

CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED FINANCIAL STATEMENTS

SINGAPORE

Third Edition

Ng Eng Juan
*Nanyang Business School
Nanyang Technological University*



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CONSOLIDATED FINANCIAL STATEMENTS—SINGAPORE

Third Edition



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Preface

This book is the third edition of the very well-received *Consolidated Financial Statements—Singapore* first published in 2006.

This new edition is necessitated by the issuance of five new/revised accounting standards by the Accounting Standards Council that will be effective for annual periods commencing on or after 1 January 2014, namely:

- FRS 110 *Consolidated Financial Statements*
- FRS 111 *Joint Arrangements*
- FRS 112 *Disclosures of Interests in Other Entities*
- FRS 27 *Separate Financial Statements*
- FRS 28 *Investments in Associates and Joint Ventures*

The chapter arrangement in this new edition is the same as that in the previous editions, except for the addition of Chapter 11, in which quizzes and examination-styled questions are presented for the reader's self-study.

I am indeed pleased to be informed by practitioners and students that they have benefited from previous editions of the book. I hope accounting practitioners and students will continue to benefit from this new edition.

I am deeply thankful to my colleagues (especially Professor Chong Kooi Wah), students in Nanyang Business School, and the many accountants who have attended my seminars. This book is greatly enriched by what I have learnt from their feedback/experiences.

Finally, I am grateful to my wife and my three boys for their support and encouragement.

Ng Eng Juan
December 2012

Preface to the First Edition

The motivation for writing this book is two-fold: (a) to discuss consolidated financial statements with specific references to Singapore accounting standards and legal provisions, and (b) to present a practical approach commonly used in Singapore in the preparation of consolidated financial statements.

The discussion of consolidated financial statements in this book is based on the Financial Reporting Standards issued by the Council on Corporate Disclosure and Governance that are effective as at 1 January 2005. Furthermore, this book adopts the ‘worksheet’ approach, the ‘consolidation journal entries’, and the ‘independent proof’, which are the commonly used tools in practice for the preparation of consolidated financial statements. The results of an empirical study on some aspects of consolidated practices of Singapore companies are also presented, where relevant.

In Chapter 1, an introduction to consolidated financial statements is presented and the recent changes in the provisions of the Companies Act and the Financial Reporting Standards in relation to the issue of who has to present consolidated financial statements are highlighted. In Chapters 2 and 3, the basic problems that may be encountered in consolidation, namely, the revaluation of a subsidiary’s net assets, goodwill on consolidation, minority interests, pre-acquisition and post-acquisition reserves, and inter-company transactions, are discussed and illustrated. In Chapter 4, complications arising from changes in ownership interest are discussed. As it is not possible to cover all conceivable scenarios, only more common events are discussed. In Chapter 5, consolidated financial statements for groups with complex structures are discussed. It should be noted that, no matter how complex the structure of a group is, the basic consolidation concepts remain the same, only the procedure becomes more complex. In Chapter 6, equity accounting for associates in the consolidated financial statements is discussed. In Chapter 7, issues relating to foreign subsidiaries and associated companies are explained and illustrated. The above chapters focus on the preparation of the consolidated balance sheets and consolidated profit and loss accounts. The preparation and presentation of the other components of consolidated financial statements, namely, the consolidated cash flow statement and the consolidated statement of changes in equity are discussed in Chapter 8 and Chapter 9 respectively.

The book will not be complete without making reference to the acceptable alternatives in the preparation and presentation of consolidated financial statements. The variations in the preparation and presentation of consolidated financial statements (a) based on other consolidation theories, and (b) using ‘pooling of interest method’ (merger method) are discussed briefly in the last chapter, Chapter 10. Many students of consolidation find the topic difficult, not because of the concepts and procedures involved, but because of the sheer number of variations in the requirements of

accounting standards and the application thereof. It is believed that the students' learning process will be more effective and efficient if the subject matter is initially presented to them using a single consistent approach and without the mass volume of variations.

I am indeed pleased to be informed time and again by practitioners and students that the predecessor of this book, *Consolidated Accounts (Singapore)*, has served their needs well. I hope accounting practitioners and students will continue to benefit from this book.

I am deeply thankful to my colleagues and my students in Nanyang Business School, and the many accountants who have attended my CPE seminars. This book is greatly enriched by what I have learnt from their feedback/experiences.

Last but not least, I am grateful to my wife, Sing Yee, for her support and encouragement; and my three boys who give me much joy and 'headache' which made the writing of this book more enjoyable.

Ng Eng Juan
May 2006

The Author

Associate Professor Ng Eng Juan graduated with BEc (first class honours) from Universiti Malaya and MBA from University of Southern California. He is a fellow of the Institute of Certified Public Accountants of Singapore (ICPAS) and a member of the Malaysian Institute of Certified Public Accountants (MICPA). He has also passed the uniformed examinations of the American Institute of Certified Public Accountants (AICPA).

Professor Ng has had many years of working experience in an international public accounting firm. He is currently with the Nanyang Business School of Nanyang Technological University, teaching financial accounting courses in the BAcc and MBA programmes. Over the years, he has won several teaching awards, including the NBS Teacher of the Year, and the Nanyang Award for Excellence in Teaching.

Professor Ng is actively involved in the accounting profession. He has been a member of the Accounting Standards Committee and China Committee of ICPAS for many years. He currently serves as external examiner/advisor to several accounting professional/degree programmes in Singapore, the United Kingdom and China. He also conducts regular executive development programmes for accountants and managers (and was awarded CPE Trainer of the Year by ICPAS), and provides consultancy services to public accounting firms, law firms and other organizations including ABN AMRO, DBS, Far East Organization, Genting Berhad, Heineken Asia Pacific, Singapore Exchange Ltd, Singapore Pool Ltd, United Engineers Ltd, Accountant General's Department, Auditor General's Office, Inland Revenue Authority of Singapore, and Malaysian Securities Commission.

Professor Ng's current research interests are in the area of accounting standards and practices. Among his publications are more than 25 professional accounting books, including *Singapore GAAP*, *Malaysia GAAP*, *Cash Flow Statements*, *Accounting for Income Taxes*, *Consolidated Financial Statements (Singapore)*, *A Practical Guide to Financial Reporting Standards (Malaysia)* and *A Practical Guide to Financial Reporting Standards (Singapore)*.

List of Statutes, Accounting Institutions, and Financial Reporting Standards

Statutes

Companies Act: The Statutes of the Republic of Singapore, Companies Act (Chapter 50)
Income Tax Act: The Statutes of the Republic of Singapore, Income Tax Act (Chapter 134)

Accounting and Regulatory Institutions

ASC: Accounting Standards Council
CCDG: Council on Corporate Disclosure and Governance
ACRA: Accounting and Corporate Regulatory Authority
ICPAS: Institute of Certified Public Accountants of Singapore
AICPA: American Institute of Certified Public Accountants
IASB: International Accounting Standards Board
IASC: International Accounting Standards Committee

Financial Reporting Standards

- FRS 1 Financial Reporting Standard 1 *Presentation of Financial Statements*, Accounting Standards Council, 2009
- FRS 2 Financial Reporting Standard 2 *Inventories*, Accounting Standards Council, 2005
- FRS 7 Financial Reporting Standard 7 *Cash Flow Statements*, Accounting Standards Council, 2003
- FRS 12 Financial Reporting Standard 12 *Income Taxes*, Accounting Standards Council, 2003
- FRS 16 Financial Reporting Standard 16 *Property, Plant and Equipment*, Accounting Standards Council, 2005
- FRS 21 Financial Reporting Standard 21 *The Effect of Changes in Foreign Exchange Rates*, Accounting Standards Council, 2005
- FRS 23 Financial Reporting Standard 23 *Borrowing Costs*, Accounting Standards Council, 2009
- FRS 27 Financial Reporting Standard 27 *Separate Financial Statements*, Accounting Standards Council, 2014
- FRS 28 Financial Reporting Standard 28 *Investments in Associates and Joint Ventures*, Accounting Standards Council, 2014
- FRS 39 Financial Reporting Standard 39 *Financial Instruments: Recognition and Measurement*, Accounting Standards Council, 2005
- FRS 103 Financial Reporting Standard 103 *Business Combinations*, Accounting Standards Council, 2009

- FRS 105 Financial Reporting Standard 105 *Non-current Assets Held for Sale and Discontinued Operations*, Accounting Standards Council, 2005
- FRS 108 Financial Reporting Standard 108 *Operating Segments*, Accounting Standards Council, 2008
- FRS 110 Financial Reporting Standard 110 *Consolidated Financial Statements*, Accounting Standards Council, 2014
- FRS 111 Financial Reporting Standard 111 *Joint Arrangements*, Accounting Standards Council, 2014
- FRS 112 Financial Reporting Standard 112 *Disclosures of Interests in Other Entities*, Accounting Standards Council, 2014

Superseded Financial Reporting Standards

- FRS 22 (2003) Financial Reporting Standard 22 *Business Combinations*, Council on Corporate Disclosure and Governance, 2003
- FRS 27 (2003) Financial Reporting Standard 27 *Consolidated Financial Statements and Accounting for Investments in Subsidiaries*, Council on Corporate Disclosure and Governance, 2003
- FRS 27 (2005) Financial Reporting Standard 27 *Consolidated Financial Statements and Accounting for Investments in Subsidiaries*, Council on Corporate Disclosure and Governance, 2005
- FRS 27 (2009) Financial Reporting Standard 27 *Consolidated and Separate Financial Statements*, Accounting Standards Council, 2009
- FRS 28 (2003) Financial Reporting Standard 28 *Accounting for Investments in Associates*, Council on Corporate Disclosure and Governance, 2003
- FRS 28 (2005) Financial Reporting Standard 28 *Investments in Associates*, Accounting Standards Council, 2005
- FRS 31 (2003) Financial Reporting Standard 31 *Financial Reporting of Interests in Joint Ventures*, Council on Corporate Disclosure and Governance, 2003
- FRS 31 (2005) Financial Reporting Standard 31 *Interests in Joint Ventures*, Accounting Standards Council, 2005
- FRS 103 (2004) Financial Reporting Standard 103 *Business Combinations*, Council on Corporate Disclosure and Governance, 2004

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CHAPTER
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1

INTRODUCTION



1.1 What are consolidated financial statements?

Consolidated financial statements are the financial statements of an economic entity which comprises more than one business entity (each of which prepares its own set of financial statements). The various business entities constitute an economic entity when they are under a common control and their resources are committed to achieve common economic goals. In other words, consolidated financial statements are the combined financial statements of a group of business entities under common control.

Various business entities may come under common control as a result of business growth. A business entity may grow internally through forming business units to undertake businesses in different industries or in different geographical locations. In this case, all the business units will constitute a group of business entities under common control. If each of the business units in the group prepares its own set of financial statements, then these individual sets of financial statements are combined to form the consolidated financial statements for the group. A business entity may also grow externally through mergers and acquisitions. In this case, the acquirer and the acquirees may constitute a group of business entities under common control. If the acquirer and the acquirees prepare their own set of financial statements, these individual sets of financial statements are combined to form the consolidated financial statements for the group.

Consolidated financial statements are prepared for a group of business entities under common control to meet the needs of users of financial statements. These are discussed in Section 1.4.

In Singapore, the accounting standards that govern the preparation and presentation of consolidated financial statements are:

- (a) FRS 103 *Business Combinations*;
- (b) FRS 110 *Consolidated Financial Statements*;
- (c) FRS 111 *Joint Arrangements*;
- (d) FRS 112 *Disclosure of Interests in Other Entities*;
- (e) FRS 27 *Separate Financial Statements*; and
- (f) FRS 28 *Investments in Associates and Joint Ventures*.

FRS 103 is effective for annual periods beginning on or after 1 July 2009. FRS 110, FRS 111, FRS 112, FRS 27, and FRS 28 are effective for annual periods beginning on or after 1 January 2014.

1.2 Who has to present consolidated financial statements?

FRS 110 requires an entity that is a parent to present consolidated financial statements (paragraph 4). A parent is defined in FRS 110 as an entity that controls one or more entities. The concept of control is discussed in Appendix 1A of this chapter. For pur-

pose of discussions in this book, an entity that holds more than 50% of the issued share capital of another is assumed to have control and is therefore the parent, unless specified otherwise.

However, a parent that is itself a subsidiary of another entity need not present consolidated financial statement if all the following conditions are met (paragraph 4(a)):

- (i) It is itself a wholly owned subsidiary, or is a partially owned subsidiary of another entity and its other owners do not object to the parent not presenting consolidated financial statements;
- (ii) Its debt or equity instruments are not traded in a stock exchange;
- (iii) It did not file, nor is in the process of filing, its financial statements with a securities commission or other regulatory organization for the purpose of issuing any debt and equity instruments; and
- (iv) Its ultimate or any intermediate parent produces consolidated financial statements that are available for public use.

(Note: The international financial reporting standard IFRS 10, on which FRS 110 is based, additionally requires the ultimate or any intermediate parent to produce consolidated financial statements that comply with International Financial Reporting Standards.)

It may be noted that, if all the conditions in paragraph 4(a) are met, the intermediate parent's consolidated financial statements will be of very little use, and are therefore exempted.

Example I.I



Scenario 1

A Ltd is the parent of B Ltd. In this case, A Ltd must present consolidated financial statements.

Scenario 2

D Ltd is the parent of E Ltd which, in turn, is the parent of F Ltd. In this case, E Ltd must present consolidated financial statements (combining the financial statements of E Ltd and F Ltd). However, E Ltd is exempted from presenting the consolidated financial statements if all the conditions in paragraph 4(a) are met. D Ltd must present consolidated financial statements (combining the financial statements of D Ltd, E Ltd, and F Ltd).

Scenario 3

K Ltd is the parent of L Ltd. L Ltd is the parent of M Ltd. M Ltd is the parent of N Ltd. In this case, all the parents, namely, K Ltd, L Ltd, and M Ltd must each present its own consolidated financial statements. However, L Ltd and M Ltd are exempted from presenting consolidated financial statements if all the conditions in paragraph 4(a) are met.

Scenario 4

X Ltd is the parent of Y Ltd which, in turn, is the parent of Z Ltd. X Ltd is incorporated in USA and listed in New York Stock Exchange, while Y Ltd and Z Ltd are incorporated in Singapore. All the conditions in paragraph 4(a) of FRS 110 are met. In this case, if Y Ltd adopts Singapore Financial Reporting Standards, it is exempted from presenting consolidated financial statements because all the conditions in paragraph 4(a) of FRS 110 are met.

However, if Y Ltd adopts International Financial Reporting Standards, it is not exempted from presenting consolidated financial statements because condition (iv) of paragraph 4(a) of IFRS 10 (which requires X Ltd to produce consolidated financial statements that comply with International Financial Reporting Standards) is not met, as X Ltd will produce consolidated financial statements that comply with US GAAP which is not International Financial Reporting Standards.



Consolidation procedures

There are two basic methods of consolidation, namely, the acquisition method (also referred to as the purchase method), and the pooling-of-interest method (also referred to as the merger method). However, since the acquisition method is by far the more commonly used method in practice, and that FRS 103 has disallowed the use of the pooling-of-interest method in almost all consolidations, this book adopts the acquisition method. (The pooling-of-interest method is briefly discussed in Chapter 10 of this book.)

In preparing consolidated financial statements under the acquisition method, the financial statements of the parent and subsidiaries in a group are combined under the 'full consolidation' principle, on a line-by-line basis and on 100% basis, by adding together like items of assets, liabilities, equity, revenue, and expenses. The investment account should, however, be eliminated against the pre-acquisition equity of the subsidiaries so as to avoid double-counting.

Where the parent has less than 100% interest in a subsidiary, the interest of the outside shareholders in the subsidiary (non-controlling interest) must be accounted for and shown separately in the consolidated financial statements.

All the assets and liabilities of the subsidiary (including those that are not recognized by the subsidiary) at the acquisition date should be recognized and fair valued, and the difference, if any, between the cost of investment and the fair value of the identifiable net assets acquired (goodwill) should also be accounted for.

Where there are intragroup transactions, the account balances must be eliminated. Profits and losses arising therefrom may be unrealized from the group's viewpoint and therefore must also be eliminated.

In more complex situations where there are many consolidation adjustments required, it may be necessary to adopt a set procedure so that the sequence of thought

and the procedure of preparation can be logically carried out. One logical sequence that is adopted in this book is as follows: (i) elimination of investment account; (ii) elimination of intragroup items; and (iii) recording of non-controlling interest.

Consolidated financial statements should be prepared using uniform accounting policies for like transactions and events in similar circumstances. In cases where a subsidiary is operating overseas and has adopted accounting standards that are not the same as those adopted by the parent, the financial statements of the subsidiary will have to be adjusted to comply with the accounting standards adopted by the parent before consolidation.

The financial statements of all the entities in a group should be based on the same accounting period. When the financial statements of the entities in the group are drawn up to different reporting dates, which in any case should not be more than three months, adjustments should be made for the effects of significant transactions or other events that occur between the dates and the date of the parent's financial statements.

Further, in business combinations, there are several terminology that are important for the purposes of consolidation. In this sub-section, the following terms are further discussed: (i) identifying the acquirer; (ii) date of acquisition; and (iii) costs of acquisition.

1.3.1 Identifying the acquirer (parent)

FRS 103 provides that the acquirer in a business combination is the combining entity that obtains control of the other combining entities (paragraph 17).

In a business combination that is effected through payment of cash, the entity that pays for the shares will ultimately gain control of the combining entities and is therefore the acquirer.

In a business combination that is effected through an exchange of equity interest, the entity that issues the equity interests is normally the acquirer. However, FRS 103 requires that all pertinent facts and circumstances be considered to determine which of the combining entities ultimately gains control of the combining entities (paragraph 21).

In some business combinations, commonly referred to as 'reversed acquisitions' (or 'reverse takeovers'), the acquirer is the entity whose equity interests have been acquired and the issuing entity is the acquiree. This often happens where a large non-listed company arranges to have itself acquired by a small listed company as a means of obtaining stock exchange listing (often referred to as 'back-door listing'). In these cases, although legally the issuing listed company is the parent and the non-listed company is the subsidiary, the non-listed company (the legal subsidiary) is, in substance, the parent since it is the one who ultimately gains control over the combining entities, and consolidated financial statements have to be prepared from the non-listed company's viewpoint. For illustration on reverse acquisition, refer to Chapter 4.

1.3.2 Date of acquisition

It is important, under purchase method of consolidation, to determine the date of acquisition. This is because, under purchase method, an acquirer will have to (a) incorporate into consolidated profit and loss account the results of operations of the acquiree as from the acquisition date, and (b) measure the assets and liabilities acquired based on their respective fair value as at the acquisition date. Further, where the business combination takes place near the accounting year-end, the determination of the acquisition date will affect the answer to the question of whether or not consolidated financial statements have to be presented for that accounting year.

FRS 103 defines the date of acquisition as the date on which the acquirer obtains control of the acquiree (paragraph 8). FRS 103 further provides that it is not necessary for a transaction to be closed or finalized before the acquirer obtains control. All pertinent facts and circumstances surrounding a business combination should be considered in assessing when the acquirer has obtained control (paragraph 9).

1.3.3 Costs of acquisition

FRS 103 defined the cost of acquisition as the aggregate of the acquisition-date fair values of the assets transferred by the acquirer, the liabilities incurred by the acquirer to the former owners of the acquiree, and the equity instruments issued by the acquirer (paragraph 37).

FRS 103 further provides that cost directly attributable to the business combination (such as professional fees paid to accountants and lawyers effecting the business combination), and general administrative expenses should not be included in the cost of acquisition (paragraph 53).

To illustrate, assume A Ltd acquires B Ltd. In exchange for the shares in B Ltd, A Ltd issues 10 million of its ordinary shares (which have a market value of \$3.00 per share) and pays \$10 million cash to the former shareholders of B Ltd. A Ltd agrees to assume a liability of \$2 million payable to a supplier of B Ltd. A Ltd pays \$1 million professional fees to the accountants and lawyers for their services rendered in relation to the acquisition. A Ltd has an acquisition department, the yearly expenditure of which amounts to \$10 million, and it is estimated that approximately 30% of the staff time has been spent in relation to this acquisition. A Ltd expects to incur \$1.5 million to restructure B Ltd after the acquisition.

In this case, the cost of acquisition is calculated as equal to \$42 million (Fair value of shares issued of \$30 million + Cash of \$10 million + Liability assumed of \$2 million).

Where the business combination agreement provides for a contingent consideration arrangement, FRS 103 requires the acquisition-date fair value of the contingent consideration to be treated as part of the cost of acquisition (paragraph 39). (Note that under FRS 103 [2004], the contingent consideration is treated as part of the cost of acquisition if and only if the contingent consideration is probable.) Further,

FRS 103 provides that subsequent changes in the fair value of the contingent consideration should be accounted for as an adjustment to the cost of acquisition if the following two conditions are met: (i) the change is made as a consequence of new information about condition existing at acquisition date and (ii) the change is made within the measurement period (not exceeding one year). If any one (or both) of the conditions is not met, the subsequent changes in the fair value of the contingent consideration will be brought to income statement (paragraph 58).

To illustrate, assume that A Ltd acquires B Ltd, and the consideration comprises (i) an immediate payment of \$100 million and (ii) a further payment of \$5 million after one year if the profit after tax of B Ltd for the following year exceeds \$10 million.

The payment conditional upon reaching profit target is a contingent consideration. Assume that, at the date of acquisition, it is estimated that there is a 40% chance that the profit after tax of B Ltd for the following year will exceed \$10 million, the fair value of the contingent consideration is therefore estimated to be \$2 million ($40\% \times \5 million). In this case, the cost of acquisition will initially be recorded at \$102 million (Dr Cost of investment \$102 million; Cr Cash \$100 million; and Cr Provision for contingent payment \$2 million).

Subsequently, if the profit target is not met, and no payment is made, the provision account will be reversed and accounted for as a gain in the income statement. If the profit target is met and A Ltd has to pay \$5 million, the additional \$3 million paid will be accounted for as a loss in the income statement.

However, if it was discovered, during the measurement period, that B Ltd has some sales orders existed on the acquisition date which were not taken into account in estimating the probability of meeting the profit target, and that after taking into consideration these sales orders, the probability that the profit after tax of B Ltd for the following year will exceed \$10 million is 60%, and consequently the fair value of the contingent consideration is \$3 million ($60\% \times \5 million). In this case, because both the conditions are met, the change to the fair value of the contingent consideration of \$1 million will be adjusted against the cost of investment.

1.4 Usefulness and limitations of consolidated financial statements

There are obvious demands for consolidated financial statements. Investors who are investing in the shares of the parent company would also want to know how the other companies in the group are performing, and would therefore be interested in the consolidated financial statements, instead of just the parent company's financial statements. Lenders who lend money to one company in a group would want corporate guarantee from the other companies in the group and would therefore be interested in the financial position of the group, instead of just that of the borrowing company. The usefulness of the consolidated financial statements to each stakeholder is discussed more specifically below.

The management of the parent will be most interested in consolidated financial statements, because it will be evaluated based on its management of all the resources under its control, the effect of which are reflected in the consolidated financial statements.

The current and prospective shareholders/investors of the parent will also be interested in the consolidated financial statements. Ultimately, the profitability of the parent is affected by the profitability of all the companies in the group.

The long-term creditors of the parent may be interested in the consolidated financial statements in evaluating the overall financial health and profitability of the parent. While the parent and its subsidiaries are separate legal entities, the creditors have an effective indirect claim on the subsidiaries through the parent.

The minority shareholders and the creditors of the subsidiaries may not be interested in the consolidated financial statements. The minority shareholders of the subsidiary company only enjoy the profit of the company and have no interest in the profit of the group. The creditors of the subsidiary similarly have no claim against group resources, unless of course the debt is guaranteed by the parent.

In Singapore, the tax authority will also not be interested in the consolidated financial statements. All companies, whether a member of a group or otherwise, are taxed individually, except that group relief is available to a parent and its more-than-75%-owned subsidiaries.

Consolidated financial statements often represent the only means by which the activities and resources of all the entities that are under the same control can be meaningfully and conveniently be presented. However, some information is invariably lost when data sets are aggregated. Thus, consolidated financial statements may not reveal, for example, that some entities in the group are insolvent, or incurring losses.

Consolidated financial statements may not be meaningful if the entities in the group are involved in dissimilar activities. Consolidated results of such group cannot be compared with industry standards; one conglomerate cannot be compared with another. This shortcoming may, however, be overcome to certain extent by the presentation of segment information.

Consolidated financial statements may even be misleading to unsophisticated readers. For example, showing both the assets and the liabilities of all the entities in a group in the consolidated financial statements can erroneously imply that all reported assets are available to pay all reported liabilities. In fact, the parent's power and willingness to transfer the assets of the group from one entity to another for whatever purposes are often restricted to certain extent.

Consolidated financial statements are often criticized on the ground that the consolidated group is presented as if it were a single entity by ignoring legal boundaries. However, supporters of consolidated financial statements argue that the substance of the relationships and not merely their legal forms should form the basis of reporting.



Approaches adopted in this book

Since one of the main thrusts of this book is to present a practical approach to consolidation, the discussion is based on the provisions of the accounting standards. (A brief discussion on the various consolidation theories and the alternative methods of consolidation is provided in Chapter 10 of this book.)

There are various approaches to the preparation of consolidated financial statements. This book adopts the 'worksheet' approach. The 'worksheet' approach has the advantage of presenting the complete information in a concise and orderly manner, and because of this, it is the approach most commonly used in practice. It is hoped that, by adopting the approach that is most commonly used in practice, the reader will be able to quickly adapt the material covered in this book to the real-life situation in practice. It is also hoped that, having gained a good appreciation of consolidation process, readers will be able to prepare consolidated financial statements using other approaches such as the 'T-account' approach and the 'schedule' approach, if the need arises.

For supervisors who have to verify the consolidation work of the subordinates, an effective and efficient way is to perform independent proofs of the consolidated figures (instead of going through the consolidation adjustments). This book also illustrates how the proofs can be done.

appendix IA

Concept of 'control'

FRS 110 establishes 'control' as the basis for consolidation. An entity that controls an investee is a parent, regardless of the nature of its involvement with the investee (paragraph 5).

An investor controls an investee if and only if the investor has all the following (paragraph 7):

- (a) Power over the investee;
- (b) Exposure, or rights, to variable returns from involvement with the investee; and
- (c) The ability to use its power over the investee to affect the amount of the investor's returns.

To assess whether an investor has all the three elements of control mentioned above, it may be necessary to consider (a) the purpose and design of the investee, (b) what the relevant activities are and how decisions about those activities are made, (c) whether the rights of the investor give it the current ability to direct the relevant activities, (d) whether the investor is exposed or has rights to variable returns from involvement

with the investee, and (e) whether the investor has the ability to use its power over the investee to affect the amount of the investor's returns (paragraph B3).

IA.1 Power

FRS 110 provides that an investor has power over an investee when the investor has existing rights that give it the current ability to direct the relevant activities (paragraph 10).

The following elements in the definition of 'power' in paragraph 10 should be noted:

- (a) *Existing rights*: An investor may have power through existing voting rights arising from equity instruments or existing rights arising from contractual arrangements (paragraph 11); only substantive rights give rise to power, protective rights do not give rise to power (paragraph B9);
- (b) *Current ability*: An investor has power if it has current ability to direct the relevant activities even if the rights have yet to be exercised (paragraph 12); the word 'current' mean 'at the time', thus, the investor must have the ability at the time when the relevant activities are to be directed (e.g., during annual general meeting);
- (c) *To direct*: An investor has power if it has current ability to direct, not just to participate in directing, the relevant activities (paragraph 14); and
- (d) *Relevant activities*: Relevant activities are the activities that significantly affect the investee's returns. In the event that two or more investors each have existing rights that give them the unilateral ability to direct different relevant activities, the investor that has power over the investee is the one that has the current ability to direct the activities that most significantly affect the returns of the investee (paragraph 13).

Power arises from rights. Examples of rights that, either individually or collectively, can give investor power include but are not limited to (paragraph B15):

- (a) Rights in the form of voting rights (or potential voting rights) of an investee;
- (b) Rights to appoint, reassign, or remove members of an investee's key management personnel who have the ability to direct the relevant activities;
- (c) Rights to appointment or remove another entity that directs the relevant activities;
- (d) Rights to direct the investee to enter into, or veto any changes to, transactions that are part of the relevant activities of the investee; and
- (e) Other rights (such as decision-making rights specified in a management contract) that give the holder the ability to direct the relevant activities.

In assessing whether it has power over the investee, an investor should consider the purpose and design of the investee to (i) identify the relevant activities, how

decision about those activities are made and (ii) who has the current ability to direct those activities (paragraph B5).

In many cases, when an investee's purpose and design are considered, it may be clear that power (i.e., rights that give the current ability to direct the relevant activities) arises from voting rights through holding of equity instrument. Thus, in many cases, the investor that holds a majority of those voting rights, in the absence of any other factors, has power over the investee (paragraph B6).

Example IA.1



In all the following scenarios, assume that the investee's purpose and design are such that, power over the investee arises solely from voting rights through shareholdings proportionately.

Scenario 1

A Ltd holds 60% of the issued share capital of B Ltd. In this case, A Ltd has power over B Ltd.

Scenario 2

L Ltd holds 60% of the issued share capital of M Ltd. M Ltd holds 60% of the issued share capital of N Ltd. In this case, L Ltd has power over both M Ltd and N Ltd. M Ltd has power over N Ltd.

Scenario 3

X Ltd holds 60% of the issued share capital of Y Ltd and 30% of the issued share capital of Z Ltd. Y Ltd holds 30% of the issued share capital of Z Ltd. In this case, X Ltd has power over both Y Ltd and Z Ltd. Y Ltd does not have power over Z Ltd.



In some cases, an investor with less than a majority of the voting rights may have rights that are sufficient to give it current ability to direct the relevant activities of the investee unilaterally (paragraph B41). This is referred to as *de facto* power in FRS 110.

For example, when the direction of relevant activities is determined by majority vote and an investor holds significantly more voting rights than any other vote holder and the other shareholdings are widely dispersed, it may be clear that the investor has power over the investee (paragraph B43).

Example IA.2

In all the following scenarios, assume that the investee's purpose and design are such that, power over the investee arises solely from voting rights through shareholdings proportionately.

Scenario 1

C Ltd holds 48% of the issued share capital of D Ltd. The remaining voting rights are held by thousands of shareholders, none individually holding more than 1% of the voting rights. None of the shareholders has any arrangements to consult any of the others or make collective decisions.

A few years ago, when assessing the proportion of voting rights to acquire, on the basis of the relative size of the other shareholdings, C Ltd determined that a 48% interest would be sufficient to give it power. In this case, C Ltd has power over D Ltd.

Scenario 2

F Ltd holds 46% of the issued share capital of G Ltd. The remaining voting rights are held by thousands of shareholders, none individually holding more than 1% of the voting rights. None of the shareholders has any arrangements to consult any of the others or make collective decisions.

Traditionally, less than 90% of the voting rights of G Ltd have been exercised at relevant shareholders' meeting. In this case, F Ltd has power over G Ltd.

Scenario 3

H Ltd holds 40% of the issued share capital of J Ltd. The remaining voting rights are held by thousands of shareholders, none individually holding more than 1% of the voting rights. None of the shareholders has any arrangements to consult any of the others or make collective decisions.

Traditionally, approximately 90% of the voting rights of J Ltd have been exercised at relevant shareholders' meeting. In this case, H Ltd does not have power over J Ltd.

Scenario 4

M Ltd holds 45% of the issued share capital of N Ltd. The remaining 55% shareholdings are held by three other shareholders in equal proportions. In this case, it only takes the three other shareholders to cooperate to be able to prevent M Ltd from directing the relevant activities of N Ltd. Thus, M Ltd does not have power over N Ltd.



As shown in the above example, in cases when an investor has less than majority voting rights, the determination of whether the investor has power (through voting rights)

is subjective. There are no clear criteria and thus significant judgment is required. FRS 110 requires the investor to consider all facts and circumstances, including voting patterns at previous shareholders' meetings, and the size of the investor's holding of voting rights relative to the size and dispersion of holdings of the other vote holders, noting that (i) the more voting rights an investor holds, the more likely the investors is to have power, (ii) the more voting rights an investor holds relative to other vote holders, the more likely the investors is to have power, and (iii) the more parties that would need to act together to outvote the investor, the more likely the investor is to have power (paragraph B42).

Where the investee has issued potential voting rights (i.e., securities with the potential of being converted into ordinary shares with voting rights, for example, options, warrant, and convertible bonds), the investor should take these potential voting rights into consideration in determining whether it has power.

FRS 110 provides that the potential rights should be considered only if the rights are substantive, i.e., the vote holders must have practical ability to exercise those rights (paragraph B47). (Note that this is different from the provision of FRS 27 [2009] which required the potential voting rights to be considered in determining control as soon as they are exercisable/convertible, and regardless of vote holders' intention and ability to exercise/convert).

Example IA.3



In all the following scenarios, assume that the investee's purpose and design are such that, power over the investee arises solely from voting rights through shareholdings proportionately.

Scenario 1

A Ltd holds 40% and B Ltd holds 60% of the 100 million shares of C Ltd, when C Ltd was incorporated in 20X1. On 1 January 20X5, C Ltd issues options to A Ltd to buy 50 million shares of C Ltd to be issued at \$1.00 per share. In this case, B Ltd has power over C Ltd from 20X1 to 20X4, and A Ltd has power over C Ltd in 20X5 (and subsequent years).

However, if the options are deeply out-of-the-money in 20X5 (for example, the fair value of the shares of C Ltd is \$0.20 per share), and A Ltd will therefore not exercise the options, the potential voting rights (option) are not substantive in 20X5. In this case, B Ltd continues to have power over C Ltd in 20X5.

Also, if the options are in-the-money (for example, the fair value of the shares of C Ltd is more than \$1.00 per share), but A Ltd does not have the financial resources to exercise the option, then the potential voting rights (options) are not substantive in 20X5. In this case, B Ltd continues to have power over C Ltd in 20X5.

Scenario 2

X Ltd holds 40% and Y Ltd holds 60% of the 100 million shares of Z Ltd, when Z Ltd was incorporated in 20X1. On 1 January 20X5, Z Ltd issues \$50 million convertible bonds to

X Ltd. The bonds are convertible from 1 January 20X6 onwards into 50 million shares of C Ltd to be issued at \$1.00 per share. In this case, Y Ltd has power over Z Ltd from 20X1 to 20X5, and X Ltd has power over Z Ltd in 20X6 when the convertible bonds are convertible.

However, if X Ltd does not wish to convert the convertible bonds in 20X6 because, for example, the returns from holding the convertible bonds are much higher than the returns from holding the shares, then the potential voting rights (convertible bonds) are not substantive in 20X6. In this case, Y Ltd continues to have power over Z Ltd in 20X6.



When an investee's purpose and design are considered, it may sometimes be clear that voting rights are not dominant factor in deciding who has power over the investee. For example, when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements. In such a case, FRS 110 requires the investor to assess the contractual arrangements in order to determine whether it has rights sufficient to give it power (paragraph B17).

Sometimes, a combination of voting rights from shareholding with other decision-making rights from contractual arrangement may give an investor power.

Example IA.4



D Ltd holds 30% of the issued share capital of E Ltd, a retailer of consumer products. There is also a contractual arrangement under which D Ltd controls the purchase of inventory and sale of goods of E Ltd. This contractual arrangement may only be rescinded with the consent of $\frac{3}{4}$ of the total shareholders of E Ltd. In this case, D Ltd has power over E Ltd, since it has the current ability to direct the relevant activities of E Ltd (the contract cannot be rescinded without its consent).



FRS 110 requires that, in assessing power, only substantive rights are considered, protective rights are not.

For a right to be substantive, the vote holder must have practical ability to exercise that right (paragraph B22) and the right has to be exercisable when decisions about the direction of the relevant activities are to be made (paragraph B24).

Example IA.5 • • • • • • • • • • • • • • • • • • •**Scenario 1**

H Ltd holds 60% of the issued share capital of J Ltd. The purpose and design of J Ltd are such that power over J Ltd arises solely from voting rights through shareholdings proportionately. In this case, H Ltd has power over J Ltd.

Scenario 2

K Ltd holds 60% of the issued share capital of L Ltd, when L Ltd is incorporated in 20X1. The purpose and design of L Ltd are such that power over L Ltd arises solely from voting rights through shareholdings proportionately.

In 20X5, L Ltd is placed under judicial management, and the judicial management has the sole right to direct the relevant activities of L Ltd. In this case, K Ltd has power over L Ltd from 20X1 to 20X4, but it does not have power over L Ltd in 20X5.

Scenario 3

M Ltd holds 60% of the issued share capital of N Ltd, which is incorporated by the government to manufacture equipment for national security. The government, which holds only one share in N Ltd, has absolute control over the operations of N Ltd. In this case, M Ltd does not have power over N Ltd.



Protective rights are designed to protect the interests of their vote holder without giving that party power over the investee. Thus, an investor that holds only protective rights does not have power over an investee.

Example IA.6 • • • • • • • • • • • • •**Scenario 1**

S Ltd is a manufacturer of consumer products and borrows a loan from T Bank Ltd. Under the loan agreement, T Bank Ltd has a right to seize the land, the factory, and the manufacturing machinery of S Ltd in the event that S Ltd defaults on its loan repayment. In this case, T Bank Ltd's right is protective right, and therefore T Bank Ltd has no power over S Ltd.

Scenario 2

AAA Ltd sets up and subsequently manages the FF Fund. AAA Ltd determines the investment policy and strategy for the FF Fund. AAA Ltd receives a market-based management fee of 2% of the market value of the net assets in FF Fund.

There are 30 investors in FF Fund. BBB Ltd owns 60% of the shares in the FF Fund, and the rest of the shares in FF Fund are distributed among the other 29 investors. The rights held by the investors are protective in nature. The investors cannot unilaterally change the investment policy and strategy of FF Fund, cannot remove the fund manager of AAA Ltd without cause.

In this case, BBB Ltd has a majority of the voting rights in FF Fund. However, these rights are protective in nature and do not give BBB Ltd the ability to direct the relevant activities of FF Fund. Thus, BBB Ltd has no power over FF Fund.

Scenario 3

X Ltd operates a business under a franchise agreement with Y Ltd, the franchisor. The franchise agreement merely gives the franchisor rights that are designed to protect the franchise brand. The franchise agreement does not restrict the ability of the franchisee or other parties to have current ability to direct the relevant activities of the franchisee. Thus, in this case, Y Ltd does not have power over X Ltd.



FRS 110 provides that mere economic dependency does not give rise to power (paragraph B40).

Example IA.7



Scenario 1

P Ltd is a manufacturer of consumer products. P Ltd purchases 80% of its raw materials from Q Ltd and sell 60% of its finished products to R Ltd. In this case, neither Q Ltd nor R Ltd has power over P Ltd.



FRS 110 provides, if it is not clear, having considered all the above issues, that the investor has power, then it should be concluded that the investor does not control the investee (paragraph B46).

IA.2 Returns

An investor is exposed, or has rights, to variable returns from its involvement with the investee when the investor's returns from its involvement have the potential to vary as a result of the investee's performance (paragraph 15).

Exposure or having rights to variable returns is a necessary but not a sufficient condition for an investor to have control over the investee. An investor (e.g., non-controlling interest) could be exposed or has right to variable returns, but does not have control over the investee. However, an investor must be exposed or has rights to variable returns in order to have control over the investee. An investor that is not exposed or has no rights to variable returns may probably be acting as an agent and has no control over the investee.

An investor's investment in ordinary shares of an investee will definitely result in the investor being exposed or having rights to variable returns, as the dividends received and the fair value of the shares held depends largely on the investee's performance.

However, FRS 110 also takes the view that an investor's investment in fixed rate bond of an investee will also result in the investor being exposed or having rights to variable returns, as the interest and principle payments are subject to the credit risks of the investee. Similarly, fixed performance fee for managing an investee's assets is also variable returns because it is exposed to the performance risk of the investee in that it depends on the investee's ability to generate sufficient income to pay the fee (paragraph B56).

IA.3 Link between power and returns

An investor controls an investee if the investor not only has power over the investee and exposure or rights to variable returns from its involvement with the investee, but also has the ability to use the power to affect the investor's returns from its involvement in the investee (paragraph 17).

In most cases, it can be clearly and easily demonstrated that an investor's majority shareholding in an investee will give the investor the ability to use the power to affect its returns from its involvement in the investee.

Example IA.8

In all the following scenarios, assume that the investee's purpose and design are such that, power over the investee arises solely from voting rights through shareholdings proportionately.

Scenario I

A Ltd holds 60% of the issued share capital of B Ltd. In this case, A Ltd's 60% shareholding in B Ltd will (a) give A Ltd power over B Ltd, (b) expose A Ltd to variable returns, and

(c) give A Ltd the ability to use its voting rights to affect its returns from B Ltd. Thus, A Ltd controls B Ltd.

Scenario 2

C Ltd holds 10% of the issued share capital of D Ltd. In this case, C Ltd's 10% shareholding in D Ltd will not give C Ltd power over D Ltd, and also will not give C Ltd the ability to use its voting rights to affect its returns from D Ltd. Thus, C Ltd does not control D Ltd.

Scenario 3

L Ltd holds 60% of the issued share capital of M Ltd. M Ltd holds 60% of the issued share capital of N Ltd. In this case, L Ltd's 60% shareholding in M Ltd and M Ltd's 60% shareholding in N Ltd will (a) give L Ltd power over N Ltd, (b) expose L Ltd to variable returns from N Ltd (because L Ltd is exposed to variable returns from M Ltd, and M Ltd is exposed to variable returns from N Ltd), and (c) give L Ltd the ability to use its voting rights to affect its returns from N Ltd (through M Ltd). Thus, L Ltd not only controls M Ltd but also controls N Ltd, and M Ltd controls N Ltd.

Scenario 4

X Ltd holds 60% of the issued share capital of Y Ltd and 30% of the issued share capital of Z Ltd. Y Ltd holds 30% of the issued share capital of Z Ltd. In this case, X Ltd's direct shareholding of 30% in Z Ltd and its indirect shareholding of 30% (through Y Ltd) will (a) give X Ltd power over Z Ltd, (b) expose X Ltd to variable returns from Z Ltd, and (c) give X Ltd the ability to use its voting rights to affect its returns from Z Ltd. Thus, X Ltd controls both Y Ltd and Z Ltd.

However, Y Ltd's 30% shareholding in Z Ltd will not give Y Ltd power over Z Ltd, and also will not give Y Ltd the ability to use its voting rights to affect its returns from Z Ltd. Thus, Y Ltd does not control Z Ltd.



In cases where decision-making rights have been delegated or are being held for the benefits of others, it is more difficult to assess whether the decision maker has the ability to use its power to affect its returns from the other entity.

In such cases, it is necessary to assess whether the decision maker is a principal or an agent. Thus, FRS 110 provides that an investor with decision-making rights should determine whether it is a principal or an agent (paragraph 18).

An investor acting as a principal has the ability to use the power to affect the investor's returns from its involvement in the investee, but an investor acting as an agent does not have the ability to use the power to affect the investor's returns from its involvement in the investee (paragraph B58).

An agent is a party primarily engaged to act on behalf and for the benefit of another party (the principal) and therefore does not control the investee.

FRS 110 further provides that a decision maker, in determining whether it is a principal or an agent, should consider the overall relationship between itself, the investee, and other parties, and in particular all the factors below (paragraph B60):

- (a) The scope of its decision-making authority;
- (b) The rights held by other parties;
- (c) Its remuneration; and
- (d) Its exposure to variability of returns through other interests.

Firstly, for a decision maker to control the entity over which it has been delegated decision-making authority, the decision maker must have power that gives it current ability to direct the relevant activities of the entity. If the decision maker is delegated decision-making rights that do not relate to relevant activities, the decision maker does not have control. Thus, it is important to consider the scope of the decision-making authority.

In considering the scope of its decision-making authority over the investee, the decision maker should consider the purpose and design of the investee, the risk to which the investee was designed to be exposed, the risk it was designed to pass on to the parties involved, and the level of involvement the decision maker has in the design of an investee (paragraph B63).

Example IA.9

ABC Ltd establishes and manages a special purpose vehicle, BCD Company. In this case, ABC Ltd is significantly involved in the design of BCD Company. This involvement may indicate that ABC Ltd had the opportunity and incentive to obtain rights that result in ABC Ltd having the ability to direct the relevant activities. Thus, ABC Ltd is acting as a principal.



Secondly, rights held by other parties may affect the decision maker's ability to direct the relevant activities of the investee (paragraph B64).

When a single party holds substantive right to remove the decision maker without cause, this, in isolation, is sufficient to conclude that the decision maker is an agent. If more than one party holds such rights, those rights are not, in isolation, conclusive in determining whether the decision maker acts as a principal or as an agent. The greater the number of parties required to act together to exercise rights to remove the decision maker, the less the weightage should be placed on this factor in determining whether the decision maker acts as a principal or as an agent (paragraph B65).

Example IA.10

MMM Management Company manages an investment fund, FFF Fund. BBB Ltd holds 30% of the investments in FFF Fund, and the rest of the investment are held by other investors, each holding less than 1%.

Scenario 1

BBB Ltd has the right to change the fund manager of FFF Fund at its own discretion. In this case, it can be concluded that MMM Management Company is acting as an agent, and therefore does not control FFF Fund.

Scenario 2

MMM Management Company can only be removed as the fund manager of FFF Fund by majority of the voting rights during the Fund's annual general meeting. In this case, based on the rights held by other parties, it is not determinable whether MMM Management Company is acting as a principal or as an agent.



Thirdly, as for remuneration, the greater the magnitude of, and variability associated with, the decision maker's remuneration relative to the returns expected from the activities of the investee, the more likely that the decision maker is a principal (paragraph B68).

On the other hand, if (a) the remuneration of the decision maker is commensurate with the service provided, and (b) the remuneration agreement includes only terms, conditions, or amounts that are negotiated at arm's length basis, it is more likely that the decision maker is an agent (paragraph B69).

Example IA.11

LM Ltd manages the day-to-day operations of NN Ltd, a special purpose vehicle set up by PQ Ltd.

Scenario 1

Assume that LM Ltd's management fee is calculated as equal to 60% of NN Ltd's profit after tax figure. In this case, it is likely that LM Ltd is acting as a principal.

Scenario 2

Assume that LM Ltd's management fee is \$100,000 per month, fixed in accordance with the prevailing market rate. In this case, it is likely that LM Ltd is acting as an agent and therefore does not control NN Ltd.



Fourthly, a decision maker that holds other interests in an investee (for example, investment in investee, or providing guarantee to investee's bank borrowing) should consider its exposure to variability of returns from those interests (paragraph B71).

Generally, the greater the magnitude of, and variability associated with, the decision maker's economic interests in relation to its remuneration, the more likely that the decision maker is a principal.

Example IA.12



FM Ltd establishes and manages an investment fund, FF Fund. As the fund manager, FM Ltd has wide decision-making discretion to make decisions in the best interests of all the investors. FM Ltd receives a market-based fee for its service equal to 2% of the cost of the fund plus 10% of the fund's profit.

Scenario 1

Assume that FM Ltd does not have other interest in FF Fund. In this case, although FM Ltd has decision-making rights that give it the current ability to direct the relevant activities of FF Fund, it receives a market-based fee for its service that is commensurate with the service provided which does not create an exposure that is of such significance that it indicates it is a principal. Thus, it may be concluded that FM Ltd is acting as an agent and therefore does not control FF Fund.

Scenario 2

Assume that FM Ltd, in the above case, holds 30% of the investment in FF Fund. In this case, the 30% shareholding in the FF Fund exposes FM Ltd and gives it rights to variability in returns. Thus, it may be determined that FM Ltd is acting as a principal. Further, it is clear that FM Ltd has decision-making rights that give it the current ability to direct the relevant activities of FF Fund, it is exposed and has right to variability in returns, and it has the ability to use the power to affect its returns from its involvement in FF Fund. Thus, it may be concluded that, in this case, FM Ltd controls FF Fund.



As mentioned earlier, FRS 110 provides that a decision maker, in determining whether it is a principal or an agent, should consider the overall relationship between itself, the investee, and other parties, and in particular all the four factors listed in paragraph B60 (namely, the scope of its decision-making authority, the rights held by other parties, its remuneration, and its exposure to variability of returns through other interests).

Example IA.13

Refer to the case in Example IA.12 above, where FM Ltd establishes and manages an investment fund, FF Fund. As the fund manager, FM Ltd has wide decision-making discretion to make decisions in the best interests of all the investors, and receives a market-based fee for its service equal to 2% of the cost of the fund plus 10% of the fund's profit. FM Ltd also holds 30% of the investment in FF Fund.

Assume further that FF Fund has a board of directors appointed by the investors other than FM Ltd, and the board of directors has the power to appoint the fund manager for the FF Fund during the annual general meeting of the fund.

In this case, FM Ltd has decision-making rights that give it the current ability to direct the relevant activities of FF Fund, and is exposed and has right to variability in returns. However, the fact that other investors have substantive rights to remove fund manager indicates that FM Ltd is acting as an agent. Consequently, FM Ltd does not have the ability to use its power to affect its returns from its involvement in FF Fund. Thus, it may be concluded that, in this case, FM Ltd does not control FF Fund.



IA.4 Other considerations

In determining control, FRS 110 also requires/deals with the following:

- (a) Related parties and *de facto* agents;
- (b) Control of specific assets (silo); and
- (c) Continuous assessment.

IA.4.1 Related parties and *de facto* agents

When assessing control, an investor should consider the nature of its relationship with other parties. In cases where those other parties are acting on the investor's behalf (i.e., *de facto* agents), FRS 110 requires the investor to consider its *de facto* agent's power, variable return, and ability to use the power to influence the variable returns (i.e., the

three elements of control) together with its own in assessing control of an investee (paragraph B74).

Example IA.14

M Ltd holds 40% and N Ltd holds 20% of the issued share capital of L Ltd, when L Ltd was incorporated in 20X1 in a foreign country. The purpose and design of L Ltd are such that, power over L Ltd arises solely from voting rights through shareholdings proportionately.

N Ltd holds the 20% shareholding in L Ltd, largely on M Ltd's behalf, in order to avoid breaching the regulation in the foreign country that forbids more than 50% shareholding by a single company. In this case, N Ltd is a *de facto* agent of M Ltd. When assessing control over L Ltd, M Ltd should take into consideration N Ltd's 20% shareholding together with its own 40% shareholding, as required by FRS 110.

IA.4.2 Control of specific assets (silo)

FRS 110 requires that an investor should consider whether it treats a portion of an investee as a deemed separate entity (i.e., silo), and if so, whether it controls the deemed separate entity (paragraph B76).

If the investor controls the deemed separate entity, FRS 110 provides that the investor should consolidate that portion of the investee, and other parties exclude that portion of the investee when assessing control of (and in consolidation), the investee (paragraph B79).

Identifying whether a silo exists, and whether an investor controls a silo, can be complex.

FRS 110 provides that an investor should treat a portion of an investee as a deemed separate entity (silo) if and only if the following condition is satisfied (paragraph B77): specified assets of the investee are the only source of payment for specified liabilities, and parties other than those with specified liabilities do not have rights related to the specified assets. Thus, in substance, the assets and liabilities of that deemed separate entity are ring-fenced from the overall investee.

If a silo exists, the next step is to identify the relevant activities of the silo and who has current ability to direct those activities. The party that has power should further consider whether it is exposed or has right to variable returns from the silo, and whether it has the ability to use its power to affect its returns from its involvement in the silo.

If an investor concludes that it controls a silo, it consolidates the silo (not the entire host entity). If an investor concludes that it controls the host entity, but not the silo within the host entity, it consolidates the host entity excluding the silo.

Example IA.15

ABC Ltd is a special purpose vehicle holding three office buildings and one factory building. The three office buildings are leased to various parties, each lessee holds a debt instrument issued by ABC Ltd amounting to 50% of the value of the office building leased. The factory has value of \$10 million, and is leased to XYZ Ltd. XYZ Ltd holds a debt instrument of \$10 million issued by ABC Ltd. The debt instrument is secured on the factory, but does not have recourse to other assets of ABC Ltd. XYZ Ltd also has a fixed price purchase option to purchase the factory for \$10 million. In this case, no silo exists for the office buildings, but a silo exists for the factory building.

**IA.4.3 Continuous assessment**

FRS 110 provides that, if facts and circumstances indicate that there are changes to one or more of the three elements of control discussed above, an investor should reassess whether it controls an investee (paragraph B80).

Example IA.16

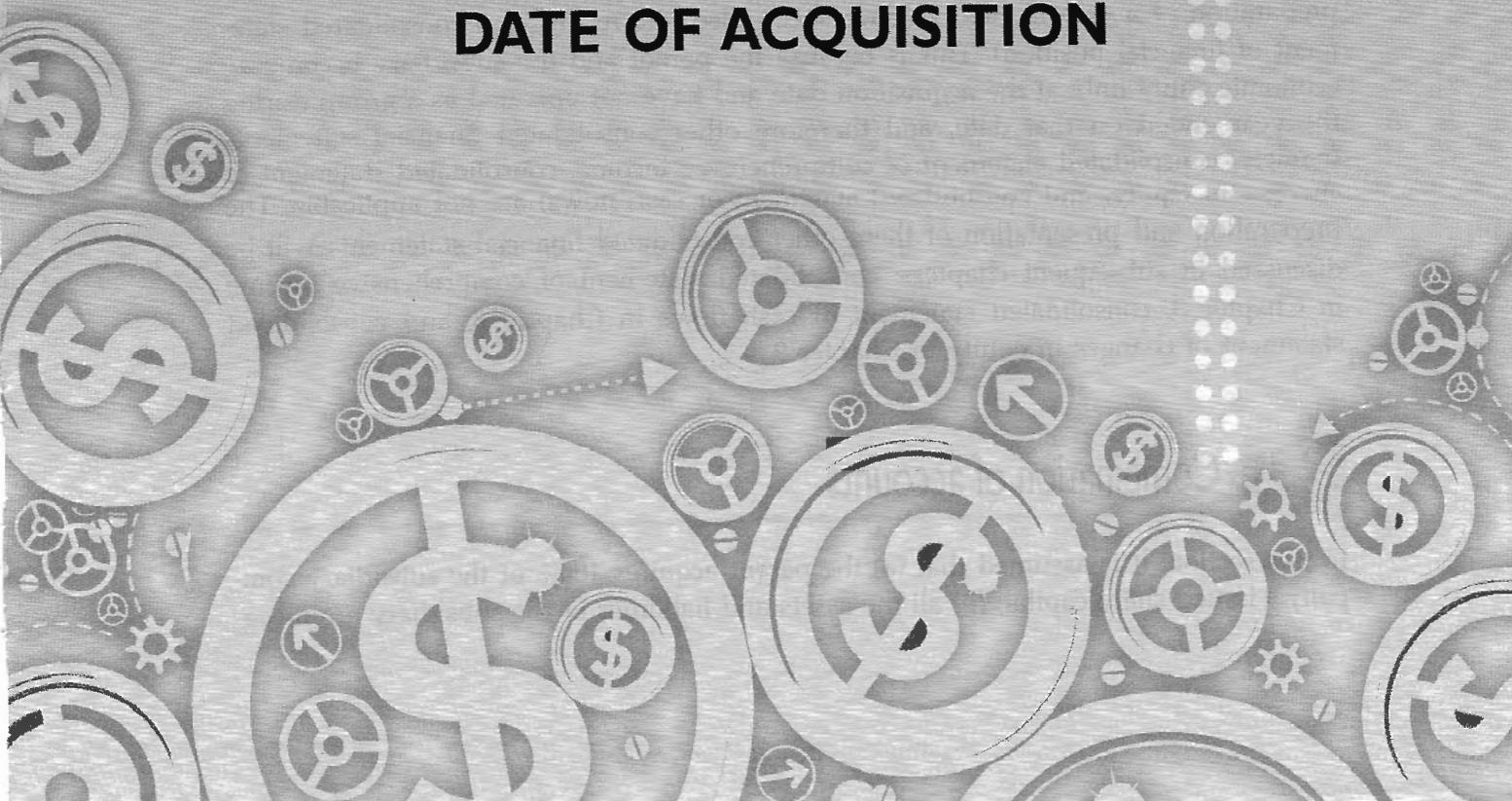
A Ltd holds 60% of the issued share capital of B Ltd, when B Ltd was incorporated in 20X1. The purpose and design of B Ltd are such that, power over B Ltd arises solely from voting rights through shareholdings proportionately.

Assume that in 20X5, the management of B Ltd is entrusted to a management company C Ltd through a contract. In this case, it is obvious that A Ltd controls B Ltd from 20X1 to 20X4. However, in 20X5, A Ltd has to reassess whether it still controls B Ltd. It is possible, in this case, that from 20X5, the relevant activities of B Ltd may no longer be directed through voting rights, but instead the contract arrangement may give C Ltd the current ability to direct the relevant activities of B Ltd.

CHAPTER

2

CONSOLIDATION AT THE DATE OF ACQUISITION



2.1 Introduction

In this chapter, discussion is limited to cases where consolidated financial statements are prepared at the date when a parent acquires a subsidiary. Where consolidated financial statements are prepared at the date of acquisition (which coincides with the balance sheet date of the companies), certain specific consolidation adjustments are required.

A basic consolidation adjustment is, of course, to combine the financial statements of the parent and the subsidiary together into one set of financial statements (the consolidated financial statements). This will be discussed in Section 2.2.

Another consolidation adjustment will be required if the assets and liabilities of the subsidiary acquired are not stated at their respective fair values. This could happen if some of the subsidiary's assets and liabilities are either undervalued or overvalued or not recognized. This adjustment will be discussed in Section 2.3.

A third consolidation adjustment that may be required occurs when the cost of investment is not equal to the fair values of the net identifiable assets of the subsidiary acquired. The difference could be due to the fact that the subsidiary may have a non-identifiable asset, or that the parent may be willing to pay a premium for the benefits of the affiliation (for example, economy of scale, reduction of risks, etc.). The reverse may also happen. This adjustment will be discussed further in Section 2.4.

A further consolidation adjustment will be required if the parent does not acquire 100% of the subsidiary's issued share capital. In this case, non-controlling interest (in other words, the interest of the non-controlling shareholders in the net assets of the subsidiary) arises, and this adjustment will be dealt with in Section 2.5.

It should be noted at the outset that in this chapter, the focus is only on the preparation of a consolidated balance sheet (also referred to as a consolidated statement of financial position). This is because the parent and the subsidiary become an economic entity only at the acquisition date and have not operated as a group during the year ended on that date, and therefore other consolidated financial statements (namely, consolidated statement of comprehensive income, consolidated statement of changes in equity, and consolidated statement of cash flows) are not applicable. The preparation and presentation of these other consolidated financial statements will be discussed in subsequent chapters: consolidated statement of comprehensive income in Chapter 3, consolidated statement of cash flows in Chapter 8, and consolidated statement of changes in equity in Chapter 9.

2.2 Combination of accounts

In this section, it is assumed that (a) the parent acquires 100% of the subsidiary company's issued share capital; (b) all the assets and liabilities of the subsidiary are recog-

nized and stated at their respective fair values in the subsidiary's balance sheet; and (c) the cost of investment is equal to the fair values of the net identifiable assets of the subsidiary acquired.

Of all the consolidation problems, this is one of the simplest to resolve. All that is required in the consolidation process is (a) the elimination of the cost of investment against the shareholders' equity of the subsidiary, and (b) the adding together, on a line-by-line basis, like items of assets and liabilities in the balance sheets of the parent and the subsidiary, as required by FRS 110 (paragraph B86).

It is necessary to eliminate the cost of investment against the shareholders' equity of the subsidiary, because at the date of acquisition, the cost of investment is equal to the net assets of the subsidiary acquired, and the net assets of the subsidiary is represented by its shareholders' equity (assets – liabilities = shareholders' equity). This elimination is to avoid double-counting when all the assets and liabilities of the parent and the subsidiary are added together.

The net effect of this elimination is to replace the cost of investment in the parent's balance sheet with the assets and liabilities of the subsidiary. Thus, the consolidated balance sheet will show, as it should, all the assets and liabilities of both the parent and the subsidiary, which are under common control.

Example 2.1

A Ltd acquired 100% of the issued share capital of B Ltd on 31 December 20X8 for a total consideration of \$120,000. The balance sheets of A Ltd and B Ltd as at that date, which reflected the fair values of the respective net assets, are as follows:

	A Ltd	B Ltd
	\$'000	\$'000
Land	400	150
Investment	120	–
Debtors	200	–
Bank	40	20
	<hr/>	<hr/>
	760	170
	<hr/>	<hr/>
Share capital	500	100
Retained profit	160	20
Long-term loan	–	50
Creditors	100	–
	<hr/>	<hr/>
	760	170
	<hr/>	<hr/>

Required

Prepare the consolidated balance sheet for A Ltd and its subsidiary as at 31 December 20X8.

Solution

(a) Consolidation journal entry

Dr Share capital (B)	100
Dr Retained profit (B)	20
Cr Investment in B Ltd	120
(elimination of investment account)	

(b) Consolidation worksheet

	A Ltd	B Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Land	400	150			550
Investment	120	—	120		—
Debtors	200	—			200
Bank	40	20			60
	<u>760</u>	<u>170</u>			<u>810</u>
Share capital	500	100	100		500
Retained profit	160	20	20		160
Long-term loan	—	50			50
Creditors	100	—			100
	<u>760</u>	<u>170</u>	<u>120</u>	<u>120</u>	<u>810</u>

(c) Consolidated balance sheet

A Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Land	550
Debtors	200
Bank	60
	<u>810</u>
Share capital	500
Retained profit	160
Long-term loan	50
Creditors	100
	<u>810</u>

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Fair value adjustments

In this section, the assumption that all the identifiable assets and liabilities of the subsidiary are recognized and stated at their respective acquisition-date fair values in the subsidiary's balance sheet is relaxed.

(It may be noted that, currently, the only non-identifiable asset that is accounted for is 'goodwill'. Thus, for purposes of discussion, it is assumed that 'identifiable assets and liabilities' means all assets and liabilities except goodwill. Goodwill will be discussed in Section 2.4 of this chapter.)

FRS 103 requires all the subsidiary's identifiable assets and liabilities (whether or not recognized in the subsidiary's balance sheet) acquired in the business combination that meet the recognition criteria to be recognized in the consolidated balance sheet at their respective acquisition-date fair values. This consolidation issue is often referred to as 'fair value adjustment' and may involve the following two consolidation adjustments:

- (a) If the identifiable assets and liabilities recognized by the subsidiary are not stated at their respective fair values, consolidation adjustment is required so as to ensure that they are stated at their respective acquisition-date fair values in the consolidated balance sheet; and
- (b) If the identifiable assets and liabilities are not recognized by the subsidiary, consolidation adjustments may be required to recognize them in the consolidated balance sheet at their respective acquisition-date fair values.

Furthermore, FRS 12 *Income Taxes* requires the tax effect of fair value adjustments, if any, to be accounted for as deferred tax assets or liability. This issue will be discussed in Section 2.3.3.

2.3.1 Restating identifiable assets and liabilities to acquisition-date fair value

As mentioned, FRS 103 requires the subsidiary's recognized identifiable assets and liabilities to be stated, in the consolidated balance sheet, at their respective acquisition-date fair values. This is because the cost of the subsidiary's assets and liabilities to the group is equal to their respective fair values at the date of acquisition. For example, if the subsidiary has a piece of land that had a market value of \$10 million (regardless of its book value) at the date when the parent acquired the subsidiary, then the cost of the land to the group is \$10 million. The land should therefore be carried in the consolidated balance sheet at \$10 million.

The consolidation adjustment required depends on whether or not the subsidiary has made the adjustments in its own books for the fair values of the assets and liabilities. (For example, under FRS 2, the subsidiary is not allowed to revalue its inventory and under FRS 16, the subsidiary may carry its property, plant and equipment at cost or at revalued amount.)

If the subsidiary has not made the adjustments in its own books, then consolidation journal entries must be made to adjust the book values of the recognized identifiable assets and liabilities of the subsidiary acquired to their respective acquisition-date fair values. If the subsidiary has made the adjustments in its own books, then the problem of undervaluation or overvaluation does not exist anymore. (Except that, in this latter case, the subsidiary may then have 'revaluation reserves', which are to be treated as part of shareholders' equity at the date of acquisition, and therefore eliminated against the cost of investment.)

Example 2.2

C Ltd acquired 100% of the issued share capital of D Ltd on 31 December 20X8 for a total consideration of \$200,000. The balance sheets of C Ltd and D Ltd as at that date are as follows:

	C Ltd	D Ltd
	\$'000	\$'000
Land	—	150
Investment	200	—
Debtors	100	—
Bank	50	30
	<hr/> <u>350</u>	<hr/> <u>180</u>
Share capital	200	100
Retained profit	90	50
Creditors	60	30
	<hr/> <u>350</u>	<hr/> <u>180</u>

C Ltd and D Ltd agreed that D Ltd's land had a fair value of \$200,000 as at 31 December 20X8.

Required

Prepare the consolidated balance sheet for C Ltd and its subsidiary as at 31 December 20X8.

Solution

(a) Consolidation journal entry

Dr Share capital (D)	100
Dr Retained profit (D)	50
Dr Land	50
Cr Investment in D Ltd	200
(elimination of investment account)	

(b) Consolidation worksheet

	C Ltd	D Ltd	Adjustments		Consolidated balances
	\$'000	\$'000	Dr	Cr	\$'000
Land	—	150	50		200
Investment	200	—		200	—
Debtors	100	—			100
Bank	50	30			80
Share capital	200	100	100		200
Retained profit	90	50	50		90
Creditors	60	30			90

(c) Consolidated balance sheet

C Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Land	200
Debtors	100
Bank	80
	<u>380</u>
Share capital	200
Retained profit	90
Creditors	90
	<u>380</u>

Note to the solution

Alternatively, the consolidation journal entries may be as follows:

Dr Land	50
Cr Revaluation reserves (D)	50
(to record fair value of land)	

and

Dr Share capital (D)	100
Dr Revaluation reserves (D)	50
Dr Retained profit (D)	50
Cr Investment in D Ltd	200
(elimination of investment account)	

Example 2.3

Refer to the case in Example 2.2. Assume that D Ltd revalues the land in its own books through the following journal entry:

Dr Land	50,000
Cr Revaluation reserve	50,000
(to record revaluation of land)	

After the above journal entry, D Ltd's balance sheet as at 31 December 20X8 will be as follows:

	\$'000
Land	200
Bank	<u>30</u>
	<u>230</u>
Share capital	100
Revaluation reserve	50
Retained profit	50
Creditors	<u>30</u>
	<u>230</u>

Solution

(a) Consolidation journal entry

Dr Share capital (D)	100
Dr Revaluation reserve (D)	50
Dr Retained profit (D)	50
Cr Investment in D Ltd	200
(elimination of investment account)	

(b) Consolidation worksheet

	C Ltd	D Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Land	—	200			200
Investment	200	—		200	—
Debtors	100	—			100
Bank	50	30			80
Share capital	200	100	100		200
Revaluation reserve	—	50	50		—
Retained profit	90	50	50		90
Creditors	60	30			90

(c) Consolidated balance sheet

C Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Land	200
Debtors	100
Bank	80
	<hr/>
	380
	<hr/>
Share capital	200
Retained profit	90
Creditors	90
	<hr/>
	380
	<hr/>

Note to the solution

The consolidated balance sheet is exactly the same as that shown in Example 2.2.



2.3.2 Recognizing unrecognized identifiable assets and liabilities

As mentioned, besides recognizing in the consolidated balance sheet the subsidiary's recognized identifiable assets and liabilities, FRS 103 also requires recognizing the subsidiary's unrecognized identifiable assets and liabilities acquired in the business combination if they meet the recognition criteria stated below.

To qualify for recognition in the consolidated balance sheet, FRS 103 provides that the unrecognized identifiable assets and liabilities of the subsidiary must meet two criteria: (a) they must meet the definition of assets and liabilities in the FRS/Framework at the acquisition date (paragraph 11); and (b) they must be part of what the acquirer and the acquiree exchanged in the business combination rather than the result of separate transactions (paragraph 12).

In the FRS/Framework, an asset is defined as 'a resource controlled by an enterprise as a result of past events and from which future benefits are expected to flow to the enterprise', and a liability is defined as 'a present obligation of an enterprise arising from past events, the settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits'. Thus, those identifiable assets and liabilities that meet the above definition but are not recognized in the subsidiary's balance sheet should be recognized in the consolidated balance sheet.

Many identifiable intangible assets are not recognized in the subsidiary's balance sheet. This is because FRS 38 *Intangible Assets* requires very stringent rules to be met for an expenditure to be recognized as an intangible asset. Thus, under FRS 38, many internally generated intangible assets (e.g., brand, copyright, customer lists, and in-process research and development projects) are not recognized. These unrecognized identifiable intangible assets will have to be recognized in the consolidated balance sheet (assuming the second recognition criterion stated in paragraph 12 is met).

To illustrate, assume that ABC Ltd acquires LMN Ltd on 31 December 20X8. LMN Ltd has the following intangible assets that are not recognized in its books: (a) a household brand name that the market has valued at \$10 million; (b) a customer list consisting of information about customers, such as their names, personal preferences and contact information, which is estimated to have a fair value of \$5 million; and (c) a good customer relationship, which is highly valued by LMN Ltd but is estimated to have a fair value of only \$1 million once the ownership and management of LMN Ltd is changed through the acquisition.

In this case, FRS 103 requires ABC Ltd to recognize the brand name of \$10 million, the customer list of \$5 million and customer relationship of \$1 million in its consolidated balance sheet.

There are also many contingent liabilities that are not recognized in the subsidiary's balance sheet. This is because FRS 37 *Provisions, Contingent Liabilities and Contingent Assets* requires very stringent rules to be met for a contingency to be recognized as a liability. Thus, under FRS 37, many contingencies (e.g., potential losses arising from lawsuits) are not recognized and are just disclosed in the notes to financial statements. These unrecognized contingencies may have to be recognized in the consolidated balance sheet, if the two recognition criteria (as stated in paragraph 11 and paragraph 12) are met. In this context it should be noted that there are two categories of contingent liabilities disclosed in the notes to financial statements (and not recognized in the balance sheet) under FRS 37, one of which meets the definition of liability while the other does not. The two categories of contingent liability are (a) possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the enterprise; and (b) present obligation that arises from past events but is not recognized because it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or the amount of the obligation cannot be measured with sufficient reliability. As mentioned above, a liability is a 'present obligation'. Thus, category (a) of contingent liability, which is a 'possible obligation', does not meet the definition of liability, but category (b), which is a 'present obligation', meets the definition of liability. Consequently, category (a) of contingent liability should not be recognized;

only category (b) of contingent liability should be recognized in the consolidated balance sheet (assuming the second recognition criterion stated in paragraph 12 is met).

To illustrate, assume that DEF Ltd acquires MNO Ltd on 31 December 20X8. At the date of acquisition, MNO Ltd has disclosed two contingent liabilities in its notes to financial statements: (a) a contingent liability involving a claim for infringement of copyright, in which the lawyers are of the opinion that there is a 60% chance that MNO Ltd will have to pay nothing, a 20% chance that it will have to pay \$100,000 and another 20% chance that it will have to pay \$500,000; and (b) a contingent liability involving a possible payment of \$1 million compensation to the CEO in the event that she is dismissed within three years for not meeting the profit targets.

In this case, the contingent liability in respect of the claim for infringement of copyright (which, being a present obligation, meets the definition of liability) should be recognized as a liability in the consolidated balance sheet (the amount of which is calculated as the expected amount of \$120,000 [$60\% \times \$0 + 20\% \times \$100,000 + 20\% \times \$500,000$]). However, the contingent liability in respect of the possible payment to the CEO (which, being a future obligation, does not meet the definition of liability) should not be recognized as a liability in the consolidated balance sheet.

As mentioned, to qualify for recognition, the second criterion is that the identifiable assets and liabilities acquired must be part of what the acquirer and the acquiree exchanged in the business combination rather than the result of separate transactions (paragraph 12).

A transaction entered into by or on behalf of the parent primarily for the benefit of the parent or the group, rather than primarily for the benefit of the subsidiary (or its former owners) before the business combination, is likely to be a separate transaction. For example, when the parent reimburses the subsidiary for paying the parent's due diligence costs in the business combination, this transaction is not part of the business combination transaction.

To further illustrate, assume that ABC Ltd acquires XYZ Ltd on 31 December 20X8. As part of the acquisition, ABC Ltd announces a plan to restructure XYZ Ltd. In this case, the provision for restructuring should not be recognized as a liability in the consolidated balance sheet, because it is not part of the business combination. If, in this case, XYZ had already announced a detailed plan for restructuring before it was acquired by ABC Ltd, and had already recognized a provision for restructuring in its balance sheet, then the provision for restructuring should be recognized as a liability in the consolidated balance sheet, because it is part of the business combination transaction.

The following example illustrates the discussion in this section.

Example 2.4

D Ltd acquired 100% of the issued share capital of E Ltd on 31 December 20X8 for a total consideration of \$250,000. The balance sheets of D Ltd and E Ltd as at that date are as follows:

	D Ltd	E Ltd
	\$'000	\$'000
Investment	250	—
Stock	200	150
Debtors	150	100
Bank	50	30
	<u>650</u>	<u>280</u>
Share capital	500	100
Retained profit	90	50
Creditors	60	130
	<u>650</u>	<u>280</u>

On the date of the above acquisition, D Ltd and E Ltd agreed that

- (a) E Ltd's stock had a fair value of \$180,000;
- (b) E Ltd had a brand name with a fair value of \$100,000; and
- (c) E Ltd had a pending lawsuit in which the lawyer advised that there was a 30% chance that the company would lose the case and would then have to pay \$100,000.

Required

Prepare the consolidated balance sheet for D Ltd and its subsidiary as at 31 December 20X8.

Solution

- (a) Consolidation journal entry

Dr Share capital (E)	100
Dr Retained profit (E)	50
Dr Stock	30
Dr Brand	100
Cr Provision for litigation loss	30
Cr Investment in E Ltd	250
(elimination of investment account)	

(b) Consolidation worksheet

	D Ltd	E Ltd	Adjustments		Consolidated balances
	\$'000	\$'000	Dr	Cr	\$'000
Brand	—	—	100		100
Investment	250	—		250	—
Stock	200	150	30		380
Debtors	150	100			250
Bank	50	30			80
Share capital	500	100	100		500
Retained profit	90	50	50		90
Creditors	60	130			190
Provision	—	—		30	30

(c) Consolidated balance sheet

D Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Brand	100
Stock	380
Debtors	250
Bank	80
	<u>810</u>
Share capital	500
Retained profit	90
Creditors	190
Provision for litigation loss	30
	<u>810</u>

Notes to the solution

- (a) Stock of the subsidiary is carried in the consolidated balance sheet at \$180,000, its acquisition-date fair value. Note that \$180,000 is the cost of the stock to the group. Therefore, as far as the consolidated financial statements are concerned, carrying the stock at \$180,000 is in compliance with the requirement of FRS 2 *Inventories*.
- (b) The subsidiary's brand, even though not recognized in the subsidiary's balance sheet because it does not meet the recognition criteria under FRS 38 *Intangible Assets*, is now recognized in the consolidated balance sheet under FRS 103.

- (c) The provision for litigation loss, even though not recognized in the subsidiary's balance sheet because it does not meet the recognition criteria under FRS 37, is now recognized in the consolidated balance sheet under FRS 103.



2.3.3 Tax effect on fair value adjustment

FRS 12 adopts two basic principles. The first principle relates to the issue of whether or not a deferred tax liability or asset exists. This principle states that if it is probable that recovery or settlement of the carrying amount of an asset or liability will make future tax payments larger or smaller than they would be if such recovery or settlement were to have no tax consequences, then a deferred tax liability or asset should be recognized, with certain limited exceptions. The second principle relates to the issue of how the effects of deferred taxes should be accounted for. This principle states that an enterprise should account for the effect of the deferred tax liability or asset in the same way that it accounts for the underlying transaction or event.

Thus, where fair value adjustment is made in consolidation, one related issue to consider is whether or not there is deferred tax to account for. Applying the first principle stated above, if the fair value adjustment will cause the recovery or settlement of the carrying amount of an asset or liability to result in future tax payments that will be larger or smaller than they would be if such recovery or settlement were to have no tax consequences, then a deferred tax liability or asset should be recognized. Conversely, if the fair value adjustment has no effect on the future tax payable, then no deferred tax need be accounted for.

If, under the first principle, it is determined that there is a deferred tax asset or liability arising from fair value adjustment, a further issue to consider is how the effects of deferred tax should be accounted for. Applying the second principle stated above, given that fair value adjustment affects the goodwill figure (as will be discussed under Section 2.4), the deferred tax effect of fair value adjustment should also be accounted for as an adjustment to the goodwill figure.

Example 2.5



Refer to Example 2.4, where D Ltd acquired 100% of the issued share capital of E Ltd on 31 December 20X8 for a total consideration of \$250,000, and the balance sheets of D Ltd and E Ltd as at that date are as follows:

	D Ltd	E Ltd
	\$'000	\$'000
Investment	250	—
Stock	200	150
Debtors	150	100
Bank	50	30
	<hr/>	<hr/>
	650	280
Share capital	500	100
Retained profit	90	50
Creditors	60	130
	<hr/>	<hr/>
	650	280
	<hr/>	<hr/>

On the date of the above acquisition, D Ltd and E Ltd agreed that

- (a) E Ltd's stock had a fair value of \$180,000;
- (b) E Ltd had a brand name with a fair value of \$100,000; and
- (c) E Ltd had a pending lawsuit in which the lawyer advised that there was a 30% chance that the company would lose the case and would then have to pay \$100,000.

For this example, assume that the relevant tax rules do not tax or allow deduction on brands and provision for litigation loss, but allow deduction on the cost of stock of \$150,000 when sales subsequently occur. Also assume a statutory tax rate of 20%.

Required

Prepare the consolidated balance sheet for D Ltd and its subsidiary as at 31 December 20X8.

Solution

- (a) Consolidation journal entry

Dr Share capital (E)	100
Dr Retained profit (E)	50
Dr Goodwill on consolidation	6
Dr Stock	30
Dr Brand	100
Cr Provision for litigation loss	30
Cr Deferred tax liability	6
Cr Investment in E Ltd	250
(elimination of investment account)	

(b) Consolidation worksheet

	D Ltd	E Ltd	Adjustments		Consolidated balances
	\$'000	\$'000	Dr	Cr	\$'000
Goodwill	—	—	6		6
Brand	—	—	100		100
Investment	250	—		250	—
Stock	200	150	30		380
Debtors	150	100			250
Bank	50	30			80
Share capital	500	100	100		500
Retained profit	90	50	50		90
Creditors	60	130			190
Provision	—	—		30	30
Deferred tax liability	—	—		6	6

(c) Consolidated balance sheet

D Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	6
Brand	100
Stock	380
Debtors	250
Bank	80
	<u>816</u>
Share capital	500
Retained profit	90
Creditors	190
Provision for litigation loss	30
Deferred tax liability	6
	<u>816</u>

Notes to the solution

- (a) Since the tax rules allow the cost of stock of \$150,000 to be deducted as cost of sales when the sales subsequently occur, applying the first principle of FRS 12, a deferred tax liability has to be accounted for arising from fair value adjustment for the stock. Since the relevant tax rules do not recognize brands, applying the first principle, there is no deferred tax to account for arising from fair value adjustment for the brand. Similarly, since the tax

rules do not allow deduction when the damages are paid on the lawsuit, applying the first principle, there is no deferred tax to be accounted for arising from fair value adjustment for the provision for litigation loss.

- (b) Based on the statutory tax rate of 20%, a deferred tax liability of \$6,000 ($20\% \times$ temporary difference of \$30,000 on stock [carrying amount of \$180,000 – tax base of \$150,000]) has to be accounted for in the consolidated balance sheet arising from fair value adjustment.
- (c) Applying the second principle of FRS 12, since fair value adjustment affects goodwill on consolidation (see Section 2.4), the deferred tax effect should also affect the goodwill on consolidation. Therefore, in this case, there is goodwill on consolidation of \$6,000 (compared to Example 2.4, where there is no goodwill on consolidation when the deferred tax effects on fair value adjustment have not been taken into account).

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Goodwill on consolidation

In this section, the assumption that the cost of investment is equal to the fair value of the identifiable net assets of the subsidiary acquired is relaxed.

In acquiring a subsidiary, the parent may be willing to pay a premium for the benefits arising from the business combination, or for the earning potential of the subsidiary. This excess of cost of investment over the acquisition-date fair value of identifiable net assets of the subsidiary acquired is to be recorded in the consolidated financial statements as 'goodwill on consolidation'. Conversely, the parent may acquire a subsidiary at a bargain, resulting in an excess of acquisition-date fair value of identifiable net assets of the subsidiary acquired over the cost of investment. This excess is generally referred to as 'negative goodwill' or 'gain on bargain purchase'.

Accounting treatments for goodwill and negative goodwill are provided for in FRS 103 (these accounting treatments are exactly the same as those previously provided for under FRS 103 [2004], except for the measurement issue).

It may be noted that goodwill or negative goodwill on consolidation does not give rise to deferred tax asset/liability under FRS 12.

2.4.1 Goodwill

Goodwill on consolidation is defined in FRS 103 as 'an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized' (Appendix A of FRS 103).

FRS 103 provides that goodwill on consolidation should be recognized as an asset (paragraph 32).

FRS 103 further provides that, assuming the parent acquired 100% interest of the subsidiary (i.e., there is no non-controlling interest), the goodwill on consolidation should initially be measured at an amount that is equal to the excess of the cost of investment over the acquirer's interest in the acquisition-date fair value of identifiable net assets of the subsidiary acquired (paragraph 32).

(If there is non-controlling interest, the amount of goodwill on consolidation is affected by the measurement bases – (either 'fair value of identifiable net assets of the subsidiary' or 'fair value') – used to measure the non-controlling interests, which will be discussed in Section 2.5 below.)

Subsequent to initial recognition, the goodwill on consolidation should be subject to impairment test under FRS 36 *Impairment of Assets*, but not subject to amortization.

In this chapter, the discussion is focused on the initial recognition and measurement of goodwill on consolidation. Accounting for subsequent impairment of goodwill on consolidation will be discussed in Chapter 3.

Example 2.6

E Ltd acquired 100% of the issued share capital of F Ltd on 31 December 20X8 for a total cash consideration of \$200,000. The balance sheets of E Ltd and F Ltd as at that date, which reflect the fair values of the respective net assets, are as follows:

	E Ltd	F Ltd
	\$'000	\$'000
Land	400	150
Investment	200	–
Debtors	100	20
Bank	60	30
	<hr/>	<hr/>
	760	200
	<hr/>	<hr/>
Share capital	500	100
General reserves	100	20
Retained profit	60	50
Creditors	100	30
	<hr/>	<hr/>
	760	200
	<hr/>	<hr/>

The excess payment is for goodwill.

Required

Prepare the consolidated balance sheet for E Ltd and its subsidiary as at 31 December 20X8.

Solution

(a) Consolidation journal entry

Dr Share capital (F)	100
Dr General reserves (F)	20
Dr Retained profit (F)	50
Dr Goodwill on consolidation	30
Cr Investment in F Ltd	200
(elimination of investment account)	

(b) Consolidation worksheet

	E Ltd	F Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	—	—	30		30
Land	400	150			550
Investment	200	—		200	—
Debtors	100	20			120
Bank	60	30			90
Share capital	500	100	100		500
General reserves	100	20	20		100
Retained profit	60	50	50		60
Creditors	100	30			130

(c) Consolidated balance sheet

**E Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8**

	\$'000
Goodwill on consolidation	30
Land	550
Debtors	120
Bank	90
	<hr/>
Share capital	500
General reserves	100
Retained profit	60
Creditors	130
	<hr/>

Note to the solution

Goodwill on consolidation is the difference between the cost of investment and the fair values of identifiable net assets acquired. Therefore, fair value adjustment (as discussed under Section 2.3) should first be accounted for before goodwill on consolidation can be determined.

Example 2.7 • • • • • • • • • • • • • • • • • • •

F Ltd acquired 100% of the issued share capital of G Ltd on 31 December 20X8 for a total cash consideration of \$300,000. The balance sheets of F Ltd and G Ltd as at that date are as follows:

	F Ltd	G Ltd
	\$'000	\$'000
Investment	300	—
Stock	200	150
Debtors	150	100
Bank	50	30
	<u>700</u>	<u>280</u>
Share capital	500	100
Retained profit	140	50
Creditors	60	130
	<u>700</u>	<u>280</u>

On the date of the above acquisition, F Ltd and G Ltd agreed that

- (a) G Ltd's stock had a fair value of \$140,000;
- (b) G Ltd had a brand name with a fair value of \$100,000; and
- (c) G Ltd had a pending lawsuit in which the lawyer advised that there was a 40% chance that the company would lose the case and would then have to pay \$100,000.

Required

Prepare the consolidated balance sheet for F Ltd and its subsidiary as at 31 December 20X8.

Solution

- (a) Consolidation journal entry

Dr Share capital (G)	100
Dr Retained profit (G)	50
Dr Brand	100
Dr Goodwill on consolidation	100
Cr Stock	10
Cr Provision for litigation loss	40
Cr Investment in E Ltd	300
(elimination of investment account)	

(b) Consolidation worksheet

	F Ltd	G Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	—	—	100		100
Brand	—	—	100		100
Investment	300	—		300	—
Stock	200	150		10	340
Debtors	150	100			250
Bank	50	30			80
Share capital	500	100	100		500
Retained profit	140	50	50		140
Creditors	60	130			190
Provision	—	—		40	40

(c) Consolidated balance sheet

F Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Goodwill on consolidation	100
Brand	100
Stock	340
Debtors	250
Bank	80
	<u>870</u>
Share capital	500
Retained profit	140
Creditors	190
Provision for litigation loss	40
	<u>870</u>

Notes to the solution

- (a) Fair value adjustments should first be accounted for before goodwill can be determined.
- (b) Goodwill on consolidation of \$100,000 is calculated as follows: cost of investment of \$300,000 – fair value of identifiable net assets acquired \$200,000 (book value of \$150,000 + fair value adjustment of \$50,000).
- (c) The above solution ignores FRS 12.

- (d) Applying FRS 12 and assuming that the relevant tax rules do not deal with brands, but allow the cost of stock of \$150,000 to be deducted as the cost of sales when the sales subsequently occur, and allow deduction when the damages are subsequently paid on the lawsuit, and also assuming a statutory tax rate of 20%, the consolidation adjustment entry will be as follows:

Dr Share capital (G)	100
Dr Retained profit (G)	50
Dr Brand	100
Dr Goodwill on consolidation	90
Dr Deferred tax asset	10
Cr Stock	10
Cr Provision for litigation loss	40
Cr Investment in E Ltd	300
(elimination of investment account)	

Note that a deferred tax asset of \$10,000 ($20\% \times$ temporary difference of \$40,000 on provision on litigation loss [carrying amount of \$40,000 – tax base of \$nil] + 20% × deductible temporary difference of \$10,000 on stock [carrying amount of \$140,000 – tax base of \$150,000]) has to be accounted for in the consolidated balance sheet arising from fair value adjustment. Consequently, the goodwill on consolidation will be \$90,000 (which may be verified as the cost of investment of \$300,000 – fair value of net identifiable assets acquired \$210,000 [book value of \$150,000 + fair value adjustment of \$50,000 + deferred tax asset of \$10,000]). Note that the deferred tax effect of fair value adjustment affects the goodwill on consolidation figure, which is consistent with the second principle of FRS 12, as earlier discussed.



2.4.2 Negative goodwill

For negative goodwill (also referred to as 'gain on bargain purchase'), FRS 103 requires it to be recognized immediately as income in the consolidated statement of comprehensive income (paragraph 34).

However, before any negative goodwill is recognized, FRS 103 requires the acquirer to reassess the cost of investment and the recognition and measurement of the acquiree's identifiable assets and liabilities (paragraph 36).

(The measurement basis used for measuring non-controlling interests will also affect the measurement of negative goodwill. This will be discussed in Section 2.5.)

Example 2.8

H Ltd acquired 100% of the issued share capital of J Ltd on 31 December 20X8 for a total cash consideration of \$200,000. The balance sheets of H Ltd and J Ltd as at that date are as follows:

	H Ltd	J Ltd
	\$'000	\$'000
Investment	200	—
Stock	100	150
Debtors	150	100
Bank	50	30
	<u>500</u>	<u>280</u>
Share capital	300	100
Retained profit	140	150
Creditors	60	30
	<u>500</u>	<u>280</u>

On the date of the above acquisition, H Ltd and J Ltd agreed that

- (a) J Ltd's stock had a fair value of \$140,000;
- (b) J Ltd had a pending lawsuit in which the lawyer advised that there was a 40% chance that the company would lose the case and would then have to pay \$50,000.

Required

Prepare the consolidated balance sheet for H Ltd and its subsidiary as at 31 December 20X8.

Solution

(a) Consolidation journal entry

Dr Share capital (J)	100
Dr Retained profit (J)	150
Cr Provision for litigation loss	20
Cr Stock	10
Cr Negative goodwill	20
Cr Investment in J Ltd	200
(elimination of investment account)	

(b) Consolidation worksheet

	H Ltd	J Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Investment	200	—		200	—
Stock	100	150		10	240
Debtors	150	100			250
Bank	50	30			80
Share capital	300	100	100		300
Retained profit	140	150	150		140
Creditors	60	30			90
Provision	—	—		20	20
Negative goodwill	—	—		20	20

(c) Consolidated balance sheet

H Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Stock	240
Debtors	250
Bank	80
	<u>570</u>
Share capital	300
Retained profit	160
Creditors	90
Provision for litigation loss	20
	<u>570</u>
	<u><u>570</u></u>

Notes to the solution

- (a) The negative goodwill of \$20,000 may be proved as follows: cost of investment of \$200,000 – fair value of net identifiable assets acquired \$220,000 (book value of \$250,000 – fair value adjustment of \$30,000).
- (b) The negative goodwill of \$20,000 is required by FRS 103 to be written off immediately to the consolidated statement of comprehensive income. Consequently, the negative goodwill of \$20,000 becomes part of retained profit in the above consolidated balance sheet.
- (c) The above solution ignores FRS 12.
- (d) Applying FRS 12 and assuming that the relevant tax rules allow the cost of stock of \$150,000 to be deducted as cost of sales when the sales subsequently occur and allow deduction when the damages are subsequently paid on the lawsuit, and also assuming a statutory tax rate of 20%, the consolidation adjustment entry will be as follows:

Dr Share capital (J)	100
Dr Retained profit (J)	150
Dr Deferred tax asset	6
Cr Provision for litigation loss	20
Cr Stock	10
Cr Negative goodwill	26
Cr Investment in J Ltd	200
(elimination of investment account)	

Note that a deferred tax asset of \$6,000 ($20\% \times$ deductible temporary difference of \$20,000 on provision on litigation loss [carrying amount of \$20,000 – tax base of \$nil] + $20\% \times$ deductible temporary difference of \$10,000 on stock [carrying amount of \$140,000 – tax base of \$150,000]) has to be accounted for in the consolidated balance sheet arising from fair value adjustment. Consequently, the negative goodwill will be \$26,000 (which may be verified as: cost of investment of \$200,000 – fair value of net identifiable assets acquired \$226,000 [book value of \$250,000 – fair value adjustment of \$30,000 + deferred tax asset of \$6,000]). Note that the deferred tax effect of fair value adjustment is on the negative goodwill figure, which is consistent with the second principle of FRS 12, as earlier discussed.



2.4.3 Goodwill of subsidiary

If a subsidiary company reports a 'goodwill' account (a non-identifiable asset) in its balance sheet, two points should be noted. Firstly, the goodwill account in the subsidiary's balance sheet should be ignored in the calculation of 'goodwill on consolidation'. This is because goodwill on consolidation, as defined in FRS 103, is the difference between cost of acquisition and the acquisition-date fair values of the identifiable net assets of the subsidiary acquired (goodwill account is a non-identifiable asset and therefore should not be included in the above calculation). Secondly, the goodwill account in the subsidiary's balance sheet should not be brought forward to the consolidated balance sheet. This is because, by definition, 'goodwill on consolidation' includes 'goodwill' and it does not make sense to present both 'goodwill on consolidation' and 'goodwill' of subsidiary in the consolidated balance sheet. It may be noted that the US GAAP, APB Opinion No. 16 *Business Combinations* provides that '... an acquiring corporation should not record as a separable asset the goodwill previously recorded by an acquired company ...' (paragraph 88).

In the consolidation process, the goodwill account in the subsidiary's book should first be set off against the reserves of the subsidiary, before the subsidiary's shareholder equity is eliminated against the cost of investment. The net effect of this treatment is that the 'goodwill' account of the subsidiary will be subsumed under the 'goodwill on consolidation' account and presented as a single item in the consolidated balance sheet.

If the subsidiary is deemed to have 'goodwill' but has not recorded it in its books, no consolidation problem arises. In this case, the parent will simply have to pay a premium resulting in an excess of cost of investment over the acquisition-date fair value of the net identifiable assets of the subsidiary acquired. The unrecorded goodwill of the subsidiary will, therefore, be reflected as part of the 'goodwill on consolidation' in the consolidated balance sheet.

Example 2.9

K Ltd acquired 100% of the issued share capital of L Ltd on 31 December 20X8 for a total consideration of \$200,000. The balance sheets of K Ltd and L Ltd as at that date, which reflect the fair values of the respective net assets, are as follows:

	K Ltd	L Ltd
	\$'000	\$'000
Goodwill	—	50
Land	400	200
Investment	200	—
Debtors	100	20
Bank	60	30
	760	300
Share capital	500	100
General reserves	100	20
Retained profit	60	50
Creditors	100	130
	760	300

The excess payment was for goodwill.

Required

Prepare the consolidated balance sheet for K Ltd and its subsidiary as at 31 December 20X8.

Solution

(a) Calculation of goodwill on consolidation

	\$'000
Cost of investment	200
Fair value of identifiable net assets ($200 + 20 + 30 - 130$) ...	120
Goodwill on consolidation	80

(b) Consolidation journal entry

Dr Share capital (L)	100
Dr General reserves (L)	20
Dr Retained profit (L)	50
Dr Goodwill on consolidation	80
Cr Goodwill (L)	50
Cr Investment in L Ltd	200
(elimination of investment account)	

(c) Consolidation worksheet

	K Ltd \$'000	L Ltd \$'000	Adjustments		Consolidated balances \$'000
			Dr	Cr	
Goodwill on consolidation ..	—	—	80		80
Goodwill	—	50		50	—
Land	400	200			600
Investment	200	—		200	—
Debtors	100	20			120
Bank	60	30			90
Share capital	500	100	100		500
General reserves	100	20	20		100
Retained profit	60	50	50		60
Creditors	100	130			230

(d) Consolidated balance sheet

K Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	80
Land	600
Debtors	120
Bank	90
	890
Share capital	500
General reserves	100
Retained profit	60
Creditors	230
	890

2.5 Non-controlling interest

In this section, the assumption that the parent acquires 100% of the subsidiary's issued share capital is relaxed.

To gain control, it is not necessary for a parent to acquire 100% of the subsidiary's issued share capital. In many cases, so long as the parent acquires more than 50% of the subsidiary's issued share capital, it would have gained control over the subsidiary's net assets and operation. In specific cases, a parent may have control over a subsidiary by acquiring less than 50% of the subsidiary's issued share capital, or even by not acquiring any shares in the subsidiary (see discussion in Appendix 1A of Chapter 1).

If a parent does not acquire 100% of the subsidiary's issued share capital, it does not own 100% of the subsidiary's net assets; the balance belongs to the non-controlling shareholders. These outside shareholders of the subsidiary are referred to as non-controlling shareholders, and their interest in the subsidiary's net assets and operating results is referred to as 'non-controlling interest' (previously referred to as 'minority interest').

When a parent acquires say, 80% of the subsidiary's issued share capital, it owns only 80% of the subsidiary's net assets. Theoretically, the consolidated balance sheet may consist of 100% of the parent's net assets plus 80% of the subsidiary's net assets. However, in accordance with the definition of 'asset' in the FRS/Framework and the 'full consolidation' concept of FRS 110, 100% of the subsidiary's assets/liabilities are added to those of the parent in the consolidated balance sheet, and the 20% (of the subsidiary's net assets) that is attributable to the non-controlling shareholders is accounted for as non-controlling interest in the consolidated balance sheet.

There are two consolidation issues in relation to non-controlling interest: (a) presentation and (b) measurement, which are discussed below.

2.5.1 Presentation of non-controlling interest

In regard to presentation, the issue is whether non-controlling interest in the consolidated balance sheet is part of shareholders' equity or a liability. Under different consolidation theories (see Chapter 10), non-controlling interest may be regarded as part of shareholders' equity or as a liability. However, FRS 110 requires non-controlling interest in the consolidated balance sheet to be presented within equity, separately from the parent shareholders' equity (paragraph 22).

Example 2.10

M Ltd acquired 90% of the issued share capital of N Ltd on 31 December 20X8 for a total consideration of \$108,000. The balance sheets of M Ltd and N Ltd as at that date, which reflect the fair values of the respective net assets, are as follows:

	M Ltd	N Ltd
	\$'000	\$'000
Land	400	150
Investment	108	—
Debtors	200	—
Bank	52	20
	<u>760</u>	<u>170</u>
Share capital	500	100
Retained profit	160	20
Long-term loan	—	50
Creditors	100	—
	<u>760</u>	<u>170</u>

Required

Prepare the consolidated balance sheet for M Ltd and its subsidiary as at 31 December 20X8 (assume that non-controlling interest is measured based on its fair value which is also equal to non-controlling interest's share of the acquisition-date fair value of identifiable net assets of N Ltd).

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (N) ($90\% \times 100$)	90
	Dr Retained profit (N) ($90\% \times 20$)	18
	Cr Investment in N Ltd	108

(elimination of investment account)

(ii)	Dr Share capital (N) ($10\% \times 100$)	10
	Dr Retained profit (N) ($10\% \times 20$)	2
	Cr Non-controlling interest	12

(to record non-controlling interest)

(b) Consolidation worksheet

	M Ltd	N Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Land	400	150			550
Investment	108	—	i 108		—
Debtors	200	—			200
Bank	52	20			72
Share capital	500	100	i 90 ii 10		500
Retained profit	160	20	i 18 ii 2		160
Long-term loan	—	50			50
Creditors	100	—			100
Non-controlling interest	—	—	ii 12		12

(c) Consolidated balance sheet

M Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Land	550
Debtors	200
Bank	72
	822
Share capital	500
Retained profit	160
	660
Non-controlling interest	12
Shareholders' equity	672
Long-term loan	50
Creditors	100
	822

**2.5.2 Measurement of non-controlling interest**

In regard to measurement, non-controlling interests may be measured using different bases under different consolidation theories. FRS 103 requires non-controlling interest

to be measured based on either (a) its fair value (for example, market price of the shares), or (b) its proportionate share of the acquisition-date fair value of the identifiable net assets of the subsidiary (paragraph 19). The parent may choose to adopt either measurement basis on a case-by-case basis. In other words, the parent may measure the non-controlling interest in Subsidiary A based on fair value, and measure the non-controlling interest in Subsidiary B based on the fair value of the identifiable net assets. (The now-superseded FRS 103 [2004] required the non-controlling interest [previously referred to as 'minority interest'] to be measured based on fair value of the identifiable net assets of the subsidiary.)

Example 2.11

P Ltd acquired 80% of the issued share capital of S Ltd on 31 December 20X8 for a total consideration of \$180,000 (at \$2.20 per share plus control premium). At this date, the identifiable net assets of S Ltd, which were carried in its books at \$150,000, were deemed to have a fair value of \$200,000. Share capital of S Ltd comprised 100,000 shares, which were traded at the stock exchange on 31 December 20X8 at \$2.20 per share.

In this case, non-controlling interest may be measured as follows:

(a) Based on 'fair value':
= $\$2.20 \times 20,000$ shares
= \$44,000

(b) Based on 'fair value of the identifiable net assets of the subsidiary':
= $20\% \times \$200,000$
= \$40,000



As mentioned earlier, the amount of goodwill on consolidation is affected by the measurement bases (either 'fair value of the identifiable net assets of the subsidiary' or 'fair value') used to measure the non-controlling interests.

Example 2.12

P Ltd acquired 60% of the issued share capital of S Ltd on 31 December 20X8 for a total consideration of \$60 million (at \$0.90 per share plus control premium). At this date, the identifiable net assets of S Ltd, which were carried in its books at \$70 million, were deemed to have a fair value of \$80 million. S Ltd was also deemed to have goodwill of \$20 million. Share capital of S Ltd comprised 100 million shares, which were traded in the stock exchange on 31 December 20X8 at \$0.90 per share.

Assume non-controlling interest is measured based on fair value of \$36 million (40 million shares \times \$0.90). In this case, goodwill on consolidation is calculated as follows:

	\$'million
Parent's cost of acquisition	60
Non-controlling interest	<u>36</u>
Total	96
Fair value of identifiable net assets acquired	<u>80</u>
Goodwill on consolidation	<u>16</u>

Alternatively, goodwill on consolidation may be calculated as follows:

	\$'million
Parent:	
Cost of investment	60
Less fair value of subsidiary's identifiable net assets ($60\% \times \$80$ million)	<u>48</u>
Parent's share of goodwill on consolidation	<u>12</u>
Non-controlling interest:	
Fair value	36
Less fair value of subsidiary's identifiable net assets ($40\% \times \$80$ million)	<u>32</u>
Non-controlling interest's share of goodwill on consolidation	<u>4</u>
Total goodwill on consolidation	<u>16</u>

Assume non-controlling interest is measured based on fair value of identifiable net assets of the subsidiary at \$32 million ($40\% \times \80 million). In this case, goodwill on consolidation is calculated as follows:

	\$'million
Parent's cost of acquisition	60
Non-controlling interest	<u>32</u>
Total	92
Fair value of identifiable net assets acquired	<u>80</u>
Goodwill on consolidation	<u>12</u>

Alternatively, goodwill on consolidation may be calculated as follows (since non-controlling interest is measured based on fair value of identifiable net assets of the subsidiary, the non-controlling interest in goodwill on consolidation (which is a non-identifiable asset) is not accounted for):

	\$'million
Parent:	6
Cost of investment	60
Less fair value of subsidiary's identifiable net assets ($60\% \times \$80$ million)	48
Parent's share of goodwill on consolidation	<u>12</u>
Non-controlling interest:	
Amount	32
Less fair value of subsidiary's identifiable net assets ($40\% \times \$80$ million)	<u>32</u>
Non-controlling interest's share of goodwill on consolidation	0
Total goodwill on consolidation	<u>12</u>



Note that the different measurement bases used for non-controlling interest will affect the amount of non-controlling interest. The different measurement bases used will also affect the amount of goodwill on consolidation (both positive and negative). However, the different measurement bases used for non-controlling interest will not affect the amount of identifiable assets and liabilities. This is because the identifiable assets and liabilities of the subsidiary acquired have to be measured based on their respective acquisition-date fair value, regardless of whether or not there is non-controlling interest and regardless of how the non-controlling interest is measured.

Example 2.13

S Ltd acquired 80% of the issued share capital of T Ltd on 31 December 20X8 for a total consideration of \$180,000. The balance sheets of S Ltd and T Ltd as at that date, are as follows:

	S Ltd	T Ltd
	\$'000	\$'000
Land	—	200
Investment in T Ltd	180	—
Debtors	100	10
Bank	60	10
	<u>340</u>	<u>220</u>
Share capital	200	100
Retained profit	60	50
Creditors	80	70
	<u>340</u>	<u>220</u>

T Ltd's land was deemed to have a fair value of \$250,000 on this date. Assume that, for purposes of FRS 12, when land is subsequently sold, the profit/loss thereof will attract tax at a rate of 20%. Share capital of T Ltd comprises 100,000 shares, which are traded in the stock exchange at \$2.20 per share.

Required

Prepare the consolidated balance sheet for S Ltd and its subsidiary as at 31 December 20X8.

Solution

The consolidated balance sheet will differ depending on the measurement bases used to measure non-controlling interest.

Solution A (Non-controlling interest is measured based on its fair value)

(a) Consolidation journal entries

(i)	Dr Share capital (T)	80
	Dr Retained profit (T)	40
	Dr Land	40
	Dr Goodwill on consolidation	28
	Cr Investment in T Ltd	180
	Cr Deferred tax liability	8
	(elimination of investment account)	

(ii)	Dr Share capital (T)	20
	Dr Retained profit (T)	10
	Dr Land	10
	Dr Goodwill on consolidation	6
	Cr Non-controlling interest	44
	Cr Deferred tax liability	2
	(to record non-controlling interest)	

(b) Consolidation worksheet

	S Ltd \$'000	T Ltd \$'000	Adjustments		Consolidated balances \$'000
			Dr \$'000	Cr \$'000	
Goodwill	—	—	i 28		
			ii 6		34
Land	—	200	i 40		
			ii 10		250
Investment	180	—		i 180	—
Debtors	100	10			110
Bank	60	10			70
Share capital	200	100	i 80		
			ii 20		200
Retained profit	60	50	i 40		
			ii 10		60
Creditors	80	70			150
Deferred tax	—	—	i 8		
			ii 2		10
Non-controlling interest ...	—	—	ii 44		44

(c) Consolidated balance sheet

S Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	34
Land	250
Debtors	110
Bank	70
	<u>464</u>
Share capital	200
Retained profit	60
Non-controlling interest	44
Deferred tax liability	10
Creditors	<u>150</u>
	<u>464</u>

Notes to solution A

- (a) Non-controlling interest is measured based on its fair value of \$44,000 (20,000 shares × \$2.20).
- (b) Land is carried at \$250,000, which may be proved as equal to parent's share of the acquisition-date fair value of the land of \$200,000 ($80\% \times \$250,000$) + non-controlling interest's share of the acquisition-date fair value of the land of \$50,000 ($20\% \times \$250,000$).
- (c) Deferred tax liability is \$10,000, which may be proved as equal to tax rate of $20\% \times$ fair value adjustment on land of \$50,000.
- (d) Goodwill on consolidation is \$34,000. This may be proved as follows:

	\$'000
Parent:	
Cost of investment	180
Less fair value of subsidiary's identifiable net assets ($80\% \times \$190,000^*$)	<u>152</u>
Parent's share of goodwill on consolidation	<u>28</u>
Non-controlling interest:	
Fair value	44
Less fair value of subsidiary's identifiable net assets ($20\% \times \$190,000^*$)	<u>38</u>
Non-controlling interest's share of goodwill on consolidation ..	<u>6</u>
Total goodwill on consolidation	<u>34</u>

*The fair value of the subsidiary's identifiable net assets is \$190,000, being book value of \$150,000 + revaluation of land of \$50,000 – deferred tax liability of \$10,000.

Solution B (Non-controlling interest is measured based on 'fair value of identifiable net assets of the subsidiary')

(a) Consolidation journal entries

(i)	Dr Share capital (T)	80
	Dr Retained profit (T)	40
	Dr Land	40
	Dr Goodwill on consolidation	28
	Cr Investment in T Ltd	180
	Cr Deferred tax liability	8
	(elimination of investment account)	
(ii)	Dr Share capital (T)	20
	Dr Retained profit (T)	10
	Dr Land	10
	Cr Non-controlling interest	38
	Cr Deferred tax liability	2
	(to record non-controlling interest)	

(b) Consolidation worksheet

	S Ltd \$'000	T Ltd \$'000	Adjustments		Consolidated balances \$'000
			Dr \$'000	Cr \$'000	
Goodwill	—	—	i 28		28
Land	—	200	i 40 ii 10		250
Investment	180	—		i 180	—
Debtors	100	10			110
Bank	60	10			70
Share capital	200	100	i 80 ii 20		200
Retained profit	60	50	i 40 ii 10		60
Creditors	80	70			150
Deferred tax	—	—	i 8 ii 2		10
Non-controlling interest	—	—	ii 38		38

(c) Consolidated balance sheet

S Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	28
Land	250
Debtors	110
Bank	70
	<u>458</u>
Share capital	200
Retained profit	60
Non-controlling interest	38
Deferred tax liability	10
Creditors	<u>150</u>
	<u>458</u>

Notes to solution B

- (a) Non-controlling interest is \$38,000 which may be proved as equal to non-controlling interest of $20\% \times$ the post-acquisition fair value amounts of the subsidiary's identifiable net assets of \$190,000 (book value of \$150,000 + revaluation of land of \$50,000 – deferred tax liability of \$10,000).
- (b) Land is carried at \$250,000, which may be proved as equal to parent's share of the acquisition-date fair value of the land of \$200,000 ($80\% \times \$250,000$) + non-controlling interest's share of the acquisition-date fair value of the land of \$50,000 ($20\% \times \$250,000$).
- (c) Deferred tax liability is \$10,000, which may be proved as equal to tax rate of $20\% \times$ fair value adjustment on land of \$50,000.
- (d) Goodwill on consolidation is \$28,000. This may be proved as follows:

	\$'000
Parent:	
Cost of investment	180
Less fair value of subsidiary's identifiable net assets ($80\% \times \$190,000$)	<u>152</u>
Parent's share of goodwill on consolidation	28
Non-controlling interest:	
Amount	38
Less fair value of subsidiary's identifiable net assets ($20\% \times \$190,000$)	<u>38</u>
Non-controlling interest's share of goodwill on consolidation	0
Total goodwill on consolidation	28

Note: Since non-controlling interest is measured based on fair value of identifiable net assets of the subsidiary, the non-controlling interest in goodwill (a non-identifiable asset) is not accounted for.

As illustrated in the above examples, measuring non-controlling interest based on 'fair value' complicates the calculation of goodwill, and the resultant goodwill amount is not meaningful (whereas if non-controlling interest is measured based on 'fair value of identifiable net assets', the resultant goodwill amount is meaningful and can be easily proved as the parent's share of the subsidiary's implicit goodwill). Further, the 'fair value of identifiable net assets' measurement basis was what was required by the now-superseded FRS 103 (2004). Also, the fair value of non-controlling interest may not be readily available in some cases. It is therefore expected that under FRS 103, most Singapore companies will adopt the 'fair value of identifiable net assets' measurement basis, and very few will adopt the 'fair value' measurement basis for measuring non-controlling interest. This book will henceforth assume that the 'fair value of identifiable net assets' measurement basis is adopted for measuring non-controlling interest, unless expressly stated otherwise.

2.6 Summary

In this chapter, the discussion on the preparation of consolidated financial statements is limited to cases where consolidated balance sheets are prepared at the date when a parent acquires a subsidiary.

In the preparation of consolidated balance sheets at the date of acquisition, certain specific consolidation adjustments will be required. These adjustments include (a) adding or eliminating items in the balance sheets of the parent and the subsidiary, (b) fair value adjustment for the subsidiary's assets and liabilities, (c) goodwill on consolidation, and (d) non-controlling interests. Each of these adjustments has been discussed and illustrated in the chapter.

Problems for self-study

PROBLEM 2.1

H Ltd acquired 80% of the issued share capital of S Ltd on 31 December 20X8 for a total cash consideration of \$8,000. The balance sheets of H Ltd and S Ltd as at that date are as follows:

	H Ltd	S Ltd
	\$'000	\$'000
Cash	10	10
Investment in S Ltd	8	—
	—	—
	18	10
	—	—
Share capital	<u>18</u>	<u>10</u>

Which of the following consolidated balance sheets makes more sense to you? Why?

Consolidated balance sheet (A)		Consolidated balance sheet (B)	
	\$'000		\$'000
Cash	<u>18</u>	Cash	<u>20</u>
Share capital	<u>18</u>	Share capital	18
		Non-controlling interest	2
			<u>20</u>

Solution

Consolidated balance sheet (B) is more appropriate, because of the following reasons:

- (a) It conforms to the definition of 'asset' in the FRS/Framework. In this case, the group 'controls' \$20 of cash. Therefore, the group's cash should be \$20.
- (b) It conforms to the full consolidation principle adopted by FRS 110, under which the assets and liabilities of the parent and those of the subsidiary are to be added across, line-by-line, on a 100% basis, regardless of the parent's shareholding percentage in the subsidiary.

PROBLEM 2.2

H Ltd acquired 100% of the issued share capital of S Ltd on 31 December 20X8 for a total consideration of \$200,000. The balance sheets of H Ltd and S Ltd as at that date are as follows:

	H Ltd	S Ltd
	\$'000	\$'000
Land	100	-
Investment	200	-
Debtors	100	120
Bank	-	80
	<u>400</u>	<u>200</u>
Share capital	200	150
Retained profit	140	20
Creditors	40	30
Bank overdraft	20	-
	<u>400</u>	<u>200</u>

The excess payment was for goodwill.

Required

Prepare the consolidated balance sheet for H Ltd and its subsidiary as at 31 December 20X8.

Solution

(a) Workings

	\$'000
Cost of investment	200
Net assets acquired	170
Goodwill on consolidation	<u>30</u>
	<u><u>=</u></u>

(b) Consolidation journal entry

Dr Share capital (S)	150
Dr Retained profit (S)	20
Dr Goodwill on consolidation	30
Cr Investment in S Ltd	200
(elimination of investment account)	

(c) Consolidation worksheet

	H Ltd \$'000	S Ltd \$'000	Adjustments		Consolidated balances \$'000
			Dr \$'000	Cr \$'000	
Goodwill	—	—	30		30
Land	100	—			100
Investment	200	—		200	—
Debtors	100	120			220
Bank	—	80			80
Share capital	200	150	150		200
Retained profit	140	20	20		140
Creditors	40	30			70
Bank overdraft	20	—			20

(d) Consolidated balance sheet

H Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	30
Land	100
Debtors	220
Bank	80
	<hr/>
	430
	<hr/>
Share capital	200
Retained profit	140
Creditors	70
Bank overdraft	20
	<hr/>
	430
	<hr/>

PROBLEM 2.3

A Ltd acquired 100% of the issued share capital of B Ltd on 31 December 20X8 for a total consideration of \$500,000. The balance sheets of A Ltd and B Ltd as at that date are as follows:

	A Ltd	B Ltd
	\$'000	\$'000
Land	200	100
Investment in B Ltd	500	—
Debtors	100	320
Bank	—	80
	<hr/>	<hr/>
	800	500
	<hr/>	<hr/>
Share capital	500	200
Retained profit	250	140
Creditors	30	160
Bank overdraft	20	—
	<hr/>	<hr/>
	800	500
	<hr/>	<hr/>

On 31 December 20X8, A Ltd has a brand with a fair value of \$100,000, and B Ltd has a brand with a fair value of \$80,000. On the same date, the fair values of the land of A Ltd and B Ltd are \$300,000 and \$150,000, respectively. Any other excess payment is for goodwill. The group adopts the historical cost convention as its basis of accounting. Tax rules are not applicable to each of these items.

Required

Prepare the consolidated balance sheet for A Ltd and its subsidiary as at 31 December 20X8.

Solution

(a) Workings

	\$'000
Cost of investment	500
Net assets acquired	470
Goodwill on consolidation	<u>30</u>

(b) Consolidation journal entry

Dr Share capital (B)	200
Dr Retained profit (B)	140
Dr Land	50
Dr Brand	80
Dr Goodwill on consolidation	30
Cr Investment in B Ltd	500
(elimination of investment account)	

(c) Consolidation worksheet

	A Ltd	B Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	—	—	30		30
Brand	—	—	80		80
Land	200	100	50		350
Investment	500	—		500	—
Debtors	100	320			420
Bank	—	80			80
Share capital	500	200	200		500
Retained profit	250	140	140		250
Creditors	30	160			190
Bank overdraft	20	—			20

(d) Consolidated balance sheet

A Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	30
Brand	80
Land	350
Debtors	420
Bank	80
	<u>960</u>
Share capital	500
Retained profit	250
Creditors	190
Bank overdraft	20
	<u>960</u>

Notes to the solution

- (a) B Ltd's brand is recognized in the consolidated balance sheet; A Ltd's brand is not. This is because, in a business combination, only the acquiree's assets and liabilities are transacted; the acquirer's assets and liabilities are not transacted. In both A Ltd's and B Ltd's books, the respective brands are not recognized because they do not meet the recognition criteria (specifically, the 'reliable measurement' criterion) under FRS 38 *Intangible Assets*. However, through the business combination, the cost of B Ltd's brand can now be reliably measured and is thus recognized in the consolidated balance sheet. A Ltd's brand continued to fail to meet the 'reliable measurement' criterion and is therefore not recognized.
- (b) B Ltd's land is subject to fair value adjustment; A Ltd's land is not. This is again because, in a business combination, only the acquiree's assets and liabilities are transacted; the acquirer's assets and liabilities are not transacted. Since A Ltd's land was transacted (when A Ltd bought the land) at a cost of \$200,000, and B Ltd's land was transacted (when A Ltd acquired B Ltd) at a cost of \$150,000, the group's land, at cost, in the consolidated balance sheet is \$350,000.
- (c) A Ltd's bank overdraft and B Ltd's bank are to be shown separately in the consolidated balance sheet. They should not be off-set against each other (see the rules for off-setting financial instruments under FRS 32 *Financial Instruments: Presentation*).

PROBLEM 2.4

P Ltd acquired 90% of the issued share capital of S Ltd on 31 December 20X8 for a total consideration of \$172,000. The balance sheets of P Ltd and S Ltd as at that date are as follows:

	P Ltd	S Ltd
	\$'000	\$'000
Land	100	150
Investment in S Ltd	172	—
Debtors	100	20
Bank	28	10
	<u>400</u>	<u>180</u>
Share capital	200	120
Retained profit	60	30
Long-term loan	100	—
Creditors	40	30
	<u>400</u>	<u>180</u>

The excess payment of \$37,000 ($\$172,000 - 90\% \times \$150,000$) is analyzed as follows (assume tax rules are not applicable to each of the items):

- \$10,000 for goodwill, plus
- \$45,000 for the undervaluation of subsidiary's land, minus
- \$18,000 for an unrecognized contingent loss arising from breach of contract.

The share capital of S Ltd comprises 100,000 ordinary shares. The ordinary shares were traded on 31 December 20X8 at \$1.90 per share.

Required

Prepare the consolidated balance sheet for P Ltd and its subsidiary as at 31 December 20X8, assuming the non-controlling interest is measured based on (a) its 'fair value' and (b) its share of the 'fair values of identifiable net assets of the subsidiary'.

Solution A (Non-controlling interest is measured based on its 'fair value')

(a) Workings

	\$'000
Cost of investment.....	172
Book value of net assets acquired ($90\% \times \$150,000$)	<u>135</u>
Excess payment.....	<u>37</u>
For goodwill on consolidation (to include non-controlling interest's portion).....	10
For undervaluation of land (to gross up to 100% = 50)	45
For unrecorded provision (to gross up to 100% = 20)	<u>(18)</u>
	<u>37</u>

(b) Consolidation journal entries

(i)	Dr Share capital (S)	108
	Dr Retained profit (S)	27
	Dr Land (S)	45
	Dr Goodwill on consolidation	10
	Cr Provision for contingent loss (S)	18
	Cr Investment in S Ltd	172
	(elimination of investment account)	
(ii)	Dr Share capital (S)	12
	Dr Retained profit (S)	3
	Dr Land (S)	5
	Dr Goodwill on consolidation	1
	Cr Provision for contingent loss (S)	2
	Cr Non-controlling interest	19
	(to record non-controlling interest)	

(c) Consolidation worksheet

	P Ltd \$'000	S Ltd \$'000	Adjustments		Consolidated balances \$'000
			Dr	Cr	
Goodwill	—	—	i 10		
			ii 1		11
Land	100	150	i 45		
			ii 5		300
Investment	172	—		i 172	—
Debtors	100	20			120
Bank	28	10			38
Share capital	200	120	i 108		
			ii 12		200
Retained profit	60	30	i 27		
			ii 3		60
Long-term loan	100	—			100
Creditors	40	30			70
Provision	—	—	i 18		
			ii 2		20
NCI	—	—	ii 19		19

(d) Consolidated balance sheet

P Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	11
Land	300
Debtors	120
Bank	38
	<u>469</u>
Share capital	200
Retained profit	60
Non-controlling interest	19
Long-term loan	100
Creditors	70
Provision for contingent loss	20
	<u>469</u>

Solution B (Non-controlling interest is measured based on its share of 'fair value of identifiable net assets')

(a) Workings

	\$'000
Cost of investment	172
Book value of net assets acquired ($90\% \times \$150,000$)	<u>135</u>
Excess payment	37
For goodwill on consolidation	
(to exclude non-controlling interest thereof)	10
For undervaluation of land	
(to be grossed up to 100% = 50)	45
For unrecorded provision	
(to be grossed up to 100% = 20)	(18)
	<u>37</u>

(b) Consolidation journal entries

(i)	Dr Share capital (\$)	108
	Dr Retained profit (\$)	27
	Dr Land (\$)	45
	Dr Goodwill on consolidation	10
	Cr Provision for contingent loss (\$)	18
	Cr Investment in S Ltd	<u>172</u>
	(elimination of investment account)	

(ii)	Dr Share capital (\$)	12
	Dr Retained profit (\$)	3
	Dr Land (\$)	5
	Cr Provision for contingent loss (\$)	2
	Cr Non-controlling interest	18
	(to record non-controlling interest)	

(c) Consolidation worksheet

	P Ltd	S Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	—	—	i 10		10
Land	100	150	i 45 ii 5		300
Investment	172	—		i 172	—
Debtors	100	20			120
Bank	28	10			38
Share capital	200	120	i 108 ii 12		200
Retained profit	60	30	i 27 ii 3		60
Long-term loan	100	—			100
Creditors	40	30			70
Provision	—	—		i 18 ii 2	20
NCI	—	—		ii 18	18

(d) Consolidated balance sheet

P Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Goodwill on consolidation	10
Land	300
Debtors	120
Bank	38
	468
Share capital	200
Retained profit	60
Non-controlling interest	18
Long-term loan	100
Creditors	70
Provision for contingent loss	20
	468

Notes to the solution

- (a) Non-controlling interest is \$19,000 under the 'fair value' measurement basis (which, in this case, is arrived at as 10,000 shares at \$1.90 each) but is \$18,000 under the 'fair value of identifiable net assets' measurement basis (which may be proved as non-controlling interest of $10\% \times$ the acquisition-date fair value of the subsidiary's identifiable net assets of \$180,000 [book value of \$150,000 + revaluation of land of \$50,000 – provision for contingent loss of \$20,000]).
- (b) Land is \$300,000 under both the 'fair value' measurement basis and the 'fair value of identifiable net assets' measurement basis for non-controlling interest. The figure of \$300,000 may be proved as equal to parent's land of \$100,000 + parent's share of the acquisition-date fair value of subsidiary's land of \$180,000 ($90\% \times \$200,000$) + non-controlling interest's share of the acquisition-date fair value of subsidiary's land of \$20,000 ($10\% \times \$200,000$).
- (c) Provision for contingent loss is \$20,000 under both the 'fair value' measurement basis and the 'fair value of identifiable net assets' measurement basis for non-controlling interest. The figure of \$10,000 may be proved as equal to parent's share of the acquisition-date fair value of subsidiary's contingent loss of \$18,000 ($90\% \times \$20,000$) + non-controlling interest's share of the acquisition-date fair value of subsidiary's contingent loss of \$2,000 ($10\% \times \$20,000$).
- (d) Goodwill on consolidation will be different depending on the measurement basis adopted for non-controlling interest. Under the 'fair value' measurement basis, goodwill on consolidation comprises both the parent's portion (either positive or negative) and the non-controlling interest's portion (either positive or negative). However, under the 'fair value of identifiable net assets' measurement basis, goodwill on consolidation comprises only the parent's portion; the non-controlling interest's portion is \$nil. In the above case, under the 'fair value' measurement basis, goodwill on consolidation is \$11,000, which may be proved to be equal to parent's portion of \$10,000 (cost of \$172,000 – share of acquisition-date fair value of identifiable net assets of \$162,000 [$90\% \times (\$150,000 + \$50,000 - \$20,000)$]) + non-controlling interest's portion of \$1,000 (fair value of \$19,000 – share of acquisition-date fair value of identifiable net assets of \$18,000 [$10\% \times (\$150,000 + \$50,000 - \$20,000)$]). The difference of \$1,000 (\$11,000 – \$10,000) is due to the fact that under the 'fair value' measurement basis, the non-controlling interest's portion of goodwill is \$1,000, but under the 'fair value of identifiable net assets' measurement basis, the non-controlling interest's portion of goodwill is \$nil.
- (e) It may be noted that the adoption of different measurement bases for non-controlling interest will affect the quantum of non-controlling interest and the quantum of goodwill on consolidation (both positive and negative). However, the adoption of different measurement bases for non-controlling interest will not affect the quantum of all the identifiable assets and liabilities.

CHAPTER

3

CONSOLIDATION SUBSEQUENT TO THE DATE OF ACQUISITION



3.1 Introduction

In the previous chapter, discussion was limited to cases where consolidated financial statements are prepared at the date of acquisition. In this chapter, the discussion will be focused on the preparation of consolidated financial statements for the periods subsequent to the date of acquisition.

In the preparation of consolidated financial statements subsequent to the date of acquisition, several additional consolidation issues and problems will arise.

Firstly, in addition to the consolidated balance sheet, the consolidated statement of comprehensive income would also have to be prepared, because the companies would have also operated as a group during the periods subsequent to the date of acquisition. The preparation of consolidated statement of comprehensive income will be discussed in isolation in Section 3.2, and discussed together with the preparation of the consolidated balance sheets in the other sections.

Another issue is the apportionment of the reserves of the subsidiary into pre-acquisition reserves (the portion that existed before the subsidiary was acquired) and post-acquisition reserves (the portion that arose after the subsidiary was acquired). The significance of the apportionment and the consolidation treatment of pre-acquisition reserves and post-acquisition reserves will be discussed in Section 3.3.

Subsequent to the date of acquisition, there could be transactions between the companies in the group. This gives rise to several problems in consolidation. These problems will be discussed in Sections 3.4, 3.5, and 3.6.

Finally, the goodwill on consolidation capitalized at the date of acquisition will have to be subjected to impairment tests annually in the subsequent periods. Also, if depreciable assets of the subsidiary are deemed to be undervalued or overvalued, then consolidation adjustments may have to be made to the depreciation charges in the subsequent periods. These two consolidation issues will be discussed in Section 3.7.

3.2 Consolidated statement of comprehensive income

Subsequent to the date of acquisition, the parent and the subsidiary operate as a group, and therefore a consolidated statement of comprehensive income, together with the consolidated balance sheet, will have to be prepared for each of the subsequent accounting periods. (A consolidated statement of comprehensive income may also be prepared in isolation for certain specific purposes, for example, for the determination of half-yearly group profits.)

Assuming that there are no fair value adjustments and no intragroup transactions, the preparation of a consolidated statement of comprehensive income will be a simple task of adding together, line by line, all the items in the individual statements of comprehensive income of the parent and subsidiary.

If the parent acquires less than 100% of the subsidiary's issued share capital, part of the subsidiary's 'profit after tax' and 'total comprehensive income' is attributable

to the non-controlling shareholders. Theoretically, what could be done is to add, say, 80% of the subsidiary's statement of comprehensive income items (assuming the parent acquires 80% of the subsidiary's issued share capital) to the statement of comprehensive income items of the parent to arrive at the 'group profit after tax' and 'group total comprehensive income' in the consolidated statement of comprehensive income. However, FRS 110 requires the application of the 'full consolidation' principle and that non-controlling interest in the profit after tax and total comprehensive income of the group are to be separately disclosed (paragraph 33). Thus, in practice and in accordance with the requirements of the accounting standard, 100% of the subsidiary's statement of comprehensive income items (even if the parent acquires less than 100% of the subsidiary's issued share capital) are added to those of the parent to arrive at total profit after tax and total comprehensive income. The total profit after tax and total comprehensive income are then apportioned into amounts attributable to the shareholders of the parent and the amounts attributable to non-controlling interest. The apportionment can be done quite easily by first determining the amount attributable to the non-controlling interest, and the balance will be the amount attributable to the shareholders of the parent.

The amount of total profit after tax attributable to non-controlling interest is calculated based on non-controlling interest in the subsidiary's 'profit after tax'. The amount of total comprehensive income attributable to non-controlling interest is calculated as the sum of (a) non-controlling interest in the subsidiary's 'profit after tax' and (b) non-controlling interest in the subsidiary's 'other comprehensive income'.

Example 3.1

Y Ltd acquired 60% of the issued share capital of Z Ltd on 31 December 20X7. There are no intragroup transactions. The statements of comprehensive income of Y Ltd and Z Ltd for the year ended 31 December 20X8 are as follows:

	Y Ltd	Z Ltd
	\$'000	\$'000
Sales	100	80
Cost of sales	30	20
Gross profit.....	70	60
Operating expenses	20	30
Profit before tax	50	30
Tax	15	10
Profit after tax	35	20
Other comprehensive income		
Fair value gain	10	10
Revaluation surplus	50	20
	60	30
Total comprehensive income	95	50

Required

Prepare the consolidated statement of comprehensive income for Y Ltd and its subsidiary for the year ended 31 December 20X8.

Solution

(a) Calculation of non-controlling interest (NCI)

$$\begin{aligned} \text{NCI in profit after tax} &= \left(\begin{array}{c} \text{non-controlling shareholding} \\ \times \\ \text{subsidiary's profit after tax} \end{array} \right) \\ &= 40\% \times \$20,000 \\ &= \$8,000 \end{aligned}$$

$$\begin{aligned} \text{NCI in fair value gain} &= \left(\begin{array}{c} \text{non-controlling shareholding} \\ \times \\ \text{subsidiary's fair value gain} \end{array} \right) \\ &= 40\% \times \$10,000 \\ &= \$4,000 \end{aligned}$$

$$\begin{aligned} \text{NCI in revaluation surplus} &= \left(\begin{array}{c} \text{non-controlling shareholding} \\ \times \\ \text{subsidiary's revaluation surplus} \end{array} \right) \\ &= 40\% \times \$20,000 \\ &= \$8,000 \end{aligned}$$

$$\begin{aligned} \text{NCI in total comprehensive income} &= \$8,000 + \$4,000 + \$8,000 \\ &= \$20,000 \end{aligned}$$

(b) Consolidation journal entry

(i)	Dr Non-controlling interest – profit	8	
	Cr Non-controlling interest (CBS)	8	
	(non-controlling interest in subsidiary's profit after tax)		
(ii)	Dr Non-controlling interest – fair value gain	4	
	Cr Non-controlling interest (CBS)	4	
	(non-controlling interest in subsidiary's fair value gain)		
(iii)	Dr Non-controlling interest – revaluation surplus	8	
	Cr Non-controlling interest (CBS)	8	
	(non-controlling interest in subsidiary's revaluation surplus)		

(c) Consolidation worksheet

	Y Ltd	Z Ltd	Adjustments Dr	Cr	Consolidated balances
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	100	80			180
Cost of sales	30	20			50
Gross profit	70	60			130
Operating expenses	20	30			50
Profit before tax	50	30			80
Tax	15	10			25
Profit after tax	35	20			55
NCI	—	—	i 8		8
Group profit	—	—			47
Fair value gain	10	10			20
NCI	—	—	ii 4		4
Group fair value gain	—	—			16
Revaluation surplus	50	20			70
NCI	—	—	iii 8		8
Group revaluation surplus	—	—			62
Group comprehensive income	95	50			125

(d) Consolidated statement of comprehensive income

Y Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
Sales	\$'000 180
Cost of sales	50
Gross profit	130
Operating expenses	50
Profit before tax	80
Tax	25
Profit after tax	55
Other comprehensive income	
Fair value gain	20
Revaluation surplus	70
Total	90
Total comprehensive income	145
Profit after tax attributable to:	
Shareholders of the parent	47
Non-controlling interest	8
	55
Total comprehensive income attributable to:	
Shareholders of the parent	125
Non-controlling interest	20
	145

Notes to the solution

- (a) The debit entry in the first consolidation journal entry (CJE) is to record non-controlling interest in the subsidiary's after-tax profit.
- (b) The debit entries in the second and third CJEs are to record non-controlling interest in the subsidiary's fair value gain and revaluation surplus, respectively.
- (c) Combining the debit entries of these CJEs will yield the non-controlling interest in the subsidiary's total comprehensive income.
- (d) The non-controlling interest in the after-tax profit will be presented in the consolidated statement of comprehensive income as a deduction from the total after-tax profit so as to arrive at the profit attributable to the shareholders of the parent.
- (e) The non-controlling interest in the total comprehensive income will be presented in the consolidated statement of comprehensive income as a deduction from the total comprehensive income so as to arrive at the total comprehensive income attributable to the shareholders of the parent.
- (f) The credit entries of these CJEs are to record non-controlling interest in the subsidiary's total comprehensive income (which forms part of the subsidiary's shareholders' equity) to be presented in the consolidated balance sheet. (These credit entries record only non-controlling interest in the subsidiary's total comprehensive income for the year. Therefore, other CJE[s] will be necessary to record non-controlling interest in the subsidiary's shareholders' equity other than the total comprehensive income for the year, so as to present a complete picture of non-controlling interest in the subsidiary's net assets in the consolidated balance sheet. These other CJE[s] will be illustrated in subsequent sections.)
- (g) Note that 100% of Z Ltd's statement of comprehensive income items are added, line by line, to those of Y Ltd, in accordance with the full consolidation principle of FRS 110.
- (h) Note that in the 'consolidated balances' column of the consolidation worksheet, subtotal figures (for example, 'Profit before tax', 'Profit after tax', and 'Total comprehensive income') are obtained by adding or subtracting downwards along the column, unlike the other figures, which are obtained by adding across, line by line. Note also that no consolidation adjustments are made to the subtotal figures.
- (i) The group profit ('Profit attributable to shareholders of the parent') of \$47,000 may be proved as follows: Parent's after-tax profit of \$35,000 + parent's 60% share of subsidiary's after-tax profit of \$12,000 ($60\% \times \$20,000$).
- (j) The group total comprehensive income ('Total comprehensive income attributable to shareholders of the parent') of \$125,000 may be proved as follows: Parent's total comprehensive income of \$95,000 + parent's 60% share of subsidiary's total comprehensive income of \$30,000 ($60\% \times \$50,000$).



If a subsidiary incurs a loss, non-controlling interest will be allocated its share of the loss (and the consolidated journal entry will be Dr Non-controlling interest [CBS] and

Cr Non-controlling interest [CSCI]). FRS 110 provides that this is also applicable to situation where the loss suffered by the subsidiary exceeds its shareholders' equity (paragraph B94).

FRS 27 (2009), which was effective on 1 July 2009 and is now superseded by FRS 110, also required the same treatment. However, prior to FRS 27 (2009), the accounting standards required the amount of loss allocated to non-controlling interest to be limited to its share of the equity of the subsidiary, so that non-controlling interest would not be carried with a debit balance in the consolidated balance sheet.

Thus, the requirement that non-controlling interest should be allocated its share of loss even if this results in the non-controlling interest having a deficit balance (under FRS 27 [2009] and FRS 110) is effective prospectively for annual periods commencing on or after 1 July 2009.

To illustrate, assume that P Ltd acquires 90% of S Ltd on 31 December 20X5, when S Ltd's net assets are represented by share capital of \$100,000 and retained profit of \$50,000. S Ltd suffers a loss of \$200,000 for the year ended 31 December 20X6. In this case, non-controlling interest in 20X5 consolidated balance sheet will be carried at \$15,000 ($10\% \times \$150,000$). In the 20X6 consolidated financial statements: (a) applying the rules under the old accounting standards prior to 1 July 2009, the amount of 20X6 loss allocated to non-controlling interest will be limited to \$15,000 (and not \$20,000 [$10\% \times \$200,000$]); consequently, non-controlling interest will be reported at \$15,000 (loss) in the consolidated statement of comprehensive income, and carried at zero balance in the consolidated balance sheet; (b) applying the rules under FRS 27 (2009) and FRS 110, the amount of 20X6 loss allocated to non-controlling interest will be \$20,000 ($10\% \times \$200,000$); consequently, non-controlling interest will be reported at \$20,000 (loss) in the consolidated statement of comprehensive income, and reported with a debit balance of \$5,000 in the consolidated balance sheet.

As mentioned above, this change in accounting treatment is effective prospectively for annual periods commencing on or after 1 July 2009. There are different views as to how the transition is to be applied, and these are discussed in the article titled *The Non-controlling Interest's Share of Loss* presented in Appendix 3A in this chapter.

For further discussions and illustrations for loss-making subsidiary, refer to Chapter 4 (Section 4.3.2).

It may be noted that under the Companies (Amendment) Act 2002 which is effective on 1 January 2003, a parent company that presents consolidated financial statements need not present its own statement of comprehensive income.

3.3 Pre-acquisition and post-acquisition reserves

At a date subsequent to the date of acquisition, the subsidiary's reserves can be categorized into two parts: those that arise before the subsidiary is acquired and those that arise after the subsidiary is acquired. The former is called 'pre-acquisition reserves' and the latter 'post-acquisition reserves'.

It is important to make the distinction, because pre-acquisition reserves represent the net assets of the subsidiary at the date of acquisition and therefore have to be eliminated against the cost of investment in the consolidation process (also, pre-acquisition reserves are not earned under the common control and therefore should not be shown in the consolidated financial statements), whereas post-acquisition reserves represent reserves earned by the subsidiary after it became a member of the group and therefore form part of the reserves of the group and consequently have to be included in the consolidated financial statements.

Example 3.2

Refer to the case in Example 2.1 in Chapter 2, where A Ltd acquired 100% of the issued share capital of B Ltd on 31 December 20X8 for a total consideration of \$120,000. At that date, B Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$20,000. Assume the balance sheets of A Ltd and B Ltd as at 31 December 20X9 (one year after the date of acquisition) are as follows:

	A Ltd	B Ltd
	\$'000	\$'000
Land	400	150
Investment	120	—
Debtors	230	50
Bank	50	30
	800	230
Share capital	500	100
Retained profit	200	50
Long-term loan	—	50
Creditors	100	30
	800	230

Required

Prepare the consolidated balance sheet for A Ltd and its subsidiary as at 31 December 20X9.

Solution

- (a) Consolidation journal entry

Dr Share capital (B)	100
Dr Retained profit (B)	20
Cr Investment in B Ltd	120
(elimination of investment account)	

(b) Consolidation worksheet

	A Ltd	B Ltd	Dr	Cr	Consolidated balances
	\$'000	\$'000	\$'000	\$'000	\$'000
Land	400	150			550
Investment	120	—		120	—
Debtors	230	50			280
Bank	50	30			80
Share capital	500	100	100		500
Retained profit	200	50	20		230
Long-term loan	—	50			50
Creditors	100	30			130

(c) Consolidated balance sheet

A Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X9	
	\$'000
Land	550
Debtors	280
Bank	80
	910
Share capital	500
Retained profit	230
Long-term loan	50
Creditors	130
	910

Notes to the solution

- (a) The retained profit of B Ltd of \$50,000 at 31 December 20X9 can be apportioned into pre-acquisition of \$20,000 (the amount of retained profit as at 31 December 20X8, the date of acquisition) and post-acquisition of \$30,000 (the amount earned after 31 December 20X8). The pre-acquisition retained profit of \$20,000 is eliminated in the consolidation journal entry, whereas the post-acquisition retained profit of \$30,000 is added to the group's retained profit.
- (b) The consolidation journal entry that eliminates the investment account (as that made in 20X8) has to be made again in the 20X9 consolidation. This is because (i) consolidation journal entries are made for the purpose of consolidation only and are not recorded in the books of the companies of the group and (ii) consolidated financial statements for a year are prepared from the entity financial statements of the companies of the group for

that year and not from the consolidated financial statements of the previous year. Thus, the same consolidation journal entry that eliminates the investment account has to be made for every year that the consolidated financial statements are prepared for the group. (Consolidation adjustments of this type are commonly referred to in practice as 'permanent adjustments'.)



It should be noted, however, that the apportionment of the subsidiary's reserves into pre-acquisition and post-acquisition is important as regards the parent only. It is of no relevance to the non-controlling shareholders. As far as the non-controlling shareholders are concerned, they have been there all the time, there is no date of acquisition, and therefore, there is no distinction between pre-acquisition and post-acquisition reserves. Non-controlling interest in the consolidated balance sheet is always equal to the non-controlling shareholding percentage multiplied by the fair value of the net identifiable assets of the subsidiary as at the balance sheet date.

Example 3.3



M Ltd acquired 90% of the issued share capital of N Ltd on 31 December 20X8 for a total cash consideration of \$108,000. At that date, N Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$20,000. The balance sheets of M Ltd and N Ltd as at 31 December 20X9 (one year after the date of acquisition) are as follows:

	M Ltd	N Ltd
	\$'000	\$'000
Land	400	150
Investment	108	—
Debtors	200	—
Bank	92	30
	<hr/>	<hr/>
	800	180
	<hr/>	<hr/>
Share capital	500	100
Retained profit	200	30
Long-term loan	—	50
Creditors	100	—
	<hr/>	<hr/>
	800	180
	<hr/>	<hr/>

Required

Prepare the consolidated balance sheet for M Ltd and its subsidiary as at 31 December 20X9.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (N) ($90\% \times 100$)	90
	Dr Retained profit (N) ($90\% \times 20$)	18
	Cr Investment in N Ltd	108
(elimination of investment account)		
(ii)	Dr Share capital (N) ($10\% \times 100$)	10
	Dr Retained profit (N) ($10\% \times 30$)	3
	Cr Non-controlling interest	13
(to record non-controlling interest)		

(b) Consolidation worksheet

	M Ltd \$'000	N Ltd \$'000	Adjustments		Consolidated balances \$'000
			Dr	Cr	
Land	400	150			550
Investment	108	—		i 108	—
Debtors	200	—			200
Bank	92	30			122
Share capital	500	100	i 90		
			ii 10		500
Retained profit	200	30	i 18		
			ii 3		209
Long-term loan	—	50			50
Creditors	100	—			100
Non-controlling interest	—	—	ii 13		13

(c) Consolidated balance sheet

M Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X9	
	\$'000
Land	550
Debtors	200
Bank	122
	<hr/>
	872
	<hr/>
Share capital	500
Retained profit	209
Non-controlling interest	13
Long-term loan	50
Creditors	100
	<hr/>
	872
	<hr/>

Notes to the solution

- (a) The group's share of the subsidiary's retained profit of \$27,000 ($90\% \times \$30,000$) is apportioned into pre-acquisition of \$18,000 ($90\% \times \$20,000$), which is eliminated against the investment account in consolidation journal entry (i), and post-acquisition of \$9,000 ($90\% \times \$10,000$), which is added to the group's retained profit.
- (b) Non-controlling interest is equal to the non-controlling shareholding percentage multiplied by the subsidiary's net assets as at 31 December 20X9 ($10\% \times \$130,000 = \$13,000$), without regard to the apportionment of the subsidiary's retained profit into pre-acquisition and post-acquisition.

34 Intragroup account balances

Entities in a group may trade or enter into any transactions with each other. These intragroup transactions give rise to several problems in the consolidation process.

In this section, one of the problems arising from intragroup transactions (also referred to as inter-company transactions) – namely, intragroup account balances – will be discussed. FRS 110 provides that these intragroup account balances should be eliminated in full (paragraph B86).

When a parent enters into a transaction with its subsidiary (or vice versa), it will record the transaction in its books, like any other transaction entered into with other entities outside the group. For example, if the parent makes a sale to its subsidiary, the parent will record 'sales' (or 'sales to subsidiary') in its books, and the subsidiary will record 'purchases' (or 'purchases from parent') in its books. However, in consolidation, when the parent and the subsidiary are deemed to be a single (economic) entity, it would not make sense to report in the consolidated

financial statements that the group sells goods to itself or buys goods from itself. Therefore, in consolidation, these intragroup accounts would have to be eliminated – and eliminated in full. Similarly, if the subsidiary has not paid for the purchases in the above transaction, the subsidiary will report in its balance sheet a ‘trade creditor’ (or ‘amount due to parent’), and the parent will report in its balance sheet a ‘trade debtor’ (or ‘amount due from subsidiary’). Again, it does not make sense to report the trade creditor and the trade debtor in the consolidated balance sheet, as the group cannot logically owe itself any money. Thus, the intragroup trade debtor and creditor would have to be fully eliminated in the consolidation process.

Sometimes, intragroup account balances may not be equal to each other due to cash or goods in transit. For example, assume that the parent grants a loan of \$100,000 to the subsidiary in 20X2. Assume also that the subsidiary repays \$20,000 to the parent on 30 December 20X2, and the parent receives the payment on 3 January 20X3. Thus, as at 31 December 20X2, the subsidiary’s balance sheet will show a ‘loan due to parent of \$80,000’, whereas the parent company’s balance sheet will show a ‘loan due from subsidiary of \$100,000’. It may also be noted that, in this case, the \$20,000 of cash-in-transit will not be reflected in either company’s balance sheets.

The easiest way to resolve the above problem is to first make an adjustment for the cash-in-transit as if the parent has received the payment (‘Dr Cash \$20,000’ and ‘Cr Loan due from subsidiary \$20,000’). After this consolidation journal entry, the intragroup loan balances will be equal in amount, and will be eliminated accordingly. The \$20,000 cash-in-transit will also be reflected in the consolidated balance sheet.

Example 3.4

The financial statements of B Ltd and C Ltd for the year 20X8 are as follows:

(a) Statements of comprehensive income for the year ended 31 December 20X8

	B Ltd	C Ltd
	\$'000	\$'000
Sales	800	500
Less cost of sales	500	300
Gross profit	300	200
Add interest income	1	—
Less distribution expenses	66	59
Administrative expenses	35	20
Profit from operation	200	121
Less interest expenses	—	1
Profit before tax	200	120
Less tax	60	30
Profit after tax	140	90
Other comprehensive income	—	—
Total comprehensive income	140	90

(b) Balance sheets as at 31 December 20X8

	B Ltd	C Ltd
	\$'000	\$'000
Land	200	200
Investment	160	—
Stock	200	100
Trade debtors	140	70
Bills receivable	6	—
Bank	44	30
	<u>750</u>	<u>400</u>
Share capital	500	100
Retained profit	160	230
Trade creditors	90	60
Bills payable	—	10
	<u>750</u>	<u>400</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	B Ltd	C Ltd
	\$'000	\$'000
Beginning retained profit	90	140
Add profit for the year	140	90
Less dividend	70	—
Ending retained profit	<u>160</u>	<u>230</u>

B Ltd acquired 80% of C Ltd's issued share capital on 31 December 20X5. At that date C Ltd's retained profit was \$100,000.

During the year 20X8, B Ltd sold merchandise of \$100,000 to C Ltd. All these goods were sold by C Ltd to third parties during the year. As at 31 December 20X8, C Ltd paid \$80,000 for the goods purchased from B Ltd, but B Ltd only received \$70,000 thereof. Besides the \$20,000 unpaid on account, C Ltd gave several negotiable instruments (bills payable) to B Ltd promising to pay a total of \$10,000 in June 20X9. B Ltd has discounted some of the bills with a total of \$4,000 with the discount houses in December 20X8. The interest expenses of C Ltd represent the interest on the bills paid to B Ltd.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing the group's retained profit only) for B Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (C)	80
	Dr Beginning retained profit (C) ($80\% \times 100$)	80
	Cr Investment in C Ltd	160
	(to eliminate investment account)	
(ii)	Dr Sales	100
	Cr Cost of sales (purchases)	100
	(to eliminate intragroup account balances)	
(iii)	Dr Interest income	1
	Cr Interest expenses	1
	(to eliminate intragroup account balances)	
(iv)	Dr Cash	10
	Cr Trade debtors	10
	(to adjust for cash-in-transit)	
(v)	Dr Trade creditors	20
	Cr Trade debtors	20
	(to eliminate intragroup account balances)	
(vi)	Dr Bills payable	6
	Cr Bills receivable	6
	(to eliminate intragroup account balances)	
(vii)	Dr Non-controlling interest (CSCI) ($20\% \times 90$)	18
	Cr Non-controlling interest (CBS)	18
	(to record non-controlling interest in profit of C Ltd)	
(viii)	Dr Share capital (C) ($20\% \times 100$)	20
	Dr Beginning retained profit (C) ($20\% \times 140$)	28
	Cr Non-controlling interest (CBS)	48
	(to record non-controlling interest in other shareholders' equity of C Ltd)	

(b) Consolidation worksheet

	B Ltd	C Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	800	500	ii 100		1,200
Cost of sales	500	300		ii 100	700
Gross profit	300	200			500
Interest income	1	—	iii 1		—
Distribution	66	59			125
Administration	35	20			55
Operating profit	200	121			320
Interest	—	1		iii 1	—
Profit before tax	200	120			320
Tax	60	30			90
Profit after tax	140	90			230
Non-controlling interest	—	—	vi 18		18
Group profit	—	—			212
Beginning retained profit	90	140	i 80		122
Dividend	70	—	viii 28		70
Ending retained profit	160	230			264
Land	200	200			400
Investment	160	—		i 160	—
Stock	200	100			300
Trade debtors	140	70		iv 10	180
				v 20	
Bills receivable	6	—		vi 6	—
Bank	44	30	iv 10		84
Share capital	500	100	i 80		
			viii 20		500
Retained profit	160	230			264
Trade creditors	90	60	v 20		130
Bills payable	—	10	vi 6		4
Non-controlling interest	—	—		vii 18	
			viii 48		66

(c) Consolidated financial statements

B Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,200
Less cost of sales	700
<hr/>	
Gross profit	500
Less distribution expenses	125
Administrative expenses	55
<hr/>	
Profit before tax	320
Less tax	90
<hr/>	
Profit after tax	230
Other comprehensive income	—
<hr/>	
Total comprehensive income	<u>230</u>
<hr/>	
Attributable to:	
Shareholders of the parent	212
Non-controlling interest	18
<hr/>	
	<u>230</u>
<hr/>	

B Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Land	400
Stock	300
Trade debtors	180
Bank	84
<hr/>	
	<u>964</u>
<hr/>	
Share capital	500
Retained profit	264
Non-controlling interest	66
Trade creditors	130
Bills payable	4
<hr/>	
	<u>964</u>
<hr/>	

B Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	122
Add profit for the year	212
Less dividend	70
Ending retained profit	264

Notes to the solution

- (a) This example demonstrates the case where both consolidated statement of comprehensive income and consolidated balance sheet are prepared at the same time. Note that only one consolidation worksheet is used. The link between the two statements is through the statement of changes in equity. The profit attributable to the shareholders of the parent, in the statement of comprehensive income, is transferred to the statement of changes in equity, and the retained profit figure in the balance sheet is obtained from ending retained profit figure in the statement of changes in equity. Note also that all adjustments are made to the beginning retained profit and individual items in the current year's statement of comprehensive income. Therefore, no adjustment is made to the ending retained profit account (which is a subtotal figure) and the retained profit account in the balance sheet.
- (b) Consolidation journal entry (i) is to eliminate the investment account. However, note that the beginning retained profit instead of the retained profit is debited for the pre-acquisition reserves.
- (c) CJEs (ii) and (iii) are to eliminate intragroup items in the statement of comprehensive income. Elimination of intragroup items does not affect the group's profit. The total after-tax profit of \$230,000 is equal to the profit of B Ltd of \$140,000 plus the profit of C Ltd of \$90,000, unaffected by CJEs (ii) and (iii). (As will be discussed in Section 3.5, only adjustments for unrealized intragroup profit and losses will affect the group's profit.)
- (d) CJE (iv) is to adjust for the cash-in-transit of \$10,000 as if B Ltd has received the money, so that the cash-in-transit of \$10,000 (which is not reflected in the balance sheets of B Ltd and C Ltd) will be properly accounted for in the consolidated balance sheet, and the intragroup trade balances will be equal in amount and can then be eliminated in CJE (v). (Before consolidation journal entry [iv], the intragroup trade creditor in C Ltd's balance sheet was carried at \$20,000, whereas the intragroup trade debtor in B Ltd's balance sheet was carried at \$30,000.)
- (e) CJE (vi) is to eliminate the intragroup bills. The end result of this elimination is that the group would have, and the consolidated balance sheet would show, bills payable of \$4,000. This is the amount of intragroup bills that B Ltd has discounted with the outside party. Once the bill is discounted with the outside party, the group would have a liability (in this case, either C Ltd pays to the discount houses the \$4,000, or B Ltd would have to pay; in other words, the group would have to pay \$4,000 to the discount houses). Therefore, it is often said that the contingent liability (that is

disclosed in the notes to the financial statements of B Ltd for the discounted bill) has become an actual liability (bills payable in consolidated balance sheet). However, if B Ltd were to hold all the intragroup bills at balance sheet date, that is, assuming B Ltd did not discount any of the bills, consolidation journal entry (v) would have eliminated \$10,000 of bills payable against \$10,000 of bills receivable, and there will be no bills payable in the consolidated balance sheet.

- (f) CJE (vii) is to record non-controlling interest in the subsidiary's after-tax profit. The debit entry facilitates the inclusion of non-controlling interest in the consolidated statement of comprehensive income. (As mentioned in Section 3.2, non-controlling interest in the subsidiary's after-tax profit must be calculated and deducted from total profit, to arrive at profit attributable to shareholders in the consolidated statement of comprehensive income.)
- (g) Having recorded the credit entry of consolidation journal entry (vii), what is required in consolidation journal entry (viii) is to take up non-controlling interest in the remaining balance of the subsidiary's shareholders' equity, namely, the subsidiary's share capital and beginning retained profit. (Note that if only the consolidated balance sheet is required, then as far as non-controlling interest is concerned, consolidation journal entry [vii] is not necessary and consolidation journal entry [viii] would simply account for non-controlling interest in the subsidiary's share capital and the ending retained profit.)

3.5 Unrealized intragroup profits and losses

When entities in a group trade with each other, they will record in their own books the intragroup profits and losses arising therefrom, the way they record profits and losses arising from trading with entities outside the group. However, in consolidation, when the entities in the group are deemed to be a single (economic) entity, these intragroup profits and losses may give rise to complications, depending on whether they are realized or unrealized, from the group's viewpoint, during the reporting period. (Intragroup profits and losses would, of course, not arise if the intragroup transactions are transacted at cost.)

Intragroup profits and losses are said to be realized, from the group's viewpoint, when the goods or assets involved are ultimately sold to outside parties.

Thus, if the goods or assets involved in the intragroup transaction are sold to external parties during the same accounting period, no adjustment will be necessary for the intragroup profits and losses because they are realized, both from the selling company's viewpoint and from the group's viewpoint, in the same accounting period. For example, assume the parent sold goods costing \$100 to its subsidiary for \$120 in March 20X8, and the subsidiary sold the goods to outside parties for \$150 in May 20X8. Assume both parent and subsidiary have 31 December accounting year-ends. The inter-company profit of \$20 made by the parent is said to be realized from the group's viewpoint, and no adjustment is required for the intragroup profits in the preparation of consolidated financial statements for 20X8. It is also easy to see that

no consolidation adjustment will be necessary in this case because the group's profit of \$50 (sales proceeds of \$150 – original cost of \$100) may be obtained by simply adding across the profit of \$20 reported by the parent and the profit of \$30 reported by the subsidiary.

However, if the goods sold by one entity to another entity in the group remain with the buying entity at the end of the accounting period, then the profit or loss made by the selling entity is said to be unrealized during the accounting period, from the group's viewpoint. This is because from the group's viewpoint (when the entities in a group are deemed to be a single economic entity), the goods have just moved from one storeroom to another storeroom within the entity; there is no external transaction that results in an increase or decrease in the net assets of the group, and the realization test is therefore not met. The unrealized intragroup profit or loss must therefore be eliminated and not reported in the consolidated financial statements. For example, assume the parent sells goods costing \$100 to its subsidiary for \$110 in March 20X8 and the goods are still held by the subsidiary at 31 December 20X8, and assume 31 December accounting year-ends. The \$10 intragroup profit reported by the parent is said to be unrealized from the group's viewpoint and must therefore be eliminated and not reported in the consolidated financial statements for 20X8.

As an extension, assume the parent sells goods costing \$100 to its subsidiary for \$130 in October 20X8, which are in turn sold by the subsidiary to an external party in March 20X9. Assume also 31 December accounting year-ends. In this case the parent would report a profit of \$30 in 20X8. However, from the group's viewpoint, the intragroup profit of \$30 is realized only in 20X9 (together with the profit reported by the subsidiary from the sale to an external party). In other words, the parent's profit for 20X8 is overstated and its profit for 20X9 is understated, from the group's viewpoint. Thus, in the 20X8 consolidation, the intragroup profit of \$30 reported by the parent must be eliminated. In the 20X9 consolidation, \$30 must be deducted from the parent's beginning retained profit and added to its current year's profit. Note, however, that the effect of the adjustment in the 20X9 consolidation is merely a transfer of the intragroup profit from the 20X8 statement of comprehensive income to the 20X9 statement of comprehensive income, and therefore would not be necessary if only the consolidated balance sheet is prepared. This is also because, from the group's viewpoint, while the retained profit in the parent's balance sheet as at 31 December 20X8 is overstated, the retained profit in the parent's balance sheet as at 31 December 20X9 is properly stated.

In cases where unrealized intragroup profits and losses arise from transactions between the parent and a partly owned subsidiary, two issues will have to be resolved.

The first issue is how much of the intragroup profits and losses are deemed to be unrealized ('partial' versus 'full' elimination).

Assume that the parent sells goods, with cost of \$100, to its 80% owned subsidiary for \$150, and that the goods are still held by the subsidiary at year-end. The question arises as to how much of the intragroup profit is unrealized. It may be argued that all

the goods are deemed to have simply moved within the economic entity and therefore the whole \$50 profit is unrealized from the group's viewpoint. On the other hand, it may be argued that since the goods are sold to an 80% owned subsidiary, 20% of the goods have been sold to outsiders and the other 80% of the goods are deemed to have remained within the economic entity. Thus, only 80% of the intragroup profit is unrealized. Similar arguments can be put forward in a case where a partly owned subsidiary sells goods to its parent.

FRS 110 requires, consistent with the full consolidation principle, the unrealized intragroup profits and losses to be eliminated in full (paragraph B86). Thus, full elimination rather than partial elimination should be adopted.

The other issue is who should bear the adjustment for the unrealized intragroup profits and losses. Unfortunately, this issue is not addressed in the Financial Reporting Standards.

The question of whether non-controlling interest should be adjusted for the unrealized intragroup profits and losses is a controversial one. One view is that all the unrealized intragroup profits and losses should be adjusted to the group's profit, and therefore non-controlling interest will not be affected by the elimination of the unrealized profits and losses. The other view is that non-controlling interest would be affected if the unrealized profits and losses arise from upstream transactions (a subsidiary selling to its parent), but not affected if the unrealized profits and losses arise from downstream transactions (a parent selling to its subsidiary). The argument is that in an upstream sale, the profits and losses are reported in the books of the subsidiary. When the profits and losses are deemed to be unrealized and eliminated in consolidation, the subsidiary's profit will be affected, and therefore non-controlling interest (the amount of which is calculated based on the subsidiary's profit) will also be affected. In a downstream sale, the intragroup profits and losses are recorded in the books of the parent. When the intragroup profits and losses are deemed to be unrealized and eliminated in consolidation, the parent's profit is affected. That would have no effect on the calculation of non-controlling interest.

The adoption of the first view may result in some awkward situations in practice. To illustrate, assume an extreme case where the parent reports no profit or loss. The 80% owned subsidiary reports a profit of \$100, which is deemed to be unrealized, and therefore eliminated in the consolidation process. The resultant consolidated statement of comprehensive income, if the first view is adopted, will show total profit of \$nil, less non-controlling interest of \$20. This is awkward, because if there is no group profit, how can minority shareholders have a \$20 interest in the profit? (Given that the parent's statement of comprehensive income shows no profit, it will be assumed that the subsidiary would also have no profit.)

Adopting the second view, the consolidated statement of comprehensive income in the above case would show no profit and no non-controlling interest, which appears to be more logical. The second view is also conceptually superior because it results in reporting both the group's profit and shareholders' profit on the basis of income that is realized from the viewpoint of the economic entity. Thus, this view is adopted in this book.

Eliminating unrealized intragroup profits and losses in 'full' and adjusting non-controlling interest for unrealized intragroup profits and losses arising from upstream transactions is sometimes referred to as 'full proportionate method'.

The adoption of the full proportionate method can easily be put into effect by (a) eliminating 100% of the unrealized inter-company profits and losses, regardless of whether the subsidiary is wholly owned or partly owned, and (b) adjusting the unrealized intragroup profits and losses against the profit of the *selling entity* in the intragroup transaction, for the purpose of calculating non-controlling interest. Note that it is the profit of the group, not that of the individual entity, that is adjusted in consolidation. The selling entity is identified so that due consideration can be given to non-controlling interest in the intragroup profits and losses. As mentioned earlier, under the full proportionate method, non-controlling interest will be affected only if the subsidiary is the selling entity in the intragroup transaction. The identification of the selling entity will greatly aid the calculation of non-controlling interest, especially in cases where the group structure is complex (see Chapter 5).

So far, the discussion of unrealized intragroup profits and losses has been focused on the income effect. The other effect of unrealized intragroup profits and losses is on asset valuation. For example, in the case where a parent sells goods with cost of \$100 to its subsidiary for \$110 in March 20X8 and the goods are still held by the subsidiary at 31 December 20X8, two problems exist in consolidation. Besides the problem of the existence of the unrealized profit of \$10, there is another problem relating to asset valuation. The unrealized profit of \$10, as discussed above, is to be eliminated. As for asset valuation, it may be noted that, in the above case, the stock will be carried at \$110 in the subsidiary's balance sheet. However, from the group's viewpoint, the cost of the stock to the group is only \$100. Thus, in consolidation, besides eliminating the unrealized profit of \$10 from the consolidated statement of comprehensive income, the stock value should also be reduced by \$10 so that the stock will be reported in the consolidated balance sheet at \$100, its original cost to the group.

Consistent with the adoption of full elimination for the income effect of the unrealized intragroup profits and losses, full elimination will also be adopted for the adjustment of the asset valuation.

In summary, where one entity in a group sells goods or assets at a price above or below cost to another entity in the group, and the goods or assets are still held by the buying entity at the end of the accounting period, two adjustments must be made in consolidation. The first adjustment eliminates 100% of the unrealized intragroup profits and losses from the group's profits (identify the selling entity, for the purpose of calculating non-controlling interest). The second adjustment reverts the value of the asset back to its original cost to the group. The purpose of these adjustments is to revert the relevant account balances back to the original position as if no transactions have taken place (in fact, from the group's viewpoint, intragroup transactions are no transactions at all).

It should be noted that in the case where the intragroup transaction is transacted below cost, the same adjustments discussed above will also be necessary, except

where the loss is not recoverable (FRS 110 paragraph B86). For example, if the parent sells a piece of damaged stock, which costs \$100 but has a net realizable value of \$80, to its subsidiary for \$80, the unrealized loss of \$20 in this case is 'real' and will not be eliminated in consolidation. The loss of \$20 will be recorded in the consolidated statement of comprehensive income, and the stock will be reported at \$80 in the consolidated balance sheet. (It may be noted, even if the intragroup transaction is ignored, that there will still be a loss of \$20 and the stock will be carried at \$80 in the parent's financial statements.) If, however, the piece of stock has a net realizable value of more than \$100 and the parent chooses to sell it to its subsidiary at only \$80, the unrealized loss of \$20 in this case is 'artificial' and will have to be eliminated, so that no loss is reported in the consolidated statement of comprehensive income and the stock will be carried at \$100 (original cost) in the consolidated balance sheet. The guiding principle here is to make consolidation adjustments that are necessary to revert the relevant account balances back to the original position, ignoring the intragroup transactions (which are, from the group's viewpoint, no transactions at all).

In the following sections, intragroup transactions involving different assets (non-depreciable assets, stock-in-trade, depreciable assets) will be discussed in greater detail, followed by a discussion on the tax effect on unrealized intragroup profits and losses.

3.5.1 Intragroup sale of non-depreciable assets

Intragroup transactions in a non-depreciable asset, like land, will be the easiest to deal with in consolidation.

Example 3.5

C Ltd acquired 80% of D Ltd in 20X2. On 30 December 20X3, C Ltd sold a piece of land to D Ltd for \$300,000. The cost of land to C Ltd was \$200,000. D Ltd held the land until 30 December 20X8, when it was sold to an outside party for \$500,000.

Required

Prepare the necessary consolidation journal entry for each of the years from 20X3 to 20X9, in respect of the intragroup sale of land.

Solution

(a) Consolidation journal entry for 20X3

Dr Profit on sale of land (C)	100,000
Cr Land	100,000
(to eliminate unrealized intragroup profit)	

- (b) Consolidation journal entries for each of the years 20X4 to 20X7

Dr Beginning retained profit (C)	100,000
Cr Land	100,000
(to eliminate unrealized intragroup profit)	

- (c) Consolidation journal entry for 20X8

Dr Beginning retained profit (C)	100,000
Cr Profit on sale of land	100,000
(to record realization of intragroup profit)	

- (d) Consolidation journal entry for 20X9

None

Notes to the solution

- (a) At the end of 20X3, the year in which the land was transferred, the debit entry in the consolidation journal entry is necessary because C Ltd has reported a profit of \$100,000 on the sale of the land in its statement of comprehensive income, which is deemed to be unrealized from the group's viewpoint and therefore must be eliminated. Also, the credit entry of the consolidation journal entry is necessary because D Ltd has reported land at \$300,000 in its balance sheet, which should be reported at \$200,000, the original cost to the group, in the consolidated balance sheet.
- (b) At the end of each of the years from 20X4 to 20X7, during which the land is still being held within the group, the consolidation journal entry required is identical to that in 20X3, except the elimination of the unrealized intragroup profit on the sale of land is against the beginning retained profit rather than the statement of comprehensive income of C Ltd. The reason why the same consolidation journal entry is required in each of the subsequent years is that, as mentioned earlier, consolidation journal entries are not recorded in the books of the companies in the group. It may be noted that the ending retained profit of C Ltd in 20X3 included the unrealized profit on the sale of land of \$100,000. Thus, the beginning retained profit of C Ltd in 20X4 would also include the same unrealized profit. The same argument applies to each of the subsequent years (up to and including 20X8). Therefore, the beginning retained profit of C Ltd for each of the subsequent years (up to and including 20X8) must be adjusted to eliminate that unrealized profit. Also, at the end of 20X4 and each of the subsequent years up to 20X7, land would still be carried in D Ltd's balance sheet at \$300,000, which should be adjusted and reported in the consolidated balance sheet at its original cost to the group of \$200,000.
- (c) At the end of 20X8, the year during which the land was sold by D Ltd to the outside party, the intragroup profit on the sale of land at \$100,000 was realized. From the group's viewpoint, the group had made a profit on the sale of land at \$300,000 in 20X8 (sales

proceeds of \$500,000 – cost of \$200,000). However, D Ltd's statement of comprehensive income reported a profit on the sale of land of only \$200,000 (\$500,000 – \$300,000). Thus the consolidation journal entry of 'Cr Profit on sale of land \$100,000' is necessary, so that in the consolidated statement of comprehensive income for 20X8, the profit on the sale of land will be reported at \$300,000. The consolidation journal entry of 'Dr Beginning retained profit (C) of \$100,000' is necessary (i) because, as explained above, C Ltd's beginning retained profit in 20X8 included the unrealized intragroup profit; and (ii) so that the beginning retained profit of the group in 20X8 is equal to the ending retained profit of the group in 20X7. The net effect of the consolidation journal entry is the reporting of the intragroup profit of \$100,000 in the 'correct' (from the group's viewpoint) accounting period. From the viewpoint of C Ltd, the intragroup profit of \$100,000 was realized in 20X3 and reported in its 20X3 statement of comprehensive income, but from the viewpoint of the group, the profit of \$100,000 is realized only in 20X8 and should therefore only be reported in the 20X8 consolidated statement of comprehensive income.

- (d) In the years subsequent to the sale of land to the outsider, no consolidation journal entry is required, as the intragroup profit is deemed to have been realized from the group's viewpoint. Also, the group's beginning retained profit for 20X9 should include the profit on the sale of land at \$300,000, which may be obtained by simply adding across the beginning retained profit of C Ltd (which includes the \$100,000 profit on the sale of land) to the beginning retained profit of D Ltd (which includes the \$200,000 profit on the sale of land).
- (e) If only the consolidated balance sheet is required, all the consolidation journal entries are still applicable, except that 'gain on sale of land (C)' in 20X3 and 20X8 would have to be changed to 'retained profit (C)' and all the 'beginning retained profit (C)' changed to 'retained profit (C)'. It is noted that, in this case, no consolidation journal entry is required in 20X8 (as it would be 'Dr Retained profit [C] \$100,000' and 'Cr Retained profit [C] \$100,000').
- (f) It should be noted that all the adjustments for the income effect of the intragroup profit are made for the purposes of determining non-controlling interest to C Ltd, the selling company. Some accountants argue that in 20X8, the credit in the consolidation journal entry should be adjusted to the profit of D Ltd, the buying company. This argument is erroneous, simply because if the credit is made to the profit of D Ltd, consolidation journal entries to decrease the beginning retained profit of C Ltd and to increase the beginning retained profit of D Ltd would have to be made in all the years subsequent to the year during which the land was sold to the outsider, which, of course is incorrect conceptually and also impractical. The credit entry should be made to the profit of C Ltd, the selling company in the original inter-company transaction, not to that of D Ltd, because the inter-company profit of \$100,000 reported by C Ltd in 20X3, which has been deemed to be unrealized and eliminated against the profit of C Ltd in each of the years up to 20X7, is now deemed to be realized and therefore should be credited back to the profit of C Ltd.

Example 3.6

Assume the 20X3 financial statements of C Ltd and D Ltd in Example 3.5 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X3

	C Ltd	D Ltd
	\$'000	\$'000
Sales	2,800	500
Less cost of sales	1,500	300
Gross profit	1,300	200
Add profit on sale of land	100	—
Less operating expenses	400	80
Profit before tax	1,000	120
Less tax	300	40
Profit after tax	700	80
Other comprehensive income	—	—
Total comprehensive income	<u>700</u>	<u>80</u>

- (b) Balance sheets as at 31 December 20X3

	C Ltd	D Ltd
	\$'000	\$'000
Land	—	300
Machinery	1,000	—
Investment	160	—
Current assets	340	100
	<u>1,500</u>	<u>400</u>
Share capital	500	100
Retained profit	800	230
Current liabilities	200	70
	<u>1,500</u>	<u>400</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X3

	C Ltd	D Ltd
	\$'000	\$'000
Beginning retained profit	300	150
Add profit for the year	700	80
Less dividend	200	—
Ending retained profit	800	230

When C Ltd acquired the 80% interest in D Ltd in 20X2, D Ltd's retained profit was \$100,000.

During the year 20X3, there were no intragroup transactions, except for the sale of land mentioned in Example 3.5.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the partial consolidated statement of changes in equity (showing the group's retained profit only) for C Ltd and its subsidiary for the year 20X3.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (D)	80
	Dr Beginning retained profit (D) ($80\% \times 100$)	80
	Cr Investment in D Ltd	160
	(to eliminate investment account)	
(ii)	Dr Profit on sale of land (C)	100
	Cr Land	100
	(to eliminate unrealized intragroup profit)	
(iii)	Dr Non-controlling interest (CSCI) ($20\% \times 80$)	16
	Cr Non-controlling interest (CBS)	16
	(to record non-controlling interest in profit of D Ltd)	
(iv)	Dr Share capital (D) ($20\% \times 100$)	20
	Dr Beginning retained profit (D) ($20\% \times 150$)	30
	Cr Non-controlling interest (CBS)	50
	(to record non-controlling interest in other shareholders' equity of D Ltd)	

(b) Consolidation worksheet

	C Ltd	D Ltd	Adjustments		Consolidated balances
	\$'000	\$'000	Dr	Cr	\$'000
Sales	2,800	500			3,300
Cost of sales	1,500	300			1,800
Gross profit	1,300	200			1,500
Profit on land	100	—	ii 100		—
Operating expenses	400	80			480
Profit before tax	1,000	120			1,020
Tax	300	40			340
Profit after tax	700	80			680
Non-controlling interest ..	—	—	iii 16		16
Profit for shareholders ...	—	—			664
Beginning retained profit ..	300	150	i 80		340
			iv 30		
Dividend	200	—			200
Ending retained profit	800	230			804
Land	—	300	ii 100		200
Machinery	1,000	—			1,000
Investment	160	—	i 160		—
Current assets	340	100			440
Share capital	500	100	i 80		500
			iv 20		
Retained profit	800	230			804
Current liabilities	200	70			270
Non-controlling interest ..	—	—	iii 16		
			iv 50		66

(c) Consolidated financial statements

C Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X3

	\$'000
Sales	3,300
Less cost of sales	1,800
Gross profit	1,500
Less distribution expenses	480
Profit before tax	1,020
Less tax	340
Profit after tax	680
Other comprehensive income	—
Total comprehensive income	680
 Attributable to:	
Shareholders of the parent	664
Non-controlling interest	16
	680

C Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X3

	\$'000
Land	200
Machinery	1,000
Current assets	440
	1,640
Share capital	500
Retained profit	804
Non-controlling interest	66
Current liabilities	270
	1,640

C Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	340
Add profit for the year	664
Less dividend	200
Ending retained profit	<u>804</u>

Notes to the solution

- (a) Consolidation journal entry (ii) eliminates unrealized intragroup profit on the sale of land of \$100,000. The effects of this consolidation journal entry are (i) the profit on the sale of land is eliminated and not reported in the consolidated statement of comprehensive income; and (ii) land is reported in the consolidated balance sheet at \$200,000, the original cost to the group.
- (b) The intragroup sale of land is downstream (from parent to subsidiary). Therefore, the elimination of the unrealized profit does not affect non-controlling interest.
- (c) Non-controlling interest of \$66,000 in the consolidated balance sheet can be proved by multiplying the non-controlling shareholding with the shareholders' equity of the subsidiary ($20\% \times [\$100,000 + \$230,000] = \$66,000$).
- (d) The group's retained profit of \$804,000 can be proved by adding C Ltd's adjusted retained profit of \$700,000 ($\$800,000 - \$100,000$) to the group's share of post-acquisition retained profit of D Ltd of \$104,000 ($80\% \times [\$230,000 - \$100,000]$).



3.5.2 Intragroup sale of stock

Intragroup sale of stock gives rise to additional complications in consolidation, besides those discussed in Section 3.5.1 above.

In the case of an intragroup sale involving land, the land would either be held within the group en bloc or sold to an outsider en bloc. On the other hand, for intra-group transactions involving stock, some of the goods involved could be sold to an outside party and some remain as stock within the group at the end of the accounting period. However, the nature of the problem is the same as that discussed under Section 3.5.1.

The intragroup profit on the goods held by the buying entity as ending stock is deemed to be unrealized; and will be deemed realized when the goods are sold by the buying entity to outsiders, from the group's viewpoint. Furthermore, under 'First-In First-Out' (FIFO) cost flow assumptions, the goods that remained as ending stock within the group are assumed to be sold to an outsider (and the intragroup profit therein

would be deemed realized from the group's viewpoint) in the following accounting period.

It may be noted that under FRS 1 *Presentation of Financial Statements*, entities are required to disclose either the cost of sales figures (under the function of expenses classification) or purchase and change in stock figures (under the nature of expense classification) in the published statement of comprehensive income. The cost of sales figures are, of course, arrived at as follows: opening stock + purchases - closing stock = cost of sales. Thus, where the function of expenses classification is used, consolidation adjustments to the opening stock, purchases, and closing stock are made against the cost of sales figure. Where the nature of expense classification is used, consolidation adjustments to opening stock and to closing stock are made against the change in stock figure, and consolidation adjustments to purchases are made against the purchase figure.

Example 3.7

F Ltd acquired 90% of G Ltd in 20X5. Since 1 January 20X7, G Ltd was asked to sell goods to F Ltd at cost plus 25%. The total intragroup sales for 20X7 was \$300,000. F Ltd's stock at 31 December 20X7 included \$50,000 of the goods purchased from G Ltd. For the year 20X8, the intragroup sales was \$500,000 and \$35,000 of these goods remained in the store of F Ltd at 31 December 20X8. The group has adopted FIFO cost flow assumptions.

Required

Prepare the consolidation journal entry for the years 20X7 and 20X8 in respect of the intragroup sale of goods.

Solution

(a) Consolidation journal entries for 20X7

(i)	Dr Sales	300,000
	Cr Cost of sales (purchases)	300,000
(to eliminate intragroup sales)		

(ii)	Dr Cost of sales (change in stock) (G)	10,000
	Cr Closing stock (CBS)	10,000
(to eliminate unrealized intragroup profit in closing stock)		

(b) Consolidation journal entries for 20X8

(i)	Dr Sales	500,000
	Cr Cost of sales (purchases)	500,000
(to eliminate intragroup sales)		

(ii)	Dr Beginning retained profit (G)	10,000
	Cr Cost of sales (change in stock) (G)	10,000
(to record realization of intragroup profit in opening stock)		
(iii)	Dr Cost of sales (change in stock) (G)	7,000
	Cr Closing stock (CBS)	7,000
(to eliminate unrealized intragroup profit in closing stock)		

Notes to the solution

- (a) Consolidation journal entry (i) in both 20X7 and 20X8 eliminates intragroup sales and purchases. Note that these adjustments only eliminate intragroup account balances and will not affect the profit of the group. Consequently, there is no need to identify the selling company.
- (b) Consolidation journal entry (ii) in 20X7 eliminates unrealized intragroup profit in the ending stock as at 31 December 20X7 (which is the mark-up on the intragroup sales of goods that remained within the group, that is, $20\% \times \$50,000 = \$10,000$). The debit entry to the cost of sales (G) increases the cost of sales and decreases the gross profit of G Ltd so as to eliminate the unrealized intragroup profit of \$10,000. (Alternatively, the debit entry to change in stock [G] will also reduce the operating profit of G Ltd.) The credit entry to closing stock reduces the value of the stock in the balance sheet, so that the stock is reported in the consolidated balance sheet at \$40,000, the original cost to the group.
- (c) Consolidation journal entry (ii) in 20X8 deals with unrealized intragroup profit in the opening stock, which is deemed to be realized in 20X8 under FIFO cost flow assumptions. The debit entry in the consolidation journal entry, 'Dr Beginning retained profit of G Ltd', eliminates the unrealized intragroup profit of \$10,000 which was included in G Ltd's 20X7 ending retained profit (and its 20X8 beginning retained profit). The credit entry of the consolidation journal entry, 'Cr Cost of sales (G)', decreases the cost of sales and increases the gross profit of G Ltd to take into account the realization of the intragroup profit made in 20X7 which is deemed to be realized in 20X8. (Alternatively, the credit entry 'Cr Change in stock [G]' will also increase the operating profit of G Ltd for 20X8.) The net effect of the consolidation journal entry is, like in the case of the sale of land to an outsider in Example 3.5, the transfer of the profit of \$10,000 arising from the 20X7 intragroup sale of goods from the 20X7 statement of comprehensive income to the 20X8 statement of comprehensive income. This is necessary because the \$10,000 profit was recorded by G Ltd in 20X7 but, from the group's viewpoint, was unrealized in 20X7 (when the goods concerned are still within the group) but realized in 20X8 (when the goods are assumed to have been sold to an outsider under FIFO assumptions). The consolidation journal entry is also necessary so that the 20X8 consolidated beginning retained profit is equal to the 20X7 consolidated ending retained profit. (The ending retained profit in the 20X7 consolidated financial statements was reduced by \$10,000 through consolidation journal entry [ii] in 20X7; therefore, the beginning retained profit in the 20X8 consolidated financial statements must also be reduced by the same amount.)

- (d) Consolidation journal entry (iii) in 20X8 eliminates unrealized intragroup profits on the stock at 31 December 20X8 (which is the mark-up on the intragroup sales of goods that still remained within the group, that is, $20\% \times \$35,000 = \$7,000$). The explanation for this consolidation journal entry is the same as that for consolidation journal entry (ii) in 20X7.
- (e) Note that the mark-up of 25% on cost is equal to the mark-up of 20% ($25\% \times [100\% + 25\%]$) on selling price.
- (f) If only the consolidated balance sheet is required, consolidation journal entry (i) in both 20X7 and 20X8 would not be necessary. Also, all adjustments to 'cost of sales' (or 'change in stock') and 'beginning retained profit' would be changed to 'retained profit'. Notice, in this case, that no consolidation journal entry would be necessary to account for the realization of the unrealized intragroup profit in the 20X8 opening stock (consolidation journal entry [ii] in 20X8 would be Dr Retained profit [G] \$10,000, and Cr Retained profit [G] \$10,000). This is because, as discussed in Section 3.5.1, when the goods involved in the intragroup sale are ultimately sold to the outside party, there will be no more effect on the consolidated balance sheet. (Thus, the argument by some accountants that the credit entry in consolidation journal entry [ii] in 20X8 should be to cost of sales of F Ltd, the buying company, is erroneous.)
- (g) As stated earlier, all adjustments for intragroup profits should be made, for the purpose of determining non-controlling interest, to the profit of the selling company in the intragroup transaction.

Example 3.8

Assume the financial statements of F Ltd and G Ltd in Example 3.7 for the year 20X7 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X7

	F Ltd	G Ltd
	\$'000	\$'000
Sales	2,800	5,000
Less cost of sales	1,500	3,000
<u>Gross profit</u>	<u>1,300</u>	<u>2,000</u>
Less operating expense	300	800
<u>Profit before tax</u>	<u>1,000</u>	<u>1,200</u>
Less tax	300	400
<u>Profit after tax</u>	<u>700</u>	<u>800</u>
Other comprehensive income	-	-
<u>Total comprehensive income</u>	<u>700</u>	<u>800</u>

(b) Balance sheets as at 31 December 20X7

	F Ltd	G Ltd
	\$'000	\$'000
Land	1,000	500
Investment	2,700	—
Stock	2,000	3,000
Other current assets	1,300	1,500
	<u>7,000</u>	<u>5,000</u>
Share capital	5,000	1,000
Retained profit	1,800	3,300
Current liabilities	200	700
	<u>7,000</u>	<u>5,000</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X7

	F Ltd	G Ltd
	\$'000	\$'000
Beginning retained profit	1,200	2,500
Add profit for the year	700	800
Less dividend	100	—
Ending retained profit	<u>1,800</u>	<u>3,300</u>

When F Ltd acquired the 90% interest in G Ltd in 20X5, G Ltd's retained profit was \$2,000,000. During the year 20X7, intragroup transactions were as mentioned in Example 3.7.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the partial consolidated statement of changes in equity (showing the group's retained profit only) for F Ltd and its subsidiary for the year 20X7.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (G)	900
	Dr Beginning retained profit (G) ($90\% \times 2,000$)	1,800
	Cr Investment in G Ltd	2,700
	(to eliminate investment account)	

(ii)	Dr Sales	300
	Cr Cost of sales	300
	(to eliminate intragroup sales)	
(iii)	Dr Cost of sales (G)	10
	Cr Closing stock (CBS)	10
	(to eliminate unrealized intragroup profit)	
(iv)	Dr Non-controlling interest (CSCI) ($10\% \times [800 - 10]$) ...	79
	Cr Non-controlling interest (CBS)	79
	(to record non-controlling interest in profit of G Ltd)	
(v)	Dr Share capital (G) ($10\% \times 1,000$)	100
	Dr Beginning retained profit (G) ($10\% \times 2,500$)	250
	Cr Non-controlling interest (CBS)	350
	(to record non-controlling interest in other shareholders' equity of G Ltd)	

(b) Consolidation worksheet

	F Ltd	G Ltd	Adjustments		Consolidated balances
			Dr	Cr	
Sales	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	2,800	5,000	ii 300		7,500
Cost of sales	1,500	3,000	iii 10	ii 300	4,210
Gross profit	1,300	2,000			3,290
Operating expenses	300	800			1,100
Profit before tax	1,000	1,200			2,190
Tax	300	400			700
Profit after tax	700	800			1,490
Non-controlling interest	—	—	iv 79		79
Profit for shareholders	—	—			1,411
Beginning retained profit	1,200	2,500	i 1,800		1,650
			✓ 250		
Dividend	100	—			100
Ending retained profit	1,800	3,300			2,961
Land	1,000	500			1,500
Investment	2,700	—		i 2,700	—
Stock	2,000	3,000		iii 10	4,990
Other current assets	1,300	1,500			2,800
Share capital	5,000	1,000	i 900		5,000
			✓ 100		
Retained profit	1,800	3,300			2,961
Current liabilities	200	700			900
Non-controlling interest	—	—		iv 79	
				v 350	429

(c) Consolidated financial statements

F Ltd and its subsidiary Consolidated statement of comprehensive income For year ended 31 December 20X7	
	\$'000
Sales	7,500
Less cost of sales	4,210
Gross profit	3,290
Less operating expenses	1,100
Profit before tax	2,190
Less tax	700
Profit after tax	1,490
Other comprehensive income	—
Total comprehensive income	<u>1,490</u>
Attributable to:	
Shareholders of the parent	1,411
Non-controlling interest	79
	<u>1,490</u>
F Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X7	
	\$'000
Land	1,500
Stock	4,990
Other current assets	2,800
	9,290
Share capital	5,000
Retained profit	2,961
Non-controlling interest	429
Current liabilities	900
	<u>9,290</u>
F Ltd and its subsidiary Consolidated statement of changes in equity (partial) For year ended 31 December 20X8	
	\$'000
Beginning retained profit	1,650
Add profit for the year	1,411
Less dividend	100
Ending retained profit	<u>2,961</u>

Notes to the solution

- (a) Consolidation journal entry (iv) records non-controlling interest in the subsidiary's profit. Notice that non-controlling interest is calculated based on the adjusted profit of the subsidiary after the elimination of the unrealized intragroup profit of \$10,000. This is because the unrealized intragroup profit arises from an upstream sales transaction and has to be eliminated from the profit of the subsidiary, the selling company, for the purpose of calculating non-controlling interest.
- (b) Non-controlling interest of \$429,000 in the consolidated balance sheet can be proved by multiplying the non-controlling shareholding with the adjusted shareholders' equity of the subsidiary ($10\% \times [\$1,000,000 + \$3,300,000 - \$10,000] = \$429,000$).
- (c) The group's retained profit of \$2,961,000 can be proved by adding F Ltd's retained profit of \$1,800,000 to the group's share of the adjusted post-acquisition retained profit of G Ltd of \$1,161,000 ($90\% \times [\$3,300,000 - \$2,000,000 - \$10,000]$).



3.5.3 Intragroup sale of depreciable assets

Intragroup sales of depreciable assets give rise to the same type of complications as in the case of intragroup sales involving non-depreciable assets, except for the subsequent depreciation charges.

The subsequent depreciation charges to statement of comprehensive income may be seen as the sale of a portion of the depreciable asset to outsiders. (This argument can be appreciated more easily in a manufacturing concern where depreciation expenses, as much as raw material used, form part of cost of goods manufactured.) The subsequent depreciation charges are therefore treated as a gradual realization of the initial unrealized profit on the intragroup sale of a depreciable asset (as in the case of unrealized profit on intragroup sale of stock which is deemed to be realized in the subsequent period when the stocks are sold to outsiders).

Example 3.9

J Ltd acquired 60% of K Ltd in 20X2. On 30 December 20X5, K Ltd sold machinery to J Ltd for \$400,000. The machinery was bought by K Ltd in January 20X1 and was carried in K Ltd's books on 30 December 20X5 at cost, \$600,000, and accumulated depreciation of \$300,000. The group's policy was to depreciate this type of machinery on a straight-line basis over a period of ten years and to provide a full year's depreciation if the machinery had been used for more than six months in the year. (Note that the machinery had a remaining useful life of five years only in the hands of J Ltd, having been used for five years by K Ltd before the intragroup sale.)

Required

Prepare the consolidation journal entry for the years 20X5, 20X6, and 20X7 in respect of the intragroup sale of machinery.

Solution

(a) Consolidation journal entry for 20X5

Dr Profit on sale of machinery (K)	100,000
Dr Machinery	200,000
Cr Accumulated depreciation	300,000
(to eliminate unrealized intragroup profit)	

(b) Consolidation journal entry for 20X6

(i) Dr Beginning retained profit (K)	100,000
Dr Machinery	200,000
Cr Accumulated depreciation	300,000
(to eliminate unrealized intragroup profit)	
(ii) Dr Accumulated depreciation	20,000
Cr Depreciation expenses (K)	20,000
(to record gradual realization of the unrealized profit)	

(c) Consolidation journal entry for 20X7

(i) Dr Beginning retained profit (K)	100,000
Dr Machinery	200,000
Cr Accumulated depreciation	300,000
(to eliminate unrealized intragroup profit)	
(ii) Dr Accumulated depreciation	40,000
Cr Depreciation expenses (K)	20,000
Cr Beginning retained profit (K)	20,000
(to record gradual realization of the unrealized profit)	

Notes to the solution

- (a) The consolidation journal entry in 20X5 and the consolidation journal entry (i) in 20X6 and 20X7 eliminate the unrealized intragroup profit on the sale of machinery. The debit entries to profit on sale of machinery in 20X5 and beginning retained profit in 20X6 and 20X7 eliminate the unrealized profit. The debit entry to machinery of \$200,000 and credit entry to accumulated depreciation of \$300,000 are to restore the cost and accumulated depreciation of the machinery back to the original figures, that is, \$600,000 and \$300,000 respectively, so that the machinery will be reported in the consolidated balance sheet without

regard to the intragroup transaction (because from the group's viewpoint, there was no transaction; the machinery was simply moved from one office to another office within the entity).

- (b) If the machinery is carried in K Ltd's books at book value, \$300,000 (instead of cost, \$600,000 and accumulated depreciation of \$300,000), the consolidation journal entry mentioned in Note (a) above will simply be 'Cr Machinery \$100,000' (instead of 'Dr Machinery \$200,000' and 'Cr Acc depreciation \$300,000'), again, for the purpose of reverting to what was recorded in the selling company's books without regard to the intragroup transaction.
- (c) The debit entry in consolidation journal entry (ii) for 20X6 and 20X7 adjusts the accumulated depreciation account to the amount that would have been reported without the intragroup sale. If there was no intragroup sale, the annual depreciation charge (increment to the accumulated depreciation account) would be \$60,000 (\$600,000 divided by ten years). However, in the buying company's books, the annual increment to the accumulated depreciation account is \$80,000 (\$400,000 divided by five years). Thus, the accumulated depreciation account is overstated, from the group's viewpoint, by \$20,000 as at 31 December 20X6 and \$40,000 as at 31 December 20X7.
- (d) The credit entry in consolidation journal entry (ii) for 20X6 and 20X7 records the gradual realization of the unrealized profit on the 'sale' of machinery, as part of the machinery is written off to the statement of comprehensive income through the depreciation process. As the machinery is written off (depreciated) in equal instalments over five years, the machinery is deemed to have been gradually sold to an outside party over the five years. Therefore, the unrealized intragroup profit on the machinery of \$100,000 is deemed to be realized in five equal instalments over the five-year period. The 'Cr Depreciation expenses (K) \$20,000' in 20X6 is to reduce the group's depreciation expenses and increase K Ltd's profit for 20X6 to take into account the gradual realization of the unrealized intragroup profit. In 20X7, the entry 'Cr Beginning retained profit (K) \$20,000' takes into account, in the 20X6 profit, the realization of 1/5 of the original unrealized intragroup profit of \$100,000, and the 'Cr Depreciation expenses (K) \$20,000' takes into account, in the 20X7 profit, the realization of another 1/5 of the original unrealized intragroup profit of \$100,000.
- (e) It should be noted that the credit entry in consolidation journal entry (ii) is made to the profit of the selling company, for the purpose of determining non-controlling interest. It is erroneous to argue that the credit entry in consolidation journal entry (ii) should be to the profit of the buying company. The argument is erroneous because firstly, the subsequent depreciation of the depreciable asset should be seen as a gradual sale of the asset to an outside party. The original unrealized intragroup profit has been eliminated from the selling company's profit, therefore the credit entry to record the gradual realization of the intragroup profit should be credited to the profit of the selling company. Secondly, the depreciation expenses of the buying company is not overstated. The cost of the machinery to the buying company is \$400,000, and therefore the depreciation expenses is correctly stated in the buying company's books at \$80,000. Thirdly, as explained in Sections 3.5.1

and 3.5.2 and to be shown in Note (h) below, it is conceptually incorrect and practically impossible.

- (f) Consolidation journal entry (i) and (ii) could, of course, be combined into one consolidation journal entry.
- (g) If only the consolidated balance sheet is required, all the above consolidation journal entries are still required, except that all profit and loss items (such as 'profit on sale of machinery', 'depreciation expenses') and 'beginning retained profit' will be changed to 'retained profit'.
- (h) If the buying company uses the machinery until it is fully depreciated, then consolidation journal entries (similar to those shown for 20X6 and 20X7) will be required for each year until after the year the machinery is fully depreciated. In the year when the machinery is fully depreciated, the consolidation journal entry will be as follows:

Dr Beginning retained profit (K)	100,000
Dr Machinery	200,000
Cr Accumulated depreciation	300,000

Dr Accumulated depreciation	100,000
Cr Beginning retained profit (K)	80,000
Cr Depreciation expenses (K)	20,000

As can be seen, the entries will net-off against each other and have no effect in the consolidated balance sheet, and therefore there is, logically, no consolidation journal entry required in the subsequent periods. If, as argued by some accountants, the credit entries in consolidation journal entry (ii) are to be adjusted to the buying company (L Ltd), the above entries will not net-off against each other, and therefore, consolidation journal entry will have to be made in the periods after the machinery is no longer involved in the consolidated financial statements, which, of course, is conceptually incorrect and practically impossible.



If the depreciable asset is sold to an outsider before it is fully depreciated, a consolidation adjustment must be made to the profit or loss arising therefrom because the profit or loss from the group's viewpoint will be different from that reported in the company's statement of comprehensive income. This situation is the same as that discussed under Sections 3.5.1 and 3.5.2. The difference in the profit or loss will be exactly equal to the amount of unrealized intragroup profit as at the date of the sale to the outside party. It follows the general principle that once the asset is sold to an outside party, all the unrealized profits are thereby realized.

Example 3.10

Refer to Example 3.9. Assume J Ltd sold the machinery to an outsider in January 20X8 for \$250,000.

Required

Prepare the consolidation journal entry for 20X8 with respect to the sale of machinery.

Solution

(a) Calculation of profit or loss on the sale

	In J Ltd's books	Group's viewpoint
	\$'000	\$'000
Sales proceed	250	250
Book value		
Cost	400	600
Accumulated depreciation	160 (400/5 × 2)	420 (600/10 × 7)
	240	180
Profit	10	70

(b) Consolidation journal entry

Dr Beginning retained profit (K)	60,000
Cr Profit on sale of machinery (K)	60,000
(to record realization of unrealized intragroup profit on machinery)	

Notes to the solution

- (a) The profit on the sale of machinery is \$70,000 from the group's viewpoint and should therefore be reported in the consolidated statement of comprehensive income as 'profit on sale of machinery \$70,000'. However, in J Ltd's statement of comprehensive income, the profit on the sale of machinery is reported at \$10,000 only. Therefore, the consolidation journal entry 'Cr Profit on the sale of machinery \$60,000' is required. The consolidation journal entry 'Dr Beginning retained profit \$60,000' is required so that the beginning retained profit in the 20X8 consolidated financial statements is equal to the ending retained profit in the 20X7 consolidated financial statements. It should be noted that the adjustment of \$60,000 is also equal to the amount of unrealized intragroup profit as at January 20X8, the date of the sale to outsiders. (See the consolidation journal entry for 20X7 in the solution to Example 3.9.) Thus, the consolidation journal entry can also be explained as a transfer of \$60,000, which is the balance of the unrealized profit as at 31 December 20X7, which, from the group's viewpoint, is realized in 20X8 when there is an external transaction.

This is consistent with the discussion on the consolidation journal entry required when the land was ultimately sold to an outsider in Section 3.5.1 and when stock was ultimately sold in Section 3.5.2. Similarly, the adjustments are to K Ltd, the selling company in the inter-company transaction, for the purpose of calculating non-controlling interest.

- (b) It may be noted that the amount of adjustment for the consolidation journal entry above is \$60,000, which is the amount of unrealized profit as at 1 January 20X8 now realized through the external transaction. The amount is \$60,000 regardless of the amount of the sale proceeds.

Example 3.11

Assume the financial statements of J Ltd and K Ltd in Example 3.9 as at 31 December 20X8 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	J Ltd	K Ltd
	\$'000	\$'000
Sales	800	500
Less cost of sales	500	150
Gross profit	300	350
Less operating expenses	200	100
Profit before tax	100	250
Less tax	30	70
Profit after tax	70	180
Other comprehensive income	—	—
Total comprehensive income	70	180

- (b) Balance sheets as at 31 December 20X8

	J Ltd	K Ltd
	\$'000	\$'000
Land	300	500
Machinery, at cost	400	—
Accumulated depreciation	(240)	—
Investment	180	—
Current assets	160	200
	800	700
Share capital	500	100
Retained profit	200	530
Current liabilities	100	70
	800	700

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	J Ltd	K Ltd
	\$'000	\$'000
Beginning retained profit	130	350
Add profit for the year	70	180
Ending retained profit	200	530

When J Ltd acquired the 60% interest in K Ltd in 20X2, K Ltd's retained profit was \$200,000. During the year 20X8, there were no intragroup transactions, except for the intragroup sale of machinery mentioned in Example 3.9, which was still being used by J Ltd at 31 December 20X8.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the partial consolidated statement of changes in equity (showing the group's retained profit only) for J Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entries

- (i) Dr Share capital (K) 60
Dr Beginning retained profit (K) ($60\% \times 200$) 120
Cr Investment in K Ltd 180
(to eliminate investment account)
- (ii) Dr Beginning retained profit (K) 100
Dr Machinery 200
Cr Accumulated depreciation 300
(to record unrealized intragroup profit)
- (iii) Dr Accumulated depreciation 60
Cr Beginning retained profit (K) 40
Cr Depreciation expenses (K) 20
(to record gradual realization of the unrealized intragroup profit)
- (iv) Dr Non-controlling interest (CSI) ($40\% \times [180 + 20]$) 80
Cr Non-controlling interest (CBS) 80
(to record non-controlling interest in profit of K Ltd)
- (v) Dr Share capital (K) ($40\% \times 100$) 40
Dr Beginning retained profit (K) ($40\% \times [350 - 100 + 40]$) 116
Cr Non-controlling interest (CBS) 156
(to record non-controlling interest in other shareholders' equity of K Ltd)

(b) Consolidation worksheet

	J Ltd	K Ltd	Adjustments	Consolidated balances
	\$'000	\$'000	Dr Cr	\$'000
Sales	800	500		1,300
Cost of sales	500	150		650
Gross profit	300	350		650
Expenses	200	100	iii 20	280
Profit before tax	100	250		370
Tax	30	70		100
Profit after tax	70	180		270
Non-controlling interest	—	—	iv 80	80
Profit for shareholders	—	—		190
Beginning retained profit	130	350	i 120 ii 100 v 116	184
Ending retained profit	200	530		374
Land	300	500		800
Machinery, at cost	400	—	ii 200	600
Accumulated depreciation	(240)	—	iii 60	ii 300 (480)
Investment	180	—	i 180	—
Current assets	160	200		360
Share capital	500	100	i 60 v 40	500
Retained profit	200	530		374
Current liabilities	100	70		170
Non-controlling interest	—	—	iv 80 v 156	236

(c) Consolidated financial statements

J Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,300
Less cost of sales	650
Gross profit	650
Less operating expenses	280
Profit before tax	370
Less tax	100
Profit after tax	270
Other comprehensive income	—
Total comprehensive income	270
Attributable to:	
Shareholders of the parent	190
Non-controlling interest	80
	270

J Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Land	800
Machinery	600
Accumulated depreciation	(480)
Current assets	360
	<hr/>
	1,280
Share capital	500
Retained profit	374
Non-controlling interest	236
Current liabilities	170
	<hr/>
	1,280

J Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	184
Add profit for the year	190
Ending retained profit	<hr/> 374

Notes to the solution

- (a) Consolidation journal entry (ii) and (iii) are the adjustments to the consolidated financial statements for the intragroup sale of machinery. Consolidation journal entry (ii) adjusts for the unrealized intragroup profit recorded in the beginning retained profit of K Ltd (the selling company) and the cost and accumulated depreciation of the machinery concerned. Consolidation journal entry (iii) records the gradual realization of the unrealized profit through the depreciation process. The asset valuation effect of consolidation journal entries (ii) and (iii) is such that the machinery account will be reported in the consolidated balance sheet as if the intragroup sale has not taken place. If the intragroup sale has not taken place, the machinery would be reported in the balance sheet of K Ltd (and in the consolidated balance sheet) as: cost \$600,000 less accumulated depreciation \$480,000, which is what is shown in the consolidated balance sheet above after the consolidation journal entries (ii) and (iii).
- (b) Consolidation journal entry (iv) records non-controlling interest in the subsidiary's profit. Notice that non-controlling interest is calculated based on the adjusted profit of the subsidiary after taking into account the gradual realization of \$20,000 of the unrealized intragroup profit in 20X8. The intragroup sale of machinery was an upstream transaction, and therefore, the original amount of \$100,000 of unrealized profit and the subsequent gradual realization of \$20,000 per year has to be adjusted to the profit of the subsidiary, the selling company, for the purpose of calculating non-controlling interest.

- (c) Non-controlling interest of \$236,000 in the consolidated balance sheet can be proved by multiplying the non-controlling shareholding with the adjusted shareholders' equity of the subsidiary ($40\% \times [\$100,000 + \$530,000 - \$40,000] = \$236,000$). (\$40,000 is the balance of the unrealized intragroup profit as at 31 December 20X8, obtainable from consolidation journal entries [ii] and [iii].)
- (d) The group's retained profit of \$374,000 can be proved by adding the parent's retained profit of \$200,000 to the group's share of the adjusted post-acquisition retained profit of the subsidiary of \$174,000 ($60\% \times [\$530,000 - \$200,000 - \$40,000]$). \$200,000 is the pre-acquisition retained profit, and \$40,000 is the balance of the unrealized intragroup profit.)



3.5.4 Intragroup charges

Another source of unrealized intragroup gains/losses may arise from an intragroup charge where the parent recognizes the charge as profit or loss in its statement of comprehensive income, while the subsidiary capitalizes the charge as part of cost of its asset in its balance sheet, or vice versa.

One common example is where the subsidiary borrows a loan from its parent to finance its construction of a qualifying asset under FRS 23 *Borrowing Costs*. In this case, the parent will treat the intragroup interest charge as interest income in its statement of comprehensive income, and the subsidiary will capitalize the interest expense as part of the cost of asset in its balance sheet under FRS 32. However, from the group's viewpoint, it may be noted that the group is merely using its own internal source of fund to finance its construction of a qualifying asset, and therefore no interest income/expense should be accounted for. It could also be argued that, from the group's viewpoint, the interest income recognized by the parent is unrealized. Thus, upon consolidation, a consolidation journal entry is required to Dr Interest income (P) and Cr Asset (S), so that there is no interest income and no interest capitalization at the group level.

A complication may arise if the parent borrows a loan from a bank and in turn lends the loan to its subsidiary to finance the subsidiary's construction of a qualifying asset under FRS 23. In this case, the parent will treat the interest to the bank as interest expense and the intragroup interest charge as interest income in its statement of comprehensive income, and the subsidiary will capitalize the interest expense as part of the cost of asset in its balance sheet under FRS 32. However, from the group's viewpoint, it may be noted that the group is borrowing a bank loan to finance its construction of a qualifying asset, and therefore the bank interest should be capitalized as part of the cost of the qualifying asset under FRS 23. The consolidation journal entry in this case will be simply to Dr Interest income (P) and Cr Interest expense (P), so that the interest to the bank is capitalized as part of the cost of the qualifying asset in the consolidated balance sheet.

In a case where the parent borrows a loan from a bank at a specified interest rate and in turn lends the loan at a different interest rate to its subsidiary to finance the subsidiary's construction of a qualifying asset under FRS 23, then the amount of interest

that can be capitalized as part of the cost of the qualifying asset under FRS 23 is the interest paid to the bank (not the interest charged by the parent). For example, if, in the above example, P Ltd pays \$6 million interest to the bank, but charges \$8 million interest against S Ltd and S Ltd consequently capitalizes \$8 million as part of the cost of its qualifying asset, the consolidation journal entry will be to Dr Interest income (P) \$8 million, Cr Interest expense (P) \$6 million, and Cr Asset (S) \$2 million, so that only \$6 million (the amount of interest paid by the group to the bank) is capitalized as part of the cost of the qualifying asset in the consolidated balance sheet.

(As discussed earlier in Section 3.4, in cases where the subsidiary borrows a loan from its parent to finance its operation cash flow needs and consequently the parent treats the intragroup interest charge as interest income in its statement of comprehensive income and the subsidiary treats the intragroup interest charge as interest expense in its statement of comprehensive income, the interest income and interest expense will be eliminated upon consolidation as 'intragroup account balances'. There is no issue of 'unrealized intragroup gains/losses'.)

3.5.5 Tax effect on unrealized intragroup profits and losses

In the discussion so far, the unrealized intragroup profits and losses are adjusted in the consolidation process, without taking into account the tax effect thereof.

FRS 12 *Income Taxes* requires deferred tax assets/liabilities to be provided for.

FRS 12 adopts two basic principles: (a) The first principle relates to the issues of whether or not a deferred tax liability/asset exists. This principle states that if it is probable that recovery or settlement of the carrying amount of an asset or liability will make future tax payments larger or smaller than they would be if such recovery or settlement were to have no tax consequences, then a deferred tax liability or asset should be recognized, with certain limited exceptions; (b) The second principle relates to the issue of how the effects of deferred tax should be accounted for. This principle states that the effect of the deferred tax liability/asset should be accounted for in the same way that the underlying transaction/event is accounted for.

Thus, where unrealized intragroup profits or losses are eliminated on consolidation, one related issue to consider is whether or not there is deferred tax to account for. Applying the first principle stated above, if the adjustment for unrealized intragroup profits or losses and the corresponding adjustment to the carrying amount of assets or liabilities (so that their carrying amount reflects the original cost to the group) give rise to a difference between the carrying amount of the assets/liabilities (in the consolidated balance sheet) and their respective tax bases (the transacted amount recorded in the buying entity's books) that will cause the recovery or settlement of the carrying amount of an asset or liability to result in future tax payments to be larger or smaller than they would be if such recovery or settlement were to have no tax consequences, then a deferred tax liability or asset should be recognized. Conversely, if the adjustment of the unrealized intragroup profits or losses and the corresponding adjustment to the carrying amounts of the assets or liabilities will have no effect on the future tax payable, then no deferred tax asset/liability need be accounted for.

If, under the first principle, it is determined that there is a deferred tax asset/liability arising from adjustment of intragroup profits and losses, a further issue to consider is how the effects of deferred tax should be accounted for. Applying the second principle stated above, the answer will depend on whether the consolidation adjustment eliminates unrealized intragroup profits/losses in the current year or previous years. If the adjustment is to eliminate unrealized intragroup profits/losses for the current year, given that all such adjustments affect the consolidated statement of comprehensive income, the deferred tax effect thereof will also affect the consolidated statement of comprehensive income (more specifically, the 'Tax expense' amount in the consolidated statement of comprehensive income). However, if the adjustment is to eliminate unrealized intragroup profits/losses in the previous years, given that all such adjustments affect the beginning retained profits, the deferred tax effect thereof will affect the 'Beginning retained profits'.

(The 'Deferred tax' will be presented as 'Deferred tax liability' in the consolidated balance sheet if it has a net credit balance, or as 'Deferred tax asset' if it has a net debit balance.)

More specifically, accounting for the tax effect arising from adjustment for unrealized intragroup profits and losses may be summarized below:

- (a) If, under the first principle, there is no tax effect arising from the adjustment for unrealized intragroup profits or losses, then there is no deferred tax to account for.

For example, assume that P sells a piece of land carried in its books at \$10 million to its subsidiary for \$15 million. Assume that the relevant tax laws do not impose tax on profit on the sale of land. In this case, adjustment for the unrealized profit of \$5 million (and subsequent realization thereof) will have no tax effect. Consequently, there is no deferred tax to account for.

With reference to Examples 3.5 and 3.6, assuming the relevant tax rules do not impose tax on profit on the sale of land, then there is no deferred tax to account for.

- (b) Assuming there is deferred tax to account for, then the accounting for the deferred tax effect depends on (i) whether the adjustment increases group profit (in which case the deferred tax account is credited) or decreases group profit (in which case the deferred tax account is debited), and (ii) whether the adjustment is to eliminate unrealized intragroup profits/losses in the current year (in which case the tax effect will affect the 'Tax expense'), or to eliminate unrealized intragroup profits/losses in the previous years (in which case, the tax effect will affect the 'Beginning retained profits').

- (i) Where the adjustment is to eliminate unrealized intragroup profits/losses in the current year, and assuming that there is deferred tax to account for, the deferred tax effect thereof can be easily accounted for by having an additional consolidation journal entry, which affects only two accounts, namely 'Tax expense' and 'Deferred tax', as follows (even though FRS 12 requires the use of the 'balance sheet' approach, the 'statement of comprehensive income' is used here since all the intragroup profit/loss adjustments affect only the consolidated statement of comprehensive income):

- If the profit of the group is decreased due to the elimination of unrealized intragroup profits and losses, then the CJE should 'Cr Tax expense' to decrease the tax expense, as follows:

Dr Deferred tax
Cr Tax expense

- If the profit of the group is increased due to the elimination of unrealized intragroup profits and losses, then the CJE should 'Dr Tax expense' to increase the tax expense, as follows:

Dr Tax expense
Cr Deferred tax

- (ii) Where the adjustment is to eliminate unrealized intragroup profits/losses in the previous years, and assuming that there is deferred tax to account for, the deferred tax effect thereof can be easily accounted for by having an additional consolidation journal entry, which affects only two accounts, namely, 'Beginning retained profits' and 'Deferred tax', as follows:

- If the beginning retained profit of the group is decreased due to the elimination of intragroup profits and losses in the previous years, then the CJE for the tax effect should 'Cr Beginning retained profit' so that the beginning retained profit is reduced only by the after-tax effect of the intragroup profits and losses, as follows:

Dr Deferred tax
Cr Beginning retained profit

- If the beginning retained profit of the group is increased due to the elimination of intragroup profits and losses in the previous years, then the CJE for the tax effect should 'Dr Beginning retained profit' so that the beginning retained profit is increased only by the after-tax effect of the intragroup profits and losses, as follows:

Dr Beginning retained profit
Cr Deferred tax

With reference to Example 3.7, assuming that the relevant tax rules imposed a tax at a rate of 20% on profit on sale of stock, the consolidation journal entries to take into account the tax effect (together with the original consolidation journal entry) will be as follows:

- (a) Consolidation journal entry for 20X7

(i)	Dr Sales	300,000	
	Cr Cost of sales	300,000	
	(to eliminate intragroup sales)		

(ii) Dr Cost of sales (G) 10,000
 Cr Closing stock (CBS) 10,000
 (to eliminate unrealized intragroup profit)

(iii) Dr Deferred tax 2,000
 Cr Tax expenses 2,000
 (to account for the tax effect on consolidation journal entry [ii])

(b) Consolidation journal entry for 20X8

(i) Dr Sales 500,000
 Cr Cost of sales 500,000
 (to eliminate intragroup sales)

(ii) Dr Beginning retained profit (G) 10,000
 Cr Cost of sales (G) 10,000
 (to eliminate realization of intragroup profit)

(iii) Dr Deferred tax 2,000
 Cr Beginning retained profit (G) 2,000
 (to account for tax effect for the debit entry in consolidation journal entry [ii])

(iv) Dr Tax expenses (G) 2,000
 Cr Deferred tax 2,000
 (to account for tax effect for the credit entry in consolidation journal entry [ii])

(v) Dr Cost of sales (G) 7,000
 Cr Closing stock (CBS) 7,000
 (to eliminate unrealized intragroup profit)

(vi) Dr Deferred tax 1,400
 Cr Tax expenses (G) 1,400
 (to account for tax effect on consolidation journal entry [v])

In practice, the intragroup adjustments (after netting-off one against the other) normally do not have a material effect on the accounting profit-tax relationship. Also, the tax effect, if the need arises, can easily be accounted for using separate consolidation journal entries as discussed above. Furthermore, the net deferred tax effect of all consolidation adjustments may be accounted for through one single consolidation journal entry, instead of a separate tax effect consolidation journal entry for each adjustment for unrealized profits and losses, as shown above. Therefore, in the rest of this book, the tax effect will be ignored to simplify the discussion.

The discussion on tax effect will end here with another illustration.

Example 3.12

The financial statements of P Ltd and Q Ltd for the year 20X8 are as follows:

(a) Statements of comprehensive income for the year ended 31 December 20X8

	P Ltd	Q Ltd
	\$'000	\$'000
Sales	280	500
Less cost of sales	150	300
Gross profit	130	200
Less operating expenses	30	70
Profit before tax	100	130
Less tax	30	40
Profit after tax	70	90
Other comprehensive income	—	—
Total comprehensive income	70	90

(b) Balance sheets as at 31 December 20X8

	P Ltd	Q Ltd
	\$'000	\$'000
Land	100	50
Investment	240	—
Stock	200	300
Other current assets	160	150
	700	500
Share capital	500	100
Retained profit	180	330
Current liabilities	20	70
	700	500

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	Q Ltd
	\$'000	\$'000
Beginning retained profit	120	240
Add profit for the year	70	90
Less dividend	10	—
Ending retained profit	180	330

When P Ltd acquired its 80% interest in Q Ltd in 20X5, Q Ltd's retained profit was \$200,000. Since 1 January 20X7, Q Ltd was asked to sell goods to P Ltd at cost plus 33½%. P Ltd's stock at 31 December 20X7 included \$80,000 worth of the goods purchased from Q Ltd. For the year 20X8, the intragroup sales is \$300,000, and \$200,000 worth of these goods remained in the store of P Ltd at 31 December 20X8. The group adopts FIFO cost flow assumptions.

Required

Prepare the consolidated statement of comprehensive income, consolidated balance sheet, and partial consolidated statement of changes in equity (showing the group's retained profit only) for P Ltd and its subsidiary for the year 20X8. (For the purposes of FRS 12, the temporary differences arising from intragroup elimination are to be accounted for at a tax rate of 20%).

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (Q)	80	
	Dr Beginning retained profit (Q) ($80\% \times 200$)	160	
	Cr Investment in Q Ltd		240
	(to eliminate investment account)		
(ii)	Dr Sales	300	
	Cr Cost of sales		300
	(to eliminate intragroup sales)		
(iii)	Dr Beginning retained profit (Q)	20	
	Cr Cost of sales		20
	(to record realization of intragroup profit on beginning stock)		
(iv)	Dr Deferred tax	4	
	Cr Beginning retained profit (Q)		4
	(to account for tax effect for the debit entry in consolidation journal entry [iii])		
(v)	Dr Tax expenses (Q)	4	
	Cr Deferred tax		4
	(to account for tax effect for the credit entry in consolidation journal entry [iii])		
(vi)	Dr Cost of Sales (Q)	50	
	Cr Closing stock (CBS)		50
	(to eliminate unrealized intragroup profit)		
(vii)	Dr Deferred tax	10	
	Cr Tax expense (CBS)		10
	(to account for tax effect for consolidation journal entry [vi])		

(viii)	Dr Non-controlling interest (CSCI)	13.2
	Cr Non-controlling interest (CBS)	13.2
	(to record non-controlling interest in profit of Q Ltd)	
(ix)	Dr Share capital (Q) ($20\% \times 100$)	20
	Dr Beginning retained profit (Q) ($20\% \times [240 - 20 + 4]$)	44.8
	Cr Non-controlling interest (CBS)	64.8
	(to record non-controlling interest in other shareholders' equity of Q Ltd)	

(b) Consolidation worksheet

	P Ltd	Q Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	280	500	ii 300		480
Cost of sales	150	300	vi 50	ii 300	180
Gross profit	130	200		iii 20	300
Operating expenses	30	70			100
Profit before tax	100	130			200
Tax	30	40	v 4	vii 10	64
Profit after tax	70	90			136
Non-controlling interest	—	—	viii 13.2		13.2
Profit for shareholders	—	—			122.8
Beginning retained profit ..	120	240	i 160	iv 4	
			iii 20		
			ix 44.8		139.2
Dividend	10	—			10
Ending retained profit	180	330			252
Land	100	50			150
Investment	240	—		i 240	—
Stock	200	300		vi 50	450
Other current assets	160	150			310
Deferred tax			iv 4	v 4	
			vii 10		10
Share capital	500	100	i 80		
			ix 20		500
Retained profit	180	330			252
Current liabilities	20	70			90
Non-controlling interest	—	—	viii 13.2		
			ix 64.8		78

(c) Consolidated financial statements

P Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	480
Cost of sales	180
Gross profit	300
Operating expenses	100
Profit before tax	200
Tax	64
Profit after tax	136
Other comprehensive income	—
Total comprehensive income	<u>136</u>
Attributable to:	
Shareholders of the parent	122.8
Non-controlling interest	13.2
	<u>136</u>

P Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Land	150
Deferred tax	10
Stock	450
Other current assets	310
	<u>920</u>
Share capital	500
Retained profit	252
Non-controlling interest	78
Current liabilities	90
	<u>920</u>

P Ltd and its subsidiary	
Consolidated statement of changes in equity (partial)	
For year ended 31 December 20X8	
\$'000	
Beginning retained profit	139.2
Add profit for the year	122.8
Less dividend	10
Ending retained profit	252

Notes to the solution

- (a) Consolidation journal entry (iii) records the realization of intragroup profit in the opening stock, which is equal to $25\% \times \$80,000 = \$20,000$. (Note that the mark-up of $33\frac{1}{3}\%$ on cost is the same as 25% on selling price.)
- (b) Consolidation journal entry (iv) records the tax effect relating to the debit entry in consolidation journal entry (iii). The consolidation journal entry (iv) 'Cr Beginning retained profit \$4,000' is necessary so that the 20X8 beginning retained profit equals the 20X7 ending retained profit. (After taking into account the tax effect, the 20X7 ending retained profit would be reduced by \$16,000, that is, the after-tax effect of the unrealized profit in the 20X7 closing stock.) The consolidation journal entry (iv) 'Dr Deferred tax \$4,000' is also necessary, because in the 20X7 consolidated balance sheet, there was a deferred tax \$4,000 (debit balance), arising from the tax effect accounting in 20X7.
- (c) Consolidation journal entry (v) records the tax effect relating to consolidation journal entry (iii) 'Cr Cost of sales \$20,000'. Consolidation journal entry (iii) 'Cr Cost of sales \$20,000' effects a reduction in the 20X8 cost of sales by \$20,000, thereby increasing the 20X8 profit before tax by \$20,000. Since the 20X8 profit before tax is increased, consolidation journal entry (v) is necessary so as to increase the tax charge by \$4,000 for the year.
- (d) Consolidation journal entry (vi) eliminates unrealized intragroup profit on the closing stock, which is equal to $25\% \times \$200,000 = \$50,000$.
- (e) Consolidation journal entry (vii) accounts for the tax effect on the elimination of the unrealized intragroup profit on closing stock, which is equal to $20\% \times \$50,000 = \$10,000$. The elimination of the unrealized intragroup profit in consolidation journal entry (vi) results in a decrease in the 20X8 profit before tax of the seller company; therefore, the tax charge must also be decreased through consolidation journal entry (vii).
- (f) Consolidation journal entry (viii) records non-controlling interest in the subsidiary's adjusted profit after tax ($20\% \times \$66,000 = \$13,200$). Notice that the subsidiary's profit after tax has been adjusted for the intragroup profits in opening stock and closing stock, and also the tax effect thereof through consolidation journal entries (iii), (v), (vi), and (vii), and is equal to \$66,000 ($\$90,000 + \$20,000 - \$4,000 - \$50,000 + \$10,000$).
- (g) Non-controlling interest in the consolidated balance sheet can be proved by multiplying the non-controlling shareholding by the adjusted shareholders' equity of the subsidiary ($20\% \times [\$100,000 + \$330,000 - \$50,000 + \$10,000] = \$78,000$). (Note that the intragroup profit in the opening stock and the tax effect thereof would not affect the calculation, because it is realized both from the selling company's viewpoint and the group's viewpoint as at 31 December 20X8.)

- (h) The group's retained profit in the consolidated balance sheet can be proved by adding the parent's retained profit to the group's share of the adjusted post-acquisition retained profit of the subsidiary. The parent's retained profit is \$180,000. The group's share of the adjusted post-acquisition retained profit of the subsidiary is equal to \$72,000 ($80\% \times [\$330,000 - \$200,000 - \$50,000 + \$10,000]$). Thus, the group's retained profit is \$252,000.

3.6**Intragroup dividend**

In Singapore, accounting for dividends is affected by the relevant tax law. Previously, the relevant tax rules provided for the imputation system, under which (a) the paying company would pay dividends net-of-tax, (b) the receiving entity would report the dividend income at the gross amount and be taxed on the gross amount of the dividend income, and (c) the receiving entity was entitled to off-set against its own tax liability the tax that the paying company had deducted from the dividends, namely, the Section 44 set-off.

In 2003, the tax rules were changed to require the use of the one-tier system. However, companies were given the option to continue using the imputation system up to 31 December 2007. Under the one-tier system: (a) the paying company will pay dividends net-of-tax, and (b) the receiving entity will report the dividend income at the net which is not taxable (and, of course, the receiving entity is not entitled to the Section 44 set-off).

Example 3.13 •

B Ltd declared and paid a gross dividend of 10 cents per share, and A Ltd held 5,000 of B Ltd's shares. Assume a statutory tax rate of 20%.

Solution A: Imputation system

Under the imputation system, the dividend in relation to A Ltd's shareholding in B Ltd will be recorded in the respective companies' books as follows:

In B Ltd's books:

(a)	Dr Dividend appropriation/retained profit	400	
	Cr Dividend payable		400
(Appropriation of dividend)			

(b)	Dr Dividend payable	400	
	Cr Cash		400
(Payment of dividend)			

In A Ltd's books:

(a)	Dr Cash	400
	Dr Tax recoverable/tax payable	100
	Cr Dividend income	500
	(Dividend income)	
(b)	Dr Tax expenses	100
	Cr Tax payable	100
	(Tax on dividend income)	

Notes to solution A

- (a) In B Ltd's books, dividends are appropriated and paid net-of-tax.
- (b) In A Ltd's books:
 - (i) dividend income is reported at the gross amount of dividend received (re-gross \$400 to \$500 [$\$400 \times 100/80 = \500]);
 - (ii) the tax payable of \$100 ($20\% \times \500) will be exactly off-set by tax recoverable under Section 44 of \$100, that is, no additional tax liability would arise out of the dividend income; and
 - (iii) the journal entries (a) and (b) in A Ltd's books may be combined as follows:

Dr Cash	400
Dr Tax expenses	100
Cr Dividend income	500

Solution B: One-tier system

Under the one-tier system, the dividend in relation to A Ltd's shareholding in B Ltd will be recorded in the respective companies' books as follows:

In B Ltd's books:

(a)	Dr Dividend appropriation/retained profit ...	400
	Cr Dividend payable	400
	(Appropriation of dividend)	
(b)	Dr Dividend payable	400
	Cr Cash	400
	(Payment of dividend)	

In A Ltd's books:

(a)	Dr Cash	400
	Cr Dividend income	400
	(Dividend income)	

Notes to solution B

- (a) In B Ltd's books, dividends are appropriated and paid net-of-tax.
- (b) In A Ltd's books:
- dividend income is reported at the net amount of dividend received, of \$400;
 - the dividend income is not taxable; and
 - there is no Section 44 set-off.



Since the imputation system has been replaced by the one-tier system, the following discussion is based on the scenario where the subsidiary adopts the one-tier system.

If the subsidiary is wholly owned by the parent, the consolidation journal entry for the elimination of the intragroup dividends will involve eliminating the dividend income of the parent against the dividend appropriation of the subsidiary. With reference to Example 3.13 and assuming that A Ltd holds 100% of the shares of B Ltd, the elimination of the intragroup dividends will be as follows (assuming the one-tier system):

Dr Dividend income (A)	400
Cr Dividend appropriation (B)	400
(to eliminate intragroup dividend)	

If, in Example 3.13, the dividend has not been paid by B Ltd, journal entry (b) 'payment of dividend' will not be recorded in B Ltd's books, and B Ltd's balance sheet will report a current liability item, 'dividend payable \$400'. In A Ltd's books, journal entry (a) 'record dividend income' will have 'Dr Dividend receivable' instead of 'Dr Cash'. The 'Dividend receivable \$400' will be reported as a current asset item in A Ltd's balance sheet. In the consolidation process, two consolidation journal entries are required: one to eliminate the dividend income against the dividend appropriation, and another to eliminate the dividend receivable against the dividend payable, as follows:

Dr Dividend income (A)	400
Cr Dividend appropriation (B)	400
(to eliminate intragroup dividend)	

Dr Dividend payable	400
Cr Dividend receivable	400
(to eliminate intragroup account balances)	

If, in Example 3.13, B Ltd has not paid the dividends, A Ltd may not have recorded the dividends at all. In this case, B Ltd's books would show a dividend appropriation against its retained profit, and a dividend payable account; whereas A Ltd's books would not have any account relating to the intragroup dividend at all. The easiest way to solve this problem is to update A Ltd's books with the dividend (either in A Ltd's books or as a consolidation journal entry), and then eliminate both the statement of comprehensive income item and balance sheet items relating to the intragroup dividend, as explained in the previous paragraph.

Example 3.14

The financial statements of Q Ltd and R Ltd for the year 20X8 are as follows:

(a) Statements of comprehensive income for the year ended 31 December 20X8

	Q Ltd	R Ltd
	\$'000	\$'000
Sales	1,000	600
Less cost of sales	300	200
 Gross profit	700	400
Less operating expenses	300	200
 Profit before tax	400	200
Less tax	120	60
 Profit after tax	280	140
Other comprehensive income	—	—
 Total comprehensive income	<u>280</u>	<u>140</u>

(b) Balance sheets as at 31 December 20X8

	Q Ltd	R Ltd
	\$'000	\$'000
Land	700	200
Investment	100	—
Cash	100	40
 900	<u>900</u>	<u>240</u>
 Share capital	400	100
Retained profit	500	70
Dividend payable	—	70
 900	<u>900</u>	<u>240</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	Q Ltd	R Ltd
	\$'000	\$'000
Beginning retained profit	220	-
Add profit for the year	280	140
Less dividend	-	70
Ending retained profit	<u>500</u>	<u>70</u>

Q Ltd acquired its 100% interest in R Ltd on 31 December 20X7, when R Ltd was formed. During the year 20X8, there were no inter-company transactions, except for a dividend declared by R Ltd on 30 December 20X8, which Q Ltd has not recorded. R Ltd is on the one-tier system.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the partial consolidated statement of changes in equity (showing the group's retained profit only) for Q Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entries

- (i) Dr Share capital (R) 100
Cr Investment in R Ltd 100
(to eliminate investment account)
- (ii) Dr Dividend receivable (Q) 70
Cr Dividend income (Q) 70
(to accrue for intragroup dividend)
- (iii) Dr Dividend income (Q) 70
Cr Dividend appropriation (R) 70
(to eliminate intragroup dividend)
- (iv) Dr Dividend payable 70
Cr Dividend receivable 70
(to eliminate intragroup account)

(b) Consolidation worksheet

	Q Ltd	R Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	1,000	600			1,600
Cost of sales	300	200			500
Gross profit	700	400			1,100
Operating expenses	300	200			500
Dividend income	—	—	iii 70	ii 70	—
Profit before tax	400	200			600
Tax	120	60			180
Profit after tax	280	140			420
Dividend	—	70		iii 70	—
Beginning retained profit	220	—			220
Ending retained profit	500	70			640
Land	700	200			900
Investment	100	—		i 100	—
Dividend receivable	—	—	ii 70	iv 70	—
Cash	100	40			140
Share capital	400	100	i 100		400
Retained profit	500	70			640
Dividend payable	—	70	iv 70		—

(c) Consolidated financial statements

Q Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	1,600
Less cost of sales	500
Gross profit	1,100
Less operating expenses	500
Profit before tax	600
Less tax	180
Profit after tax	420
Other comprehensive income	—
Total comprehensive income	420

**Q Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8**

	\$'000
Land	900
Cash	140
	<u>1,040</u>
Share capital	400
Retained profit	640
	<u>1,040</u>

**Q Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8**

	\$'000
Beginning retained profit	220
Add profit for the year	420
Ending retained profit	<u>640</u>

Note to the solution

The intragroup dividend must be accrued, either in the books of Q Ltd or as a consolidation journal entry, before the elimination for the dividend can be made. In the above solution, the intragroup dividend is accrued as a consolidation journal entry (consolidation journal entry [ii]). If the intragroup dividend is accrued in the books of Q Ltd, consolidation journal entry (ii) will not be necessary.



If the subsidiary is not wholly owned by the parent, part of the dividends will be paid or made payable to the non-controlling shareholders. The parent's dividend income from the subsidiary will be eliminated against that portion of the subsidiary's dividend appropriation attributable to the parent's proportionate shareholding. The other portion of the subsidiary's dividend appropriation that is attributable to the non-controlling shareholding will be eliminated against non-controlling interest.

Example 3.15

S Ltd acquired 80% interest in T Ltd in 20X5. For the year ended 31 December 20X8, T Ltd, which adopted the one-tier system, paid a net dividend of \$300.

Required

Prepare the consolidation journal entry to eliminate intragroup dividends for the year ended 31 December 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Dividend income (S)	240	
	Cr Dividend appropriation (T)		240
(to eliminate inter-company dividend)			
(ii)	Dr Non-controlling interest (CBS)	60	
	Cr Dividend appropriation (T)		60
(to eliminate non-controlling interest in dividend)			

Notes to the solution

- (a) Consolidation journal entry (i) eliminates S Ltd's dividend income of \$240 against S Ltd's share of T Ltd's dividend appropriation ($80\% \times \$300 = \240).
- (b) The credit entry in consolidation journal entry (ii) eliminates non-controlling shareholders' interest in T Ltd's dividend appropriation ($20\% \times \$300 = \60). This entry in consolidation journal entry (ii), together with the credit entry in consolidation journal entry (i), will fully eliminate the dividend appropriation of T Ltd, so that the consolidated statement of changes in equity shows only the parent dividend appropriation, if any.
- (c) The debit entry in consolidation journal entry (ii) reduces non-controlling interest in the consolidated balance sheet. The rationale for this entry is that when the subsidiary pays dividends, its net assets will be reduced, and consequently, non-controlling interest in the consolidated balance sheet should be reduced.



Another complication that may arise from intragroup dividend is when the subsidiary pays dividend out of its pre-acquisition reserves.

Dividend paid out of pre-acquisition reserves is effectively a repayment to the parent of part of its original cost of investment. Prior to the *Amendments to FRS 101 and FRS 27 (2004)* effective 1 January 2009, such dividend – when received – were

credited to investment account and not as dividend income in the books of the parent. The consolidation adjustment for dividends paid out of pre-acquisition reserves would be slightly more complicated than that for dividends paid out of post-acquisition reserves (because in the case of pre-acquisition dividends, there was no 'dividend income' in the parent's books to off-set against the 'dividend appropriation' account in the subsidiary's books).

To illustrate the consolidation adjustment for pre-acquisition dividends prior to 1 January 2009, assume that the following case occurred before the year 2009. P Ltd acquired 100% of S Ltd in 20X1. The cost of investment was \$280, and the fair value of the net assets of S Ltd at the date of acquisition was represented by share capital of \$100 and retained profit of \$100 (giving rise to goodwill on consolidation of \$80). For the year 20X2, S Ltd did not earn any profit but paid a dividend of \$60 out of the pre-acquisition retained profit. P Ltd had correctly recognized the dividend received as reduction of investment account (Dr Cash; Cr Investment). Consequently, in P Ltd's books, there was no dividend income, and the investment account balance was reduced to \$220 (\$280 – \$60). For the year 20X3, S Ltd had not earned any profit and had not paid any dividend. In this case, the relevant CJE for 20X1 consolidation was as follows:

Dr Share capital (\$)	100
Dr Beginning retained profit (\$)	100
Dr Goodwill on consolidation	80
Cr Investment	280
(elimination of investment account)		

For 20X2, when \$60 was paid out of the pre-acquisition retained profit, the pre-acquisition retained profit of S Ltd would be reduced to \$40 (however, in S Ltd's financial statements, the beginning retained profit was still \$100, and dividend appropriate of \$60 was shown as a separate line item), and P Ltd's investment account balance would be reduced to \$220. The relevant CJE for 20X2 consolidation were as follows:

(i) Dr Beginning retained profit (\$)	60
Cr Dividend appropriation (\$)	60
(elimination of pre-acquisition dividend)		

(ii) Dr Share capital (\$)	100
Dr Beginning retained profit (\$)	40
Dr Goodwill on consolidation	80
Cr Investment	220
(elimination of investment account)		

For 20X3, S Ltd's dividend appropriation would be off-set against its beginning retained profit, the relevant CJE for 20X3 (and all subsequent years) consolidation was as follows:

Dr Share capital (S)	100
Dr Beginning retained profit (S)	40
Dr Goodwill on consolidation	80
Cr Investment	220
(elimination of investment account)	

However, FRS 27 (as well as FRS 27 [2009], and amended FRS 27 [2005] which are now superseded by FRS 110 and FRS 27) requires all dividends from the subsidiary (regardless of whether the dividends are paid out of pre-acquisition reserve or post-acquisition reserve) to be recognized as dividend income (paragraph 12).

Thus, for annual periods beginning on or after 1 January 2009, dividends paid out of the subsidiary's pre-acquisition reserves are accounted for, in the parent's books, in the same manner as dividends paid out of the subsidiary's post-acquisition reserve.

Since dividend paid by the subsidiary out of its pre-acquisition reserves (which is effectively a repayment to the parent of part of its original cost of investment) is now accounted for, in the parent's books, as dividend income, and not as reduction of investment account, the parent's investment account balance may exceed its recoverable amount (which may be computed as equal to the parent's share of the subsidiary's net assets). Therefore, effective from 1 January 2009, when the subsidiary pays dividends out of pre-acquisition reserve, the parent should subject its investment account to impairment test. If the carrying amount of the investment account exceeds its recoverable amount, impairment loss should be provided.

To illustrate, assume that the following case occurs after 1 January 2009. P Ltd acquired 100% of S Ltd in 20X7. The cost of investment was \$280, and the fair value of the net assets of S Ltd at the date of acquisition was represented by share capital of \$100 and retained profit of \$100 (giving rise to goodwill on consolidation of \$80). For the year 20X8, S Ltd did not earn any profit but paid a dividend of \$60 out of the pre-acquisition retained profit. P Ltd had correctly recognized the dividend received as dividend income in its 20X8 statement of comprehensive income. Consequently, the carrying amount of the investment in subsidiary of \$280 exceeded the recoverable amount of S Ltd of \$220 ($\$200 + \$80 - \60), and P Ltd therefore provided impairment loss of \$60 in 20X8. For the year 20X9, assume S Ltd had not earned any profit and had not paid any dividend. In this case, the relevant CJE for 20X7 consolidation is as follows:

Dr Share capital (S)	100
Dr Beginning retained profit (S)	100
Dr Goodwill on consolidation	80
Cr Investment	280
(elimination of investment account)	

For 20X8, when \$60 was paid out of the pre-acquisition retained profit, the pre-acquisition retained profit of S Ltd will be reduced to \$40 (pre-acquisition retained profit of \$100 less dividend appropriation of \$60), and P Ltd's investment account balance will also be reduced to \$220 (cost of investment of \$280 less accumulated

impairment of \$60). Under such circumstances, the easiest way to solve these issues for 20X8 consolidation is to have three separate CJEs: (i) to eliminate the intragroup dividend, (ii) to reverse out the impairment loss, and (iii) to eliminate the investment account, as shown below:

(i)	Dr Dividend income (P)	60	
	Cr Dividend appropriation (S)	60	
	(to eliminate intragroup dividend)		
(ii)	Dr Accumulated impairment (P)	60	
	Cr Impairment loss (P)	60	
	(to reverse out the impairment loss)		
(iii)	Dr Share capital (S)	100	
	Dr Beginning retained profit (S)	100	
	Dr Goodwill on consolidation	80	
	Cr Investment	280	
	(elimination of investment account)		

For 20X9, S Ltd's dividend appropriation will be off-set against its beginning retained profit and thus the pre-acquisition reserve is \$40 (pre-acquisition retained profit of \$100 less dividend appropriation of \$60). P Ltd's 20X8 dividend income and impairment loss will off-set each other and do not have to be dealt with in 20X9. Thus, for 20X9 (and all subsequent years) consolidation, the relevant CJE are as shown below (which may, of course, be combined into one CJE):

(i)	Dr Accumulated impairment (P)	60	
	Cr Investment	60	
	(impairment of investment account)		
(ii)	Dr Share capital (S)	100	
	Dr Beginning retained profit (S)	40	
	Dr Goodwill on consolidation	80	
	Cr Investment	220	
	(elimination of investment account)		

As mentioned above, effective from 1 January 2009, when subsidiary pays dividends out of pre-acquisition reserve and the parent recognizes it as dividend income, the parent should subject its investment account to impairment test. If the carrying amount of the investment account exceeds its recoverable amount, impairment loss should be provided. However, if the carrying amount of the investment account does not exceed its recoverable amount, no impairment loss is provided.

To illustrate, assume that the following case occurs after 1 January 2009. H Ltd acquired 100% of S Ltd in 20X7. The cost of investment was \$280, and the fair value of the net assets of S Ltd at the date of acquisition was represented by share capital of \$100 and retained profit of \$100 (giving rise to goodwill on consolidation of \$80). S Ltd paid a dividend of \$60 out of the pre-acquisition retained profit in January 20X8, and H Ltd had correctly recognized the dividend received as dividend income in its 20X8 statement of comprehensive income. For the year 20X8, S Ltd made a profit of \$100. In this case, as contrast to the previous case above, the carrying amount of the investment in subsidiary of \$280 was less than the recoverable amount of S Ltd of \$320 ($\$200 + \$80 - \$60 + \100), and therefore no impairment loss had to be provided for in 20X8. For the year 20X9, assume S Ltd had not earned any profit and had not paid any dividend. In this case, the relevant CJE for 20X7 consolidation is as follows:

Dr Share capital (S)	100
Dr Beginning retained profit (S)	100
Dr Goodwill on consolidation	80
Cr Investment	280
(elimination of investment account)	

For 20X8 consolidation, the intragroup dividends and the investment account are eliminated as follows:

(i) Dr Dividend income (H)	60
Cr Dividend appropriation (S)	60
(elimination of intragroup dividend)	

(ii) Dr Share capital (S)	100
Dr Beginning retained profit (S)	100
Dr Goodwill on consolidation	80
Cr Investment	280
(elimination of investment account)	

For 20X9 consolidation, S Ltd's dividend appropriation will be off-set against its beginning retained profit, and thus the pre-acquisition reserve is \$40 (pre-acquisition retained profit of \$100 less dividend appropriation of \$60). H Ltd's 20X8 dividend income paid out of S Ltd's pre-acquisition reserve is now carried in its 20X9 beginning retained profit, and should be set off against the cost of investment. Thus, for 20X9 (and all subsequent years) consolidation, the relevant CJE are as shown below:

(i) Dr Beginning retained profit (H)	60
Cr Investment	60
(pre-acquisition dividend income)	

(ii)	Dr Share capital (\$)	100
	Dr Beginning retained profit (\$)	40
	Dr Goodwill on consolidation	80
	Cr Investment	220
	(elimination of investment account)	

It may be noted that, in all the above illustrations, the goodwill of \$80 remains unchanged throughout the years.

To close the discussion for intragroup dividend, it should be noted that in the elimination of intragroup dividends, the group after-tax profit will be reduced, even though the group retained profit is not affected. For the purpose of determination of non-controlling interest, net dividend is reduced from the after-tax profit of the receiving entity. Thus, in a simple parent-subsidiary scenario, non-controlling interest will not be affected because the receiving entity is the parent. However, in a complex group structure (see Chapter 5), non-controlling interest may be affected by the elimination of intragroup dividends if the receiving entity is one of the intermediary subsidiaries.

3.7 Other consolidation adjustments

This section discusses three consolidation adjustments that may be required in the preparation of consolidated financial statements subsequent to the date of acquisition, namely, (a) the impairment of goodwill on consolidation; (b) the accounting for unamortized negative goodwill; and (c) the adjustments for depreciation on fair-valued depreciable assets of the subsidiary.

3.7.1 Impairment of goodwill on consolidation

As mentioned in Chapter 2, FRS 103 provides that goodwill on consolidation should be capitalized and subject to impairment test but without amortization. (FRS 103 [2004], which was effective for annual periods beginning on or after 1 July 2004 and is now superseded by FRS 103, provided for the same treatment.) However, prior to FRS 103 (2004), the now-superseded FRS 22 required goodwill to be capitalized and amortized on a systematic basis over its useful life.

As a transition provision, FRS 103 (2004) required the transition from FRS 22 in respect of goodwill on consolidation to be accounted for prospectively (paragraph 79). FRS 103 (2004) further requires the accumulated amortization provided for under FRS 22 to be set off against the goodwill at the beginning of the first annual period beginning on or after 1 July 2004 (paragraph 79).

Example 3.16

To illustrate the transitional provision, assume that ABC Ltd (with 31 December accounting year-end) acquired a subsidiary in 20X2. The goodwill arising therefrom of \$10 million was amortized on a straight-line basis over five years commencing 20X2. As at 1 January 20X5, when ABC Ltd adopts FRS 103 (2004), the book balance of the goodwill stands at \$4 million. In this case, FRS 103 (2004) and FRS 103 require the goodwill to be carried at \$4 million in ABC Ltd's consolidated balance sheet for 20X5 and thereafter, unless there is impairment.



It should be noted, because of the transitional provision which requires prospective application, whatever goodwill amortization was provided for (in accordance with FRS 22) in the years prior to the adoption of FRS 103 (2004) should be carried forward by a CJE (Dr Beginning retained profits; Cr Goodwill on consolidation). This is to ensure that the goodwill on consolidation will be carried at its unamortized amount at the date of adoption of FRS 103 (2004), and to ensure that the group's beginning retained profit equals its ending retained profit in the previous year.

Example 3.17

The financial statements of X Ltd and Y Ltd for the year 20X8 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	X Ltd	Y Ltd
	\$'000	\$'000
Sales	800	500
Less cost of sales	400	300
Gross profit	400	200
Less operating expenses	150	100
Profit before tax	250	100
Less tax	80	30
Profit after tax	170	70
Other comprehensive income	—	—
Total comprehensive income	170	70

(b) Balance sheets as at 31 December 20X8

	X Ltd	Y Ltd
	\$'000	\$'000
Land	400	150
Investment	200	—
Debtors	240	220
Bank	60	30
	<u>900</u>	<u>400</u>
Share capital	500	100
General reserves	100	50
Retained profit	260	220
Creditors	40	30
	<u>900</u>	<u>400</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	X Ltd	Y Ltd
	\$'000	\$'000
Beginning retained profit	160	150
Add profit for the year	170	70
Less dividend	70	—
Ending retained profit	<u>260</u>	<u>220</u>

X Ltd acquired 80% interest in Y Ltd on 1 January 20X6. At that date, Y Ltd's net assets were represented by its shareholders' equity consisting of share capital \$100,000, general reserves \$50,000, and retained profit \$50,000. There were no intragroup transactions. The group adopted FRS 103 (2004) on 1 January 20X8. Prior to 1 January 20X8, the group's policy was to amortize goodwill on consolidation using the straight-line method over five years.

Required

Prepare the consolidated statement of comprehensive income, consolidated balance sheet, and partial consolidated statement of changes in equity (showing the group's retained profit only) for X Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entry

(i)	Dr Share capital (Y)	80
	Dr General reserves (Y)	40
	Dr Beginning retained profit (Y)	40
	Dr Goodwill on consolidation	40
	Cr Investment in Y Ltd	200 (to eliminate investment account)

(ii)	Dr Beginning retained profit (X)	16	
	Cr Goodwill on consolidation		16
	(to record previous years' amortization)		
(iii)	Dr Non-controlling interest (CSI)	14	
	Cr Non-controlling interest (CBS)		14
	(to record non-controlling interest in profit of Y Ltd)		
(iv)	Dr Share capital (Y)	20	
	Dr General reserves (Y)	10	
	Dr Beginning retained profit (Y)	30	
	Cr Non-controlling interest (CBS)	60	
	(to record non-controlling interest in other shareholders' equity of Y Ltd)		

(b) Consolidation worksheet

	X Ltd	Y Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	800	500			1,300
Cost of sales	400	300			700
Gross profit	400	200			600
Expenses	150	100			250
Profit before tax	250	100			350
Tax	80	30			110
Profit after tax	170	70			240
Non-controlling interest	—	—	iii 14		14
Profit for shareholders	—	—			226
Dividend	70	—			70
Beginning retained profit	160	150	i 40 ii 16 iv 30		224
Ending retained profit	260	220			380
Goodwill	—	—	i 40	ii 16	24
Land	400	150			550
Investment	200	—		i 200	—
Debtors	240	220			460
Bank	60	30			90
Share capital	500	100	i 80 iv 20		500
General reserves	100	50	i 40 iv 10		100
Retained profit	260	220			380
Creditors	40	30			70
Non-controlling interest	—	—	iii 14 iv 60		74

(c) Consolidated financial statements

X Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	1,300
Less cost of sales	<u>700</u>
Gross profit	600
Less operating expenses	<u>250</u>
Profit before tax	350
Less tax	<u>110</u>
Profit after tax	240
Other comprehensive income	<u>—</u>
Total comprehensive income	<u><u>240</u></u>
Attributable to:	
Shareholders of the parent	226
Non-controlling interest	<u>14</u>
	<u><u>240</u></u>

X Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Goodwill on consolidation	24
Land	550
Debtors	460
Bank	<u>90</u>
	<u><u>1,124</u></u>
Share capital	500
General reserves	100
Retained profit	380
Non-controlling interest	<u>74</u>
Creditors	<u>70</u>
	<u><u>1,124</u></u>

X Ltd and its subsidiary	
Consolidated statement of changes in equity (partial)	
For year ended 31 December 20X8	
	\$'000
Beginning retained profit	224
Add profit for the year	226
Less dividend	<u>70</u>
Ending retained profit	<u><u>380</u></u>

Notes to the solution

- (a) Consolidation journal entry (ii) records the amortization of goodwill on consolidation that had been provided for prior to the adoption of FRS 103 (2004). Even though the group adopted FRS 103 (2004) in 20X8, under which amortization was no longer required, the amount of amortization that had been provided for in the years 20X6 and 20X7 should still be recorded in 20X8 (as well as for all the following years until the subsidiary is disposed of). This is because FRS 103 (2004) requires the transition from FRS 22 to FRS 103 (2004) to be accounted for prospectively. This consolidation journal entry is also necessary to ensure that the group's beginning retained profit for 20X8 is equal to the group's ending retained profit at 31 December 20X7.
- (b) The group's profit of \$226,000 can be proved by adding the parent's profit of \$170,000 to the group's share of the subsidiary's profit of \$56,000 ($80\% \times \$70,000$).
- (c) The group's retained profit of \$380,000 can be proved by adding the parent's adjusted retained profit of \$244,000 ($\$260,000 - \$16,000$) to the group's share of the subsidiary's post-acquisition retained profit of \$136,000 ($80\% \times [\$220,000 - \$50,000]$).
- (d) Non-controlling interest of \$74,000 in the consolidated balance sheet can be proved as 20% of the subsidiary's net assets of \$370,000.



Another transitional provision in FRS 103 (2004) is relevant in cases where goodwill on consolidation has been immediately charged to the reserves (as allowed under a now-superseded standard). In such a case, FRS 103 (2004) provided that the goodwill should not be reversed and recognized as part of the profit or loss upon disposal of the subsidiary (paragraph 80).

As mentioned above, FRS 103, like FRS 103 (2004), requires goodwill on consolidation to be subject to impairment testing. For goodwill impairment testing, the provisions of FRS 36 *Impairment of Assets* are applicable and are summarized below:

- (i) goodwill impairment should be done on a cash-generating unit;
- (ii) goodwill impairment testing should be done annually and whenever there is an indication of impairment;

- (iii) the annual impairment test for a cash-generating unit to which goodwill has been allocated may be performed at any time during an annual period, and different cash-generating units may be tested for impairment at different times, provided the test is performed at the same time every year; and
- (iv) reversal of goodwill impairment is not allowed.

As mentioned above, goodwill impairment testing under FRS 103 is very rigorous: it has to be done on a cash-generating-units basis (instead of on the subsidiary as a whole), and it has to be performed whenever there is an indication of impairment or at least annually. Furthermore, the reversal of impairment is not allowed.

Thus, for the purposes of impairment testing, goodwill should, from the acquisition date, be allocated to each of the cash-generating units. The carrying amount of the cash-generating unit is then compared with its recoverable amount (defined as the higher of fair value less cost to sell and the value in use). If the recoverable amount is less than the carrying amount, an impairment loss for the cash-generating unit should be provided for, and allocated to reduce the carrying amounts of the assets of the units, first to reduce the carrying amount of goodwill allocated to the cash-generating units, and then to the other assets of the unit pro rata on the basis of the carrying amount of each asset in the unit.

Example 3.18

In April 20X4, ABC Ltd paid \$15 million to acquire 100% interest in XYZ Ltd, which had a supermarket outlet and a manufacturing plant.

Assume that the \$15 million was allocated as follows: \$5 million to the net identifiable assets of the supermarket business, \$5 million to the net identifiable assets of the manufacturing business, \$3 million as goodwill for the supermarket business, and \$2 million as goodwill for the manufacturing business.

Assume that towards the end of 20X4, the supermarket business of XYZ Ltd was adversely affected because of the diversion of traffic, and the recoverable amount of the supermarket business was estimated at \$6 million. Assume further that the recoverable amount of the manufacturing business was \$10 million.

In this case, even though XYZ Ltd was not impaired as a whole (carrying amount of \$15 million versus recoverable amount of \$16 million), FRS 103 required an impairment loss of \$2 million to be written off against the goodwill (for the supermarket business) in 20X4.

If the supermarket business picked up in the subsequent years (due to whatever reason), no reversal of the goodwill impairment was allowed.



As mentioned above, FRS 36 provides that if the impairment loss for the cash-generating unit is more than the carrying amount of goodwill allocated to the cash-generating units, then the remaining loss should be allocated to the other assets of the unit pro rata on the basis of the carrying amount of each asset in the unit.

Example 3.19

Refer to the case in Example 3.18.

Assume that towards the end of 20X4, the supermarket business of XYZ Ltd was adversely affected because of the diversion of traffic, and the recoverable amount of the supermarket business was estimated at \$3 million (instead of \$6 million).

Assume that the net identifiable assets of the supermarket business comprised the building \$5 million, equipment \$3 million, inventory \$2 million, and net monetary liability of \$5 million. ABC Ltd adopted the 31 December accounting year-end and the policy of providing no depreciation on depreciable assets acquired during the year and a whole year's depreciation on depreciable assets disposed of during the year.

In this case, there was an impairment loss of \$5 million for the supermarket business. In accordance with the requirement of FRS 36, the impairment loss should be allocated as follows:

- (a) \$3 million against goodwill;
- (b) \$1 million against building;
- (c) \$600,000 against equipment; and
- (d) \$400,000 against inventory.



In cases where the parent does not own 100% of the subsidiary, the calculation of goodwill impairment is slightly more complicated. This arises from the fact that, as discussed in Chapter 2, only the parent's share of the goodwill is accounted for in the consolidated financial statements (assuming the non-controlling interest is measured based on 'fair value of net identifiable assets' on the acquisition date). Thus, in comparing the carrying amount and the recoverable amount, the non-controlling notional interest in the goodwill will have to be taken into account in determining the amount of the goodwill impairment.

Example 3.20

In August 20X8, P Ltd acquired 80% interest in S Ltd for a cash consideration of \$48 million. On this date, the fair value of S Ltd's net identifiable assets was \$50 million. P Ltd adopted the 31 December accounting year-end and the policy of providing no depreciation on depreciable assets acquired during the year and a whole year's depreciation on depreciable assets disposed of during the year.

Assume that there was no change to the carrying amounts of S Ltd's net identifiable assets. The group has adopted the policy of measuring the non-controlling interest based on the 'fair value of net identifiable assets' of the subsidiary acquired. In this case, before any impairment testing, P Ltd's consolidated balance sheet as at 31 December 20X8 will include the following items: goodwill \$8 million, identifiable net assets \$50 million, and non-controlling interest \$10 million.

Assume P Ltd performed impairment tests on 31 December 20X8, and that the recoverable amount of S Ltd (assumed to comprise only a single cash-generating unit) was estimated at \$45 million. In this case, the calculation of the impairment is as follows:

	\$'000
Goodwill	8
Non-controlling's notional interest	2
Identifiable net assets	50
Notionally adjusted carrying amount	60
Recoverable amount	45
Impairment loss	<u>15</u>
Allocated as follows:	
Against goodwill	10
Against net identifiable asset	5

Thus, P Ltd has to recognize an impairment loss of \$8 million against goodwill (ignoring the non-controlling's notional interest of \$2 million) and \$5 million against net identifiable assets.

After the impairment test, P Ltd's consolidated balance sheet as at 31 December 20X8 will include the following items:

- (a) goodwill \$nil;
- (b) identifiable net assets \$45 million; and
- (c) non-controlling interest \$9 million.

Sometimes, a parent may have made provisions for impairment against the investment in the subsidiary's account in its own books. If, in consolidation, a consolidation journal entry is made to record impairment loss on goodwill, then there will be double-counting of the loss. In order to avoid double-counting, the easiest way to deal with this issue is to first make a consolidation journal entry to reverse out the parent's impairment loss, and then proceed to make the consolidation journal entry to record the impairment loss on goodwill.

Example 3.21

The financial statements of X Ltd and Y Ltd for the year 20X8 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	X Ltd	Y Ltd
	\$'000	\$'000
Sales	800	500
Less cost of sales	400	300
Gross profit	400	200
Less impairment loss	10	—
Less operating expenses	150	100
Profit before tax	240	100
Less tax	80	30
Profit after tax	160	70
Other comprehensive income	—	—
Total comprehensive income	160	70

- (b) Balance sheets as at 31 December 20X8

	X Ltd	Y Ltd
	\$'000	\$'000
Land	300	100
Investment	220	—
Accumulated impairment	(20)	—
Debtors	240	220
Bank	40	30
	780	350
Share capital	500	100
Retained profit	240	220
Creditors	40	30
	780	350

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	X Ltd	Y Ltd
	\$'000	\$'000
Beginning retained profit	150	150
Add profit for the year	160	70
Less dividend	70	—
Ending retained profit	<u>240</u>	<u>220</u>

X Ltd acquired 80% interest in Y Ltd on 1 January 20X1. At that date, Y Ltd's net assets were represented by its shareholders' equity consisting of share capital \$100,000 and retained profit \$50,000. There were no intragroup transactions.

The group adopted FRS 103 (2004) on 1 January 20X5. Prior to 1 January 20X5, the group's policy was to amortize goodwill on consolidation using the straight-line method over ten years. Under FRS 103 (2004) and for the purposes of consolidation, the goodwill impairment loss of \$15,000 was written off in 20X6, and there was a further impairment loss of \$10,000 in 20X8. X Ltd has, in its own books, provided for the impairment loss of \$10,000 in 20X6 and another \$10,000 in 20X8 against the investment in Y Ltd account.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the partial consolidated statement of changes in equity (showing the group's retained profit only) for X Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Provision for impairment (X)	20	
	Cr Beginning retained profit (X)	10	
	Cr Impairment loss (X)	10	
	(to reverse out the parent's recorded impairment loss)		
(ii)	Dr Share capital (Y)	80	
	Dr Beginning retained profit (Y)	40	
	Dr Goodwill on consolidation	100	
	Cr Investment in Y Ltd	220	
	(to eliminate investment account)		
(iii)	Dr Beginning retained profit	40	
	Cr Goodwill on consolidation	40	
	(previous years' goodwill amortization)		

(iv)	Dr Beginning retained profit	15
	Dr Impairment loss	10
	Cr Accumulated impairment – goodwill on consolidation	25
	(goodwill impairment)	
(v)	Dr Non-controlling interest (CSCI)	14
	Cr Non-controlling interest (CBS)	14
	(non-controlling interest in profit of Y Ltd)	
(vi)	Dr Share capital (Y)	20
	Dr Beginning retained profit (Y)	30
	Cr Non-controlling interest (CBS)	50
	(non-controlling interest in other shareholders' equity of Y Ltd)	

(b) Consolidation worksheet

	X Ltd	Y Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	800	500			1,300
Cost of sales	400	300			700
Gross profit	400	200			600
Impairment loss	10	–	i 10		–
Other expenses	150	100	iv 10		260
Profit before tax	240	100			340
Tax	80	30			110
Profit after tax	160	70			230
Non-controlling interest	–	–	v 14		14
Profit for shareholders	–	–			216
Dividend	70	–			70
Beginning retained profit	150	150	ii 40 iii 40 iv 15 vi 30	i 10	185
Ending retained profit	240	220			331
Goodwill	–	–	ii 100	iii 40	60
Accumulated impairment				iv 25	(25)
Land	300	100			400
Investment	220	–	ii 220		–
Accumulated impairment	(20)	–	i 20		–
Debtors	240	220			460
Bank	40	30			70
Share capital	500	100	ii 80 vi 20		500
Retained profit	240	220			331
Creditors	40	30			70
Non-controlling interest	–	–	v 14 vi 50		64

(c) Consolidated financial statements

X Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	1,300
Less cost of sales	700
Gross profit	600
Less operating expenses	260
Profit before tax	340
Less tax	110
Profit after tax	230
Other comprehensive income	—
Total comprehensive income	<u>230</u>
Attributable to:	
Shareholders of the parent	216
Non-controlling interest	14
	<u>230</u>
X Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Goodwill on consolidation	35
Land	400
Debtors	460
Bank	70
	<u>965</u>
Share capital	500
Retained profit	331
Non-controlling interest	64
Creditors	70
	<u>965</u>

X Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	185
Add profit for the year	216
Less dividend	70
Ending retained profit	331

Notes to the solution

- (a) Consolidation journal entry (i) reverses out the impairment losses recorded by the parent. This consolidation journal entry is necessary to avoid double-counting of the impairment loss.
- (b) Consolidation journal entry (iii) records goodwill amortization provided for in the years 20X1 to 20X4 under FRS 22. As required by FRS 103 (2004), the accumulated amortization is directly off-set against the goodwill account.
- (c) Consolidation journal entry (iv) records goodwill impairment for 20X6 and 20X8. Goodwill impairment for 20X6 is charged against the beginning retained profit, while that for 20X8 is charged against the statement of comprehensive income. FRS 103 (2004) requires the gross amount of the goodwill and the accumulated impairment to be disclosed separately, which could be done either on the face of the balance sheet or in the notes to financial statements (as in this case).
- (d) The group's profit of \$216,000 can be proved by adding the parent's adjusted profit of \$160,000 ($\$160,000 + \$10,000 - \$10,000$) to the group's share of the subsidiary's profit of \$56,000 ($80\% \times \$70,000$).
- (e) The group's retained profit of \$331,000 can be proved by adding the parent's adjusted retained profit of \$195,000 ($\$240,000 + \$20,000 - \$40,000 - \$15,000 - \$10,000$) to the group's share of the subsidiary's post-acquisition retained profit of \$136,000 ($80\% \times [\$220,000 - \$50,000]$).
- (f) Non-controlling interest in the consolidated balance sheet of \$64,000 can be proved as 20% of the subsidiary's net assets of \$320,000.



3.7.2 Accounting for unamortized negative goodwill

As discussed in Chapter 2, FRS 103 requires negative goodwill to be immediately credited to the consolidated statement of comprehensive income. (FRS 103 [2004], which was effective 1 July 2004 and is now superseded by FRS 103, also required the same

treatment.) However, prior to FRS 103 (2004), the now-superseded FRS 22 required negative goodwill to be recognized in the consolidated balance sheet and periodically amortized to the consolidated income statements.

As a transitional provision, FRS 103 (2004) required any unamortized amount of negative goodwill at the beginning of the first annual period beginning on or after 1 July 2004 to be derecognized at the beginning of that period with a corresponding adjustment to the beginning retained profits (paragraph 81).

Example 3.22

In 20X2, ABC Ltd (with 31 December accounting year-end) paid \$90 million to acquire a 100% interest in XYZ Ltd, whose net assets were represented by share capital \$80 million and retained profit \$20 million. The negative goodwill arising therefrom of \$10 million was being brought to the consolidated statement of comprehensive income since 20X3, in accordance with the provision of FRS 22. As at 1 January 20X5, when ABC Ltd adopted FRS 103 (2004), the book balance of the negative goodwill stood at \$4 million. In this case, FRS 103 (2004) requires ABC Ltd to pass through a consolidation adjustment to write off the negative goodwill of \$4 million to its beginning retained profit in its 20X5 consolidated financial statements.

Practically, what ABC Ltd has to do is to create a consolidation journal entry to write off all the negative goodwill of \$10 million to its beginning retained profit in 20X5 (and all subsequent years). This is because not only does the unamortized amount of \$4 million have to be written off to the beginning retained profit, as required under the transitional provision of FRS 103 (2004), but the total amount of amortization of \$6 million that have been written off to the consolidated statements of comprehensive income in the previous years will also have to be recorded as a credit to the beginning retained profit in 20X5.

Thus, in the above case, the consolidation journal entries required (for 20X5 and all subsequent years before the disposal of the subsidiary) are as follows:

(a)	Dr Share capital (XYZ)	80 million
	Dr Beginning retained profit (XYZ)	20 million
	Cr Negative goodwill	10 million
	Cr Investment in subsidiary	90 million
(b)	Dr Negative goodwill	10 million
	Cr Beginning retained profit	10 million

3.7.3 Adjustment in relation to fair value adjustments

As mentioned in Chapter 2, during a business combination, fair value adjustment may be necessary. For purposes of fair value adjustment, (a) the subsidiary's assets may have to be revalued, upwards or downwards, in the consolidated financial statements (but the subsidiary may or may not adjust its books for the revaluation); and (b) the subsidiary's unrecognized identifiable assets and liability may have to be recognized in the consolidated financial statements.

If an asset of the subsidiary is deemed to be overvalued or undervalued and is a non-depreciable asset (for example, land), and the subsidiary decides not to make adjustment for the over/undervaluation in its books, then an additional consolidation journal entry would be required in the year the asset is disposed of to adjust for the profit or loss on disposal.

Refer to Example 2.2 in Chapter 2, where C Ltd acquired 100% of the issued share capital of D Ltd on 31 December 20X8, and the land that was carried in D Ltd's balance sheet at \$150,000 was deemed to have a fair value of \$200,000. Assume further that D Ltd sold the land for \$220,000 in December 20X9. In this case, D Ltd will record profit on the sale of land of \$70,000 ($\$220,000 - \$150,000$). However, from the group's viewpoint, the profit on the sale of land is only \$20,000 ($\$220,000 - \$200,000$). Thus, for the 20X9 consolidation, the following consolidated journal entries will be required: firstly, the permanent consolidated journal entry to eliminate the investment account of \$200,000 against share capital of \$100,000, retained profit of \$50,000, and revaluation of land of \$50,000 (as in the 20X8 consolidation shown in Example 2.2); secondly, the consolidation journal entry to adjust the profit on the sale of land by Dr Profit on sale of land \$50,000, and Cr Land \$50,000 (so that the profit on disposal of land will be shown at \$20,000, and land will be nil, in the 20X9 consolidated financial statements). In all the subsequent years, the same permanent consolidation journal entry to eliminate the investment account will still be required, and the second consolidation journal entry to adjust for the profit on disposal of land required will be Dr Beginning retained profit \$50,000 and Cr Land \$50,000.

It may be noted that the consolidation adjustment is made to 'correct' the subsidiary's profit (or beginning retained profit), and consequently, non-controlling interest will be affected.

If the subsidiary has made the adjustment in its own books for the overvaluation or undervaluation of the non-depreciable assets (see Example 2.3 in Chapter 2), then there is no need for the consolidation journal entry to adjust for the profit or loss on disposal of the asset. This is because the profit or loss on disposal recorded by the subsidiary will be 'correct' from the group's viewpoint.

If the asset of the subsidiary is deemed to be overvalued or undervalued and is a depreciable asset, and the subsidiary decides not to make adjustment for the valuation in its books, then an additional consolidation journal entry is required in each subsequent period, to adjust the depreciation charge recorded by the subsidiary. Further, upon disposal of the asset, a consolidation journal entry will also be required to adjust the profit or loss on disposal of the asset.

If the depreciable asset is deemed to be undervalued at the date of business combination, then when the subsidiary provides depreciation based on the book value of the depreciable asset in the subsequent periods, the depreciation charge provided by the subsidiary is, from the group's viewpoint, understated. Therefore, a consolidation journal entry would be required to provide for additional depreciation charge.

Conversely, for a depreciable asset that is deemed overvalued at the date of business combination, the depreciation provided by the subsidiary based on the book value of the depreciable asset is, from the group's viewpoint, overstated. Therefore, a consolidation journal entry will be required to decrease the depreciation charge.

It may be noted that the adjustment is for the under-provision or over-provision of depreciation by the subsidiary. Thus, the consolidation adjustment is made to 'correct' the subsidiary's profit, and consequently, non-controlling interest will be affected.

If the subsidiary has made the adjustment in its own books for the overvaluation or undervaluation of the depreciable assets, then there is no need for the consolidation journal entry to provide for additional depreciation charge, or to reduce the depreciation charge of the subsidiary. This is because, in this case, the amount of depreciation provided by the subsidiary based on the book value of the depreciable assets that has been properly adjusted would be 'correct' from the group's viewpoint.

A full illustration of the consolidation adjustments in relation to depreciable assets is shown in Example 3.23.

Similarly, if identifiable assets and liabilities are not recognized in the subsidiary's books but have to be recognized in the consolidated financial statements under the fair value adjustment, consolidation journal entries may be required to adjust for the income effect thereof (for example, amortization expense, impairment loss, and profit or loss on disposal).

Refer to Example 2.4 in Chapter 2, where D Ltd acquired 100% of the issued share capital of E Ltd on 31 December 20X8, and at that date, E Ltd is deemed to have a brand name with a fair value of \$100,000 but which is not recognized in its books. Assume further that the recoverable amount of the brand is deemed to be \$20,000 on 31 December 20X9. In this case, an impairment loss of \$80,000 will have to be recognized in the 20X9 consolidated financial statements. However, E Ltd, which has not recognized the brand in its books, will not have provided for the impairment loss in its books. Therefore, for the 20X9 consolidation, the following consolidated journal entries will be required: firstly, the permanent consolidation journal entry to eliminate the investment account of \$250,000 against share capital of \$100,000, retained profit of \$50,000, undervaluation of stock of \$30,000, brand of \$100,000, and provision for litigation loss of \$30,000 (as in the 20X8 consolidation shown in Example 2.4); secondly, the consolidation journal entry to recognize the impairment loss by Dr Impairment loss \$80,000, and Cr Brand \$80,000 (so that the impairment loss of \$80,000 is recognized, and the brand is shown at its recoverable amount of \$20,000, in the 20X9 consolidated financial statements). In all the subsequent years, the same permanent consolidation journal entry to eliminate the investment account will still be required, and the second consolidation journal entry to recognize the 20X8 impairment loss will be Dr Beginning retained profit \$80,000 and Cr Brand \$80,000.

It may be noted that the consolidation adjustment is made to 'correct' the subsidiary's profit (or beginning retained profit), and consequently, non-controlling interest will be affected.

Example 3.23

The financial statements of A Ltd and Z Ltd for the year 20X8 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd \$'000	Z Ltd \$'000
Sales	800	500
Less cost of sales	400	300
Gross profit	400	200
Less selling expenses	60	70
administrative expenses	50	20
other expenses	40	10
Profit before tax	250	100
Less tax	80	30
Profit after tax	170	70
Other comprehensive income	—	—
Total comprehensive income	170	70

- (b) Balance sheets as at 31 December 20X8

	A Ltd \$'000	Z Ltd \$'000
Land	100	150
Machinery, at cost	400	100
Accumulated depreciation	(100)	(80)
Investment	180	—
Current assets	320	230
	900	400
Share capital	500	100
Retained profit	260	220
Current liabilities	140	80
	900	400

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd	Z Ltd
	\$'000	\$'000
Beginning retained profit	160	150
Add profit for the year	170	70
Less dividend	70	—
Ending retained profit	<u>260</u>	<u>220</u>

A Ltd acquired 80% interest in Z Ltd on 1 January 20X6. At that date, Z Ltd's net assets were represented by its shareholders' equity consisting of share capital of \$100,000 and retained profit of \$100,000.

The excess payment of \$20,000 ($\$180,000 - 80\% \times \$200,000$) was for the undervaluation of Z Ltd's machinery (which was used in the administrative offices). Z Ltd's machinery, which was carried at a cost of \$100,000 and accumulated depreciation of \$50,000 as at the date of acquisition, was deemed to have a value of \$75,000. (Z Ltd has not adjusted its books for the undervaluation.)

There were no intragroup transactions. The group's policy was to depreciate machinery using the straight-line method over ten years.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet and the partial consolidated statement of changes in equity (showing the group's retained profit only) for A Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entry

(i)	Dr Machinery	50
	Cr Accumulated depreciation	25
	Cr Revaluation reserves (Z)	25
	(to record revaluation of machinery)	
(ii)	Dr Share capital (Z)	80
	Dr Revaluation reserves (Z)	20
	Dr Beginning retained profit (Z)	80
	Cr Investment in Z Ltd	180
	(to eliminate investment account)	
(iii)	Dr Beginning retained profit (Z)	10
	Dr Depreciation expenses (Z)	5
	Cr Accumulated depreciation	15
	(to record additional depreciation expense)	

(iv)	Dr Non-controlling interest (CSCI) (20% × [70 – 5])	13	
	Cr Non-controlling interest (CBS)		13
(to record non-controlling interest in profit of Z Ltd)			
(v)	Dr Share capital (Z)	20	
	Dr Revaluation reserves (Z)		5
	Dr Beginning retained profit (Z) (20% × [150 – 10])	28	
	Cr Non-controlling interest (CBS)		53
(to record non-controlling interest in other shareholders' equity of Z Ltd)			

(b) Consolidation worksheet

	A Ltd	Z Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	800	500			1,300
Cost of sales	400	300			700
Gross profit	400	200			600
Selling expenses	60	70			130
Administrative expenses	50	20	iii 5		75
Other expenses	40	10			50
Profit before tax	250	100			345
Tax	80	30			110
Profit after tax	170	70			235
Non-controlling interest	–	–	iv 13		13
Profit for shareholders	–	–			222
Dividend	70	–			70
Beginning retained profit	160	150	ii 80 iii 10 v 28		192
Ending retained profit	260	220			344
Land	100	150			250
Machinery	400	100	i 50		550
Accumulated depreciation	(100)	(80)			i 25 iii 15 (220)
Investment	180	–		ii 180	–
Current assets	320	230			550
Share capital	500	100	ii 80 v 20		500
Revaluation reserves	–	–	ii 20 v 5	i 25	–
Retained profit	260	220			344
Current liabilities	140	80			220
Non-controlling interest	–	–		iv 13 v 53	66

(c) Consolidated financial statements

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 1 December 20X8

	\$'000
Sales	1,300
Less cost of sales	700
<hr/>	
Gross profit	600
Less selling expenses	130
administrative expenses	75
other expenses	50
<hr/>	
Profit before tax	345
Less tax	110
<hr/>	
Profit after tax	235
Other comprehensive income	—
<hr/>	
Total comprehensive income	<u>235</u>
<hr/>	
Attributable to:	
Shareholders of the parent	222
Non-controlling interest	13
<hr/>	
	<u>235</u>
<hr/>	

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Land	250
Machinery, at cost	550
Less Accumulated depreciation	(220)
Current assets	<u>550</u>
	<u>1,130</u>
<hr/>	
Share capital	500
Retained profit	344
Non-controlling interest	66
Current liabilities	<u>220</u>
	<u>1,130</u>
<hr/>	

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	192
Add profit for the year	222
Less dividend	70
Ending retained profit	<u>344</u>

Notes to the solution

- (a) Consolidation journal entry (i) records the revaluation of machinery. This is one of the methods provided in FRS 16, where both the gross carrying amount and accumulated depreciation are restated proportionately (to retain the relationship that the machinery is 50% depreciated) so that the book value equals the revalued amount.
- (b) The revaluation reserves, being part of the pre-acquisition reserves, is fully eliminated at group level.
- (c) Consolidation journal entry (iii) records additional depreciation on the machinery. The additional depreciation charge each year is \$5,000 because Z Ltd has provided for depreciation of \$10,000 ($\$100,000 \div 10$ years) each year, but from the group's viewpoint, the annual depreciation charge should be \$15,000 ($\$10,000 + [\$25,000 \div 5$ years]). In other words, at the group level, an additional depreciation charge of \$5,000 ($\$25,000 \div 5$ years) has to be provided for. Additional depreciation expenses for 20X6 and 20X7 are charged against the beginning retained profit of Z Ltd, whereas those for 20X8 are charged to the current year's profit of Z Ltd.
- (d) The depreciation expenses are, in this case, presented as part of the administrative expenses in the consolidated statement of comprehensive income.
- (e) Non-controlling interest in the consolidated balance sheet of \$66,000 can be proved as 20% of the subsidiary's adjusted net assets of \$330,000 ($\$320,000 + \$25,000 - \$15,000$).
- (f) The group's retained profit of \$344,000 can be proved by adding the parent's retained profit of \$260,000 to the group's share of Z Ltd's adjusted post-acquisition retained profit of \$84,000 ($80\% \times [\$220,000 - \$100,000 - \$15,000]$).

3.8

Transition from FRS 27 (2009) and INT FRS 12 to FRS 110

FRS 110 supersedes FRS 27 (2009) and INT FRS 12 for annual periods beginning on or after 1 January 2013.

Compared to FRS 27 (2009) and INT FRS 12, FRS 110 changes the scope of consolidation (who has to present consolidated financial statements and whose financial statements have to be included in the consolidated financial statements), but it does not change the consolidation process and procedure.

Thus, when a parent transit from FRS 27 (2009) and INT FRS 12 to FRS 110, it may have to deal with four possible scenarios:

- (a) Entities that were previously consolidated under FRS 27 (2009) and INT FRS 12 continue to be consolidated under FRS 110;
- (b) Entities that were previously not consolidated under FRS 27 (2000) and INT FRS 12 continue to be not consolidated under FRS 110;
- (c) Entities that were previously not consolidated under FRS 27 (2000) and INT FRS 12 but have to be consolidated under FRS 110; and
- (d) Entities that were previously consolidated under FRS 27 (2009) and INT FRS 12 but do not have to be consolidated under FRS 110.

The transition requirements of FRS 110 in regards to each of the four scenarios are discussed below:

- (a) *Entities that were previously consolidated under FRS 27 (2009) and INT FRS 12 continue to be consolidated under FRS 110.* In this case, no adjustments are required on the date of initial application of FRS 110 (i.e., at the beginning of the annual period in which FRS 110 is applied for the first time).
- (b) *Entities that were previously not consolidated under FRS 27 (2009) and INT FRS 12 continue to be not consolidated under FRS 110.* In this case, no adjustments are required on the date of initial application of FRS 110.
- (c) *Entities that were previously not consolidated under FRS 27 (2009) and INT FRS 12 but have to be consolidated under FRS 110.* In this case, FRS 110 provides that the parent should measure the assets, liabilities, and non-controlling interests in that previously unconsolidated investee on the date of initial application as if that investee had been consolidated from the date when the investor obtained control (in accordance with FRS 110) of that investee (paragraph C4). If measuring an investee' assets, liabilities, and non-controlling interest in accordance with the above is impracticable, FRS 110 provides that the parent should do the measurement as if the acquisition date is on the beginning of the earliest period for which application of FRS 103 is practicable (which may be the current period). (It should be noted, therefore, that FRS 110 requires retrospective application. However, where it is impracticable to do the measurement retrospectively, FRS 110 allows prospective application.) Any difference between the amount of assets, liabilities, and non-controlling interests recognized at the deemed acquisition date and any previously recognized amounts should be adjusted to equity for that period.
- (d) *Entities that were previously consolidated under FRS 27 (2009) and INT FRS 12 but do not have to be consolidated under FRS 110.* In this case, FRS 110 provides that the investor should measure its interest in the investee on the date of initial application at the amount as if the investor has lost control (and assuming FRS 110 had been effective on the date of loss of control) of the investee

(paragraph C5). If measurement of the interest in investee in accordance with the above is impracticable, FRS 110 provides that the investor should apply the requirements of FRS 110 for accounting for a loss of control on the beginning of the earliest period for which application of FRS 110 is practicable (which may be the current period). Again, it should be noted that FRS 110 requires retrospective application. However, where it is impracticable to do the measurement retrospectively, FRS 110 allows prospective application. ('Loss of control' is discussed and illustrated under Section 4.2.4 in Chapter 4 of this book.) Any difference between the previously recognized amount of assets, liabilities, and non-controlling interests and the carrying amount of the interest in investee should be adjusted to equity for that period.

3.9 Summary

In this chapter, issues involved in the preparation of consolidated financial statements subsequent to the date of acquisition are discussed.

The preparation of consolidated financial statements subsequent to the date of acquisition will involve the preparation of a consolidated balance sheet and consolidated statement of comprehensive income (as well as consolidated cash flow statement, which will be discussed in Chapter 8, and consolidated statement of changes in equity, which will be discussed in Chapter 9).

One of the major problems encountered in the preparation of consolidated financial statements subsequent to the date of acquisition relates to intragroup transactions. Intragroup transactions often give rise to intragroup account balances and unrealized intragroup profits and losses. It should be noted that the elimination of intragroup account balances (for example, a loan due from the subsidiary against a loan due to the parent, sales against purchases, interest revenue against interest expense) does not affect group assets and group profits, whereas the elimination of unrealized intragroup profits and losses would affect group assets and group profits.

Intragroup dividend is another problematic issue. It should be noted that the *Amendments to FRS 101 and FRS 27* now require dividend paid out of the subsidiary's pre-acquisition reserve to be accounted as dividend income in the parent's books. Consequently, an impairment test should be performed and adjusted for both in the parent's books and in consolidation. It should also be noted that the elimination of intragroup dividends would reduce the group's after-tax profits, even though the group's retained profit is not affected.

Other consolidation issues relate to accounting for goodwill (both positive and negative) on consolidation, and consolidation adjustments arising from fair value adjustments. In the consolidation process, it is important to understand the reasons for, and not just the mechanics of, the consolidation adjustments made in each case.

appendix 3A**The non-controlling interest's share of loss***

One of the major changes to consolidated financial statements introduced by FRS 27 (2009) *Consolidated and Separate Financial Statements* (hereafter referred to as 'FRS 27') is the relaxation of the restriction on non-controlling interest's share of loss.

Prior to the adoption of FRS 27 effective 1 July 2009, whenever a subsidiary suffered a huge loss that caused its owners' equity to turn negative, the non-controlling interest's share of loss would be restricted so that the non-controlling interest would not be presented with a debit balance in the consolidated balance sheet. When the subsidiary made a profit in a subsequent period, the non-controlling interest would be attributed its share of profit only after the loss not previously absorbed had been made good.

However, FRS 27 provides that '... total comprehensive income is attributable to the owners of the parent and to the non-controlling interests even if this results in the non-controlling interest having a deficit balance' (paragraph 28). FRS 27 thus does not allow restriction of non-controlling interest's share of loss.

This paper discusses the practical issue of how to transit to FRS 27.28 in a case where the non-controlling interest's share of loss of a subsidiary has previously been restricted.

Three different accounting methods

For purposes of illustration, assume the following case: P Ltd (which adopts 31 December accounting year-ends) acquires 90% of S Ltd on 2 February 20X2 when S Ltd's net assets are represented by share capital of \$100,000. S Ltd suffers a loss of \$300,000 for the year ended 31 December 20X2, and makes a profit of \$500,000 for the year ended 31 December 20X3.

Prior to FRS 27, the amount of 20X2 loss attributed to non-controlling interest would be restricted to \$10,000 (and not \$30,000 [$10\% \times \$300,000$]). Consequently, non-controlling interest would be reported at \$10,000 (loss) in the 20X2 consolidated statement of comprehensive income, and carried at zero balance ($\$10,000 [10\% \times \text{share capital of } \$100,000] - \$10,000 \text{ share of loss}$) in the 20X2 consolidated balance sheet. The 20X3 profit attributed to non-controlling interest would be \$30,000 (\$50,000

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$[10\% \times \$500,000] - \$20,000$ of loss which was not previously absorbed). Consequently, non-controlling interest would be reported at \$30,000 in the 20X3 consolidated statement of comprehensive income, and carried at \$30,000 (\$10,000 share of share capital – \$10,000 share of beginning accumulated loss + \$30,000 share of current year profit) in the 20X3 consolidated balance sheet.

Assume that P Ltd group applies FRS 27 on 1 January 20X3. In this case, the amount of 20X2 loss attributed to non-controlling interest will still be restricted to \$10,000. However, how should the non-controlling interest be accounted for in the 20X3 consolidated financial statements?

There are three alternative accounting methods.

Method A

This method follows strictly the requirement of FRS 27.28. Thus, the amount of 20X3 profit attributed to non-controlling interest will be \$50,000 ($10\% \times \$500,000$).

The advantage of this method is that the non-controlling interest in the 20X3 consolidated statement of comprehensive income of \$50,000 is correct as it represents non-controlling interest's 10% share of the subsidiary's profit of \$500,000 in 20X3.

The disadvantage of this method is that the non-controlling interest in the 20X3 consolidated balance sheet of \$50,000 (\$10,000 [10% of share capital of \$100,000] – \$10,000 [10% of beginning accumulated loss of \$300,000, but restricted to \$10,000] + \$50,000 [10% of current year profit of \$500,000]) is conceptually incorrect as it does not represent non-controlling interest's 10% share of the subsidiary's net asset of \$300,000 (\$100,000 – \$300,000 + \$500,000) as at 31 December 20X3.

Method B

This method follows the practice prior to FRS 27. Thus, the amount of 20X3 profit attributed to non-controlling interest will be \$30,000 ($10\% \times \$500,000$ less loss of \$20,000 which was not previously absorbed).

The advantage of this method is that the non-controlling interest in the 20X3 consolidated balance sheet of \$30,000 (\$10,000 [10% of share capital of \$100,000] – \$10,000 [10% of beginning accumulated loss of \$300,000, but restricted to \$10,000] + \$30,000 share of current year profit) is correct as it represents non-controlling interest's 10% share of the subsidiary's net asset of \$300,000 (\$100,000 – \$300,000 + \$500,000) as at 31 December 20X3.

This method may, however, be faulted on the ground that it is not in compliance with the requirement of FRS 27.28, and that the non-controlling interest in the 20X3 consolidated statement of comprehensive income of \$30,000 is not consistent with the non-controlling interest's 10% share of the subsidiary's profit of \$500,000.

Method C

Under this method, the amount of 20X3 profit attributed to non-controlling interest will be \$50,000 ($10\% \times \$500,000$), consistent with the requirement of FRS 27.28. However, an additional consolidation adjustment has to be made (Debit Non-controlling interest in the consolidated balance sheet and Credit Beginning accumulated losses of subsidiary) to accrue for non-controlling interest's share of 20X2 loss of \$20,000 that was not previously absorbed.

The advantage of this method over the other two methods is that the non-controlling interest in the 20X3 consolidated statement of comprehensive income of \$50,000 is correct as it represents non-controlling interest's 10% share of the subsidiary's profit of \$500,000 in 20X3, and the non-controlling interest in the 20X3 consolidated balance sheet of \$30,000 ($\$10,000 [10\% \text{ of share capital of } \$100,000] - \$10,000 [10\% \text{ of beginning accumulated loss of } \$300,000, \text{ but restricted to } \$10,000] - \$20,000 \text{ adjustment} + \$50,000 \text{ share of current year profit}$) is also correct as it represents non-controlling interest's 10% share of the subsidiary's net asset of \$300,000 ($\$100,000 - \$300,000 + \$500,000$) as at 31 December 20X3.

Some accountants fault this method on the ground that the additional consolidation adjustment to accrue for non-controlling interest's share of 20X2 loss that was not previously absorbed amounts to retrospective application of paragraph 28, which is prohibited by FRS 27.45.

However, it may be noted that FRS 27.45 simply provides that 'an entity shall not *restate* any profit or loss attribution for reporting periods before the amendment is applied' (emphasis added). Thus, what FRS 27.45 requires is simply that the non-controlling interest that was reported at the restricted amount of \$10,000 (loss) in the 20X2 consolidated statement of comprehensive income, and at zero balance in the 20X2 consolidated balance sheet should not be restated when they are presented as comparative figures to the 20X3 consolidated financial statements. FRS 27.45 does not prohibit the additional consolidation adjustment to accrue for non-controlling interest's share of 20X2 loss in the 20X3 consolidated financial statements.

Conclusion

It is unfortunate that FRS 27 does not clearly spell out how to transit to paragraph 28 in cases where the non-controlling interest's share of loss has previously been restricted. The paper examines three practical solutions to the problem, and recommends the use of *Method C*.

Problems for self-study

Problems 3.1, 3.2, and 3.3 illustrate the preparation of consolidated financial statements in three consecutive years. (The non-controlling interests are to be measured based on 'fair value of identifiable net assets'.)

PROBLEM 3.1

The financial statements of A Ltd and B Ltd for the year 20X6 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X6

	A Ltd	B Ltd
	\$'000	\$'000
Sales	500	200
Less cost of sales	200	70
Gross profit	300	130
Less operating expenses	200	80
Profit before tax	100	50
Less tax	30	15
Profit after tax	70	35
Other comprehensive income ..	—	—
Total comprehensive income ...	70	35

- (b) Balance sheets as at 31 December 20X6

	A Ltd	B Ltd
	\$'000	\$'000
Land	100	100
Machinery	200	200
Investment	200	—
Current assets	100	50
	600	350
Share capital	400	100
Retained profit	120	100
Current liabilities	80	150
	600	350

(c) Statements of changes in equity (partial) for the year ended 31 December 20X6

	A Ltd	B Ltd
	\$'000	\$'000
Beginning retained profit	50	65
Add profit for the year	70	35
Ending retained profit	<u>120</u>	<u>100</u>

A Ltd acquired 80% interest in B Ltd for a cash consideration of \$200,000 on 30 December 20X6. The excess payment was for goodwill.

Required

Prepare the consolidated balance sheet for A Ltd and its subsidiary as at 31 December 20X6.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (B)	80
	Dr Retained profit (B)	80
	Dr Goodwill on consolidation	40
	Cr Investment in B Ltd	200
	(to eliminate investment account)	
(ii)	Dr Share capital (B)	20
	Dr Retained profit (B)	20
	Cr Non-controlling interest (CBS)	40
	(to record non-controlling interest)	

(b) Consolidation worksheet

	A Ltd	B Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	—	—	i 40		40
Land	100	100			200
Machinery	200	200			400
Investment	200	—		i 200	—
Current assets	100	50			150
Share capital	400	100	i 80		400
			ii 20		
Retained profit	120	100	i 80		120
			ii 20		
Current liabilities	80	150			230
Non-controlling interest	—	—	ii 40		40

(c) Consolidated financial statements

A Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X6	
	\$'000
Goodwill on consolidation	40
Land	200
Machinery	400
Current assets	150
	<u>790</u>
Share capital	400
Retained profit	120
Non-controlling interest	40
Current liabilities	230
	<u>790</u>

Notes to the solution

- (a) CJE (i) is to eliminate the cost of investment against the share capital and pre-acquisition reserves of the subsidiary.
- (b) CJE (ii) is to record non-controlling interest in the subsidiary's net assets.
- (c) In this case, only the consolidated balance sheet is required. For the year 20X6, A Ltd and B Ltd has not operated as a group, and therefore the consolidated statement of comprehensive income and the consolidated statement of changes in equity are not required.

PROBLEM 3.2

The financial statements of A Ltd and B Ltd (as in Problem 3.1) for the year 20X7 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X7

	A Ltd	B Ltd
	\$'000	\$'000
Sales	900	300
Less cost of sales	300	100
	<u>600</u>	<u>200</u>
Gross profit	600	200
Add dividend income	28	—
profit on sale of machinery	—	5
Less other operating expenses	200	125
Profit before tax	428	80
Less tax	120	25
	<u>308</u>	<u>55</u>
Profit after tax	308	55
Other comprehensive income		
Revaluation surplus	60	50
Total comprehensive income	<u>368</u>	<u>105</u>

(b) Balance sheets as at 31 December 20X7

	A Ltd	B Ltd
	\$'000	\$'000
Land	160	150
Machinery	400	100
Investment in B Ltd	200	—
Current assets	128	40
	<u>888</u>	<u>290</u>
Share capital	400	100
Revaluation reserve	60	50
Retained profit	328	120
Current liabilities	100	20
	<u>888</u>	<u>290</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X7

	A Ltd	B Ltd
	\$'000	\$'000
Beginning retained profit	120	100
Add profit for the year	308	55
Less dividend	100	35
Ending retained profit	<u>328</u>	<u>120</u>
Beginning revaluation reserve	—	—
Add surplus for the year	60	50
Ending revaluation reserve	<u>60</u>	<u>50</u>

A Ltd acquired 80% interest in B Ltd for a cash consideration of \$200,000 on 30 December 20X6. At that date, B Ltd's net assets are represented by share capital of \$100,000 and retained profit of \$100,000. The excess payment is for goodwill. A Ltd adopted FRS 103 in 20X6. In 20X7, there is a goodwill impairment loss of \$8,000.

In April 20X7, B Ltd sold a piece of machinery (which was carried in its books at cost of \$100,000 less accumulated depreciation of \$50,000) to A Ltd for \$55,000. The machinery has a remaining useful life of five years. The group adopts a policy to depreciate depreciable assets using the straight-line method over ten years, and to provide for a full year's depreciation if the asset has been used for more than six months during the year.

During the year 20X7, A Ltd sold goods to B Ltd at cost plus 20%. The total intragroup sale for the year is \$100,000. The unrealized intragroup profit in the closing stock as at 31 December 20X7 is -\$6,000.

During the year 20X7, both A Ltd and B Ltd revalued their respective land. The dividends are paid out of the current year's profits.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (partial) for A Ltd and its subsidiary for the year 20X7.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (B)	80	
	Dr Beginning retained profit (B)	80	
	Dr Goodwill on consolidation	40	
	Cr Investment in B Ltd	200	
	(to eliminate investment account)		
(ii)	Dr Impairment loss (A)	8	
	Cr Accumulated impairment – Goodwill	8	
	(to record impairment loss for goodwill on consolidation)		
(iii)	Dr Dividend income (A)	28	
	Cr Dividend appropriation (B)	28	
	(to eliminate inter-company dividend)		
(iv)	Dr Profit on sale of machinery (B)	5	
	Dr Machinery – cost	45	
	Cr Machinery – accumulated depreciation	50	
	(to eliminate unrealized profit on the sale of machinery)		
(v)	Dr Machinery – accumulated depreciation	1	
	Cr Depreciation expense (B)	1	
	(to record realization of profit on machinery)		
(vi)	Dr Sales	100	
	Cr Cost of sales	100	
	(to eliminate intragroup sales)		
(vii)	Dr Cost of sales (A)	6	
	Cr Current asset	6	
	(to eliminate unrealized profit in the closing stock)		
(viii)	Dr Non-controlling interest (CSCI) ($20\% \times [55 - 5 + 1]$) ..	10.2	
	Cr Non-controlling interest (CBS)	10.2	
	(to record non-controlling interest in profit of B Ltd)		

(ix)	Dr Non-controlling interest (CBS)	7	
	Cr Dividend appropriation (B)		7
	(to record dividend paid to non-controlling interest)		
(x)	Dr Non-controlling interest (CSCI) ($20\% \times 50$)	10	
	Cr Non-controlling interest (CBS)		10
	(to record non-controlling interest in revaluation surplus of B Ltd)		
(xi)	Dr Share capital (B)	20	
	Dr Beginning retained profit (B) ($20\% \times 100$)	20	
	Cr Non-controlling interest (CBS)		40
	(to record non-controlling interest in other shareholders' equity of B Ltd)		

(b) Consolidation worksheet

	A Ltd	B Ltd	Dr	Cr	Consolidated balances
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	900	300	vi 100		1,100
Cost of sales	300	100	vii 6	vi 100	306
Gross profit	600	200			794
Dividend income	28	—	iii 28		—
Profit on machinery	—	5	iv 5		—
Operating expenses	200	125	ii 8	v 1	332
Profit before tax	428	80			462
Tax	120	25			145
Profit after tax	308	55			317
Non-controlling interest	—	—	viii 10.2		10.2
Group profit	—	—			306.8
Dividend	100	35		iii 28 ix 7	100
Beginning retained profit	120	100	i 52 xi 20		
Ending retained profit	328	120			326.8
Revaluation surplus	60	50			110
Non-controlling interest	—	—	x 10		10
Ending revaluation reserve	60	50			100
Goodwill on consolidation	—	—	i 40	ii 8	32
Land	160	150			310
Machinery	400	100	iv 45 v 1	iv 50	496
Investment	200	—		i 200	—
Current assets	128	40		vii 6	162
Share capital	400	100	i 80 xi 20		400
Revaluation reserve	60	50			100
Retained profit	328	120			326.8
Current liabilities	100	20			120
Non-controlling interest	—	—	ix 7 x 10 xi 40	viii 10.2	
					53.2

(c) Consolidated financial statements

A Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X7	
	\$'000
Sales	1,100
Less cost of sales	<u>306</u>
Gross profit	794
Less operating expenses	<u>332</u>
Profit before tax	462
Less tax	<u>145</u>
Profit after tax	317
Other comprehensive income	
Revaluation surplus	<u>110</u>
Total comprehensive income	<u>427</u>
Profit attributable to:	
Shareholders of the parent	306.8
Non-controlling interest	<u>10.2</u>
	317
Total comprehensive income attributable to:	
Shareholders of the parent	406.8
Non-controlling interest	<u>20.2</u>
	427
 <hr/>	
A Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X7	
	\$'000
Goodwill on consolidation	32
Land	310
Machinery	496
Current assets	<u>162</u>
	1,000
Share capital	400
Revaluation reserve	100
Retained profit	326.8
Non-controlling interest	53.2
Current liabilities	<u>120</u>
	1,000

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X7

	\$'000
Beginning retained profit	120
Add profit for the year	306.8
Less dividend	<u>100</u>
Ending retained profit	<u><u>326.8</u></u>
Beginning revaluation reserve	—
Add revaluation surplus for the year	<u>100</u>
Ending revaluation reserve	<u><u>100</u></u>

Notes to the solution

- (a) CJE (i) for 20X7 consolidation is exactly the same as CJE (i) for 20X6 consolidation. Such a CJE is commonly referred to as a 'permanent adjustment'.
- (b) Note that non-controlling interest is affected only by the intragroup profit relating to the machinery where B Ltd is the selling company.
- (c) In the disclosure for 'profit before tax', (i) there will be an item 'impairment loss on goodwill of \$8,000', and (ii) depreciation expenses will be reduced by \$1,000 (see CJE [e]).
- (d) For purposes of balance sheet presentation, the accumulated impairment has been set off against the goodwill. FRS 103 requires the disclosure of the gross amount of goodwill and the accumulated impairment, which may be shown in the notes to account.
- (e) Group profit of \$306,800 may be proved by adding A Ltd's adjusted profit of \$266,000 (\$308,000 – inter-company dividend of \$28,000 – goodwill impairment of \$8,000 – unrealized profit in closing stock of \$6,000) to the group's share of B Ltd's adjusted profit of \$40,800 ($80\% \times [\$55,00 - \text{unrealized profit on sale of machinery of } \$5,000 + \text{subsequent realization of profit on machinery of } \$1,000]$).
- (f) Non-controlling interest in the consolidated balance sheet of \$53,200 can be proved as $20\% \times (\$100,000 + \$50,000 + \$120,000 - \$5,000 + \$1,000)$. (Note: $[\$100,000 + \$50,000 + \$120,000]$ represents subsidiary's unadjusted net assets; \$5,000 is the unrealized profit on machinery; \$1,000 is the subsequent realization of profit on machinery.)
- (g) Non-controlling interest in the consolidated balance sheet may be reconciled as follows: beginning balance of \$40,000 + share of revaluation surplus of \$10,000 + share of profit of \$10,200 – share of dividend of \$7,000 = ending balance of \$53,200.
- (h) Group revaluation reserve of \$100,000 may be proved as A Ltd's revaluation reserve of \$60,000 + A Ltd's share of B Ltd's revaluation reserve of \$40,000 ($80\% \times \$50,000$).
- (i) Group retained profit of \$326,800 can be proved by adding A Ltd's adjusted retained profit of \$314,000 (\$328,000 – goodwill impairment of \$8,000 – unrealized profit in closing stock of \$6,000) to the group's share of B Ltd's adjusted post-acquisition retained profit of \$12,800 ($80\% \times [\$120,00 - \$100,000 - \$5,000 + \$1,000]$). Note that in proving the group retained profit, there is no need to adjust for inter-company dividend, as inter-company dividend is self-eliminated at this level.

- (j) The group retained profit may be reconciled as follows: beginning balance of \$120,000 + group profit of \$306,800 – dividend of \$100,000 = ending balance of \$326,800.
- (k) Note that the group's beginning retained profit for 20X7 is, as it should be, equal to the group's ending retained profit for 20X6.

PROBLEM 3.3

The financial statements of A Ltd and B Ltd (as in Problems 3.1 and 3.2) for the year 20X8 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Sales	1,000	800
Less cost of sales	350	300
Gross profit	650	500
Add dividend income	56	—
Less operating expenses	280	280
Profit before tax	426	220
Less tax	126	70
Profit after tax	300	150
Other comprehensive income		
Revaluation surplus	40	30
Total comprehensive income	340	180

- (b) Balance sheets as at 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Land	200	180
Machinery	500	250
Investment in B Ltd	200	—
Current assets	178	50
	1078	480
Share capital	400	100
Revaluation reserve	100	80
Retained profit	528	200
Current liabilities	50	100
	1078	480

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Beginning retained profit	328	120
Add profit for the year	300	150
Less dividend paid	100	70
Ending retained profit	528	200
Beginning revaluation reserve	60	50
Add surplus for the year	40	30
Ending revaluation reserve	100	80

A Ltd acquired 80% interest in B Ltd for a cash consideration of \$200,000 on 30 December 20X6. At that date B Ltd's net assets are represented by share capital of \$100,000 and retained profit of \$100,000. The excess payment is for goodwill. A Ltd adopted FRS 103 in 20X6. In 20X7, there was a goodwill impairment loss of \$8,000. In 20X8, there is no further impairment.

In April 20X7, B Ltd sold a piece of machinery (which was carried in its books at cost of \$100,000 less accumulated depreciation of \$50,000) to A Ltd for \$55,000. The machinery has a remaining useful life of five years. The machinery is still used by A Ltd as at 31 December 20X8. The group adopts a policy to depreciate depreciable assets using the straight-line method over ten years, and to provide for a full year's depreciation if the asset has been used for more than six months during the year.

During the year 20X8, the total intragroup sale from A Ltd to B Ltd is \$200,000. The unrealized intragroup profit in the closing stock as at 31 December 20X8 is \$7,000. As mentioned in Problem 3.2, there was unrealized inter-company profit of \$6,000 in the stock as at 31 December 20X7.

During the year 20X8, both A Ltd and B Ltd revalued their respective land, again.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet and the consolidated statement of changes in equity (showing group retained profit only) for A Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (B)	80
	Dr Beginning retained profit (B)	80
	Dr Goodwill on consolidation	40
	Cr Investment in B Ltd	200
	(to eliminate investment account)	

(ii)	Dr Beginning retained profit	8
	Cr Accumulated impairment – goodwill	8
	(to record goodwill impairment in previous year)	
(iii)	Dr Dividend income (A)	56
	Cr Dividend (B)	56
	(to eliminate intragroup dividend)	
(iv)	Dr Beginning retained profit (B)	5
	Dr Machinery – cost	45
	Cr Machinery – accumulated depreciation	50
	(to eliminate unrealized profit on the sale of machinery)	
(v)	Dr Machinery – accumulated depreciation	2
	Cr Beginning retained profit (B)	1
	Cr Depreciation expense (B)	1
	(to record realization of profit on machinery)	
(vi)	Dr Sales	200
	Cr Cost of sales	200
	(to eliminate intragroup sales)	
(vii)	Dr Beginning retained profit (A)	6
	Cr Cost of sales (A)	6
	(to record realization of profit in opening stock)	
(viii)	Dr Cost of sales (A)	7
	Cr Current asset	7
	(to eliminate unrealized profit in closing stock)	
(ix)	Dr Non-controlling interest (CSCI) ($20\% \times [150 + 1]$)	30.2
	Cr Non-controlling interest (CBS)	30.2
	(to record non-controlling interest in profit of B Ltd)	
(x)	Dr Non-controlling interest (CBS)	14
	Cr Dividend (B)	14
	(to record non-controlling interest in dividend of B Ltd)	
(xi)	Dr Non-controlling interest (CSCI) ($20\% \times 30$)	6
	Cr Non-controlling interest (CBS)	6
	(to record non-controlling interest in revaluation surplus of B Ltd)	

(xii)	Dr Share capital (B)	20
	Dr Beginning revaluation reserve (B) ($20\% \times 150$)	10
	Dr Beginning retained profit (B) ($20\% \times [120 - 5 + 1]$)	23.2
	Cr Non-controlling interest (CBS)	53.2
	(to record non-controlling interest in other shareholders' equity of B Ltd)	

(b) Consolidation worksheet

	A Ltd	B Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	1,000	800	vi 200		1,600
Cost of sales	350	300	viii 7 vii 6	vi 200	451
Gross profit	650	500			1,149
Dividend income	56	—	iii 56		—
Operating expenses	280	280		v i	559
Profit before tax	426	220			590
Tax	126	70			196
Profit after tax	300	150			394
Non-controlling interest	—	—	ix 30.2		30.2
Group profit	—	—			363.8
Dividend	100	70		iii 56 x 14	100
Beginning retained profit	328	120	i 80 ii 8 iv 5 vii 6 xii 23.2	v i	326.8
Ending retained profit	500	200			590.6
Beginning revaluation reserve	60	50	xii 10		100
Revaluation surplus	40	30			70
Non-controlling interest	—	—	xi 6		6
Ending revaluation reserve ...	60	50			164
Goodwill on consolidation ...	—	—	i 40	ii 8	32
Land	200	180			380
Machinery	500	250	iv 45 v 2	iv 50	747
Investment	200	—		i 200	—
Current assets	178	50		viii 7	221
Share capital	400	100	i 80 xii 20		400
Retained profit	500	200			590.6
Current liabilities	50	100			150
Non-controlling interest	—	—	x 14 xi 6 xii 53.2	ix 30.2	75.4

(xii)	Dr Share capital (B)	20
	Dr Beginning revaluation reserve (B) ($20\% \times 150$)	10
	Dr Beginning retained profit (B) ($20\% \times [120 - 5 + 1]$)	23.2
	Cr Non-controlling interest (CBS)	53.2
	(to record non-controlling interest in other shareholders' equity of B Ltd)	

(b) Consolidation worksheet

	A Ltd	B Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	1,000	800	vi 200		1,600
Cost of sales	350	300	viii 7 vii 6	vi 200	451
Gross profit	650	500			1,149
Dividend income	56	—	iii 56		—
Operating expenses	280	280		v i	559
Profit before tax	426	220			590
Tax	126	70			196
Profit after tax	300	150			394
Non-controlling interest	—	—	ix 30.2		30.2
Group profit	—	—			363.8
Dividend	100	70		iii 56 x 14	100
Beginning retained profit	328	120	i 80 ii 8 iv 5 vii 6 xii 23.2	v	326.8
Ending retained profit	500	200			590.6
Beginning revaluation reserve ..	60	50	xii 10		100
Revaluation surplus	40	30			70
Non-controlling interest	—	—	xi 6		6
Ending revaluation reserve ...	60	50			164
Goodwill on consolidation ...	—	—	i 40	ii 8	32
Land	200	180			380
Machinery	500	250	iv 45 v 2	iv 50	747
Investment	200	—		i 200	—
Current assets	178	50		viii 7	221
Share capital	400	100	i 80 xii 20		400
Retained profit	500	200			590.6
Current liabilities	50	100			150
Non-controlling interest	—	—	x 14 xi 6 xii 53.2	ix 30.2	75.4

(c) Consolidated financial statements

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,600
Less cost of sales	451
Gross profit	<u>1,149</u>
Less operating expenses	559
Profit before tax	590
Less tax	196
Profit after tax	<u>394</u>
Other comprehensive income	
Revaluation surplus	70
Total comprehensive income	<u>464</u>
Profit attributable to:	
Shareholders of the parent	363.8
Non-controlling interest	30.2
	<u>394</u>
Total comprehensive income attributable to:	
Shareholders of the parent	427.8
Non-controlling interest	36.2
	<u>464</u>

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Goodwill on consolidation	32
Land	380
Machinery	747
Current assets	<u>221</u>
	<u>1,380</u>
Share capital	400
Revaluation reserve	164
Retained profit	590.6
Non-controlling interest	75.4
Current liabilities	<u>150</u>
	<u>1,380</u>

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	326.8
Add profit for the year	363.8
Less dividend	100
Ending retained profit	590.6
Beginning revaluation reserve	100
Add revaluation surplus for the year	64
Ending revaluation reserve	164

Notes to the solution

- (a) CJE (i) for 20X8 consolidation is exactly the same as CJE (i) for 20X7 and 20X6 consolidation. This 'permanent adjustment' has to be done year after year (until there is a change in shareholding interests).
- (b) In the disclosure for 'profit before tax', (i) depreciation expenses will be reduced by \$1,000, and (ii) there will be no dividend income.
- (c) For purposes of balance sheet presentation, the accumulated impairment has been set off against the goodwill. The gross amount of goodwill and the accumulated impairment could, of course, be shown separately in the balance sheet (or in the notes to financial statements).
- (d) Group profit of \$363,800 may be proved by adding A Ltd's adjusted profit of \$243,000 (\$300,000 – intragroup net dividend of \$56,000 + realization of profit in opening stock of \$6,000 – unrealized profit in closing stock of \$7,000) to the group's share of B Ltd's adjusted profit of \$120,800 ($80\% \times [\$150,000 + \text{realization of profit on machinery of } \$1,000]$).
- (e) Non-controlling interest in the consolidated balance sheet of \$75,400 can be proved as $20\% \times \text{subsidiary's adjusted net assets of } \$377,000 (\$100,000 + \$80,000 + \$200,000 - \$5,000 + [2 \times \$1,000])$.
- (f) Non-controlling interest in the consolidated balance sheet may be reconciled as follows: beginning balance of \$53,200 + share of revaluation reserve of \$6,000 + share of profit of \$30,200 – share of dividend of \$14,000 = ending balance of \$75,400.
- (g) Group revaluation reserve of \$164,000 may be proved as A Ltd's revaluation reserve of \$100,000 + A Ltd's share of B Ltd's revaluation reserve of \$64,000 ($80\% \times \$80,000$).
- (h) Group retained profit of \$590,600 can be proved by adding A Ltd's adjusted retained profit of \$513,000 (\$528,000 – goodwill impairment of \$8,000 – unrealized profit in closing stock of \$7,000) to the group's share of B Ltd's adjusted post-acquisition retained profit of \$77,600 ($80\% \times [\$200,000 - \$100,000 - \$5,000 + (2 \times \$1,000)]$).
- (i) The group retained profit may be reconciled as follows: beginning balance of \$326,800 + group profit of \$363,800 – dividend of \$100,000 = ending balance of \$590,600.
- (j) Note that the group's beginning retained profit for 20X8 is, as it should be, equal to the group's ending retained profit for 20X7.

In practice, both the consolidated statement of comprehensive income and the consolidated balance sheet (together with the consolidated statement of changes in equity and the consolidated cash flow statement) would have to be prepared annually. However, on certain occasions, it may be necessary to prepare the consolidated statement of comprehensive income without preparing the consolidated balance sheet (for example, in reporting the group's half-year results), or vice versa (for example, in determining the group's net assets for purposes of a proposed business combination). Problems 3.4, 3.5, and 3.6 below illustrate respectively the preparation of consolidated balance sheets in isolation, consolidated statements of comprehensive income in isolation, and both in combination. The same source data is used in all three problems.

PROBLEM 3.4

The financial statements of P Ltd and S Ltd for the year 20X8 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	P Ltd	S Ltd
	\$'000	\$'000
Sales	800	500
Less cost of sales	400	<u>300</u>
Gross profit	400	200
Less selling expenses	60	70
administrative expenses	50	20
other expenses	40	<u>10</u>
Profit before tax	250	100
Less tax	80	<u>30</u>
Profit after tax	<u>170</u>	<u>70</u>

- (b) Balance sheets as at 31 December 20X8

	P Ltd	S Ltd
	\$'000	\$'000
Land	100	150
Machinery, at cost	400	100
Less accumulated depreciation	(100)	(80)
Investment	180	—
Stock	200	100
Debtors	120	100
Bank	—	30
	<u>900</u>	<u>400</u>
Share capital	400	100
Retained profit	260	220
Creditors	140	80
Bank overdraft	100	—
	<u>900</u>	<u>400</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd
	\$'000	\$'000
Beginning retained profit	160	150
Add profit for the year	170	70
Less dividend	70	—
Ending retained profit	<u>260</u>	<u>220</u>

P Ltd acquired 90% interest in S Ltd on 1 January 20X6. At that date, S Ltd's net assets were represented by its shareholders' equity consisting of share capital of \$100,000 and retained profit of \$100,000.

In February 20X6, P Ltd sold a piece of land (which was carried in its books at \$150,000) to S Ltd at cost.

In March 20X6, P Ltd sold a piece of machinery to S Ltd for \$40,000. The machinery was bought by P Ltd for \$100,000 in January 20X1. The market value of the machinery at this date was approximately equal to the book value carried in the books of P Ltd.

Since S Ltd was taken over in 20X6, it had been selling goods to P Ltd at cost plus 10%. In 20X8, the intragroup sales amounted to \$100,000. P Ltd's opening stock and closing stock for 20X8 consisted of \$22,000 and \$33,000 respectively, of the goods bought from S Ltd. As at 31 December 20X8, P Ltd's creditors account included an amount of \$10,000 payable to S Ltd for the goods purchased.

The group's policy was to depreciate machinery using the straight-line method over ten years, and to provide for a full year's depreciation if the machinery had been used for more than six months in the year.

Required

Prepare the consolidated balance sheet for P Ltd and its subsidiary as at December 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (S)	90
	Dr Retained profit (S)	90
	Cr Investment in S Ltd	180
	(to eliminate investment account)	
(ii)	Dr Machinery	60
	Cr Accumulated depreciation	50
	Cr Retained profit (P)	10
	(to eliminate unrealized intragroup loss)	

(iii)	Dr Retained profit (P)	6		
	Cr Accumulated depreciation	6		
	(to record gradual realization of intragroup loss)			
(iv)	Dr Creditors	10		
	Cr Debtors	10		
	(to eliminate intragroup account balances)			
(v)	Dr Retained profit (S)	3		
	Cr Stock	3		
	(to eliminate unrealized intragroup profit in closing stock)			
(vi)	Dr Share capital (S)	10		
	Dr Retained profit (S) ($10\% \times [220 - 3]$)	21.7		
	Cr Non-controlling interest	31.7		
	(to record non-controlling interest)			

(b) Consolidation worksheet

	P Ltd	S Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Land	100	150			250
Machinery	400	100	ii 60		560
Accumulated depreciation	(100)	(80)		ii 50 iii 6	(236)
Investment	180	—		i 180	—
Stock	200	100		v 3	297
Debtors	120	100		iv 10	210
Bank	—	30			30
Share capital	400	100	i 90 vi 10		400
Retained profit	260	220	i 90 ii 10 iii 6 v 3 vi 21.7		369.3
Creditors	140	80	iv 10		210
Bank overdraft	100	—			100
Non-controlling interest	—	—		vi 31.7	31.7

(c) Consolidated balance sheet

P Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Land	250
Machinery, at cost	560
Accumulated depreciation	(236)
Stock	297
Debtors	210
Bank	30
	<u>1,111</u>
Share capital	400
Retained profit	369.3
Non-controlling interest	31.7
Creditors	210
Bank overdraft	100
	<u>1,111</u>

Notes to the solution

- (a) In this case, losses arise from the intragroup sale of machinery from P Ltd to S Ltd. As mentioned in the question, the cost can be recovered. Consolidation journal entry (ii) is therefore required to eliminate the initial unrealized intragroup loss of \$10,000. Consolidation journal entry (iii) records the gradual realization of the intragroup loss through the depreciation process. The initial unrealized intragroup loss of \$10,000 is going to be gradually realized as and when the machinery is depreciated over the five years. The annual realization of \$2,000 of the inter-company loss for 20X6, 20X7, and 20X8 is charged against the retained profit. Note that the initial unrealized intragroup loss and the subsequent realization of the intragroup loss are charged or credited, for the purpose of determining non-controlling interest, to the profit of P Ltd, the selling company.
- (b) Note that there is no adjustment on the intragroup sale of land, because there is no intragroup profit or loss arising therefrom.
- (c) Note that non-controlling interest is affected by unrealized intragroup profits arising from upstream sales only. Non-controlling interest is affected by the inter-company profit in the sale of stock where S Ltd is the selling company. Non-controlling interest is not affected by the intragroup loss on the sale of machinery where P Ltd is the selling company.
- (d) Non-controlling interest in the consolidated balance sheet of \$31,700 can be proved as 10% \times (\$100,000 + \$220,000 – \$3,000). (S Ltd's net asset of \$320,000 [\$100,000 + \$220,000]

as shown in the balance sheet is decreased by the unrealized intragroup profit of \$3,000 in the closing stock. The inter-company profit in the opening stock has been realized as at 31 December 20X8.)

- (e) The group's retained profit of \$369,300 can be proved by adding the parent's adjusted retained profit of \$264,000 (\$260,000 + unrealized loss on machinery \$10,000 – subsequent realization of loss on machinery \$6,000) to the group's share of S Ltd's adjusted post-acquisition retained profit of \$105,300 [$90\% \times (\$220,000 - \$100,000 - \$3,000)$].
- (f) The bank account and the bank overdraft account in the consolidated balance sheet should not be off-set against each other (as provided for in FRS32).

PROBLEM 3.5

Refer to the case in Problem 3.4. Prepare the consolidated statement of comprehensive income for P Ltd and its subsidiary for the year ended 31 December 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Beginning retained profit (P)	4
	Dr Depreciation expenses (P)	2
	Cr Accumulated depreciation	6
	(to record gradual realization of loss on machinery)	
(ii)	Dr Sales	100
	Cr Cost of sales	100
	(to eliminate intragroup sales)	
(iii)	Dr Beginning retained profit (S)	2
	Cr Cost of sales (S)	2
	(to record unrealized profit in opening stock)	
(iv)	Dr Cost of sales (S)	3
	Cr Closing stock (CBS)	3
	(to eliminate unrealized profit in closing stock)	
(v)	Dr Non-controlling interest (CSCI) ($10\% \times [70 + 2 - 3]$)	6.9
	Cr Non-controlling interest (CBS)	6.9
	(to record non-controlling interest in profit of S Ltd)	

(b) Consolidation worksheet

	P Ltd	S Ltd	Adjustments		Consolidated balances
	\$'000	\$'000	Dr	Cr	\$'000
Sales	800	500	ii 100		1,200
Cost of sales	400	300	iv 3	ii 100 iii 2	601
Gross profit	400	200			599
Selling expenses	60	70			130
Administrative expenses	50	20	i 2		72
Other expenses	40	10			50
Profit before tax	250	100			347
Tax	80	30			110
Profit after tax	170	70			237
Non-controlling interest	—	—	v 6.9		6.9
Profit for shareholders	—	—			230.1
Dividend	70	—			70
Retained profit	100	70			160.1

(c) Consolidated statement of comprehensive income

P Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	1,200
Less cost of sales	601
Gross profit	599
Less operating expenses	
Selling	130
Administrative	72
Others	50
Profit before tax	347
Less tax	110
Profit after tax	237
Other comprehensive income	—
Total comprehensive income	237
Attributable to:	
Shareholders of the parent	230.1
Non-controlling interest	6.9
	237

Notes to the solution

- (a) In this case, losses arise from the intragroup sale of machinery from P Ltd to S Ltd. Consolidation journal entry (i) records the gradual realization of the intragroup loss through the depreciation process. The initial unrealized intragroup loss of \$10,000 is going to be gradually realized as and when the machinery is depreciated over the five years. The annual realization of \$2,000 of the inter-company loss for 20X6 and 20X7 is charged against the beginning retained profit, whereas that for 20X8 is charged against the current year's profit. Note that the initial unrealized intragroup loss and the subsequent realization of the intragroup loss are charged or credited, for the purpose of determining non-controlling interest, to the profit of P Ltd, the selling company.
- (b) The depreciation expenses on machinery are classified as 'administrative expenses' in this case, on the assumption that the machinery is wholly used for administrative purposes. In the disclosure, the depreciation expenses will be increased by \$2,000 (consolidation journal entry [i]).
- (c) Note that there is no adjustment on the intragroup sale of land, because there is no intragroup profit or loss arising therefrom.
- (d) Note that non-controlling interest is affected by unrealized intragroup profit arising from upstream sales only. Non-controlling interest is affected by the inter-company profit in the sale of stock where S Ltd is the selling company. Non-controlling interest is not affected by the intragroup loss on the sale of machinery where P Ltd is the selling company.
- (e) The group's profit of \$230,100 can be proved by adding the parent's adjusted profit of \$168,000 (\$170,000 – realization of loss on machinery \$2,000) to the group's share of S Ltd's adjusted profit of \$62,100 ($90\% \times [\$70,000 + \text{realization of profit in opening stock } \$2,000 - \text{unrealized profit in closing stock } \$3,000]$).
- (f) Note that when only the consolidated statement of comprehensive income is prepared, the consolidated worksheet would not include both debit and credit entries of all the consolidation journal entries, because some debit and credit entries of the consolidation journal entries affect balance sheet items only.
- (g) In the statement of changes in equity (partial), or in the notes to financial statements, the following movement schedule for retained profit is shown:

	\$'000
Beginning retained profit	—
Add profit for the year	230.1
Less dividend	70
Ending retained profit	<u>160.1</u>

PROBLEM 3.6

Refer to the case in Problem 3.4. Prepare the consolidated statement of comprehensive income, consolidated balance sheet, and consolidated statement of changes in equity (showing the group's retained profit only) for P Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (S)	90	
	Dr Beginning retained profit (S)	90	
	Cr Investment in S Ltd		180
	(to eliminate investment account)		
(ii)	Dr Machinery	60	
	Cr Accumulated depreciation		50
	Cr Beginning retained profit (P)		10
	(to eliminate unrealized intragroup loss)		
(iii)	Dr Beginning retained profit (P)	4	
	Dr Depreciation expenses (P)	2	
	Cr Accumulated depreciation		6
	(to record gradual realization of intragroup loss)		
(iv)	Dr Sales	100	
	Cr Cost of sales		100
	(to eliminate intragroup sales)		
(v)	Dr Creditors	10	
	Cr Debtors		10
	(to eliminate intragroup account balances)		
(vi)	Dr Beginning retained profit (S)	2	
	Cr Cost of sales (S)		2
	(to record unrealized profit in opening stock)		
(vii)	Dr Cost of sales (S)	3	
	Cr Closing stock (CBS)		3
	(to eliminate unrealized profit in closing stock)		
(viii)	Dr Non-controlling interest (CSCI) ($10\% \times [70 + 2 - 3]$)	6.9	
	Cr Non-controlling interest (CBS)		6.9
	(to record non-controlling interest in profit of S Ltd)		
(ix)	Dr Share capital (S)	10	
	Dr Beginning retained profit (S) ($10\% \times [150 - 2]$)	14.8	
	Cr Non-controlling interest (CBS)		24.8
	(to record non-controlling interest in other shareholders' equity of S Ltd)		

(b) Consolidation worksheet

	P Ltd	S Ltd	Adjustments		Consolidated balances
	\$'000	\$'000	Dr	Cr	
Sales	800	800	iv 100		1,200
Cost of sales	400	300	vii 3	iv 100	
				vi 2	601
Gross profit	400	200			599
Operating expenses					
Selling	60	70			130
Administrative	50	20	iii 2		72
Others	40	10			50
Profit before tax	250	100			347
Tax	80	30			110
Profit after tax	170	70			237
Non-controlling interest	—	—	vii 6.9		6.9
Profit for shareholders	—	—			230.1
Dividend	70	—			70
Beginning retained profit	160	150	i 9 iii 4 vi 2 ix 14.8	ii 10	209.2
Ending retained profit	260	220			369.3
Land	100	150			250
Machinery	400	100	ii 60		560
Accumulated depreciation	(100)	(80)		i 50 iii 6	(236)
Investment	180	—		i 180	—
Stock	200	100		vii 3	297
Debtors	120	100		v 10	210
Bank	—	30			30
Share capital	400	100	i 90 ix 10		400
Retained profit	260	220			369.3
Creditors	140	80	v 10		210
Bank overdraft	100	—			100
Non-controlling interest	—	—		vii 6.9 ix 24.8	31.7

(c) Consolidated financial statements

P Ltd and its subsidiary Consolidated statement of comprehensive income For year ended 31 December 20X8	
	\$'000
Sales	1,200
Less cost of sales	<u>601</u>
Gross profit	599
Less operating expenses	
Selling	130
Administrative	72
Others	<u>50</u>
Profit before tax	347
Less tax	<u>110</u>
Profit after tax	237
Other comprehensive income	<u>—</u>
Total comprehensive income	<u><u>237</u></u>
Attributable to:	
Shareholders of the parent	230.1
Non-controlling interest	<u>6.9</u>
	<u><u>237</u></u>
P Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Land	250
Machinery, at cost	560
Accumulated depreciation	<u>(236)</u>
Stock	297
Debtors	210
Bank	<u>30</u>
	<u><u>1,111</u></u>
Share capital	400
Retained profit	369.3
Non-controlling interest	<u>31.7</u>
Creditors	210
Bank overdraft	<u>100</u>
	<u><u>1,111</u></u>

P Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	209.2
Add profit for the year	230.1
Less dividend	70
Ending retained profit	369.3

Notes to the solution

- (a) In this case, losses arise from the intragroup sale of machinery from P Ltd to S Ltd. Consolidation journal entry (ii) eliminates the initial unrealized intragroup loss of \$10,000. Consolidation journal entry (iii) records the gradual realization of the intragroup loss through the depreciation process. The initial unrealized intragroup loss of \$10,000 is going to be gradually realized as and when the machinery is depreciated over the five years. The annual realization of \$2,000 of the inter-company loss for 20X6 and 20X7 is charged against the beginning retained profit, whereas that for 20X8 is charged to the current year's profit. Note that the initial unrealized intragroup loss and the subsequent realization of the intragroup loss are charged or credited, for the purpose of determining non-controlling interest, to the profit of P Ltd, the selling company.
- (b) The depreciation expenses on machinery are classified as 'administrative expenses' in this case, on the assumption that the machinery is wholly used for administrative purposes. In the disclosure, the depreciation expenses will be increased by \$2,000 (consolidation journal entry [iii]).
- (c) Note that there is no adjustment on the intragroup sale of land, because there is no intragroup profit or loss arising therefrom.
- (d) Note that non-controlling interest is affected by unrealized intragroup profit arising from upstream sales only. Non-controlling interest is affected by the inter-company profit in the sale of stock where S Ltd is the selling company. Non-controlling interest is not affected by the intragroup loss on the sale of machinery where P Ltd is the selling company.
- (e) Non-controlling interest in the consolidated balance sheet of \$31,700 can be proved as $10\% \times (\$100,000 + \$220,000 - \$3,000)$. (S Ltd's net asset of \$320,000 [$\$100,000 + \$220,000$] as shown in the balance sheet is decreased by the unrealized intragroup profit of \$3,000 in the closing stock. Note that the intragroup profit in the opening stock has been realized as at 31 December 20X8.)
- (f) The group's retained profit of \$369,300 can be proved by adding the parent's adjusted retained profit of \$264,000 ($\$260,000 + \text{unrealized loss on machinery } \$10,000 - \text{realization of loss on machinery } \$6,000$) to the group's share of S Ltd's adjusted post-acquisition retained profit of \$105,300 ($90\% \times [\$220,000 - \$100,000 - \$3,000]$).

- (g) The group's profit of \$230,100 can be proved by adding the parent's adjusted profit of \$168,000 (\$170,000 – realization of loss on machinery of \$2,000) to the group's share of S Ltd's adjusted profit of \$62,100 ($90\% \times [\$70,000 + \text{realized profit in opening stock of } \$2,000 - \text{unrealized profit in the closing stock of } \$3,000]$).
- (h) In the consolidated balance sheet, the bank account and bank overdraft account should not be off-set against each other, in accordance with the provisions of FRS 32 *Financial Instruments: Presentation and Disclosure*.

CHAPTER
C H A P T E R

4

CHANGES IN SHAREHOLDING INTEREST AND OTHER SPECIFIC ISSUES

4.1 Introduction

In the previous chapters, assumptions were made that the parent acquires controlling interest in a subsidiary in a single transaction, at the beginning or end of an accounting period, and that there is no change in the parent's ownership interest in the subsequent periods.

In practice, it is an exception rather than the norm, that the parent acquires controlling interest in the subsidiary in a single transaction, and at the beginning or end of an accounting period. It is also not uncommon in practice for the parent's shareholding interest in the subsidiary to change as a consequence of the parent acquiring additional shares or disposing of shares in the subsidiary, or the subsidiary issuing additional shares. These issues will be discussed in this chapter.

Specifically, consolidation issues arising from changes in shareholding interests will be discussed in Section 4.2 and consolidation issues relating to specific issues such as the acquisition of a subsidiary during the year, loss-making subsidiaries, subsidiary with preferences share capital and bonds, and reverse acquisition will be discussed in Section 4.3.

4.2 Changes in shareholding interest

In this section, four possible scenarios in changes in shareholding are discussed:

- Step acquisition;
- Increase in shareholding interest in a subsidiary;
- Decrease in shareholding interest in a subsidiary without loss of control; and
- Decrease in shareholding interest in a subsidiary with loss of control.

Step acquisition is an acquisition where a parent acquires control of a subsidiary in a series of share acquisition transactions. The consolidation issues arising from step acquisition are provided for in FRS 103, which is effective prospectively in business combinations for which the acquisition date is on or after the beginning of annual periods beginning on or after 1 July 2009 (earlier application is permitted), and are discussed and illustrated in Section 4.2.1.

Where a parent acquires additional shares in its subsidiary, this is not step acquisition. The accounting treatments for an increase in shareholding interest in a subsidiary are provided for in FRS 110. The same accounting treatment was also provided in FRS 27 (2009). This accounting treatment is therefore effective prospectively for annual periods beginning on or after 1 July 2009. These are discussed and illustrated in Section 4.2.2.

A parent's shareholding interest in a subsidiary may decrease either as a result of disposal of shares of the subsidiary or issuance of new shares by the subsidiary to non-controlling shareholders. Decrease in shareholding in a subsidiary may result in no loss of control (a subsidiary is still a subsidiary) or loss of control (a subsidiary becomes an associate, a mere investment, or nothing). The accounting treatments for

decrease in shareholding interest in a subsidiary, with and without loss of control, are provided for in FRS 110. The same accounting treatments were also provided for in FRS 27 (2009). These accounting treatments are therefore effective prospectively for annual periods beginning on or after 1 July 2009. Decrease in shareholding interest in a subsidiary without loss of control is discussed and illustrated in Section 4.2.3, and decrease in shareholding interest in a subsidiary with loss of control is discussed and illustrated in Section 4.2.4.

4.2.1 Step acquisition

Step acquisition is an acquisition where a parent acquires control of a subsidiary in a series of share acquisition transactions. This is also referred to as a business combination achieved in stages, or piecemeal acquisition.

For step acquisition, FRS 103 requires the acquirer to re-measure its previously held shareholding at the acquisition-date fair value and recognize the resulting gain or loss, if any, in profit or loss (paragraph 42). This should be done as if the previously held shareholdings are disposed of and reacquired on the date when control of the subsidiary is achieved.

Further, FRS 103 requires the goodwill to be calculated as if all the shareholdings were acquired at the date when control is achieved.

For example, assume that A Ltd acquires 10% of B Ltd (which has a share capital of 100 million shares) at \$2 per share for a total cost of \$20 million on 10 January 20X2, acquires an additional 20% of B Ltd at \$3 per share for a total cost of \$60 million on 15 May 20X2, and acquires an additional 40% of B Ltd at \$5 per share for a total cost of \$200 million on 12 December 20X2.

In this case, for the purposes of the consolidated financial statements, all the 70% shareholdings are deemed to be acquired on 12 December 20X2 at \$5 per share for a total cost of \$350 million. Consequently, a consolidation adjustment must be made to revalue the initial 10% and 20% investments to \$5 per share, resulting in an increase in cost of investment of \$70 million ($30 \text{ million} \times \$5 - [\$20 \text{ million} + \$60 \text{ million}]$), and a gain of \$70 million, as if the 10% and 20% initial shareholdings were sold and reacquired on 12 December 20X2 at \$5 per share. The goodwill will be calculated as if the cost of investment is \$350 million ($70 \text{ million} \times \5).

The following example illustrates the various scenarios.

Example 4.1

Scenario I

In October 20X1, A Ltd purchases 10% of the shares in B Ltd (which has a share capital comprising 100 million shares) at a cost of \$10 million, and classifies the investment as 'held for trading' under FRS 39. On its accounting year-end on 31 December 20X1, when the market value of the shares is \$11 million, A Ltd re-measures the investment to \$11 million and recognizes a profit of \$1 million in its 20X1 income statement, in accordance with FRS 39.

On 1 April 20X2, A Ltd acquires control of B Ltd through the purchase of an additional 60% of the shares in B Ltd for a cash consideration of \$80 million. At this date, the market value of the original 10% shares in B Ltd is \$13 million.

Under FRS 103, A Ltd, at its group level, has to:

- (a) re-measure its 10% shareholding in B Ltd to \$13 million on 1 April 20X2 and recognize a profit of \$2 million in its 20X2 consolidated income statement, as if the initial 10% shareholding was sold and reacquired on 1 April 20X2. The consolidation adjustments are as follows:

Dr Cash	13
Cr Investment	11
Cr Gain	2
(assumed sale)	

Dr Investment	13
Cr Cash	13
(assumed reacquisition)	

or simply combined as follows:

Dr Investment	2
Cr Gain	2
(assumed sale and reacquisition)	

- (b) calculate its goodwill as follows (assuming the fair value of the net identifiable assets of B Ltd on 1 April 20X2 is \$100 million, and NCI is measured on a 'fair value of net identifiable assets' basis):

	\$'million
Cost of investment (13 + 80)	93
Fair value of identifiable net assets ($70\% \times 100$)	70
Goodwill	23
	<u><u>=</u></u>

Alternatively, the goodwill may be computed as follows:

	\$'million
Fair value of consideration	80
Previously held investment	13
Non-controlling interest	30
	<u><u>=</u></u>
Fair value of net identifiable assets acquired	123
Goodwill	23
	<u><u>=</u></u>

Scenario 2

In October 20X1, C Ltd purchases 10% of the shares in D Ltd (which has a share capital comprising 100 million shares) at a cost of \$10 million, and classifies the investment as 'available-for-sale' under FRS 39. On its accounting year-ends on 31 December 20X1 and 20X2, when the market values of the shares are respectively \$11 million and \$13 million, C Ltd re-measures the investment and recognizes in its fair value reserve \$1 million in 20X1 and another \$2 million in 20X2, in accordance with FRS 39.

On 1 April 20X3, C Ltd acquires control of D Ltd through the purchase of an additional 60% of the shares in D Ltd for a cash consideration of \$90 million. At this date, the market value of the original 10% shares in D Ltd is \$14 million.

Under FRS 103, C Ltd, at its group level, has to:

- (a) re-measure its 10% shareholding in D Ltd to \$14 million on 1 April 20X3 and recognize a total profit of \$4 million in its consolidated income statement, by recognizing the \$1 million profit and reversing the \$3 million from fair value reserve to profit, as if the initial 10% shareholding was sold and reacquired on 1 April 20X3. The consolidation adjustments are as follows:

Dr Cash	14
Dr Fair value reserve	3
Cr Investment	13
Cr Gain	4
(assumed sale)	
Dr Investment	14
Cr Cash	14
(assumed reacquisition)	

or simply as follows:

Dr Investment	1
Dr Fair value reserve	3
Cr Gain	4
(assumed sale and reacquisition)	

- (b) calculate its goodwill as follows (assuming the fair value of the identifiable net assets of D Ltd on 1 April 20X3 is \$110 million, and NCI is measured on a 'fair value of identifiable net assets' basis):

	\$'million
Cost of investment (14 + 90)	104
Fair value of identifiable net assets (70% × 110)	77
Goodwill	<u>27</u>

Alternatively, the goodwill may be computed as follows:

	\$'million
Fair value of consideration	90
Previously held investment	14
Non-controlling interest	33
	<hr/>
	137
Fair value of identifiable net assets acquired	110
	<hr/>
Goodwill	27
	<hr/>

Scenario 3

In October 20X1, E Ltd purchases 30% of the shares in F Ltd (which has a share capital comprising 100 million shares) at a cost of \$30 million, and classifies the investment as 'investment in associate' under FRS 28 (assuming E Ltd has subsidiaries and presents consolidated financial statements).

From October 20X1 to 31 December 20X2, F Ltd's retained profit increases by \$10 million, and E Ltd has therefore increased its 'investment in associate' by \$3 million in the consolidated financial statements.

On 1 January 20X3, E Ltd acquires control of F Ltd through the purchase of an additional 25% of the shares in F Ltd for a cash consideration of \$35 million. At this date, the market value of the 30% shares in F Ltd purchased in 20X1 is \$40 million.

Under FRS 103, E Ltd, at its group level, has to:

- (a) re-measure its 30% shareholding in F Ltd firstly from \$30 million to \$33 million under equity accounting, and secondly from \$33 million to \$40 million and recognize a profit of \$7 million as if the investment in the associate is sold and reacquired on 1 January 20X3. The consolidation adjustments are as follows:

Dr Investment	3
Cr Beginning retained profit	3
(equity accounting)	
Dr Cash	40
Cr Investment	33
Cr Gain	7
(assumed sale)	
Dr Investment	40
Cr Cash	40
(assumed reacquisition)	

The last two adjustments may be combined as follows:

Dr Investment	7
Cr Gain	7
(assumed sale and reacquisition)	

- (b) calculate its goodwill as follows (assuming the fair value of the net identifiable assets of F Ltd on 1 January 20X3 is \$100 million, and NCI is measured on a 'fair value of net identifiable assets' basis):

	\$'million
Cost of investment (40 + 35)	75
Fair value of identifiable net assets ($55\% \times 100$)	55
Goodwill	<u>20</u>

Alternatively, the goodwill may be computed as follows:

	\$'million
Fair value of consideration	35
Previously held investment	40
Non-controlling interest	<u>45</u>
	120
Fair value of identifiable net assets acquired	<u>100</u>
Goodwill	<u>20</u>



The following example is a full illustration of the consolidation process for a case of step acquisition.

Example 4.2



On 1 January 20X1, PAR Ltd acquires a 20% interest in SUB Ltd for a cash consideration of \$5 million. The interest in SUB Ltd is accounted for as 'investment in associate' carried at cost in PAR Ltd's books under FRS 28 (assuming PAR Ltd has subsidiaries and presents consolidated financial statements). At this date, SUB Ltd's balance sheet comprises share

capital of \$10 million (comprising 10 million ordinary shares) and retained profit of \$10 million, and land of \$10 million (the market value of which is \$15 million) and cash of \$10 million.

On 31 December 20X3, when SUB Ltd's shares are traded at \$6 per share, PAR Ltd acquires control of SUB Ltd through the purchase of an additional 50% interest in SUB Ltd for a cash consideration of \$30 million. At this date, SUB Ltd's balance sheet comprises share capital of \$10 million and retained profit of \$20 million, and land of \$10 million (the market value of which is \$30 million) and cash of \$20 million. Also, at this date, the fair value of PAR Ltd's original 20% investment in SUB Ltd is \$12 million (2 million shares × \$6).

On 31 December 20X3, PAR Ltd's balance sheet comprises share capital of \$50 million and retained profit of \$25 million, and investment in SUB Ltd of \$35 million and cash of \$40 million.

In the preparation of the 20X3 consolidated financial statements for the PAR Ltd group, the following consolidation adjustments (in relation to the consolidated balance sheet) are required in relation to the step acquisition of SUB Ltd (assuming the non-controlling interest is measured based on the fair value of the net identifiable assets of the subsidiary):

	\$'million	\$'million
Dr Investment in SUB Ltd	2	
Cr Retained profit (20% × 10)		2
(to equity account for post-acquisition profit)		
Dr Investment in SUB Ltd	5	
Cr Gain on assumed sale		5
(assumed sale and reacquisition)		
Dr Share capital (70% × 10)	7	
Dr Retained profit (70% × 20)	14	
Dr Land (70% × 20)	14	
Dr Goodwill	7	
Cr Investment in SUB Ltd		42
(to eliminate investment in SUB Ltd)		
Dr Share capital (30% × 10)	3	
Dr Retained profit (30% × 20)	6	
Dr Land (30% × 20)	6	
Cr Non-controlling interest		15
(to record non-controlling interest)		

The consolidated balance sheet of PAR Ltd as at 31 December 20X3 is as follows:

	\$'million
Share capital	50
Retained profit ($25 + 2 + 5$)	<u>32</u>
	82
Non-controlling interest	<u>15</u>
	97
Goodwill	7
Land	30
Cash	<u>60</u>
	97
	<u><u>=</u></u>

Notes to the solution

- (a) This is a case of step acquisition. As required by FRS 103, the previously held investment has to be assumed to be sold and reacquired on the date when the parent gains control of the subsidiary. Thus, the cost of investment is increased by \$5 million and a gain of \$5 million is recognized.
- (b) In the case of step acquisition, FRS 103 also requires that there should be only one goodwill, which is calculated as follows (assuming the non-controlling interest is measured based on fair value of net identifiable assets of subsidiary):

	\$'000,000
Cost of the 50% shareholding	30
Non-controlling interest ($30\% \times 50$)	15
Acquisition-date fair value of previously held shares	<u>12</u>
Total	57
Less acquisition-date fair value of identifiable net assets of subsidiary ...	<u>50</u>
Goodwill	7
	<u><u>=</u></u>



4.2.2 Increase in shareholding interest in a subsidiary

Section 4.2.1 above deals with cases where the parent makes a number of share-purchase transactions before acquiring control over the investee. This section deals with cases where the parent, after having acquired control over the subsidiary, acquires additional shares in the subsidiary.

Where the parent acquires additional shares in the subsidiary after control has been achieved, the provisions of FRS 110 should be noted.

Previously, Singapore FRSs did not provide for such cases. In practice, what was commonly done was to simply keep the different tranches of share acquisition separate, and calculate the pre-acquisition reserve, fair value adjustments, and goodwill separately for each tranche.

Now, FRS 110 provides, in paragraph 23, that acquisition of additional shares in a subsidiary should be accounted for as equity transactions, (i.e., transactions with owners in their capacity as owners). Therefore, in such transactions, there are no gains/losses, no change in fair value adjustment, and no change in goodwill.

It may be noted that under FRS 110 (which adopts the 'full consolidation' principle), the additional acquisition of shares in a subsidiary will have no impact on all the consolidated accounts (except for the two accounts discussed below). For example, if the parent has land of \$10 million and the subsidiary has land of \$10 million, the land in the consolidated balance sheet is \$20 million, regardless of whether the parent has 60%, 80%, or 100% shareholding interest in the subsidiary. The additional acquisition of shares will merely affect two accounts, namely, (a) non-controlling interest, and (b) reduction in cash or other assets equal to the fair value of the consideration given in the share acquisition. FRS 110 provides that the difference between the change in non-controlling interest balance and the fair value of the consideration given for the share acquisition should be recognized directly in equity that is attributed to the owners of the parent (paragraph B96).

It may also be noted that, under FRS 110 (where goodwill is not accounted for in accordance with the 'full consolidation' principle), the additional acquisition of shares in a subsidiary will affect the goodwill figure. For example, when the parent acquires 60% of the subsidiary, only 60% of the subsidiary's goodwill will be accounted for, and when the parent acquires 80% of the subsidiary, 80% of the subsidiary's goodwill will be accounted for (assuming the non-controlling interest is measured based on its share of the fair value of the net identifiable assets). Thus, in a case where the parent acquires additional shares in its subsidiary, the goodwill will change. However, as mentioned above, FRS 110 requires that in such a case, goodwill should not change. Thus, after additional shares are acquired, a consolidation adjustment must be made to the goodwill figure to reinstate it to its original figure.

The adjustment for the goodwill figure (as discussed in the above paragraph) and the adjustment for the difference between the change in non-controlling interest and the purchase consideration (as discussed in the previous paragraph) are of the same

quantum. This must be so, and may be illustrated with a simple example. Assume that the net asset backing per share of a subsidiary is \$5.00, and the parent pays \$7.00 to acquire an additional share in the subsidiary. In this case, the purchase consideration is \$7.00 and non-controlling interest will decrease by \$5.00. Thus, the adjustment to the equity (required under paragraph B96) is \$2.00. In this case, the goodwill will also increase by \$2.00 (cost of \$7.00 – fair value of net asset acquired of \$5.00). It may be noted that the quantum for the two adjustments is the same. Thus, where the parent acquires additional shares in a subsidiary, the following consolidation adjustment is required: Dr Goodwill and Cr Capital reserve, or Dr Capital reserve and Cr Goodwill.

As mentioned earlier, this new treatment for additional share acquisition in a subsidiary should be applied prospectively for annual periods beginning on or after 1 July 2009, and only to transactions occurring after that date.

Following is a full illustration of the consolidation process for a case of acquisition of additional shares in a subsidiary.

Example 4.3

The 31 December 20X7 balance sheets of C Ltd and its 70%-owned subsidiary, D Ltd, are as follows:

	C Ltd	D Ltd
	\$'000	\$'000
Investment, at cost		
70,000 shares in D Ltd	200	—
Land	—	100
Other assets	800	500
	<u>1,000</u>	<u>600</u>
Share capital	400	100
Retained profits	400	300
Liabilities	200	200
	<u>1,000</u>	<u>600</u>

C Ltd acquires its investment in D Ltd (the share capital of which comprises 100,000 ordinary shares) in January 20X5, when D Ltd's net assets are represented by share capital of \$100,000 and retained profit of \$100,000. On this date, D Ltd's land, which was acquired in 20X1, is deemed to have a fair value of \$150,000. The fair value of land remains at \$150,000 as at 31 December 20X7 and 31 December 20X8.

On 1 January 20X8, C Ltd acquires 10,000 of D Ltd's shares for a cash consideration of \$40,000. The financial statements of the two companies for the year 20X8 are as follows:

(a) Balance sheets as at 31 December 20X8

	C Ltd	D Ltd
	\$'000	\$'000
Investment, at cost		
80,000 shares in D Ltd	240	—
Land	—	100
Other assets	960	720
	<u>1,200</u>	<u>820</u>
Share capital	400	100
Retained profits	550	420
Liabilities	250	300
	<u>1,200</u>	<u>820</u>

(b) Statement of comprehensive income for the year ended 31 December 20X8

	C Ltd	D Ltd
	\$'000	\$'000
Revenue	550	300
Operating expenses	350	120
Profit before tax	200	180
Taxation	50	60
Profit after tax	150	120
Other comprehensive income	—	—
Total comprehensive income	<u>150</u>	<u>120</u>

(c) Statement of changes in equity (partial) for the year ended 31 December 20X8

	C Ltd	D Ltd
	\$'000	\$'000
Beginning retained profits	400	300
Profit for the year	150	120
Ending retained profits	<u>550</u>	<u>420</u>

Required

Prepare for C Ltd and its subsidiary the 20X7 consolidated balance sheet and the 20X8 consolidated balance sheet, consolidated statement of comprehensive income, and consolidated statement of changes in equity (partial).

Solution**Consolidation for 20X7**

(a) Consolidation journal entries

Dr Share capital	70,000	$100 \times 70\%$
Dr Retained profit	70,000	$100 \times 70\%$
Dr Land	35,000	$(100 - 100) \times 70\%$
Dr Goodwill on consolidation	25,000	$200 - 175$
Cr Investment	200,000	$B15 -$
(elimination of investment account)		
Dr Share capital	30,000	$100 \times 30\%$
Dr Retained profit	90,000	$300 \times 30\%$
Dr Land	15,000	$50 \times 30\%$
Cr Non-controlling interest	135,000	
(Non-controlling interest)		

(b) Consolidated balance sheet

C Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X7	
	\$'000
Goodwill on consolidation	25
Land	150
Other assets	<u>1,300</u>
	<u>1,475</u>
Share capital	400
Retained profit	540
Non-controlling interest	135
Liabilities	<u>400</u>
	<u>1,475</u>

Consolidation for 20X8

(a) Consolidation journal entries

(i) Dr Share capital	70,000	
Dr Beginning retained profit	70,000	
Dr Land	35,000	
Dr Goodwill on consolidation	25,000	
Cr Investment	200,000	
(elimination of investment account – 70%)		

(ii)	Dr Share capital	10,000	
	Dr Beginning retained profit	30,000	
	Dr Land	5,000	
	Cr Negative goodwill	5,000	
	Cr Investment	40,000	
	(elimination of investment account – 10%)		

Dr Land "50
 Dr cap 100
 Dr Inv 50
 Cr Inv 50
 Cr cap 100
 Cr Inv 50

(iii)	Dr Negative goodwill	5,000	
	Cr Capital reserve	5,000	
	(effect of increase in equity interest)		

20%

(iv)	Dr Non-controlling interest (CSCI)	24,000	
	Cr Non-controlling interest (CBS)		24,000
	(non-controlling interest in profit)		

20%

(v)	Dr Share capital	20,000	
	Dr Beginning retained profit	60,000	
	Dr Land	10,000	
	Cr Non-controlling interest (CBS)		90,000
	(non-controlling interest)		

50% + 70%
 70% + 70%
 50% + 70%

(b) Consolidated accounts

C Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Revenue	850
Operating expenses	470
	<hr/>
Profit before tax	380
Tax	110
	<hr/>
Profit after tax	270
Other comprehensive income	–
	<hr/>
Total comprehensive income	270
	<hr/>
Profit attributable to:	
Owners of the parent	246
Non-controlling interest	24
	<hr/>
	270
	<hr/>

C Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Retained profits	
Beginning balance	540
Profit for the year	246
Ending balance	786
Capital reserve	
Beginning balance	-
Increase in equity interest during the year	5
Ending balance	5

C Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Goodwill on consolidation	25
Land	150
Other assets	1,680
	1,855
Share capital	400
Capital reserve	5
Retained profits	786
	1,191
Non-controlling interest	114
	1,305
Liabilities	550
	1,855

Notes to the solution

- (a) For 20X8 consolidation, CJE (i) is to eliminate the initial 70% investment against D Ltd's share capital and pre-acquisition reserves as in January 20X5, and CJE (ii) is to eliminate the additional 10% investment against D Ltd's share capital and pre-acquisition reserves as at 1 January 20X8. CJE (i) gives rise to a goodwill of \$25,000, and CJE (ii) gives rise to a negative goodwill of \$5,000. However, FRS 110 requires that there should not be any change to the goodwill as a result of additional share acquisition. Thus, in CJE (iii) there is Dr Negative goodwill of \$5,000, so that the requirement of FRS 110 is met.

- (b) CJE (iii) for 20X8 consolidation is to adjust for the effect of acquisition of additional shares. The debit entry 'Negative goodwill \$5,000' is as explained in Note (a) above. The credit entry 'Capital reserve \$5,000' is to account for the difference between the cost of share acquisition of \$40,000 and the changes in non-controlling interest of \$45,000 (as at 31 December 20X7, the non-controlling interest was \$135,000 ($30\% \times [\$100,000 + \$300,000 + \$50,000]$]), but as at 1 January 20X8, when C Ltd acquired additional shares, the non-controlling interest is reduced to \$90,000 ($20\% \times [\$100,000 + \$300,000 + \$50,000]$)).
- (c) CJE (iv) and (v) are to account for non-controlling interest, which now holds 20% interest in D Ltd. The non-controlling interest (measured on a 'fair value of net identifiable assets of subsidiary' basis) of \$114,000 as shown in the 20X8 consolidated balance sheet may be proved as 20% of fair value of D Ltd's net identifiable assets as at 31 December 20X8 ($20\% \times [\$520,000 + \$50,000] = \$114,000$). The non-controlling interest of \$24,000 in the 20X8 consolidated statement of comprehensive income may be proved as 20% of D Ltd's after-tax profit for 20X8 ($20\% \times \$120,000 = \$24,000$).
- (d) Note that the group's beginning retained profit for 20X8 is, as it should be, equal to the group's ending retained profit for 20X7. The figure of \$540,000 may be proved as follows: C Ltd's retained profit of \$400,000 + the group's share of D Ltd's post-acquisition retained profit of \$140,000 ($70\% \times [\$300,000 - \$100,000]$).
- (e) The group profit of \$246,000 for 20X8 may be proved as follows: C Ltd's after-tax profit of \$150,000 + the group's interest, based on 80,000 shares, in D Ltd's after-tax profit of \$96,000 ($\$120,000 \times 80\%$).
- (f) The group's retained profit as at 31 December 20X8 of \$786,000 may be proved as follows: C Ltd's retained profit of \$550,000 + the group's interest in D Ltd's post-acquisition retained profit of \$236,000 ($70\% \times [\$300,000 - \$100,000] + 80\% \times \$120,000$).



4.2.3 Decrease in shareholding interest in a subsidiary without loss of control

Where the parent disposes of part of its shareholding in a subsidiary, it may consequently retain control of the subsidiary or lose control of the subsidiary, depending mainly on the quantum of the share disposal. This section deals with decrease in shareholding interest in a subsidiary without loss of control; Section 4.2.4 will deal with decrease in shareholding interest in a subsidiary with loss of control. For cases where the parent's shareholding in the subsidiary is decreased without loss of control of the subsidiary, the provisions of FRS 110 should be noted.

Previously, Singapore FRSs did not provide for such cases. In practice, a major consolidation problem in the preparation of consolidated financial statements is the determination of 'profit or loss on disposal of shares in subsidiary'. The amount of

profit or loss on disposal of shares in subsidiary to be reported in the consolidated financial statements will, in most cases, be different from that reported in the parent's profit and loss account.

Now, FRS 110 provides, in paragraph 23, that decrease in shareholding in a subsidiary without loss of control should be accounted for as equity transactions (i.e., transactions with owners in their capacity as owners). Therefore, in such transactions, there are no gains/losses, no change in fair value adjustment, and no change in goodwill.

It may be noted that, under FRS 110 (which adopts the 'full consolidation' principle), the disposal of shares in a subsidiary without loss of control will have no impact on all the consolidated accounts (except for the two accounts discussed below). For example, if the parent has land of \$10 million and the subsidiary has land of \$10 million, the land in the consolidated balance sheet is \$20 million, regardless of whether the parent has 90% or 60% shareholding interest in the subsidiary. The disposal of shares will affect merely two accounts, namely, (a) non-controlling interest, and (b) increase in cash or other assets equal to the fair value of the consideration received in the share disposal. FRS 110 provides that the difference between the change in non-controlling interest balance and the fair value of the consideration received for the share disposal should be recognized directly in equity that is attributed to the owners of the parent (paragraph B96).

It may also be noted that, under FRS 110 (where goodwill is not accounted for in accordance with the 'full consolidation' principle), the disposal of shares in a subsidiary will affect the goodwill figure. For example, when the parent acquires 80% of the subsidiary, 80% of the subsidiary's goodwill will be accounted for, but when the parent disposes of some shareholding and retains 60% in the subsidiary, only 60% of the subsidiary's goodwill will be accounted for (assuming the non-controlling interest is measured based on its share of the fair value of the net identifiable assets). Thus, in a case where the parent disposes of shares in its subsidiary without loss of control, the goodwill will change. However, as mentioned above, FRS 110 requires that in such a case, goodwill should not change. Thus, a consolidation adjustment must be made to reinstate the goodwill figure.

Additionally, when the parent disposes of shares in a subsidiary, it will recognize a gain/loss arising therefrom. However, as mentioned above, FRS 110 requires that in such a case, there should be no gain/loss on disposal in the consolidated financial statements. Thus, a consolidation adjustment should be made to write off the gain/loss recognized by the parent.

Further, after the disposal of shares without loss of control, consolidation will be done based on the reduced shareholding percentage. Thus, an adjustment should be made to the group's beginning retained profit so that the group's beginning retained profit will be equal to the group's ending retained profit prior to the disposal of the shares.

Thus, there are four consolidation adjustments to be made in a case where parent's shareholding in a subsidiary decreases but without loss of control, namely (a) capital

reserve (for the difference between change in non-controlling interest and the sales proceeds), (b) goodwill (to reinstate the goodwill back to its original figure before the decrease in shareholding), (c) gain/loss on disposal of shares (as recognized in the parent's books), and (d) beginning retained profit (so that the groups' beginning retained profit will be equal to its ending retained profit in the prior year). All these adjustments will be dealt with in a single consolidation journal entry.

As mentioned earlier, the above-discussed new treatment for decrease in shareholding without loss of control should be applied prospectively for annual periods beginning on or after 1 July 2009, and only to transactions occurring after that date.

A parent's shareholding interest in the subsidiary may decrease because (a) the parent disposes of part of its shareholding in the subsidiary, or (b) the subsidiary issues new shares and the parent is not allotted its proportionate shares. The case where the parent's shareholding interest in the subsidiary decreases because the former disposes of shares (disposal of shares) is first discussed, followed by the case where the parent's shareholding interest in the subsidiary decreases due to new shares being issued by the subsidiary (deemed disposal).

4.2.3.1 Decrease in shareholding interest due to disposal of shares

As mentioned above, FRS 110 provides that disposal of shares in a subsidiary without loss of control should be accounted for as equity transactions (paragraph 23). All the four consolidation adjustments discussed above will be necessary.

Example 4.4 is a full illustration of the consolidation process for a case of disposal of shares in a subsidiary with no loss of control.

Example 4.4

The 31 December 20X7 balance sheets of K Ltd and its wholly owned subsidiary, L Ltd, are as follows:

	K Ltd	L Ltd
	\$'000	\$'000
Investment, at cost		
100,000 shares in L Ltd	300	-
Land	-	100
Other assets	700	500
	<u>1,000</u>	<u>600</u>
Share capital	400	100
Retained profits	400	300
Liabilities	200	200
	<u>1,000</u>	<u>600</u>

K Ltd acquires its investment in L Ltd (the share capital of which comprises 100,000 ordinary shares) in January 20X5, when L Ltd's net assets are represented by share capital of \$100,000 and retained profit of \$100,000. On this date, L Ltd's land, which was acquired in 20X1, is deemed to have a fair value of \$150,000.

On 1 January 20X8, K Ltd sold 20,000 of L Ltd's shares for a cash consideration of \$110,000. The financial statements of the two companies for the year 20X8 are as follows:

(a) Balance sheets as at 31 December 20X8

	K Ltd	L Ltd
	\$'000	\$'000
Investment, at cost		
80,000 shares in L Ltd	240	—
Land	—	100
Other assets	960	720
	<hr/>	<hr/>
	1,200	820
	<hr/>	<hr/>
Share capital	400	100
Retained profits	550	420
Liabilities	250	300
	<hr/>	<hr/>
	1,200	820
	<hr/>	<hr/>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	K Ltd	L Ltd
	\$'000	\$'000
Revenue	500	300
Operating expenses	350	120
Profit on sales of shares	50	—
	<hr/>	<hr/>
Profit before tax	200	180
Taxation	50	60
	<hr/>	<hr/>
Profit after tax	150	120
Other comprehensive income	—	—
	<hr/>	<hr/>
Total comprehensive income	150	120
	<hr/>	<hr/>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	K Ltd	L Ltd
	\$'000	\$'000
Beginning retained profits	400	300
Profit for the year	150	120
	<hr/>	<hr/>
Ending retained profits	550	420
	<hr/>	<hr/>

Required

Prepare for K Ltd and its subsidiary the 20X7 consolidated balance sheet and the 20X8 consolidated balance sheet, consolidated statement of comprehensive income, and consolidated statement of changes in equity (partial).

Solution**Consolidation for 20X7**

(a) Consolidation journal entries

Dr Share capital	100,000
Dr Retained profit	100,000
Dr Land	50,000
Dr Goodwill on consolidation	50,000
Cr Investment	300,000
(elimination of investment account)	

(b) Consolidated balance sheet

K Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X7	
	\$'000
Goodwill on consolidation	50
Land	150
Other assets	1,200
	<u>1,400</u>
Share capital	400
Retained profit	600
Liabilities	400
	<u>1,400</u>

Consolidation for 20X8

(a) Consolidation journal entries

(i)	Dr Share capital	80,000
	Dr Beginning retained profit	80,000
	Dr Land	40,000
	Dr Goodwill on consolidation	40,000
	Cr Investment	240,000
	(elimination of investment account)	
(ii)	Dr Profit on sale of shares	50,000
	Dr Goodwill on consolidation	10,000
	Cr Beginning retained profit	40,000
	Cr Capital reserve	20,000
	(disposal of shares in subsidiary)	

(iii)	Dr Non-controlling interest (CSCI)	24,000
	Cr Non-controlling interest (CBS) ...	24,000
(non-controlling interest in profit)		
(iv)	Dr Share capital	20,000
	Dr Beginning retained profit	60,000
	Dr Land	10,000
	Cr Non-controlling interest (CBS) ...	90,000
(non-controlling interest)		

(b) Consolidated accounts

K Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Revenue	800
Operating expenses	470
Profit before tax	330
Tax	110
Profit after tax	220
Other comprehensive income	—
Total comprehensive income	<u>220</u>
 Attributable to:	
Owners of the parent	196
Non-controlling interest	24
	<u>220</u>

K Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Retained profits	
Beginning balance	600
Profit for the year	196
Ending balance	<u>796</u>
Capital reserve	
Beginning balance	—
Increase during the year	20
Ending balance	<u>20</u>

K Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	50
Land	150
Other assets	1,680
	1,880
Share capital	400
Capital reserve	20
Retained profits	796
	1,216
Non-controlling interest	114
	1,330
Liabilities	550
	1,880

Notes to the solution

- (a) In CJE (i) for 20X8 consolidation, the elimination of investment account is against 80% of L Ltd's share capital and pre-acquisition reserves, as K Ltd now holds only 80% of L Ltd. Note that the goodwill on consolidation is thereby reduced proportionately (from \$50,000 in 20X7 consolidation to \$40,000 in 20X8 consolidation). However, FRS 110 requires that there should not be any change to the goodwill as a result of disposal of shares with no loss of control. Thus, in CJE (ii) there is Dr Goodwill on consolidation of \$10,000, so that the requirement of FRS 110 is met. In CJE (i), land revaluation is also reduced proportionately (from \$50,000 in 20X7 consolidation to \$40,000 in 20X8 consolidation). However, FRS 110 requires that there should not be any such change as a result of disposal of shares with no loss of control. This requirement of FRS 110 is met when the non-controlling interest in the land revaluation of \$10,000 is adjusted for in CJE (iv).
- (b) CJE (ii) for 20X8 consolidation is to adjust for the effect of disposal of shares with no loss of control. From the parent's viewpoint, the 'profit on sale of shares' is \$50,000, as shown below:

Sale proceeds	\$110,000
Cost of 20,000 share	\$ 60,000
Profit on sale of shares	\$ 50,000

However, from the group's viewpoint FRS 110 requires that there should be no profit or loss on the disposal of shares with no loss of control. Thus, it is necessary to have the debit entry 'Profit on sale of shares \$50,000'. Another debit entry, 'Goodwill on consolidation \$10,000' is as explained in Note (a) above.

The credit entry 'Beginning retained profit \$40,000' is to account for K Ltd's interest, based on the 20,000 shares, in L Ltd's post-acquisition profits up to 1 January 20X8, which is equal to \$40,000 ($20\% \times [\$300,000 - \$100,000]$). The other credit entry, 'Capital reserve \$20,000', is to account for the difference between the sales proceed of shares of \$110,000 and the change in non-controlling interest of \$90,000 arising from the disposal of shares. (As at 1 January 20X8, when the 20% of shares were disposed of, L Ltd's net assets are \$450,000 [book value of \$400,000 + land revaluation of \$50,000], and thus the non-controlling interest is \$90,000 [$\$450,000 \times 20\%$]. Before the sale of shares, there was no non-controlling interest).

- (c) CJE (iii) and (iv) are to account for non-controlling interest, which now holds 20% interest in L Ltd. The non-controlling interest (measured on the 'fair value of net identifiable assets of subsidiary' basis) of \$114,000 as shown in the 20X8 consolidated balance sheet may be proved as 20% of fair value of L Ltd's net identifiable assets as at 31 December 20X8 ($20\% \times [\$520,000 + \$50,000] = \$114,000$). The non-controlling interest of \$24,000 in the 20X8 consolidated statement of comprehensive income may be proved as 20% of L Ltd's after-tax profit for 20X8 ($20\% \times \$120,000 = \$24,000$).
- (d) Note that the group's beginning retained profit for 20X8 is, as it should be, equal to the group's ending retained profit for 20X7. The figure of \$600,000 may be proved as follows: K Ltd's retained profit of \$400,000 + the group's share of L Ltd's post-acquisition retained profit of \$200,000 ($100\% \times [\$300,000 - \$100,000]$).
- (e) The group profit of \$196,000 for 20X8 may be proved as follows: K Ltd's after-tax profit of \$100,000 ($\$150,000 - \$50,000$ profit on sales of shares) + the group's interest, based on 80,000 shares, in L Ltd's after-tax profit of \$96,000 ($\$120,000 \times 80\%$).
- (f) The group's retained profit as at 31 December 20X8 of \$796,000 may be proved as follows: K Ltd's retained profit of \$500,000 ($\$550,000 - \$50,000$ profit on sales of shares) + the group's interest in L Ltd's post-acquisition retained profit of \$296,000 ($100\% \times [\$300,000 - \$100,000] + 80\% \times \$120,000$).



4.2.3.2 Decrease in shareholding interest due to deemed disposal

The parent's shareholding interest in the subsidiary may also decrease if (a) the subsidiary makes a rights issue and the parent is allotted a number of shares that is less than its proportionate interest, or (b) the subsidiary issues additional shares to a third party.

For example, assume that A Ltd originally holds 90% of B Ltd's 100,000,000 issued shares. If B Ltd issues a one-for-one rights issue, and A Ltd subscribes for and is allotted 50% of the rights issue, A Ltd's shareholding interest will be decreased from 90% to 70% ($[90,000,000 + 50,000,000]/200,000,000$). If, instead of the rights issue, B Ltd just issues 50,000,000 shares to a third party, A Ltd's shareholding interest will be decreased from 90% to 60% ($90,000,000/150,000,000$).

A decrease in the parent's shareholding interest as a result of new shares issued by the subsidiary is often referred to as 'deemed disposal'.

As mentioned above, FRS 110 provides that decrease in shareholding interest in a subsidiary without loss of control should be accounted for as equity transactions (paragraph 23). The consolidation adjustments are similar to those for decrease in shareholding interest due to disposal of shares discussed in Section 4.2.3.1, except that parent would not recognize any gain or loss.

Example 4.5

S Ltd was incorporated in 20X1 with 100,000 shares. In 20X5, P Ltd acquires 80% of the shares in S Ltd. In 20X8, S Ltd issues another 25,000 shares to a third party for cash of \$50,000. Prior to the share issue, S Ltd's net assets are represented by share capital of \$100,000 and retained profits of \$50,000 (after the share issue, S Ltd's net assets increase to \$200,000).

As a result of the new shares issued by S Ltd, P Ltd's shareholding interest in S Ltd decreases from 80% to 64%. In this case, there are no proceeds from the deemed disposal. However, the group cash will increase by \$50,000, and the non-controlling interest will change from \$30,000 ($20\% \times \$150,000$) to \$72,000 ($36\% \times \$200,000$). FRS 110 requires the difference of \$8 million (see calculation below) to be treated as a positive movement in the equity.

	\$'000,000
Increase in group cash	50
Increase in non-controlling interest ($72 - 30$)	<u>42</u>
Positive movement in equity	<u><u>8</u></u>

The next example is a full illustration of the consolidation process for a case of deemed disposal with no loss of control.

Example 4.6

The 31 December 20X7 balance sheets of K Ltd and its wholly owned subsidiary, L Ltd, are as follows:

	K Ltd	L Ltd
	\$'000	\$'000
Investment, at cost		
100,000 shares in L Ltd	300	—
Land	—	100
Other assets	700	500
	<u>1,000</u>	<u>600</u>
Share capital	400	100
Retained profits	400	300
Liabilities	200	200
	<u>1,000</u>	<u>600</u>

K Ltd acquires its investment in L Ltd (the share capital of which comprises 100,000 ordinary shares) in January 20X5, when L Ltd's net assets are represented by share capital of \$100,000 and retained profit of \$100,000. On this date, L Ltd's land, which was acquired in 20X1, is deemed to have a fair value of \$150,000.

On 1 January 20X8, L Ltd issues another 25,000 shares to a third party for a cash consideration of \$80,000. The financial statements of the two companies for the year 20X8 are as follows:

(a) Balance sheets as at 31 December 20X8

	K Ltd	L Ltd
	\$'000	\$'000
Investment, at cost		
100,000 shares in L Ltd	300	—
Land	—	100
Other assets	900	800
	<u>1,200</u>	<u>900</u>
Share capital	400	180
Retained profits	550	420
Liabilities	250	300
	<u>1,200</u>	<u>900</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	K Ltd	L Ltd
	\$'000	\$'000
Revenue	500	300
Operating expenses	300	120
Profit before tax	200	180
Taxation	50	60
Profit after tax	150	120
Other comprehensive income	—	—
Total comprehensive income	150	120

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	K Ltd	L Ltd
	\$'000	\$'000
Beginning retained profits	400	300
Profit for the year	150	120
Ending retained profits	550	420

Required

Prepare for K Ltd and its subsidiary the 20X7 consolidated balance sheet and the 20X8 consolidated balance sheet, consolidated statement of comprehensive income, and consolidated statement of changes in equity (partial).

Solution**Consolidation for 20X7**

(a) Consolidation journal entries

Dr Share capital	100,000
Dr Retained profit	100,000
Dr Land	50,000
Dr Goodwill on consolidation	50,000
Cr Investment	300,000
(elimination of investment account)	

(b) Consolidated balance sheet

K Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X7	
	\$'000
Goodwill on consolidation	50
Land	150
Other assets	<u>1,200</u>
	<u>1,400</u>
Share capital	400
Retained profit	600
Liabilities	<u>400</u>
	<u>1,400</u>

Consolidation for 20X8

(a) Consolidation journal entries

- (i) Dr Share capital 144,000
 Dr Beginning retained profit 80,000
 Dr Land 40,000
 Dr Goodwill on consolidation 36,000
 Cr Investment 300,000
 (elimination of investment account)
- (ii) Dr Goodwill on consolidation 14,000
 Dr Capital reserve 26,000
 Cr Beginning retained profit 40,000
 (deemed disposal)
- (iii) Dr Non-controlling interest (CSCI) 24,000
 Cr Non-controlling interest (CBS) ... 24,000
 (non-controlling interest in profit)
- (iv) Dr Share capital 36,000
 Dr Beginning retained profit 60,000
 Dr Land 10,000
 Cr Non-controlling interest (CBS) 106,000
 (non-controlling interest)

(b) Consolidated financial statements

K Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Revenue	800
Operating expenses	<u>420</u>
Profit before tax	380
Tax	<u>110</u>
Profit after tax	270
Other comprehensive income	<u>—</u>
Total comprehensive income	<u>270</u>
Attributable to:	
Owners of the parent	246
Non-controlling interest	<u>24</u>
	<u>270</u>
K Ltd and its subsidiary	
Consolidated statement of changes in equity (partial)	
For year ended 31 December 20X8	
	\$'000
Retained profits	
Beginning balance	600
Profit for the year	<u>246</u>
Ending balance	<u>846</u>
Capital reserve	
Beginning balance	<u>—</u>
Decrease during the year	26
Ending balance	<u>(26)</u>

K Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Goodwill on consolidation	50
Land	150
Other assets	1,700
	1,900
Share capital	400
Capital reserve	(26)
Retained profits	846
	1,220
Non-controlling interest	130
	1,350
Liabilities	550
	1,900

Notes to the solution

- (a) In CJE (i) for 20X8 consolidation, the elimination of investment account is against 80% of L Ltd's share capital and pre-acquisition reserves, as K Ltd now holds only 80% ($100,000/125,000$) of L Ltd. Note that the goodwill on consolidation is thereby reduced from \$50,000 in 20X7 consolidation to \$36,000 in 20X8 consolidation. However, FRS 110 requires that there should not be any change to the goodwill as a result of decrease in shareholding with no loss of control. Thus, in CJE (ii) there is Dr Goodwill on consolidation of \$14,000, so that the requirement of FRS 110 is met.
- (b) CJE (ii) for 20X8 consolidation is to adjust for the effect of deemed disposal with no loss of control. The debit entry 'Goodwill on consolidation \$14,000' is as explained in Note (a) above. The other debit entry 'Capital reserve \$26,000' is to account for the difference between the cash received of \$80,000 and the change in non-controlling interest of \$106,000 arising from the issuance of shares. (As at 1 January 20X8, immediately after the shares were issued, L Ltd's net assets is \$530,000 [share capital of \$180,000 + retained profit of \$300,000 + land revaluation of \$50,000]. Thus, the non-controlling interest is \$106,000 [$\$530,000 \times 20\%$]. Before the deemed disposal, there is no non-controlling interest).

The credit entry 'Beginning retained profit \$40,000' is to account for K Ltd's interest, based on the 20% deemed disposed of, in L Ltd's post-acquisition profits up to 1 January 20X8, which is equal to \$40,000 ($20\% \times [\$300,000 - \$100,000]$). Note that, unlike in Example 4.4, there is no adjustment for 'profit on sale of share', as K Ltd has not recognized any gain or loss arising from the deemed disposal.

- (c) CJE (iii) and (iv) are to account for non-controlling interest, which now holds 20% interest in L Ltd. The non-controlling interest (measured on a 'fair value of net identifiable assets of subsidiary' basis) of \$130,000 as shown in the 20X8 consolidated balance sheet may be proved as 20% of fair value of L Ltd's net identifiable assets as at 31 December 20X8 ($20\% \times [\$600,000 + \$50,000] = \$130,000$). The non-controlling interest of \$24,000 in the 20X8 consolidated statement of comprehensive income may be proved as 20% of L Ltd's after-tax profit for 20X8 ($20\% \times \$120,000 = \$24,000$).
- (d) Note that the group's beginning retained profit for 20X8 is, as it should be, equal to the group's ending retained profit for 20X7. The figure of \$600,000 may be proved as follows: K Ltd's retained profit of \$400,000 + the group's share of L Ltd's post-acquisition retained profit of \$200,000 ($100\% \times [\$300,000 - \$100,000]$).
- (e) The group profit of \$246,000 for 20X8 may be proved as follows: K Ltd's after-tax profit of \$150,000 + the group's interest, based on 80,000 shares, in L Ltd's after-tax profit of \$96,000 ($\$120,000 \times 80\%$).
- (f) The group's retained profit as at 31 December 20X8 of \$846,000 may be proved as follows: K Ltd's retained profit of \$550,000 + the group's interest in L Ltd's post-acquisition retained profit of \$296,000 ($100\% \times [\$300,000 - \$100,000] + 80\% \times \$120,000$).



4.2.4 Decrease in shareholding interest in a subsidiary with loss of control

Section 4.2.3 above deals with decrease in shareholding interest in a subsidiary without loss of control. This section deals with decrease in shareholding interest in a subsidiary with loss of control.

Where the parent disposes of part of its shareholding interest in the subsidiary resulting in loss of control, the provisions of FRS 110 should be noted.

Previously, Singapore FRSs did not provide for such cases. In practice, a major consolidation problem in the preparation of consolidated financial statements is the determination of 'profit or loss on disposal of shares in subsidiary'. The amount of profit or loss on disposal of shares in subsidiary to be reported in the consolidated financial statements will, in most cases, be different from that reported in the parent's statement of comprehensive income.

Now, FRS 110 provides that when a parent loses control of a subsidiary, it should (paragraph B98):

- derecognize the assets (including goodwill) and liabilities of the subsidiary at their carrying amount at the date when control is lost;
- derecognize the carrying amount of the non-controlling interest in the former subsidiary at the date control is lost;

- (c) recognize the fair value of consideration received (including shares in subsidiary received), if any;
- (d) recognize any investment retained in the former subsidiary at its fair value at the date control is lost;
- (e) reclassify to profit or loss, or transfer directly to retained profit if required in accordance with other FRS; and
- (f) recognize any resulting difference as gain or loss in profit or loss attributable to the parent.

As mentioned earlier, this new treatment should be applied prospectively for annual periods beginning on or after 1 July 2009 and only for transactions occurring after that date.

4.2.4.1 Disposal of all shareholding interest in a subsidiary

The easiest case of disposal with loss of control is where all the shareholding interest in the subsidiary is disposed of. Also, the understanding of the consolidation issues in a case where 100% of the shareholding interest in a subsidiary is disposed of will be useful in the discussion of consolidation issues to be dealt with in a case of partial disposal. Thus, this section deals with disposal of all shareholding interest in a subsidiary. Partial disposal will be dealt with in Section 4.2.4.2.

When the parent disposes of one of its subsidiaries, a major consolidation issue in the preparation of consolidated financial statements for the year of disposal is the determination of profit or loss on disposal of subsidiary.

The amount of profit or loss on disposal of subsidiary to be reported in the consolidated statement of comprehensive income will, in most cases, be different from that reported in the parent's statement of comprehensive income.

From the parent's viewpoint, the profit or loss on disposal of subsidiary is the difference between the disposal proceeds and the cost of investment to the parent. (The cost of investment to the parent is the original cost in the acquisition.) However, from the group's viewpoint, the profit or loss on disposal of subsidiary is the difference between the disposal proceeds and the group's share of the net assets of the subsidiary disposed of. The group's share of the subsidiary's net assets is also equal to cost of investment +/(-) the group's share of the post-acquisition profits (losses) of the subsidiary up to the date of disposal. The difference in the amount of profit or loss on disposal of subsidiary as reported in the parent's statement of comprehensive income and the amount that is to be reported in the consolidated statement of comprehensive income is, therefore, equal to the group's share of the subsidiary's post-acquisition profits or losses up to the date of disposal.

Another consolidation issue that arises from the disposal of a subsidiary is that even though the subsidiary is disposed of, the group's share of the subsidiary's post-acquisition profits or losses up to the date of disposal must still be reported in the group's retained profits. Thus a consolidation journal entry must be made, in the year of disposal, to credit (debit) the group's retained profits for the group's share of the post-acquisition profits (losses). This consolidation journal entry is also necessary to ensure that the group's beginning retained profit in the year of disposal equals the group's ending retained profit in the preceding year.

It may be noted that the consolidation adjustments necessary to address the first and second issues above are of the same amount, which is equal to the group's share of the subsidiary's post-acquisition profits or losses up to the date of disposal. Thus, only one consolidation journal entry is required to address both the issues discussed above. The consolidation journal entry will be as follows (assuming the subsidiary is disposed of at the beginning of the year and the subsidiary has earned post-acquisition profits):

Dr Profit (loss) on sale of subsidiary

Cr Beginning retained profit

The debit entry is to adjust the profit or loss on disposal of subsidiary. The credit entry is to account for the group's share of the subsidiary's post-acquisition profits up to the beginning of the year.

Example 4.7

The 31 December 20X7 balance sheets of A Ltd and its subsidiaries, B Ltd and C Ltd, are as follows:

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000
Investment, at cost			
4 million shares in B Ltd	4,800	—	—
1 million shares in C Ltd	1,000	—	—
Other assets	6,200	6,500	1,500
	<u>12,000</u>	<u>6,500</u>	<u>1,500</u>
Share capital	8,000	5,000	1,000
Retained profits	4,000	1,500	500
	<u>12,000</u>	<u>6,500</u>	<u>1,500</u>

The share capital of A Ltd, B Ltd, and C Ltd comprises, respectively, 8 million shares, 5 million shares, and 1 million shares. On 1 January 20X8, A Ltd sold all its shareholding in B Ltd for a cash consideration of \$6,000,000.

B Ltd was acquired in January 20X1, when the fair value of its net assets was represented by share capital of \$5,000,000 and retained profits of \$1,000,000. C Ltd was acquired when it was formed in 20X6.

Required

Prepare the consolidated journal entry in respect of the sale of a subsidiary company for the 20X8 consolidation.

Solution

Consolidation journal entry

Dr Profit on disposal of subsidiary	400
Cr Beginning retained profit	400
(to adjust for disposal of subsidiary)	

Notes to the solution

- (a) The debit entry in the CJE is to adjust the profit on disposal of subsidiary. A Ltd has recorded the profit on disposal of subsidiary of \$1,200,000 in its books as follows:

Dr Cash	\$6,000,000
Cr Investment in B Ltd	\$4,800,000
Cr Profit on disposal of subsidiary ...	\$1,200,000

However, from the group's viewpoint the 'Profit on disposal of subsidiary' should be \$800,000 only, computed as follows:

Sale proceeds	\$6,000,000
Share of net assets	\$5,200,000*
Profit on disposal of subsidiary	<u>\$ 800,000</u>

*As at 1 January 20X8, the group's share of net assets of B Ltd is \$5,200,000 ($80\% \times \$6,500,000$). This figure may also be calculated as follows:

$$\begin{aligned} &\text{Cost of investment + group's share of the post-acquisition profits} \\ &(\$4,800,000 + 80\% \times [\$1,500,000 - \$1,000,000] = \$5,200,000). \end{aligned}$$

- (b) The credit entry in the CJE is to account for the group's share of B Ltd's post-acquisition profits up to the date of disposal on 1 January 20X8, which is equal to \$400,000 ($80\% \times [\$1,500,000 - \$1,000,000]$). This entry is also necessary to ensure that the group's beginning retained profit for 20X8 of \$4,900,000 (A Ltd's beginning retained profit of \$4,000,000 +

group's share of C Ltd's post-acquisition profit of \$500,000 + CJE entry of \$400,000) is equal to the group's ending retained profit for 20X7 of \$4,900,000 (A Ltd's ending retained profit of \$4,000,000 + group's share of B Ltd's post-acquisition profit of \$400,000 + group's share of C Ltd's post-acquisition profit of \$500,000).

- (c) The debit and credit entries of the CJE may also be viewed as a single adjustment to bring part of the current year's profit (profit on sale of subsidiary) to the past year's profit (beginning retained profit). This adjustment is necessary because the parent has recorded all the gains in relation to the subsidiary only in the year of disposal, whereas the consolidation principle requires the parent to recognize its share of the subsidiary's profit on a year-to-year basis.



If the subsidiary is disposed of during the year, FRS 110 requires the results of operations of the subsidiary to be included in the consolidated income statement until the date of disposal (paragraph 20). In other words, the group's share of the profit of the subsidiary for the year up to the date of disposal must be included in the consolidated statement of comprehensive income. However, the principle underlying the consolidation journal entry required to adjust for the effect of the disposal of subsidiary is basically the same as that discussed above.

Example 4.8



Refer to the case in Example 4.7. Assume that B Ltd is disposed of on 31 August 20X8 instead of 1 January 20X8, and the statement of comprehensive income of B Ltd for the year ended 31 December 20X8 (assuming revenue and expenses to accrue evenly throughout the year) is as follows:

	\$'000
Sales	900
Cost of sales	300
<hr/>	
Gross profit	600
Operating expenses	150
<hr/>	
Profit before tax	450
Taxation	150
<hr/>	
Profit after tax	300
Other comprehensive income	—
<hr/>	
Total comprehensive income	<u>300</u>

Required

Prepare the consolidation journal entry in respect of the sale of subsidiary company for the 20X8 consolidation.

Solution

Consolidation journal entry

Dr Profit on disposal of subsidiary	560
Dr Cost of sales	160
Dr Operating expenses	80
Dr Taxation	80
Cr Sales	480
Cr Beginning retained profit	400
(to adjust for disposal of subsidiary)	

Notes to the solution

- (a) The debit entry to Profit on disposal of subsidiary in the CJE is to adjust the profit on disposal of subsidiary. A Ltd has recorded the profit on disposal of subsidiary of \$1,200,000 in its books as follows:

Dr Cash	\$6,000,000
Cr Investment in B Ltd	\$4,800,000
Cr Profit on sale of subsidiary ..	\$1,200,000

However, from the group's viewpoint the 'Profit on disposal of subsidiary' should be \$640,000 only, computed as follows:

Sale proceeds	\$6,000,000
Share of net assets	\$5,360,000*
Profit on disposal of subsidiary	<u>\$ 640,000</u>

*As at 1 January 20X8, the group's share of net assets of B Ltd is \$5,200,000 (see Example 4.5). For the current year, the group takes up another \$160,000 ($80\% \times 8/12 \times \$300,000$), being its share of B Ltd's after-tax profit for the year 20X8 up to 31 August 20X8. Therefore the group's share of net assets of B Ltd as at 31 August 20X8 is \$5,360,000.

- (b) The credit entry to Beginning retained profit in the CJE is to account for the group's share of B Ltd's post-acquisition profits up to 1 January 20X8, which is equal to \$400,000 ($80\% \times [\$1,500,000 - \$1,000,000]$).
- (c) The other entries in the CJE are to take up the group's share of B Ltd's revenue and expense items up to the date of disposal on 31 August 20X8. Note that since B Ltd is disposed of during the year 20X8, its accounts will not be consolidated. Therefore, it is necessary to separately account for the group's share of B Ltd's after-tax profit by increasing group sales by \$480,000 ($80\% \times 8/12 \times \$900,000$), cost of sales by \$160,000 ($80\% \times 8/12 \times \$300,000$),

operating expenses by \$80,000 ($80\% \times 8/12 \times \$150,000$) and tax charge by \$80,000 ($80\% \times 8/12 \times \$150,000$).



The existence of goodwill on consolidation does not complicate the consolidation process when the subsidiary is disposed of. The amount of adjustment made to the profit or loss on disposal of subsidiary will still be the same as the amount of adjustment made to the group retained profits.

Example 4.9

Refer to Example 4.7, where B Ltd is disposed of on 1 January 20X8. Assume that the share in B Ltd was bought for a cash consideration of \$5,000,000 instead of \$4,800,000, thereby giving rise to a goodwill on consolidation of \$200,000 ($\$5,000,000 - 80\% \times \$6,000,000$). Also assume that from 1 January 20X1 to 31 December 20X4, the group adopted the policy of amortizing goodwill on consolidation on a straight-line basis over ten years under FRS 22 and from 1 January 20X5 the group adopts FRS 103, under which an impairment of \$40,000 was provided for in 20X7.

Required

Prepare the consolidation journal entry in respect of the sale of the subsidiary company for the 20X8 consolidation.

Solution

Consolidation journal entry

Dr Profit on disposal of subsidiary	280
Cr Beginning retained profit	280
(to adjust for disposal of subsidiary)	

Notes to the solution

- (a) The debit entry in the CJE is to adjust the profit on disposal of subsidiary. A Ltd has recorded the profit on disposal of subsidiary of \$1,000,000 in its books as follows:

Dr Cash	\$6,000,000
Cr Investment in B Ltd	\$5,000,000
Cr Profit on disposal of subsidiary	\$1,000,000

However, from the group's viewpoint the 'Profit on disposal of subsidiary' should be \$720,000 only, computed as follows:

Sale proceeds	\$6,000,000
Share of net assets	\$5,280,000*
Profit on disposal of subsidiary	<u>\$ 720,000</u>

*As at 1 January 20X8, the group's share of net assets of B Ltd is \$5,280,000 ($80\% \times \$6,500,000 + \text{goodwill of } \$80,000 [\$200,000 - \text{amortization of } \$80,000 - \text{impairment of } \$40,000]$). This is also equal to cost of investment of \$5,000,000 + group's share of post-acquisition profits of \$400,000 ($80\% \times [\$1,500,000 - \$1,000,000]$) – goodwill amortization of \$80,000 ($\$200,000 \times 4/10$) and goodwill impairment of \$40,000.

- (b) The credit entry in the CJE is to account for the group's share of B Ltd's post-acquisition profits up to the date of disposal on 1 January 20X8 of \$400,000 ($80\% \times [\$1,500,000 - \$1,000,000]$) – goodwill amortization of \$80,000 and goodwill impairment of \$40,000. The entry is also necessary to ensure that the beginning retained profit of the group in 20X8 is equal to the ending retained profit of the group in 20X7.



The next example is a full illustration of a case of a 100% disposal of subsidiary.

Example 4.10

X Ltd acquired a subsidiary, Y Ltd, in January 20X5 when Y Ltd was formed with share capital of \$100,000 (comprising 100,000 ordinary shares). X Ltd acquired another subsidiary, Z Ltd, in February 20X5 when Z Ltd's net assets at fair value were represented by share capital of \$100,000 (comprising 100,000 ordinary shares) and retained profit of \$100,000. The 31 December 20X7 balance sheets of X Ltd and its subsidiaries, Y Ltd and Z Ltd, are as follows:

	X Ltd \$'000	Y Ltd \$'000	Z Ltd \$'000
Investment, at cost			
100,000 shares in Y Ltd	100	–	–
80,000 shares in Z Ltd	200	–	–
Other assets	700	600	500
	<u>1,000</u>	<u>600</u>	<u>500</u>
Share capital	400	100	100
Retained profits	400	300	200
Liabilities	200	200	200
	<u>1,000</u>	<u>600</u>	<u>500</u>

The group adopted FRS 103 on 1 January 20X5. An impairment loss of \$24,000 was provided in June 20X6 and a further impairment loss of \$8,000 was provided in June 20X8 on goodwill arising from the acquisition of Z Ltd. On 30 September 20X8, X Ltd disposed of Z Ltd for a cash consideration of \$300,000. The financial statements of the companies for the year 20X8 are as follows:

(a) Balance sheets as at 31 December 20X8

	X Ltd \$'000	Y Ltd \$'000	Z Ltd \$'000
Investment, at cost			
100,000 shares in Y Ltd	100	—	—
Other assets	1,100	800	700
	<u>1,200</u>	<u>800</u>	<u>700</u>
Share capital	400	100	100
Retained profits	600	420	280
Liabilities	200	280	320
	<u>1,200</u>	<u>800</u>	<u>700</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	X Ltd \$'000	Y Ltd \$'000	Z Ltd \$'000
Sales	600	500	360
Cost of sales	300	200	120
Gross profit	300	300	240
Profit on sale of subsidiary	100	—	—
Operating expenses	150	120	120
Profit before tax	250	180	120
Taxation	50	60	40
Profit after tax	200	120	80
Other comprehensive income	—	—	—
Total comprehensive income	<u>200</u>	<u>120</u>	<u>80</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	X Ltd \$'000	Y Ltd \$'000	Z Ltd \$'000
Beginning retained profits	400	300	200
Profit for the year	200	120	80
Ending retained profits	<u>600</u>	<u>420</u>	<u>280</u>

Required

Prepare for X Ltd and its subsidiaries (a) the 20X7 consolidated balance sheet and (b) the 20X8 consolidated balance sheet, consolidated statement of comprehensive income, and consolidated statement of changes in equity (showing group retained profits only).

Solution**Consolidation for 20X7**

(a) Consolidation journal entries

(i)	Dr Share capital (Y)	100	
	Cr Investment in Y Ltd		100
	(to eliminate investment account)		
(ii)	Dr Share capital (Z)	80	
	Dr Retained profit (Z)		80
	Dr Goodwill on consolidation		40
	Cr Investment in Z Ltd		200
	(to eliminate investment account)		
(iii)	Dr Retained profit (X)	24	
	Cr Goodwill on consolidation		24
	(to record goodwill impairment in prior year)		
(iv)	Dr Share capital (Z)	20	
	Dr Retained profit (Z)		40
	Cr Non-controlling interest		60
	(to record non-controlling interest)		

(b) The consolidated balance sheet for the group as at 31 December 20X7 is as follows:

X Ltd and its subsidiaries Consolidated balance sheet As at 31 December 20X7	
	\$'000
Goodwill on consolidation	16
Other assets	<u>1,800</u>
	<u>1,816</u>
Share capital	400
Retained profit	756
Non-controlling interest	60
Liabilities	<u>600</u>
	<u>1,816</u>

Consolidation for 20X8

(Note that Z Ltd has been disposed of, and therefore the group consists of only X Ltd and Y Ltd.)

(a) Consolidation journal entries

(i)	Dr Share capital (Y)	100
	Cr Investment in Y Ltd	100
(to eliminate investment account)		
(ii)	Dr Profit on disposal of subsidiary (X)	96
	Dr Cost of sales	72
	Dr Goodwill impairment	8
	Dr Operating expenses	72
	Dr Tax	24
	Cr Sales	216
	Cr Beginning retained profit	56
(to adjust profit on disposal of subsidiary)		

(b) Consolidated financial statements

X Ltd and its subsidiary Consolidated statement of comprehensive income For year ended 31 December 20X8	
	\$'000
Sales	1,316
Cost of sales	<u>572</u>
Gross profit	744
Profit on sale of subsidiary	4
Operating expenses	<u>350</u>
Profit before tax	398
Tax	<u>134</u>
Profit after tax	264
Other comprehensive income	<u>—</u>
Total comprehensive income	<u>264</u>
 Attributable to	
Owners of the parent	264
Non-controlling interest	<u>—</u>
	<u>264</u>

X Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Assets	1,900
Share capital	400
Retained profits	1,020
Liabilities	480
	1,900

X Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profits	756
Profit for the year	264
Ending retained profits	1,020

Notes to the solution

- (a) The debit entry of CJE (ii) for 20X8 consolidation is to adjust the profit on disposal of subsidiary. X Ltd has recorded the profit on disposal of subsidiary of \$100,000 as follows:

Dr Cash	\$300,000
Cr Investment in Z Ltd	\$200,000
Cr Profit on disposal of subsidiary	\$100,000

However, from the group's viewpoint the 'Profit on disposal of subsidiary' should be \$4,000 only, computed as follows:

Sale proceeds	\$300,000
Share of net assets	\$296,000*
Profit on disposal of subsidiary	\$ 4,000

* As at 30 September 20X8, the group's share of net assets of Z Ltd is \$296,000 (80% of net assets of \$360,000 [$\$300,000 + 9/12 \times \$80,000$] + goodwill of \$8,000). This is also equal to cost of investment of \$200,000 + X Ltd's share in Z Ltd's post-acquisition profits of \$128,000 ($[\$200,000 - \$100,000] \times 80\% + [9/12 \times \$80,000 \times 80\%]$) – goodwill impairment of \$32,000.

- (b) The credit entry to Beginning retained profit in CJE (ii) for 20X8 consolidation is to account for X Ltd's share of Z Ltd's post-acquisition profits up to 1 January 20X8, which is equal to \$80,000 ($[\$200,000 - \$100,000] \times 80\%$) – goodwill impairment of \$24,000.

- (c) The other entries in CJE (ii) for 20X8 consolidation are to take up the group's share of Z Ltd's revenue and expense items up to the date of disposal on 30 September 20X8 and the goodwill impairment of \$8,000 for the year 20X8. Note that since Z Ltd is disposed of during the year 20X8, its accounts will not be consolidated. Therefore, it is necessary to separately account for the group's share of Z Ltd's after-tax profit by increasing group sales by \$216,000 ($80\% \times 9/12 \times \$360,000$), cost of sales by \$72,000 ($80\% \times 9/12 \times \$120,000$), operating expenses by \$72,000 ($80\% \times 9/12 \times \$120,000$), and tax charge by \$24,000 ($80\% \times 9/12 \times \$40,000$). It is also necessary to account for the goodwill impairment for the year of \$8,000.
- (d) Note that the beginning retained profit in the consolidated statement of comprehensive income of 20X8 is, as it should be, equal to the ending retained profit in the consolidated statement of comprehensive income of 20X7.



4.2.4.2 Partial disposal

Where the parent disposes only partially of its shareholding interest in a subsidiary with loss of control, the provisions of paragraph B98 of FRS 110, which is reproduced below, should be noted:

- (a) derecognize the assets (including goodwill) and liabilities of the subsidiary at their carrying amount at the date when control is lost;
- (b) derecognize the carrying amount of the non-controlling interests in the former subsidiary at the date control is lost;
- (c) recognize the fair value of consideration received (including shares in subsidiary received), if any;
- (d) recognize any investment retained in the former subsidiary at its fair value at the date when control is lost;
- (e) reclassify to profit or loss, or transfer directly to retained profit if required in accordance with other FRS; and
- (f) recognize any resulting difference as gain or loss in profit or loss attributable to the parent.

As in the case of disposal of all the shareholding interest in a subsidiary, one major consolidation issue in a case of partial disposal of shareholding interest with loss of control is the determination of profit or loss on disposal of subsidiary. As previously discussed, the amount of profit or loss on disposal of shares in a former subsidiary to be reported in the consolidated statement of comprehensive income will, in most cases, be different from that reported in the parent's statement of comprehensive income.

Also, as previously discussed, another consolidation issue that arises from the partial disposal of shares in a former subsidiary is that even though the shareholding interest has been partially disposed of, the group's share of the former subsidiary's post-acquisition profits or losses up to the date of partial disposal must still be reported

in the group's retained profits. Thus, a consolidation journal entry must be made, in the year of disposal, to credit (debit) the group's retained profits for the group's share of the post-acquisition profits (losses). This consolidation journal entry is also necessary to ensure that the group's beginning retained profit in the year of disposal equals the group's ending retained profit in the preceding year.

It may be noted that the consolidation adjustments necessary to address the first and second issues above are of the same amount (except for the re-measurement gain/loss of the remaining shareholding that FRS 110 requires to be treated as part of the gain/loss on partial disposal of shares, discussed below), which is equal to the group's share of the subsidiary's post-acquisition profits or losses up to the date of disposal. Thus, only one consolidation journal entry is required to address both the issues discussed above. The consolidation journal entry will be as follows (assuming the subsidiary is disposed of at the beginning of the year and the subsidiary has earned post-acquisition profits):

Dr Profit (loss) on sale of subsidiary
Cr Beginning retained profit

The only additional consolidation issue to be dealt with in a case of partial disposal (as compared to 100% disposal) is the accounting for the remaining shareholdings. FRS 110 requires the remaining shareholding to be re-measured at its fair value at the date when control is lost (paragraph B98). FRS 110 further requires the re-measurement gain/loss of the remaining shareholding to be treated as part of the gain/loss on partial disposal of the shares (paragraph B98). The effect of this requirement is that, upon disposal of a subsidiary, the profit/loss on disposal will be the same (as if parent disposes of all the shareholding) regardless of the actual percentage of shareholding disposed of.

Example 4.11

On 2 February 20X2, P Ltd acquires 90 million shares of S Ltd (whose share capital comprises 100 million shares) at \$5.00 per share for a total cash consideration of \$450 million. Assume that on 8 August 20X2, the fair value of S Ltd's share is \$6.00 per share.

Scenario 1

Assume that P Ltd disposes of all the 90 million shares of S Ltd on 8 August 20X2. In this case, the gain on disposal of subsidiary is \$90 million ($90 \text{ million shares} \times [\$6 - \$5]$).

Scenario 2

Assume that P Ltd disposes of only 80 million shares of S Ltd on 8 August 20X2. In this case, the gain on disposal of subsidiary is \$90 million, calculated as follows: Gain arising from sale of shares of \$80 million ($80 \text{ million shares} \times [\$6 - \$5]$) + gain arising from re-measurement of remaining shares of \$10 million ($10 \text{ million shares} \times [\$6 - \$5]$).

Scenario 3

Assume that P Ltd disposes of only 70 million shares of S Ltd on 8 August 20X2. In this case, the gain on disposal of subsidiary is \$90 million, calculated as follows: Gain arising from sale of shares of \$70 million (70 million shares \times [\$6 – \$5]) + gain arising from re-measurement of remaining shares of \$20 million (20 million shares \times [\$6 – \$5]).



If the remaining shares are to be held for long term and are therefore classified as 'available-for-sale' under FRS 39, there is another additional issue to be addressed. In this case, the amount of fair value gain/loss arising from mark-to-market re-measurement of the available-for-sale investment recognized in the parent's financial statements will, in most cases, be different from that reported in consolidated financial statements. The amount of the fair value gain/loss recognized by the parent is the difference between the market value at the balance sheet date and the original cost of investment; whereas in the consolidated financial statements, the amount of fair value gain/loss is the difference between the market value at the balance sheet date and the carrying amount of the investment at the date of loss of control.

It may be noted that FRS 110 requires 'partial disposal' to be accounted for, as if the parent disposes of all the shareholding and at the same time re-acquires the remaining shareholding.

Example 4.12



Refer to the case of Example 4.11 above. Assume that P Ltd disposes of 80 million shares of S Ltd on 8 August 20X2. Assume further that P Ltd classifies the 10 million remaining shares of S Ltd as 'available-for-sale' investment under FRS 39, and that the market value of S Ltd's share as at 31 December 20X2 is \$8.00 per share. In this case, in P Ltd's financial statements, the amount of fair value gain arising from mark-to-market re-measurement of the available-for-sale investment is \$30 million (10 million shares \times [\$8 – \$5]). However, in the consolidated financial statements, the amount of fair value gain arising from mark-to-market re-measurement of the available-for-sale investment is \$20 million (10 million shares \times [\$8 – \$6]).

The difference is due to the different treatment of the re-measurement gain of \$10 million (10 million shares \times [\$6 – \$5]) on the remaining shares. P Ltd treats the \$10 million gain as part of its fair value gain on available-for-sale investment. However, at the group level, the \$10 million gain is treated as part of the gain on disposal of subsidiary, as required by paragraph B98 of FRS 110. In this case, the relevant consolidation adjustment for 20X2 is as follows:

Dr Fair value gain	10 million
Cr Profit on disposal of subsidiary	10 million

Arising from the different treatment of the \$10 million gain ($10 \text{ million shares} \times [\$6 - \$5]$) in 20X2, in all subsequent years (until the year when the available-for-sale investment is disposed of), the fair value reserve reported in P Ltd's financial statements will be \$10 million more than that to be reported in consolidated financial statements, and the retained profit reported in P Ltd's financial statements will be \$10 million less than that to be reported in consolidated financial statements.

(For example, if the market value of S Ltd's share is \$10.00 per share as at 31 December 20X3, the fair value reserve reported in P Ltd's financial statements will be \$50 million [$10 \text{ million shares} \times (\$10 - \$5)$], whereas, the fair value reserve to be reported in consolidated financial statements will be \$40 million [$10 \text{ million shares} \times (\$10 - \$6)$]. Also, the \$10 million [$10 \text{ million shares} \times (\$6 - \$5)$] is to be reported as part of the groups' retained profit [profit on disposal of subsidiary in 20X2], but not recognized in P Ltd's retained profit.)

Therefore, in all subsequent years (until the year when the available-for-sale investment is disposed of), the following consolidation adjustment has to be made:

Dr Beginning fair value reserve	10 million
Cr Beginning retained profit	10 million



It may be appreciated that if the remaining shares are to be held for short term and are therefore classified as 'held-for-trading' under FRS 39, consolidation adjustments are only required in the year of disposal of subsidiary, and no consolidation adjustments are required in all the subsequent years. This is because, if the remaining shares are classified as held-for-trading, the fair value gain or loss arising thereof is taken to profit or loss (which becomes part of beginning retained profit in subsequent years).

Example 4.13



Refer to the case of Example 4.12 above. Assume that P Ltd intends to hold the remaining 10 million shares of S Ltd for short term and therefore classifies them as 'held-for-trading' investment.

In this case, for 20X2, P Ltd recognizes all the \$30 million (10 million shares \times [\$8 – \$5]) as fair value gain arising from mark-to-market re-measurement of held-for-trading investment. In the 20X2 consolidated financial statements, \$10 million (10 million shares \times [\$6 – \$5]) is treated as part of profit on disposal of subsidiary, and \$20 million (10 million shares \times [\$8 – \$6]) is treated as fair value gain arising from mark-to-market re-measurement of held-for-trading investment. Thus, the relevant consolidation adjustment for 20X2 is as follows:

Dr Fair value gain	10 million
Cr Profit on disposal of subsidiary	10 million

However, in all subsequent years, the \$10 million of fair value gain will become part of P Ltd's beginning retained profit, and the \$10 million of profit on disposal of the subsidiary will become part of the group's beginning retained profit. Thus, there is no difference between P Ltd's beginning retained profits and the group's beginning retained profits; therefore, no consolidation adjustments are necessary.



The next example is a full illustration of the consolidation process for a case of partial disposal of shares in a subsidiary with loss of control.

Example 4.14

The 31 December 20X7 balance sheets of A Ltd and its subsidiaries, B Ltd and C Ltd, are as follows:

	A Ltd	B Ltd	C Ltd
	\$'000	\$'000	\$'000
Investment, at cost			
100,000 shares in B Ltd	100	–	–
80,000 shares in C Ltd	200	–	–
Other assets	700	600	500
	<u>1,000</u>	<u>600</u>	<u>500</u>
Share capital			
Share capital	400	100	100
Retained profits	400	300	200
Liabilities	200	200	200
	<u>1,000</u>	<u>600</u>	<u>500</u>

A Ltd acquires its investment in B Ltd (the share capital of which comprises 100,000 ordinary shares) in January 20X5, when B Ltd was formed with share capital of \$100,000.

A Ltd acquires its investment in C Ltd (the share capital of which comprises 100,000 ordinary shares) in February 20X5, when C Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$100,000.

On 1 January 20X8, A Ltd sells 70,000 of C Ltd's shares for a cash consideration of \$225,000. The investment in 10,000 of C Ltd's shares is to be accounted for as 'available for sale' under FRS 39. The fair values of the remaining 10,000 of C Ltd's shares as at 1 January 20X8 and 31 December 20X8 are \$37,000 and \$40,000 respectively.

The financial statements of the three companies for the year 20X8 are as follows:

(a) Balance sheets as at 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000
Investment			
100,000 shares in B Ltd	100	—	—
10,000 shares in C Ltd	40	—	—
Other assets	1,000	800	700
	<u>1,140</u>	<u>800</u>	<u>700</u>
Share capital	400	100	100
Fair value reserve	15	—	—
Retained profits	550	420	280
Liabilities	175	280	320
	<u>1,140</u>	<u>800</u>	<u>700</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000
Revenue	500	300	200
Operating expenses	350	120	80
Profit on disposal of C Ltd	50	—	—
Profit before tax	200	180	120
Taxation	50	60	40
Profit after tax	150	120	80
Other comprehensive income	15	—	—
Total comprehensive income	<u>165</u>	<u>120</u>	<u>80</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000
Beginning fair value reserve	—	—	—
Fair value gain for the year	15	—	—
Ending fair value reserve	<u>15</u>	<u>—</u>	<u>—</u>
Beginning retained profits	400	300	200
Profit for the year	<u>150</u>	<u>120</u>	<u>80</u>
Ending retained profits	<u>550</u>	<u>420</u>	<u>280</u>

Required

Prepare for A Ltd and its subsidiary the 20X7 consolidated balance sheet and the 20X8 consolidated balance sheet, consolidated statement of comprehensive income, and consolidated statement of changes in equity (partial).

Solution**Consolidation for 20X7**

(a) Consolidation journal entries

(i) Dr Share capital 100,000
 Cr Investment in B Ltd 100,000
 (elimination of investment in B Ltd)

(ii) Dr Share capital 80,000
 Dr Retained profit 80,000
 Dr Goodwill on consolidation 40,000
 Cr Investment in C Ltd 200,000
 (elimination of investment in C Ltd)

(iii) Dr Share capital 20,000
 Dr Retained profit 40,000
 Cr Non-controlling interest 60,000
 (non-controlling interest)

(b) Consolidated balance sheet

A Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X7	
	\$'000
Goodwill on consolidation	40
Other assets	<u>1,800</u>
	<u>1,840</u>
Share capital	400
Retained profit	780
Non-controlling interest	60
Liabilities	<u>600</u>
	<u>1,840</u>

Consolidation for 20X8

(Note that with the disposal of shares in 20X8, A Ltd has lost control over C Ltd. Consequently, C Ltd has become a mere investment and its accounts will therefore not be consolidated.)

(a) Consolidation journal entries

(i)	Dr Share capital	100,000	
	Cr Investment in B Ltd	100,000	
	(elimination of investment in B Ltd)		
(ii)	Dr Profit on disposal of subsidiary	50,000	<i>company group</i>
	Dr Loss on disposal of subsidiary	20,000	
	Cr Beginning retained profit	70,000	
	(to adjust profit/loss on disposal of shares)		
(iii)	Dr Investment in C Ltd	10,000	<i>10% (2008)</i>
	Cr Beginning retained profit	10,000	<i>dealing</i>
	(to equity account the remaining shareholding)		<i>long term</i>
(iv)	Dr Investment in C Ltd	2,000	
	Cr Profit on disposal of subsidiary	2,000	
	(to fair value the remaining shareholding)		
(v)	Dr Investment in C Ltd	3,000	
	Cr Fair value gain	3,000	
	(to mark to market under FRS 39)		

(vi)	Dr Fair value gain	15,000
	Cr Investment in C Ltd	15,000
(to reverse the mark-to-market gain recorded at company level)		

(b) Consolidated accounts

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Revenue	800
Operating expenses	470
Loss on disposal of subsidiary	18
Profit before tax	312
Tax	110
Profit after tax	202
Other comprehensive income	
Fair value gain	3
Total comprehensive income	205
Profit attributable to:	
Owners of the parent	202
Non-controlling interest	—
	202
Total comprehensive income attributable to:	
Owners of the parent	205
Non-controlling interest	—
	205

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Fair value reserve	
Beginning balance	—
Gain for the year	3
Ending balance	3
Retained profits	
Beginning balance	780
Profit for the year	202
Ending balance	982

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Investment in C Ltd	40
Other assets	<u>1,800</u>
	<u>1,840</u>
Share capital	400
Fair value reserve	3
Retained profits	<u>982</u>
Liabilities	<u>455</u>
	<u>1,840</u>

Notes to the solution

- (a) The debit entry in CJE (ii) for 20X8 consolidation is to adjust the profit on sale of shares in C Ltd. From the parent's viewpoint, the profit on sale of shares is \$50,000, computed as follows:

Sale proceeds	\$225,000
Investment (\$200,000 × 7/8)	<u>\$175,000</u>
Profit on sale of shares	<u>\$ 50,000</u>

However, from the group's viewpoint, there is a 'Loss on sale of shares' of \$20,000, computed as follows:

Sale proceeds	\$225,000
Share of net assets	\$210,000*
Goodwill	<u>\$ 35,000#</u>
Loss on sale of shares	<u>\$ 20,000</u>

*As at 1 January 20X8, the net assets of C Ltd is \$300,000. Thus, the amount of C Ltd's net assets attributable to the 70,000 shares sold is \$210,000 (\$300,000 × 70%).

Goodwill on consolidation arising from acquisition of C Ltd is \$40,000 (\$200,000 – 80% × [\$100,000 + \$100,000]). Therefore, the amount of goodwill that is attributable to the 70,000 shares sold is \$35,000 (\$40,000 × 7/8).

It may be noted that the sum of the 'share of net assets of \$210,000' and 'goodwill of \$35,000' of \$245,000 may also be arrived at as follows: cost of the shares of \$175,000 (\$200,000 × 7/8) + the group's interest, based on the 70,000 shares sold, in C Ltd's post-acquisition profits of \$70,000 ([\\$200,000 – \\$100,000] × 70%).

- (b) The credit entry in CJE (ii) for 20X8 consolidation is to account for the group's interest, based on the 70,000 shares sold, in C Ltd's post-acquisition profits up to 1 January 20X8 of \$70,000 ($[\$200,000 - \$100,000] \times 70\%$).
- (c) CJE (iii) for 20X8 consolidation is to equity account for investment in 10,000 shares in C Ltd up to the date of disposal on 1 January 20X8. The 'Investment account' will be increased by \$10,000, which is equal to the group's proportionate interest based on the remaining 10,000 shares in C Ltd's post-acquisition profits ($[\$200,000 - \$100,000] \times 10\% = \$10,000$). The credit entry to 'Beginning retained profit' of \$10,000 in CJE (iii) is to account for the group's interest based on the remaining 10,000 shares in C Ltd's post-acquisition profits up to 1 January 20X8.
- (d) It may be noted that the credit entry to beginning retained profit in CJE (ii) accounts for the group's interest based on the 70,000 shares sold, and that in CJE (iii) accounts for the group's interest based on the remaining 10,000 shares held. Thus, these two credit entries combined would have accounted for the group's interest in C Ltd's post-acquisition reserves in the beginning retained profit for all the 80,000 shares held before the disposal of \$80,000 ($80\% \times [\$200,000 - \$100,000]$).
- (e) CJE (iv) is to fair value the remaining shareholding of 10,000 shares in C Ltd after the disposal of the 70,000 shares. As provided for in FRS 110, the remaining shareholding has to be re-measured to its fair value as at the date when the parent loses control of the subsidiary, and the gain/loss on re-measurement is treated as part of the gain/loss on disposal of the subsidiary. In this case, on 1 January 20X8 when there is loss of control, the carrying amount of the 10,000 shares is \$35,000 (cost of \$25,000 + share of post-acquisition profit of \$10,000 [see Note (c) above]), and the fair value is \$37,000. Thus, there is a re-measurement gain of \$2,000, and this is treated as part of the gain on disposal of the subsidiary. It should be noted that the re-measurement is done after the equity accounting (see Note [c] above).
- (f) The loss on disposal of subsidiary of \$18,000 in the consolidated statement of comprehensive income may be proved as follows: loss on disposal of the 70,000 shares of \$20,000 (see Note [a]) offset against the gain on re-measurement of the remaining 10,000 shares of \$2,000 (see Note [e]). The loss on disposal of subsidiary may also be proved as follows:

	\$'000
Sales proceeds	225
Fair value of remaining shareholding	37
Total	<u>262</u>
Share of net assets of subsidiary ($80\% \times 300$)	240
Goodwill	40
Total	<u>280</u>
Loss on disposal of subsidiary	<u>18</u>

- (g) Note that the group's beginning retained profit for 20X8 is, as it should be, equal to the group's ending retained profit for 20X7. The figure of \$780,000 may be proved as follows: A Ltd's reserve of \$400,000 + group's share of B Ltd's reserve of \$300,000 ($100\% \times \$300,000$) + group's share of C Ltd's reserve of \$80,000 ($[\$200,000 - \$100,000] \times 80\%$).
- (h) The group's after-tax profit for 20X8 of \$202,000 may be proved as follows: A Ltd's after-tax profit of \$100,000 + group's share of B Ltd's after-tax profit of \$120,000 ($100\% \times \$120,000$) – loss on disposal of shares in C Ltd of \$18,000. Note that C Ltd is a mere investment for the year and would be accounted for under the cost method.
- (i) The group's ending retained profit as at 31 December 20X8 of \$982,000 may be proved as follows: A Ltd's ending retained profit of \$550,000 + group's share of B Ltd's post-acquisition ending retained profit of \$420,000 + group's interest based on the remaining 10,000 shares in C Ltd's post-acquisition reserve up to the date of disposal on 1 January 20X8 of \$10,000 ($[\$200,000 - \$100,000] \times 10\%$) + re-measurement gain of \$2,000 on the remaining 10,000 shares at the date of loss of control.
- (j) Note that, at group level, the investment of 10,000 shares in C Ltd has been equity accounted for up to the date of disposal on 1 January 20X8 at \$35,000 (see below), re-measured to its fair value of \$37,000 at the date of disposal on 1 January 20X8, and then marked to market value of \$40,000 under FRS 39 as at 31 December 20X8.

The investment account balance at 1 January 20X8 of \$35,000 may be proved as follows: cost of investment of \$25,000 + group's 10% equity interest in the post-acquisition profits of C Ltd up to the date of disposal on 1 January 20X8 of \$10,000 ($[\$200,000 - \$100,000] \times 10\%$).

The re-measurement of the 10,000 shares at the date of disposal gives rise to a gain of \$2,000 (\$37,000 – \$35,000). This gain of \$2,000 is treated as part of the gain/loss on disposal of the shares.

The mark-to-market gain of \$3,000 (\$40,000 – \$37,000) is taken to fair value reserve as part of 'other comprehensive income' for the year, as required under FRS 39. At the group level, the fair value of \$37,000 on the date when the parent lost control is treated as the initial fair value for the purpose of calculating mark-to-market gain/loss and fair value reserve for the AFS investment under FRS 39.

- (k) In the CJE for 20X8, CJE (iii), (iv), and (v) are to adjust, at group level, for equiting accounting, re-measurement gain, and mark-to-market gain, respectively. CJE (vi) is to reverse out the mark-to-market gain recognized by A Ltd. CJE (iii) through CJE (vi) may be combined as one CJE as follows:

Dr Fair value gain	12,000
Cr Beginning retained profits	10,000
Cr Profit on disposal of subsidiary	2,000

- (l) In the consolidation for all subsequent periods, CJE (ii) through (vi) may be combined as Dr Beginning AFS reserve \$12,000; Cr Beginning retained profit \$12,000. This is to adjust for the re-measurement gain of \$12,000 on the remaining shares in C Ltd at the date of loss of control, which was recognized by the parent as part of the AFS reserve, but should be treated as part of gain/loss on disposal from the group's viewpoint (as required by FRS 110).

4.3 Other specific issues

In this section, five specific issues are discussed:

- Acquisition of subsidiary during the accounting period;
- Loss-making subsidiary;
- Subsidiary with preference share capital;
- Subsidiary with bonds; and
- Reverse acquisition.

In cases where the parent acquires a subsidiary not at the beginning or end of, but during, an accounting period, the main consolidation issues relate to the preparation and presentation of a consolidated statement of comprehensive income for the year concerned. These issues are discussed in Section 4.3.1.

Consolidation issues relating to loss-making subsidiaries, which have been briefly discussed in Chapter 3 (Section 3.2), are further illustrated in Section 4.3.2.

Where a subsidiary need not be consolidated, the issue is how the investment is to be presented in the consolidated financial statements. This is discussed in Section 4.3.3.

Reverse acquisitions are discussed in Section 4.3.4.

4.3.1 Acquisition of subsidiary during accounting period

In all the examples in the previous chapters, it has been assumed that the parent acquires a subsidiary either at the beginning or at the end of an accounting period. In practice, the parent may, of course, acquire a subsidiary at any date during an accounting period.

In a case where the parent acquires a subsidiary during the accounting period, instead of at the beginning or end of the accounting period, the only consolidation issue that will arise is in the preparation and presentation of a consolidated statement of comprehensive income for the accounting period concerned. (The preparation and presentation of a consolidated balance sheet is not affected by the date of acquisition, whether it is the beginning or the end or some other date within an accounting period. The preparation and presentation of consolidated statements of comprehensive income for the subsequent periods will also not be affected).

Where a subsidiary is acquired during an accounting period, part of the profit or loss reported in the statement of comprehensive income of the subsidiary for the year is 'pre-acquisition profit or loss' from the group's viewpoint and therefore should not be aggregated with the profit or loss of the parent in the consolidated statement of comprehensive income.

There are two approaches to exclude the pre-acquisition profit or loss of the subsidiary acquired during the year from the consolidated statement of comprehensive income.

- The first approach is to include in the consolidated statement of comprehensive income the profit or loss of the subsidiary for the whole accounting period, and

- to deduct therefrom the pre-acquisition profit or loss. (This approach is referred to as the 'whole-year' approach in this book, for ease of reference.)
- The second approach is to include only the post-acquisition profit or loss of the subsidiary in the consolidated statement of comprehensive income. (This approach is referred to as the 'part-of-the-year' approach in this book, for ease of reference.)

Example 4.15

A Ltd acquires 90% interest in B Ltd on 31 March 20X8. The summarized statement of comprehensive income of B Ltd for the year ended 31 December 20X8 is as follows:

	\$'000
Revenue	360
Expenses	240
Profit before tax	120
Tax	40
Profit after tax	80
Other comprehensive income	—
Total comprehensive income	<u>80</u>

Assuming that revenue and expenses of B Ltd accrue evenly throughout the year, B Ltd's operation results may be included in the consolidated statement of comprehensive income for the year ended 31 December 20X8 as follows:

Whole-year approach

	\$'000
Revenue	360
Expenses	240
Profit before tax	120
Tax	40
Profit after tax	80
Pre-acquisition profit	20 (3/12 × 80)
Profit for the year	60
Other comprehensive income	—
Total comprehensive income	<u>60</u>
 Attributable to:	
Shareholders of the parent	54
Non-controlling interest	6
	<u>60</u>

Part-of-the-year approach

	\$'000
Revenue	270 $(9/12 \times 360)$
Expenses	<u>180</u> $(9/12 \times 240)$
Profit before tax	90
Tax	<u>30</u> $(9/12 \times 40)$
Profit for the year	60
Other comprehensive income	—
Total comprehensive income	<u>60</u>
Attributable to:	
Shareholders of the parent	54
Non-controlling interest	<u>6</u>
	<u>60</u>

It may be noted that both approaches produce the same consolidated profit figures. The profit attributable to shareholders of the parent of \$54,000 can be verified as the group's share of the subsidiary's post-acquisition profit ($90\% \times 9/12 \times \$80,000 = \$54,000$). The profit attributable to non-controlling interest of \$6,000 can be verified as the non-controlling shareholders' share of the subsidiary's post-acquisition profit ($10\% \times 9/12 \times \$80,000 = \$6,000$).



FRS 110 requires the income and expenses of a subsidiary to be included in the consolidated financial statements from the acquisition date (paragraph 20). Applying this paragraph to a case where a subsidiary company is acquired during the year, a loose interpretation of the paragraph allows the use of either one of the approaches mentioned above in the presentation of the consolidated statement of comprehensive income for the year, although a strict interpretation of the paragraph requires the use of the part-of-the-year approach.

Table 4.1 shows the result of an empirical test done in the year 2000 on companies listed on the Singapore Exchange. It shows that 50% of the companies adopted the part-of-the-year approach, while only 21% of the companies adopted the whole-year approach. The preference for the part-of-the-year approach in Singapore could be due to the adoption of the stricter interpretation of the requirements of FRS 110, which argues that no pre-acquisition portion of the subsidiary's profit should be shown in the consolidated statement of comprehensive income, not even if the end result includes only the post-acquisition profit of the subsidiary (as would be the case under the whole-year approach).

TABLE 4.1 Subsidiary acquired during the year

Alternatives	Frequency	Percentage
A	19	21
B	45	50
C	26	29
Total	90	100

Legend:

- A: Whole-year approach
- B: Part-of-the-year approach
- C: Not applicable

It is interesting to note that the US GAAP recommends the use of the whole-year approach (ARB No. 51), because of a major shortcoming of the part-of-the-year approach, namely, by consolidating revenue and expense for only the post-acquisition period of the subsidiary, the consolidated statement of comprehensive income does not provide a basis for predicting future revenue and expense for the group.

The following example is a full illustration of the acquisition of a subsidiary during the accounting period.

Example 4.16

The financial statements of C Ltd and D Ltd for the year 20X8 are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	C Ltd	D Ltd
	\$'000	\$'000
Sales	500	300
Cost of sales	200	100
Gross profit	300	200
Operating expenses	200	125
Profit before tax	100	75
Tax	30	25
Profit after tax	70	50
Other comprehensive income	—	—
Total comprehensive income	70	50

(b) Balance sheets as at 31 December 20X8

	C Ltd	D Ltd
	\$'000	\$'000
Land	300	300
Investment in D Ltd	160	—
Current assets	140	50
	<u>600</u>	<u>350</u>
Share capital	400	100
Retained profit	120	130
Current liabilities	80	120
	<u>600</u>	<u>350</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	C Ltd	D Ltd
	\$'000	\$'000
Beginning retained profit	50	80
Profit for the year	70	50
Ending retained profit	<u>120</u>	<u>130</u>

C Ltd acquired 80% interest in D Ltd for a cash consideration of \$160,000 on 30 June 20X8. Assume that 40% of D Ltd's revenue and expenses are made in the first half of the year and 60% in the second half of the year.

Required

Prepare the consolidated statement of comprehensive income, consolidated balance sheet, and partial consolidated statement of changes in equity (showing group retained profits only) for C Ltd and its subsidiary for the year 20X8.

Solution**Whole-year Approach**

(a) Consolidation journal entries

(i)	Dr Share capital (D)	80
	Dr Beginning retained profit (D)	64
	Dr Pre-acquisition profit	16
	Cr Investment in D Ltd	160
	(to eliminate investment account)	

(ii)	Dr Non-controlling interest (CSCI)	6
	Dr Pre-acquisition profit	4
	Cr Non-controlling interest (CBS)	10
	(to record non-controlling interest in profit of D Ltd)	
(iii)	Dr Share capital (D)	20
	Dr Beginning retained profit (D)	16
	Cr Non-controlling interest (CBS)	36
	(to record non-controlling interest in other shareholders' equity of D Ltd)	

(b) Consolidation worksheet

	C Ltd	D Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	500	300			800
Cost of sales	200	100			300
Gross profit	300	200			500
Operating expenses	200	125			325
Profit before tax	100	75			175
Tax	30	25			55
Profit after tax	70	50			120
Pre-acquisition profit	—	—	i 16		
			ii 4		20
Non-controlling interest ...	—	—	ii 6		6
Group profit	—	—			94
Beginning retained profit ...	50	80	i 64		
			iii 16		50
Ending retained profit	120	130			144
Land	300	300			600
Investment	160	—	i 160		—
Current assets	140	50			190
Share capital	400	100	i 80		
			iii 20		400
Retained profit	120	130			144
Current liabilities	80	120			200
Non-controlling interest ...	—	—	ii 10		
			iii 36		46

(c) Consolidated financial statements

C Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	800
Cost of sales	300
	<hr/>
Gross profit	500
Operating expenses	325
	<hr/>
Profit before tax	175
Tax	55
	<hr/>
Profit after tax	120
Pre-acquisition profit	20
	<hr/>
Profit for the year	100
Other comprehensive income	—
	<hr/>
Total comprehensive income	100
	<hr/> <hr/>
Attributable to:	
Shareholders of the parent	94
Non-controlling interest	6
	<hr/>
	100
	<hr/> <hr/>

C Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Land	600
Current assets	190
	<hr/>
	790
	<hr/> <hr/>
Share capital	400
Retained profit	144
Non-controlling interest	46
Current liabilities	200
	<hr/>
	790
	<hr/> <hr/>

C Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	50
Profit for the year	94
Ending retained profit	144

Part-of-the-year approach

(a) Consolidation journal entries

(i)	Dr Share capital (D)	80
	Dr Beginning retained profit (D)	64
	Dr Sales (D)	96
	Cr Cost of sales (D)	32
	Cr Operating expenses (D)	40
	Cr Tax (D)	8
	Cr Investment in D Ltd	160
	(to eliminate investment account)	
(ii)	Dr Non-controlling interest (CSCI)	6
	Dr Sales (D)	24
	Cr Cost of sales (D)	8
	Cr Operating expenses (D)	10
	Cr Tax (D)	2
	Cr Non-controlling interest (CBS)	10
	(to record non-controlling interest in profit of D Ltd)	
(iii)	Dr Share capital (D)	20
	Dr Beginning retained profit (D)	16
	Cr Non-controlling interest (CBS)	36
	(to record non-controlling interest in other shareholders' equity of D Ltd)	

(b) Consolidation worksheet

	C Ltd	D Ltd	Dr	Cr	Consolidated balances
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	500	300	i 96 ii 24		680
Cost of sales	200	100		i 32 ii 8	260
Gross profit	300	200			420
Operating expenses	200	125		i 40 ii 10	275
Profit before tax	100	75			145
Tax	30	25		i 8 ii 2	45
Profit after tax	70	50			100
Non-controlling interest ..	—	—	ii 6		6
Group profit	—	—			94
Beginning retained profit ..	50	80	i 64 iii 16		50
Ending retained profit	120	130			144
Land	300	300			600
Investment	160	—		i 160	—
Current assets	140	50			190
Share capital	400	100	i 80 iii 20		400
Retained profit	120	130			144
Current liabilities	80	120			200
Non-controlling interest ..	—	—	ii 10 iii 36		46

(c) Consolidated accounts

C Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	680
Cost of sales	<u>260</u>
Gross profit	420
Operating expenses	<u>275</u>
Profit before tax	145
Tax	<u>45</u>
Profit after tax	100
Other comprehensive income	<u>—</u>
Total comprehensive income	<u>100</u>
Attributable to:	
Shareholders of the parent	94
Non-controlling interest	<u>6</u>
	<u>100</u>

C Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Land	600
Current assets	190
	<hr/>
	790
	<hr/>
Share capital	400
Retained profit	144
Non-controlling interest	46
Current liabilities	200
	<hr/>
	790
	<hr/>

C Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	50
Profit for the year	94
	<hr/>
Ending retained profit	144
	<hr/>

Notes to the solution

- (a) The consolidated balance sheets and the partial statements of changes in equity are exactly the same under both approaches.
- (b) The consolidated statements of comprehensive income differ.

Under the whole-year approach: All the revenue and expense items of the subsidiary are added across for the whole year, without the pre-acquisition/post-acquisition cut-off. The pre-acquisition portion of the subsidiary's after-tax profit is deducted as a single line in the consolidated statement of comprehensive income. The portion of the pre-acquisition profit attributable to the parent's shareholding is eliminated in CJE (i), and the portion attributable to non-controlling interest is eliminated in CJE (ii).

Under the part-of-the-year approach: All the revenue and expense items of the subsidiary accrued before the date of acquisition are eliminated and not shown in the consolidated accounts. The portion of the pre-acquisition revenue and expenses attributable to the parent's shareholding is eliminated in CJE (i), and the portion attributable to non-controlling interest is eliminated in CJE (ii).

- (c) Group profit is the same under both approaches. The group profit of \$94,000 can be proved by adding the profit of the parent of \$70,000 to the group's share of the post-acquisition profit of subsidiary of \$24,000 ($80\% \times 60\% \times \$50,000$).
- (d) Non-controlling interest in the consolidated statement of comprehensive income is the same under both approaches. It is calculated based on non-controlling shareholders' interest in the post-acquisition profit of the subsidiary. Thus, the non-controlling interest in the consolidated statement of comprehensive income is \$6,000 ($20\% \times 60\% \times \$50,000$).

- (e) Non-controlling interest in the consolidated balance sheet measures the non-controlling shareholders' interest in the subsidiary company's net assets at the balance sheet date (and therefore is not affected by the date of acquisition). The non-controlling interest of \$46,000 in the consolidated balance sheet (under both approaches) can be proved by multiplying non-controlling shareholding as at the balance sheet date by the net assets of D Ltd as at the balance sheet date ($20\% \times \$230,000 = \$46,000$).



4.3.2 Loss-making subsidiary

In a case where a subsidiary makes losses instead of earning profits, the same consolidation procedures (as those discussed in Chapter 3) apply.

Example 4.17



A Ltd acquired 80% interest in B Ltd in 20X1, at which date B Ltd's retained profit was \$100,000. The 20X3 financial statements of A Ltd and B Ltd are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X3

	A Ltd	B Ltd
	\$'000	\$'000
Sales	2,800	500
Cost of sales	1,500	300
Gross profit	1,300	200
Profit on sale of land	100	–
Operating expenses	400	280
Profit/(Loss) before tax	1,000	(80)
Tax	300	–
Profit/(Loss) after tax	700	(80)
Other comprehensive income	–	–
Total comprehensive income/(loss)	<u>700</u>	<u>(80)</u>

(b) Balance sheets as at 31 December 20X3

	A Ltd	B Ltd
	\$'000	\$'000
Land	—	200
Machinery	1,000	—
Investment in B Ltd	160	—
Current assets	340	50
	<u>1,500</u>	<u>250</u>
Share capital	500	100
Retained profit	800	70
Current liabilities	200	80
	<u>1,500</u>	<u>250</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X3

	A Ltd	B Ltd
	\$'000	\$'000
Beginning retained profit	300	150
Profit/(loss) for the year	700	(80)
Dividend	200	—
Ending retained profit	<u>800</u>	<u>70</u>

There have been no inter-company transactions except for the sale of a piece of land from A Ltd to B Ltd with an unrealized profit of \$100,000 during the year 20X3.

Required

Prepare the consolidated statement of comprehensive income, consolidated balance sheet, and consolidated statement of changes in equity (showing group retained profits only) for A Ltd and its subsidiary for the year 20X3.

Solution

(a) Consolidation journal entries (CJE)

(i)	Dr Share capital (B)	80
	Dr Beginning retained profit (B) ($80\% \times 100$)	80
	Cr Investment in B Ltd	160
	(to eliminate investment account)	
(ii)	Dr Profit on sale of land (A)	100
	Cr Land	100
	(to eliminate unrealized inter-company profit)	

(iii)	Dr Non-controlling interest (CBS) (20% × 80)	16	
	Cr Non-controlling interest (CSCI)	16	
	(to record non-controlling interest in loss of B Ltd)		
(iv)	Dr Share capital (B) (20% × 100)	20	
	Dr Beginning retained profit (B) (20% × 150)	30	
	Cr Non-controlling interest (CBS)	50	
	(to record non-controlling interest in other shareholders' equity of B Ltd)		

(b) Consolidation worksheet

	A Ltd	B Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	2,800	500			3,300
COGS	1,500	300			1,800
Gross profit	1,300	200			1,500
Profit on land	100	—	ii 100		—
Operating expenses	400	280			680
Profit/(Loss) before tax	1,000	(80)			820
Tax	300	—			300
Profit/(Loss) after tax	700	(80)			520
NCI	—	—	iii 16		16
Group profit	—	—			536
Dividend	200	—			200
Profit/(Loss) retained	500	(80)			336
Beginning retained profit ..	300	150	i 80		
			iv 30		340
Ending retained profit	800	70			676
Land	—	200	ii 100		100
Machinery	1,000	—			1000
Investment	160	—	i 160		—
Current assets	340	50			390
Share capital	500	100	i 80		
			iv 20		500
Retained profit	800	70			676
Current liabilities	200	80			280
Non-controlling interest...	—	—	iii 16		
			iv 50		34

(c) Consolidated financial statements

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X3

	\$'000
Sales	3,300
Less cost of sales	1,800
	<hr/>
Gross profit	1,500
Less operating expenses	680
	<hr/>
Profit before tax	820
Less tax	300
	<hr/>
Profit after tax	520
Other comprehensive income	—
	<hr/>
Total comprehensive income	520
Attributable to:	
Shareholders of the parent	536
Non-controlling interest	(16)
	<hr/>
	520

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X3

	\$'000
Land	100
Machinery	1,000
Current assets	390
	<hr/>
	1,490
Share capital	500
Retained profit	676
Non-controlling interest	34
Current liabilities	280
	<hr/>
	1,490

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X3

	\$'000
Beginning retained profit	340
Profit for the year	536
Dividend	200
Ending retained profit	676

Notes to the solution

- (a) Non-controlling interest in the after-tax loss of the subsidiary is adjusted as Dr Non-controlling interest in the consolidated balance sheet and Cr Non-controlling interest in the consolidated statement of comprehensive income (see CJE [iii]).
- (b) Note the 'profit attributable to shareholders of the parent' (group profit) in the consolidated statement of comprehensive income is increased (instead of being decreased) by non-controlling interest. The group profit of \$536,000 may be proved as the parent's adjusted after-tax profit of \$600,000 (\$700,000 – unrealized profit of \$100,000) – the group's share of the subsidiary's after-tax loss of \$64,000 ($80\% \times \$80,000$).
- (c) Non-controlling interest of \$34,000 in the consolidated balance sheet can be proved by multiplying the non-controlling shareholding with the shareholders' equity of the subsidiary ($20\% \times \$170,000 = \$34,000$).
- (d) Note that from the group's viewpoint, there is a post-acquisition loss of \$30,000 ($\$70,000 - \$100,000$) in respect of B Ltd. The group's retained profit of \$676,000 can be proved as equal to A Ltd's adjusted retained profit of \$700,000 ($\$800,000 - \$100,000$) – the group's share of post-acquisition loss of B Ltd of \$24,000 ($80\% \times \$30,000$).



A related issue is that where a subsidiary has been incurring losses, the parent may have to, in its own separate financial statements, make provision for impairment for its investment. Such provision for impairment losses may pose some problems in consolidation. It may be appreciated that there will be double-counting of the loss, if after the parent has taken up the loss in its own books, another loss is taken up through the consolidation process. The easiest way to solve this problem during the consolidation process is to, first of all, reverse out the amount accrued by the parent for the impairment loss of the investment, and then proceed with consolidation as if no provision for the loss has been made by the parent.

The following example illustrates a case where the subsidiary incurs such huge losses that its shareholders' equity becomes negative and the parent, in its own separate financial statements, makes provision for impairment for its investment.

Example 4.18

C Ltd acquired 80% interest in D Ltd in 20X1 for cash consideration of \$160,000, at which date, D Ltd's net assets are represented by share capital of \$100,000 and retained profit of \$100,000. Both C Ltd and D Ltd adopt 31 December year-ends.

D Ltd has been operating profitably over the years. However, for the year ended 31 December 20X8, D Ltd suffered a huge operating loss and its shareholders' equity went into negative balance. C Ltd consequently made a provision for the impairment loss in the investment of \$150,000 (because D Ltd's recoverable amount was calculated to be equal to \$10,000) for the year ended 31 December 20X8.

The 20X8 financial statements of C Ltd and D Ltd are as follows:

(a) Statements of comprehensive income for the year ended 31 December 20X8

	C Ltd	D Ltd
	\$'000	\$'000
Sales	2,800	500
Cost of sales	1,500	300
Gross profit	1,300	200
Impairment loss on investment	150	—
Operating expenses	150	520
Profit/(loss) before tax	1,000	(320)
Tax	300	—
Profit/(loss) after tax	700	(320)
Other comprehensive income	—	—
Total comprehensive income/(loss)	<u>700</u>	<u>(320)</u>

(b) Balance sheets as at 31 December 20X8

	C Ltd	D Ltd
	\$'000	\$'000
Fixed assets	1,000	100
Investment in D Ltd	10	—
Current assets	340	10
	<u>1,350</u>	<u>110</u>
Share capital	500	100
Retained profit/(loss)	800	(110)
Current liabilities	50	120
	<u>1,350</u>	<u>110</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	C Ltd	D Ltd
	\$'000	\$'000
Beginning retained profit	300	210
Profit/(loss) for the year	700	(320)
Dividend	200	—
Ending retained profit/(loss)	<u>800</u>	<u>(110)</u>

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the partial consolidated statement of changes in equity (showing the group retained profits only) for C Ltd and its subsidiary for the year 20X8.

Solution:

(a) Consolidation journal entries

(i)	Dr Investment in D Ltd	150	
	Cr Impairment loss on investment		150
	(to reverse out the impairment loss)		
(ii)	Dr Share capital (D)	80	
	Dr Beginning retained profit (D)	80	
	Cr Investment in D Ltd		160
	(to eliminate Investment account)		
(iii)	Dr Non-controlling interest (CBS)	64	
	Cr Non-controlling interest (CSCI)		64
	(to record non-controlling interest in loss)		
(iv)	Dr Share capital (D)	20	
	Dr Beginning retained profit (D)	42	
	Cr Non-controlling interest (CBS)	62	
	(to record non-controlling interest in other shareholders' equity)		

Note: If CJE (ii) gives rise to "goodwill on consolidation", another CJE is required to provide impairment loss on the goodwill as follows:

Dr Impairment loss	xx
Cr Goodwill on consolidation	xx

(b) Consolidation worksheet

	C Ltd	D Ltd	Adjustments Dr	Cr	Consolidated balances
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	2,800	500			3,300
Cost of sales	1,500	300			1,800
Gross profit	1,300	200			1,500
Impairment loss	150	—	i 150		—
Expenses	150	520			670
Profit/(loss)	1,000	(320)			830
Tax	300	—			300
Profit/(loss)	700	(320)			530
Non-controlling interest	—	—	iii 64		64
Profit for shareholders of parent	—	—			594
Dividend	200	—			200
Beginning retained profit	300	210	ii 80		
			iv 42		388
Ending retained profit	800	(110)			782
Fixed assets	1,000	100			1,100
Investment	10	—	i 150	ii 160	—
Current assets	340	10			350
Share capital	500	100	ii 80		500
			iv 20		
Retained profit	800	(110)			782
Current liabilities	50	120			170
Non-controlling interest	—	—	iii 64	iv 62	2

(c) Consolidated financial statements

C Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	3,300
Less cost of sales	1,800
Gross profit	1,500
Less operating expenses	670
Profit before tax	830
Less tax	300
Profit after tax	530
Other comprehensive income	—
Total comprehensive income	<u>530</u>
Attributable to:	
Shareholders of the parent	594
Non-controlling interest	(64)
	<u>530</u>

C Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Fixed assets	1,100
Current assets	350
	<hr/>
	1,450
Share capital	500
Retained profit	782
Non-controlling interest	(2)
Current liabilities	170
	<hr/>
	1,450

C Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	388
Profit for the year	594
Dividend	200
	<hr/>
Ending retained profit	782

Notes to the solution

- (a) CJE (i) is to reverse out the impairment loss accrued by the parent company so as to avoid double-counting the loss.
- (b) In this case, D Ltd suffered a huge loss in 20X8, such that its shareholders' equity as at 31 December 20X8 is negative. Under FRS 110 (and FRS 27 [2009]), the non-controlling interest will be allotted its share of loss, even if by so doing, the non-controlling interest will be reported with a debit balance in the consolidated balance sheet.
- (c) The profit attributable to shareholders of the parent of \$594,000 may be proved as parent's adjusted after-tax profit of \$850,000 (\$700,000 add impairment loss of \$150,000) less the group's share of subsidiary's after-tax loss of \$256,000 ($80\% \times \$320,000$).
- (d) The group retained profit of \$782,000 can be proved as equal to the parent's adjusted retained profit of \$950,000 (\$800,000 adding back impairment loss of \$150,000) less the group's share of post-acquisition loss of subsidiary of \$168,000 ($80\% \times \$210,000$).
- (e) Non-controlling interest in the consolidated balance sheet is negative \$2,000. This may be proved as equal to non-controlling interest of 20% multiplied by the negative shareholders' equity of D Ltd of \$10,000.
- (f) As discussed in Chapter 3, prior to annual period beginning on or after 1 July 2009 (the effective date of FRS 27 [2009]), the old accounting standards required that, in cases where a subsidiary suffers a huge loss such that its shareholders' equity becomes negative, the non-controlling interest's share of loss has to be restricted, so that non-controlling interest

in the consolidated balance sheet would not be carried with a debit balance. Under the old accounting standards before 1 July 2009, the non-controlling interest's share of loss in CJE (iii) would be restricted to \$62,000 (instead of \$64,000).

- (g) If there is goodwill on consolidation, the goodwill should be subject to impairment test at the consolidation stage.



4.3.3 Subsidiary with preference share capital

This section deals with cases where the subsidiary has preference share capital in addition to ordinary share capital.

FRS 110 does deal briefly, in paragraph B95, with cases where a subsidiary has cumulative preference shares. This section will deal with the issue in greater depth.

It should be noted at the outset that control is normally achieved through shareholding interest in the ordinary shares, and not in the preference shares (which normally are without voting power), of the subsidiary. Thus, shareholding interest in the preference share capital does not determine the status of the investee.

The existence of preference shares in the capital structure of the subsidiary complicates slightly the consolidation process. The complications generally arise from the various contractual rights vested with the preference shares in respect to income and return of capital.

For purposes of discussion, the impact of the various contractual rights of the preference shares on consolidation is first discussed, followed by an illustration where the parent holds part of the preference shares of a subsidiary.

4.3.3.1 Contractual rights of preference shares

Where the subsidiary has both preference and ordinary share capital, the basic consolidation process is to apportion the income and the net assets of the subsidiary into the amount that is attributable to the preference share capital and the amount attributable to the ordinary share capital. The apportionment is usually done by first allotting the income and net assets to the preference share, in accordance with the contractual rights vested in the preference shares, and then allotting the remainder to the ordinary shares. Thus, the apportionment depends principally on the contractual rights of the preference shares.

The preference shares may be preferential in terms of distribution of income (dividends), or distribution of assets on liquidation, or both. In respect of distribution of income, the preference shares may also be cumulative or non-cumulative, and/or participative or non-participative. In respect of distribution of assets, preference shares may be redeemable or otherwise, and if redeemable, may be redeemed at a price higher than, lower than, or equal to the par/stated value.

(a) Apportionment of income

If the preference shares are non-participative, income allocated to preference shares is based solely on its stated dividend rate. If the preference shares are participative, they are entitled to share the additional income after the ordinary shares are given their share of the income.

To illustrate, assume A Ltd's issued share capital consists of 10,000,000 ordinary shares, and 10,000,000 preference shares, and its after-tax profit for the year ended 31 December 20X8 is \$2,000,000. Assume that the dividend rate for preference shares is \$0.05 (net) per share. If the preference shares are non-participative, the profit for the year will be allocated as follows: \$500,000 ($10,000,000 \times \0.05) for the preference shares, and \$1,500,000 ($\$2,000,000 - \$500,000$) for the ordinary shares. If the preference shares are participative and are to participate in any excess profit equally with ordinary shares after the ordinary shares have been allocated \$0.10 per share, the amount of income allocated to the preference shares will be \$750,000 ($\$500,000 + 1/2 \times [\$2,000,000 - \$500,000 - \$1,000,000]$), and the ordinary shares will be allocated remainder of \$1,250,000 ($\$1,000,000 + 1/2 \times [\$2,000,000 - \$500,000 - \$1,000,000]$).

If the preference shares are non-cumulative, the income is allocated to the preference shares only if dividends are declared and only for the amount declared. If the preference shares are cumulative, FRS 110 provides that the income allocated to the preference share is equal to the current year's dividend entitlement, irrespective of whether dividends have been declared and/or the amount of dividends paid (paragraph B95).

To illustrate, assume B Ltd's issued share capital consists of 10,000,000 ordinary shares, and 10,000,000 preference shares. The stated dividend rate for preference shares is \$0.05 (net). B Ltd's after-tax profit for the years ended 31 December 20X7 and 20X8 are respectively \$600,000 and \$2,000,000. In 20X7, the directors do not declare any dividend for both the preference shares and ordinary shares. In 20X8, the directors declare and pay the stated dividends for the preference shares and \$0.10 dividend for the ordinary shares.

For the year 20X7, if the preference shares are non-cumulative, the profit allocated to the preference shares will be \$nil (since no dividend has been declared) and all the profit of \$600,000 will be allocated to the ordinary shares. However, if the preference shares are cumulative, the amount of profit allocated to preference shares is based on the amount of its dividend entitlement, whether or not declared for the year. Thus, the profit for the year 20X7 will be allocated as follows: \$500,000 ($10,000,000 \times \0.05) for the preference shares, and \$100,000 ($\$600,000 - \$500,000$) for the ordinary shares.

For the year 20X8, if the preference shares are non-cumulative, the profit will be allocated as follows: \$500,000 ($10,000,000 \times \0.05) for the preference shares, and the remainder of the profit of \$1,500,000 ($\$2,000,000 - \$500,000$) will be allocated to the ordinary shares. If the preference shares are cumulative, the 20X8 profit will be

similarly allocated as follows: \$500,000 for the preference shares (regardless of the fact that \$1,000,000 of dividends are actually declared for preference shares in 20X8), and \$1,500,000 for the ordinary shares.

Note that if the preference shares are non-cumulative, the amount of profit allocated to preference shares is based on the amount of dividends declared. Thus, the 20X7 income allocated to preference shares will be \$nil, and the 20X8 income allocated will be \$500,000. If the preference shares are cumulative, the amount of profit allocated to preference shares is based on their dividends entitlement, whether or not declared or paid. Thus, the 20X7 income allocated to preference shares will be \$500,000, and the 20X8 income allocated will also be \$500,000.

Note also that the dividend declared for ordinary shares is of no relevance in the apportionment of the profit between preference shares and ordinary shares.

(b) Apportionment of net assets

If the preference shares are not redeemable, the amount of net assets that is allocated to the preference shares will be based on the stated or par value of the shares, plus dividends in arrear on cumulative preference shares.

To illustrate, assume A Ltd's net assets as at 31 December 20X8 is represented by 10,000,000 preference shares with stated or par value of \$1.00 each (and with stated dividend of \$0.05 per share), 50,000,000 ordinary shares issued at \$1.00 each, and retained profit of \$40,000,000. Assuming the preference shares are not redeemable and non-cumulative, the net assets of \$100,000,000 will be allocated as follows: \$10,000,000 to the preference shares, and the remainder of \$90,000,000 to the ordinary shares. If the preference shares are cumulative and two years' dividends have not been declared, the amount of net assets allocated to the preference shares will then be \$11,000,000 ($\$10,000,000 + 10,000,000 \times \0.05×2), and the balance of \$89,000,000 ($\$100,000,000 - \$11,000,000$) will be allocated to the ordinary shares.

If the preference shares are redeemable, the redemption price will be stated, and this stated amount will be used for the apportionment of the net assets. Again, any dividends in arrears in respective of cumulative preference shares should also be included in the apportionment.

To illustrate, assume B Ltd's net assets as at 31 December 20X8 is represented by 10,000,000 preference shares with stated or par value of \$1.00 each (and with stated dividend of \$0.05 per share), 20,000,000 ordinary shares issued at \$1.00 each, and retained profit of \$20,000,000. Assuming the preference shares are redeemable at \$1.20 per share, the net assets of \$50,000,000 will be allocated as follows: \$12,000,000 to the preference shares, and the remainder of \$38,000,000 to the ordinary shares. If the preference shares are cumulative and three years' dividends have not been declared, the amount of net assets allocated to the preference shares will then be \$13,500,000 ($\$12,000,000 + 10,000,000 \times \0.05×3), and the balance of \$36,500,000 ($\$50,000,000 - \$13,500,000$) will be allocated to the ordinary shares.

4.3.3.2 Consolidation issues

Parent may hold all, none, or part of the preference share capital of the subsidiary. In this section, the consolidation issues are illustrated in a case where the preference shares of the subsidiary are partly held by the parent and partly held by outsiders.

That portion of the subsidiary's preference shares that are held by the parent would have to be eliminated upon consolidation. Any difference between the cost of acquisition and the redemption value of the shares will be recorded as a charge or a credit to the group reserves. This is because when the parent acquires part of the preference shares of the subsidiary, the transaction should be treated as if the group retires that part of the preference shares.

The income and the net assets attributable to the preference shares held by the outsiders should be accounted for as part of the 'non-controlling interest' in the consolidated financial statements.

Example 4.19

P Ltd pays \$200,000 to acquire 60% of the ordinary share capital of S Ltd in January 20X5 when S Ltd's net assets are represented by ordinary share capital of \$150,000 and retained profit of \$100,000.

On 1 January 20X6, S Ltd makes a public issue of 100,000 cumulative preference shares at \$1.00 each. The preference shares carry a stated dividend of \$0.10 per share. S Ltd has the option to redeem the preference shares ten years after the issuance date at \$1.00 per share.

On 1 January 20X8, P Ltd, which has not subscribed for any of S Ltd's preference shares on the issuance date, acquires 30,000 of the shares at a cost of \$1.10 per share.

The financial statements of P Ltd and S Ltd for 20X8 are as follows:

- (a) Statements of comprehensive income (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd
	\$'000	\$'000
Sales	500	300
Cost of good sold	200	100
Gross profit	300	200
Preference dividend income	3	—
Ordinary dividend income	21	—
Expenses	174	100
Profit before tax	150	100
Tax	50	30
Profit after tax	100	70

(b) Balance sheets as at 31 December 20X8

	P Ltd	S Ltd
	\$'000	\$'000
Investment in S Ltd		
Preference shares	33	—
Ordinary shares	200	—
Other assets	1,600	900
	<u>1,833</u>	<u>900</u>
Preference share capital	—	100
Ordinary share capital	500	150
Retained profit	900	275
Liabilities	433	375
	<u>1,833</u>	<u>900</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd
	\$'000	\$'000
Beginning retained profit	850	250
Profit for the year	100	70
Dividends		
Preference	—	10
Ordinary	50	35
Ending retained profit	<u>900</u>	<u>275</u>

A goodwill impairment of \$30,000 was written off in 20X6 and another goodwill impairment of \$10,000 was written off in 20X8.

Required

Prepare the consolidated financial statements for P Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Preference share capital	30,000
	Dr Capital reserve	3,000
	Cr Investment in preference shares	33,000
	(elimination of investment preference shares)	

(ii)	Dr Ordinary share capital	90,000
	Dr Beginning retained profit	60,000
	Dr Goodwill on consolidation	50,000
	Cr Investment in ordinary shares	200,000
	(elimination of investment in ordinary shares)	
(iii)	Dr Beginning retained profit	30,000
	Dr Impairment loss/expense	10,000
	Cr Goodwill on consolidation	40,000
	(goodwill impairment)	
(iv)	Dr Preference share dividend income	3,000
	Cr Dividend appropriation: preference	3,000
	(elimination of inter-company preference dividend)	
(v)	Dr Ordinary share dividend income	21,000
	Cr Dividend appropriation: ordinary	21,000
	(elimination of inter-company ordinary dividend)	
(vi)	Dr Non-controlling interest (CSCI)	31,000
	Cr Non-controlling interest (CBS)	31,000
	(non-controlling interest in profit)	
(vii)	Dr Non-controlling interest (CBS)	7,000
	Cr Dividend appropriation: preference	7,000
	(non-controlling interest in preference dividend)	
(viii)	Dr Non-controlling interest (CBS)	14,000
	Cr Dividend appropriation: ordinary	14,000
	(non-controlling interest in ordinary dividend)	
(ix)	Dr Preference share capital	70,000
	Cr Non-controlling interest (CBS)	70,000
	(non-controlling interest in preference share capital)	
(x)	Dr Ordinary share capital	60,000
	Dr Beginning retained profit	100,000
	Cr Non-controlling interest (CBS)	160,000
	(non-controlling interest in ordinary share capital)	

(b) Consolidation worksheet

	P Ltd	S Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	500	300			800
Cost of goods sold	200	100			300
Gross profit	300	200			500
Preference share dividend	3	—	iv 3		—
Ordinary share dividend	21	—	v 21		—
Expenses	174	100	iii 10		284
Profit before tax	150	100			216
Tax	50	30			80
Profit after tax	100	70			136
NCI (CSCI)	—	—	vi 31		31
Group profit	—	—			105
Dividends					
Preference	—	10	iv 3 vii 7		—
Ordinary	50	35	v 21 viii 14		50
Profit retained	50	28			55
Beginning retained profits	850	250	ii 60 iii 30 x 100		910
Ending retained profits	900	278			965
Goodwill	—	—	ii 50	iii 40	10
Investment in preference shares	33	—	i 33		—
Investment in ordinary shares ..	100	—	ii 100		—
Other assets	1,600	900			2,500
Preference share capital	—	100	i 30 ix 70		—
Ordinary share capital	500	150	ii 60 x 40		500
Capital reserve	—	—	i 3		3
Retained profit	900	278			965
Liabilities	433	375			808
NCI (CBS)	—	—	vii 7 viii 14 x 160	vi 31 ix 70	240

(c) Consolidated accounts

P Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	800
Cost of goods sold	300
<hr/>	
Gross profit	500
Expenses	284
Profit before tax	216
Tax	80
<hr/>	
Profit after tax	136
<hr/>	
Attributable to:	
Shareholders of the parent	105
Non-controlling interest	31
<hr/>	
	<u>136</u>

P Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Goodwill on consolidation	10
Other assets	2,500
<hr/>	
	<u>2,510</u>
<hr/>	
Share capital	500
Capital reserve	(3)
Retained profit	965
Non-controlling interest	240
Liabilities	808
<hr/>	
	<u>2,510</u>

P Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	910
Profit for the year	105
Dividend	50
<hr/>	
Ending retained profit	965

Notes to the solution

- (a) In this case, the subsidiary company has both preference share capital and ordinary share capital. The preference shares are 30% held by the parent and 70% held by non-controlling shareholders. The ordinary shares are 60% held by the parent and 40% held by non-controlling shareholders.
- (b) The profit of the subsidiary company will be allocated to the preference shareholders and the ordinary shareholder as follows:

	\$'000
Profit after tax	70
Attributable to preference shareholders ($100,000 \times \$0.10$) ...	10
Attributable to ordinary shareholders	<u>60</u>

and allocated to the parent and non-controlling shareholders as follows:

	\$'000
Attributable to parent	
$(30\% \times \$10,000 + 60\% \times \$60,000)$ rounded to	39
Attributable to non-controlling shareholders	
$(70\% \times \$10,000 + 40\% \times \$60,000)$ rounded to	<u>31</u>
Total	<u>70</u>

- (c) The group profit of \$105,000 may be proved as follows: P Ltd's profit of \$100,000 plus group's share of S Ltd's profit of \$39,000 (see Note [b] above) less inter-company dividends of \$24,000 less goodwill impairment of \$10,000.
- (d) Non-controlling interest in the consolidated statement of comprehensive income of \$31,000 is calculated as shown in Note (b) above.
- (e) Non-controlling interest in the consolidated balance sheet of \$240,000 consists of \$70,000 of the net assets attributable to its 70% interest in S Ltd's preference share capital and \$170,000 attributable to its 40% interest in S Ltd's ordinary share capital. The \$170,000 is calculated based on 40% interest in the net assets after deducting the amount attributable to preference shareholders, as follows: $40\% \times (\$525,000 - \$100,000) = \$170,000$.
- (f) The group's 20X8 beginning retained profit of \$910,000 should be equal to the group's 20X7 ending retained profit which may be computed as follows: P Ltd's 20X7 ending retained profit of \$850,000 plus group's 60% share of S Ltd's post-acquisition profit up to 31 December 20X7 of \$90,000 ($60\% \times [\$250,000 - \$100,000]$) less goodwill impairment of \$30,000. Note that there is no preference shares dividends in arrears, and therefore all the retained profits are attributable to ordinary shares.
- (g) The group's 20X8 ending retained profit of \$965,000 may be proved as follows: P Ltd's ending retained profit of \$900,000 plus group's 60% share of S Ltd's post-acquisition profit that is attributable to ordinary shareholders up to 31 December 20X8 of \$105,000 ($60\% \times [\$275,000 - \$100,000]$) less goodwill impairment of \$40,000. Note again that

there is no preference shares dividends in arrears, and therefore all the retained profits are attributable to ordinary shares.



4.3.4 Subsidiary with bonds

This section deals with cases where the subsidiary has bond issues, besides ordinary share capital. The bonds may be entirely held by a third party, or entirely held by the parent, or partly held by the third party and partly held by the parent. If the bonds are entirely held by a third party, there will be no consolidation issue involved. This is because, in this case, all the relevant accounts that are presented in the subsidiary's financial statements will also have to be similarly presented in the consolidated financial statements. There is no consolidation adjustment required. Note that the bond held by a third party is presented as liability, not as part of 'non-controlling interest', in the consolidated balance sheet.

If the bonds are either wholly or partly held by the parent, the inter-company indebtedness and the related interest income/expense would have to be eliminated during the consolidation process. The bonds held by the parent may be acquired directly from the subsidiary on the date of issue or from a third party on a date subsequent to the date of issue.

If the parent acquires the bonds directly from the subsidiary on the date of issue, the book value of the bonds investment in the parent's books will be proportionately equal to the book value of the bonds in the subsidiary's books. If the parent acquires the bonds from a third party, the purchase cost may not be proportionately equal to the book value of the bonds. The parent's acquisition of subsidiary's bonds from a third party should be accounted for as if the group does an early extinguishing of its bonds. The difference arising therefrom will be accounted as gain/loss on early extinguishing of bond in the consolidated financial statements.

The discussion in this section will be on cases where the subsidiary issues the bonds to the parent. It may be appreciated that the discussions in this section are equally applicable to cases where the subsidiary holds the bonds issued by the parent. The various scenarios are illustrated below.

4.3.4.1 Parent acquires all the subsidiary's bonds at the date of issue

Where the subsidiary issues all its bonds at par to the parent, the consolidation elimination is very simple. To illustrate, assume that B Ltd is a subsidiary of A Ltd and that both companies have 31 December year-end. On 1 January 20X8, B Ltd issues \$10,000,000 five-year bonds with coupon rate of 10% per annum to A Ltd at par.

In this case, B Ltd's 20X8 balance sheet will carry an item 'Bonds payable \$10,000,000', and its 20X8 income statement will carry an expense item 'Interest expense \$1,000,000'. A Ltd's 20X8 balance sheet will carry an item 'Investment in bonds

\$10,000,000' and its 20X8 income statement will carry an income item 'Interest income \$1,000,000'. On consolidation, all the inter-company accounts balances in relation to the bonds will be eliminated. The relevant consolidation journal entries are as follows:

Dr Bonds payable	10,000,000
Cr Investment in bonds	10,000,000
(elimination of inter-company bonds)	
Dr Interest income	1,000,000
Cr Interest expense	1,000,000
(elimination of inter-company interest)	

In the 20X8 consolidated financial statements, all the four inter-company accounts will not be presented. Note also that the elimination of the interest income against interest expense does not affect group profit and therefore will also not affect non-controlling interest calculations.

4.3.4.2 Parent acquires part of subsidiary's bonds at the date of issue

Where only part of the subsidiary's bonds is issued to the parent, then only the parent proportionate share will be eliminated. The other part of subsidiary's bond that is held by other parties will be shown as liability in the consolidated balance sheet. Similar adjustment is made for the bond interest. To illustrate, assume that B Ltd is a subsidiary of A Ltd and that both companies have 31 December year-end. On 1 January 20X8, B Ltd makes a public issue of \$10,000,000 five-year bonds with coupon rate of 8% per annum at par, of which 10% is issued to A Ltd.

In this case, B Ltd's 20X8 balance sheet will carry an item 'Bonds payable \$10,000,000', and its 20X8 income statement will carry an expense item 'Interest expense \$800,000'. A Ltd's 20X8 balance sheet will carry an item 'Investment in bonds \$1,000,000' and its 20X8 income statement will carry an income item 'Interest income \$80,000'. On consolidation, all the inter-company accounts balances in relation to the bonds will be eliminated. The relevant consolidation journal entries are as follows:

Dr Bonds payable	1,000,000
Cr Investment in bonds	1,000,000
(elimination of inter-company bonds)	
Dr Interest income	80,000
Cr Interest expense	80,000
(elimination of inter-company interest)	

In the 20X8 consolidated financial statements, there will be 'Bond payable \$9,000,000' in the consolidated balance sheet and 'Interest expense \$720,000' in the consolidated income statements. Note that the bond held by other parties is presented as a liability (not as part of 'non-controlling interest') in the consolidated balance sheet. Note also that the elimination of the interest income against interest expense does

not affect group profit and therefore will also not affect non-controlling interest calculations.

4.3.4.3 Parent acquires part of subsidiary's bonds at a subsequent date

Where the parent acquires part of the subsidiary's bonds from a third party subsequent to the date of issue, this will be accounted for, at the group level, as early extinguishing of bonds, and the difference arising therefrom will be accounted as gain/loss on early extinguishing of bond. To illustrate, assume that B Ltd is a subsidiary of A Ltd and that both companies have 31 December year-end. On 1 January 20X8, B Ltd makes a public issue of \$10,000,000 five-year bonds with coupon rate of 8% per annum at par. The parent acquires 10% of the bond at 99 on 31 December 20X9, after the 20X9 interest has been paid.

In this case, B Ltd's 20X9 balance sheet will carry an item 'Bonds payable \$10,000,000', and its 20X9 income statement will carry an expense item 'Interest expense \$800,000'. A Ltd's 20X9 balance sheet will carry an item 'Investment in bonds \$990,000'. On consolidation, A Ltd's acquisition of B Ltd's bonds on 31 December 20X9 is treated as an early extinguishing of the bonds. The relevant consolidation journal entries are as follows:

Dr Bonds payable	1,000,000
Cr Investment in bonds	990,000
Cr Gain on early extinguishing of bonds	10,000
(elimination of inter-company bonds)	

In the 20X9 consolidated financial statements, there will be 'Bond payable \$9,000,000' in the consolidated balance sheet, 'Interest expense \$800,000', and 'Gain on early extinguishing of bonds \$10,000' in the consolidated income statements.

4.3.4.4 Subsidiary's bonds issued at premium/discount

Where the subsidiary company issues the bonds at premium or discount, the premium or discount would have to be amortized over the bond period. The amortization charge (on bond discount) or credit (on bond premium) will form part of the periodic interest expense. Under FRS 39, the premium/discount should be amortized using the effective interest rate method. Where the subsidiary's bonds are issued to the parent at a premium or at a discount, the parent would similarly have to amortize the premium/discount on its investment in bonds and account for the amortization charge (on premium) or credit (on discount) as part of the interest income.

Thus, where the subsidiary issues the bonds at premium or discount to its parent, the consolidation elimination is again very simple. To illustrate, assume that B Ltd is a subsidiary of A Ltd and that both companies have 31 December year-end. On 1 January 20X8, B Ltd issues \$10,000,000 10-year bonds with coupon rate of 10% per annum to A Ltd at 101. Assume that both companies amortize the premium using the

effective interest rate method, based on the effective interest rate implicit in the bonds of 9.8%. In this case, when B Ltd issues the bonds, it will record the transaction as follows:

Dr Cash	10,100,000
Cr Bonds payable	10,000,000
Cr Bond premium	100,000

When A Ltd purchases the bonds, it will record the transaction as follows:

Dr Investment in bonds	10,100,000
Cr Cash	10,100,000

Assuming the interest is payable on 31 December each year, B Ltd will record the interest payment as follows:

Dr Interest expense	989,000*
Dr Bond premium	11,000
Cr Cash	1,000,000

$$* \text{Interest expense} = \$10,100,000 \times 9.8\%$$

and A Ltd will record the interest received as follows:

Dr Cash	1,000,000
Cr Investment in bonds	11,000
Cr Interest income	989,000#

$$\# \text{Interest income} = \$10,100,000 \times 9.8\%$$

B Ltd's 20X8 balance sheet will therefore carry the bonds as 'Bonds payable \$10,000,000, add bond premium \$89,000', and its 20X8 income statement will carry an expense item 'Interest expense \$989,000'. A Ltd's 20X8 balance sheet will carry an item 'Investment in bonds \$10,089,000' and its 20X8 income statement will carry an income item 'Interest income \$989,000'. On consolidation, all the inter-company accounts balance in relation to the bonds will be eliminated. The relevant consolidation journal entries will be as follows:

Dr Bonds payable	10,000,000
Dr Bond premium	89,000
Cr Investment in bonds	10,089,000
(elimination of inter-company bonds)	
Dr Interest income	989,000
Cr Interest expense	989,000
(elimination of inter-company interest)	

In the 20X8 consolidated financial statements, all the accounts in relation to the bonds will not be presented. Note also that the elimination of the interest income against interest expense does not affect group profit and therefore will also not affect non-controlling interest calculations.

4.3.5 Reverse acquisition

FRS 103 provides that the acquirer in a business combination is the combining entity that obtains control of the other combining entities (paragraph 17).

Generally, in a business combination that is effected through payment of cash, the entity that pays for the shares will ultimately gain control of the combining entities and is therefore the acquirer. In a business combination that is effected through an exchange of equity interest, the entity that issues the equity interest is normally the acquirer.

However, in some business combinations, commonly referred to as 'reverse acquisitions' (or 'reverse takeovers'), the acquirer is the entity whose equity interests have been acquired and the issuing entity is the acquiree. This often happens where a large non-listed company arranges to have itself acquired by a small listed company as a means of obtaining stock exchange listing (often referred to as 'back-door listing'). In these cases, legally, the issuing listed company is regarded as the parent and the non-listed company is regarded as the subsidiary. However, the legal subsidiary (the non-listed company) is, in substance, the acquirer since its shareholders are the ones who ultimately gain control over the combining entities.

FRS 103 further provides that in a reverse acquisition, the consolidated financial statements should be prepared from the viewpoint of the legal subsidiary, except that the share capital should be that of the legal parent.

One major consolidation problem in reverse acquisition is the determination of the cost of acquisition. For the purposes of determining the cost of acquisition, it is necessary to determine the number of shares that the legal subsidiary would have to issue in an ordinary acquisition, which is equal to the number of shares that would provide the shareholders of the legal parent the same percentage ownership interest of the combined entity as they have in the reverse takeover.

Example 4.20

ABC Ltd is listed in the Singapore Exchange (SGX) with 100 million ordinary shares in issue. The shareholders of XYZ Ltd (which has 60 million ordinary shares in issue) wishes to be listed through the back door.

On 30 June 20X6, the two companies effect a business combination under which ABC Ltd issues 2.5 ordinary shares in exchange for each ordinary share of XYZ Ltd, i.e., ABC Ltd issues 150 million of its ordinary shares in exchange for all the 60 million ordinary shares in XYZ Ltd. In this case, while XYZ Ltd is legally a 100% owned subsidiary of ABC Ltd, the shareholders of XYZ Ltd have in fact gained 60% control ($150/250$) over ABC Ltd. This is an example of a reverse takeover.

Assume that the balance sheets of the two companies immediately before the above reverse takeover are as follows. Assume ABC Ltd's assets have a fair value of \$190 million, and XYZ Ltd's assets have a fair value of \$400 million.

	ABC Ltd	XYZ Ltd
	\$'million	\$'million
Assets	180	370
Liabilities	(70)	(170)
	<u>110</u>	<u>200</u>
Share capital	100	60
Retained profit	10	140
	<u>110</u>	<u>200</u>

In this case, given that after the reverse takeover the other shareholders in ABC Ltd now have 40% interest in XYZ Ltd (through ABC Ltd), XYZ Ltd will have to issue 40 million of its ordinary shares (in an ordinary takeover) to give the same effect. Assuming that at 30 June 20X6, the fair value of XYZ Ltd's ordinary shares is estimated at \$5 per share, the cost of takeover is \$200 million ($40 \text{ million} \times \5).

Given that ABC Ltd's net assets have a fair value of \$120 million (assets of \$190 million – liabilities of \$70 million), the goodwill on consolidation is \$80 million (cost of acquisition of \$200 million – fair value of net assets acquired of \$120 million [$\$190 \text{ million} - \70 million]). In this case, the consolidated balance sheet for ABC Ltd group as at 30 June 20X6 is as follows:

	\$'million
Goodwill	80
Assets (190 + 370)	560
Liabilities (70 + 170)	<u>(240)</u>
	<u>400</u>
Share capital	260
Retained profit	<u>140</u>
	<u>400</u>

Note that, as required by FRS 103, the consolidated financial statement is prepared from the viewpoint of XYZ Ltd (legal subsidiary), except that the share capital is that of ABC Ltd (the legal parent). The share capital in the consolidated balance sheet comprises ABC Ltd's 250 million shares at a total value of \$260 million (which is the total of the 'acquisition' cost of \$200 million and XYZ Ltd's \$60 million share capital). Note also that the fair value adjustment applies to the assets of ABC Ltd (not those of XYZ Ltd), and that the retained profit of ABC Ltd (not that of XYZ Ltd) is eliminated, being a pre-acquisition reserve, in the consolidation process.

4.4 Summary

This chapter discusses some specific issues that may arise in consolidation. Nine specific issues have been discussed, namely, (a) step acquisition, (b) increase in shareholder interest in a subsidiary, (c) decrease in shareholding interest in a subsidiary with no loss of control, (d) decrease in shareholding interest in a subsidiary with loss of control, (e) acquisition of a subsidiary during the accounting period, (f) loss-making subsidiary; (g) subsidiary with preference share capital; (h) subsidiary with bonds; and (i) reverse acquisition.

Issues (a) to (d) relate to changes in shareholding interest. It should be noted that the consolidation issues arising therefrom are now provided for in FRS 103 and FRS 110 (and FRS 27 [2009]), effective prospectively for annual periods beginning on or after 1 July 2009.

In step acquisitions, FRS 103 provides that the shareholding interest held before control is achieved should be assumed to be sold and reacquired on the date control is achieved, with the effect that all the shareholdings are deemed to be acquired on the date control is achieved.

Increases and decreases in shareholding interest in a subsidiary are deemed to be equity transactions. Thus, there is no gain/loss, no change to fair value adjustment, and no change to goodwill. Only two items will be affected, namely, non-controlling interest and the fair value of consideration received/paid, and the difference between these two changes is to be taken directly to group equity.

Where decreases in shareholding interest in a subsidiary result in loss of control, FRS 110 requires gain/loss to be accounted for. The remaining shareholding interest, if any, is to be re-measured at fair value at the date loss of control and subsequently be accounted for under FRS 28 or FRS 39, as the case may be.

Where the parent acquires a subsidiary during an accounting period, the main consolidation issues relate to the preparation and presentation of consolidation statement of comprehensive income for the year concerned.

For loss-making subsidiaries, care should be taken not to double-count the loss. For subsidiary with preference share capital, it should be noted that the preference share not held by parent is treated as part of non-controlling interest, whereas for subsidiary with bonds, the bonds not held by parent should be presented as liability in the consolidated balance sheet. For reverse acquisitions, the legal subsidiary is the de facto parent, and consolidated financial statements are therefore prepared from the viewpoint of the legal subsidiary.

Problems for self-study

PROBLEM 4.1

- P Ltd acquires/disposes shares in S Ltd (whose share capital of \$100 million comprises 100 million ordinary shares) as follows:

Date	Number of shares acquired/(disposed)	Cost (price per share)	Balance of S Ltd's retained profit
20X3	10 million	\$ 5	\$300 million
20X4	20 million	\$ 6	\$400 million
20X5	40 million	\$ 7	\$500 million
20X6	10 million	\$ 8	\$600 million
20X7	(20) million	\$ 9	\$700 million
20X8	30 million	\$10	\$800 million

Required

Compute the amount of 'goodwill on consolidation' to be presented in the consolidated balance sheet for each of the years 20X5 through 20X8.

Solution

The goodwill on consolidation is computed in 20X5 as

Cost (70 million × \$7)	\$490 million
Share of net asset (70% × \$600 million)	\$420 million
Goodwill	<u>\$ 70 million</u>

The share acquisition/disposal in 20X6, 20X7, and 20X8 are accounted for as 'equity transactions'. Therefore, the goodwill on consolidation remains at \$70 million (assuming no impairment) for each of these years.

PROBLEM 4.2

A Ltd (which has acquired another subsidiary in 20X1) pays \$90 million to acquire a 90% interest in B Ltd (whose share capital of \$100 million comprises 100 million ordinary shares) when B Ltd was incorporated in February 20X2. In May 20X5, when B Ltd's net assets is represented by share capital of \$100 million and retained profit of \$100 million, and when B Ltd's shares are traded at \$3 per share, A Ltd disposes of some shares in B Ltd.

Compute the gain/loss on disposal of B Ltd's shares, as presented in the 20X5 consolidated statement of comprehensive income, under the following independent scenarios:

- (i) A Ltd disposes of 90 million of B Ltd's shares
- (ii) A Ltd disposes of 80 million of B Ltd's shares
- (iii) A Ltd disposes of 70 million of B Ltd's shares
- (iv) A Ltd disposes of 20 million of B Ltd's shares
- (v) A Ltd disposes of 10 million of B Ltd's shares

Solution

In May 20X5, the carrying amount of B Ltd's shares at the group level is \$2 per share (\$200 million/100 shares). In each of the scenarios (i), (ii), and (iii) where there is loss of control, the gain on disposal of subsidiary is \$90 million, as computed below. In each of the scenarios (iv) and (v) where there is no loss of control, and the disposal is accounted for as 'equity transaction', there is no gain/loss on disposal.

Scenario 1

Sales proceed ($90 \text{ million} \times \3)	\$270 million
Carrying amount ($90 \text{ million} \times \2)	\$180 million
Gain	<u><u>\$ 90 million</u></u>

Scenario 2

Sales proceed ($80 \text{ million} \times \3)	\$240 million
Carrying amount ($80 \text{ million} \times \2)	\$160 million
Gain on sale of 80 million shares	\$ 80 million
Re-measurement gain of remaining 10 million shares ($10 \text{ million} \times [\$3 - \$2]$)	\$ 10 million
Total gain	<u><u>\$ 90 million</u></u>

Scenario 3

Sales proceed ($70 \text{ million} \times \3)	\$210 million
Carrying amount ($70 \text{ million} \times \2)	\$140 million
Gain on sale of 70 million shares	\$ 70 million
Re-measurement gain of remaining 20 million shares ($20 \text{ million} \times [\$3 - \$2]$)	\$ 20 million
Total gain	<u><u>\$ 90 million</u></u>

PROBLEM 4.3

The financial statements of A Ltd and its subsidiaries B Ltd and C Ltd for the year 20X8 are as follows:

- (a) Balance sheets as at 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000
Investment, at cost			
100,000 shares in B Ltd	135	—	—
55,000 shares in C Ltd	108	—	—
Other assets	957	800	700
	<u>1,200</u>	<u>800</u>	<u>700</u>
Share capital	400	100	100
Retained profits	500	420	280
Liabilities	300	280	320
	<u>1,200</u>	<u>800</u>	<u>700</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd
	\$'000	\$'000	\$'000
Sales	500	600	400
Cost of sales	200	250	150
Gross profit	300	350	250
Operating expenses	150	170	130
Profit before tax	150	180	120
Taxation	50	60	40
Profit after tax	100	120	80
Other comprehensive income	—	—	—
Total comprehensive income	100	120	80

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd
	\$'000	\$'000	\$'000
Beginning retained profits	400	300	200
Profit for the year	100	120	80
Ending retained profits	500	420	280

The share capital of A Ltd comprises 400,000 ordinary shares. The share capital of B Ltd and C Ltd each comprises 100,000 ordinary shares.

A Ltd acquired 80% in B Ltd for a cash consideration of \$85,000 in January 20X1, when B Ltd was incorporated with share capital of \$100,000. A Ltd acquired the remaining 20,000 shares in B Ltd for a cash consideration of \$50,000 on 1 April 20X6, when B Ltd's retained profit was \$100,000.

A Ltd acquired its investment in C Ltd as follows:

Date	Number of shares purchased	Cost	Balance of C Ltd's retained profit
		\$'000	\$'000
12 February 20X2	5,000	5	8
13 March 20X3	6,000	9	15
16 June 20X6	44,000	88	60

A Ltd has accounted for its investment in the 11,000 shares in C Ltd as 'trading' securities under FRS 39. As at 31 December 20X5, the investment in the 11,000 shares has been marked to its market value of \$20,000. The cumulative gain of \$6,000 (\$20,000 – \$14,000) is in A Ltd's retained profit on 1 January 20X6.

In 20X6, when C Ltd became a subsidiary, A Ltd accounted for its investment in C Ltd at \$108,000 (carrying amount of 11,000 shares at \$20,000 + cost of 44,000 shares at \$88,000). The investment in C Ltd has since been carried at its 'cost' of \$108,000.

During the year 20X8, B Ltd sold goods invoiced at \$100,000 to A Ltd. At 31 December 20X8, the stock of A Ltd included goods bought from B Ltd with unrealized profit of \$10,000.

All the excess payments are for goodwill. There has been no impairment of goodwill. Non-controlling interest has been measured based on its share of the net identifiable assets of the subsidiary. The group adopted FRS 103 and FRS 110 on 1 January 20X6.

Required

Prepare the consolidated balance sheet, consolidated statement of comprehensive income, and partial consolidated statement of changes in equity for A Ltd and its subsidiaries for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (B)	80	
	Dr Goodwill on consolidation	5	
	Cr Investment in B Ltd		85
	(to eliminate the 80% investment account)		
(ii)	Dr Share capital (B)	20	
	Dr Beginning retained profit (B)	20	
	Dr Goodwill on consolidation	10	
	Cr Investment in B Ltd		50
	(to eliminate the 20% investment account)		
(iii)	Dr Capital reserve (group)	10	
	Cr Goodwill on consolidation		10
	(to comply with FRS 110)		
(iv)	Dr Sales	100	
	Cr Cost of sales		100
	(to eliminate inter-company sales)		
(v)	Dr Cost of sales (B)	10	
	Cr Other assets		10
	(to eliminate unrealized profit in stock)		
(vi)	Dr Investment in C Ltd	2	
	Cr Beginning retained profit (group)		2
	(to comply with FRS 103)		

(vii)	Dr Share capital (C)	55
	Dr Beginning retained profit (C)	33
	Dr Goodwill on consolidation	22
	Cr Investment in C Ltd	110
	(to eliminate investment account)	
(viii)	Dr Non-controlling interest (CSCI)	36
	Cr Non-controlling interest (CBS)	36
	(to record non-controlling interest in profit)	
(ix)	Dr Share capital (C)	45
	Dr Beginning retained profit (C)	90
	Cr Non-controlling interest (CBS)	135
	(to record non-controlling interest)	

(b) Consolidation worksheet

	A Ltd	B Ltd	C Ltd	Adjustments		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	500	600	400	iv 100		1,400
Cost of sales	200	250	150	v 10	iv 100	510
Gross profit	300	350	250			890
Operating expenses	150	170	130			450
Profit before tax	150	180	120			440
Tax	50	60	40			150
Profit after tax	100	120	80			290
Non-controlling interest ...	—	—	—	viii 36		36
Group profit	—	—	—			254
Beginning retained profit ...	400	300	200	ii 20 vii 33 ix 90	vi 2	759
Ending retained profit	500	420	280			1,013
Goodwill	—	—	—	i 5 ii 10 vii 22	iii 10	27
Investment in B Ltd	135	—	—		i 85 ii 50	—
Investment in C Ltd	108	—	—	vi 2	vii 110	—
Other assets	957	800	700		v 10	2,447
Share capital	400	100	100	i 80 ii 20 vii 55 ix 45		400
Capital reserve	—	—	—	iii 10		10
Retained profit	500	420	280			1,013
Liabilities	300	280	320			900
Non-controlling interest ...	—	—	—	viii 36 ix 135		171

(c) Consolidated financial statements

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,400
Cost of sales	510
Gross profit	890
Operating expenses	450
Profit before tax	440
Tax	150
Profit after tax	290
Other comprehensive income	—
Total comprehensive income	<u>290</u>
 Attributable to:	
Shareholders of the parent	254
Non-controlling interest	36
	<u>290</u>

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Goodwill on consolidation	27
Other assets	<u>2,447</u>
	<u>2,474</u>
Share capital	400
Capital reserve	(10)
Retained profits	1,013
Non-controlling interest	171
Liabilities	<u>900</u>
	<u>2,474</u>

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Capital reserve	
Beginning balance	-
Increase in shareholding in subsidiary	(10)
Ending balance	<u>(10)</u>
Retained profits	
Beginning balance	759
Profit for the year	254
Ending balance	<u>1,013</u>

Notes to the solution

- (a) This problem involves a case where additional shares are acquired after control has been achieved (B Ltd) and a case where control is achieved through piecemeal acquisition or step acquisition (C Ltd).
- (b) CJE (i) is to eliminate the initial 80% investment against B Ltd's share capital (as done in all previous years' consolidation). CJE (ii) is to eliminate the additional 20% investment against B Ltd's share capital and pre-acquisition reserves as at 1 April 20X6. CJE (i) gives rise to a goodwill of \$5,000, and CJE (ii) gives rise to a goodwill of \$10,000. However, FRS 110 requires that there should not be any change to the goodwill as a result of additional share acquisition. Thus, in CJE (iii) there is Cr Goodwill of \$10,000, so that the requirement of FRS 110 is met.
- (c) CJE (iii) is to adjust for the effect of acquisition of additional shares in a subsidiary as required by FRS 110. The credit entry 'Goodwill \$10,000' is as explained in Note (b) above. The debit entry 'Capital reserve \$10,000' is to account for the difference between the cost of share acquisition of \$50,000 and the change in non-controlling interest of \$40,000 (as at 31 March 20X6, the non-controlling interest was \$40,000 [$20\% \times (\$100,000 + \$100,000)$]), but as at 1 April 20X6, when A Ltd acquired the additional shares, the non-controlling interest is reduced to \$nil).
- (d) CJE (vi) is to take into account the requirement of FRS 103 that in a step acquisition, the earlier shareholdings should be deemed to be disposed of and reacquired on the date control is achieved. In this case, the shareholdings acquired on 12 February 20X2 and 13 March 20X3 are deemed to be sold on 16 June 20X6, thereby giving rise to a gain of \$2,000 (sale proceeds of \$22,000 [11,000 shares sold at \$2 ($\$88,000/44,000$) each] – carrying amount of \$20,000). These shares are deemed to be re-purchased at an increased cost of \$2,000 (re-purchase cost of \$22,000 [11,000 shares re-purchased at \$2 ($\$88,000/44,000$) each – carrying amount of \$20,000]).
- (e) Under FRS 103, it is assumed that all 55,000 shares were acquired on 16 June 20X6. In this case, the cost of investment is \$110,000 (55,000 shares acquired at \$2 each) and A Ltd's share of C Ltd's net identifiable assets is \$88,000 ($55\% \times (\$100,000 + \$60,000)$), thereby giving rise to a goodwill on consolidation of \$22,000 ($\$110,000 - \$88,000$).

The financial statements of the companies for the year 20X8 are as follows:

(a) Balance sheets as at 31 December 20X8

	D Ltd \$'000	E Ltd \$'000	F Ltd \$'000	G Ltd \$'000
Investment				
90,000 shares in E Ltd	90	—	—	—
16,000 shares in F Ltd	60	—	—	—
Other assets	1,077	800	700	700
	<u>1,227</u>	<u>800</u>	<u>700</u>	<u>700</u>
Share capital	400	100	100	100
Revaluation reserve	—	—	—	50
Fair value reserve	27	—	—	—
Retained profits	550	420	280	190
Liabilities	250	280	320	360
	<u>1,227</u>	<u>800</u>	<u>700</u>	<u>700</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	D Ltd \$'000	E Ltd \$'000	F Ltd \$'000	G Ltd \$'000
Sales	400	500	300	200
Cost of sales	100	200	100	100
Gross profit	300	300	200	100
Profit on sale of shares of E	35	—	—	—
Profit on sale of shares of F	75	—	—	—
Loss on sale of subsidiary G	25	—	—	—
Operating expenses	185	120	80	40
Profit before tax	200	180	120	60
Taxation	50	60	40	20
Profit after tax	150	120	80	40
Other comprehensive income	27	—	—	—
Total comprehensive income	<u>177</u>	<u>120</u>	<u>80</u>	<u>40</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	D Ltd \$'000	E Ltd \$'000	F Ltd \$'000	G Ltd \$'000
Beginning retained profits	400	300	200	150
Profit for the year	150	120	80	40
Ending retained profits	<u>550</u>	<u>420</u>	<u>280</u>	<u>190</u>

Required

Prepare the consolidated balance sheet, consolidated statement of comprehensive income and partial consolidated statement of changes in equity (showing the various reserves only) for D Ltd and its subsidiary for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Share capital (E)	90	
	Cr Investment in E Ltd	90	
	(to eliminate investment account)		
(ii)	Dr Profit on sale of shares of E Ltd	35	
	Cr Beginning retained profit	30	
	Cr Capital reserve	5	
	(to adjust for sale of shares without loss of control)		
(iii)	Dr Non-controlling interest (CSCI)	12	
	Cr Non-controlling interest (CBS)	12	
	(non-controlling interest in profit of E Ltd)		
(iv)	Dr Share capital (E)	10	
	Dr Beginning retained profit (E)	30	
	Cr Non-controlling interest (CBS)	40	
	(non-controlling interest in other equity of E Ltd)		
(v)	Dr Profit on sale of shares (D)	60	
	Cr Beginning retained profit (D)	60	
	(to adjust profit on sale of shares in F Ltd)		
(vi)	Dr Investment in F Ltd	15	
	Cr Beginning retained profit (D)	15	
	(to equity account up to date of disposal in F Ltd)		
(vii)	Dr Investment in F Ltd	2	
	Cr Profit on sale of shares (D)	2	
	(to re-measure the remaining shareholding)		
(viii)	Dr Investment in F Ltd	10	
	Cr Fair value reserve (D)	10	
	(to mark-to-market the investment at group level)		
(ix)	Dr Fair value reserve (D)	27	
	Cr Investment in F Ltd	27	
	(to reverse D Ltd's mark-to-market gain recorded at company level)		

(x)	Dr Loss on disposal of subsidiary	103
	Dr Cost of sales	80
	Dr Operating expenses	32
	Dr Tax	16
	Cr Sales	160
	Cr Beginning retained profit (D)	71
	(to adjust for the loss on disposal of G Ltd)	

(b) Consolidation worksheet

	D Ltd	E Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	400	500		x 160	1,060
Cost of sales	100	200	x 80		380
Gross profit	300	300			680
Gain on sale of E	35		ii 35		0
Gain on sale of F	75	—	v 60	vii 2	17
Loss on sale of G	25	—	x 103		128
Operating expenses	185	120	x 32		337
Profit before tax	200	180			232
Tax	50	60	x 16		126
Profit after tax	100	120			106
NCI	—	—	iii 12		12
Beginning retained profit	400	300	iv 30	ii 30	
				v 60	
				vi 15	
				x 71	846
Ending retained profit	550	420			940
Investment in E Ltd	90	—		i 90	—
Investment in F Ltd	60	—	vii 2	ix 27	
			viii 10		
			vi 15		60
Other assets	1,077	800			1,877
Share capital	400	100	i 90		
			iv 10		400
Capital reserve	—	—		ii 5	5
Fair value reserve	27	—	ix 27	viii 10	10
Retained profit	550	420			940
Non-controlling interest	—	—		iii 12	
				iv 40	52
Liabilities	250	280			530

(c) Consolidated financial statements

D Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,060
Cost of sales	380
Gross profit	680
Gain on sales of shares in F Ltd	17
Loss on disposal of G Ltd	128
Operating expenses	337
Profit before tax	232
Tax	126
Profit after tax	106
Other comprehensive income	
Fair value gain	10
Total comprehensive income	<u><u>116</u></u>
Profit attributable to:	
Owners of the parent	94
Non-controlling interest	12
	<u><u>106</u></u>
Total comprehensive income attributable to:	
Owners of the parent	104
Non-controlling interest	12
	<u><u>116</u></u>

D Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Investment	60
Other assets	1,877
	<u><u>1,937</u></u>
Share capital	400
Capital reserve	5
Fair value reserve	10
Retained profits	940
Non-controlling interest	52
Liabilities	530
	<u><u>1,937</u></u>

D Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Capital reserve	
Beginning balance	—
Sale of shares in subsidiary	5
Ending balance	<u>5</u>
Fair value reserve	
Beginning balance	—
Gain for the year	<u>10</u>
Ending balance	<u>10</u>
Retained profit	
Beginning balance	846
Profit for the year	<u>94</u>
Ending balance	<u>940</u>

Notes to the solution

- (a) This case involves three cases of disposal of shares in subsidiaries: (i) disposal of shares in E Ltd without loss of control, (ii) disposal of shares in F Ltd with loss of control, and (iii) disposal of all the shares in G Ltd.
- (b) CJE (ii) is to take into account the effect of disposal of shares in E Ltd without loss of control. In D Ltd's books, it has recorded a gain on disposal of shares of \$35,000 (\$45,000 – \$10,000). However, FRS 110 provides that in a case of disposal of shares in a subsidiary without loss of control, there should be no gain/loss arising therefrom. Thus, the debit entry to eliminate the profit.

The credit entry 'Beginning retained profit \$30,000' is to account for D Ltd's interest, based on the 10,000 shares, in E Ltd's post-acquisition profits up to 1 January 20X8, which is equal to \$30,000 ($10\% \times \$300,000$). The other credit entry 'Capital reserve \$5,000' is to account for the difference between the sale proceeds of \$45,000 and the increase in non-controlling interest of \$40,000 (non-controlling interest before the share disposal is \$nil; after the share disposal, non-controlling interest is \$40,000 [$10\% \times \$400,000$ (share capital of \$100,000 + retained profit of \$300,000)]).

- (c) CJE (v) is to adjust the profit on disposal of shares in F Ltd. D Ltd has recorded the profit on disposal of shares of \$75,000 as follows:

Dr Cash	\$207,000
Cr Investment in F Ltd (\$165,000 × 80%) ...	\$132,000
Cr Profit on disposal of shares	\$ 75,000

However, from the group's viewpoint, the 'Profit on disposal of shares' should be \$15,000 only, computed as follows:

Sale proceeds	\$207,000
Share of net assets	\$192,000*
Profit on disposal of shares	\$ 15,000

*As at 1 January 20X8, the group's share of net assets in F Ltd attributable to the 64,000 shares is \$192,000 ($64\% \times \$300,000 + \text{unamortized goodwill of } \nil). This figure may also be computed as: cost of the shares of \$132,000 ($\$165,000 \times 64/80$) + D Ltd's interest, based on the 64,000 shares, in F Ltd's post-acquisition profits of \$64,000 ($[\$200,000 - \$100,000] \times 64\%$) – amortization of goodwill, attributable to the 64,000 shares of \$4,000 ($\$5,000 \times 64/80$).

The credit entry in CJE (v) is to account for D Ltd's interest, based on the 64,000 shares, in F Ltd's post-acquisition profits up to the date of disposal on 1 January 20X8, which is equal to \$64,000 ($[\$200,000 - \$100,000] \times 64\%$) less the amortization of goodwill, attributable to the 64,000 shares of \$4,000 ($\$5,000 \times 64/80$). This entry is also necessary so that the group's 20X8 beginning retained profit is equal to its 20X7 ending retained profit.

- (d) CJE (vi) is to equity account for the remaining 16,000 shares in F Ltd up to the date of loss of control on 1 January 20X8. The debit entry of CJE (vi) is to increase the investment account balance from its cost of \$33,000 ($16,000/60,000 \times \$165,000$) by D Ltd's interest, based on the 16,000 shares, in F Ltd's post-acquisition profits up to the date of disposal on 1 January 20X8 of \$16,000 ($16\% \times [\$200,000 - \$100,000]$) – goodwill amortization of \$1,000 ($16/80 \times \$5,000$). The credit entry of CJE (vi) is to account for D Ltd's interest, based on the 16,000 shares held, in F Ltd's post-acquisition profits up to 1 January 20X8 of \$16,000 ($16\% \times [\$200,000 - \$100,000]$) – goodwill amortization of \$1,000 ($16/80 \times \$5,000$). This entry is also necessary so that the group's 20X8 beginning retained profit is equal to its 20X7 ending retained profit.
- (e) CJE (vii) is to re-measure the remaining shareholding to its fair value at the date of loss of control and to treat this fair value gain/loss as part of the profit/loss on disposal of shares with loss of control, as required by FRS 110. In this case, after the disposal of shares in F Ltd 1 January 20X8, the carrying amount of the remaining 16,000 shares was \$48,000 (cost of \$33,000 [$16,000/80,000 \times \$165,000$]) + equity accounting up to date of loss of control of \$15,000 (see Note [d] above). However, these 16,000 shares have a fair value of \$50,000 at the date of loss of control on 1 January 20X8. Thus, the adjustment is \$2,000 ($\$50,000 - \$48,000$).
- (f) The gain on disposal of shares in F Ltd is therefore \$17,000 (profit on disposal of 64,000 shares of \$15,000 [see Note (c) above] + profit on re-measurement of the remaining 16,000 share of \$2,000 [see Note (e) above]). The gain on disposal of shares in F Ltd of \$17,000 may also be proved as follows:

	\$'000
Sale proceeds	207
Fair value of remaining shareholding	50
Total	<u>257</u>
Share of net assets of subsidiary ($80\% \times 300$)	240
Gain on disposal of subsidiary	<u>17</u>

- (g) CJE (viii) is to adjust the carrying amount of the 16,000 shares in F Ltd to its fair value of \$60,000 on 31 December 20X8, as required under FRS 39. After the above adjustments, the carrying amount of the 16,000 shares is \$50,000 (cost of \$33,000 + equity adjustment of \$15,000 [CJE (vi)] + re-measurement gain of \$2,000 [CJE (vii)]). Thus, CJE (viii) is required to adjust the carrying amount of the shares from \$50,000 to its marker value of \$60,000 as at 31 December 20X8, as required by FRS 39.
- (h) CJE (ix) is to reverse out the fair value adjustment on the 16,000 shares accounted for by D Ltd, in order not to double-count the fair value adjustment. In D Ltd's books, the 16,000 shares have been re-measured from cost of \$33,000 to fair value of \$60,000. Thus, the \$27,000 fair value adjustment in D Ltd's books has to be reversed out.
- (i) CJE (x) is to adjust the loss on disposal of G Ltd and to also account for the group's shares of G Ltd's profit for the year up to the date of disposal. D Ltd has recorded the loss on disposal of G Ltd of \$25,000 as follows:

Dr Cash	\$150,000
Dr Loss on disposal of G Ltd	\$ 25,000
Cr Investment in G Ltd	<u>\$175,000</u>

However, from the group viewpoint, the 'Loss on disposal of G Ltd' should be \$128,000, computed as follows:

Sale proceeds	\$150,000
Share of net assets	\$278,000*
Loss on disposal of G Ltd	<u>\$128,000</u>

* As at 31 December 20X8, the group's share of net assets of G Ltd is \$278,000 ($80\% \times \$340,000 + \text{goodwill of } \$6,000$ [$\text{initial goodwill of } \$15,000 (\$175,000 - 80\% \times \$200,000) - \text{impairment of } \$9,000$]). This figure of \$278,000 may also be computed as follows: cost of the investment of \$175,000 + D Ltd's interest, based on the 80,000 shares, in G Ltd's post-acquisition profits up to the date of disposal of \$112,000 ($80\% \times [\$190,000 - \$50,000]$) – goodwill impairment of \$9,000 for three years from 20X5 to 20X7 (There is no amortization in 20X8 when the group adopts FRS 103).

The credit entry to Beginning retained profit in CJE (x) is to account for D Ltd's interest, based on the 80,000 shares, in G Ltd's post-acquisition profits up to 1 January 20X8 of \$71,000 ($\$80,000 [80\% \times (\$150,000 - \$50,000)] - \text{goodwill impairment of } \$9,000$). This entry is also necessary so that the group's 20X8 beginning retained profit is equal to its 20X7 ending retained profit. The other entries in CJE (x) are to account for D Ltd's interest, based on the 80,000 shares, in G Ltd's revenue and expense for the year 20X8.

- (j) The group's beginning retained profit in 20X8 of \$846,000 should be equal to the group's ending retained profit in 20X7. The group's ending retained profit in 20X7 can be proved by adding D Ltd's retained profit at 31 December 20X7 to the group's share of the subsidiaries' post-acquisition profit – goodwill amortization/impairment as at 31 December 20X7, which is equal to \$846,000 (D Ltd's retained profit of \$400,000 + group's share of E Ltd's post-acquisition profit of \$300,000 [$100\% \times \$300,000$] + group's share of F Ltd's adjusted post-acquisition profit of \$75,000 [$80\% \times (\$200,000 - \$100,000) - \$5,000$] + group's share of G Ltd's adjusted post-acquisition profit of \$71,000 [$80\% \times (\$150,000 - \$50,000) - \$9,000$]).
- (k) The group's ending retained profit in 20X8 of \$940,000 can be proved by adding D Ltd's adjusted retained profit at 31 December 20X8 to the group's share of the subsidiaries' post-acquisition profit less goodwill amortization/impairment as at 31 December 20X8 and the profit/loss on disposal of shares, as follows: D Ltd's retained profit of \$550,000 – net profit recognized on disposal of shares in subsidiaries of \$85,000 (profit of \$35,000 + profit of \$75,000 – loss of \$25,000) + group's share of E Ltd's post-acquisition profit of \$408,000 ($100\% \times \$300,000 + 90\% \times \$120,000$) + group's share of F Ltd's adjusted post-acquisition profit of \$75,000 ($80\% \times [\$200,000 - \$100,000] - \$5,000$) + group's share of G Ltd's adjusted post-acquisition profit of \$103,000 ($80\% \times [\$190,000 - \$50,000] - \$9,000$), + profit on sales of shares in F Ltd of \$17,000 – loss on disposal of G Ltd of \$128,000.

CHAPTER
C H A P T E R

5

COMPLEX GROUP STRUCTURE



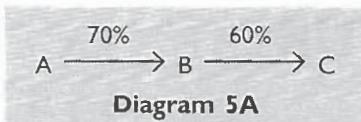
5.1 Introduction

In the previous chapters, all the cases discussed involve simple group structures where the parent holds a direct controlling interest in one or more subsidiaries. In this chapter, consolidation involving groups with more complex structures will be discussed.

A group of companies may consist of a father-son-grandson structure with multiple tiers of parent-subsidiary relationships. For example, the parent may control a subsidiary, which in turn controls another subsidiary. A group may also consist of connecting affiliations. For example, a parent and its subsidiary may jointly hold a controlling interest in another entity. Furthermore, a group may have cross holdings among the entities in the group. For example, a parent and its subsidiary in a group may mutually hold shares in each other. Consolidation for groups with these three kinds of complexities in group structure will be discussed in Sections 5.2, 5.3, and 5.4, respectively.

5.2 Father-son-grandson structure

A group with a father-son-grandson structure is one with multiple tiers of parent-subsidiary relationships. Diagram 5A illustrates a group with a father-son-grandson structure, where A Ltd controls B Ltd, which in turn controls C Ltd. In this group structure, A Ltd is the ultimate parent and C Ltd is often referred to as a sub-subsidiary. (In a larger group, C Ltd may in turn control D Ltd, and so on.)



In the above case, A Ltd controls B Ltd, which in turns controls C Ltd. A Ltd will therefore also have control over C Ltd. Thus, under FRS 110, both B Ltd and C Ltd are subsidiaries of A Ltd. Under the Companies Act, B Ltd is a subsidiary of A Ltd by operation of Section 5(1)(a), and C Ltd is a subsidiary of A Ltd by operation of Section 5(1)(b) (which provides that a company is deemed a subsidiary of another company if the first-mentioned company is a subsidiary of any company which is that other company's subsidiary). It may be noted that effective interest (in the above case A Ltd has only 42% effective interest in C Ltd) is not relevant to the issue of determining the parent-subsidiary relationship.

It therefore follows that when A Ltd in Diagram 5A prepares the consolidated financial statements, it has to incorporate the financial statements of A Ltd, those of B Ltd, as well as those of C Ltd. (B Ltd, of course, has to prepare its consolidated financial statements incorporating the financial statements of B Ltd and those of C Ltd unless it chooses not to, under paragraph 4[a] of FRS 110.)

The preparation of the consolidated financial statements for B Ltd and its subsidiary C Ltd has been extensively discussed in the previous chapters. The focus of discussion in this chapter will be the preparation of consolidated financial statements of A Ltd and its subsidiary B Ltd and sub-subsidiary C Ltd.

There are two methods that can be used to prepare the consolidated financial statements for groups with a father-son-grandson structure:

- (a) The consolidation of consolidation method (also referred to as 'direct consolidation', 'sequential consolidation', and 'two-stage consolidation');
- (b) The indirect interest method (also referred to as 'indirect consolidation', 'multiple consolidation', and 'one-stage consolidation').

The consolidation of consolidation method involves a series of consolidation, starting with the most junior subsidiary. For a group with a father-son-grandson structure as the one shown in Diagram 5A, the first step is to consolidate the financial statements of C Ltd with those of B Ltd to obtain the consolidated financial statements of B Ltd, and the second step is to consolidate the consolidated financial statements of B Ltd with the financial statements of A Ltd. This method is easy in the sense that it merely involves doing the consolidation process, based on the principles and techniques already discussed in the previous chapters, repetitively for each level of the parent-subsidiary relationship.

The indirect interest method, on the other hand, involves only one consolidation process covering all the entities in the group. However, it requires the calculation and use of both the actual shareholding (or, the direct shareholding) and effective shareholding (or, the direct plus indirect shareholding) percentages. The share capital and pre-acquisition reserves of the sub-subsidiary will be apportioned to the group and non-controlling interest based on actual shareholding percentage, while the post-acquisition reserves of the sub-subsidiary will be apportioned to the group and non-controlling interest based on the effective shareholding percentage. Thus, for the group shown in Diagram 5A, the share capital and pre-acquisition reserves of C Ltd will be apportioned based on actual shareholding percentage of 60% to the group and 40% to non-controlling interest, while the post-acquisition reserves of C Ltd will be apportioned based on effective shareholding of 42% ($70\% \times 60\%$) to the group and 58% ($40\% + 30\% \times 60\%$) to non-controlling interest. The effective shareholding percentage is used to apportion the post-acquisition reserves of the sub-subsidiary to the group and to the non-controlling interest, because, with reference to Diagram 5A above, if C Ltd makes \$100, 60% thereof (that is, \$60) will go to B Ltd; and of the \$60 that goes to B Ltd, 70% thereof (that is, \$42) will ultimately go to A Ltd. Thus, the group's share of C Ltd's post-acquisition profit is based on the effective shareholding of 42%. As for non-controlling interest, it will first get \$40 (based on its direct shareholding of 40%) of C Ltd's profit; and of the \$60 of C Ltd that goes to B Ltd, non-controlling interest will have another 30% interest. Thus, non-controlling interest will get a total of \$58 ($\$40 + 30\% \times \60), based on its effective shareholding of 58% (direct interest of 40% plus indirect interest of 18% [$30\% \times 60\%$]). The share capital and pre-acquisition reserves as well as the post-acquisition reserves of the

subsidiary B Ltd will, of course, be apportioned based on 70% to the group and 30% to non-controlling interest because the actual shareholding percentage and effective shareholding are the same.

Both methods are commonly used in practice for the preparation of the published consolidated financial statements. The consolidation of consolidation method can be effectively used in cases where the group has a father-son-grandson structure as in Diagram 5A, and where there are no intragroup transactions between the ultimate parent and the sub-subsidiary. In this case, B Ltd will have to prepare the consolidated financial statements incorporating B Ltd and C Ltd (unless B Ltd chooses not to prepare consolidated financial statements under paragraph 4[a] of FRS 110). At A Ltd's level, the consolidated financial statements of B Ltd and its subsidiary C Ltd will be available and can simply be incorporated into the consolidated financial statements of A Ltd under the consolidation of consolidation method. However, in cases where the group has many tiers of sub-subsidiaries, time constraints may render it impractical for the ultimate parent to wait for each subsidiary to consolidate with its own subsidiary. Also, in the preparation of certain specific reports such as profit forecasts and interim results, the ultimate parent may have to compile the consolidated results without the availability of the consolidated results of its subsidiary and sub-subsidiary. In these cases, the choice of method used depends solely on the preference of the preparer of the consolidated financial statements.

Table 5.1 below shows the result of an empirical test done in the year 2000 on companies listed in the Singapore Exchange. As can be seen, 50% of the companies used the consolidation of consolidation method, while only 15% of the companies used the indirect interest method. The popularity of the consolidation of consolidation method could be due to the fact that in Singapore, every parent, unless it chooses not to prepare consolidated financial statements under paragraph 4(a) of FRS 110, has to prepare

TABLE 5.1 Consolidation procedure for groups with a complex structure

Alternatives	Frequency	Percentage
A	45	50
B	13	15
C	30	33
D	2	2
Total	90	100

Legends:

- A: Consolidation of consolidation method
- B: Indirect interest method
- C: Not applicable
- D: Others

and present consolidated financial statements. For a group with a father-son-grandson structure, the subsidiary ('son') would have prepared the consolidated financial statements incorporating its financial statements with those of the sub-subsidiary ('grandson'); thus, at the parent ('father') level, the consolidated financial statements of the group could be conveniently prepared by simply consolidating the consolidated accounts of the subsidiary and sub-subsidiary with the financial statements of the parent using the consolidation of consolidation method. It is interesting to note that there are two companies that employ both methods in the preparation of the consolidated financial statements for the group. One of these companies stated that it used the indirect interest method for the preparation of management financial statements, and the consolidation of consolidation method for audit purposes. It is obviously a good practice to use one method to prepare the consolidated financial statements and use another method to verify the resultant consolidated figures.

The application of both the consolidation of consolidation method and the indirect interest method will now be illustrated.

Example 5.1

The 31 December 20X8 balance sheets of three companies in a group are as follows:

	A Ltd	B Ltd	C Ltd
	\$'000	\$'000	\$'000
Share capital	100	60	50
Reserves	45	51	25
	<u>145</u>	<u>111</u>	<u>75</u>
Investment			
45,000 shares in B Ltd	70	—	—
30,000 shares in C Ltd	—	36	—
Other net assets	75	75	75
	<u>145</u>	<u>111</u>	<u>75</u>

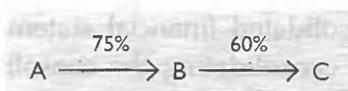
The share capital of A Ltd, B Ltd, and C Ltd comprises 100,000 shares, 60,000 shares, and 50,000 shares, respectively. The shareholdings were acquired on 1 January 20X1, when B Ltd reserves were \$20,000 and C Ltd reserves were \$10,000.

Required

Prepare the consolidated balance sheet of A Ltd and its subsidiaries as at 31 December 20X8.

Solution A: Consolidation of consolidation method

(a) Group structure



(b) Consolidation journal entries

B Ltd + C Ltd

(i)	Dr Share capital (C) ($60\% \times 50$)	30
	Dr Reserves (C) ($60\% \times 10$)	6
	Cr Investment in C Ltd	36
	(to eliminate investment account)	
(ii)	Dr Reserves (C) ($60\% \times [25 - 10]$)	9
	Cr Reserves (B)	9
	(to transfer post-acquisition reserves)	
(iii)	Dr Share capital (C) ($40\% \times 50$)	20
	Dr Reserves (C) ($40\% \times 25$)	10
	Cr Non-controlling interest	30
	(to record non-controlling interest)	

A Ltd + (B Ltd + C Ltd)

(iv)	Dr Share capital (B) ($75\% \times 60$)	45
	Dr Reserves (B) ($75\% \times 20$)	15
	Dr Goodwill on consolidation	10
	Cr Investment in B Ltd	70
	(to eliminate investment account)	
(v)	Dr Reserves (B) ($75\% \times [51 - 20 + 9]$)	30
	Cr Reserves (A)	30
	(to transfer post-acquisition reserves)	
(vi)	Dr Share capital (B) ($25\% \times 60$)	15
	Dr Reserves (B) ($25\% \times [51 + 9]$)	15
	Cr Non-controlling interest	30
	(to record non-controlling interest)	

(c) Consolidation worksheet

	A Ltd	B Ltd	C Ltd	Consolidation Dr	Consolidation Cr	Consolidated balances
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	—	—	—	iv 10		10
Investment in B Ltd	70	—	—		iv 70	—
Investment in C Ltd	—	36	—		i 36	—
Other net assets	75	75	75			225
Share capital (A)	100	—	—			100
Share capital (B)	—	60	—	iv 45		—
				vi 15		—
Share capital (C)	—	—	50	i 30		—
				iii 20		—
Reserves (A)	45	—	—		v 30	75
Reserves (B)	—	51	—	iv 15	ii 9	—
				v 30		—
				vi 15		—
Reserves (C)	—	—	25	i 6		—
				ii 9		—
				iii 10		—
Non-controlling interest	—	—	—		iii 30	60
				vi 30		—

(d) Consolidated balance sheet

A Ltd and its subsidiaries Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	10
Other net assets	225
	235
Share capital	100
Reserves	75
Non-controlling interest	60
	235

Solution B: Indirect interest method

(a) Group structure

	B Ltd	C Ltd
	\$'000	\$'000
Group		
Direct	75%	—
Indirect	—	45% ($75\% \times 60\%$)
Non-controlling interest		
Direct	25%	40%
Indirect	—	15% ($25\% \times 60\%$)

(b) Consolidation journal entries

(i)	Dr Share capital (B) ($75\% \times 60$)	45
	Dr Share capital (C) ($60\% \times 50$)	30
	Dr Reserves (B) ($75\% \times 20$)	15
	Dr Reserves (C) ($60\% \times 10$)	6
	Dr Goodwill on consolidation	10
	Cr Investment in B Ltd	70
	Cr Investment in C Ltd	36
	(to eliminate investment accounts)	
(ii)	Dr Reserves (B) ($75\% \times [51 - 20]$)	23.25
	Dr Reserves (C) ($45\% \times [25 - 10]$)	6.75
	Cr Reserves (A)	30
	(to transfer post-acquisition reserves)	
(iii)	Dr Share capital (B) ($25\% \times 60$)	15
	Dr Share capital (C) ($40\% \times 50$)	20
	Dr Reserves (B) ($25\% \times 51$)	12.75
	Dr Reserves (C) ($40\% \times 10$)	4
	Dr Reserves (C) ($55\% \times [25 - 10]$)	8.25
	Cr Non-controlling interest	60
	(to record non-controlling interest)	

(c) Consolidation worksheet

	A Ltd	B Ltd	C Ltd	Consolidation		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	—	—	—	i 10		10
Investment in B Ltd	70	—	—		i 70	—
Investment in C Ltd	—	36	—		i 36	—
Other net assets	75	75	75			225
Share capital (A)	100	—	—			100
Share capital (B)	—	60	—	i 45		—
				iii 15		—
Share capital (C)	—	—	50	i 30		—
				iii 20		—
Reserves (A)	45	—	—		ii 30	75
Reserves (B)	—	51	—	i 15		—
				ii 23.25		—
				iii 12.75		—
Reserves (C)	—	—	25	i 6		—
				ii 6.75		—
				iii 4		—
				iii 8.25		—
Non-controlling interest ..	—	—	—		iii 60	60

(d) Consolidated balance sheet

A Ltd and its subsidiaries Consolidated balance sheet As at 31 December 20X8	
	\$'000
Goodwill on consolidation	10
Other net assets	225
	<u>235</u>
Share capital	100
Reserves	75
Non-controlling interest	60
	<u>235</u>

Notes to the solution

- (a) Both the consolidation of consolidation method and the indirect interest method yield the same consolidated balance sheet.
- (b) Under the consolidation of consolidation method, two consolidation processes are carried out. The first process consolidates the financial statements of C Ltd with those of B Ltd, and the second process consolidates the consolidated financial statements of B Ltd and its subsidiary C Ltd with the financial statements of A Ltd.

- (c) Under the indirect interest method, only one consolidation process is carried out. The financial statements of all the companies in the group are consolidated in the same process. However, two different shareholding percentages are used: the actual shareholding percentage is used to apportion pre-acquisition reserves, and the effective shareholding percentage is used to apportion post-acquisition reserves.
- (d) The group reserve of \$75,000 may be proved as follows:

	\$'000
A Ltd's retained profit	45
Group's share of B Ltd's post-acquisition reserve $75\% \times (51 - 20)$	<u>23.25</u>
Group's share of C Ltd's post-acquisition reserve $75\% \times 60\% \times (25 - 10)$	<u>6.75</u>
	<u><u>75</u></u>

- (e) The non-controlling interest of \$60,000 may be proved as follows:

	\$'000
Non-controlling's direct interest in B Ltd $25\% \times 111$	27.75
Non-controlling's direct interest in C Ltd $40\% \times 75$	<u>30</u>
Non-controlling's indirect interest in C Ltd $25\% \times 60\% \times (25 - 10)$	<u>2.25</u>
	<u><u>60</u></u>

Note: Non-controlling's direct interest entitles it to a share of the net assets of the subsidiary, while non-controlling's indirect interest only entitles it to a share of the post-acquisition reserve of the subsidiary.



In Example 5.1, it is assumed that all the companies in the group acquire their respective shareholdings on the same date. If the respective shareholdings are acquired on different dates, certain complications may arise.

If A Ltd acquires B Ltd before B Ltd acquires C Ltd, there are no complications. This is because C Ltd becomes a subsidiary of the B Ltd group and a subsidiary of the A Ltd group on the same date (in other words, the date it was acquired by B Ltd).

However, if A Ltd acquires B Ltd after B Ltd has acquired C Ltd, complications would arise. This is because, in this case, C Ltd becomes a subsidiary of the B Ltd group on the date it was acquired by B Ltd, but becomes a subsidiary of the A Ltd group only at a later date when B Ltd is acquired by A Ltd. Viewed from a different

angle, the complications arise because when A Ltd acquires B Ltd, B Ltd already has a subsidiary, C Ltd, and thus when A Ltd acquires B Ltd, it not only acquires B Ltd, but also C Ltd. This seems like a complicated situation. However, it can be resolved quite easily in the consolidation process by treating the increase or decrease in C Ltd's reserves (from the date it was acquired by B Ltd to the date B Ltd was acquired by A Ltd) as post-acquisition reserves from the viewpoint of the B Ltd group but as pre-acquisition reserves from the viewpoint of the A Ltd group.

Thus, under the consolidation of consolidation method, at A Ltd's level of consolidation, B Ltd's share of the increase or decrease in C Ltd's reserves from the date B Ltd acquires C Ltd to the date the A Ltd group acquires B Ltd will be treated as part of B Ltd's pre-acquisition reserves at the date it is acquired by A Ltd and eliminated against A Ltd's investment account.

Under the indirect interest method, the amount of C Ltd's reserve that is to be treated as pre-acquisition reserves and eliminated against the investment account is its reserves as at the date when B Ltd was acquired by A Ltd.

Example 5.2



This example is based on the case in Example 5.1, incorporating amendments made to the dates of acquisition. In this case, A Ltd acquired B Ltd before B Ltd acquired C Ltd. The 31 December 20X8 balance sheets of the three companies in the group are as follows:

	A Ltd	B Ltd	C Ltd
	\$'000	\$'000	\$'000
Share capital	100	60	50
Reserves	45	51	25
	<u>145</u>	<u>111</u>	<u>75</u>
Investment			
45,000 shares in B Ltd	70	—	—
30,000 shares in C Ltd	—	36	—
Other net assets	75	75	75
	<u>145</u>	<u>111</u>	<u>75</u>

The share capital of A Ltd, B Ltd, and C Ltd comprises 100,000 shares, 60,000 shares, and 50,000 shares, respectively. A Ltd acquired B Ltd in 20X3, when B Ltd's reserves were \$20,000. B Ltd acquired C Ltd in 20X5, when C Ltd's reserves were \$10,000.

Required

Prepare the consolidated balance sheet of A Ltd and its subsidiaries as at 31 December 20X8.

Solution

The solution will be exactly the same as the solution to Example 5.1.

Notes to the solution

- (a) Under the consolidation of consolidation method, the post-acquisition reserves transferred from C Ltd to B Ltd (CJE [ii]) will also be in the nature of post-acquisition reserves from the viewpoint of A Ltd. This is because C Ltd became a subsidiary of B Ltd in 20X5 and was deemed a subsidiary of A Ltd in 20X5 also, when B Ltd became a subsidiary of A Ltd. Thus, C Ltd's reserves after 20X5 are in the nature of post-acquisition reserves from the viewpoints of both B Ltd and A Ltd.
- (b) Under the indirect interest method, C Ltd will be consolidated on the basis that it became a subsidiary of the group in 20X5, the later of the two dates of acquisition.

Example 5.3 •

This example is based on the case in Example 5.1, incorporating amendments made to the dates of acquisition. In this case, A Ltd acquired B Ltd after B Ltd acquired C Ltd. The 31 December 20X8 balance sheets of the three companies in the group are as follows:

	A Ltd	B Ltd	C Ltd
	\$'000	\$'000	\$'000
Share capital	100	60	50
Reserves	45	51	25
	<hr/>	<hr/>	<hr/>
	145	111	75
	<hr/>	<hr/>	<hr/>
Investment			
45,000 shares in B Ltd	70	—	—
30,000 shares in C Ltd	—	36	—
Other net assets	75	75	75
	<hr/>	<hr/>	<hr/>
	145	111	75
	<hr/>	<hr/>	<hr/>

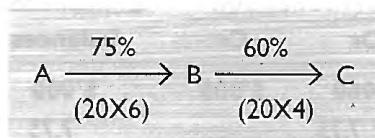
The share capital of A Ltd, B Ltd, and C Ltd comprises 100,000 shares, 60,000 shares, and 50,000 shares, respectively. B Ltd acquired C Ltd in 20X4, when C Ltd's reserves were \$10,000. A Ltd acquired B Ltd in 20X6, when B Ltd's reserves were \$20,000. At this date, C Ltd's reserves were \$15,000.

Required

Prepare the consolidated balance sheet of A Ltd and its subsidiaries as at 31 December 20X8.

Solution A: Consolidation of consolidation method

(a) Group structure



(b) Consolidation journal entries

B Ltd + C Ltd

(i)	Dr Share capital (C) ($60\% \times 50$)	30
	Dr Reserves (C) ($60\% \times 10$)	6
	Cr Investment in C Ltd	36
	(to eliminate investment account)	
(ii)	Dr Reserves (C) ($60\% \times [25 - 10]$)	9
	Cr Reserves (B)	9
	(to transfer post-acquisition reserves)	
(iii)	Dr Share capital (C) ($40\% \times 50$)	20
	Dr Reserves (C) ($40\% \times 25$)	10
	Cr Non-controlling interest	30
	(to record non-controlling interest)	

A Ltd + (B Ltd + C Ltd)

(iv)	Dr Share capital (B) ($75\% \times 60$)	45
	Dr Reserves (B) ($75\% \times [20 + 60\% \times (15 - 10)]$)	17.25
	Dr Goodwill on consolidation	7.75
	Cr Investment in B Ltd	70
	(to eliminate investment account)	
(v)	Dr Reserves (B) ($75\% \times [51 - 20 + (60\% \times [25 - 15])]$)	27.75
	Cr Reserves (A)	27.75
	(to transfer post-acquisition reserves)	
(vi)	Dr Share capital (B) ($25\% \times 60$)	15
	Dr Reserves (B) ($25\% \times [51 + 9]$)	15
	Cr Non-controlling interest	30
	(to record non-controlling interest)	

(c) Consolidation worksheet

	A Ltd	B Ltd	C Ltd	Consolidation Dr	Cr	Consolidated balances
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	—	—	—	iv 7.75		7.75
Investment in B Ltd	70	—	—		iv 70	—
Investment in C Ltd	—	36	—		i 36	—
Other net assets	75	75	75			225
Share capital (A)	100	—	—			100
Share capital (B)	—	60	—	v 45		—
				vi 15		—
Share capital (C)	—	—	50	i 30		—
				iii 20		—
Reserves (A)	45	—	—		v 27.75	72.75
Reserves (B)	—	51	—	iv 17.25	i 9	—
				v 27.75		—
				vi 15		—
Reserves (C)	—	—	25	i 6		—
				ii 9		—
				iii 10		—
Non-controlling interest ..	—	—	—		iii 30	—
					vi 30	60

(d) Consolidated balance sheet

A Ltd and its subsidiaries
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Goodwill on consolidation	7.75
Other net assets	<u>225</u>
	<u>232.75</u>
Share capital	100
Reserves	72.75
Non-controlling interest	<u>60</u>
	<u>232.75</u>

Solution B: Indirect interest method

(a) Group structure

	B Ltd	C Ltd
	\$'000	\$'000
Group		
Direct	75%	—
Indirect	—	45% ($75\% \times 60\%$)
Non-controlling interest		
Direct	25%	40%
Indirect	—	15% ($25\% \times 60\%$)

(b) Consolidation journal entries

(i)	Dr Share capital (B) ($75\% \times 60$)	45
	Dr Share capital (C) ($60\% \times 50$)	30
	Dr Reserves (B) ($75\% \times 20$)	15
	Dr Reserves (C) ($60\% \times 10$)	6
	Dr Reserves (C) ($45\% \times [15 - 10]$)	2.25
	Dr Goodwill on consolidation	7.75
	Cr Investment in B Ltd	70
	Cr Investment in C Ltd	36
	(to eliminate investment accounts)	
(ii)	Dr Reserves (B) ($75\% \times [51 - 20]$)	23.25
	Dr Reserves (C) ($45\% \times [25 - 15]$)	4.5
	Cr Reserves (A)	27.75
	(to transfer post-acquisition reserves)	
(iii)	Dr Share capital (B) ($25\% \times 60$)	15
	Dr Share capital (C) ($40\% \times 50$)	20
	Dr Reserves (B) ($25\% \times 51$)	12.75
	Dr Reserves (C) ($40\% \times 10$)	4
	Dr Reserves (C) ($55\% \times [25 - 10]$)	8.25
	Cr Non-controlling interest	60
	(to record non-controlling interest)	

(c) Consolidation worksheet

	A Ltd	B Ltd	C Ltd	Consolidation		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	–	–	–	i 7.75		7.75
Investment in B Ltd	70	–	–		i 70	–
Investment in C Ltd	–	36	–		i 36	–
Other net assets	75	75	75			225
Share capital (A)	100	–	–			100
Share capital (B)	–	60	–	i 45		–
				iii 15		–
Share capital (C)	–	–	50	i 30		–
				iii 20		–
Reserves (A)	45	–	–		ii 27.75	72.75
Reserves (B)	–	51	–	i 15		–
				ii 23.25		–
				iii 12.75		–
Reserves (C)	–	–	25	i 6		–
				i 2.25		–
				ii 4.5		–
				iii 4		–
				iii 8.25		–
Non-controlling interest ..	–	–	–	iv 60		60

(d) Consolidated balance sheet

A Ltd and its subsidiaries	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Goodwill on consolidation	7.75
Other net assets	225
	<u>232.75</u>
Share capital	100
Reserves	72.75
Non-controlling interest	60
	<u>232.75</u>

Notes to the solution

- (a) Both the consolidation of consolidation method and the indirect interest method yield the same consolidated balance sheet.
- (b) In this case, where A Ltd acquires B Ltd in 20X6 and B Ltd acquires C Ltd in 20X4, C Ltd becomes a subsidiary of the B Ltd group in 20X4, but it becomes a subsidiary of the A Ltd group only in 20X6, when B Ltd becomes a subsidiary of A Ltd.

Under the consolidation of consolidation method, at the B Ltd group's level, C Ltd becomes a subsidiary in 20X4, at which date its pre-acquisition reserves are \$10,000 and post-acquisition reserves are \$15,000 (\$25,000 – \$10,000). However, at the A Ltd group's level, C Ltd becomes a subsidiary in 20X6, at which date its pre-acquisition reserves are \$15,000 and post-acquisition reserves are \$10,000 (\$25,000 – \$15,000). Therefore, at the second level of consolidation, C Ltd's post-acquisition reserves of \$9,000 ($60\% \times [\$25,000 - \$10,000]$) that is transferred to B Ltd in CJE [ii] has to be further apportioned into pre-acquisition reserves of \$3,000 ($60\% \times [\$15,000 - \$10,000]$ in CJE [iv]) and post-acquisition reserves of \$6,000 ($60\% \times [\$25,000 - \$15,000]$ in CJE [v]). The net effects of these consolidation journal entries are (i) B Ltd's pre-acquisition reserves to be eliminated against the investment account consist of not only the reserves of B Ltd at the date it was acquired by A Ltd but also its share of the increase in C Ltd's reserves from the date C Ltd was acquired by B Ltd to the date B Ltd was acquired by A Ltd; and (ii) the A Ltd group's reserve is increased by its share of C Ltd's post-acquisition reserves from the date C Ltd became a subsidiary of the group in 20X6 ($75\% \times 60\% \times [\$25,000 - \$15,000]$ as in CJE [v]).

Under the indirect interest method, the post-acquisition reserves of C Ltd from the date it was acquired by B Ltd of \$15,000 (\$25,000 – \$10,000) are first apportioned to the group and to non-controlling interest based on their respective effective interest of 45% and 55%. The amount that is apportioned to the group has to be further apportioned into pre-acquisition and post-acquisition reserves from A Ltd's viewpoint. Thus, the pre-acquisition

reserves of C Ltd consist of \$6,000 ($60\% \times \$10,000$) relating to the pre-acquisition reserves on the date B Ltd acquires C Ltd and \$2,250 ($45\% \times [\$15,000 - \$10,000]$) relating to the increase in the reserves of C Ltd from the date B Ltd acquires C Ltd to the date A Ltd acquires B Ltd. The net effect of the above adjustments is that C Ltd is consolidated on the basis that it becomes a subsidiary of the group in 20X6. It is noted that only that part of C Ltd's reserves that is earned from 20X6 (post-acquisition from the A Ltd group's viewpoint) is added to the A Ltd group's reserves (see CJE [ii]).

- (c) The group reserve of \$72,750 may be proved as follows:

	\$'000
A Ltd's retained profit	45
Group's share of B Ltd's post-acquisition reserve $75\% \times (51 - 20)$	<u>23.25</u>
Group's share of C Ltd's post-acquisition reserve $75\% \times 60\% \times (25 - 15)$	<u>4.5</u>
	<u>72.75</u>

Note: C Ltd became a subsidiary of A Ltd in 20X6. Thus, its post-acquisition reserve attributable to A Ltd group is (\$25,000 - \$15,000).

- (d) The non-controlling interest of \$60,000 may be proved as follows:

	\$'000
Non-controlling's direct interest in B Ltd $25\% \times 111$	<u>27.75</u>
Non-controlling's direct interest in C Ltd $40\% \times 75$	<u>30</u>
Non-controlling's indirect interest in C Ltd $25\% \times 60\% \times (25 - 10)$	<u>2.25</u>
	<u>60</u>

Note: Non-controlling's direct interest entitles it to a share of the net assets of the subsidiary, while non-controlling's indirect interest only entitles it to a share of the post-acquisition reserve of the subsidiary. Note also that C Ltd became a subsidiary of B Ltd in 20X4, and thus, C Ltd's post-acquisition reserve attributable to non-controlling's indirect interest is (\$25,000 - \$10,000).



Other consolidation complexities involving issues discussed in Chapters 2 and 3 will also be encountered in groups with a father-son-grandson structure. These will be illustrated in 'Problems for self-study'.

5.B**Connecting affiliation structure**

A group with a connecting affiliation structure is one where one subsidiary holds shares in another subsidiary as shown in Diagram 5B, or where the parent holds shares in a sub-subsidiary as shown in Diagram 5C, or where the parent and its subsidiary jointly hold a controlling interest in another entity as shown in Diagram 5D.

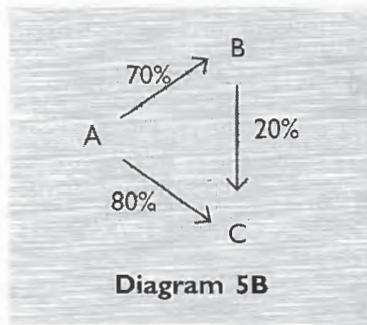


Diagram 5B

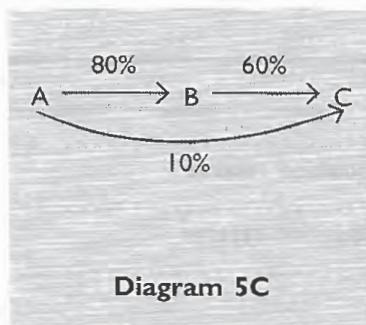


Diagram 5C

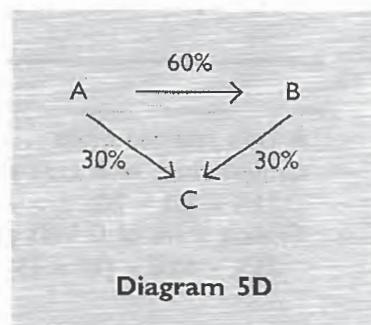


Diagram 5D

In Diagram 5B, A Ltd controls B Ltd and C Ltd. Therefore, both B Ltd and C Ltd are subsidiaries of A Ltd under FRS 110. Under the Companies Act, both B Ltd and C Ltd are subsidiaries of A Ltd by operation of Section 5(1)(a). Thus, both B Ltd and C Ltd are subsidiaries of A Ltd under FRS 110 as well as under the Companies Act.

In Diagram 5C, A Ltd controls B Ltd, which in turn controls C Ltd. Therefore, A Ltd controls both B Ltd and C Ltd, and both B Ltd and C Ltd are subsidiaries of A Ltd under FRS 110. Under the Companies Act, B Ltd is a subsidiary of A Ltd by operation of Section 5(1)(a) and C Ltd is a subsidiary of A Ltd by operation of Section 5(1)(b). Thus, both B Ltd and C Ltd are subsidiaries of A Ltd under FRS 110 as well as under the Companies Act.

In Diagram 5D, A Ltd controls B Ltd. A Ltd also controls C Ltd because of its control over 60% (its own 30% plus another 30% through B Ltd) of C Ltd. Thus, both B Ltd and C Ltd are subsidiaries of A Ltd under FRS 110. Under the Companies Act, B Ltd is a subsidiary of A Ltd by operation of Section 5(1)(a) and C Ltd is a subsidiary of A Ltd by operation of Section 5(3)(b)(ii) (which effectively provides that the subsidiary's shareholding in another company is deemed to be held by the parent company, for the purpose of determining the parent-subsidiary relationship). Thus, both B Ltd and C Ltd are subsidiaries of A Ltd under FRS 110 as well as under the Companies Act.

Consequently, in all three cases above, A Ltd would have to prepare and present consolidated financial statements incorporating the financial statements of A Ltd, B Ltd, and C Ltd. It may be noted, for example in the case illustrated in Diagram 5D, that while C Ltd is treated as an associate in B Ltd's books and in A Ltd's books, in

the preparation of A Ltd's consolidated financial statements C Ltd should be treated as a 60% owned subsidiary.

The two consolidation methods discussed in Section 5.2, namely, the consolidation of consolidation method and the indirect interest method, can also be used in the preparation of consolidated financial statements for a group with a connecting affiliation structure.

The consolidation of consolidation method may not be the best method to use for this type of group. This is because among the three cases mentioned in Diagrams 5B, 5C, and 5D, the first level of consolidation for the B Ltd group is applicable only in the case in Diagram 5C, and even there, the consolidated financial statements of B Ltd and its subsidiary, C Ltd, cannot be used for the second level of consolidation involving the A Ltd group because of A Ltd's shareholding in C Ltd. However, the principles of the consolidation of consolidation method can be applied. For example, in all three cases illustrated in Diagrams 5B, 5C, and 5D, a first level of consolidation can be done to consolidate the financial statements of C Ltd with those of B Ltd and A Ltd, and a second level of consolidation can be done to consolidate the financial statements of B Ltd with those of A Ltd. After these two levels of consolidation processes, the consolidated financial statements of the A Ltd group will then be obtained. It is essential to always start with the most junior subsidiary, as in the case of groups with a father-son-grandson structure.

The indirect interest method will be more appropriate for groups with a connecting affiliation structure. However, as mentioned before, the indirect interest method will require the use of effective shareholding, the determination of which can be quite complicated in groups with a connecting affiliation structure. Essentially, the effective shareholding in these types of group structures is equal to the direct shareholding plus the indirect shareholding. The effective shareholdings for the three cases in Diagrams 5B, 5C, and 5D are computed and shown below.

	B	C
Group		
Direct shareholding	70%	80%
Indirect shareholding	—	14% ($70\% \times 20\%$)
Effective shareholding	70%	94%
 Non-controlling Interest		
Direct shareholding	30%	—
Indirect shareholding	—	6% ($30\% \times 20\%$)
Effective shareholding	30%	6%

Diagram 5E: Shareholdings for group in Diagram 5B

	B	C
Group		
Direct shareholding	80%	10%
Indirect shareholding	—	48% ($80\% \times 60\%$)
Effective shareholding	<u>80%</u>	<u>58%</u>
Non-controlling Interest		
Direct shareholding	20%	30%
Indirect shareholding	—	12% ($20\% \times 60\%$)
Effective shareholding	<u>20%</u>	<u>42%</u>

Diagram 5F: Shareholdings for group in Diagram 5C

	B	C
Group		
Direct shareholding	60%	30%
Indirect shareholding	—	18% ($60\% \times 30\%$)
Effective shareholding	<u>60%</u>	<u>48%</u>
Non-controlling Interest		
Direct shareholding	40%	40%
Indirect shareholding	—	12% ($40\% \times 30\%$)
Effective shareholding	<u>40%</u>	<u>52%</u>

Diagram 5G: Shareholdings for group in Diagram 5D

The application of both consolidation methods to a group with a connecting affiliation structure will now be illustrated.

Example 5.4

The 31 December 20X8 balance sheets of three companies in a group are as follows:

	L Ltd	M Ltd	N Ltd
	\$'000	\$'000	\$'000
Share capital	100	60	50
Reserves	80	51	25
	<u>180</u>	<u>111</u>	<u>75</u>
Investment			
45,000 shares in M Ltd	60	—	—
10,000 shares in N Ltd	12	—	—
30,000 shares in N Ltd	—	36	—
Other net assets	<u>108</u>	<u>75</u>	<u>75</u>
	<u>180</u>	<u>111</u>	<u>75</u>

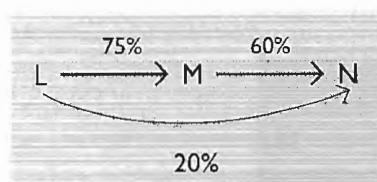
The share capital of L Ltd, M Ltd, and N Ltd comprises 100,000 shares, 60,000 shares, and 50,000 shares, respectively. The shareholdings were acquired on 1 January 20X5, when M Ltd's reserves were \$20,000 and N Ltd's reserves were \$10,000.

Required

Prepare the consolidated balance sheet of L Ltd and its subsidiaries as at 31 December 20X8.

Solution A: Consolidation of consolidation method

(a) Group structure



(b) Consolidation journal entries

N Ltd

(i)	Dr Share capital (N) ($20\% \times 50$)	10
	Dr Reserves (N) ($20\% \times 10$)	2
	Cr Investment in N Ltd (L)	12
	(to eliminate investment account)	
(ii)	Dr Share capital (N) ($60\% \times 50$)	30
	Dr Reserves (N) ($60\% \times 10$)	6
	Cr Investment in N Ltd (M)	36
	(to eliminate investment account)	
(iii)	Dr Reserves (N) ($20\% \times [25 - 10]$)	3
	Cr Reserves (L)	3
	(to transfer post-acquisition reserves)	
(iv)	Dr Reserves (N) ($60\% \times [25 - 10]$)	9
	Cr Reserves (M)	9
	(to transfer post-acquisition reserves)	
(v)	Dr Share capital (N) ($20\% \times 50$)	10
	Dr Reserves (N) ($20\% \times 25$)	5
	Cr Non-controlling interest	15
	(to record non-controlling interest)	

M Ltd

(vi)	Dr Share capital (M) ($75\% \times 60$)	45	
	Dr Reserves (M) ($75\% \times 20$)	15	
	Cr Investment in M Ltd		60
	(to eliminate investment account)		
(vii)	Dr Reserves (M) ($75\% \times [51 - 20 + 9]$)	30	
	Cr Reserves (L)		30
	(to transfer post-acquisition reserves)		
(viii)	Dr Share capital (M) ($25\% \times 60$)	15	
	Dr Reserves (M) ($25\% \times [51 + 9]$)	15	
	Cr Non-controlling interest		30
	(to record non-controlling interest)		

(c) Consolidation worksheet

	L Ltd	M Ltd	N Ltd	Consolidation		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Investment in M Ltd	60	–	–		vi 60	–
Investment in N Ltd	12	–	–		i 12	–
Investment in N Ltd	–	36	–		ii 36	–
Other net assets	108	75	75			258
Share capital (L)	100	–	–			100
Share capital (M)	–	60	–	vi 45		–
				viii 15		
Share capital (N)	–	–	50	i 10		–
				ii 30		
				v 10		
Reserves (L)	80	–	–		iii 3	
				vii 30		113
Reserves (M)	–	51	–	vi 15	vi 9	–
				vii 30		
				viii 15		
Reserves (N)	–	–	25	i 2		–
				ii 6		
				iii 3		
				iv 9		
				v 5		
Non-controlling interest ..	–	–	–		v 15	
				viii 30		45

(d) Consolidated balance sheet

L Ltd and its subsidiaries Consolidated balance sheet As at 31 December 20X8	
	\$'000
Net assets	<u>258</u>
Share capital	100
Reserves	113
Non-controlling interest	45
	<u>258</u>

Solution B: Indirect Interest Method

(a) Group structure

	M Ltd	N Ltd
Group		
Direct	75%	20%
Indirect	—	45% ($75\% \times 60\%$)
Total	<u>75%</u>	<u>65%</u>
Non-controlling interest		
Direct	25%	20%
Indirect	—	15% ($25\% \times 60\%$)
Total	<u>25%</u>	<u>35%</u>

(b) Consolidation journal entries

(i)	Dr Share capital (M) ($75\% \times 60$)	45
	Dr Share capital (N) ($20\% \times 50$)	10
	Dr Share capital (N) ($60\% \times 50$)	30
	Dr Reserves (M) ($75\% \times 20$)	15
	Dr Reserves (N) ($20\% \times 10$)	2
	Dr Reserves (N) ($60\% \times 10$)	6
	Cr Investment in M Ltd	60
	Cr Investment in N Ltd	12
	Cr Investment in N Ltd	36
	(to eliminate investment accounts)	

(ii)	Dr Reserves (M) [75% × (51 – 20)]	23.25	
	Dr Reserves (N) [65% × (25 – 10)]	9.75	
	Cr Reserves (L)		33
	(to transfer post-acquisition reserves)		
(iii)	Dr Share capital (M) (25% × 60)	15	
	Dr Share capital (N) (20% × 50)	10	
	Dr Reserves (M) (25% × 51)	12.75	
	Dr Reserves (N) (20% × 10)	2	
	Dr Reserves (N) [35% × (25 – 10)]	5.25	
	Cr Non-controlling interest		45
	(to record non-controlling interest)		

(c) Consolidation worksheet

	L Ltd \$'000	M Ltd \$'000	N Ltd \$'000	Consolidation		Consolidated balances \$'000
				Dr \$'000	Cr \$'000	
Investment in M Ltd	60	–	–		i 60	–
Investment in N Ltd	12	–	–		i 12	–
Investment in N Ltd	–	36	–		i 36	–
Other net assets	108	75	75			258
Share capital (L)	100	–	–			100
Share capital (M)	–	60	–	i 45		–
				iii 15		–
Share capital (N)	–	–	50	i 10		–
				i 30		–
				iii 10		–
Reserves (L)	80	–	–		ii 33	113
Reserves (M)	–	51	–	i 15		–
				ii 23.25		–
				iii 12.75		–
Reserves (N)	–	–	25	i 2		–
				i 6		–
				ii 9.75		–
				iii 2		–
				iii 5.25		–
Non-controlling interest ..	–	–	–		iii 45	45

(d) Consolidated balance sheet

L Ltd and its subsidiaries	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Net assets	<u>258</u>
Share capital	100
Reserves	113
Non-controlling interest	45
	<u>258</u>

Notes to the solution

- (a) Both the consolidation of consolidation method and the indirect interest method yield the same consolidated balance sheet.
- (b) Under the consolidation of consolidation method, two consolidation processes are carried out, starting with the most junior subsidiary, N Ltd.
- (c) Under the indirect interest method, only one consolidation process is carried out. However, two different shareholding percentages are used: the actual shareholding percentage is used to apportion pre-acquisition reserves, and the effective shareholding percentage is used to apportion post-acquisition reserves.



In Example 5.4, it is assumed that all the shareholdings are acquired on the same date. In practice, the shareholdings could, of course, be acquired on different dates. When the shareholdings are acquired on different dates, certain complexities would arise:

- (a) The first complexity arises if, in Example 5.4, the date on which L Ltd acquires the shareholdings in M Ltd is different from the date on which M Ltd acquires its shareholdings in N Ltd. This gives rise to the same problem as that discussed in Examples 5.2 and 5.3.
- (b) The second complexity arises if the date on which L Ltd acquires its direct shareholding in N Ltd is different from the date on which its indirect shareholding in N Ltd is acquired. This gives rise to either a case of step acquisition or a case of additional acquisition of shares after control has been achieved, which has been discussed in Chapter 4.

There are numerous possible scenarios. However, the two examples below will be sufficient to illustrate the principles involved.

Example 5.5

This example is based on the case in Example 5.4, incorporating amendments on the dates of the acquisition of shares and other minor changes. In this case, L Ltd acquired the shareholding in M Ltd after M Ltd acquired the shareholding in N Ltd, and L Ltd's indirect shareholding in N Ltd was acquired after the direct shareholding.

Goodwill on consolidation had been fully amortized in accordance with FRS 22 before the companies adopted FRS 103 (2004) in 20X5. The 31 December 20X8 balance sheets of the three companies in the group are as follows:

	L Ltd	M Ltd	N Ltd
	\$'000	\$'000	\$'000
Share capital	100	60	50
Reserves	80	51	25
	<u>180</u>	<u>111</u>	<u>75</u>
Investment			
45,000 shares in M Ltd	69	—	—
10,000 shares in N Ltd	11	—	—
30,000 shares in N Ltd	—	36	—
Other net assets	100	75	75
	<u>180</u>	<u>111</u>	<u>75</u>

The share capital of L Ltd, M Ltd, and N Ltd comprises 100,000 shares, 60,000 shares, and 50,000 shares, respectively.

L Ltd acquired the shares in N Ltd on 1 January 20X1, when N Ltd's shares are traded at \$1.10 per share. L Ltd accounted for its investment in N Ltd (assuming there is no significant influence) as 'trading' securities under FRS 39. The market price of N Ltd's shares at 31 December 20X1 was \$1.10 per share. M Ltd acquired the shares in N Ltd on 20 February 20X2, when N Ltd's shares are traded at \$1.20 per share. The investment is accounted at cost under FRS 110. L Ltd acquired the shares in M Ltd on 30 March 20X3. The investment in M Ltd is accounted at cost under FRS 110.

The reserves of the companies on the various dates are as follows:

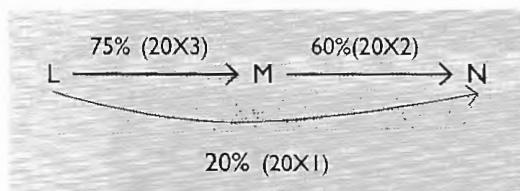
	L Ltd	M Ltd	N Ltd
	\$'000	\$'000	\$'000
1 January 20X1	25	7	5
20 February 20X2	35	12	10
30 March 20X3	55	20	15

Required

Prepare the consolidated balance sheet of L Ltd and its subsidiaries as at 31 December 20X8.

Solution A: Consolidation of consolidation method

(a) Group structure



(b) Consolidation journal entries

N Ltd

(i)	Dr Investment in N Ltd (L)	1	
	Cr Reserves (L)		1
	(assumed disposal and re-purchase)		
(ii)	Dr Share capital (N)	40	
	Dr Reserves (N) ($80\% \times 10$)	8	
	Cr Investment in N Ltd (L)		12
	Cr Investment in N Ltd (M)		36
	(to eliminate investment account)		
(iii)	Dr Reserves (N) ($20\% \times [25 - 10]$)	3	
	Cr Reserves (L)		3
	(to transfer post-acquisition reserves)		
(iv)	Dr Reserves (N) ($60\% \times [25 - 10]$)	9	
	Cr Reserves (M)		9
	(to transfer post-acquisition reserves)		
(v)	Dr Share capital (N) ($20\% \times 50$)	10	
	Dr Reserves (N) ($20\% \times 25$)	5	
	Cr Non-controlling interest		15
	(to record non-controlling interest)		

M Ltd

(vi)	Dr Share capital (M) ($75\% \times 60$)	45	
	Dr Reserves (M) ($75\% \times [20 + 60\% \times (15 - 10)]$)	17.25	
	Dr Reserves (L) ($20\% \times [15 - 10]$)	1	
	Dr Goodwill	5.75	
	Cr Investment in M Ltd		69
	(to eliminate investment account)		

(vii)	Dr Reserves (L)	5.75
	Cr Goodwill	5.75
	(to record goodwill amortization in previous years)	
(viii)	Dr Reserves (M) ($75\% \times [51 - 20 + 60\% \times (25 - 15)]$) ..	27.75
	Cr Reserves (L)	27.75
	(to transfer post-acquisition reserves)	
(ix)	Dr Share capital (M) ($25\% \times 60$)	15
	Dr Reserves (M) ($25\% \times [51 + 9]$)	15
	Cr Non-controlling interest	30
	(to record non-controlling interest)	

(c) Consolidation worksheet

	L Ltd	M Ltd	N Ltd	Consolidation		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Goodwill	—	—	—	vi 6.75	vii 6.75	—
Investment in M Ltd	69	—	—		vi 69	—
Investment in N Ltd	11	—	—	i 1	ii 12	—
Investment in N Ltd	—	36	—		ii 36	—
Other net assets	100	75	75			250
Share capital (L)	100	—	—			100
Share capital (M)	—	60	—	vi 45		—
				ix 15		
Share capital (N)	—	—	50	ii 40		—
				v 10		
Reserves (L)	80	—	—	vi 1	i 1	
				vii 5.75	iii 3	
					viii 27.75	105
Reserves (M)	—	51	—	vi 17.25	iv 9	
				viii 27.75		
				ix 15		
Reserves (N)	—	—	25	ii 8		
				iii 3		
				iv 9		
				v 5		
Non-controlling interest ..	—	—	—		v 15	
					ix 30	45

(d) Consolidated balance sheet

L Ltd and its subsidiaries Consolidated balance sheet As at 31 December 20X8	
	\$'000
Net assets	<u>250</u>
Share capital	100
Reserves	105
Non-controlling interest	<u>45</u>
	<u>250</u>

Solution B: Indirect interest method

(a) Group structure

	M Ltd	N Ltd
Group		
Direct	75%	20% (20X1)
Indirect	—	45% (20X3)
Total	<u>75%</u>	<u>65%</u>
Non-controlling interest		
Direct	25%	20%
Indirect	—	15%
Total	<u>25%</u>	<u>35%</u>

(c) Consolidation journal entries

(i) Dr Investment in N | |
 Cr Reserve (L) | |
 (assumed disposal and re-purchase)

(ii) Dr Share capital (M) ($75\% \times 60$) 45
 Dr Share capital (N) ($20\% \times 50$) 10
 Dr Share capital (N) ($60\% \times 50$) 30
 Dr Reserves (M) ($75\% \times 20$) 15
 Dr Reserves (N) ($20\% \times 15$) 3
 Dr Reserves (N) ($60\% \times 10$) 6
 Dr Reserves (N) ($45\% \times [15 - 10]$) 2.25
 Dr Goodwill on consolidation 5.75
 Cr Investment in M Ltd 69
 Cr Investment in N Ltd 12
 Cr Investment in N Ltd 36
 (to eliminate investment accounts)

(iii)	Dr Reserves (L)	5.75
	Cr Goodwill on consolidation	5.75
(to record goodwill amortization in previous years)		
(iv)	Dr Reserves (M) ($75\% \times [51 - 20]$)	23.25
	Dr Reserves (N) ($20\% \times [25 - 15]$)	2
	Dr Reserves (N) ($45\% \times [25 - 15]$)	4.5
	Cr Reserves (L)	29.75
(to transfer post-acquisition reserves)		
(v)	Dr Share capital (M) ($25\% \times 60$)	15
	Dr Share capital (N) ($20\% \times 50$)	10
	Dr Reserves (M) ($25\% \times 51$)	12.75
	Dr Reserves (N) ($20\% \times 10$)	2
	Dr Reserves (N) ($35\% \times [25 - 10]$)	5.25
	Cr Non-controlling interest	45
(to record non-controlling interest)		

(c) Consolidation worksheet

	L Ltd \$'000	M Ltd \$'000	N Ltd \$'000	Consolidation		Consolidated balances \$'000
				Dr ii 6.75	Cr iii 6.75	
Goodwill	—	—	—	ii 6.75	iii 6.75	—
Investment in M Ltd	69	—	—		ii 69	—
Investment in N Ltd	11	—	—	i 1	ii 12	—
Investment in N Ltd	—	36	—		ii 36	—
Other net assets	100	75	75			250
Share capital (L)	100	—	—			100
Share capital (M)	—	60	—	ii 45		—
Share capital (N)	—	—	50	v 15 ii 10 ii 30 v 10		—
Reserves (L)	80	—	—	iii 5.75	i 1	105
Reserves (M)	—	51	—	ii 15 iv 23.25 v 12.75	iv 29.75	—
Reserves (N)	—	—	25	ii 3 ii 6 ii 2.25 iv 2 iv 4.5 v 2 v 5.25		—
Non-controlling interest ..	—	—	—		v 45	45

(d) Consolidated balance sheet

L Ltd and its subsidiaries Consolidated balance sheet As at 31 December 20X8	
	\$'000
Net assets	<u>250</u>
Share capital	100
Reserves	105
Non-controlling interest	45
	<u>250</u>

Notes to the solution

- (a) In this case, M Ltd acquired the shareholding in N Ltd before L Ltd acquired the shareholding in M Ltd. Under the consolidation of consolidation method, at the second level of consolidation, N Ltd's post-acquisition reserve of \$9,000 ($60\% \times [\$25,000 - \$10,000]$) that is transferred to M Ltd in CJE (iv) has to be further apportioned into pre-acquisition reserves of \$3,000 ($60\% \times [\$15,000 - \$10,000]$) in CJE (vi) and post-acquisition reserves of \$6,000 ($60\% \times [\$25,000 - \$15,000]$) in CJE (viii). N Ltd's reserve transferred to L Ltd should similarly be apportioned (see CJE [iii] and [vi]). The net effects of these consolidation journal entries are: (i) M Ltd's pre-acquisition reserves to be eliminated against the investment account consist of not only the reserves of M Ltd at the date it was acquired by L Ltd, but also its share of the increase in N Ltd's reserves from the date N Ltd was acquired by M Ltd to the date M Ltd was acquired by L Ltd; and (ii) the L Ltd group's reserve is increased by its share of N Ltd's post-acquisition reserves from the date N Ltd became a subsidiary of the group in 20X3 ($75\% \times 60\% \times [\$25,000 - \$15,000]$) as in CJE (viii).

Under the indirect interest method, the post-acquisition reserve of N Ltd from the date it was acquired by M Ltd of \$15,000 ($\$25,000 - \$10,000$) is first apportioned to the group and to non-controlling interest based on their respective effective interest of 45% and 55%. The amount that is apportioned to the group has to be further apportioned into pre-acquisition and post-acquisition reserves from L Ltd's viewpoint. Thus, the pre-acquisition reserves of N Ltd consist of \$6,000 ($60\% \times \$10,000$) relating to the pre-acquisition reserves at the date M Ltd acquired N Ltd and \$2,250 ($45\% \times [\$15,000 - \$10,000]$) relating to the increase in the reserves of N Ltd from the date M Ltd acquired N Ltd to the date L Ltd acquired M Ltd. Also, the group's reserves are increased only by that part of N Ltd's reserves that is earned from 20X3, that are post-acquisition reserves from the group's viewpoint (see CJE [iv]).

- (b) This case also illustrates the problem involving step acquisition. L Ltd acquired 20% of N Ltd in 20X1 and another 60% through its subsidiary at a later date. As discussed in Chapter 4, FRS 103 requires the 20% shareholding acquired on 1 January 20X1 to be deemed to be disposed and re-purchased on 20 February 20X2 (the day when control is ultimately achieved). Given that on 1 January 20X1 the cost is \$1.10 per share, and on 20 February

20X2 the market price is \$1.20 per share, the assumption of disposal and re-purchase of the initial 20% shareholding will result in a gain of \$1,000 ($10,000 \times [\$1.20 - \$1.10]$) and an increase in cost of investment of \$1,000 ($\$12,000 - \$11,000$).

Example 5.6

This example is based on the case in Example 5.4, incorporating amendments on the dates of acquisition of shares and other minor changes. In this case, L Ltd acquired the shareholding in M Ltd before M Ltd acquired the shareholding in N Ltd, and L Ltd's indirect shareholding in N Ltd was acquired before the direct shareholding. The 31 December 20X8 balance sheets of the three companies in the group are as follows:

	L Ltd	M Ltd	N Ltd
	\$'000	\$'000	\$'000
Share capital	100	60	50
Retained profits	80	51	25
	<u>180</u>	<u>111</u>	<u>75</u>
Investment			
45,000 shares in M Ltd	60	—	—
10,000 shares in N Ltd	15	—	—
30,000 shares in N Ltd	—	36	—
Other net assets	105	75	75
	<u>180</u>	<u>111</u>	<u>75</u>

The share capital of L Ltd, M Ltd, and N Ltd comprises 100,000 shares, 60,000 shares, and 50,000 shares, respectively. L Ltd acquired the shares in M Ltd on 1 January 20X1. M Ltd acquired the shares in N Ltd on 20 February 20X2. L Ltd acquired the shares in N Ltd on 30 March 20X3. All the investments are accounted at cost under FRS 110.

The retained profits of the companies on the various dates were as follows:

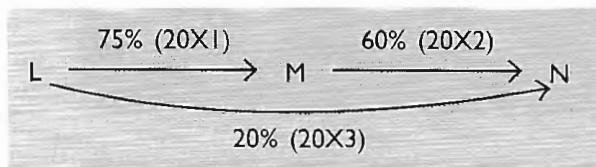
	L Ltd	M Ltd	N Ltd
	\$'000	\$'000	\$'000
1 January 20X1	25	20	7
20 February 20X2	35	20	10
30 March 20X3	55	40	15

Required

Prepare the consolidated balance sheet of L Ltd and its subsidiaries as at 31 December 20X8.

Solution A: Consolidation of consolidation method

(a) Group structure



(b) Consolidation journal entries

N Ltd

(i)	Dr Share capital (N) ($60\% \times 50$)	30
	Dr Retained profits (N) ($60\% \times 10$)	6
	Cr Investment in N Ltd (M)	36
	(to eliminate investment account)	
(ii)	Dr Share capital (N) ($20\% \times 50$)	10
	Dr Retained profits (N) ($20\% \times 15$)	3
	Dr Goodwill on consolidation	2
	Cr Investment in N Ltd (L)	15
	(to eliminate investment account)	
(iii)	Dr Capital reserve	2
	Cr Goodwill on consolidation	2
	(to comply with FRS 110)	
(iv)	Dr Retained profits (N) ($60\% \times [25 - 10]$)	9
	Cr Retained profits (M)	9
	(to transfer post-acquisition retained profits)	
(v)	Dr Retained profits (N) ($20\% \times [25 - 15]$)	2
	Cr Retained profits (L)	2
	(to transfer post-acquisition retained profits)	
(vi)	Dr Share capital (N) ($20\% \times 50$)	10
	Dr Retained profits (N) ($20\% \times 25$)	5
	Cr Non-controlling interest	15
	(to record non-controlling interest)	

M Ltd

(vii)	Dr Share capital (M) ($75\% \times 60$)	45
	Dr Retained profits (M) ($75\% \times 20$)	15
	Cr Investment in M Ltd	
	(to eliminate investment account)	60
(viii)	Dr Retained profits (M) ($75\% \times [51 - 20 + 9]$)	30
	Cr Retained profits (L)	
	(to transfer post-acquisition retained profits)	30
(ix)	Dr Share capital (M) ($25\% \times 60$)	15
	Dr Retained profits (M) ($25\% \times [51 + 9]$)	15
	Cr Non-controlling interest	
	(to record non-controlling interest)	30

(c) Consolidation worksheet

	L Ltd	M Ltd	N Ltd	Consolidation		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Investment in M Ltd	60	–	–		vii 60	–
Investment in N Ltd	15	–	–		ii 15	–
Investment in N Ltd	–	36	–		i 36	–
Other net assets	105	75	75			255
Goodwill	–	–	–	ii 2	iii 2	–
Share capital (L)	100	–	–			100
Share capital (M)	–	60	–	vii 45		–
				ix 15		
Share capital (N)	–	–	50	i 30		
				ii 10		
				vi 10		
Capital reserve	–	–	–	iii 2		2
Retained profits (L)	80	–	–		v 2	
					viii 30	112
Retained profits (M)	–	51	–	vii 15	iii 9	
				viii 30		
				ix 15		
Retained profits (N)	–	–	25	i 6		
				ii 3		
				iv 9		
				v 2		
				vi 5		
Non-controlling interest	–	–	–	vi 15		
				ix 30		45

(d) Consolidated balance sheet

L Ltd and its subsidiaries Consolidated balance sheet As at 31 December 20X8	
	\$'000
Net assets	<u>255</u>
Share capital	100
Capital reserve	(2)
Retained profits	112
Non-controlling interest	45
	<u>255</u>

Solution B: Indirect Interest Method

(a) Group structure

	M Ltd	N Ltd
Group		
Direct	75%	20%
Indirect	—	45%
Total .	75%	65%
 Non-controlling interest		
Direct	25%	20%
Indirect	—	15%
Total .	25%	35%

(b) Consolidation journal entries

(i)	Dr Share capital (M) ($75\% \times 60$)	45
	Dr Share capital (N) ($20\% \times 50$)	10
	Dr Share capital (N) ($60\% \times 50$)	30
	Dr Retained profits (M) ($75\% \times 20$)	15
	Dr Retained profits (N) ($20\% \times 15$)	3
	Dr Retained profits (N) ($60\% \times 10$)	6
	Dr Goodwill on consolidation	2
	Cr Investment in M Ltd	60
	Cr Investment in N Ltd	15
	Cr Investment in N Ltd	36
	(to eliminate investment accounts)	

(ii)	Dr Capital reserve	2
	Cr Goodwill on consolidation	2
	(to comply with FRS 110)	

(iii)	Dr Retained profits (M) ($75\% \times [51 - 20]$)	23.25
	Dr Retained profits (N) ($20\% \times [25 - 15]$)	2
	Dr Retained profits (N) ($45\% \times [25 - 10]$)	6.75
	Cr Retained profits (L)	32
	(to transfer post-acquisition retained profits)	
(iv)	Dr Share capital (M) ($25\% \times 60$)	15
	Dr Share capital (N) ($20\% \times 50$)	10
	Dr Retained profits (M) ($25\% \times 51$)	12.75
	Dr Retained profits (N) ($20\% \times 10$)	2
	Dr Retained profits (N) ($35\% \times [25 - 10]$)	5.25
	Cr Non-controlling interest	45
	(to record non-controlling interest)	

(c) Consolidation worksheet

	A Ltd	B Ltd	C Ltd	Adjustments		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Investment in M Ltd	60	—	—	i 60		—
Investment in N Ltd	15	—	—	i 15		—
Investment in N Ltd	—	36	—	i 36		—
Goodwill	—	—	—	i 2	ii 2	—
Other net assets	—	75	75			255
Share capital (L)	100	—	—			100
Share capital (M)	—	60	—	i 45		—
				iv 15		
Share capital (N)	—	—	50	i 10		—
				i 30		
				iv 10		—
Capital reserve	—	—	—	ii 2		2
Retained profits (L)	80	—	—		ii 32	112
Retained profits (M)	—	51	—	i 15		—
				iii 23.25		
				iv 12.75		—
Retained profits (N)	—	—	25	i 3		—
				i 6		
				iii 2		
				ii 6.75		
				iv 2		
				iv 5.25		—
Non-controlling interest ...	—	—	—		iii 45	45

(d) Consolidated balance sheet

L Ltd and its subsidiaries Consolidated balance sheet As at 31 December 20X8	
	\$'000
Net assets	<u>255</u>
Share capital	100
Capital reserve	(2)
Retained profits	112
Non-controlling interest	45
	<u>255</u>

Notes to the solution

- (a) In this case, L Ltd acquired M Ltd in 20X1 and M Ltd acquired N Ltd in 20X2. Thus, N Ltd became a subsidiary of M Ltd and a subsidiary of L Ltd on the same date, that is, in 20X2. This would not give rise to the complication shown in Example 5.3.
- (b) In this case, L Ltd acquired its controlling interest in N Ltd (through M Ltd) in 20X2, and made additional shares in N Ltd in 20X3. This is a problem in the nature of the acquisition of additional shares in a subsidiary after control has been achieved, which has been discussed in Chapter 4. In such a case, FRS 110 requires that there should be no change to the goodwill upon increase in shareholding arising from acquisition of additional shares. In fact, only two items are affected: (a) the cost of additional share acquisition, and (b) decrease in non-controlling interest. FRS 110 requires the difference between these two figures to be treated as a movement in a capital reserve. In this case, before the additional share acquisition, non-controlling interest is \$26,000 ($40\% \times$ net assets of \$65,000 [represented by share capital of \$50,000 and reserve of \$15,000]), and after the additional share acquisition, non-controlling interest is \$13,000 ($20\% \times$ net assets of \$65,000). Thus, non-controlling interest decreases by \$13,000. The cost of the additional share acquisition is \$15,000. FRS 110 requires the difference of \$2,000 to be debited to a capital reserve. Also, the goodwill of \$2,000 arising from the additional share acquisition should be written off to comply with the requirement of FRS 110. These two consolidation adjustments are made through CJE (iii) in Solution A, and CJE (ii) in Solution B.

Other consolidation complexities involving problems discussed in Chapters 2 and 3 would also be encountered in groups with connecting affiliation structures. These will be illustrated in 'Problems for self-study'.

5.4 Cross holdings

Cross holdings, which are also known as mutual holdings or reciprocal holdings, exist when companies hold shares in one another. Cross holdings between the parent and its subsidiary are prohibited in Singapore under Section 21(1) of the Companies Act. However, cross holdings may still exist under two circumstances. Section 21(3) of the Companies Act allows cross holdings that existed before the enforcement of the Companies Act on 29 December 1967 to continue, and Section 21(4) allows cross holdings that arise in cases where the subsidiary has held shares in the parent at the time it was acquired, to continue for a period of 12 months. Thus, the problem of cross holding may still be encountered, albeit very rarely, in Singapore.

The existence of cross holdings between the parent and its subsidiary gives rise to certain problems in the consolidation process.

One major problem is the apportionment of the post-acquisition reserves of the subsidiary between the group and non-controlling interest. Given a case where S Ltd holds 25% in P Ltd and P Ltd holds 80% in S Ltd and thereafter S Ltd reports a profit of \$100 and P Ltd reports a profit of \$1,000, it may not be easy to apportion the total profit of \$1,100 between the group and the non-controlling interest. There are a few mathematical tools that can be used to resolve the problem. One of the simplest, namely, simultaneous equations, is illustrated below:

Let p be the 'real' profit of P Ltd and s the 'real' profit of S Ltd. The simultaneous equations can be set up as follows:

$$\begin{aligned} p &= \$1,000 + 80\% \times s \\ s &= \$100 + 25\% \times p \end{aligned}$$

Solving the above simultaneous equations will yield the following:

$$\begin{aligned} p &= \$1,350 \\ s &= \$437.50 \end{aligned}$$

Therefore, the total profit of \$1,100 will be apportioned as follows:

Non-controlling interest: $20\% \times s = \$87.50$

Group: $\$1,100 - \$87.50 = \$1,012.50$

Another problem is the determination of pre-acquisition reserves. In a case where a subsidiary has held shares in the parent before it (the subsidiary) is acquired, the pre-acquisition reserves of the subsidiary would include its interest, based on the shares it holds, in the increase or decrease in the parent's reserves from the date the subsidiary acquires the shareholding in the parent to the date the parent acquires the shareholding in the subsidiary.

Unlike all other cases where the group's share capital is always equal to the share capital of the parent, cross holding between the parent and its subsidiary will result

in the group's share capital being less than the share capital of the parent without going through a legal reduction in capital. The above problems associated with cross holdings will now be illustrated.

Example 5.7

The 31 December 20X8 balance sheets of two companies in a group are as follows:

	S Ltd	T Ltd
	\$'000	\$'000
Share capital	100	50
Reserves	90	50
	<hr/> 190	<hr/> 100
Investment		
40,000 shares in T Ltd	68	—
10,000 shares in S Ltd	—	11
Other net assets	122	89
	<hr/> 190	<hr/> 100

The share capital of S Ltd and T Ltd comprises 100,000 shares and 50,000 shares, respectively. T Ltd acquired the shares in S Ltd on 1 January 20X5, and S Ltd acquired the shares in T Ltd on 20 February 20X8. The reserves of the companies on the various dates were as follows:

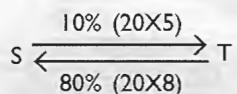
	S Ltd	T Ltd
	\$'000	\$'000
1 January 20X5	10	20
20 February 20X8	60	30

Required

Prepare the consolidated balance sheet of S Ltd and its subsidiary as at 31 December 20X8.

Solution

(a) Group structure



(b) Consolidation journal entries

(i)	Dr Share capital (S) ($10\% \times 100$)	10		
	Dr Reserves (S) ($10\% \times 10$)	1		
	Cr Investment in S Ltd		11	
	(to eliminate investment account)			
(ii)	Dr Share capital (T) ($80\% \times 50$)	40		
	Dr Reserves (T) ($80\% \times 30$)	24		
	Dr Reserves (S) ($80\% \times 10\% \times [60 - 10]$)	4		
	Cr Investment in T Ltd		68	
	(to eliminate investment account)			
(iii)	Dr Reserves (T)	15		
	Cr Reserves (S)		15	
	(to transfer post-acquisition reserves)			
(iv)	Dr Share capital (T) ($20\% \times 50$)	10		
	Dr Reserves (T) ($20\% \times 30 + 5$)	11		
	Cr Non-controlling interest		21	
	(to record non-controlling interest)			

(c) Consolidation worksheet

	S Ltd	T Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Investment in T Ltd	68	—	ii 68	—	
Investment in S Ltd	—	11	i 11	—	
Other net assets	122	89			211
Share capital (S)	100	—	i 10	90	
Share capital (T)	—	50	ii 40 iv 10	—	
Reserves (S)	90	—	i 1 ii 4 iii 15	100	
Reserves (T)	—	50	ii 24 iii 15 iv 11	—	
Non-controlling interest	—	—	iv 21	21	

(d) Consolidated balance sheet

S Ltd and its subsidiaries Consolidated balance sheet As at 31 December 20X8	
	\$'000
Net assets	<u>211</u>
Share capital	90
Reserves	100
Non-controlling interest	21
	<u>211</u>

Notes to the solution

- (a) The share capital as shown in the consolidated balance sheet is \$90,000. The group is deemed to have reduced the capital of S Ltd by buying back its own shares.
- (b) In the calculation of the pre-acquisition reserves of T Ltd, T Ltd's interest in the increase in S Ltd's reserves from 1 January 20X5 to 20 February 20X8 must be included.
- (c) The apportionment of the post-acquisition reserves to the group and to the non-controlling interest can be determined as follows:

Let s be the 'real' post-acquisition profit of S Ltd and t is the 'real' post-acquisition profit of T Ltd:

$$\begin{aligned}s &= \$90,000 - \$60,000 + 80\% \times t \\t &= \$50,000 - \$30,000 + 10\% \times s\end{aligned}$$

Solving the simultaneous equations will yield the following:

$$\begin{aligned}s &= \$50,000 \\t &= \$25,000\end{aligned}$$

Therefore, the post-acquisition profit of the subsidiary will be apportioned as follows:

$$\text{Non-controlling interest: } 20\% \times t = \$5,000$$

$$\text{Group: } \$50,000 - \$30,000 - \$5,000 = \$15,000$$



There may also be cross holding between fellow subsidiaries in a group, and the shareholdings may take place at different dates. These seem to be difficult problems to deal with. However, the principles involved are the same as those discussed in this chapter. Also, because cross holdings are very rarely encountered in practice, no further discussion and illustration on this topic is deemed necessary.

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Summary

In consolidation for groups with complex structures, the first task is to determine the group structure. Whether an entity is a subsidiary of the group depends on the application of the 'control' concept in FRS 110 and the provisions of Section 5 of the Companies Act. If the group controls an entity, then the entity is a subsidiary of the group and should therefore be incorporated into the consolidated financial statements of the group.

The consolidation issues involved in the preparation of consolidated financial statements for groups with complex structures are basically the same as those involved in groups with simple structures (for example, adding across on the full consolidation principle, elimination of intragroup account balances and unrealized intragroup profits or losses). Care should, however, be taken in computing the non-controlling interest and the group's profits/reserves.

One other complication in the preparation of consolidated financial statements for groups with complex structures arises when the shareholdings are acquired at different dates. This complicates the apportionment of the reserves of the subsidiaries and subsubsidiaries into pre-acquisition and post-acquisition portions.

There are two methods commonly used in the preparation of consolidated financial statements for groups with complex structures, namely, the consolidation of consolidation method and the indirect interest method. The consolidation of consolidation method involves a series of consolidation processes performed repetitively for each level of the parent-subsidiary, commencing with the most junior subsidiary, and is most suited for groups with a father-son-grandson structure. The indirect interest method involves only one consolidation process covering all the entities in the group; however, it requires the use of effective shareholding, which could be quite complicated for more complex groups. The choice of method depends largely on the group structure and the preparer's personal preferences.

Problems for self-study

PROBLEM 5.1

The 20X8 financial statements of three companies in a group are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	D Ltd	E Ltd	F Ltd
	\$'000	\$'000	\$'000
Sales	600	500	400
Cost of sales	200	250	150
Gross profit	400	250	250
Dividend income	84	56	—
Operating expenses	200	100	50
Profit before tax	284	206	200
Tax	64	56	70
Profit after tax	220	150	130
Other comprehensive income	—	—	—
Total comprehensive income	220	150	130

- (b) Balance sheets as at 31 December 20X8

	D Ltd	E Ltd	F Ltd
	\$'000	\$'000	\$'000
Share capital	600	300	300
Retained profit	310	208	120
Dividend payable	120	112	70
Other liabilities	274	316	110
	<u>1,304</u>	<u>936</u>	<u>600</u>
Investment in E Ltd	320	—	—
Investment in F Ltd	—	280	—
Dividend receivable	84	56	—
Other assets	900	600	600
	<u>1,304</u>	<u>936</u>	<u>600</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	D Ltd	E Ltd	F Ltd
	\$'000	\$'000	\$'000
Beginning retained profit	210	170	60
Profit for the year	220	150	130
Dividend proposed	120	112	70
Ending retained profit	<u>310</u>	<u>208</u>	<u>120</u>

The share capital of D Ltd, E Ltd, and F Ltd comprises 600,000 shares, 300,000 shares, and 300,000 shares, respectively. D Ltd acquired 75% interest in E Ltd in January 20X5, when E Ltd's retained profit was \$100,000. On the same date, E Ltd acquired 80% interest in F Ltd, when F Ltd's retained profit was \$50,000.

The companies have adopted FRS 103 on 1 January 20X8. Prior to that, the companies adopted a policy under which goodwill on consolidation was amortized over five years on a straight-line basis, commencing in the year of the acquisition. There is no impairment of goodwill for 20X8.

The group started to sell to each other in 20X8. During the year 20X8, F Ltd sold goods invoiced at \$50,000 to E Ltd and E Ltd sold goods invoiced at \$80,000 to D Ltd. As at 31 December 20X8, the unrealized profit in the stock of E Ltd was \$10,000 and that in the stock of D Ltd was \$30,000.

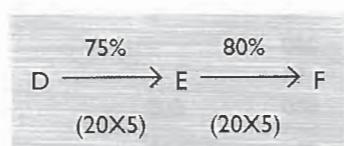
All the dividends were declared on 10 December 20X8 and were payable on 10 January 20X9. The companies have adopted the one-tier system for dividends since 1 January 20X8.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing the group's retained profit only) for D Ltd and its subsidiaries for the year 20X8.

Solution A: Consolidation of consolidation method

(a) Group structure



(b) Consolidation journal entries

E Ltd + F Ltd

(i)	Dr Share capital (F) ($80\% \times 300$)	240
	Dr Beginning retained profit (F) ($80\% \times 50$)	40
	Cr Investment in F Ltd	280
	(to eliminate investment account)	

(ii)	Dr Dividend payable (F)	70
	Cr Dividend receivable (E)	56
	Cr Dividend payable to minority interest	14
	(to eliminate intragroup balances)	
(iii)	Dr Sales	50
	Cr Cost of sales	50
	(to eliminate intragroup sales)	
(iv)	Dr Cost of sales (F)	10
	Cr Other assets	10
	(to eliminate unrealized profit in closing stock)	
(v)	Dr Dividend income (E)	56
	Cr Dividend proposed (F) ($80\% \times 70$)	56
	(to eliminate intragroup dividends)	
(vi)	Dr Beginning retained profit (F) ($80\% \times [60 - 50]$)	8
	Cr Beginning retained profit (E)	8
	(to transfer post-acquisition beginning retained profit)	
(vii)	Dr Profit after tax (F) ($80\% \times [130 - 10]$)	96
	Cr Profit after tax (E)	96
	(to transfer post-acquisition profit after tax)	
(viii)	Dr Non-controlling interest (CSCI) ($20\% \times [130 - 10]$)	24
	Cr Non-controlling interest (CBS)	24
	(to record non-controlling interest in profit)	
(ix)	Dr Non-controlling interest (CBS)	14
	Cr Dividend proposed (F)	14
	(to record non-controlling interest in dividend)	
(x)	Dr Share capital (F) ($20\% \times 300$)	60
	Dr Beginning retained profit (F) ($20\% \times 60$)	12
	Cr Non-controlling interest (CBS)	72
	(to record non-controlling interest in F Ltd's other shareholders' equity)	

D Ltd + (E Ltd + F Ltd)

(xi)	Dr Share capital (E) ($75\% \times 300$)	225
	Dr Beginning retained profit (E) ($75\% \times 100$)	75
	Dr Goodwill on consolidation	20
	Cr Investment in E Ltd	320
	(to eliminate investment account)	

(xii)	Dr Beginning retained profit (D)	12	
	Cr Goodwill on consolidation		12
	(to record goodwill amortization in previous years)		
(xiii)	Dr Dividend payable (E)	112	
	Cr Dividend receivable (D)		84
	Cr Dividend payable to non-controlling interest		28
	(to eliminate intragroup balances)		
(xiv)	Dr Sales	80	
	Cr Cost of sales		80
	(to eliminate intragroup sales)		
(xv)	Dr Cost of sales (E)	30	
	Cr Other assets		30
	(to eliminate unrealized profit in closing stock)		
(xvi)	Dr Dividend income (D)	84	
	Cr Dividend proposed (E) ($75\% \times 112$)		84
	(to eliminate intragroup dividends)		
(xvii)	Dr Beginning retained profit (E)	58.5	
	Cr Beginning retained profit (D)		58.5
	(to transfer post-acquisition beginning retained profit [$75\% \times (170 - 100 + 8)$])		
(xviii)	Dr Profit after tax (E)	120	
	Cr Profit after tax (D)		120
	(to transfer post-acquisition profit after tax [$75\% \times (150 - 30 - 56 + 96)$])		
(xix)	Dr Non-controlling interest (CSCI)	40	
	Cr Non-controlling interest (CBS)		40
	(to record non-controlling interest in profit [$25\% \times (150 - 30 - 56 + 96)$])		
(xx)	Dr Non-controlling interest (CBS) ($25\% \times 112$)	28	
	Cr Dividend proposed (E)		28
	(to record non-controlling interest in dividend)		
(xi)	Dr Share capital (E) ($25\% \times 300$)	75	
	Dr Beginning retained profit (E) ($25\% \times [170 + 8]$)		44.5
	Cr Non-controlling interest (CBS)		119.5
	(to record non-controlling interest in E Ltd's other shareholders' equity)		

(c) Consolidation worksheet

	D Ltd	E Ltd	F Ltd	Consolidation		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	600	500	400	iii 50 xiv 80		1,370
Cost of sales	200	250	150	iv 10 xv 30	iii 50 xiv 80	510
Gross profit	400	250	250			860
Dividend	84	56	—	v 56		—
				xvx 84		
Operating expenses	200	100	50			350
Profit before tax	284	206	200			510
Tax	64	56	70			190
Profit after tax	220	150	130			320
Non-controlling interest ...	—	—	—	viii 24 xix 40		64
Group profit	—	—	—			256
Beginning retained profit ...	210	170	60	i 40 x 12 xi 75 xii 12 xxi 44.5		256.5
Dividend appropriation	120	112	70	v 56 ix 14 xvi 84 xx 28		120
Ending retained profit	310	208	120	xi 20	xxi 12	392.5
Goodwill	—	—	—		xi 320	8
Investment in E Ltd	320	—	—		i 280	—
Investment in F Ltd	—	280	—		ii 56	—
Dividend receivable	84	56	—		xiii 84	
Other assets	900	600	600		iv 10 xv 30	2,060
Share capital	600	300	300	i 240 x 60 xi 225 xi 75		600
Ending retained profit	310	208	120			392.5
Dividend payable	120	112	70	ii 70	xiii 112	120
Dividend to NCI	—	—	—	ii 14	xiii 28	42
Other liabilities	274	316	110		ix 14 xx 28	700
Non-controlling interest ...	—	—	—		viii 24 x 72 xix 40 xxi 119.5	213.5

(d) Consolidated financial statements

D Ltd and its subsidiaries
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,370
Cost of sales	<u>510</u>
Gross profit	860
Operating expenses	<u>350</u>
Profit before tax	510
Tax	<u>190</u>
Profit for the year	320
Other comprehensive income	<u>—</u>
Total comprehensive income	<u><u>320</u></u>
Attributable to:	
Shareholders of the parent	256
Non-controlling interest	<u>64</u>
	<u><u>320</u></u>

D Ltd and its subsidiaries
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Goodwill on consolidation	8
Other assets	<u>2,060</u>
	<u><u>2,068</u></u>
Share capital	600
Retained profit	392.5
Non-controlling interest	213.5
Dividend payable	120
Dividend payable to non-controlling interest	42
Other liabilities	<u>700</u>
	<u><u>2,068</u></u>

D Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	256.5
Profit for the year	256
Dividend proposed	120
Ending retained profit	392.5

Solution B: Indirect Interest Method

(a) Group structure

	E Ltd	F Ltd
Group		
Direct	75%	—
Indirect	—	60% ($75\% \times 80\%$)
Non-controlling interest		
Direct	25%	20%
Indirect	—	20% ($25\% \times 80\%$)

(b) Consolidation journal entries

(i)	Dr Share capital (E) ($75\% \times 300$)	225
	Dr Share capital (F) ($80\% \times 300$)	240
	Dr Beginning retained profit (E) ($75\% \times 100$)	75
	Dr Beginning retained profit (F) ($80\% \times 50$)	40
	Dr Goodwill	20
	Cr Investment in E Ltd	320
	Cr Investment in F Ltd	280
	(to eliminate investment accounts)	
(ii)	Dr Beginning retained profit (D)	12
	Cr Goodwill	12
	(to record goodwill amortization in previous years)	
(iii)	Dr Dividend payable (E)	112
	Dr Dividend payable (F)	70
	Cr Dividend receivable (D)	84
	Cr Dividend receivable (E)	56
	Cr Dividend payable to non-controlling interest	42
	(to eliminate intragroup balances)	

(iv)	Dr Sales	130
	Cr Cost of sales	130
	(to eliminate intragroup sales)	
(v)	Dr Cost of sales (E)	30
	Dr Cost of sales (F)	10
	Cr Other assets	40
	(to eliminate unrealized profit in closing stocks)	
(iv)	Dr Dividend income (D)	84
	Dr Dividend income (E)	56
	Cr Dividend proposed (E)	84
	Cr Dividend proposed (F)	56
	(to eliminate intragroup dividends)	
(vii)	Dr Non-controlling interest (E) (CSCI) ($25\% \times [150 - 30 - 56]$)	16
	Dr Non-controlling interest (F) (CSCI) ($40\% \times [130 - 10]$)	48
	Cr Non-controlling interest (CBS)	64
	(to record non-controlling interest in profit)	
(viii)	Dr Non-controlling interest (CBS)	42
	Cr Dividend proposed (E) ($25\% \times 112$)	28
	Cr Dividend proposed (F) ($20\% \times 70$)	14
	(to record non-controlling interest in dividends)	
(ix)	Dr Share capital (E) ($25\% \times 300$)	75
	Dr Share capital (F) ($20\% \times 300$)	60
	Dr Beginning retained profit (E) ($25\% \times 170$)	42.5
	Dr Beginning retained profit (F) ($20\% \times 50$)	10
	Dr Beginning retained profit (F) ($40\% \times [60 - 50]$)	4
	Cr Non-controlling interest (CBS)	191.5
	(to record non-controlling interest in OSC and BRP)	

(c) Consolidation worksheet

	D Ltd	E Ltd	F Ltd	Consolidation Dr	Cr	Consolidated balances
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	600	500	400	iv 130		1,370.0
Cost of sales	200	250	150	v 30	iv 130	
				v 10		510
Gross profit	400	250	250			860
Dividend	84	56	—	vi 84		—
				vi 56		
Operating expenses	200	100	50			350
Profit before tax	284	206	200			510
Tax	64	56	70			190
Profit after tax	220	150	130			320
Non-controlling interest ..	—	—	—	vii 16		
				vii 48		64
Group profit	—	—	—			256
Beginning retained profit ..	210	170	60	i 75		
				i 40		
				ii 12		
				ix 42.5		
				ix 10		
				ix 4		256.5
Dividends proposed	120	112	70		vi 84	
				vi 56		
				viii 28		
				viii 14		120
Ending retained profit	310	208	120			392.5
Goodwill	—	—	—	i 20	ii 12	8
Investment in E Ltd	320	—	—		i 320	—
Investment in F Ltd	—	280	—		i 280	—
Dividend receivable	84	56	—		iii 84	
				iii 56		—
Other assets	900	600	600		v 40	2,060
Share capital	600	300	300	i 225		
				i 240		
				ix 75		
				ix 60		600
Ending retained profit	310	208	120			392.5
Dividend payable	120	112	70	ii 112		
				iii 70		120
Dividend to non-controlling interest	—	—	—	iii 42		42
Other liabilities	274	316	110			700
Non-controlling interest ...	—	—	—	viii 42	vii 64.15	
				i 191.5		213.5

(d) Consolidated financial statements

D Ltd and its subsidiaries	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	1,370
Cost of sales	<u>510</u>
Gross profit	860
Operating expenses	<u>350</u>
Profit before tax	510
Tax	<u>190</u>
Profit for the year	320
Other comprehensive income	<u>—</u>
Total comprehensive income	<u><u>320</u></u>
Attributable to:	
Shareholders of the parent	256
Non-controlling interest	<u>64</u>
	<u><u>320</u></u>
D Ltd and its subsidiaries	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Goodwill on consolidation	8
Other assets	<u>2,060</u>
	<u><u>2,068</u></u>
Share capital	600
Retained profit	392.5
Non-controlling interest	213.5
Dividend payable	120
Dividend payable to non-controlling interest	42
Other liabilities	<u>700</u>
	<u><u>2,068</u></u>

D Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	256.5
Profit for the year	256
Dividend proposed	120
Ending retained profit	392.5

Notes to the solution

- (a) Both the consolidation of consolidation method and the indirect interest method yield the same consolidated financial statements.
- (b) This is a case of a group with a father-son-grandson structure where the parent, D Ltd, holds a subsidiary, E Ltd, and a sub-subsidiary, F Ltd. All the shareholdings were acquired on the same date.
- (c) In Solution (A), CJEs (vi), (vii), (xvii), and (xviii) are created for the transfer of post-acquisition profit to facilitate calculations only. They are not necessary for the consolidation process and are therefore not incorporated into the consolidation worksheet.
- (d) The non-controlling interest of \$64,000 in the consolidated statement of comprehensive income can be proved as follows:

	\$'000
Non-controlling interest in E Ltd's adjusted after-tax profit 25% × (150 – 30 – 56)	16
Non-controlling interest in F Ltd's adjusted after-tax profit (20% + 25% × 80%) × (130 – 10)	48
Total	64

- (e) The group's profit of \$256,000 can be proved as follows:

	\$'000
Adjusted after-tax profit of the parent, D Ltd 220 – 84	136
Add group's share of the adjusted after-tax profit of E Ltd 75% × (150 – 30 – 56)	48
Add group's share of the adjusted after-tax profit of F Ltd (75% × 80%) × (130 – 10)	72
Total	256

Note: The figures 84 and 56 are intragroup dividends.

- (f) The group's retained profit of \$392,500 can be proved as follows:

	\$'000
Retained profit of the parent, D Ltd	310
Add group's share of the post-acquisition retained profit of E Ltd $75\% \times (208 - 30 - 100)$	58.5
Add group's share of the post-acquisition retained profit of F Ltd $(75\% \times 80\%) \times (120 - 10 - 50)$	36
Less goodwill amortization under FRS 22	12
Total	<u>392.5</u>

Note: Intragroup dividends need not be adjusted for in the proof for the group's retained profit as they are self-eliminated at this level.

- (g) Non-controlling interest of \$213,500 in the consolidated balance sheet can be proved as follows:

	\$'000
Non-controlling interest in E Ltd $25\% \times (300 + 208 - 30)$	119.5
Non-controlling interest in F Ltd Direct: $20\% \times (300 + 120 - 10)$	82
Indirect: $25\% \times 80\% \times (120 - 10 - 50)$	12
Total	<u>213.5</u>

Note: Non-controlling shareholders' direct interest is calculated based on the net assets of the subsidiary, while its indirect interest is calculated based on the post-acquisition reserves of the subsidiary (this is because only the post-acquisition reserve is transferred from the sub-subsidiary to the subsidiary and for which the non-controlling shareholders have an interest).

PROBLEM 5.2

The 20X8 financial statements of three companies in a group are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd
	\$'000	\$'000	\$'000
Sales	600	500	400
Cost of sales	200	250	150
Gross profit	400	250	250
Dividend income	84	42	—
Operating expenses	200	100	50
Profit before tax	284	192	200
Tax	64	42	70
Profit after tax	220	150	130
Other comprehensive income	—	—	—
Total comprehensive income	<u>220</u>	<u>150</u>	<u>130</u>

(b) Balance sheets as at 31 December 20X8

	A Ltd	B Ltd	C Ltd
	\$'000	\$'000	\$'000
Ordinary share capital	600	300	300
Retained profits	310	208	120
Liabilities	90	92	80
	<u>1,000</u>	<u>600</u>	<u>500</u>
Investment in B Ltd	338	—	—
Investment in C Ltd	—	180	—
Other assets	662	420	500
	<u>1,000</u>	<u>600</u>	<u>500</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd
	\$'000	\$'000	\$'000
Beginning retained profits	210	170	60
Profit for the year	220	150	130
Dividend	120	112	70
Ending retained profits	<u>310</u>	<u>208</u>	<u>120</u>

B Ltd acquires 60% C Ltd, when C Ltd was incorporated in January 20X4 with a paid-up capital of \$300,000. A Ltd acquires 75% interest in B Ltd in January 20X5, when B Ltd's retained profits were \$100,000. On this date, C Ltd's retained profits were \$40,000.

The companies have adopted FRS 103 on 1 January 20X8. Prior to that, the companies adopted a policy under which goodwill on consolidation had been amortized over five years on a straight-line basis, commencing in the year of the acquisition. There is no impairment of goodwill for 20X8.

The group starts to sell to each other in 20X8. During the year 20X8, B Ltd sold goods invoiced at \$50,000 to C Ltd, and A Ltd sold goods invoiced at \$80,000 to B Ltd. As at 31 December 20X8, the unrealized profits in the stock of C Ltd is \$10,000 and that in the stock of B Ltd is \$20,000

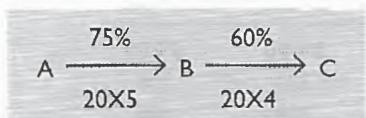
All the dividends were declared out of current year profits. Ignore the tax effects of consolidation adjustments.

Required

- (a) Prepare, using the consolidation and consolidation method, the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing group retained profit only) for A Ltd and its subsidiaries for the year 20X8.

Solution

(a) Group structure



(b) Consolidation journal entries

B Ltd + C Ltd

(i)	Dr Ordinary share capital (C) ($60\% \times 300$)	180	
	Cr Investment in C Ltd	180	
	(to eliminate investment account)		
(ii)	Dr Sales	50	
	Cr Cost of sales	50	
	(to eliminate intragroup sales)		
(iii)	Dr Cost of sales (B)	10	
	Cr Other assets	10	
	(to eliminate unrealized profit in closing stock)		
(iv)	Dr Dividend income (B)	42	
	Cr Dividend proposed (C) ($60\% \times 70$)	42	
	(to eliminate intragroup dividends)		
(v)	Dr Beginning retained profits (C) ($60\% \times 60$)	36	
	Cr Beginning retained profits (B)	36	
	(to transfer post-acquisition beginning retained profits)		
(vi)	Profit after tax (C) ($60\% \times 130$)	78	
	Cr Profit after tax (B))	78	
	(to transfer post-acquisition profit after tax)		
(vii)	Dr Non-controlling interest (CSCI) ($40\% \times 130$)	52	
	Cr Non-controlling interest (CBS)	52	
	(to record non-controlling interest in profit)		
(viii)	Dr Non-controlling interest (CBS)	28	
	Cr Dividend (C)	28	
	(to record non-controlling interest in dividend)		

(ix)	Dr Ordinary share capital (C) ($40\% \times 300$)	120
	Dr Beginning retained profits (C) ($40\% \times 60$)	24
	Cr Non-controlling interest (CBS)	144
	(to record non-controlling interest in C Ltd's other shareholders' equity)	

A Ltd + (B Ltd + C Ltd)

(x)	Dr Ordinary share capital (B) ($75\% \times 300$)	225
	Dr Beginning retained profits ($75\% \times [100 + 24]$)	93
	Dr Goodwill on consolidation	20
	Cr Investment in B Ltd	338
	(to eliminate investment account)	
(xi)	Dr Beginning retained profits (A)	12
	Cr Goodwill on consolidation	12
	(to record goodwill amortization in prior years)	
(xii)	Dr Sales	80
	Cr Cost of sales	80
	(to eliminate intragroup sales)	
(xiii)	Dr Cost of sales (A)	20
	Cr Other assets	20
	(to eliminate unrealized profit in closing stock)	
(xiv)	Dr Dividend income (A)	84
	Cr Dividend (C) ($75\% \times 112$)	84
	(to eliminate intragroup dividends)	
(xv)	Dr Beginning retained profit (B)	61.5
	Cr Beginning retained profit (A)	61.5
	(to transfer post-acquisition beginning retained profits [$75\% \times (170 - 100 + 60\% \times [60 - 40])$])	
(xvi)	Dr Profit after tax (B)	132
	Cr Profit after tax (A)	132
	(to transfer post-acquisition profit after tax [$75\% \times (150 - 10 - 42 + 78)$])	
(xvii)	Dr Non-controlling interest (CSCI)	44
	Cr Non-controlling interest (CBS)	44
	(to record non-controlling interest in profit [$25\% \times (150 - 10 - 42 + 78)$])	
(xviii)	Dr Non-controlling interest (CBS) ($25\% \times 112$)	28
	Cr Dividend proposed (B)	28
	(to record non-controlling interest in dividend)	

(xix)	Dr Ordinary share capital (B) ($25\% \times 300$)	75
	Dr Beginning retained profits (B) ($25\% \times [170 + 36]$)	51.5
	Cr Non-controlling interest (CBS)	126.5
(to record non-controlling interest in B Ltd's other shareholders' equity)		

(c) Consolidation worksheet

	A Ltd	B Ltd	C Ltd	Consolidation		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	600	500	400	ii 50 xiii 80		1,370
Cost of goods sold	200	250	150	iii 10 xiv 20	ii 50 xiii 80	500
Gross profit	400	250	250			870
Dividend	84	42	—	iv 42 xv 84		—
Operating expenses	200	100	50			350
Profit before tax	284	192	200			520
Tax	64	42	70			176
Profit after tax	220	150	130			344
NCI	—	—	—	vii 52 xviii 44		96
Profit for shareholders ...	—	—	—			248
Beginning retained profit ..	210	170	60	ix 24 x 93 xi 12 xx 51.5		259.5
Dividend paid	120	112	70		iv 42 viii 28 xv 84 xix 28	120
Ending retained profit	310	208	120	x 20	xi 12 x 338	377.5
Goodwill	—	—	—		xi 12	8
Investment in B Ltd	338	—	—		x 338	—
Investment in C Ltd	—	180	—		i 180	—
Other assets	662	420	500		iii 10 xiv 20	1,552
Ordinary share capital	600	300	300	i 180 ix 120 x 225 xx 75		600
Ending retained profit	310	208	120			323.5
Other liabilities	90	92	80			262
NCI	—	—	—	viii 28 xix 28	vii 52 ix 144 xviii 44 xx 126.5	310.5

(d) Consolidation financial statements

A Ltd and its subsidiaries
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,370
Cost of sales	500
<hr/>	
Gross profit	870
Operating expenses	350
<hr/>	
Profit before tax	520
Tax	176
<hr/>	
Profit after tax	344
Other comprehensive income	—
<hr/>	
Total comprehensive income	<u>344</u>
 Attributable to:	
Shareholders of the parent	248
Non-controlling interest	96
<hr/>	
	<u>344</u>

A Ltd and its subsidiaries
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Goodwill on consolidation	8
Other assets	1,552
<hr/>	
	<u>1,560</u>
 Ordinary share capital	600
Retained profits	387.5
Non-controlling interest	310.5
Liabilities	262
<hr/>	
	<u>1,560</u>

A Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profits	259.5
Profit for the year	248.0
Dividend proposed	120.0
<hr/>	
Ending retained profits	<u>387.5</u>

Notes to the solution

- (a) This is a case of group with father-son-grandson structure where the parent, A Ltd, holds a subsidiary, B Ltd, and a sub-subsidiary, C Ltd. In this case, the parent A Ltd acquires the subsidiary B Ltd, after the date subsidiary B Ltd acquires the sub-subsidiary C Ltd.
- (b) In the solution, CJE (v), (vi), (xvi), and (xvii) are for the transfer of post-acquisition profits to facilitate calculations only. They are not necessary for the consolidation process and therefore are not incorporated into the consolidation worksheet.
- (c) The non-controlling interest in the consolidated profit and loss account of \$96,000 can be proved as follows:

	\$'000
Non-controlling interest in B Ltd's adjusted after-tax profit 25% × (150 – 10 – 42)	24.5
Non-controlling interest in C Ltd's adjusted after-tax profit (40% + 25% × 60%) × \$130	71.5
Total	<u>96.0</u>

- (d) The group profit of \$248,000 can be proved as follows:

	\$'000
Adjusted after-tax profit of the parent, A Ltd 220 – 20 – 84	116.0
Add group's share of the adjusted after-tax profit of B Ltd 75% × (150 – 10 – 42)	73.5
Add group's share of the adjusted after-tax profit of C Ltd (75% × 60%) × 130	58.5
Total	<u>248.0</u>

- (e) The group retained profit of \$387,500 can be proved as follows:

	\$'000
Retained profit of the parent, A Ltd 310 – 20	290.0
Add group's share of the post-acquisition retained profit of B Ltd 75% × (208 – 10 – 100)	73.5
Add group's share of the post-acquisition retained profits of C Ltd (75% × 60%) × (120 – 40)	36.0
Less goodwill amortization under FRS 22	12.0
Total	<u>387.5</u>

Note: Intragroup dividends need not be adjusted for in the proof for group retained profit as they are self-eliminated at this level.

- (f) Non-controlling interest in the consolidated balance sheet of \$310,500 can be proved as follows:

	\$'000
Non-controlling interest in B Ltd	
$25\% \times (300 + 208 - 10)$	124.5
Non-controlling interest in C Ltd	
Direct: $40\% \times (300 + 120)$	168.0
Indirect: $25\% \times 60\% \times 120$	18.0
Total	<u>310.5</u>

Note: Non-controlling shareholders' direct interest is calculated based on the net assets of the subsidiary, while its indirect interest is calculated based on the post-acquisition reserves of the subsidiary (this is because only the post-acquisition reserve is transferred from sub-subsidiary to the subsidiary and for which the non-controlling shareholders have an interest).

PROBLEM 5.3

The 20X8 financial statements of three companies in a group are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	X Ltd	Y Ltd	Z Ltd
	\$'000	\$'000	\$'000
Sales	600	500	400
Cost of sales	<u>320</u>	<u>230</u>	<u>200</u>
Gross profit	280	270	200
Operating expenses	<u>80</u>	<u>80</u>	<u>50</u>
Operating profit	200	190	150
Dividend income	<u>126</u>	<u>28</u>	<u>—</u>
Profit before tax	326	218	150
Tax	<u>66</u>	<u>68</u>	<u>50</u>
Profit after tax	260	150	100
Other comprehensive income	<u>—</u>	<u>—</u>	<u>—</u>
Total comprehensive income	<u>260</u>	<u>150</u>	<u>100</u>

(b) Balance sheets as at 31 December 20X8

	X Ltd	Y Ltd	Z Ltd
	\$'000	\$'000	\$'000
Share capital	1,000	500	500
Retained profits	300	215	90
Liabilities	700	785	410
	<u>2,000</u>	<u>1,500</u>	<u>1,000</u>
Investment in Y Ltd	500	—	—
Investment in Z Ltd	350	—	—
Investment in Z Ltd	—	300	—
Other assets	1,150	1200	1,000
	<u>2,000</u>	<u>1,500</u>	<u>1,000</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	X Ltd	Y Ltd	Z Ltd
	\$'000	\$'000	\$'000
Beginning retained profits	210	170	60
Profit for the year	260	150	100
Dividend paid	170	105	70
Ending retained profits	<u>300</u>	<u>215</u>	<u>90</u>

The share capital of X Ltd comprises 1 million shares. The share capital of Y Ltd and Z Ltd each comprises 500,000 shares.

On 3 March 20X3, X Ltd acquires 60% interest in Z Ltd, when Z Ltd's retained profits are \$25,000, and 80% interest in Y Ltd, when Y Ltd's retained profits are \$100,000. Y Ltd acquires 40% interest in Z Ltd on 1 January 20X8.

The companies adopt FRS 110 and FRS 103 on 1 January 20X7. Prior to that, goodwill on consolidation had been fully amortized under FRS 22.

Y Ltd has been selling merchandise to X Ltd since July 20X7. During 20X8, Y Ltd sold goods invoiced at \$100,000 to X Ltd. The intragroup mark-ups on the goods in the opening stock and closing stock of X Ltd for 20X8 are \$15,000 and \$12,000, respectively.

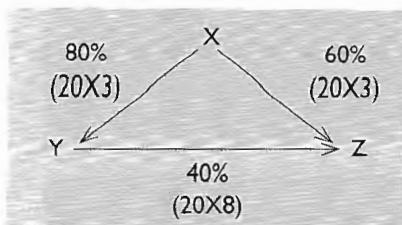
The companies adopt the one-tier system for dividends on 1 January 20X8.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet and the consolidated statement of changes in equity (showing group retained profit only) for X Ltd and its subsidiaries for the year 20X8.

Solution A: Consolidation of consolidation method

(a) Group structure



(b) Consolidation journal entries

(I) Z Ltd

(i)	Dr Share capital (Z) ($40\% \times 500$)	200
	Dr Beginning retained profit (Z) ($40\% \times 60$)	24
	Dr Goodwill	76
	Cr Investment in Z Ltd (Y)	300
	(to eliminate investment account)	
(ii)	Dr Share capital (Z) ($60\% \times 500$)	300
	Dr Beginning retained profits (Z) ($60\% \times 25$)	15
	Dr Goodwill on consolidation	35
	Cr Investment in Z Ltd (X)	350
	(to eliminate investment account)	
(iii)	Dr Beginning retained profits (X)	35
	Cr Goodwill on consolidation	35
	(to record goodwill amortization in prior years)	
(iv)	Dr Capital reserve (X)	76
	Cr Goodwill on consolidation	76
	(to comply with requirement of FRS 110)	
(v)	Dr Dividend income (X) ($60\% \times 70$)	42
	Dr Dividend income (Y) ($40\% \times 70$)	28
	Cr Dividend paid (Z)	70
	(to eliminate intragroup dividends)	
(vi)	Dr Beginning retained profits (Z)	21
	Cr Beginning retained profits (X) ($60\% \times [60 - 25]$)	21
	(to transfer post-acquisition beginning retained profits)	
(vii)	Dr Profit after tax (Z)	100
	Cr Profit after tax (Y) ($40\% \times 100$)	40
	Cr Profit after tax (X) ($60\% \times 100$)	60
	(to transfer post-acquisition profit after tax)	

(2) Y Ltd

(viii)	Dr Share capital (Y) ($80\% \times 500$)	400	
	Dr Beginning retained profit (Y) ($80\% \times 100$)	80	
	Dr Goodwill on consolidation	20	
	Cr Investment in Y Ltd		500
	(to eliminate investment account)		
(ix)	Dr Beginning retained profits (X)	20	
	Cr Goodwill on consolidation		20
	(to record goodwill amortization in prior years)		
(x)	Dr Sales	100	
	Cr Cost of sales		100
	(to eliminate intragroup sales)		
(xi)	Dr Beginning retained profits (Y)	15	
	Cr Cost of sales (Y)		15
	(realization of intragroup profit in opening stock)		
(xii)	Dr Cost of sales (Y)	12	
	Cr Other assets		12
	(unrealized intragroup profit in closing stock)		
(xiii)	Dr Dividend income (X) ($80\% \times 105$)	84	
	Cr Dividend paid (Y)		84
	(to eliminate intragroup dividend)		
(xiv)	Dr Beginning retained profit (Y)	44	
	Cr Beginning retained profit (X)		44
	(to transfer post-acquisition beginning retained profits) ($80\% \times [170 - 100 - 15]$)		
(xv)	Dr Profit after tax (Y)	132	
	Cr Profit after tax (X)		132
	(to transfer profit after tax) ($80\% \times [150 + 15 - 12 - 28 + 40]$)		
(xvi)	Dr Non-controlling interest (CSCI)	33	
	Cr Non-controlling interest (CBS)		33
	(to record non-controlling interest in profit of Y Ltd) ($20\% \times [150 + 15 - 12 - 28 + 40]$)		
(xvii)	Dr Non-controlling interest (CBS)	21	
	Cr Dividend paid (Y) ($20\% \times 105$)		21
	(to record non-controlling interest in dividend)		

(xviii) Dr Share capital (Y) ($20\% \times 500$) 100
 Dr Beginning retained profit (Y) ($20\% \times [170 - 15]$) 31
 Cr Non-controlling interest (CBS) 131
 (to record non-controlling interest in Y Ltd's other shareholders' equity)

(c) Consolidation worksheet

	A Ltd	B Ltd	C Ltd	Consolidation		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	600	500	400	x 100		1,400
Cost of sales	320	230	200	xii 12	x 100 xi 15	647
Gross profit	280	270	200			753
Operating expenses	80	80	50			210
Operating profit	200	190	150			543
Dividend income	126	28	-	v 42 v 28 xiii 84		-
Profit before tax	326	218	150			543
Tax	66	68	50			184
Profit after tax	260	150	100	xvi 33		359
NCI	-	-	-			33
Group profit	-	-	-			326
Beginning retained profit ..	210	170	60	i 24 ii 15 iii 35 viii 80 ix 20 xi 15 xviii 31		220
Dividend paid	170	105	70	v 70 xiii 84 xvii 21		170
Ending retained profit	300	215	90			376
Goodwill	-	-	-	i 76 ii 35 viii 20	iii 35 iv 76 ix 20	-
Investment in Y Ltd	500	-	-		viii 500	-
Investment in Z Ltd	350	-	-		ii 350	-
Investment in Z Ltd	-	300	-		i 300	
Other assets	1,150	1,200	1,000	xii 12 xii 12		3,338
Share capital	1,000	500	500	i 200 ii 300 viii 400 xviii 100		1,000
Capital reserve	-	-	-	iv 76		(76)
Retained profits	300	215	90			376
Liability	700	785	410	xvii 21	xvi 33	1,895
NCI	-	-	-	xviii 131		143

(d) Consolidated financial statements

X Ltd and its subsidiaries	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	1,400
Cost of sales	647
Gross profit	753
Expenses	210
Profit before tax	543
Tax	184
Profit after tax	359
Other comprehensive income	—
Total comprehensive income	<u><u>359</u></u>
Attributable to:	
Shareholders of the parent	326
Non-controlling interest	33
	<u><u>359</u></u>

X Ltd and its subsidiaries	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Assets	<u><u>3,338</u></u>
Share capital	1,000
Capital reserve	(76)
Retained profits	376
Non-controlling interest	143
Liabilities	<u><u>1,895</u></u>
	<u><u>3,338</u></u>

X Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Capital reserve	
Beginning balance	—
Increase in shareholding in subsidiary	(76)
Ending balance	<u>(76)</u>
Retained profit	
Beginning balance	220
Profit for the year	326
Dividend paid	<u>(170)</u>
Ending balance	<u>376</u>

Solution B: Indirect interest method

(a) Group structure

	Y Ltd	Z Ltd
Group		
Direct	80%	60%
Indirect	—	32% ($80\% \times 40\%$)
NCI		
Direct	20%	—
Indirect	—	8% ($20\% \times 40\%$)

(b) Consolidation journal entries

(i)	Dr Share capital (Z) ($40\% \times 500$)	200
	Dr Share capital (Z) ($60\% \times 500$)	300
	Dr Share capital (Y) ($80\% \times 500$)	400
	Dr Beginning retained profits (Z) ($60\% \times 25$)	15
	Dr Beginning retained profits (Y) ($80\% \times 100$)	80
	Dr Beginning retained profits (Y) ($40\% \times 60$)	24
	Dr Goodwill on consolidation	131
	Cr Investment in Z Ltd (Y)	300
	Cr Investment in Z Ltd (X)	350
	Cr Investment in Y Ltd (X)	500
	(to eliminate investment accounts)	
(ii)	Dr Beginning retained profits (X)	55
	Cr Goodwill on consolidation	55
	(to record goodwill amortization in prior years)	

(iii)	Dr Capital reserve (X)	76	
	Cr Goodwill on consolidation	76	
	(to comply with requirement of FRS 110)		
(iv)	Dr Sales	100	
	Cr Cost of sales	100	
	(to eliminate intragroup sales)		
(v)	Dr Beginning retained profit (Y)	15	
	Cr Cost of sales (Y)	15	
	(realization of intragroup profit in opening stock)		
(vi)	Dr Cost of sales (Y)	12	
	Cr Other assets	12	
	(to eliminate unrealized profit in closing stock)		
(vii)	Dr Dividend income (X) ($80\% \times 105$)	84	
	Dr Dividend income (X) ($60\% \times 70$)	42	
	Dr Dividend income (Y) ($40\% \times 70$)	28	
	Cr Dividend paid (Y)	84	
	Cr Dividend paid (Z)	70	
	(to eliminate intragroup dividends)		
(viii)	Dr NCI (Y) (CSCI) ($20\% \times [150 + 15 - 12 - 40 + 12]$) ...	25	
	Dr NCI (Z) (CSCI) ($8\% \times 100$)	8	
	Cr Non-controlling interest (CBS)	33	
	(to record non-controlling interest in profits)		
(ix)	Dr Non-controlling interest (CBS)	21	
	Cr Dividend paid (Y) ($20\% \times 105$)	21	
	(to record non-controlling interest in dividends)		
(x)	Dr Share capital (Y) ($20\% \times 500$)	100	
	Dr Beginning retained profits (Y) ($20\% \times [170 - 15]$)	31	
	Cr Non-controlling interest	131	
	(to record non-controlling interest in other shareholders' equity)		

(c) Consolidation worksheet

	X Ltd	Y Ltd	Z Ltd	Consolidation		Consolidated balances
	\$'000	\$'000	\$'000	Dr	Cr	\$'000
Sales	600	500	400	iv 100		1,400
Cost of sales	320	230	200	vi 12	iv 100	
					v 15	647
Gross profit	280	270	200			753
Expenses	80	80	50			210
Operating profit	200	190	150			543
Dividend income	126	28	—	vii 84		
				vii 42		
				vii 28		—
Profit before tax	326	218	150			543
Tax	66	68	50			184
Profit after tax	260	150	100			359
NCI	—	—	—	viii 25		
				viii 8		33
Group profit	—	—	—			326
Beginning retained profit	210	170	60	i 15		
				i 80		
				i 24		
				ii 55		
				v 15		
				x 31		220
Dividend paid	170	105	70		viii 84	
					viii 70	
					ix 21	170
Ending retained profit ...	300	215	90			376
Goodwill	—	—	—	i 131	ii 55	
					iii 76	—
Investment in Y Ltd	500	—	—		ii 500	—
Investment in Z Ltd	350	—	—		ii 350	—
Investment in Z Ltd	—	300	—		ii 300	—
Other assets	1,150	1,200	1,000		vi 12	3,338
Share capital	1,000	500	500	i 200		
				i 300		
				i 400		
				x 100		1,000
Capital reserve	—	—	—		iii 76	(76)
Retained profit	300	215	90			376
Liability	700	785	410			1,895
NCI	—	—	—	ix 21	viii 33	
					x 131	143

(d) Consolidated financial statements

X Ltd and its subsidiaries
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,400
Cost of sales	647
Gross profit	753
Expenses	210
Profit before tax	543
Tax	184
Profit after tax	359
Other comprehensive income	—
Total comprehensive income	<u>359</u>
 Attributable to:	
Shareholders of the parent	326
Non-controlling interest	33
	<u>359</u>

X Ltd and its subsidiaries
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Assets	<u>3,338</u>
Share capital	1,000
Capital reserve	(76)
Retained profits	376
Non-controlling interest	143
Liabilities	1,895
	<u>3,338</u>

X Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Capital reserve	
Beginning balance	—
Increase in shareholding in subsidiary	(76)
Ending balance	<u>(76)</u>
 Retained profit	
Beginning balance	220
Profit for the year	326
Dividend paid	<u>(170)</u>
Ending balance	<u>376</u>

Notes to the solution

- (a) Both the consolidation of consolidation method and the indirect interest method yield the same consolidated financial statements.
- (b) This is a case of a group with connecting affiliation where one subsidiary (Y Ltd) holds shares in another subsidiary (Z Ltd).
- (c) This case also illustrates the problem involving acquisition of additional shares in a subsidiary. X Ltd acquired 60% of Z Ltd in 20X3 and acquired another 40% of Z Ltd through Y Ltd in 20X8. As discussed in Chapter 4, when there is an increase in shareholding in a subsidiary, it should be treated as an 'equity transaction'. Thus, there should not be any change in goodwill. Instead, there are only two changes: (i) the purchase consideration paid for the additional share acquisition, and (ii) change in non-controlling interest. FRS 110 requires the difference between these two figures to be taken directly to capital reserve.

The above adjustments are shown in CJE (iv) of Solution A and CJE (iii) of Solution B as Dr Capital reserve \$76,000 and Cr Goodwill on consolidation \$76,000.

The Credit entry 'Cr Goodwill on consolidation \$76,000' is to eliminate the goodwill arising from the additional 40% acquisition on 1 January 20X8, as FRS 110 provides that there is no change to the goodwill on consolidation in a case of additional acquisition of shares in a subsidiary.

The Debit entry 'Dr Capital reserve \$76,000' is to account for the difference between the cost of share acquisition of \$300,000 and the changes in non-controlling interest of \$224,000 (as at 31 December 20X7, the non-controlling interest was \$224,000 ($40\% \times [\$500,000 + \$60,000]$), but as at 1 January 20X8, non-controlling interest is \$nil), as required by FRS 110.

- (d) In Solution A, CJE (vi), (vii), (xiv), and (xv) are for the transfer of post-acquisition profits to facilitate calculations only. They are not necessary for the consolidation process and therefore are not incorporated into the consolidation worksheet.

- (e) When Y Ltd's dividend income is eliminated (CJE [v] in Solution A and CJE [vii] in Solution B), its profit after tax is reduced, and therefore non-controlling interest in Y Ltd's profit after tax is also reduced as in CJE [xvi] in Solution A and CJE [viii] in solution B).
- (f) The non-controlling interest in the consolidated statement of comprehensive income of \$33,000 can be proved as follows:

	\$'000
Non-controlling's direct interest in Y Ltd's adjusted after-tax profit 20% × (150 + 15 – 12 – 28)	25
Non-controlling's indirect interest in Z Ltd's adjusted after-tax profit 20% × 40% × 100	8
Total	<u>33</u>

- (g) The group profit of \$326,000 can be proved as follows:

	\$'000
Adjusted after-tax profit of the parent, X Ltd 260 – 84 – 42	134
Add group's share of the adjusted after-tax profit of Y Ltd 80% × (150 + 15 – 12 – 28)	100
Add group's share of the adjusted after-tax profit of Z Ltd (60% + 80% × 40%) × 100	92
Total	<u>326</u>

- (h) The group retained profit of \$376,000 can be proved as follows:

	\$'000
Retained profit of the parent, X Ltd	300
Add group's share of the post-acquisition retained profit of Y Ltd 80% × (215 – 12 – 100)	82.4
Add group's share of the post-acquisition retained profits of Z Ltd 60% × (90 – 25) + 80% × 40% × (90 – 60)	48.6
Less amortization of goodwill under FRS 22	55
Total	<u>376</u>

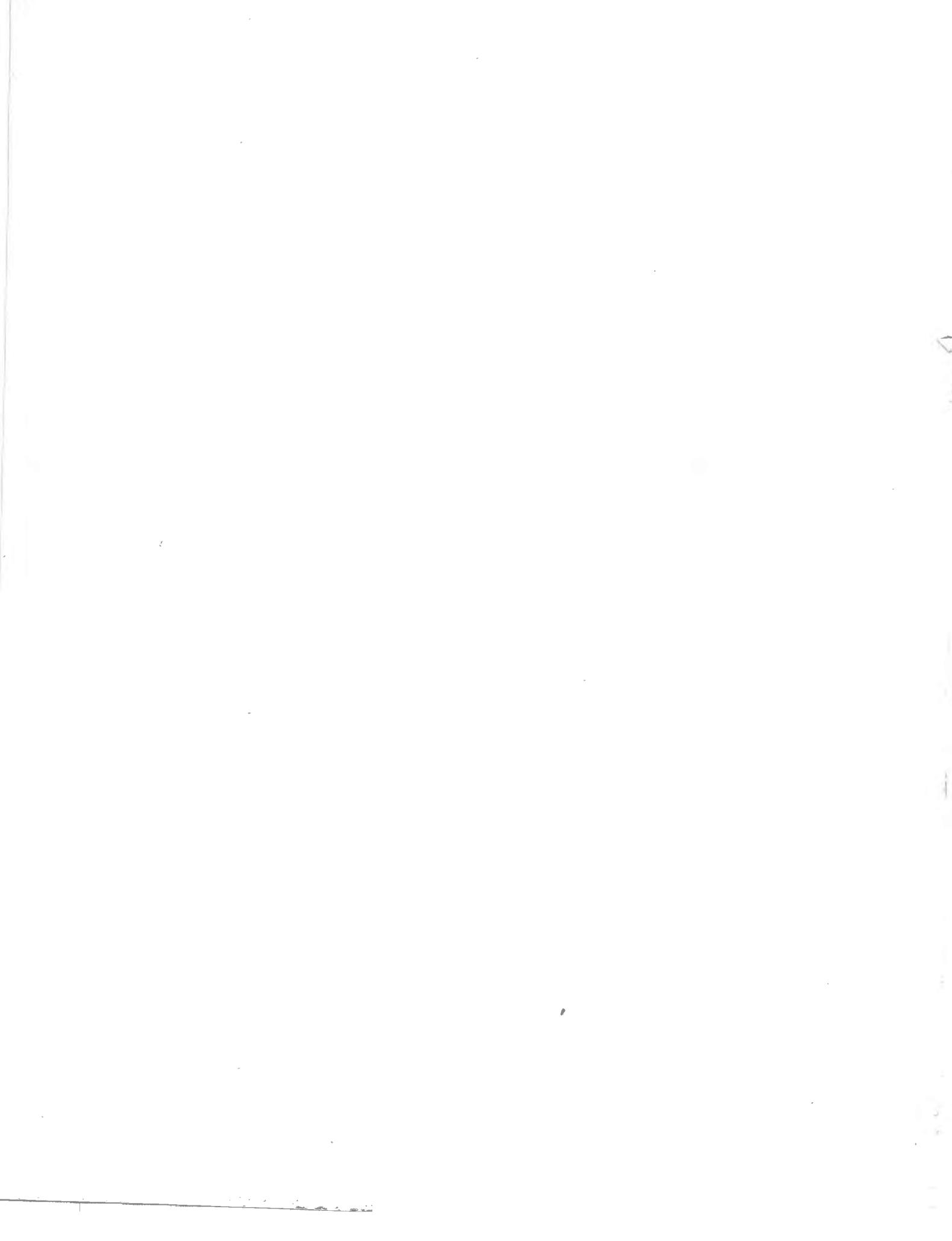
Note: Intragroup dividends need not be adjusted for in the proof for group-retained profit as they are self-eliminated at this level.

- (i) Non-controlling interest in the consolidated balance sheet of \$143,000 can be proved as follows:

	\$'000
Non-controlling's direct interest in Y Ltd 20% × (500 + 215 – 12)	140.6
Non-controlling's indirect interest in Z Ltd 20% × 40% × (90 – 60)	2.4
Total	143

Note: Non-controlling shareholders' direct interest is calculated based on the net assets of the subsidiary, while its indirect interest is calculated based on the post-acquisition reserves of the subsidiary (this is because only the post-acquisition reserve is transferred from the sub-subsidiary to the subsidiary and for which the non-controlling shareholders have an interest).

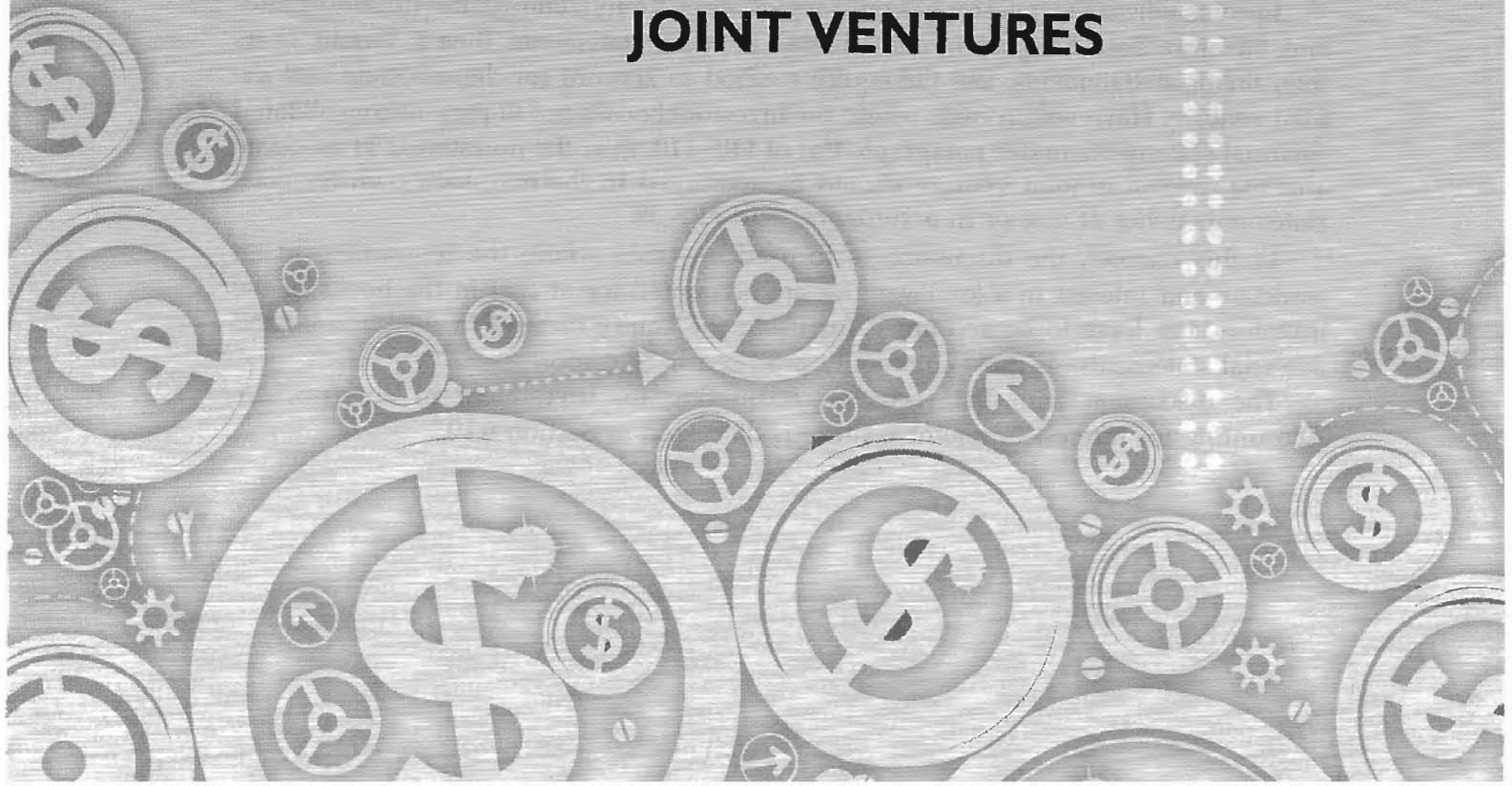
- (j) In groups with complex structure, it does not matter whether the intragroup transaction is between the parent and its subsidiary or with its sub-subsidiary, or between the subsidiaries, the consolidation principle is that the unrealized intragroup gains/losses is eliminated against the profit or loss of the selling entity, for purposes of calculation of non-controlling interest.



CHAPTER
C H A P T E R

6

ASSOCIATES AND JOINT VENTURES



6.1 Introduction

So far, in the discussion on consolidated financial statements, only subsidiaries (and sub-subsidiaries) have been considered. However, there may be other entities that have to be incorporated into the consolidated financial statements. One such entity is an 'associate', and another such entity is a 'joint venture'. As may be noted, accounting treatments for an investment in an associate and an interest in a joint venture are quite similar, and therefore they are dealt with in the same chapter.

Investment in an associate should be accounted for in the consolidated financial statements, using the equity method (except as provided for under paragraph 20 of FRS 28 where the investment is classified as 'held for sale', in which case the investment is accounted for in accordance with FRS 105).

Interest in a joint venture should be accounted for in the consolidated financial statements using the equity method (except as provided in paragraph 20 of FRS 28 where the joint venture is classified as 'held for sale', in which case the joint venture is accounted for in accordance with FRS 105).

In the separate financial statements of the investor, the investment in an associate and interest in a joint venture should be accounted for either at cost or in accordance with FRS 39. However, if the investment/interest is accounted for in accordance with FRS 105 (because it is classified as 'held for sale') in the consolidated financial statements, then it should also be accounted for in accordance with FRS 105 in the separate financial statements. Also, if the investment/interest is accounted for in accordance with FRS 39 (because the investor ceases to have significant influence and joint control respectively) in the consolidated financial statements, then it should also be accounted for in accordance with FRS 39 in the separate financial statements.

In cases where the investor has only associates and joint ventures but no subsidiaries and therefore does not present consolidated financial statements, then it should, in its own financial statements, use the equity method to account for the associate and the joint venture. However, in cases where the investor chooses not to present consolidated financial statements under paragraph 4(a) of FRS 110, then the investment in associate and the interest in joint venture should be accounted in the investor's own financial statements either at cost or in accordance with FRS 39.

In this chapter, the discussion is focused on cases where the investment in an associate and interest in a joint venture are accounted for at cost in the books of the investors, but have to be accounted for using the equity method in the consolidated financial statements, as most commonly practised in Singapore.

The discussion will first focus on accounting for investment in an associate. Accounting for interest in a joint venture is discussed in Section 6.10.

6.2 Associate: definition

The term 'associate' is purely an accounting creation. It has no legal definition. An associate is defined in FRS 28 as an entity in which the investor has significant influence (paragraph 3). The term 'significant influence' is defined in the same FRS as the power to participate in the financial and operating policy decisions of the investee but does not necessarily imply control over those policies (paragraph 3). It should be noted that under FRS 28, the term 'associate' is defined to include an unincorporated entity such as a partnership, even though in the business world an associate is usually a company incorporated under the Companies Act.

In order to achieve a reasonable degree of uniformity in application, FRS 28 recommends the use of 20% voting power as the cut-off point. If an investor holds 20% or more of the voting power of the investee, it is presumed that, in the absence of evidence to the contrary, the investor has significant influence over the investee. Conversely, if the investor holds less than 20% of the voting power of the investee, it is presumed that the investor does not have significant influence over the investee, unless such influence can be clearly demonstrated (paragraph 5).

In applying the 20% rule (and in determining proportionate interest), FRS 28 provides that both the parent's and its subsidiary's voting rights must be taken into account (paragraph 27). For example, assume that P Ltd holds 80% of voting rights of S Ltd, and P Ltd and S Ltd each hold 10% of voting rights of T Ltd. In this case, P Ltd group is deemed to have 20% voting power in T Ltd, and consequently, T Ltd is accounted for as an associate of the P Ltd group. However, an associate's voting rights in the investee is not taken into account in applying the 20% rule. For example, assume A Ltd holds 80% of B Ltd, 10% of C Ltd, and 10% of D Ltd, B Ltd holds 10% of C Ltd, and C Ltd holds 10% of D Ltd. In this case, C Ltd is an associate for the A Ltd group, but D Ltd is not.

Where there are potential voting rights, FRS 28 provides that, in deciding whether the investor has the 20% voting power to treat the investee as an associate, these potential voting rights should be taken into consideration as soon as they are exercisable or convertible (paragraph 7), and regardless of the intention and ability of investor to exercise or convert (paragraph 8). (It should be noted that, for potential voting rights, the requirements of FRS 110 [which provides that the potential voting rights must be substantive before they are taken into consideration in deciding control] and FRS 28 [which provides that the potential voting rights are taken into account in deciding the 20% rule as soon as they are legally exercisable/convertible] are different.) To illustrate the requirement of paragraphs 7 and 8 of FRS 28, assume that on 1 January 20X2,

A Ltd acquires 10% of the 100 million ordinary shares of B Ltd, and on 1 January 20X3, B Ltd issues convertible bonds to A Ltd which are convertible into 20 million ordinary share from 1 January 20X4, and A Ltd intends to convert and actually converts the convertible bonds into shares on 1 January 20X5. In this case, A Ltd has only 10% voting power over B Ltd for years 20X2 and 20X3, but is deemed to have 25% ($30 \text{ million}/120 \text{ million} \times 100\%$) voting power over B Ltd in 20X4 (and in 20X5).

Besides holding 20% or more of the voting rights, the existence of significant influence may also be evidenced in other ways, for example, representation on the board of directors, or dependence of the investee on the investor for its raw material requirements or for the provision of essential technical information and assistance (paragraph 6).

6.3 Equity accounting: basic principles

As mentioned earlier, FRS 28 requires an investment in an associate to be accounted for in consolidated financial statements using the equity method.

Under the equity method, the investment account is initially recorded at cost but is subsequently adjusted for the investor's proportionate share of the increase or decrease in the net assets of the associate, so that at any balance sheet date, the carrying amount of the investment account will approximate the investor's proportionate share of the associate's net assets at that date. The investment income consists of the investor's proportionate share of the investee's periodic profit or loss. (There are, however, two exceptions to the general rule stated above, which will be discussed in Section 6.6.)

In the consolidated financial statements, the investor's proportionate share of the associate's net assets is presented in the consolidated balance sheet as a single-line item: 'investment in associate'; and the investor's share of the associate's profit or loss is presented in the consolidated statement of comprehensive income as a single-line item: 'share of profit (loss) of associate'. The financial statements of the associate are not added, line by line, to the financial statements of other entities in the group. Because of the above treatment, equity accounting is often referred to as 'one-line proportionate consolidation'.

Equity accounting is probably the best accounting treatment for investment in associates. In the consolidated balance sheet, full consolidation of the associate is not appropriate. This is because the investor only has significant influence in (but no control over) an associate. Since the investor has no control over the associate,

it has no control over the assets and liabilities of the associate, and consequently, the associate's assets cannot be treated as the assets of the investor, and cannot be added, line by line, to the investor's assets (full consolidation). A more appropriate measure of the investor's equity interest in the assets and liabilities of the associate in which the investor has no control will therefore be the investor's proportionate share of the associate's net assets (equity method). In the consolidated statement of comprehensive income, cost method is not appropriate. This is because, as mentioned, the investor has significant influence in an associate, and may therefore influence the amount of dividends to be declared by the associate. Thus, the amount of dividend income (cost method) from the associate will not be a good indication of the profitability of the investment in the associate. A more appropriate measure of the profitability of investment in the associate in which the investor has significant influence will therefore be the investor's proportionate share of the associate's profit/loss (equity method).

Example 6.1

P Ltd holds 60% of S Ltd and 25% of A Ltd. It acquired its 60% interest in S Ltd, when S Ltd was formed on 1 January 20X8, for a cash consideration of \$60,000. It also acquired its 25% interest in A Ltd on 1 January 20X8 for a cash consideration of \$100,000.

There was no transaction among the three companies during the year 20X8, except for a dividend of \$140,000 paid by A Ltd out of its current-year profits. All the companies have adopted the one-tier system for dividends. The financial statements of the three companies (assuming P Ltd used the cost method to account for its investments) are as follows:

(a) Balance sheets as at 31 December 20X8

	P Ltd \$'000	S Ltd \$'000	A Ltd \$'000
Investment in S Ltd	60	—	—
Investment in A Ltd	100	—	—
Net assets	<u>540</u>	<u>110</u>	<u>540</u>
	<u>700</u>	<u>110</u>	<u>540</u>
Share capital	200	100	100
Retained profit	500	10	440
	<u>700</u>	<u>110</u>	<u>540</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	P Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Sales	900	100	700
Cost of sales	300	40	200
Gross profit	600	60	500
Dividend from A Ltd	35	—	—
Operating expenses	200	44	100
Profit before tax	435	16	400
Tax	135	6	120
Profit after tax	300	10	280
Other comprehensive income	—	—	—
Total comprehensive income	300	10	280

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Beginning retained profit	300	—	300
Profit for the year	300	10	280
Dividend	100	—	140
Ending retained profit	500	10	440

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing the group's retained profit only) for the P Ltd group for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Investment in A Ltd	70
	Cr Share of profit of associate	70
	(to equity account for associate's profit)	
(ii)	Dr Dividend income	35
	Cr Investment in A Ltd	35
	(to convert from cost method to equity method for dividend from associate)	

(iii)	Dr Share capital (S)	60	
	Cr Investment in S Ltd		60
	(to eliminate investment in subsidiary)		
(iv)	Dr Non-controlling interest (CSCI)	4	
	Cr Non-controlling interest (CBS)		4
	(to record non-controlling in profit of S Ltd)		
(v)	Dr Share capital (S)	40	
	Cr Non-controlling interest (CBS)		40
	(to record non-controlling interest in share capital of S Ltd)		

(b) Consolidation worksheet

	P Ltd	S Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	900	100			1,000
Cost of sales	300	40			340
Gross profit	600	60			660
Dividend	35	—	ii 35		—
Expenses	200	44			244
Share of profit	—	—	i 70		70
Profit before tax	435	16			486
Tax	135	6			141
Profit after tax	300	10			345
Non-controlling interest	—	—	iv 4		4
Group profit	—	—			341
Dividend	100	—			100
Beginning retained profit	300	—			300
Ending retained profit	500	10			541
Share capital	200	100	iii 60		200
			v 40		
Non-controlling interest	—	—	iv 4		
			v 40		44
Investment in S Ltd	60	—	iii 60		—
Investment in A Ltd	100	—	i 70	ii 35	135
Net assets	540	110			650

(c) Consolidated financial statements

P Ltd and its subsidiary Consolidated statement of comprehensive income For year ended 31 December 20X8	
	\$'000
Sales	1,000
Cost of sales	340
Gross profit	660
Operating expenses	244
Operating profit	416
Share of profit of associate	70
Profit before tax	486
Tax	141
Profit after tax	345
Other comprehensive income	—
Total comprehensive income	<u>345</u>
Attributable to:	
Shareholders of the parent	341
Non-controlling interest	4
	<u>345</u>

P Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Share capital	200
Retained profit	541
Non-controlling interest	44
	<u>785</u>
Investment in associate	135
Other net assets	650
	<u>785</u>

P Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	300
Profit for the year	341
Dividend	100
Ending retained profit	541

Notes to the solution

- (a) The financial statements of the associate A Ltd are not added, line by line, to the financial statements of P Ltd and S Ltd. (Note that the financial statements of A Ltd are not included in the consolidation worksheet.) Instead, the group's share of A Ltd's net assets is shown in the consolidated balance sheet as 'investment in associate', and the group's share of A Ltd's profit is shown in the consolidated statement of comprehensive income as 'share of profit of associate'.
- (b) CJE (i) is created to equity account for the associate's profit.
- (c) CJE (ii) is necessary, firstly, to record dividends received from the associate as a reduction to the investment account (as required under the equity method), and secondly, to reverse out the dividend income that P Ltd has recorded in its own books under the cost method. The net effect of the consolidation journal entry is to convert, from the cost method to the equity method, for the dividends received from the associate.
- (d) The carrying amount of the investment in an associate's account can be proved as cost plus the group's share of the post-acquisition reserve of the associate. In this case, the investment in the associate of \$135,000 as shown in the consolidated balance sheet can be proved as follows: cost of investment of \$100,000 + group's share of the post-acquisition reserve of \$35,000 ($25\% \times [\$440,000 - \$300,000]$).
- (e) The amount of the group's ending retained profit can be proved as being equal to the amount of adjusted profit retained in the parent plus the amount of the group's share of the post-acquisition adjusted profits retained in the subsidiaries and associates. In this case, the group's retained profit of \$541,000 can be proved as follows: amount retained in P Ltd of \$500,000 + amount retained in S Ltd of \$6,000 ($60\% \times \$10,000$) + amount retained in A Ltd of \$35,000 [$25\% \times (\$440,000 - \$300,000)$].
- (f) It does not matter which entity, the subsidiary or the associate, is to be adjusted first in the consolidation process (unlike the case of indirect shareholding, to be discussed in Section 6.8).



The above example assumes a simple case where there is no difference between the cost of acquisition and the underlying net assets, and that there is no transaction between the investor and its associate.

The issues involved in cases where there is a difference between the cost of investment and the underlying net assets are discussed in Section 6.4. The issues relating to intragroup transactions are discussed in Section 6.5.

6.4 Difference between cost and underlying net assets

As in the case of parent-subsidiary relationships discussed in Chapter 2, there may also be differences between the investor's cost of investment in the associate and the investor's proportionate share of the associate's net assets. These differences, again like in the case of parent-subsidiary relationships, may arise due to (a) over- or undervaluation of the associate's assets and liabilities or unrecorded intangible assets and contingent liabilities, and/or (b) existence of goodwill or negative goodwill.

Where the associate's assets and liabilities are over- or undervalued and/or where there are unrecorded intangible assets and contingent liabilities, the consolidation treatment of these items in the case of investor-associate relationships is very different from that in the case of parent-subsidiary relationships, as discussed in Chapter 2. Unlike in the case of parent-subsidiary relationships, no fair value adjustment for the over- or undervalued assets and liabilities and no recognition of the unrecorded intangible assets and contingent liabilities are necessary in the case of investor-associate relationships. The differences are simply carried as part of the cost of the investment in associate account. To illustrate, assume that P Ltd pays \$120 to acquire a 40% interest in A Ltd, whose net assets are represented by share capital of \$100 and retained profit of \$100. At this date, A Ltd has an unrecognized brand with a market value of \$50, and the fair value of its machinery is \$50 more than carrying amount. In this case, the investment in the associate will be carried at \$120, and A Ltd's machinery and brand will not be adjusted or recognized in the consolidated balance sheet.

FRS 28 provides, however, that the appropriate adjustments to the investor's share of the associate's profit or loss should be made to account for the depreciation of the depreciable assets based on their fair value at the acquisition date (paragraph 32). To illustrate, refer to the above case and assume that A Ltd's machinery is to be depreciated using the straight-line method and has a remaining useful life of five years. Applying the requirement of paragraph 32, P Ltd's share of A Ltd's profit is to be reduced by \$4 ($40\% \times$ additional depreciation charge of \$10) per year over the next five years. (Assume that there is no amortization and no impairment of the brand.)

Where there is goodwill, FRS 28 provides that goodwill relating to an associate should be included in the carrying amount of the investment (paragraph 32). FRS 28 further provides that amortization of that goodwill is not permitted (to be consistent with goodwill accounting under FRS 103). To illustrate, assume that H Ltd pays \$50

to acquire a 40% interest in an associate whose net assets have a fair value of \$100. In this case, the goodwill of \$10 ($\$50 - 40\% \times \100) will not be separately recorded and also will not be amortized; it will be carried as part of the cost of investment. In the consolidated balance sheet, the investment in the associate will be carried at \$50, and there is no goodwill account. FRS 28 further provides that, because goodwill included in the carrying amount of the investment in associate is not separately recognized, it is not tested for impairment separately (paragraph 42). Instead, the entire carrying amount of investment is tested for impairment under FRS 36.

For associates acquired before the adoption of FRS 28 and FRS 103, the goodwill element embedded in the cost of investment may or may not have been amortized. In any case, with the adoption of FRS 28 and FRS 103, the amortization should immediately cease, and the unamortized amount of goodwill, if any, will be carried as part of the cost of investment.

If there is negative goodwill, paragraph 32 of FRS 28 requires the negative goodwill to be excluded from the carrying amount of the investment and written off immediately to the consolidated statement of comprehensive income in the year of investment (again, this is consistent with negative goodwill accounting under FRS 103). To illustrate, assume in the above case, H Ltd pays \$35 instead of \$50, thereby giving rise to a negative goodwill of \$5. In this case, the negative goodwill of \$5 will be written off immediately to the consolidated statement of comprehensive income, and the investment will be carried at \$40. The consolidation journal entry will be as follows: 'Dr Investment in associate \$5' and 'Cr Other income \$5'.

For associates acquired before the adoption of FRS 28 and FRS 103, the negative goodwill element embedded in the cost of investment may or may not have been amortized. In any case, with the adoption of FRS 28 and FRS 103, the unamortized amount of negative goodwill, if any, embedded in the cost of investment should be written off to the beginning retained profit as follows: 'Dr Investment in associate' and 'Cr Beginning retained profit'.

Example 6.2

On 2 January 20X8, A Ltd paid \$40,000 to acquire 30% of B Ltd, whose net assets were represented by share capital of \$100,000. The excess payment of \$10,000 ($40,000 - 30\% \times 100,000$) was analyzed as follows:

- (a) \$5,000 for goodwill;
- (b) \$4,000 for undervaluation of machinery;
- (c) \$3,000 for undervaluation of land; and
- (d) \$2,000 for overvaluation of stock-on-hand.

The machinery had a remaining useful life of four years and was depreciated using the straight-line method, the land was not subject to amortization, and the stock was sold during the year 20X8.

For the year ended 31 December 20X8, B Ltd reported a pre-tax profit of \$10,000 and an after-tax profit of \$7,000. In consolidation, the following consolidation journal entries will be required:

(i)	Dr Investment in associate	2,100
	Cr Share of profit of associate	2,100
	(share of associate's profit)	
(ii)	Dr Share of profit of associate	1,000
	Cr Investment in associate	1,000
	(additional depreciation on undervalued machinery)	
(iii)	Dr Investment in associate	2,000
	Cr Share of profit of associate	2,000
	(overvaluation of stock)	

Notes to the solution

- (a) CJE (i) is to equity account for the associate's profit.
- (b) A Ltd's share of B Ltd's profit will be reduced by an additional depreciation on machinery of \$1,000 (CJE [ii]), and increased by the sale of the overvalued stock of \$2,000 (CJE [iii]).
- (c) There is no income effect arising from goodwill.
- (d) There is also no income effect arising from the undervaluation of land. However, in the year when the land is sold, A Ltd's share of the profit thereof should be reduced by \$3,000 (or share of loss on disposal increased by \$3,000).
- (e) Note that, unlike in the case of the subsidiary, there is no need to revalue the identifiable assets of the associate (in other words, no fair value adjustment is required of the associate's identifiable assets and liabilities). This is because, in the consolidated financial statements, the assets and liabilities of the associate are not added to those of the investor, on a line-by-line basis. The fair value differences are simply carried as part of the cost of investment in associate.

6.5 Transactions between parent and associate

If there are transactions between the investor and its associate, consolidation journal entries along the same lines as in the case of transactions between parent and subsidiary are required, with the following modifications:

- (a) Only unrealized intragroup profits and losses arising from intragroup transactions are eliminated. Intragroup account balances arising from intragroup transactions are not eliminated.
- (b) For unrealized intragroup profits and losses, partial rather than full elimination is used. In other words, only the investor's proportionate interest in the unrealized intragroup profits and losses is adjusted for.

To illustrate, assume that P Ltd has a 40% interest in an associate, A Ltd. During 20X8, P Ltd sold goods invoiced at \$100 to A Ltd. As at 31 December 20X8, some of these goods remained in the store of A Ltd, and there was an unrealized profit of \$20. In this case, for the 20X8 consolidation, (i) the inter-company sales and purchase were not eliminated and (ii) only 40% of the unrealized gain was eliminated.

If there is unrealized loss arising from the transaction between parent and its associate, the same rules apply. However, if the loss is not recoverable, FRS 28 requires 100% the non-recoverable unrealized loss arising from downstream transactions to be eliminated (paragraph 29). For non-recoverable unrealized loss arising from upstream transactions, FRS 28 requires that only parent's proportionate share of the loss is eliminated (paragraph 29).

To illustrate the requirement of paragraph 29, assume that H Ltd has a 30% interest in A Ltd, and that during the year, there is an inter-company sales, and none of the goods are sold to outsider by the year end. Assume the four independent scenarios below:

- In scenario 1, A Ltd buys good for \$100 and sells them to H Ltd for \$60, even though the net realizable value of the goods is more than \$100. In this scenario, only 30% of the unrealized loss ($30\% \times \$40 = \12) should be eliminated in the consolidated financial statements.
- In scenario 2, H Ltd buys good for \$100 and sells them to A Ltd for \$60, even though the net realizable value of the goods is more than \$100. In this scenario, only 30% of the unrealized loss ($30\% \times \$40 = \12) should be eliminated in the consolidated financial statements.
- In scenario 3, A Ltd buys good for \$100 and sells them to H Ltd for \$60, because the goods are damaged and the net realizable value of the goods is \$60. In this scenario, only 30% of the unrealized loss ($30\% \times \$40 = \12) should be eliminated in the consolidated financial statements.
- In scenario 4, H Ltd buys good for \$100 and sells them to A Ltd for \$60, because the goods are damaged and the net realizable value of the goods is \$60. In this scenario, 100% of the unrealized loss ($100\% \times \$40 = \40) should be eliminated in the consolidated financial statements.

Further, there may be unrealized gain/loss arising from the investor's contribution of a non-monetary asset to an associate in exchange for an equity interest in the associate.

In a case where an investor contributes a non-monetary asset to an associate in exchange for an equity interest in the associate, a question arises as to whether the investor should recognize gain or loss arising therefrom. FRS 28 provides that the investor should recognize gain or loss arising therefrom unless there is no commercial substance in the transaction (paragraph 30).

To illustrate the requirement of paragraph 30, assume that X Ltd contributes a piece of land to A Ltd in exchange for 25% equity interest in A Ltd (which is deemed to have a fair value of \$560 million). Assume further that the land was carried in X Ltd's financial statement at \$100 million, and the fair value of A Ltd's 25% equity

interest is \$140 million ($25\% \times \560 million). In this case, X Ltd is required to recognize, in its separate financial statements, the gain arising therefrom through a journal entry: Dr Investment in associate \$140 million; Cr Land \$100 million; and Cr Gain on disposal of land \$40 million.

To illustrate a case of a transaction without commercial substance, assume that Y Ltd and three other parties, each contributes a piece of land (of equal fair value) to A Ltd and each is allotted 25% equity interest in A Ltd. In this case, there is no commercial substance in the transaction. Assuming the land was carried in Y Ltd's financial statement at \$100 million, Y Ltd will record the transaction through a journal entry: Dr Investment in associate \$100 million; and Cr Land \$100 million.

Where an investor contributes a non-monetary asset to an associate in exchange for an equity interest in the associate and recognizes gain or loss arising therefrom, FRS 28 provides that any gain/loss that is deemed unrealized at group level should be eliminated against the investment account (paragraph 30).

To illustrate, assume the case of X Ltd above where X Ltd contributes a piece of land to A Ltd in exchange for 25% equity interest in A Ltd, and X Ltd thereby recognizes a gain on disposal of land of \$40 million in its separate financial statements. Assume that X Ltd has investment in subsidiaries and therefore prepares consolidated financial statements. It may be appreciated that, at group level, \$10 million ($25\% \times \40 million) of the gain on disposal of land is unrealized (because it is as if X Ltd is selling 25% of the land back to itself). Thus, a consolidation adjusting entry is required to eliminate the unrealized gain: Dr Gain on disposal of land \$10 million; and Cr Investment in associate \$10 million.

FRS 28 is silent on how to account for the partial elimination of the unrealized profit or loss. However, in practice, there are several alternative consolidation journal entries that are used to eliminate the unrealized profits and losses.

One approach that is commonly used in US accounting literature is to adjust the unrealized profits and losses through the investment in associate account and the share of profit of associate account, irrespective of whether the transaction is upstream or downstream. For example, assume there is an unrealized profit in the intragroup sale of stock. The accounting entry will be 'Dr Share of profit of associate'; 'Cr Investment in associate'. The rationale is that since the intragroup profits and losses are deemed to be unrealized because of equity accounting, the adjustment should therefore be made against the equity accounts involved, that is, the investment in associate account and share of profit of associate account.

Another approach that is commonly used, especially in Australian accounting literature, follows closely the principles of consolidation of a subsidiary company. For example, assume there is an unrealized profit in the intragroup sale of stock. If the transaction is downstream, the accounting entry will be 'Dr Profit before tax'; 'Cr Investment in associate'. The argument is that in downstream transactions, the unrealized profit is recorded in the investor's books and the 'overvalued' stock is recorded in the investee's books. Therefore, when the unrealized profit is

eliminated, the investor's profit will be reduced ('Dr Profit before tax'). Also, the investee's net asset (stock) will be reduced and therefore the investment must be reduced ('Cr Investment in associate'). On the other hand, if the transaction is upstream, the accounting entry is 'Dr Share of profit of associate'; 'Cr Stock'. The argument is that in an upstream transaction, the profit is recorded in the investee's books and the stock in the investor's books. Therefore, when the unrealized profit is eliminated, the investee's profit will be reduced and therefore the share of the investee's profit will be reduced ('Dr Share of profit of associate'). Also, the stock value in the investor's books will be reduced ('Cr Stock').

A third approach is to 'Dr Profit before tax' and 'Cr Deferred profit', for downstream transactions. The argument is that in a downstream transaction, the only issue involved is to defer the recognition of the profit that the investor has recorded. No other accounts are affected. For upstream transactions, the accounting entry may be either one of the two approaches mentioned above, that is, 'Dr Share of profit of associate'; and 'Cr Investment in associate', or 'Cr Stock'.

Example 6.3

The A Ltd group holds 30% interest in B Ltd, and there is an unrealized intragroup profit of \$100 in closing stock. The alternative consolidated journal entries under each of the three approaches discussed above are:

Approach 1

Dr Share of profit of associate	30
Cr Investment in associate	30
(downstream transaction)	
Dr Share of profit of associate	30
Cr Investment in associate	30
(upstream transaction)	

Approach 2

Dr Cost of sales	30
Cr Investment in associate	30
(downstream transaction)	
Dr Share of profit of associate	30
Cr Stock	30
(upstream transaction)	

Approach 3

Dr Cost of sales	30
Cr Deferred profit	30
(downstream transaction)	

Dr Share of profit of associate	30
Cr Investment in associate	30
(upstream transaction)	

or

Dr Share of profit of associate	30
Cr Stock	30
(upstream transaction)	

Notes to the solution

- (a) These consolidation journal entries ignore the tax effect on the elimination of unrealized profits. As in the case of the consolidation of a subsidiary, the tax effect can easily be incorporated as follows:
 - (i) where the elimination reduces the profit before tax, the consolidation journal entry for the tax effect is 'Dr Deferred tax'; 'Cr Tax expenses'; and
 - (ii) where the elimination reduces the share of profit of the associate, the consolidation journal entry for the tax effect is 'Dr Deferred tax'; 'Cr Share of tax of associate'.

However, the tax effect on the elimination of unrealized profits and losses will be ignored in subsequent discussion, as a matter of convenience.

- (b) Of the three approaches mentioned, the first approach seems to have the best theoretical backing, and will be used in this book.



The example below is a comprehensive illustration of the issues discussed under Sections 6.4 and 6.5.

Example 6.4

H Ltd holds 80% of S Ltd and 40% of A Ltd. It acquired its 80% interest in S Ltd, when S Ltd was formed on 10 January 20X8, for a cash consideration of \$80,000.

H Ltd acquired its 40% interest in A Ltd on 31 August 20X5, when A Ltd's retained profit was reported at \$200,000, for a cash consideration of \$150,000. The excess payment was for goodwill. The companies have adopted FRS 103 and FRS 28 since 1 January 20X5, and there has been no impairment of goodwill.

During the year 20X8, H Ltd sold goods to A Ltd amounting to \$300,000. On 31 December 20X8, A Ltd's stock included goods invoiced by H Ltd at \$50,000 + 10%.

On 30 June 20X8, A Ltd sold a piece of land that was carried in its books at \$400,000 to H Ltd for \$500,000. The land was still carried in H Ltd's books on 31 December 20X8.

On 30 September 20X8, A Ltd paid an interim dividend of \$70,000 out of the current year's profits. All the companies have adopted the one-tier system for the calculation of dividends since 1 January 20X8.

The financial statements of the three companies are as follows:

(a) Balance sheets as at 31 December 20X8

	H Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Investment in S Ltd	80	—	—
Investment in A Ltd	150	—	—
Amount due from S Ltd	100	—	—
Amount due from A Ltd	50	—	—
Other net assets	420	220	640
	<u>800</u>	<u>220</u>	<u>640</u>
	<u><u>800</u></u>	<u><u>220</u></u>	<u><u>640</u></u>
Share capital	200	100	100
Retained profit	600	20	490
Amount due to H Ltd	—	100	50
	<u>800</u>	<u>220</u>	<u>640</u>
	<u><u>800</u></u>	<u><u>220</u></u>	<u><u>640</u></u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	H Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Sales	1,000	100	500
Cost of sales	300	40	200
Gross profit	700	60	300
Profit on sale of land	—	—	100
Dividend from A Ltd	28	—	—
Operating expenses	240	34	100
Profit before tax	488	26	300
Tax	128	6	100
Profit after tax	360	20	200
Other comprehensive income	—	—	—
Total comprehensive income	<u>360</u>	<u>20</u>	<u>200</u>
	<u><u>360</u></u>	<u><u>20</u></u>	<u><u>200</u></u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	H Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Beginning retained profit	300	—	360
Profit for the year	360	20	200
Dividend	60	—	70
Ending retained profit	600	20	490

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing the group's retained profit only) for the H Ltd group for the year 20X8.

Solution

This suggested solution adopts Approach 1 in the elimination of unrealized intragroup profits and losses. The solution can easily be modified to incorporate the other approaches.

(a) Consolidation journal entries

- | | | |
|-------|---|----|
| (i) | Dr Investment in A Ltd | 80 |
| | Cr Share of profit of associate | 80 |
| | (to equity account for profit of associate) | |
| (ii) | Dr Dividend income | 28 |
| | Cr Investment in A Ltd | 28 |
| | (to convert from cost method to equity method for dividend from associate) | |
| (iii) | Dr Share of profit of associate | 2 |
| | Cr Investment in A Ltd | 2 |
| | (unrealized profit in stock from downstream transaction) | |
| (iv) | Dr Share of profit of associate | 40 |
| | Cr Investment in A Ltd | 40 |
| | (unrealized profit on upstream sale of land) | |
| (v) | Dr Investment in A Ltd | 64 |
| | Cr Beginning retained profit | 64 |
| | (to equity account for the post-acquisition reserves in BRP of associate
(40% × [\$360,000 – \$200,000]) | |
| (vi) | Dr Share capital (S) | 80 |
| | Cr Investment in S Ltd | 80 |
| | (to eliminate investment in subsidiary) | |

(vii)	Dr Amount due to H Ltd	100	
	Cr Amount due from S Ltd		100
	(to eliminate intragroup loans)		
(viii)	Dr Non-controlling interest (CSCI)	4	
	Cr Non-controlling interest (CBS)		4
	(to record non-controlling interest in subsidiary's profit)		
(ix)	Dr Share capital (S)	20	
	Cr Non-controlling interest (CBS)		20
	(to record non-controlling interest in subsidiary's share capital)		

(b) Consolidation worksheet

	H Ltd	S Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	1,000	100			1,100
Cost of sales	300	40			340
Gross profit	700	60			760
Dividend	28	—	ii 28		—
Expenses	240	34			274
Share of profit	—	—	iii 2	i 80	
			iv 40		38
Profit before tax	488	26			524
Tax	128	6			134
Profit after tax	360	20			390
Non-controlling interest	—	—	viii 4		4
Group profit	360	20			386
Dividend	60	—			60
Beginning retained profit	300	—		v 64	364
Ending retained profit	600	20			690
Share capital	200	100	vi 80		
			ix 20		200
Due to H Ltd	—	100	vii 100		—
Non-controlling interest	—	—		viii 4	
				ix 20	24
Investment in S Ltd	80	—		vi 80	—
Investment in A Ltd	150	—	i 80	ii 28	
			v 64	iii 2	
				iv 40	224
Due from S Ltd	100	—		vii 100	—
Due from A Ltd	50	—			50
Net assets	420	220			640

(c) Consolidated financial statements

H Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,100
Cost of sales	340
Gross profit	760
Operating expenses	274
Operating profit	486
Share of profit of associate	38
Profit before tax	524
Tax	134
Profit after tax	390
Other comprehensive income	—
Total comprehensive income	<u>390</u>
Attributable to:	
Shareholders of the parent	386
Non-controlling interest	4
	<u>390</u>

P Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	200
Retained profit	690
Non-controlling interest	24
	<u>914</u>
Investment in associate	224
Amount due from associate	50
Other net assets	640
	<u>914</u>

H Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	364
Profit for the year	386
Dividend	60
Ending retained profit	690

Notes to the solution

- (a) CJE (i) is to equity account for the associate's profit.
- (b) The goodwill of \$30,000 ($\$150,000 - 40\% \times [\$100,000 + \$200,000]$) is, as required by FRS 28, carried as part of the carrying amount of investment in A Ltd.
- (c) Consolidation journal entries (iii) and (iv) are required to record the unrealized inter-company profits. Approach 1 is adopted for this solution. Note that under Approach 1, all the unrealized intragroup profits, both from upstream transactions and downstream transactions, are adjusted against the investment account and the share of profit of associate account. Under Approach 2, CJEs (iii) and (iv) will be as follows:

(iii) Dr Cost of sales	2
Cr Investment in A Ltd	2
(unrealized profit in closing stock)	
(iv) Dr Share of profit of associate	40
Cr Land	40
(unrealized profit in land)	

Under Approach 3, CJE (iii) and (iv) will be as follows:

(iii) Dr Cost of sales	2
Cr Deferred profit	2
(unrealized profit in closing stock)	
(iv) Dr Share of profit of associate	40
Cr Investment in A Ltd	40
(unrealized profit in land)	

or

Dr Share of profit of associate	40	
Cr Land	40	
(unrealized profit in land)		

- (d) Consolidation journal entry (v) is required to accrue for the investor's share of the associate's post-acquisition profit from the date of share acquisition to the beginning of the current year. In this case, the post-acquisition reserve of A Ltd up to the beginning of the current year is \$160,000 ($\$360,000 - \$200,000$), and H Ltd's 40% share thereof is \$64,000 ($40\% \times \$160,000$).
- (e) The group's profit of \$386,000 can be proved as follows: parent's adjusted profit of \$332,000 ($\$360,000 - \text{dividend from associate of } \$28,000$) + group's share of subsidiary's profit of \$16,000 ($80\% \times \$20,000$) + group's equity interest in the associate's adjusted profit of \$38,000 (40% on profit of \$200,000 – unrealized profit on sale of stock of \$2,000 – unrealized profit on sale of land of \$40,000).
- (f) The group's retained profit of \$690,000 can be proved as follows: retained profit of H Ltd of \$600,000 + group's share of the post-acquisition reserve of S Ltd of \$16,000 ($80\% \times \$20,000$) + group's share of the adjusted post-acquisition reserve of A Ltd of \$74,000 ($40\% \times [\$490,000 - \$200,000]$ – unrealized profit of \$42,000).
- (g) The investment in the associate of \$224,000 can be proved as follows: cost of investment of \$150,000 + group's share of the post-acquisition reserves of A Ltd of \$74,000 (40% × [$\$490,000 - \$200,000$] – \$2,000 – \$40,000). The figure of \$224,000 can also be proved as being equal to the group's equity interest in the associate's net assets of \$236,000 (40% × \$590,000) + goodwill of \$30,000 – unrealized profits of \$42,000.
- (h) Note that while the amount due from the subsidiary company is eliminated, the amount due from the associate is not eliminated. (This is because the financial statements of the associate are not added, line by line, to the consolidated financial statements.) The amount due from the associate account may be combined with the investment in associate account and presented in the consolidated balance sheet as a single item, 'associate'.
- (i) Note also that the sale of goods between parent and associate is not eliminated.

6.6 Impairment loss

As mentioned in Section 6.3, under the equity method, the investment account is initially recorded at cost but is subsequently adjusted for the investor's proportionate share of the increase or decrease in the net assets of the associate, and the investment income consists of the investor's proportionate share of the investee's periodic profit or loss. However, there are two exceptions to the general rule stated above. These two exceptions are related to one another.

Firstly, as provided for in paragraph 38 of FRS 28, if the investor's share of losses of the associate exceeds the carrying amount of the investment (and any long-term interest that in substance forms part of the investor's net investment in the associate), the loss recognized is limited to the carrying amount of the investment (and any long-term interest that in substance forms part of the investor's net investment in the associate) and the investment account is reported at \$nil balance (in other words, the investment account should not be reported at credit balance). After the investor's interest is reduced to \$nil, additional losses are provided for and a liability recognized only to the extent that the investor has incurred legal or constructive obligations to make payments on behalf of the associate. If the associate subsequently reports profits, the investor resumes including its share of those profits only after it has made good its share of the losses not previously recognized.

To illustrate, assume A Ltd holds 30% interest in B Ltd, and that the carrying amount of investment as at 1 January 20X7 is \$10,000. If B Ltd reports a loss of \$40,000 for the year ended 31 December 20X7, A Ltd's share of the loss of the associate for 20X7 will be limited to \$10,000 (instead of $30\% \times \$40,000$). If B Ltd subsequently reports a profit of \$50,000 for the year ended 31 December 20X8, A Ltd's share of the profit of the associate for 20X8 will be \$13,000 ($[30\% \times \$50,000] - \text{loss of } \$2,000 \text{ not recognized in 20X7}$).

In the above example, if at 1 January 20X7, A Ltd not only has an investment account carried at \$10,000, but also an equity loan of \$1,000 due from the associate, and a trade receivable of \$500 due from the associate, the share of the loss for 20X7 will be limited to \$11,000 (carrying amounts of investment and equity loan, but excluding trade receivable).

Secondly, as provided in paragraphs 40 and 41 of FRS 28, if there is an indication that an investment in an associate may be impaired, the provisions of FRS 36 *Impairment of Assets* should be applied. FRS 36 basically requires that whenever there is an indication that the asset may be impaired, the recoverable amount (defined as the higher of value in use and fair value less costs to sell) of the asset should be estimated; and if the carrying amount of an asset exceeds its recoverable amount, an impairment loss should be recognized. FRS 28 provides that the impairment test should be assessed for each individual associate, unless an individual associate does not generate cash inflows that are largely independent of those from other assets of the entity (paragraph 43). FRS 28 further provides that, because goodwill included in the carrying amount of the investment in associate is not recognized separately, it is not tested for impairment separately; instead, the entire carrying amount of the investment is tested for impairment (paragraph 42). Consequently, reversal of impairment loss on investment in associate is recognized in its entirety (notwithstanding the prohibition of FRS 36 on reversal of impairment on goodwill).

To illustrate, assume that on 1 January 20X1, P Ltd pays \$40 to acquire a 30% interest in A Ltd, which has net assets of \$100. It may be noted that the investment account balance of \$40 is inclusive of a goodwill element of \$10. Assume that all the assets of A Ltd were destroyed in a fire on 31 December 20X1. In this case, P Ltd will

write off \$40 as impairment loss in 20X1. Assume further that A Ltd recovers all the loss from the arsonist in 20X2 and the fair value of its net assets is more than \$100 on 31 December 20X2. In this case, P Ltd is allowed to reverse all the impairment loss of \$40 (not just \$30) in 20X2, as provided for under paragraph 42 of FRS 28.

One complication that may arise in consolidation is where the parent company provides for, in its own separate financial statements, impairment losses on the investment. There will be double-counting of the loss if, after the parent has taken up the loss in its own books, another loss is taken up through equity accounting during the consolidation process.

The easiest way to solve this problem during the consolidation process is to (a) reverse out the amount accrued by the parent for the impairment loss of the investment, (b) proceed with equity accounting as if no provision for the loss has been made by the parent, and (c) subject the investment account, after the application of equity accounting, to impairment testing in accordance with FRS 36 to determine if it is necessary to recognize any additional impairment loss at the group level.

Example 6.5

P Ltd holds 60% of S Ltd and 40% of A Ltd. It acquired its 60% interest in S Ltd, when S Ltd was incorporated on 1 January 20X8, for a cash consideration of \$60,000. It also acquired its 40% interest in A Ltd in 20X5 for a cash consideration of \$200,000. At that date A Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$400,000.

A Ltd incurred huge losses in 20X8. Accordingly, P Ltd made a provision for impairment loss, in its own books, of \$120,000 in 20X8 (which is netted-off against the investment in A Ltd account in the balance sheet as shown).

The financial statements of the three companies are as follows:

(a) Balance sheets as at 31 December 20X8

	P Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Investment in S Ltd	60	—	—
Investment in A Ltd	80	—	—
Net assets	560	110	200
	700	110	200
	=====	=====	=====
Share capital	200	100	100
Retained profit	500	10	100
	700	110	200
	=====	=====	=====

(b) Statements of comprehensive income for the year ended 31 December 20X8

	P Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Sales	900	100	700
Cost of sales	300	40	400
Gross profit	600	60	300
Operating expenses	200	44	550
Impairment loss	120	—	—
Profit/(loss) before tax	280	16	(250)
Tax	80	6	—
Profit/(loss) after tax	200	10	(250)
Other comprehensive income	—	—	—
Total comprehensive income(loss)	200	10	(250)

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Beginning retained profit	400	—	350
Profit/(Loss) for the year	200	10	(250)
Dividend	100	—	—
Ending retained profit	500	10	100

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing the group's retained profit only) for the P Ltd group for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Investment in A Ltd	120
	Cr Impairment loss	120
	(to reverse out the impairment loss)	
(ii)	Dr Beginning retained profit	20
	Cr Investment in A Ltd	20
	(to equity account for post-acquisition loss in BRP of associate)	

(iii)	Dr Share of loss of associate	100		
	Cr Investment in A Ltd		100	
	(to equity account for current-year loss of associate)			
(iv)	Dr Share capital (S)	60		
	Cr Investment in S Ltd		60	
	(to eliminate investment in subsidiary)			
(v)	Dr Non-controlling interest (CSCI)	4		
	Cr Non-controlling interest (CBS)		4	
	(to record non-controlling interest in profit of S Ltd)			
(vi)	Dr Share capital (S)	40		
	Cr Non-controlling interest (CBS)		40	
	(to record non-controlling interest in share capital of S Ltd)			

(b) Consolidation worksheet

	P Ltd	S Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	900	100			1,000
Cost of sales	300	40			340
Gross profit	600	60			660
Expenses	200	44			244
Impairment loss	120	—		i 120	—
Share of loss	—	—	iii 100		100
Profit before tax	280	16			316
Tax	80	6			86
Profit after tax	200	10			230
Non-controlling interest	—	—	v 4		4
Profit for shareholders	—	—			226
Dividend	100	—			100
Beginning retained profit	400	—	ii 20		380
Ending retained profit	500	10			506
Share capital	200	100	iv 60		200
			vi 40		
Non-controlling interest	—	—	v 4		4
			vi 40		44
Investment in S Ltd	60	—		iv 60	—
Investment in A Ltd	80	—	i 120	iii 100	
				ii 20	80
Net assets	560	110			670

(c) Consolidated financial statements

P Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,000
Cost of sales	340
Gross profit	660
Operating expenses	244
Operating profit	416
Share of loss of associate	100
Profit before tax	316
Tax	86
Profit after tax	230
Other comprehensive income	—
Total comprehensive income	<u>230</u>
Attributable to:	
Shareholders of the parent	226
Non-controlling interest	4
	<u>230</u>

P Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	200
Retained profit	506
Non-controlling interest	44
	<u>750</u>
Investment in associate	80
Other net assets	670
	<u>750</u>

P Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	380
Profit for the year	226
Dividend	100
Ending retained profit	506

Notes to the solution

- (a) CJE (i) reverses out the impairment loss recognized by the parent so as to avoid double-counting the loss.
- (b) After reversing out the impairment loss through CJE (i), and equity accounting for the associate's losses through CJEs (ii) and (iii), it is necessary to further apply the impairment test under FRS 36 to determine whether any additional impairment loss is necessary. In this solution, it is assumed that no further impairment loss is necessary. (If the recoverable amount of the investment in the associate is only \$30,000, then it would be necessary to provide for an additional impairment loss of \$50,000 [carrying amount of \$80,000 – recoverable amount of \$30,000] on the investment in the associate. In this case, an additional consolidation journal entry will be necessary as follows: 'Dr Impairment loss [CSCI] \$50,000' and 'Cr Accumulated impairment on investment [CBS] \$50,000'.)
- (c) The group's profit of \$226,000 may be proved as being equal to P Ltd's adjusted after-tax profit of \$320,000 (\$200,000 adding back impairment loss of \$120,000) + group's share of S Ltd's after-tax profit of \$6,000 ($60\% \times \$10,000$) – group's share of A Ltd's loss of \$100,000 ($40\% \times \$250,000$). Note that if the impairment loss has not been reversed out, there will be double-counting of the group's share of the associate's losses.
- (d) The group's retained profit of \$506,000 can be proved as being equal to P Ltd's adjusted retained profit of \$620,000 (\$500,000 adding back impairment loss of \$120,000) + group's share of S Ltd's post-acquisition profit of \$6,000 ($60\% \times \$10,000$) – group's share of post-acquisition loss of A Ltd of \$120,000 ($40\% \times [\$100,000 - \$400,000]$).
- (e) The investment in associate of \$80,000 in the consolidated balance sheet can be proved as cost of investment of \$200,000 – group's share of the post-acquisition loss of \$120,000 ($40\% \times [\$100,000 - \$400,000]$).
- (f) If the 20X8 loss of A Ltd is \$500,000 (instead of \$250,000), the group's share of the associate's current-year loss (CJE [iii]) will have to be restricted. If there is no restriction and a loss of \$200,000 ($40\% \times \$500,000$) is recognized under CJE (iii), then the investment in associate account will end up with a credit balance of \$20,000 ($\$120,000 + \$80,000$ [CJE (i)] – \$20,000 [CJE (ii)] – \$200,000 [CJE (iii)]). In order that the investment account does not end up with a credit balance, the loss recognized in CJE (iii) will have to be restricted to \$180,000 ($\$120,000 + \$80,000 - \$20,000$). In this case, since the investment account has been written down to \$nil, no further testing for impairment losses under FRS 36 is necessary.

6.7 Changes in equity interests

As in the case of subsidiaries, an investor's equity interest in associates may also change in subsequent periods. FRS 28 deals with the following scenarios of changes in equity interests:

- (a) An investor's equity interest in an associate is increased such that the former associate consequently becomes a subsidiary (paragraph 22 [a]);
- (b) An investor's equity interest in an associate is decreased such that the former associate consequently becomes a mere investment (paragraph 22 [b]); and
- (c) An investor's equity interest in an associate is decreased but the former associate remains as an associate (paragraph 25).

(Note that FRS 28 does not deal with another possible scenario where an investor's equity interest in an associate is increased but the former associate remains as an associate. This is covered in Section 6.7.4.)

6.7.1 An investor's equity interest in an associate is increased such that the former associate consequently becomes a subsidiary

In cases where an investor's equity interest in an associate is increased such that the former associate consequently becomes a subsidiary, the consolidation issues are the same as those discussed under Section 4.2.1 of Chapter 4 (step acquisition). In fact, FRS 28 provides that, in these cases, the provisions of FRS 103 in relation to step acquisition should be applied (paragraph 22 [a]).

Just to recap, as discussed under Section 4.2.1 of Chapter 4, in a step acquisition, FRS 103 requires the acquirer to re-measure its previously-held shareholding at the acquisition-date fair value and recognize the re-measurement gain or loss, if any, in profit or loss. This should be done as if the previously held shareholdings are disposed of and reacquired on the date when control of the subsidiary is achieved. Further, FRS 103 requires the goodwill to be calculated as if all the shareholdings were acquired at the date when control is achieved. Readers may wish to refer to Example 4.1, Scenario 3 in Chapter 4, for the necessary consolidation adjustments.

Below is a full illustration of a case where an investor's equity interest in an associate is increased such that the former associate consequently becomes a subsidiary.

Example 6.6

P Ltd incorporates a wholly owned subsidiary, S Ltd, on 1 January 20X7, with a paid-up capital of \$100,000. It acquired 30% interest in T Ltd, when T Ltd was incorporated with 100,000 shares on 1 January 20X7, for a cash consideration of \$30,000. On 1 January 20X8, when the shares of T Ltd were traded at \$1.40 per share, P Ltd acquired an additional 50% interest in T Ltd (i.e., 50,000 shares) for a cash consideration of \$70,000.

There is no transaction among the three companies. The financial statements of the three companies are as follows:

(a) Balance sheets as at 31 December 20X8

	P Ltd	S Ltd	T Ltd
	\$'000	\$'000	\$'000
Investment in S Ltd	100	—	—
Investment in T Ltd	100	—	—
Net assets	80	130	150
	<u>280</u>	<u>130</u>	<u>150</u>
Share capital	200	100	100
Retained profits	80	30	50
	<u>280</u>	<u>130</u>	<u>150</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	P Ltd	S Ltd	T Ltd
	\$'000	\$'000	\$'000
Sales	300	100	200
Cost of sales	100	40	100
Gross profit	200	60	100
Operating expenses	120	44	70
Profit before tax	80	16	30
Tax	30	6	10
Profit after tax	50	10	20
Other comprehensive income	—	—	—
Total comprehensive income	<u>50</u>	<u>10</u>	<u>20</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd	T Ltd
	\$'000	\$'000	\$'000
Beginning retained profit	50	20	30
Profit for the year	50	10	20
Dividend	20	—	—
Ending retained profit	80	30	50

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing group retained profit only) for P Ltd group for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Investment in T Ltd	9	9	70K - 30K = 40K
	Cr Beginning retained profit			
	(to equity account for T Ltd as an associate)			
(ii)	Dr Investment in T Ltd	3	3	42K - 39K = 3K
	Cr Gain on deemed disposal and re-purchase			
	(to account for assumed disposal and re-purchase)			
(iii)	Dr Share capital (T) ($80\% \times 100$)	80		Equity = Total assets - Total liabilities
	Dr Beginning retained profit (T) ($80\% \times 30$)	24		
	Dr Goodwill on consolidation	8		
	Cr Investment in T Ltd		112	(142K - 110K)
	(to eliminate investment account)			
(iv)	Dr Non-controlling interest (CPL) ($20\% \times 20$)	4		
	Cr Non-controlling interest (CBS)		4	
	(to record non-controlling interest in profit of T Ltd)			
(v)	Dr Share capital (T)	20		
	Dr Beginning retained profit (T)	6		
	Cr Non-controlling interest		26	
	(to record non-controlling interest in T Ltd's other shareholders' equity)			
(vi)	Dr Share capital (S)	100		
	Cr Investment in S Ltd.....		100	
	(to eliminate investment account)			

(b) Consolidation worksheet

	P Ltd	S Ltd	T Ltd	Consolidation		Consolidated balances
	\$'000	\$'000	\$'000	Dr	Cr	
Sales	300	100	200			600
Cost of goods sold	100	40	100			240
Gross profit	200	60	100			360
Gain on disposal	—	—	—	ii	3	3
Expenses	120	44	70			234
Profit before tax	80	16	30			129
Tax	30	6	10			46
Profit after tax	50	10	20			83
Non-controlling interest ..	—	—	—	iv	4	4
Group profit	—	—	—			79
Dividend	20	—	—			20
Profit retained	30	10	20			59
Beginning retained profit ..	50	20	30	iii	24	i - 9
				v	6	
Ending retained profit	80	30	50			138
Share capital	200	100	100	iii	80	
				v	20	
				vi	100	200
Non-controlling interest ..	—	—	—		iv	4
					v	26
Investment in S Ltd	100	—	—		vi	100
Investment in T Ltd	100	—	—	i	9	iii 112
				ii	3	
Net assets	80	130	150			360
Goodwill	—	—	—	iii	8	8

(c) Consolidated financial statements

P Ltd and its subsidiaries
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	600
Cost of sales	<u>240</u>
Gross profit	360
Profit on assumed disposal and re-purchase	3
Operating expenses	<u>234</u>
Profit before tax	129
Tax	<u>46</u>
Profit after tax	83
Other comprehensive income	—
Total comprehensive income	<u>83</u>
Attributable to:	
Shareholders of the parent	79
Non-controlling interest	4
	<u>83</u>

P Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Share capital	200
Retained profit	138
Non-controlling interest	30
	<hr/>
	368
Goodwill on consolidation	8
Other net assets	360
	<hr/>
	368

P Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	79
Profit for the year	79
Dividend	20
	<hr/>
Ending retained profit	138

Notes to the solution

- (a) This case, where the investor acquires additional shares in an associate such that the associate becomes a subsidiary, is a case of 'step acquisition'. The consolidation procedure is therefore the same as that discussed in Chapter 4.
- (b) CJE (i) is to equity account for P Ltd's share of post-acquisition profit of T Ltd from the day T Ltd became an associate to the date T Ltd became a subsidiary.
- (c) CJE (ii) is to account for the effect of assumed disposal of the initial 30,000 shares in T Ltd, thereby giving rise to a gain of \$3,000 (selling price of \$42,000 [30,000 × \$1.40] – the carrying amount of the investment account of \$39,000 [cost of \$30,000 + equity share of post-acquisition reserve of \$9,000 (see CJE [i])]), and the effect of the assumed re-purchase of the 30,000 at a cost of \$42,000 (30,000 × \$1.40), thereby increasing the cost of investment by \$3,000 (\$42,000 – \$39,000), as required by FRS 103.
- (d) It is important to ensure that, in the consolidated financial statements, the group's beginning retained profit for the current year of \$79,000 is the same as the group ending retained profit of the previous year. It may be noted that the group ending retained profit for 20X7 was \$79,000, which can be re-computed as equal to P Ltd's ending retained profit of \$50,000 + group's share of S Ltd's post-acquisition retained profits of \$20,000 + group's share of the increase since the date of share acquisition in the retained profit of T Ltd of \$9,000 (30% × 30,000).

6.7.2 An investor's equity interest in an associate is decreased such that the former associate consequently becomes a mere investment

In cases where an investor's equity interest in an associate is decreased such that the former associate consequently becomes a mere investment, FRS 28 provides that (paragraph 22 [b]):

- (i) the investor should discontinue the use of equity method from the date it loses significant influence;
- (ii) the retained interest should be re-measured at fair value on the date of loss of significant influence and the difference thereof treated as part of the profit or loss on disposal of associate; and
- (iii) the retained interest should subsequently be accounted for in accordance with FRS 39.

As in the case of loss of control of a subsidiary, there are two effects of the provision of paragraph 22 (b): namely (i) upon loss of significant influence, the profit/loss on disposal of shares in the former associate will be the same (as if all the shareholding were disposed of) regardless of the actual percentage of shareholding disposed of; and (ii) if the retained interest is to be accounted as 'available for sale' under FRS 39, a consolidation adjustment has to be made in respect of the fair value reserve arising from mark-to-market re-measurement of the available-for-sale investment.

To illustrate the requirement that, upon loss of significant influence, the profit/loss on disposal of shares in the former associate will be the same regardless of the actual percentage of shareholding disposed of, assume that on 2 February 20X8, P Ltd group acquires 30 million of the 100 million shares of A Ltd at \$5 per share, and on 8 August 20X8 when the shares are traded at \$6 per share, P Ltd group disposes of part of its shareholding in A Ltd such that it losses significant influence. In this case, it does not matter whether P Ltd group disposes of 30 million shares, or 20 million shares, the profit on the disposal to be reported in the consolidated financial statement will be \$30 million ($30 \text{ million share} \times [\$6 - \$5]$). This may be proved as follows. If P Ltd group disposes of all the 30 million shares, the gain on disposal is \$30 million (sales proceeds of \$180 million [$30 \text{ million shares} \times \6] less cost of investment of \$150 million [$30 \text{ million} \times \5]). If the parent disposes of only 20 million shares, the gain on disposal is still \$30 million (sales proceeds of \$120 million [$20 \text{ million shares} \times \6] less cost of investment of \$100 million [$20 \text{ million} \times \5]) plus fair value gain of \$10 million ($10 \text{ million} \times [\$6 - \$5]$) on re-measurement of remaining 10 million shares.

To illustrate the requirement that, if the retained interest is to be accounted as 'available for sale' under FRS 39, a consolidation adjustment has to be made in respect of the fair value reserve arising from mark-to-market gains/losses, refer to the above case of P Ltd group where P Ltd group disposes of 20 million shares. Assume that the 10 million shares are accounted as 'available for sale', and that A Ltd's share are

traded at \$8 per share on 31 December 20X8. In this case, in P Ltd's financial statements, the mark-to-market gain (fair value reserve) on the available-for-sale investment is \$30 million (10 million shares \times [\$8 – \$5]), whereas in the consolidated financial statements, the mark-to-market gain (fair value reserve) on the available-for-sale investment is \$20 million (10 million shares \times [\$8 – \$6]). Thus, for 20X8 consolidation, an adjustment must be made as follows: Dr Fair value gain \$10 million; Cr Profit on disposal of associate \$10 million. For each of all the subsequent years (until the year in which the available-for-sale investment is disposed of), the following consolidation adjustment must be made: Dr Beginning fair value reserve \$10 million; Cr Beginning retained profit \$10 million. Of course, if the retained interest is accounted for as 'held for trading' investment, no adjustment is required for the re-measurement of the retained interest on the date of loss of significant influence. These, in fact, are same as the issues discussed under Section 4.2.4 in Chapter 4.

Example 6.7

A Ltd incorporated a wholly owned subsidiary, B Ltd, on 1 January 20X4 with a paid-up capital of \$100,000. It acquired 30% interest in C Ltd on 30 June 20X6, when C Ltd was formed with 100,000 ordinary shares for a cash consideration of \$30,000. On 1 January 20X8, A Ltd sold 20,000 shares in C Ltd for a cash consideration of \$25,000. Upon the disposal of shares, A Ltd ceased to have significant influence over C Ltd. The investments are reclassified as 'held for trading' under FRS 39. The market values of the investment were \$12,000 on 1 January 20X8 and \$15,000 on 31 December 20X8.

There were no other transactions among the companies. The financial statements of the companies are as follows:

(a) Balance sheets as at 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000
Investment in B Ltd	100	–	–
Investment in C Ltd	15	–	–
Net assets	140	130	113
	255	130	113
	—	—	—
Share capital	200	100	100
Retained profit	55	30	13
	255	130	113
	—	—	—

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000
Sales	100	50	20
Cost of sales	20	10	10
Gross profit	80	40	10
Profit on sale of shares	5	—	—
Mark-to-market gain	5	—	—
Operating expenses	40	20	5
Profit before tax	50	20	5
Tax	12	6	2
Profit after tax	38	14	3
Other comprehensive income	—	—	—
Total comprehensive income	38	14	3

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000
Beginning retained profit	30	16	10
Profit for the year	38	14	3
Dividend	13	—	—
Ending retained profit	55	30	13

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet and the consolidated statement of changes in equity (showing the group's retained profit only) for the A Ltd group for the year 20X8.

Solution

(a) Consolidation journal entries

- (i) Dr Investment in C Ltd ($30\% \times 10$) 3
 Cr Beginning retained profit (A) 3
 (to equity account for the post-acquisition increase in BRP of associate)

- (ii) Dr Profit on sale of shares 2
 Cr Investment in C Ltd 2
 (to adjust profit on sale of shares)

(iii)	Dr Investment in C Ltd	1	
	Cr Profit on sale of shares	1	
	(to comply with paragraph 22[b])		
(iv)	Dr Investment in C Ltd	3	
	Cr Mark-to-market gain	3	
	(to recognize mark-to-market gain)		
(v)	Dr Mark-to-market gain	5	
	Cr Investment in C Ltd	5	
	(to reverse mark-to-market gain recorded at company level)		
(vi)	Dr Share capital (B)	100	
	Cr Investment in B Ltd	100	
	(to eliminate investment in subsidiary)		

(b) Consolidation worksheet

	A Ltd	B Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	100	50			150
Cost of sales	20	10			30
Gross profit	80	40			120
Profit on sale of shares	5	—	ii 2	iii 1	4
Mark-to-market gain	5	—	v 5	iv 3	3
Expenses	40	20			60
Profit before tax	50	20			67
Tax	12	6			18
Profit after tax	38	14			49
Dividend	13	—			13
Beginning retained profit	30	16	i 3		49
Ending retained profit	55	30			85
Share capital	200	100	vi 100		200
Investment in B Ltd	100	—		iv 100	—
Investment in C Ltd	15	—	i 3	ii 2	
			iii 1	v 5	
			iv 3		15
Net assets	140	130			270

(c) Consolidated financial statements

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	150
Cost of sales	30
Gross profit	120
Profit on sale of shares	4
Mark-to-market gain on shares	3
Operating expenses	60
Profit before tax	67
Tax	18
Profit after tax	49
Other comprehensive income	—
Total comprehensive income	49
<hr/>	
Attributable to:	
Shareholders of the parent	49
Non-controlling interest	—
	49

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	200
Retained profit	85
	<hr/>
Investment in C Ltd	15
Other net assets	270
	<hr/>
	285

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	49
Profit for the year	49
Dividend	13
Ending retained profit	85

Notes to the solution

- (a) CJE (i) is to account for the group's share of the increase in the post-acquisition beginning retained profit of C Ltd up to 31 December 20X7, which is equal to \$3,000 ($30\% \times \$10,000$). This CJE is also necessary so as to ensure that the group beginning retained profit for 20X8 is the same as the group ending retained profit for 20X7.
- (b) CJE (ii) is to adjust for the profit on sale of the 20,000 shares in C Ltd. From A Ltd's viewpoint (accounted for at cost), the cost of the 20,000 shares is \$20,000, and thus, the profit arising from the sales is \$5,000. However, from the group's viewpoint (under the equity method), the carrying amount of the 20,000 shares is \$22,000 (cost of \$20,000 + share of post-acquisition retained profit of \$2,000 [$20\% \times \$10,000$], see Note [a] above), and the profit arising therefrom is \$3,000. Thus, the profit has to be reduced by \$2,000 through CJE (ii).
- (c) After the disposal of 20,000 shares, the status of C Ltd has changed from an associate to a mere investee. In accordance with the requirement of the amended paragraph 22(b) of FRS 28, the remaining shareholding should be re-measured to its fair value on the day of loss of significant influence, and the gain/loss arising therefrom should be treated as part of the gain/loss on disposal of the associate. In this case, the carrying amount of the 30,000 shares in C Ltd on the day of loss of significant influence was \$33,000 (cost of \$30,000 + 30% of the increase in post-acquisition retained profits of \$10,000, see Note [a] above). Thus, the carrying amount of the 10,000 shares in C Ltd on that day was \$11,000 ($1/3 \times \$33,000$). As required by paragraph 22(b), these remaining 10,000 shares in C Ltd are re-measured to the fair value of \$12,000. This is done through CJE (iii).
- (d) The profit on disposal of shares in C Ltd is therefore \$4,000 (profit on sale of 20,000 shares of \$3,000 + re-measurement gain on the remaining 10,000 shares of \$1,000). The profit of \$4,000 may also be proved as follows:

	\$'000
Sales proceeds	25
Fair value of remaining shares	<u>12</u>
Total	37
Net assets of associate disposed of ($30\% \times [100 + 10]$)	<u>33</u>
Gain on disposal	4
	<u><u>=</u></u>

- (e) Since the investment in the remaining 10,000 shares in C Ltd (which has been re-measured at \$12,000) is classified as 'held for trading' investment under FRS 39, it is marked to market value of \$15,000 at 31 December 20X8, thereby giving rise to a mark-to-market gain of \$3,000. This is done through CJE (iv).
- (f) CJE (v) is to reverse out the mark-to-market exercise done by A Ltd, to avoid double-counting. (The mark-to-market at group level has been done through CJE [iv].) From A Ltd's viewpoint, the cost of the investment in C Ltd is \$10,000, and therefore the mark-to-market gain is \$5,000. All the \$5,000 is reversed out through CJE (v).

- (g) Since adjustments (i) through (v) are all adjusted to profit or loss (first half of the statement of comprehensive income), and they net-off each other, all these CJEs will not be necessary in the consolidation for all subsequent periods.

6.7.3 An investor disposes of all its equity interest in an associate

Where the investor disposed of all its shareholding in an associate, then, of course, the only consolidation adjustments required are adjustment to profit on disposal and the beginning retained profit (as in the case where the parent disposes of all its shareholding in a subsidiary, discussed in Section 4.2.4 in Chapter 4).

Example 6.8

Refer to the case in Example 6.1. Assume that on 1 January 20X9, the associate, A Ltd, is disposed of for a cash consideration of \$150,000. The financial statements of P Ltd and S Ltd for 20X9 are as follows:

- (a) Balance sheets as at 31 December 20X9

	P Ltd	S Ltd
	\$'000	\$'000
Investment	60	—
Net assets	260	130
	<u>320</u>	<u>130</u>
Share capital	200	100
Retained profit	120	30
	<u>320</u>	<u>130</u>

- (b) Statements of comprehensive income for the year ended 31 December 20X9

	P Ltd	S Ltd
	\$'000	\$'000
Sales	500	120
Cost of sales	200	50
Gross profit	300	70
Gain on disposal of investment	50	—
Operating expenses	250	40
Profit before tax	100	30
Tax	30	10
Profit after tax	70	20
Other comprehensive income	—	—
Total comprehensive income	<u>70</u>	<u>20</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X9

	P Ltd	S Ltd
	\$'000	\$'000
Beginning retained profit	50	10
Profit for the year	70	20
Ending retained profit	<u>120</u>	<u>30</u>

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing the group's retained profit only) for the P Ltd group for the year 20X9.

Suggested solution

(a) Consolidation journal entries

(i)	Dr Profit on disposal of investment	35	
	Cr Beginning retained profit (P)		35
	(to adjust profit on disposal of associate)		
(ii)	Dr Share capital (S)	60	
	Cr Investment in S Ltd		60
	(to eliminate investment in subsidiary)		
(iii)	Dr Non-controlling interest (CSCI)	8	
	Cr Non-controlling interest (CBS)		8
	(to record non-controlling interest in profit of S Ltd)		
(iv)	Dr Share capital (S)	40	
	Dr Beginning retained profit (S)		4
	Cr Non-controlling interest (CBS)		44
	(to record non-controlling interest in other shareholders' equity of S Ltd)		

(b) Consolidation worksheet

	P Ltd	S Ltd	Consolidation		Consolidated balances
	\$'000	\$'000	Dr	Cr	\$'000
Sales	500	120			620
Cost of sales	200	50			250
Gross profit	300	70			370
Gain on disposal	50	—	i 35		15
Expenses	250	40			290
Profit before tax	100	30			95
Tax	30	10			40
Profit after tax	70	20			55
Non-controlling interest	—	—	iii 8		8
Profit for shareholders	—	—			47
Beginning retained profit	50	10	iv 4	i 35	91
Ending retained profit	120	30			138
Share capital	200	100	ii 60		
			iv 40		200
Non-controlling interest	—	—	iii 8		
			iv 44		52
Investment in S Ltd	60	—	ii 60		—
Net assets	260	130			390

(c) Consolidated financial statements

P Ltd and its subsidiary Consolidated statement of comprehensive income For year ended 31 December 20X9	
	\$'000
Sales	620
Cost of sales	250
Gross profit	370
Gain on disposal of associate	15
Operating expenses	290
Profit before tax	95
Tax	40
Profit after tax	55
Other comprehensive income	—
Total comprehensive income	55
Attributable to:	
Shareholders of the parent	47
Non-controlling interest	8
	55

P Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X9

	\$'000
Share capital	200
Retained profit	138
Non-controlling interest	52
	<u>390</u>
Net assets	<u>390</u>

P Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X9

	\$'000
Beginning retained profit	91
Profit for the year	47
Ending retained profit	<u>138</u>

Notes to the solution

- (a) CJE (i) is required to adjust the profit on disposal of shares in the associate. From P Ltd's viewpoint, the cost of investment is \$100,000 and therefore the profit is \$50,000. However, from the group's viewpoint (under the equity method), the carrying amount of the investment is \$135,000 (see the solution to Example 6.1; the figure may also be computed as the cost of \$100,000 + P Ltd's equity interest in the increase in net assets of A Ltd of \$35,000 [$25\% \times \$140,000$]) and the profit should be \$15,000. Therefore, a consolidation journal entry is required to reduce the profit from \$50,000 to \$15,000.
- (b) CJE (i) is also required to take up the group's share of the increase in the net assets of the associate from the date of acquisition to the date of disposal, so as to ensure that the beginning retained profit of the group for the current year is equal to the ending retained profit of the group for the previous year of \$91,000 (see solution to Example 6.1).
- (c) CJE (i) is the only extra consolidation journal entry required in a case of disposal of shares in associate, and is the same in nature as the ones discussed in Chapter 4 in relation to disposal of shares in subsidiaries.



6.7.4 An investor's equity interest in an associate is decreased but the former associate remains as an associate

In cases where an investor's equity interest in an associate is decreased but the former associate remains as an associate, there are no consolidation adjustments required, except if the associate has other comprehensive income items that have to be reclassified to profit or loss upon disposal. In that case, FRS 28 provides that the investor should reclassify to profit or loss the proportion of the gain or loss that had previously been recognized in other comprehensive income relating to that reduction in equity interest if that gain or loss would be required to be reclassified to profit or loss on the disposal of the related assets or liabilities (paragraph 25).

To illustrate the requirement of paragraph 25, assume that on 1 January 20X5, P Ltd group acquires a 40% equity interest in an associate, A Ltd, and on 1 January 20X6, P Ltd group disposes of 10% and retained 30% equity interest in A Ltd. Assume further that for the year ended 31 December 20X5, A Ltd recognizes a fair value gain of \$100 on its 'Available-for-sale' investment. In this case, P Ltd group would have recognized a 'Share of associate's other comprehensive income of \$40' as its 'Other comprehensive income' in its 20X5 Consolidated statement of comprehensive income. When P Ltd group's equity interest is decreased from 40% to 30% on 1 January 20X6, paragraph 25 of FRS 28 requires P Ltd group to recycle \$10 from its 'Beginning fair value reserve' to its 'Profit or loss' in its 20X6 consolidated financial statements.

It should be noted that the requirement of paragraph 25 of FRS 28 is also applicable in cases where the investor discontinues the use of equity method under Section 6.7.1 and Section 6.7.2 above (paragraph 22 [c]).

6.7.5 An investor's equity interest in an associate is increased but the former associate remains as an associate

In cases where an investor's equity interest in an associate is increased but the former associate remains as an associate, there are no specific consolidation adjustments required. That is probably the reason why FRS 28 does not deal with such cases.

To illustrate a case where an investor's equity interest in an associate is increased but the former associate remains as an associate, assume that in 20X2, P Ltd group acquires 30% equity interest in an associate, A Ltd. On 30 April 20X4, P Ltd group acquires additional 10% equity interest in A Ltd. In this case, for the 20X4 consolidation (assuming 31 December accounting year-end), P Ltd group will simply recognize 30% of A Ltd's profit from 1 January 20X4 to 30 April 20X4 plus 40% of A Ltd's profit from 1 May 20X4 to 31 December 20X4 as its 'Share of associate's profit' for the year 20X4. There are no other specific consolidation adjustments required in relation to this change in equity interest.

6.8 Indirect shareholding

In the discussion so far, it has been assumed that the parent holds shares in an associate directly. The parent could, of course, hold shares in an associate indirectly through a subsidiary. In fact, in providing a working definition of 'significant influence' for the purposes of identifying an associate, FRS 28 specifically states that 'an investor holds, directly or indirectly through subsidiaries, 20% or more shares' (paragraph 5). Applying the 20% rule, if A Ltd holds 80% of B Ltd and B Ltd holds 20% in C Ltd, then the A Ltd group is deemed to have an associate, C Ltd. Also, if D Ltd holds 60% of E Ltd and 70% of F Ltd, and E Ltd and F Ltd each holds 10% in G Ltd, then G Ltd will be considered an associate of the D Ltd group.

Where the shares in an associate are held by the subsidiaries, no complication arises in consolidation, except that the non-controlling interest in the subsidiaries would have a share of the earnings and net assets of the associate.

As in the case of groups with a complex structure (discussed in Chapter 5), where the dates of acquisition are different, additional consolidation problems would arise. However, the nature of the problem is the same as that discussed in Chapter 5.

Example 6.9

Y Ltd holds 80% of S Ltd, and S Ltd holds 40% of A Ltd. It acquired its 80% interest in S Ltd on 1 January 20X7, when S Ltd's retained profit was \$10,000, for a cash consideration of \$100,000.

S Ltd acquired its 40% interest in A Ltd on 31 August 20X7, when A Ltd's retained profit was reported at \$15,000, for a cash consideration of \$40,000.

All excess payments were for goodwill. The companies have adopted FRS 103 and FRS 28 since 1 January 20X7.

During the year 20X8, A Ltd sold goods to S Ltd. On 31 December 20X8, S Ltd's stock included goods invoiced by A Ltd at \$25,000 + 10%.

On 30 September 20X8, A Ltd paid an interim dividend of \$10,000 out of the current year's profits. The companies have adopted the one-tier system for dividends on 1 January 20X8.

The financial statements of the three companies are as follows:

(a) Balance sheets as at 31 December 20X8

	Y Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Investment in S Ltd	100	—	—
Investment in A Ltd	—	40	—
Amount due from A Ltd	—	50	—
Net assets	160	41	170
	<u>260</u>	<u>131</u>	<u>170</u>
Share capital	200	100	80
Retained profit	60	31	40
Amount due to S Ltd	—	—	50
	<u>260</u>	<u>131</u>	<u>170</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	Y Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Sales	300	100	200
Cost of sales	100	40	60
Gross profit	200	60	140
Dividend income	—	4	—
Operating expenses	110	44	100
Profit before tax	90	20	40
Tax	30	7	10
Profit after tax	60	13	30
Other comprehensive income	—	—	—
Total comprehensive income	<u>60</u>	<u>13</u>	<u>30</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	Y Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Beginning retained profit	20	18	20
Profit for the year	60	13	30
Dividend	20	—	10
Ending retained profit	<u>60</u>	<u>31</u>	<u>40</u>

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing the group's retained profit only) for the Y Ltd group for the year 20X8.

Solution

Note that unrealized intragroup profits and losses are dealt with using Approach 1. (See Section 6.5.)

(a) Consolidation journal entries

(i)	Dr Investment in A Ltd	12
	Cr Share of profit of associate (S) (to equity account for profit of associate)	12
(ii)	Dr Dividend income (S)	4
	Cr Investment in A Ltd	4
	(to convert from cost method to equity method for dividend)	
(iii)	Dr Share of profit of associate (S)	1
	Cr Investment in A Ltd	1
	(unrealized profit in closing stock)	
(iv)	Dr Investment in A Ltd	2
	Cr Beginning retained profit (S)	2
	(to equity account for post-acquisition reserve in beginning retained profit)	
(v)	Dr Share capital (S)	80
	Dr Beginning retained profit (S)	8
	Dr Goodwill on consolidation	12
	Cr Investment in S Ltd	100
	(to eliminate investment in subsidiary)	
(vi)	Dr Non-controlling interest (CSCI) ($20\% \times [13 + 12 - 4 - 1]$) ..	4
	Cr Non-controlling interest (CBS)	4
	(to record non-controlling interest in profit of S Ltd)	
(vii)	Dr Share capital (S)	20
	Dr Beginning retained profit (S) ($20\% \times [18 + 2]$)	4
	Cr Non-controlling interest (CBS)	24
	(to record non-controlling interest in other shareholders' equity of S Ltd)	

(b) Consolidation worksheet

	Y Ltd	S Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	300	100			400
Cost of sales	100	40			140
Gross profit	200	60			260
Dividend	—	4	ii 4		—
Expenses	110	44			154
Share of profit	—	—	iii 1	i 12	11
Profit before tax	90	20			117
Tax	30	7			37
Profit after tax	60	13			80
Non-controlling interest ...	—	—	vi 4		4
Profit for shareholders	—	—			76
Dividend	20	—			20
Beginning retained profit ...	20	18	v 8	iv 2	28
			vii 4		
Ending retained profit	60	31			84
Share capital	200	100	v 80		
			vii 20		200
Non-controlling interest ...	—	—		vi 4	28
				vii 24	
Goodwill	—	—	v 12		12
Investment in S Ltd	100	—		v 100	—
Investment in A Ltd	—	40	i 12	ii 4	
			iv 2	iii 1	49
Due from A Ltd	—	50			50
Net assets	160	41			201

(c) Consolidated financial statements

Y Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	400
Cost of sales	140
Gross profit	260
Operating expenses	154
Operating profit	106
Share of profit of associate	11
Profit before tax	117
Tax	37
Profit after tax	80
 Attributable to:	
Shareholders of the parent	76
Non-controlling interest	4
	80

Y Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	200
Retained profit	84
Non-controlling interest	28
	312
Goodwill on consolidation	12
Investment in associate	49
Amount due from associate	50
Other net assets	201
	312

Y Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	28
Profit for the year	76
Dividend	20
Ending retained profit	84
	<hr/>

Notes to the solution

- (a) Where, as in this example, the associate is held indirectly through a subsidiary, the only complication is the computation of non-controlling interest:

(i) Non-controlling interest in consolidated statement of comprehensive income

Since the associate is held by the subsidiary, non-controlling shareholders in the subsidiary would have an interest in the profit of the associate. In this example, the non-controlling interest in the consolidated statement of comprehensive income is equal to the non-controlling interest in S Ltd's profit + the non-controlling interest in S Ltd's equity interest in A Ltd's adjusted profit ($20\% \times [\$13,000 - \text{dividend income of } \$4,000] + 20\% \times 40\% \times [\$30,000 - \text{unrealized profit of } \$2,500] = \$4,000$).

(ii) Non-controlling interest in consolidated balance sheet

Since the associate is held by the subsidiary, non-controlling shareholders in the subsidiary would have an interest in the post-acquisition profit of the associate. In this example, the non-controlling interest of \$28,000 in the consolidated balance sheet is equal to the non-controlling interest in S Ltd's net assets + the non-controlling interest in S Ltd's equity interest in the post-acquisition reserves of A Ltd ($20\% \times \$131,000 + 20\% \times 40\% \times [\$40,000 - \$15,000 - \$2,500] = \$28,000$).

- (b) Whether the associate is held directly or indirectly does not affect the application of equity accounting and the presentation of the investment account and the associate's profits in the consolidated financial statements.
- (c) In the case of indirect shareholding, the subsidiary's investment in the associate must first be adjusted (applying equity method) before the parent's investment in the subsidiary is adjusted (applying full consolidation) during the consolidation process.

6.9 Associate with preference share capital

Where an associate has preference share capital, the consolidation issues arising therefrom are similar to those discussed under Section 4.3.3 of Chapter 4. FRS 28 specifically provides that if an associate has outstanding cumulative preference shares that are held by parties other than the entity, the entity should compute its share of profit

or loss after adjusting for the dividends on the preference shares, whether or not the dividends have been declared (paragraph 37).

To illustrate the requirement of paragraph 37, assume A Ltd's issued share capital consists of 10,000,000 ordinary shares and 10,000,000 cumulative preference shares. The stated dividend rate for preference shares is \$0.05 (net). A Ltd's after-tax profit for the years ended 31 December 20X7 and 20X8 are \$600,000 and \$2,000,000, respectively. In 20X7, the directors do not declare any dividend for both the preference shares and ordinary shares. In 20X8, the directors declare and pay the 20X7 and 20X8 dividends for the preference shares and \$0.10 dividend for the ordinary shares. P Ltd holds 3,000,000 of the ordinary shares (and none of the cumulative preference shares) of A Ltd.

For the year 20X7, the amount of A Ltd's profit allocated to the cumulative preference shares is based on the amount of its dividend entitlement, whether or not declared for the year. Thus, the profit for the year 20X7 will be allocated as follows: \$500,000 ($10,000,000 \times \0.05) for the preference shares, and \$100,000 ($\$600,000 - \$500,000$) for the ordinary shares. Consequently, P Ltd's share of associate's profit is \$30,000 ($30\% \times \$100,000$).

For the year 20X8, A Ltd's profit will be allocated as follows: \$500,000 for the preference shares (regardless of the fact that \$1,000,000 of dividends are actually declared for preference shares in 20X8), and \$1,500,000 ($\$2,000,000 - \$500,000$) for the ordinary shares. Consequently, P Ltd's share of associate's profit is \$450,000 ($30\% \times \$1,500,000$).

6.10 Joint venture

Accounting for joint venture is governed by FRS 111 and FRS 28.

6.10.1 Requirements of FRS 111

FRS 111 deals with 'joint arrangements'. A joint arrangement is defined as an arrangement of which two or more parties have joint control (paragraph 4), and 'joint control' is defined as the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control (paragraph 7). FRS 111 provides that, for purposes of accounting, a joint arrangement is either a 'joint operation' or a 'joint venture' (paragraph 6).

A joint operation is defined as a joint arrangement whereby the parties that have joint control of the arrangement (i.e., the joint operators) have rights to the assets, and obligations for the liabilities, relating to the arrangement (paragraph 15), and a joint venture is defined a joint arrangement whereby the parties that have joint control of the arrangement (i.e., the joint venturers) have rights to the net assets of the arrangement

(paragraph 16). For ease of reading, further discussions and illustrations on how to identify a joint operation and a joint venture are presented in Section 6.10.3.

6.10.1.1 Joint operation

For its interest in a joint operation, FRS 111 requires the joint operator to apply the relevant FRS to recognize and measure (i) its assets, including its share of any assets held jointly; (ii) its liabilities, including its share of liabilities incurred jointly; (iii) its revenue from the sale of its share of the output arising from the joint operation, and its share of the revenue from the sale of the output by the joint operation; and (iv) its expenses, including its share of any expenses incurred jointly (paragraph 20).

The joint operator accounts for its interest in a joint operation in the same manner, in its own financial statements, and in its consolidated financial statements. Thus, there is no consolidation for joint operations.

6.10.1.2 Joint venture

For its interest in a joint venture, FRS 111 requires the joint venturer to recognize it as an investment and account for that investment using the equity method in accordance with FRS 28, unless the joint venturer is exempted from applying equity accounting (paragraph 24).

In its consolidated financial statements, the joint venturer accounts for its investment in a joint venture using the equity method (in compliance with paragraph 24 stated above). However, in its financial statements, the joint venturer should account for its investment in a joint venture, in compliance with paragraph 10 of FRS 27, at cost, or in accordance with FRS 39 (paragraph 26).

Thus, in consolidation, the joint venturer has to convert its interest in joint venture from cost to equity method in accordance with the provisions of FRS 28 (as in the case of investment in associates).

6.10.2 Requirements of FRS 28

As mentioned, FRS 28 requires joint ventures (and associates) to be accounted for using equity method in the consolidated financial statements. (In fact, all the provisions of FRS 28, except for those relating to 'significant influence', are equally applicable to both investment in associate and interest in joint venture.)

Thus, preparation of consolidated financial statements for a group with joint venture is the same as that for a group with associates. All the discussions on equity method of accounting in the earlier sections of this chapter are equally applicable to this section. Preparation of consolidated financial statements for a group with joint ventures is illustrated with a simple example below.

Example 6.10

P Ltd has a 60% interest in a subsidiary, S Ltd, and a 50% interest in a joint venture, A Ltd. P Ltd acquired its 60% interest in S Ltd, when S Ltd was formed on 1 January 20X8, for a cash consideration of \$60,000. The joint venture, A Ltd, was formed in 20X5 with a cash contribution of \$100,000 each from P Ltd and its other joint venturer.

There is no transaction among P Ltd, S Ltd, and A Ltd during the year 20X8, except for a net dividend of \$140,000 paid by A Ltd out of its current year profits.

The financial statements of the three companies are as follows:

(a) Balance sheets as at 31 December 20X8

	P Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Investment in S Ltd	60	—	—
Interest in A Ltd	100	—	—
Net assets	540	110	540
	700	110	540
	—	—	—
Share capital	200	100	200
Retained profits	500	10	340
	700	110	540
	—	—	—

(b) Statements of comprehensive income for the year ended 31 December 20X8

	P Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Sales	900	100	700
Cost of sales	300	40	200
Gross profit	600	60	500
Dividend from A Ltd	70	—	—
Operating expenses	200	44	100
Profit before tax	470	16	400
Tax	170	6	120
Profit after tax	300	10	280
Other comprehensive income	—	—	—
Total comprehensive income	300	10	280
	—	—	—

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Beginning retained profit	300	—	200
Profit for the year	300	10	280
Dividend	100	—	140
Ending retained profit	<u>500</u>	<u>10</u>	<u>340</u>

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing group retained profit only) for P Ltd group for the year 20X8 (using the equity method to account for the group's interest in a joint venture).

Solution

(a) Consolidation journal entries

- (i) Dr Interest in A Ltd 140
Cr Share of profit of joint venture 140
(to equity account for joint venture's profit)
- (ii) Dr Dividend income 70
Cr Interest in A Ltd 70
(to convert from cost to equity method for dividend from joint venture)
- (iii) Dr Interest in A Ltd 100
Cr Beginning retained profit 100
(to equity account for share of joint venture's post-acquisition retained profits)
- (iv) Dr Share capital (S) 60
Cr Investment in S Ltd 60
(to eliminate investment in subsidiary)
- (v) Dr Non-controlling interest (CSCI) 4
Cr Non-controlling interest (CBS) 4
(to record non-controlling interest in profit of S Ltd)
- (vi) Dr Share capital (S) 40
Cr Non-controlling interest (CBS) 40
(to record non-controlling interest in share capital of S Ltd)

(b) Consolidation worksheet

	P Ltd	S Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	900	100			1,000
Cost of sales	300	40			340
Gross profit	600	60			660
Dividend	70	—	ii 70		—
Expenses	200	44			244
Share of profit	—	—		i 140	140
Profit before tax	470	16			556
Tax	170	6			176
Profit after tax	300	10			380
Non-controlling interest	—	—	v 4		4
Profit for group	—	—			376
Dividend	100	—			100
Beginning retained profit	300	—	iii 100		400
Ending retained profit	500	10			676
Share capital	200	100	iv 60		200
			vi 40		
Non-controlling interest	—	—	v 4		44
Investment in S Ltd	60	—	vi 40		—
Interest in A Ltd	100	—	iv 60		270
Net assets	540	110	iii 100	ii 70	650

(c) Consolidated financial statements

P Ltd Group	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	1,000
Cost of sales	340
Gross profit	660
Operating expenses	244
Share of profit of joint venture	140
Profit before tax	556
Tax	176
Profit after tax	380
Other comprehensive income	—
Total comprehensive income	380
Attributable to:	
Shareholders of the parent	376
Non-controlling interest	4
	380

P Ltd Group
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	200
Retained profit	676
Non-controlling interest	44
	<u>920</u>
Interest in joint venture	270
Other net assets	650
	<u>920</u>

P Ltd Group
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	400
Profit for the year	376
Dividend	100
Ending retained profit	<u>676</u>

Notes to the solution

- (a) Under equity accounting, the financial statements of the joint venture A Ltd are not added, line by line, to the financial statements of P Ltd and S Ltd. (Note that the financial statements of A Ltd are not included in the consolidation worksheet). Instead, the group share of A Ltd's net assets is shown in the consolidated balance sheet as 'Interest in joint venture', and the group's share of A Ltd's profit is shown in the consolidated statement of comprehensive income as 'Share of profit of joint venture'.
- (b) CJE (i) is to equity account for the joint venture's profit. This CJE is similar to that used to equity account for the associate's profit.
- (c) CJE (ii) is necessary, firstly, to record dividend received from the joint venture as a reduction to the interest in A Ltd account (as required under the equity method), and secondly, to reverse out the dividend income that P Ltd has recorded in its own books. The net effect of the CJE is to convert, from cost to equity method, for the dividend received from the joint venture.
- (d) CJE (iii) is to account for the group's share of the joint venture's beginning retained profit. This is necessary so that all the retained profits of the joint venture will be accounted for, as they should be under equity accounting, in the consolidated financial statements.

- (e) The carrying amount of interest in the joint venture account can be proved as cost plus the group's share of the retained profit (which is all post-acquisition reserve) of the joint venture. In this case, interest in the joint venture of \$270,000 as shown in the consolidated balance sheet can be proved as follows: cost of investment of \$100,000 + group's share of the post-acquisition reserve of \$170,000 ($50\% \times \$340,000$).
- (f) The amount of group ending retained profit can be proved as equal to the amount of adjusted profit retained in the parent plus the amounts of the group's share of the post-acquisition adjusted profits retained in the subsidiaries and joint ventures. In this case, the group retained profit of \$676,000 can be proved as follows: amount retained in P Ltd of \$500,000 + amount retained in S Ltd of \$6,000 ($60\% \times \$10,000$) + amount retained in A Ltd of \$170,000 ($50\% \times \$340,000$).
- (g) The amount of group profit can be proved as equal to the amount of adjusted profit retained in the parent plus the amounts of the group's share of the post-acquisition adjusted profits retained in the subsidiaries and joint ventures. In this case, the group profit of \$376,000 can be proved as follows: adjusted profit of P Ltd of \$230,000 (profit of \$300,000 – net dividend from joint venture of \$70,000) + share of S Ltd's profit of \$6,000 ($60\% \times \$10,000$) + share of A Ltd's profit of \$140,000 ($50\% \times \$280,000$).



6.10.3 Joint arrangements, joint operations, and joint ventures

A joint arrangement is defined in FRS 111 as an arrangement of which two or more parties have joint control (paragraph 4). Thus, a joint arrangement has the following characteristics (paragraph 5):

- (a) The parties are bound by a contractual arrangement; and
- (b) The contractual arrangement gives two or more of those parties joint control of the arrangement.

Joint control is defined as the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control (paragraph 7).

Thus, in assessing whether it has joint control of an arrangement, an entity should (a) first assess whether the arrangement is a joint arrangement (i.e., whether more than one party controls the arrangement) and (b) secondly whether it has joint control of the joint arrangement (i.e., whether decisions about the relevant activities require the unanimous consent of the parties that collectively control the arrangement).

The following examples will further help to determine whether an operation is a joint arrangement under FRS 111.

Example 6.11

A Ltd and B Ltd establish a business operation, ABC Ltd. Assume that ABC Ltd's purpose and design are such that power over ABC Ltd arises solely from voting rights through shareholdings proportionately. Assume also that A Ltd and B Ltd each have 50% of the voting rights of ABC Ltd, and that the contractual arrangement specifies that the majority (more than 50%) of the voting rights are required to direct the relevant activities of ABC Ltd.

In this case, A Ltd and B Ltd have joint control of ABC Ltd because decisions about the relevant activities of ABC Ltd cannot be made without the consent of both A Ltd and B Ltd.

Example 6.12

C Ltd, D Ltd, and E Ltd establish a business operation, CDE Ltd. Assume that CDE Ltd's purpose and design are such that power over CDE Ltd arises solely from voting rights through shareholdings proportionately. Assume also that C Ltd has 50% of the voting rights of CDE Ltd, D Ltd has 30%, and E Ltd has 20%, and that the contractual arrangement specifies that at least 75% of the voting rights are required to direct the relevant activities of CDE Ltd.

In this case, C Ltd and D Ltd have joint control of CDE Ltd because decisions about the relevant activities of CDE Ltd cannot be made without the consent of both C Ltd and D Ltd.

Example 6.13

L Ltd, M Ltd, and N Ltd establish a business operation, LMN Ltd. Assume that LMN Ltd's purpose and design are such that power over LMN Ltd arises solely from voting rights through shareholdings proportionately. Assume also that L Ltd has 50% of the voting rights of LMN Ltd, M Ltd, and N Ltd each have 25%, and that the contractual arrangement specifies that at least 75% of the voting rights are required to direct the relevant activities of LMN Ltd.

In this case, for LMN Ltd to be treated as a joint arrangement under FRS 111, the contractual arrangement has to specify which combination of the parties (L Ltd and M Ltd, or L Ltd and N Ltd) is required to agree unanimously to decisions about the relevant activities of LMN Ltd. (If there is no such contractual arrangement, L Ltd, M Ltd, and N Ltd will each treat LMN Ltd as an associate.)

Example 6.14

Assume a business arrangement PQR Ltd's purpose and design are such that power over PQR Ltd arises solely from voting rights through shareholdings proportionately. Assume also that P Ltd and Q Ltd each have 30% of the voting rights of PQR Ltd, and the remaining 40% being widely dispersed. The contractual arrangement specifies that majority of the voting rights are required to direct the relevant activities of PQR Ltd.

In this case, for PQR Ltd to be treated as a joint arrangement under FRS 111, the contractual arrangement has to specify that decisions to direct the relevant activities of PQR Ltd requires the consent of both P Ltd and Q Ltd. (If there is no such a contractual arrangement, both P Ltd and Q Ltd will treat PQR Ltd as an associate.)

FRS 111 provides that, for purposes of accounting, a joint arrangement is either a 'joint operation' or a 'joint venture' (paragraph 6). Thus, after having determined that it has joint control of a joint arrangement, an entity has to further determine whether the joint arrangement is a joint operation or a joint venture.

FRS 111 provides that the classification of a joint arrangement as a joint operation or a joint venture depends on the rights and obligations of the parties to the arrangement (paragraph 14). An entity should assess its rights and obligations arising from the arrangement in the context of the structure and legal form of the arrangement, the terms agreed by the parties in the contractual arrangement, and other facts and circumstances (paragraph 17). Specifically, FRS 111 provides that:

- a joint operation is a joint arrangement whereby the parties that have joint control of the arrangement (i.e., the joint operators) have rights to the assets, and obligations for the liabilities, relating to the arrangement (paragraph 15); and
- a joint venture is a joint arrangement whereby the parties that have joint control of the arrangement (i.e., the joint venturers) have rights to the net assets of the arrangement (paragraph 16).

The following examples will further help to determine whether a joint arrangement is a joint operation or a joint venture FRS 111.

Example 6.15

Scenario 1

A Ltd and B Ltd are construction companies. They establish a new entity AB Construction Company (ABCC), in which they each have 50% voting rights, to build a condominium for a housing developer.

ABCC is not a separate legal entity. The contractual arrangement provides that (i) the decisions to direct the relevant activities of ABCC must have the consent of both A Ltd and B Ltd; (ii) A Ltd and B Ltd have equal rights to all the assets of ABCC; (iii) A Ltd and B Ltd have several and joint responsibility for all the obligations arising from the operation of ABCC; and (iv) A Ltd and B Ltd will share the profit or loss of ABCC equally.

In this case, the joint arrangement is carried out through a separate vehicle whose legal form does not allow it to hold assets and incur liabilities in its own name. A Ltd and B Ltd have rights to the assets, and obligations for the liabilities, of the joint arrangement. The joint arrangement, ABCC, is therefore a joint operation.

Scenario 2

A Ltd and B Ltd are construction companies. They incorporate a new company AB Construction Ltd (ABC), in which they each have 50% voting rights, to build a condominium for a housing developer.

ABC is a separate legal entity. It holds all the assets, and incurs all the liabilities, in relation to the construction, in its own name.

The contractual arrangement provides that (i) the decisions to direct the relevant activities of ABCC must have the consent of both A Ltd and B Ltd; (ii) A Ltd and B Ltd will share the profit or loss of ABC equally; and (iii) A Ltd and B Ltd will share equally the residual after all assets are realized and all liabilities are settled when ABC is wound up upon completion of the construction of the condominium.

In this case, (i) the joint arrangement is carried out through a separate vehicle whose legal form causes the assets and liabilities of the arrangement to be in the name of the arrangement; and not in the names of the parties to the joint arrangement; (ii) the terms of the contractual arrangement do not specify that A Ltd and B Ltd have rights to the assets; and obligations for the liabilities, of the joint arrangement; instead, the terms of the contractual arrangement establish that the parties have rights to the net assets of the joint arrangement; and (iii) there are no other facts and circumstances that indicate that the parties have rights to substantially all the economic benefits of the assets, and obligation for the liabilities of the joint arrangement. The joint arrangement, ABC, is therefore a joint venture.

Example 6.16**Scenario 1**

X Ltd and Y Ltd are trading companies. They incorporate a new company MM Manufacturing Ltd (MMM), in which they each have 50% voting rights, to manufacture product ZZZ. All of the product ZZZ are sold by MMM to the ultimate consumers. MMM is a separate legal entity. It holds all the assets, and incurs all the liabilities, in relation to the manufacturing operation, in its own name.

The contractual arrangement provides that (i) the decisions to direct the relevant activities of MMM must have the consent of both X Ltd and Y Ltd; (ii) X Ltd and Y Ltd will share the profit or loss of MMM equally; and (iii) X Ltd and Y Ltd will have equal interest in the net assets of MMM; they will share equally the residual after all assets are realized and all liabilities are settled upon the eventual winding up of MMM; X Ltd and Y Ltd have no rights over the assets and have no obligations for the liabilities of MMM.

In this case, (i) the joint arrangement is carried out through a separate vehicle whose legal form causes the assets and liabilities of the arrangement to be in the name of the arrangement, and not in the names of the parties to the joint arrangement; (ii) the terms of the contractual arrangement do not specify that the parties have rights to the assets, and obligations for the liabilities, of the joint arrangement; instead, the terms of the contractual arrangement establish that the parties have rights to the net assets of the joint arrangement; and (iii) there are no other facts and circumstances that indicate that the parties have rights to substantially all the economic benefits of the assets, and obligation for the liabilities of the joint arrangement. MMM is therefore a joint venture.

Scenario 2

Assume the same facts as Scenario 1 above, except that the contractual agreement provides for all the product ZZZ manufactured by MMM to be sold through X Ltd and Y Ltd to the ultimate consumers, and X Ltd and Y Ltd have committed themselves to purchasing all the product ZZZ manufactured by MMM in equal proportions.

In this case, as in Scenario 1 above, (i) the joint arrangement is carried out through a separate vehicle whose legal form causes the assets and liabilities of the arrangement to be in the name of the arrangement, and not in the names of the parties to the joint arrangement; (ii) the terms of the contractual arrangement does not specify that the parties have rights to the assets, and obligations for the liabilities, of the joint arrangement; instead, the terms of the contractual arrangement establishes that the parties have rights to the net assets of the joint arrangement.

However, in this case, there are other facts and circumstances that should be considered. The fact that the parties of the joint arrangement have committed to purchasing all the product ZZZ manufactured by MMM has the effect of causing X Ltd and Y Ltd to have (i) rights to substantially all the economic benefits of the assets of MMM; and (ii) obligations

for the liabilities of MMM, because those liabilities will be settled through the parties' purchases. MMM is therefore a joint operation.

6.11 Summary

In this chapter, consolidation issues and problems relating to investment in associates and interests in joint ventures are discussed.

Investments in associates are to be equity accounted for in consolidated financial statements. Thus, if the investor accounts for the investment in associate at cost in its own books, consolidation adjustments should be made to convert, from cost method to equity method, the accounts that are related to the investment.

Interests in joint ventures are also to be equity accounted for in consolidated financial statements. It should be noted that the financial statements of the associate and joint ventures are not added, line by line, to the consolidated financial statements.

Problems for self-study

PROBLEM 6.1

H Ltd holds 80% of S Ltd and 40% of A Ltd. It acquired its investments in 20X1, when S Ltd's retained profit was \$100,000 and A Ltd's retained profit was \$50,000. The excess payments are for goodwill. All the companies have adopted FRS 103 and FRS 28 since 1 January 20X8. Prior to that, both the goodwill arising from acquisition of S Ltd and A Ltd were amortized over five years under FRS 22.

In 20X5, all three companies revalued their respective fixed assets for the first time. In 20X8, all three companies revalued their respective fixed assets again. The amounts of revaluation surplus were credited to the respective revaluation reserve accounts.

In December 20X7, H Ltd sold goods invoiced at \$20,000 (cost plus 100% mark-up) to A Ltd. All these goods were in the store of A Ltd as at 31 December 20X7, but were sold in January 20X8.

During the year 20X8, both S Ltd and A Ltd sold goods to H Ltd at cost plus 50%. S Ltd's sales to H Ltd was \$100,000, and A Ltd's sales to H Ltd was \$50,000. On 31 December 20X8, H Ltd's stock included goods purchased from S Ltd and A Ltd of \$60,000 and \$30,000, respectively.

All the companies have adopted the one-tier system for dividend since 1 January 20X8.
 The financial statements of the three companies are as follows:

(a) Balance sheets as at 31 December 20X8

	H Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Fixed assets	400	700	300
Investment in S Ltd	420	—	—
Investment in A Ltd	70	—	—
Net current assets	80	50	70
	<u>970</u>	<u>750</u>	<u>370</u>
Share capital	500	400	100
Revaluation reserves	100	100	50
Retained profits	370	250	220
	<u>970</u>	<u>750</u>	<u>370</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	H Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Sales	1,000	800	500
Cost of sales	400	300	200
Gross profit	600	500	300
Dividend from S Ltd	112	—	—
Dividend from A Ltd	28	—	—
Operating expenses	300	200	100
Profit before tax	440	300	200
Tax	90	100	60
Profit after tax	350	200	140
Other comprehensive income			
Revaluation surplus	60	50	30
Total comprehensive income	<u>410</u>	<u>250</u>	<u>170</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	H Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Revaluation reserve			
Beginning balance	40	50	20
Surplus for the year	60	50	30
Ending balance	<u>100</u>	<u>100</u>	<u>50</u>
Retained profits			
Beginning balance	120	190	150
Profit for the year	350	200	140
Dividend	100	140	70
Ending balance	<u>370</u>	<u>250</u>	<u>220</u>

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (partial) for H Ltd group for the year 20X8.

Solution

(a) Consolidation journal entries

(i)	Dr Investment in A Ltd	56	
	Cr Share of profit of associate		56
(to equity account for profit of associate)			
(ii)	Dr Dividend income	28	
	Cr Investment in A Ltd		28
(to convert from cost method to equity method for dividend from associate)			
(iii)	Dr Beginning retained profit (H)	4	
	Cr Share of profit of associate		4
(realization of unrealized profit in opening stock)			
(iv)	Dr Investment in A Ltd	40	
	Cr Beginning retained profit		40
(to equity account for increase in BRP of associate)			
(v)	Dr Investment in A Ltd	8	
	Cr Revaluation reserve (H)		8
(to equity account for beginning revaluation reserve of associate)			
(vi)	Dr Investment in A Ltd	12	
	Cr Share of revaluation surplus		12
(to equity account for revaluation surplus of associate)			

(vii)	Dr Share of profit of associate	4
	Cr Investment in A Ltd	4
	(unrealized profit in closing stock)	
(viii)	Dr Beginning retained profit (H)	10
	Cr Investment in A Ltd	10
	(goodwill amortization in prior years)	
(ix)	Dr Share capital (S)	320
	Dr Beginning retained profit (S)	80
	Dr Goodwill on consolidation	20
	Cr Investment in S Ltd	420
	(to eliminate investment in subsidiary)	
(x)	Dr Beginning retained profit (H)	20
	Cr Goodwill on consolidation	20
	(goodwill amortization in prior years)	
(xi)	Dr Sales	100
	Cr Cost of sales	100
	(to eliminate intragroup sales)	
(xii)	Dr Cost of sales	20
	Cr Net current assets (closing stock)	20
	(unrealized intragroup profit on closing stock)	
(xiii)	Dr Dividend income (H)	112
	Cr Dividend appropriation (S)	112
	(intragroup dividend)	
(xiv)	Dr Non-controlling interest (CSCI)	36
	Cr Non-controlling interest (CBS)	36
	(to record non-controlling interest in profit of S Ltd)	
(xv)	Dr Non-controlling interest (CBS)	28
	Cr Dividend appropriation (S)	28
	(to record non-controlling interest in dividend of S Ltd)	
(xvi)	Dr Non-controlling interest (CSCI)	10
	Cr Non-controlling interest (CBS)	10
	(to record non-controlling interest in revaluation surplus of S Ltd)	
(xvii)	Dr Share capital (S)	80
	Dr Beginning revaluation reserve (S)	10
	Dr Beginning retained profit (S)	38
	Cr Non-controlling interest	128
	(to record non-controlling interest in other shareholders' equity of S Ltd)	

(b) Consolidation worksheet

	H Ltd	S Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	1,000	800	xi 100		1,700
Cost of sales	400	300	xii 20	xi 100	620
Gross profit	600	500			1,080
Dividend (S)	112	—	xiii 112		—
Dividend (A)	28	—	ii 28		—
Expenses	300	200			500
Share of profit	—	—	vii 4	i 56 iii 4	56
Profit before tax	440	300			636
Tax	90	100			190
Profit after tax	350	200			446
Non-controlling interest	—	—	xiv 36		36
Group profit	—	—			410
Revaluation surplus	60	50			110
Non-controlling interest	—	—	xvi 10		10
Share of associate	—	—		vi 12	12
Group revaluation surplus	—	—			112
Group total income	—	—			522
Share capital	500	400	ix 320 xvii 80		500
Revaluation reserve					
Beginning	40	50	xvii 10	v 8	88
Surplus for year	60	50			112
Ending	100	100			200
Retained profits					
Beginning	120	190	iii 4 viii 10 ix 80 x 20 xvii 38	iv 40	198
Profit for the year	100	140			410
Dividend	100	140		xiii 112 xv 28	100
Ending	370	250	xv 28	xiv 36 xvi 10 xvii 128	508
Non-controlling interest	—	—			146
Goodwill	—	—	ix 20	x 20	—
Fixed assets	400	700			1,100
Investment in S Ltd	420	—		ix 420	—
Investment in A Ltd	70	—	i 56 iv 40 v 8 vi 12	ii 28 vii 4 viii 10	144
Net CA	80	50		xii 20	110

(c) Consolidated financial statements

H Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,700
Cost of sales	620
Gross profit	1,080
Operating expenses	500
Operating profit	580
Share of profit of associate	56
Profit before tax	636
Tax	190
Profit after tax	446
Other comprehensive income	
Revaluation surplus	110
Share of associate's other comprehensive income	12
Total	122
Total comprehensive income	568
Profit attributable to:	
Shareholders of the parent	410
Non-controlling interest	36
	446
Total comprehensive income attributable to:	
Shareholders of the parent	522
Non-controlling interest	46
	568

H Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	500
Revaluation reserves	200
Retained profit	508
Non-controlling interest	146
	1,354
Fixed assets	1,100
Investment in associate	144
Net current assets	110
	1,354

H Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For the year ended 31 December 20X8

	\$'000
Revaluation reserve	
Beginning balance	88
Revaluation surplus for the year	112
Ending balance	200
Retained profits	
Beginning balance	198
Profit for the year	410
Dividend	100
Ending balance	508

Notes to the solution

- (a) It may be noted that for presentation purposes, the amount of revaluation surplus shown in the consolidated statement of comprehensive income is \$110,000, which is arrived at by adding 100% of the subsidiary's revaluation surplus to that of the parent, in accordance with the full consolidation principle under FRS 110 ($\$50,000 + \$60,000 = \$110,000$). The non-controlling interest in the subsidiary's revaluation surplus is shown as a separate line item. The group's share of the associate's revaluation surplus is also shown as a separate line item. However, in the consolidated statement of changes in equity, the amount of revaluation surplus is \$112,000, which is arrived at by adding the parent's revaluation surplus of \$60,000 to the parent's share of the subsidiary's revaluation surplus of \$40,000 ($80\% \times \$50,000$) and the parent's share of the associate's fair value gain of \$12,000 ($40\% \times \$30,000$).
- (b) FRS 1 requires the group's share of the associate's after-tax profit to be presented as a separate line item in the consolidated statement of comprehensive income. In this case, the group's share of the associate's profit is \$56,000, which may be proved as the parent's share of the associate's adjusted after-tax profit ($40\% \times [\$140,000 + \$10,000 - \$10,000] = \$56,000$).
- (c) FRS 1 also requires the group's share of the associate's other comprehensive income to be presented as a separate line item in the consolidated statement of comprehensive income. In this case, the group's share of the associate's other comprehensive income is \$12,000, which may be proved as equal to the parent's 40% interest in the associate's revaluation surplus of \$30,000.
- (d) The revaluation reserve of \$200,000 in the consolidated balance sheet can be proved as follows: H Ltd's revaluation reserve of \$100,000 + group's share of S Ltd's revaluation reserve of \$80,000 ($80\% \times \$100,000$) + group's share of A Ltd's revaluation reserve of \$20,000 ($40\% \times \$50,000$). Note that in this case, all the revaluation reserves of S Ltd and A Ltd are post-acquisition reserves and are therefore treated as group's revaluation reserves.

- (e) The investment in associate of \$144,000 can be proved as follows: cost of investment of \$70,000 + group's share of the post-acquisition profit of \$64,000 ($40\% \times [\$220,000 - \text{pre-acquisition reserve of } \$50,000 - \text{unrealized profit of } \$10,000]$) + share of post-acquisition revaluation reserve of \$20,000 ($40\% \times \$50,000$) – goodwill amortization of \$10,000. The figure of \$144,000 can also be proved as equal to the group's equity interest in the associate's net assets of \$148,000 ($40\% \times \$370,000$) – unrealized profits of \$4,000 ($40\% \times \$10,000$) + goodwill of \$10,000 ($\$70,000 - [40\% \times \$150,000]$) – goodwill amortization of \$10,000.
- (f) The group profit of \$410,000 can be proved as follows: Parent's adjusted profit of \$210,000 ($\$350,000 - \text{dividend from subsidiary of } \$112,000 - \text{dividend from associate of } \$28,000$) + group's share of subsidiary company's adjusted profit of \$144,000 ($80\% \times [\$200,000 - \$20,000]$) + group's equity interest in the associate's adjusted profit of \$56,000 ($40\% \times [\$140,000 + \$10,000 - \$10,000]$).
- (g) The group retained profit of \$508,000 can be proved as follows:

	\$'000
H Ltd: 370 – goodwill amortization of 30	340
S Ltd: 80% × (250 – pre-acquisition profit of 100 – unrealized profit of 20)	104
A Ltd: 40% × (220 – pre-acquisition profit of 50 – unrealized profit of 10)	64
Total	<u>508</u>

PROBLEM 6.2

A Ltd incorporates a wholly owned subsidiary, B Ltd, on 1 January 20X4 with a paid-up capital of \$100,000.

On 31 August 20X8, A Ltd acquired a 40% interest in C Ltd for a cash consideration of \$70,000, with an intention of disposal in early 20X9 to take advantage of the expected increase in the market price. A Ltd has been actively seeking a buyer for its shareholding in C Ltd. Investment in C Ltd is classified as 'held for sale' under FRS 105. At 31 December 20X8, the fair value less costs to sell of the investment is \$100,000.

A Ltd acquired 50% interest in D Ltd on 30 June 20X6, when D Ltd was formed, for a cash consideration of \$50,000. D Ltd has been accounted for as an associate. On 1 July 20X8, A Ltd sold 40,000 shares in D Ltd for a cash consideration of \$45,000. (It may be assumed that D Ltd's revenue and expenses accrued evenly through the year.) Upon the disposal of shares, A Ltd ceases to have significant influence over D Ltd. The investment in D Ltd was to be reclassified as 'available for sale' (AFS) investments under FRS 39. The market value of the investment was \$11,000 on 1 July 20X8 and \$15,000 on 31 December 20X8.

The share capital of A Ltd comprises 200,000 shares, whereas the share capital of B Ltd, C Ltd, and D Ltd each comprises 100,000 shares.

There is no other transaction among the companies. The financial statements of the companies are as follows:

(a) Balance sheets as at 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Ltd
	\$'000	\$'000	\$'000	\$'000
Investment in B Ltd	100	—	—	—
Investment in C Ltd	70	—	—	—
Investment in D Ltd	15	—	—	—
Net assets	70	130	120	130
	255	130	120	130
Share capital	200	100	100	100
AFS reserve	5	—	—	—
Retained profits	50	30	20	30
	255	130	120	130

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Ltd
	\$'000	\$'000	\$'000	\$'000
Sales	100	50	30	50
Cost of sales	40	10	10	20
Gross profit	60	40	20	30
Gain on sale of D Ltd shares	5	—	—	—
Operating expenses	20	20	10	6
Profit before tax	45	20	10	24
Tax	12	6	3	4
Profit after tax	33	14	7	20
Other comprehensive income				
Fair value gain	5	—	—	—
Total comprehensive income	38	14	7	20

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000	D Ltd \$'000
AFS reserve				
Beginning balance	—	—	—	—
Gain for the year	5	—	—	—
Ending balance	5	—	—	—
Retained profit				
Beginning balance	30	16	13	10
Profit for the year	33	14	7	20
Dividend	13	—	—	—
Ending balance	50	30	20	30

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing the group retained profit only) for A Ltd group for the year 20X8.

Solution

(a) Consolidation journal entries

- (i) Dr Investment in D Ltd 5
 Cr Beginning retained profit (A) ($50\% \times 10$) 5
 (to equity account for post-acquisition profit in the BRP of associate)
- (ii) Dr Investment in D Ltd 5
 Cr Share of profit of associate 5
 (to equity account for associate's profit)
- (iii) Dr Profit on sale of shares 5
 Dr Loss on sale of share 3
 Cr Investment in D Ltd 8
 (to adjust profit on sale of shares)
- (iv) Dr Loss on sale of shares 1
 Cr Investment in D Ltd 1
 (re-measurement loss on remaining shares)

(v)	Dr Investment in D Ltd	4	
	Cr AFS reserve		4
	(to mark to market at group level)		
(vi)	Dr AFS reserve	5	
	Cr Investment in D Ltd		5
	(to reverse out mark-to-market gain at company level)		
(vii)	Dr Share capital (B)	100	
	Cr Investment in B Ltd		100
	(to eliminate investment in subsidiary)		

(b) Consolidation worksheet

	A Ltd	B Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	100	50			150
Cost of sales	40	10			50
Gross profit	60	40			100
Profit on shares	5	—	iii 5		—
Loss on shares	—	—	iii 3		
			iv 1		4
Expenses	20	20			40
Share of profit	—	—		ii 5	5
Profit before tax	45	20			61
Tax	12	6			18
Profit after tax	33	14			43
Dividend	13	—			13
AFS gain	5	—	vi 5	v 4	4
Beginning retained profit	30	16		i 5	51
Ending retained profit	50	30			81
Share capital	200	100	vii 100		200
AFS reserve	5	—			4
Investment in B Ltd.	100	—		vii 100	—
Investment in C Ltd.	70	—			70
Investment in D Ltd.	15	—	i 5	iii 8	
			ii 5	iv 1	
			v 4	vi 5	15
Net assets	70	130			200

(c) Consolidated financial statements

A Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	150
Cost of sales	50
	<u> </u>
Gross profit	100
Operating expenses	40
Loss on sale of shares	4
Share of profit of associate	5
	<u> </u>
Profit before tax	61
Tax	18
	<u> </u>
Profit after tax	43
Other comprehensive income	
Fair value gain	4
	<u> </u>
Total comprehensive income	<u>47</u>
	<u> </u>
Profit after tax attributable to:	
Shareholders of the parent	43
Non-controlling interest	—
	<u> </u>
	43
Total comprehensive income attributable to:	
Shareholders of the parent	47
Non-controlling interest	—
	<u> </u>
	47
	<u> </u>

A Ltd and its subsidiary	
Consolidated balance sheet	
As at 31 December 20X8	
	\$'000
Share capital	200
AFS reserve	4
Retained profit	81
	<u> </u>
	285
Held for sale investment	70
AFS investment	15
Other net assets	200
	<u> </u>
	285
	<u> </u>

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
AFS reserve	
Beginning balance	-
Gain for the year	4
Ending balance	<u>4</u>
Retained profit	
Beginning balance	51
Profit for the year	43
Dividend	<u>13</u>
Ending balance	<u>81</u>

Notes to the solution

- (a) C Ltd is classified as 'held for sale' in accordance with FRS 105. It is to be carried at cost (given that it is lower than fair value less costs to sell), and presented separately in the consolidated balance sheet. C Ltd will not be equity accounted for.
- (b) CJE (i) is to recognize the group's share of the increase in the post-acquisition beginning retained profit of D Ltd up to 31 December 20X7, which is equal to \$5,000 ($50\% \times \$10,000$). This CJE is also necessary so as to ensure that the group beginning retained profit for 20X8 is the same as the group ending retained profit for 20X7.
- (c) CJE (ii) is to equity account for the group's share of the profit of D Ltd up to the date of disposal when the group ceased to have significant influence. Before 1 July 20X8, A Ltd has significant influence over D Ltd and should therefore use the equity method to account for its share of D Ltd's profit up to that date. The group share of D Ltd profit for the first six months is \$5,000 ($50\% \times \$20,000 \times 6/12$).
- (d) CJE (iii) is to adjust for the profit on sale of the 40,000 shares in D Ltd. The sale proceeds is \$45,000. From A Ltd's viewpoint (accounted for at cost), the cost of the 40,000 shares is \$40,000 ($4/5 \times \$50,000$) and thus, the profit arising from the sales is \$5,000. However, from the group's viewpoint (under the equity method), the carrying amount of the 40,000 shares is \$48,000 ($4/5 \times [\$50,000 + \$5,000 + \$5,000]$ see Note [b] above), and thus, there is a loss of \$3,000 from the sales of shares.
- (e) After the disposal of 40,000 shares, the status of D Ltd has changed from an associate to a mere investee. In accordance with the requirement of the amended paragraph 18 of FRS 28, the remaining shareholding should be re-measured to its fair value on the day of loss of significant influence, and the gain/loss arising therefrom should be treated

as part of the gain/loss on disposal of the associate. In this case, the carrying amount of the 50,000 shares in D Ltd at the date of loss of significant influence was \$60,000 (cost of \$50,000 plus share of post-acquisition reserve of \$10,000). Thus, the carrying amount of the remaining 10,000 shares in D Ltd at that date was \$12,000 ($1/5 \times \$60,000$). As required by paragraph 22(b), these remaining 10,000 shares in D Ltd are re-measured to the fair value of \$11,000, giving rise to a loss of \$1,000. This is done through CJE (iv).

- (f) The loss on disposal of shares in D Ltd is therefore \$4,000 (loss on sale of 40,000 shares of \$3,000 + re-measurement loss on the remaining 10,000 shares of \$1,000) The loss of \$4,000 may also be proved as follows:

	\$'000
Sale proceeds	45
Fair value of remaining shares	<u>11</u>
Total	56
Net assets of associate disposed of ($50\% \times [100 + 10 + 10]$)	<u>60</u>
Loss on disposal	<u>4</u>

- (g) Since the remaining 10,000 shares are to be classified as available for sale investment under FRS 39, they are marked to market value of \$15,000 at 31 December 20X8. The fair value was \$11,000 on 1 July 20X8 at group level. Thus, the mark-to-market gain is \$4,000 at group level. This mark-to-market gain on AFS securities is recognized as 'other comprehensive income' and ultimately taken directly to the AFS reserve. This is done through CJE (v).
- (h) CJE (vi) is to reverse out the mark-to-market exercise done by A Ltd, to avoid double-counting. (The mark-to-market at group level has been done through CJE [v].) From A Ltd's viewpoint, the cost of the investment in D Ltd is \$10,000, and therefore the mark-to-market gain is \$5,000. All the \$5,000 is reversed out through CJE (vi).
- (i) In the consolidation for all subsequent periods, CJE (i) through (iv) may be combined as Dr Beginning AFS reserve \$1,000; Cr Beginning retained profit \$1,000. This is to adjust for the re-measurement loss of \$1,000 on the 10,000 shares in D Ltd at the date of loss of significant influence, which was recognized by the parent as part of the AFS reserve, but should be treated as part of gain/loss on disposal from the group viewpoint (as required by paragraph 22(b) of FRS 28).

PROBLEM 6.3

The 20X8 financial statements of four companies in a group are as follows:

- (a) Statements of comprehensive income for the year ended 31 December 20X8

	P Ltd	S Ltd	T Ltd	A Ltd
	\$'000	\$'000	\$'000	\$'000
Sales	600	500	400	800
Cost of sales	200	250	150	300
Gross profit	400	250	250	500
Dividend income	112	56	—	—
Operating expenses	200	100	50	200
Profit before tax	312	206	200	300
Tax	92	56	70	100
Profit after tax	220	150	130	200
Other comprehensive income	—	—	—	—
Total comprehensive income	220	150	130	200

- (b) Balance sheets as at 31 December 20X8

	P Ltd	S Ltd	T Ltd	A Ltd
	\$'000	\$'000	\$'000	\$'000
Ordinary share capital	600	300	300	100
Retained profit	310	208	120	490
Inter-company payables	20	10	—	5
Liabilities	445	382	190	105
	1,375	900	610	700
Investment in S Ltd	320	—	—	—
Investment in A Ltd	150	—	—	—
Investment in T Ltd	—	280	—	—
Inter-company receivables	5	20	10	—
Other assets	900	600	600	700
	1,375	900	610	700

- (c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd	T Ltd	A Ltd
	\$'000	\$'000	\$'000	\$'000
Beginning retained profit	210	170	60	360
Profit for the year	220	150	130	200
Dividend proposed	120	112	70	70
Ending retained profit	310	208	120	490

P Ltd acquired 75% of S Ltd in January 20X5, when S Ltd's retained profit was \$100,000. S Ltd acquired 80% of T Ltd in March 20X5, when T Ltd's retained profit was \$50,000. P Ltd acquired 40% of A Ltd in August 20X5, when A Ltd's retained profit was \$200,000.

The companies adopted FRS 103 on 1 January 20X8. Prior to that, the companies adopted a policy under which goodwill arising from the acquisition of subsidiaries was amortized over five years on a straight-line basis, commencing in the year of the acquisition (the goodwill implicit in the acquisition of the associate was not subject to amortization). There is no impairment for 20X8.

The group started to sell to each other in 20X8 at cost plus 30%. During the year 20X8, T Ltd sold \$50,000 worth of goods to S Ltd and S Ltd sold \$80,000 worth of goods to P Ltd. As at 31 December 20X8, the unrealized profit in the stock of S Ltd was \$10,000 and that in the stock of P Ltd was \$30,000. During the year 20X8, P Ltd sold \$300,000 worth of goods to A Ltd. As at 31 December 20X8, the unrealized profit in the stock of A Ltd was \$5,000. Arising from these intragroup transactions, there are inter-company account balances as shown in the balance sheets above.

All the dividends were paid out of the current year's profits. The companies have adopted the one-tier system for dividends since 1 January 20X8.

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet and the consolidated statement of changes in equity (showing the group's retained profit only) for P Ltd and its subsidiaries for the year 20X8.

Solution:

(a) Consolidation journal entries

S Ltd + T Ltd

(i)	Dr Ordinary share capital (T) (80% × 300)	240
	Dr Beginning retained profit (T) (80% × 50)	40
	Cr Investment in T Ltd	280
	(to eliminate investment account)	
(ii)	Dr Inter-company payable (S)	10
	Cr Inter-company receivable (T)	10
	(to eliminate intragroup balances)	
(iii)	Dr Sales	50
	Cr Cost of sales	50
	(to eliminate intragroup sales)	
(iv)	Dr Cost of sales (T)	10
	Cr Other assets	10
	(to eliminate unrealized profit in closing stock)	
(v)	Dr Dividend income (S)	56
	Cr Dividend proposed (T) (80% × 70)	56
	(to eliminate intragroup dividends)	

(vi)	Dr Beginning retained profit (T) ($80\% \times [60 - 50]$)	8	
	Cr Beginning retained profit (S)	8	
	(to transfer post-acquisition beginning retained profit)		
(vii)	Dr Profit after tax (T) ($80\% \times [130 - 10]$)	96	
	Cr Profit after tax (S)	96	
	(to transfer post-acquisition profit after tax)		
(viii)	Dr Non-controlling interest (CSCI) ($20\% \times [130 - 10]$)	24	
	Cr Non-controlling interest (CBS)	24	
	(to record non-controlling interest in profit)		
(ix)	Dr Non-controlling interest (CBS)	14	
	Cr Dividend proposed (T)	14	
	(to record non-controlling interest in dividend)		
(x)	Dr Ordinary share capital (T) ($20\% \times 300$)	60	
	Dr Beginning retained profit (T) ($20\% \times 60$)	12	
	Cr Non-controlling interest (CBS)	72	
	(to record non-controlling interest in T Ltd's other shareholders' equity)		

P Ltd + (S Ltd + T Ltd)

(xi)	Dr Ordinary share capital (S) ($75\% \times 300$)	225	
	Dr Beginning retained profit (S) ($75\% \times 100$)	75	
	Dr Goodwill on consolidation	20	
	Cr Investment in S Ltd	320	
	(to eliminate investment account)		
(xii)	Dr Beginning retained profit (P)	12	
	Cr Goodwill on consolidation	12	
	(to record goodwill amortization in previous years)		
(xiii)	Dr Inter-company payable (P)	20	
	Cr Inter-company receivable (S)	20	
	(to eliminate intragroup balances)		
(xiv)	Dr Sales	80	
	Cr Cost of sales	80	
	(to eliminate intragroup sales)		
(xv)	Dr Cost of sales (S)	30	
	Cr Other assets	30	
	(to eliminate unrealized profit in closing stock)		

(xvi)	Dr Dividend income (P)	84
	Cr Dividend proposed (S) ($75\% \times 112$)	84
	(to eliminate intragroup dividends)	
(xvii)	Dr Beginning retained profit (S)	58.5
	Cr Beginning retained profit (P)	58.5
	(to transfer post-acquisition beginning retained profit [$75\% \times (170 - 100 + 8)$])	
(xviii)	Dr Profit after tax (S)	120
	Cr Profit after tax (P)	120
	(to transfer post-acquisition profit after tax [$75\% \times (150 - 30 - 56 + 96)$])	
(xix)	Dr Non-controlling interest (CSCI)	40
	Cr Non-controlling interest (CBS)	40
	(to record non-controlling interest in profit [$25\% \times (150 - 30 - 56 + 96)$])	
(xx)	Dr Non-controlling interest (CBS) ($25\% \times 112$)	28
	Cr Dividend proposed (S)	28
	(to record non-controlling interest in dividend)	
(xxi)	Dr Ordinary share capital (S) ($25\% \times 300$)	75
	Dr Beginning retained profit (S) ($25\% \times [170 + 8]$)	44.5
	Cr Non-controlling interest (CBS)	119.5
	(to record non-controlling interest in S Ltd's other shareholders' equity)	

P Ltd + A Ltd

(xxii)	Dr Investment in A Ltd	80
	Cr Share of profit of associate	80
	(to equity account for profit of associate)	
(xxiii)	Dr Dividend income (P)	28
	Cr Investment in A Ltd	28
	(to convert from cost method to equity method for dividend from associate)	
(xxiv)	Dr Share of profit of associate	2
	Cr Investment in A Ltd	2
	(to adjust for unrealized profit in stock)	
(xxv)	Dr Investment in A Ltd	64
	Cr Beginning retained profit	64
	(to equity account for the post-acquisition reserves in BRP of associate [$40\% \times (\$360,000 - \$200,000)$])	

(b) Consolidation worksheet

	A Ltd	B Ltd	C Ltd	Consolidation		Consolidated balances
				Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	600	500	400	iii 50 xiv 80		1,370
Cost of sales	200	250	150	iv 10 xv 30	iii 50 xiv 80	510
Gross profit	400	250	250			860
Dividend	112	56	—	v 56 xvi 84 xxii 28		—
Operating expenses	200	100	50			350
Share of profit	—	—	—	xxiv 2	xviii 80	78
Profit before tax	312	206	200			588
Tax	92	56	70			218
Profit after tax	220	150	130			370
Non-controlling interest	—	—	—	viii 24 xix 40		138 64
Profit for shareholders	—	—	—			306
Beginning retained profit	210	170	60	i 40 x 12 xi 75 xii 12 xxi 44.5	xxv 64	320.5
Dividend appropriation	120	112	70		v 56 ix 14 xvi 84 xx 28	120
Ending retained profit	310	208	120	xi 20	xii 12	506.5
Goodwill	—	—	—		xi 320	8
Investment in S Ltd	320	—	—			—
Investment in A Ltd	150	—	—	xxii 80 xxv 64	xxiii 28 xxiv 2	264
Investment in T Ltd	—	280	—		i 280	—
Intragroup receivables	5	20	10		ii 10 xiii 20	5
Other assets	900	600	600		iv 10 xv 30	2,060
Share capital	600	300	300	i 240 x 60 xi 225 xxi 75		600
Ending retained profit	310	208	120	ii 10 xii 20		506.5
Intragroup payables	20	10	—			—
Other liabilities	445	382	190	ix 14 xx 28	viii 24 x 72 xix 40 xxi 119.5	1,017
Non-controlling interest	—	—	—			213.5

(c) Consolidated financial statements

P Ltd and its subsidiaries
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	1,370
Cost of sales	510
<hr/>	
Gross profit	860
Operating expenses	350
<hr/>	
Operating profit	510
Share of profit of associate	78
<hr/>	
Profit before tax	588
Tax	218
<hr/>	
Profit after tax	370
Other comprehensive income	—
<hr/>	
Total comprehensive income	370
<hr/>	
Attributable to:	
Shareholders of the parent	306
Non-controlling interest	64
<hr/>	
	370
<hr/>	

P Ltd and its subsidiaries
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Goodwill on consolidation	8
Investment in associate	264
Amount due from associate	5
Other assets	2,060
<hr/>	
	2,337
<hr/>	
Ordinary share capital	600
Retained profit	506.5
Non-controlling interest	213.5
Other liabilities	1,017
<hr/>	
	2,337
<hr/>	

P Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	320.5
Profit for the year	306
Dividend proposed	120
Ending retained profit	506.5

Notes to the solution

- (a) This is a case involving a parent (P Ltd), a subsidiary (S Ltd), a sub-subsidiary (T Ltd), and an associate (A Ltd). The consolidation adjustments for the subsidiary and sub-subsidiary follow those discussed in Chapter 5 (in this example, the consolidation of consolidation method is used; the indirect interest method could also be used). The consolidation adjustments for the associate follow those discussed in this chapter.
- (b) The group's profit of \$306,000 can be proved as follows:

	\$'000
Adjusted after-tax profit of the parent, P Ltd 220 – 112	108
Add group's share of the adjusted after-tax profit of S Ltd 75% × (150 – 30 – 56)	48
Add group's share of the adjusted after-tax profits of T Ltd (75% × 80%) × (130 – 10)	72
Add group's share of the adjusted after-tax profits of A Ltd 40% × (200 – 5)	78
Total	306

(The figures '112' and '56' are intragroup dividends.)

- (c) The group's retained profit of \$506,500 can be proved as follows:

	\$'000
Retained profit of the parent, P Ltd	310
Add group's share of the post-acquisition retained profit of S Ltd 75% × (208 – 30 – 100)	58.5
Add group's share of the post-acquisition retained profit of T Ltd (75% × 80%) × (120 – 10 – 50)	36
Add group's share of the post-acquisition retained profit of A Ltd 40% × (490 – 200 – 5)	114
Less goodwill amortization under FRS 22	12
Total	506.5

(Intragroup dividends need not be adjusted for in the proof for the group's retained profit as they are self-eliminated at this level.)

- (d) The non-controlling interest in the consolidated statement of comprehensive income of \$64,000 can be proved as follows:

	\$'000
Non-controlling interest in S Ltd's adjusted after-tax profit 25% × (150 – 30 – 56)	16
Non-controlling interest in T Ltd's adjusted after-tax profit (20% + 25% × 80%) × (130 – 10)	48
Total	<u>64</u>

- (e) The non-controlling interest in the consolidated balance sheet of \$213,500 can be proved as follows:

	\$'000
Non-controlling interest in S Ltd 25% × (300 + 208 – 30)	119.5
Non-controlling interest in T Ltd Direct: 20% × (300 + 120 – 10)	82
Indirect: 25% × 80% × (120 – 10 – 50)	12
Total	<u>213.5</u>

Note that the non-controlling shareholders' direct interest is calculated based on the net assets of the subsidiary, while their indirect interest is calculated based on the post-acquisition reserves of the subsidiary (this is because only the post-acquisition reserve is transferred from the sub-subsidiary to the subsidiary and for which the non-controlling interest has an indirect interest).

- (f) The investment in the associate of \$264,000 can be proved as follows: cost of investment of \$150,000 + group's share of post-acquisition reserves of A Ltd of \$114,000 ($40\% \times [\$490,000 - \$200,000 - \$5,000]$). The figure of \$264,000 can also be proved as being equal to the group's equity interest in the associate's net assets of \$236,000 ($40\% \times \$590,000$) – unrealized profits of \$2,000 ($40\% \times \$5,000$) + goodwill of \$30,000 ($\$150,000 - 40\% \times [\$100,000 + \$200,000]$).
- (g) Note that while intragroup amounts due to or from the subsidiary and the sub-subsidiary are eliminated, the amount due from the associate is not eliminated. Note also that inter-company sale of goods between parent and subsidiary is eliminated, while the inter-company sale between parent and associate is not eliminated.

PROBLEM 6.4

P Ltd acquired a 90% interest in S Ltd, when S Ltd was incorporated with 100,000 shares on 1 January 20X5. S Ltd acquired 30% interest in T Ltd, when T Ltd was incorporated with 100,000 shares on 1 January 20X6, for a cash consideration of \$30,000. On 1 January 20X8, when the shares of T Ltd were traded at \$1.50 per share, S Ltd acquired an additional 30% interest in T Ltd (i.e., 50,000 shares) for a cash consideration of \$45,000.

There is no transaction among the three companies. All the companies have adopted FRS 103 since 1 January 20X8. There has been no impairment of goodwill. The financial statements of the three companies for 20X7 are as follows:

(a) Balance sheets as at 31 December 20X7

	P Ltd	S Ltd	T Ltd
	\$'000	\$'000	\$'000
Investment in S Ltd	90	—	—
Investment in T Ltd	—	30	—
Other net assets	160	90	130
	<u>250</u>	<u>120</u>	<u>130</u>
Share capital	200	100	100
Retained profits	50	20	30
	<u>250</u>	<u>120</u>	<u>130</u>

(b) Statements of comprehensive income for the year ended 31 December 20X7

	P Ltd	S Ltd	T Ltd
	\$'000	\$'000	\$'000
Sales	300	100	150
Cost of sales	100	60	50
Gross profit	200	40	100
Operating expenses	150	25	70
Profit before tax	50	15	30
Tax	20	5	10
Profit after tax	30	10	20
Other comprehensive income	—	—	—
Total comprehensive income	<u>30</u>	<u>10</u>	<u>20</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X7

	P Ltd	S Ltd	T Ltd
	\$'000	\$'000	\$'000
Beginning retained profit	20	10	10
Profit for the year	30	10	20
Ending retained profit	<u>50</u>	<u>20</u>	<u>30</u>

The financial statements of the three companies for 20X8 are as follows:

(a) Balance sheets as at 31 December 20X8

	P Ltd	S Ltd	T Ltd
	\$'000	\$'000	\$'000
Investment in S Ltd	90	—	—
Investment in T Ltd	—	75	—
Other net assets	190	55	150
	<u>280</u>	<u>130</u>	<u>150</u>
Share capital	200	100	100
Retained profits	80	30	50
	<u>280</u>	<u>130</u>	<u>150</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	P Ltd	S Ltd	T Ltd
	\$'000	\$'000	\$'000
Sales	300	100	200
Cost of sales	100	40	100
Gross profit	200	60	100
Operating expenses	120	44	70
Profit before tax	80	16	30
Tax	30	6	10
Profit after tax	50	10	20
Other comprehensive income	—	—	—
Total comprehensive income	<u>50</u>	<u>10</u>	<u>20</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd	T Ltd
	\$'000	\$'000	\$'000
Beginning retained profit	50	20	30
Profit for the year	50	10	20
Dividend	20	—	—
Ending retained profit	80	30	50

Required

Prepare the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity (showing the group retained profit only) for P Ltd group for the years 20X7 and 20X8.

Solution**For 20X7**

(a) Consolidation journal entries

(i)	Dr Investment in T Ltd	6
	Cr Share of profit	6
	(share of profit of associate)	
(ii)	Dr Investment in T Ltd	3
	Cr Beginning retained profit	3
	(to equity account for post-acquisition profit in the BRP of associate)	
(iii)	Dr Share capital (S)	90
	Cr Investment in S Ltd	90
	(to eliminate investment account)	
(iv)	Dr Non-controlling interest (CSCI)	1.6
	Cr Non-controlling interest (CBS)	1.6
	(to record non-controlling interest in profit)	
	($10\% \times [10 + 6]$)	
(v)	Dr Share capital (S)	10
	Dr Beginning retained profit ($10\% \times [10 + 3]$)	1.3
	Cr Non-controlling interest	11.3
	(to record non-controlling interest in other shareholders' equity)	

(b) Consolidation worksheet

	P Ltd	S Ltd	Consolidation		Consolidated balances
	\$'000	\$'000	Dr	Cr	\$'000
Sales	300	100			400
Cost of goods sold	100	60			160
Gross profit	200	40			240
Expenses	150	25			175
Operating profit	50	15			65
Share of associate	—	—		i 6	6
Profit before tax	50	15			71
Tax	20	5			25
Profit after tax	30	10			46
Non-controlling interest ...	—	—	iv 1.6		1.6
Group profit	—	—			44.4
Beginning retained profit ...	20	10	v 1.3	ii 3	31.7
Ending retained profit	50	20			76.1
Share capital	200	100	iii 90 v 10		200
Non-controlling interest ...	—	—	iv 1.6 v 11.3		12.9
Investment in S Ltd	90	—	iii 90		—
Investment in T Ltd	30	—	i 6 ii 3		39
Net assets	160	90			250

(c) Consolidated financial statements

P Ltd and its subsidiaries
Consolidated statement of comprehensive income
For year ended 31 December 20X7

	\$'000
Sales	400
Cost of sales	160
Gross profit	240
Operating expenses	175
Share of associate's profit	6
Profit before tax	71
Tax	25
Profit after tax	46
Other comprehensive income	—
Total comprehensive income	46
 Attributable to:	
Shareholders of the parent	44.4
Non-controlling interest	1.6
	46.0

P Ltd and its subsidiaries
Consolidated balance sheet
As at 31 December 20X7

	\$'000
Share capital	200
Retained profit	76.1
Non-controlling interest	12.9
	289
Investment in associate	39
Other net assets	250
	289

P Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X7

	\$'000
Beginning retained profit	31.7
Profit for the year	44.4
Ending retained profit	76.1

Notes to the 20X7 solution

- (a) In this case, the associate is held by the subsidiary. Thus, non-controlling interest has an interest in the associate's current-year profit and the associate's post acquisition profit in its beginning retained profits, which are accounted for in CJE (iv) and (v), respectively.

For 20X8

- (a) Consolidation journal entries

(i)	Dr Investment in T Ltd	9	
	Cr Beginning retained profit (S)	9	
	(to equity account when T Ltd was an associate)		
(ii)	Dr Investment in T Ltd	6	
	Cr Gain on deemed disposal (S)	6	
	(to account for assumed disposal and re-purchase)		

(iii)	Dr Share capital (T) ($60\% \times 100$)	60
	Dr Beginning retained profit (T) ($60\% \times 30$)	18
	Dr Goodwill on consolidation	12
	Cr Investment in T Ltd	90
	(to eliminate investment account)	
(iv)	Dr Non-controlling interest (CSCI)	8
	Cr Non-controlling interest (CBS)	8
	(to record non-controlling interest in profit of T Ltd)	
(v)	Dr Share capital (T)	40
	Dr Beginning retained profit (T)	12
	Cr Non-controlling interest	52
	(to record non-controlling interest in T Ltd's other shareholders' equity)	
(vi)	Dr Share capital (S)	90
	Cr Investment in S Ltd	90
	(to eliminate investment account)	
(vii)	Dr Non-controlling interest (CPL)	2.8
	Cr Non-controlling interest (CBS)	2.8
	(to record non-controlling interest in profit of S Ltd)	
	($10\% \times [10 + 12 + 6]$)	
(viii)	Dr Share capital	10
	Dr Beginning retained profit ($10\% \times [20 + 9]$)	2.9
	Cr Non-controlling interest	12.9
	(to record non-controlling interest in S Ltd's other shareholders' equity)	

(b) Consolidation worksheet

	P Ltd	S Ltd	T Ltd	Consolidation		Consolidated balances
	\$'000	\$'000	\$'000	Dr \$'000	Cr \$'000	\$'000
Sales	300	100	200			600
Cost of goods sold	100	40	100			240
Gross profit	200	60	100			360
Gain on disposal	—	—	—		ii 6	6
Expenses	120	44	70			234
Profit before tax	80	16	30			132
Tax	30	6	10			46
Profit after tax	50	10	20			86
Non-controlling interest ...	—	—	—	iv 8		
				vii 2.8		10.8
Group profit	—	—	—			75.2
Dividend	20	—	—			20
Profit retained	30	10	20			55.2
Beginning retained profit ...	50	20	30	iii 18	i 9	
				v 12		
				viii 2.9		76.1
Ending retained profit	80	30	50			131.3
Share capital	200	100	100	iii 60		
				v 40		
				vi 90		200
				viii 10		
Non-controlling interest ...	—	—	—	iv 8		
				v 52		
				vii 2.8		
				viii 12.9		75.7
Investment in S Ltd	90	—	—		vi 90	—
Investment in T Ltd	—	75	—	i 9	iii 90	
				ii 6		
Net assets	190	55	150	iii 12		395
Goodwill	—	—	—			12

(c) Consolidated financial statements

P Ltd and its subsidiaries
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	600
Cost of sales	240
Gross profit	360
Profit on assumed disposal and re-purchase	6
Operating expenses	234
Profit before tax	132
Tax	46
Profit after tax	86
Other comprehensive income	—
Total comprehensive income	<u>86</u>
Attributable to:	
Shareholders of the parent	75.2
Non-controlling interest	10.8
	<u>86</u>

P Ltd and its subsidiaries
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	200
Retained profit	131.3
Non-controlling interest	75.7
	<u>407</u>
Goodwill on consolidation	12
Other net assets	395
	<u>407</u>

P Ltd and its subsidiaries
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	76.1
Profit for the year	75.2
Dividend	20.0
Ending retained profit	131.3

Notes to the 20X8 solution

- (b) This case, where the investor acquires additional shares in an associate such that the associate becomes a subsidiary, is a case of 'step acquisition'.
- (c) CJE (i) is to equity account for the P Ltd's share of post-acquisition profit of T Ltd from the day T Ltd became an associate to the date T Ltd became a subsidiary.
- (d) CJE (ii) is to account for the effect of assumed disposal of the initial 30,000 shares in T Ltd, thereby giving rise to a gain of \$6,000 (selling price of \$45,000 ($30,000 \times \1.50) less the carrying amount of the investment account of \$39,000 (cost of \$30,000 + equity share of post-acquisition reserve of \$9,000 (see CJE [a])), and the effect of the assumed re-purchase of the 30,000 at a cost of \$45,000 ($30,000 \times \1.50), thereby increase the cost of investment by \$6,000 ($\$45,000 - \$39,000$), as required by FRS 103.
- (e) It is important to ensure that, in the consolidated financial statements, the group's beginning retained profit for the current year of \$76,100 is the same as the group ending retained profit of the previous year. It may be noted that the group ending retained profit for 20X7 was \$76,100, which can be re-computed as equal to P Ltd's ending retained profit of \$50,000 plus group's share of S Ltd's post-acquisition retained profit of \$18,000 ($90\% \times \$20,000$) plus group's share of the associate's post-acquisition retained profit of \$8,100 ($90\% \times 30\% \times 30,000$).
- (f) The group retained profit as at 31 December 20X8 of \$131,300 may be proved as follows: P Ltd's ending retained profit of \$80,000 plus group's share of S Ltd's post-acquisition retained profit of \$27,000 ($90\% \times \$30,000$) plus group's share of T Ltd's post-acquisition retained profit of \$10,800 ($90\% \times 60\% \times [\$50,000 - \$30,000]$), plus group's share of T Ltd's retained profit during the period it was an associate of \$8,100 ($90\% \times 30\% \times \$30,000$), plus gain arising from the step acquisition of T Ltd of \$5,400 ($90\% \times \$6,000$).
- (g) The non-controlling interest of \$75,700 in the consolidated balance sheet as at 31 December 20X8 may be proved as follows: direct non-controlling interest in T Ltd of \$60,000 ($40\% \times \$150,000$), plus indirect non-controlling interest in T Ltd of \$1,200 ($10\% \times 60\% \times \$20,000$), plus direct non-controlling interest in S Ltd of \$14,500 ($10\% \times (\$130,000 + \$9,000 + \$6,000)$).

CHAPTER

7

**FOREIGN SUBSIDIARIES,
ASSOCIATES, AND
JOINT VENTURES**





Introduction

In the discussion of consolidated financial statements so far, it has been assumed that all the companies in the group are incorporated and operating in the same country, Singapore. In the real world, it is, of course, not uncommon to have groups with companies all over the world. This chapter is devoted to the discussion of preparation of consolidated financial statements for groups with subsidiaries, associates, and joint ventures in foreign countries.

As discussed in Chapter 2, in the preparation of consolidated financial statements, the financial statements of the parent and those of its subsidiary are combined on a line-by-line basis by adding together like items of assets, liabilities, revenue, and expenses.

However, where the parent and subsidiaries in a group are operating in different countries and where their respective financial statements are presented in different presentation currencies, it is obviously not possible to add across the items without first converting all the items in the financial statements into the same presentation currency. Similarly, for a foreign associate, it is necessary to first translate the presentation currency of its financial statements into the presentation currency of the parent before the group's share of the associate's profit and net assets can be calculated and incorporated into the consolidated financial statements. Also, for foreign joint ventures, their financial statements will have to be first translated into the presentation currency of the parent-investor before they can be incorporated into the consolidated financial statements.

Thus, in the preparation of consolidated financial statements for a group with foreign subsidiaries, associates, and joint ventures, two processes are involved: firstly, the translation process, and secondly, the consolidation process. The translation process involves converting the presentation currencies of the financial statements of the foreign subsidiaries, associates, and joint ventures to the presentation currency of the parent. The consolidation process will then be carried out largely along the same principles as discussed in the previous chapters.

It should, however, be noted that under FRS 21, it is not always necessary to translate the financial statements of a foreign subsidiary or associate for the purposes of consolidation. This is because under FRS 21, a foreign subsidiary, associate, or joint venture may adopt the same presentation currency as that of the parent. It is obvious that where a foreign subsidiary, associate or joint venture adopts the same presentation currency as that of the parent, no translation is necessary.

For the purposes of this chapter, it is assumed that the foreign subsidiary, associate, or joint venture adopts a presentation currency that is different from that of the parent, and consequently, the financial statements of the foreign subsidiary, associate, or joint venture will have to be translated before the consolidation process can be carried out.

7.2 Translation process

As mentioned above, translation is a process of converting the presentation currency of the financial statements of a foreign subsidiary, associate, or joint venture to the presentation currency of the parent. There are two issues involved in the translation process:

- Which *exchange rate* is to be used to translate each of the items in the financial statements of the foreign subsidiary and associated companies; and
- How to account for the *translation differences* arising from the translation process.

Due to changes in the currency exchange rates, the question arises as to which exchange rate should be used to translate the various items in the financial statements of the foreign subsidiaries, associates, and joint ventures. To illustrate the issue, assume a Singapore company (whose presentation currency is Singapore Dollar [S\$]) acquired a Malaysian company (whose presentation currency is Ringgit Malaysia [RM]) in 20X5, and the Malaysian subsidiary purchased a piece of land on 10 January 20X6 for RM 1,000,000. Assume also that the exchange rate between RM and S\$ as at 10 January 20X6 was RM 1.00 = S\$0.90, and the rate as at 31 December 20X6 was RM 1.00 = S\$0.85. In the preparation of the consolidated balance sheet as at 31 December 20X6, the question arises as to whether the land, which is carried in the balance sheet of the Malaysian subsidiary at RM 1,000,000, should be translated using the rate prevailing at the date of land purchase on 10 January 20X6 into S\$900,000, or using the exchange rate prevailing at the balance sheet date on 31 December 20X6 into S\$850,000. The issue is, simply, whether the item in the foreign financial statements should be translated using the historical rate (the exchange rate prevailing at the time the transaction is recorded in the books of the foreign entity) or closing rate (the exchange rate prevailing on the balance sheet date).

A related issue is the treatment of the exchange differences arising from the translation (which is often referred to as translation differences). Where an item is translated using different exchange rates in successive financial statements, the item is said to be subject to translation exposure, and translation gain or loss would arise. To illustrate, assume the case in the above paragraph. Assume that the exchange rate between ringgit Malaysia and Singapore dollar was RM 1.00 = S\$0.70 as at 31 December 20X7. If the land is translated using the historical rate of RM 1.00 = S\$0.90, then the land will be translated into S\$900,000 in both 20X6 and 20X7 consolidated balance sheets (and also for subsequent periods). There is no translation exposure, and no gain or loss arises from translation. However, if the land is to be translated using closing rates, the land will be translated using the exchange rate of RM 1.00 = S\$0.85 prevailing on 31 December 20X6 into S\$850,000 for the 20X6 consolidated balance sheet, and translated using the exchange rate of RM 1.00 = S\$0.70 prevailing on 31 December 20X7 into S\$700,000 for the 20X7 consolidated balance sheet. The land is subject to translation exposure (risk). For the purposes of preparing

the 20X7 consolidated financial statements, a translation loss of S\$150,000 (S\$850,000 – S\$700,000) will have to be accounted for. The question arises as to its proper accounting treatment: Should the translation difference be treated as part of the 'profit or loss' or as part of the 'other comprehensive income'?

7.2.1 Translation methods

Traditionally, there are four translation methods used to address the above-mentioned issues. These are:

- closing rate method;
- current/non-current method;
- monetary/non-monetary method; and
- temporal method.

Under the closing rate method, a single rate is used in the translation. All balance sheet items, other than shareholders' equity, are translated at the closing rate. Similarly, all revenue and expenses are translated at the closing rates. Translation differences are treated as part of other comprehensive income (in the second half of the statement of comprehensive income).

Under the current/non-current method, current assets and current liabilities are translated at the closing rate, while other assets and liabilities are translated at the historical rate. In the statement of comprehensive income, depreciation expense, and amortization expense are translated at historical rates applicable to the related assets, while all other revenue and expenses are translated at the average rate for the accounting period. Translation differences are treated as part of the profit or loss (in the first half of the statement of comprehensive income).

The monetary/non-monetary method focuses on the characteristics, rather than the balance sheet classification, of the assets and liabilities. Those assets representing claims expressed in a fixed monetary amount (monetary assets) and those obligations expressed in a fixed monetary amount (monetary liabilities) are translated at the closing rate. All other assets and liabilities are translated at appropriate historical rates. In the statement of comprehensive income, average rates are used to translate all revenue and expenses, except for depreciation expense, amortization expense, and cost of goods sold, which are translated at appropriate historical rates. Translation differences are treated as part of the profit or loss (in the first half of the statement of comprehensive income).

The temporal method aims to preserve the time (or temporal) dimension associated with the accounting bases of assets and liabilities. Thus, assets and liabilities measured at historical costs are translated using the historical rate, while those measured at current value are translated using the closing rate. (Monetary items, which are translated using closing rate under the monetary/non-monetary method, are also translated using closing rate under temporal method, because monetary items are measured at current values. However, one common difference between the monetary/non-monetary method and the temporal method is that under the former, stock [or

investments], being a non-monetary item, will be translated using the historical rate, whereas under the latter, the rate to be used to translate stock depends on the stock's measurement base. If the measurement base of the stock value is 'cost', it will be translated using the historical rate; however, if the base is 'net realizable value', the stock value will be translated using the closing rate). Profit and loss items are translated, as in the case of the monetary/non-monetary method, with modification for cost of goods sold, as the case may be. Translation differences are to be treated as part of the profit or loss (in the first half of the statement of comprehensive income).

It should be noted that no matter which translation method is used, the share capital and pre-acquisition reserves of the foreign subsidiaries, associates, and joint ventures should be translated at the exchange rate in effect on the date of share acquisition.

One of the main advantages of using the closing rate method is that the translated financial statements will retain the financial relationships as presented in the original financial statements. For example, financial ratios such as the current ratio, the rate of return on total assets, as computed from the translated financial statements will be the same as those computed from the original statements. This is because all the accounts in the original financial statements are translated using the same rate. One major drawback of using the closing rate method, however, is that the translated figures are difficult to interpret. For example, the translated balance for land of S\$850,000 in the 20X6 consolidated balance sheet in the above case is not subject to easy interpretation.

The other three translation methods use both historical rates and closing rate for various items in the balance sheet. Of the three methods, the temporal method seems to be most sound theoretically. The main essence of the temporal method is that translation should change only the unit of measure; it should not alter any other attributes, particularly the accounting base at which the assets and liabilities are measured. One of the advantages of using the temporal method is therefore that the translated figure will be the same as though the parent has itself entered into the transaction. For example, in the case above, if the land of RM 1,000,000 is translated using the historical rate of RM 1.00 = S\$0.90 under the temporal method, the translated figure of S\$900,000 will be exactly equal to the amount that the Singapore parent would have to incur if it were to buy the Malaysian land itself. One major drawback of the temporal method is that the translation consequence may not be consistent with the economic consequence of a change in the exchange rate. For example, under specific conditions, the temporal method will give rise to a translation gain when a change in exchange rate is obviously to the disadvantage of the parent, and vice versa. Another drawback of the temporal method is that the financial relationship of the accounts in the translated financial statements will be distorted. For example, financial ratios such as the current ratio, the rate of return on total assets, as computed from the translated financial statements will not be the same as those computed from the original statements, since the various accounts are translated using different rates.

In Singapore, the accounting standard that governs the translation of the financial statements of foreign subsidiaries, associates, and joint ventures for the purposes of including them in the consolidated financial statements is FRS 21.

FRS 21 provides that in the translation of the financial statement of foreign subsidiaries, associates, and joint ventures (whose presentation currencies are different from that of the parent), the following procedures should be applied (paragraph 39):

1. all assets and liabilities are translated at closing rate;
2. all income and expenses in the statement of comprehensive income are translated at the exchange rates at the dates of the transactions (or the average rates that approximate the actual rates); and
3. all translation adjustments are recognized as other comprehensive income.

Thus, FRS 21 requires the use of a translation method that is conceptually very similar to the closing rate method, discussed above. For ease of discussion, the translation method required under FRS 21 is hereafter referred to as the closing rate method.

(The now-superseded FRS 21 [2003] provided for the use of either the closing rate method or the temporal method, depending on the operational and financial characteristics of the foreign subsidiary, associate, or joint venture. If the foreign subsidiary, associate, or joint venture was deemed a foreign entity, the closing rate method was to be used. If the foreign subsidiary, associate, or joint venture was deemed an integral part of the parent, the temporal method was to be used. It should be noted that the temporal method is no longer allowed under FRS 21, on the presumption that a foreign subsidiary, associate, or joint venture that is deemed an integral part of the parent would have adopted the same functional currency — and the same presentation currency — as that of the parent and therefore translation is not necessary.)

The rationale for using the closing rate to translate the financial statements of foreign subsidiaries, associates, and joint ventures is as follows: since these subsidiaries, associates, and joint ventures carry out their transactions substantially in local currency, a change in the exchange rate would have little or no direct effect on the activities or cash flow of the parent. The significance of the exchange rate changes to the parent would be based on the parent's net investment in the foreign subsidiaries, associates, and joint ventures rather than on the particular mix of assets and liabilities held by these foreign reporting entities at the time of the change. Also, these foreign subsidiaries, associates, and joint ventures are deemed to have operated primarily within the economic environment of the foreign country, and the parent is interested in the net assets rather than the individual assets and liabilities of these foreign subsidiaries, associates, and joint ventures. In translating the financial statements of these foreign reporting entities, it is therefore appropriate to preserve as far as possible the results and the interrelationships of the amounts appearing in the foreign financial statements. These results and interrelationships are regarded as providing the most meaningful indicator of the performance and financial position of the foreign subsidiaries, associates, and joint ventures for inclusion in the consolidated financial statements. This is achieved by translating all the assets and liabilities at a single rate: the closing rate.

7.2.2 Translation problems

In the translation of foreign currency financial statements, there are two major calculations to be performed: (a) translation differences for the year and (b) post-acquisition reserve in the retained profits.

7.2.2.1 Translation differences

In practice, many entities determine the ending balance of translation reserve as simply equal to the amount that is required to be inserted to 'balance' the translated balance sheet. The beginning balance of the translation reserve (obtained from previous year's translated balance sheet) is then deducted therefrom to arrive at the translation gain/loss for the period. This approach is acceptable provided there is no error in the translated balance sheet. It may be appreciated that if there is an error in the calculation of any other item in the translated balance sheet, the ending balance of the translation reserve inserted as the balancing item will also be in error, and consequently, the amount of translation gain/loss for the period will also be wrong.

Thus, it is advisable to calculate the translation gain/loss for the period independently, and then add/deduct it to the beginning balance of the translation reserve (obtained from previous year's translated balance sheet) to arrive at the ending balance of the translation reserve. Under the closing rate method as required by FRS 21, the translation gain/loss may be quite easily calculated, as summarized below.

- Since all the assets and liabilities are translated using closing rate (which changes from year to year), all the assets and liabilities are exposed to translation risks. The beginning net assets will thus give rise to a translation difference which may be calculated using the following formula:

$$\text{'Beginning net asset'} \times (\text{'current year's closing rate'} - \text{'prior year's closing rate'})$$

- Since the profit and loss items are translated using the average rate (instead of the closing rate), an additional translation difference will arise, which may be calculated using the following formula:

$$\begin{aligned} &\text{'Profit after tax for the year'} \times \\ &(\text{'current year's closing rate'} - \text{'current year's average rate'}) \end{aligned}$$

- If there are dividends paid/payable during the year, and if the dividends paid/payable are translated using an exchange rate other than the closing rate, an additional translation difference will arise, which may be calculated using the following formula:

$$\text{'Dividend paid/payable'} \times (\text{'current year's closing rate'} - \text{'rate used'})$$

- If there are 'other comprehensive income' items and if they are translated using an exchange rate other than the closing rate, an additional translation difference will arise, which may be calculated using the following formula:

$$\text{'Other comprehensive income'} \times (\text{'current year's closing rate'} - \text{'rate used'})$$

To illustrate, assume a Singapore parent acquired a Malaysia subsidiary, M Bhd, in 20X1. The net assets of M Bhd was RM 100 million and RM 150 million as at 31 December 20X7 and 31 December 20X8, respectively. For the year ended 31 December 20X8, the profit after tax of M Bhd was RM 40 million. M Bhd paid an interim dividend of RM 10 million on 30 June 20X8, and revalued its land on 30 September 20X8 with a revaluation surplus of RM 20 million. (Beginning net asset of RM 100 million + Profit after tax of RM 40 million – Dividend of RM 10 million + Revaluation surplus of RM 20 million = Ending net assets of RM 150 million.) The exchange rates between RM and S\$ were as follows: RM 1.00 = S\$0.50 as at 31 December 20X7; RM 1.00 = S\$0.40 as at 31 December 20X8; RM 1.00 = S\$0.46 as at 30 June 20X8; RM 1.00 = S\$0.42 as at 30 September 20X8; and the average exchange rate for 20X8 was RM 1.00 = S\$0.45. In this case, the translation loss for the year ended 31 December 20X8 is calculated as follows:

Beginning net assets: RM 100 million × (0.40 – 0.50)	= S\$10 million
Add profit after tax: RM 40 million × (0.40 – 0.45)	= S\$ 2 million
Less dividend paid: RM 10 million × (0.40 – 0.46)	= S\$ 0.6 million
Add revaluation surplus: RM 20 million × (0.40 – 0.42)	= <u>S\$ 0.4 million</u>
Total	= <u>S\$11.8 million</u>

If the Singapore parent chooses to translate the other comprehensive income using the average rate of RM 1.00 = S\$0.45, as that used to translate profit and loss items, the translated loss for the year 20X8 may be calculated as follows:

Beginning net assets: RM 100 million × (0.40 – 0.50)	= S\$10 million
Add comprehensive income: RM 60 million × (0.40 – 0.45) ...	= S\$ 3 million
Less dividend paid: RM 10 million × (0.40 – 0.46)	= <u>S\$ 0.6 million</u>
Total	= <u>S\$12.4 million</u>

If the Singapore parent chooses to translate the dividends paid and the other comprehensive income using the average rate of RM 1.00 = S\$0.45, as that used to translate profit and loss items, the translated loss for the year 20X8 may be calculated as follows:

Beginning net assets: RM 100 million × (0.40 – 0.50)	= S\$10 million
Profit retained: RM 50 million × (0.40 – 0.45)	= <u>S\$ 2.5 million</u>
Total	= <u>S\$12.5 million</u>

It should be noted that the translation difference calculated above yields the translation gain/loss for the current year (to be presented as other comprehensive income

in the translated statement of comprehensive income). The ending balance of translation reserve (to be presented in the translated balance sheet) is equal to the beginning balance of translation reserve (obtained from previous year's translated balance sheet) plus or minus the current year's translation difference (as calculated above).

It should also be noted that, as provided for in paragraph 48 of FRS 21, the translation reserve will be reversed and treated as part of the profit or loss on disposal in the statement of comprehensive income upon disposal of the foreign subsidiary, associate, or joint venture.

7.2.2.2 Post-acquisition reserve

It is almost impossible to calculate the post-acquisition reserve in the beginning retained profit. It involves the application of the various exchange rates prevailing in the past years to the past years' profits.

It is also almost impossible to calculate the beginning translation reserve (which is, by definition, a post-acquisition reserve), as it involves the application of the various exchange rates prevailing in the past years to the past years' net assets and past years' profits since the date of acquisition.

In practice, the prior year's translated financial statements are readily available. Therefore, the translated post-acquisition reserve in the beginning retained profit and the beginning translation reserves may simply be obtained from the prior year's translated financial statements.

However, where necessary, the translated post-acquisition reserves in the beginning retained profit may be obtained by reconstructing the prior year's balance sheet. The prior year's balance sheet may be easily reconstructed by applying the appropriate exchange rate to the balance sheet items. (Note that the share capital and pre-acquisition reserves are translated using the exchange rate existing at the date of share acquisition.) The translated post-acquisition reserve in the beginning retained profit is simply the balancing figure in the translated balance sheet.

7.2.2.3 Share capital and pre-acquisition reserve

Besides the two major calculations discussed above, one other point that should be noted in the translation process is that the share capital and pre-acquisition reserve of foreign subsidiaries, associates, and joint ventures should be translated using the historical exchange rate prevailing at the date when the parent acquired its equity interest in the foreign subsidiaries, associates, and joint ventures (regardless of the translation method used).

In this respect, it should be noted that FRS 21 requires that the goodwill arising from the acquisition should be translated using the closing rate (paragraph 47). This issue will be further discussed and illustrated in Section 7.3.

7.2.3 An illustration on closing rate method of translation

To illustrate the closing rate method of translation under FRS 21, assume the following case.

Example 7.1

On 10 January 20X6, S Ltd, a company incorporated in Singapore, acquired 80% interest in M Bhd, a company incorporated in Malaysia. On this date, M Bhd's net assets were represented by share capital of RM 3,000,000, revaluation reserve of RM 1,000,000, and retained profit of RM 1,000,000.

The presentation currencies of S Ltd and M Bhd are respectively Singapore Dollar (S\$) and Ringgit Malaysia (RM). The financial statements of M Bhd for the year 20X8 are as follows:

- (a) Statement of comprehensive income for the year ended 31 December 20X8.

	RM'000
Sales	9,000
Opening stock	1,000
Purchases	5,500
Closing stock	2,000
Cost of sales	4,500
Gross profit	4,500
Interest expense	60
Amortization expense	100
Depreciation expense	300
Other expenses	1,040
Profit before tax	3,000
Tax	1,000
Profit after tax	2,000
Other comprehensive income	
Revaluation surplus	500
Total comprehensive income	2,500

(b) Statement of changes in equity (partial) for the year ended 31 December 20X8

	RM'000
Beginning retained profit	2,300
Profit for the year	2,000
Ending retained profit	4,300
Beginning revaluation reserve	1,000
Revaluation surplus for the year	500
Ending revaluation reserve	1,500

(c) Balance sheet as at 31 December 20X8

	RM'000
Intangible asset	200
Land	6,000
Machinery	3,000
Accumulated depreciation	(700)
 Current assets	
Stock	2,000
Trade debtors	2,000
Cash	500
	4,500
 Current liabilities	
Trade creditors	2,200
Tax payable	1,000
	3,200
 Net current assets	1,300
	9,800
 Share capital	3,000
Revaluation reserves	1,500
Retained profit	4,300
	8,800
 Long-term loan	1,000
	9,800

Additional information

- (a) The intangible asset, a patent, was acquired on 10 March 20X6 for RM 500,000. It is amortized over five years on a straight-line basis with a full year's amortization charge for the year 20X6.

- (b) Land was acquired in December 20X1 for RM 4,500,000. M Bhd revalues its land on 31 December 20X4 and on 31 December 20X8.
- (c) The machines were acquired as follows:

Date	Cost
10 January 20X6	RM 2,000,000
30 March 20X8	RM 1,000,000

The machinery is depreciated on a straight-line basis over ten years with no salvage value. A full year's depreciation is provided if the machinery has been used for more than six months in the year.

- (d) Under the valuation basis of lower of cost and net realizable value as required by FRS 2 *Inventories*, both the opening stock and closing stock were valued at cost, based on FIFO assumption. The stock at year-end is deemed to have been purchased during the last three months of the year.
- (e) The ordinary shares of M Bhd were issued at RM 1.00 each in January 20X1.
- (f) The revaluation reserves arise as follows:

Surplus on revaluation of land on 31 December 20X4:	RM 1,000,000
Surplus on revaluation of land on 31 December 20X8:	RM 500,000

- (g) The long-term loan was obtained from S Ltd on 20 February 20X7. The loan is denominated in RM. It bears the market interest rate of 6% per annum, but no repayment schedule is stipulated; in fact, both companies have agreed that it may be convertible into shares at a later date. The long-term loan, being an equity (not liability) in substance, is presented as part of shareholders' equity, as required by FRS 32.
- (h) In the 31 December 20X7 translated balance sheet, the retained profit was S\$1,980,000 and the translation reserve was S\$540,000 (loss).
- (i) The relevant exchange rates between RM and S\$ are as follows:

10 January 20X6	RM 1.00 = S\$0.90
10 March 20X6	RM 1.00 = S\$0.88
31 December 20X6	RM 1.00 = S\$0.85
20 February 20X7	RM 1.00 = S\$0.84
31 December 20X7	RM 1.00 = S\$0.80
30 March 20X8	RM 1.00 = S\$0.77
31 December 20X8	RM 1.00 = S\$0.70
Average for October–December 20X7	RM 1.00 = S\$0.82
Average for October–December 20X8	RM 1.00 = S\$0.72
Average for 20X8	RM 1.00 = S\$0.75

Required

Translate the financial statements of M Bhd into S\$, in compliance with FRS 21.

Solution

The translation of the 20X8 financial statements of M Bhd under the closing rate method will be as follows:

(a) Statement of comprehensive income for the year ended 31 December 20X8

	RM'000	Rate	S\$'000
Sales	9,000	0.75	6,750
Opening stock	1,000	0.75	750
Purchases	5,500	0.75	4,125
Closing stock	2,000	0.75	1,500
Cost of sales	4,500		3,375
Gross profit	4,500		3,375
Interest expense	60	0.75	45
Amortization expense	100	0.75	75
Depreciation expense	300	0.75	225
Other expenses	1,040	0.75	780
Profit before tax	3,000		2,250
Tax	1,000	0.75	750
Profit after tax	2,000		1,500
Other comprehensive income			
Revaluation surplus	500	0.70	350
Translation loss	—	Note d	730
Total other comprehensive income/(loss)	500		(380)
Total comprehensive income	2,500		1,120

(b) Statement of changes in equity (partial) for the year ended 31 December 20X8

	RM'000	Rate	S\$'000
Retained profit			
Beginning balance			
Pre-acquisition	1,000	0.90	900
Post-acquisition	1,300	Note b	1,080
	2,300	(20X7)	1,980
Profit for the year	2,000		1,500
Ending retained profit	4,300		3,480
Revaluation reserve			
Beginning balance	1,000	0.90	900
Revaluation surplus for the year	500	0.70	350
Ending balance	1,500		1,250
Translation reserve/(loss)			
Beginning balance	—	(20X7)	(540)
Translation loss for the year	—	Note d	(730)
Ending balance	—		(1,270)

(c) Balance sheet as at 31 December 20X8

	RM'000	Rate	S\$'000
Intangible assets	200	0.70	140
Land	6,000	0.70	4,200
Machinery	3,000	0.70	2,100
Accumulated depreciation	(700)	0.70	(490)
Current assets			
Stock	2,000	0.70	1,400
Trade debtors	2,000	0.70	1,400
Cash	500	0.70	350
	4,500		3,150
Current liabilities			
Trade creditors	2,200	0.70	1,540
Tax payable	1,000	0.70	700
	3,200		2,240
Net current assets	1,300		910
	9,800		6,860
Share capital	3,000	0.90	2,700
Revaluation reserves	1,500	SCE	1,250
Translation reserve	—	SCE	(1,270)
Retained profit	4,300	SCE	3,480
	8,800		6,160
Long-term loan	1,000	0.70	700
	9,800		6,860

Notes to the solution

- (a) Under the closing rate method, all the balance sheet items are translated using the closing rate (that is, the exchange rate prevailing on 31 December 20X8) of RM 1.00 = S\$0.70, except for the share capital and the pre-acquisition reserves, which are translated using the exchange rate prevailing at the date of acquisition on 10 January 20X6 of RM 1.00 = S\$0.90. The profit and loss items are, in this case, translated using the average rates, as an approximation of the actual transaction rates.
- (b) The S\$ post-acquisition reserve in the beginning retained profit of S\$1,080,000 is obtained by deducting the pre-acquisition retained profit of S\$900,000 ($\text{RM } 1,000,000 \times \text{historical rate of RM } 1.00 = \text{S\$}0.90$) from the beginning retained profit of S\$1,980,000 (from the 20X7 translated balance sheet). It can also be computed from the reconstructed 20X7 balance sheet as follows (the balancing figure in the S\$ column):

	RM'000	Rate	S\$'000
Net assets as at 31 December 20X7	<u>6,300</u>	<u>0.80</u>	<u>5,040</u>
Share capital	3,000	0.90	2,700
Revaluation reserve	1,000	0.90	900
Translation reserve/(loss)	—		(540)
Retained profit			
Pre-acquisition	1,000	0.90	900
Post-acquisition	1,300		1,080
Shareholders' equity as at 31 December 20X7	<u>6,300</u>		<u>5,040</u>

- (c) The revaluation reserve on 31 December 20X4 is 'pre-acquisition reserve' and therefore translated at the rate prevailing on the date of acquisition on 10 January 20X6 of RM 1.00 = S\$0.90.
- (d) The translation loss for the year comprises two components:
- (i) translation difference on net assets (which is equal to beginning net assets multiplied by the change in the exchange rates from the beginning to the end of the current year); and
 - (ii) translation difference on profit (which is equal to profit retained for the year multiplied by the change in the exchange rates from the average rate to the closing rate).

The calculations are shown below:

On net assets:	
RM 6,300,000 × (0.70 – 0.80)	= S\$630,000 loss
On profit for the year:	
RM 2,000,000 × (0.70 – 0.75)	= S\$100,000 loss
Total	<u>S\$730,000 loss</u>

Given that the beginning balance of the translation reserve was S\$540,000 (loss), the ending balance of the translation reserve will be S\$1,270,000 (loss).

(Note: Alternatively, the translation reserve of S\$1,270,000 (loss) may be simply inserted as the balancing figure in the translated balance sheet. In this case, the statement of comprehensive income and the statement of changes in equity would have to be translated first. The translated retained profit of S\$3,480,000 and revaluation reserve of S\$1,250,000 are then brought forward to the balance sheet. The translation reserve is then just the figure necessary to balance the translated balance sheet.)

(e) The 'Other comprehensive income' items, like profit or loss items, may be translated using the rate at the date of transaction or using the average rate (paragraph 39). In this case, the revaluation of land is done on 31 December 20X8, and the revaluation surplus is translated using the transaction rate (which is also the closing rate in this case). Consequently, there is no translation gain/loss arising from this 'other comprehensive income' item.

If the revaluation was done on 30 March 20X8, and the revaluation surplus was translated using the transaction rate on 30 March 20X8 of RM 1.00 = S\$0.77, then there would be a translation exposure from the revaluation surplus. In this case, the translation loss in Note (d) above would be calculated with an additional line item 'On other comprehensive item: RM 500,000 × (0.70 – 0.77) = S\$35,000 loss', and the total translation loss for the year would be S\$765,000.

If, regardless of the date of the revaluation, the 'Other comprehensive income' item is translated using the average rate as that applied to profit or loss items, then the translation loss in Note (d) above will be calculated based on 'Total comprehensive income of RM 2,500,000' (instead of 'Profit for the year of RM 2,000,000'), and the total translation loss for the year would be S\$755,000.



Having translated the financial statements of the foreign subsidiary, associate, and joint venture the next step will be to consolidate the financial statements of the foreign subsidiary (see Section 7.3), and to equity account for the foreign associate (see Section 7.4) and the foreign joint venture (see Section 7.5).

7.3

Foreign subsidiary

Once translated, the financial statements of a foreign subsidiary will be no different from those of a local subsidiary, and the consolidation process will follow the normal consolidation procedures as required by FRS 110, such as elimination of intragroup transactions and intragroup balances. There are, however, two issues that may need further elaboration.

7.3.1 Consolidation issues

There are three unique issues relating to consolidation involving a foreign subsidiary (whose presentation currency is different from that of the parent).

7.3.1.1 Goodwill on consolidation

Generally, goodwill on consolidation may be treated as an amount paid for (a) an asset of the subsidiary or (b) an asset of the group.

In a case where the goodwill arises on the acquisition of a foreign entity, the quantum of the goodwill reported in the consolidated financial statements will differ depending on the views adopted. If the goodwill is treated as an asset of the foreign entity, then it is deemed to have been denominated in a foreign currency and therefore have to be translated (as any other asset of a foreign entity) using the closing rate. On the other hand, if the goodwill is treated as an asset of the group, then it is denominated in the presentation currency of the parent and therefore no translation is required.

In the past, in the absence of guidelines from accounting standards, the general practice in Singapore has been to adopt the view that goodwill on consolidation is an asset of the group and is therefore denominated in the presentation currency of the parent. Consequently, no translation is required.

However, FRS 21 has expressly adopted the opposing view. In fact, paragraph 47 of FRS 21 specifically requires that goodwill arising from acquisition of a foreign operation (and any fair value adjustments) be treated as an asset of the foreign operation and be translated at the closing rate. It should be noted that the requirement of paragraph 47 is applicable prospectively to acquisitions occurring in annual periods beginning on or after 1 January 2005 (even though retroactive adjustment is permissible).

The following example illustrates the requirement of paragraph 47 of FRS 21.

On 30 December 20X1, S Ltd (whose accounting year-end is 31 December and whose functional and presentation currency is the Singapore Dollar [S\$]) acquires a 60% interest in M Bhd (whose functional and presentation currency is the Ringgit Malaysia [RM]) for a cash consideration of S\$80 million. On this date, M Bhd's net assets are represented by share capital of RM 100 million and retained profit of RM 100 million, and the exchange rate is RM 1.00 = S\$0.50. On 31 December 20X2 and 31 December 20X3, the exchange rates are, respectively, RM 1.00 = S\$0.40 and RM 1.00 = \$0.55.

For the purpose of 20X1 consolidation, the following CJE is required to record goodwill under FRS 21 (2005):

Dr Share capital (60% × 100 × 0.5)	30
Dr Retained profit (60% × 100 × 0.5)	30
Dr Goodwill on consolidation	20
Cr Investment in M Bhd	80

For the purpose of 20X2 consolidation, the following CJEs are required to record goodwill under FRS 21:

Dr Share capital (60% × 100 × 0.5)	30
Dr Retained profit (60% × 100 × 0.5)	30
Dr Goodwill on consolidation	20
Cr Investment in M Bhd	80

Dr Translation loss	4
Cr Goodwill on consolidation	4

For the purpose of 20X3 consolidation, the following CJEs are required to record goodwill under FRS 21:

Dr Share capital ($60\% \times 100 \times 0.5$)	30
Dr Retained profit ($60\% \times 100 \times 0.5$)	30
Dr Goodwill on consolidation	20
Cr Investment in M Bhd	80

Dr Goodwill on consolidation	2
Dr Beginning translation reserve	4
Cr Translation gain	6

(Note: Under FRS 21, M Bhd is deemed to have a goodwill acquired by S Ltd valued at RM 40 million [Cost of RM 160 million – 60% of net assets of RM 200 million]). Therefore,

- For 20X1 consolidation, when the closing rate is RM 1.00 = S\$0.50, the goodwill on consolidation should be reported at S\$20 (40×0.50) million.
- For 20X2 consolidation, when the closing rate is RM 1.00 = S\$0.40, the goodwill on consolidation should be reported at S\$16 (40×0.40) million.
- For 20X3 consolidation, when the closing rate is RM 1.00 = S\$0.55, the goodwill on consolidation should be reported at S\$22 (40×0.55) million.

It should be noted that the translation gain/loss arising from the translation of goodwill on consolidation arises only during the consolidation process, not during the translation process. Thus, the translation gain/loss is only recognized in the consolidated financial statements (and not in the foreign subsidiary's translated financial statements).

It should also be noted that, since the goodwill on consolidation is deemed to be an asset belonging to the foreign subsidiary, non-controlling interest in the foreign subsidiary should be allotted its share of the translation gain/loss arising from the translation of goodwill on consolidation.

7.3.1.2 Inter-company dividends

For dividend paid by a foreign subsidiary to a Singapore parent, the Singapore parent has to deal with both 'accounting for foreign currency transaction' and 'translation of foreign currency financial statements'. The most expedient (and also technically correct) way to deal with this issue in translation/consolidation is to apply the same exchange

rate to account for the foreign currency dividend income recognized by the parent and to the translation of the dividend paid recognized by the subsidiary.

To illustrate, assume that the Singapore parent (with S\$ as its functional and presentation currency) receives dividends of RM 100 from its 100%-owned Malaysian subsidiary (with RM as its functional and presentation currency) on 1 August 20X8 when the exchange rate is RM 1.00 = S\$0.45. In this case, the Singapore parent will record the dividend received using the exchange rate at the date of transaction as Dr Cash S\$45; Cr Dividend income S\$45. At year-end, it will be most expedient to translate the Malaysian subsidiary's dividend paid of RM 100 into S\$45, so that in subsequent consolidation, the inter-company dividend could easily be eliminated through the consolidation journal entry Dr Dividend income (parent) S\$45; Cr Dividend paid (subsidiary) S\$45.

If, in the above case, the subsidiary's dividend paid is translated using the average exchange rate of, say, RM 1.00 = S\$0.40 (as that used to translate all profit or loss items), into S\$40, the dividend income of the parent will not be the same as the dividend paid of the subsidiary. Subsequent consolidation will therefore give rise to an additional translation difference. In this case, the consolidation journal entry will be Dr Dividend income (parent) S\$45; Cr Dividend paid (subsidiary) S\$40; Cr Translation gain S\$5.

It may be noted that either way, the effects on the consolidated financial statements will be the same. To illustrate, assume that in the above example, the closing exchange rate at year-end is RM 1.00 = S\$0.30. In the first case where the subsidiary's dividend is translated using the exchange rate of RM 1.00 = S\$0.45, the dividend will give rise to translation gain of S\$15 ($-RM\ 100 \times (0.30 - 0.45)$) in the subsidiary's translated financial statements, and consequently, in the consolidated financial statements. In the second case where the subsidiary's dividend is translated using the exchange rate of RM 1.00 = S\$0.40, the dividend will give rise to translation gain of S\$10 ($-RM\ 100 \times (0.30 - 0.40)$) in the subsidiary's translated financial statements, and upon subsequent consolidation, there is an additional translation gain of S\$5, giving rise to a total translation gain of S\$15 in the consolidated financial statements.

The above discussion is, of course, also applicable to other intragroup transactions recognized in the respective statements of comprehensive income of Singapore parent and foreign subsidiary, like intragroup sales and purchases, intragroup interest income and expense, and intragroup management fee income and expense.

7.3.1.3 Exchange differences on intragroup monetary items

As previously discussed, all intragroup balances between a parent and a subsidiary will be fully eliminated during the consolidation process. Similarly, all intragroup balances between a parent and its foreign subsidiary will be fully eliminated during the consolidation process. However, it should be noted that the exchange differences

arising on intragroup monetary items will not be eliminated. This is because while for intragroup items there is an asset account and a corresponding liability account; exchange differences arising therefrom will be recorded only in one (not both) of the entities' books. For example, if the parent grants its subsidiary a loan denominated in the subsidiary's currency, the parent would have an exchange difference arising from a change in the exchange rate, but the subsidiary would not. On the other hand, if the loan is denominated in the parent's currency, then the subsidiary would have an exchange difference arising therefrom, but the parent would not. Thus, exchange differences arising on intragroup monetary items will not be eliminated during the consolidation process and will have to be presented in the consolidated statement of comprehensive income (like all other exchange differences).

For exchange differences arising on intragroup monetary items that, in substance, form part of the parent's net investment in a foreign operation, there is a further consolidated issue. As required by paragraph 28 of FRS 21, at the company level, all exchange differences on intragroup monetary items (including exchange differences arising on intragroup monetary items that, in substance, form part of the parent's net investment in a foreign operation) should be recognized as profit or loss (and presented in the first half of the statement of comprehensive income) of the period in which they arise. However, as required by paragraph 32 of FRS 21, at the group level, exchange differences arising on intragroup monetary items that, in substance, form part of the parent's net investment in a foreign operation would have to be recognized as part of the 'other comprehensive income' (and presented in the second half of the statement of comprehensive income). Thus, during the consolidation process, the exchange differences arising on intragroup monetary items that, in substance, form part of the parent's net investment in a foreign operation would have to be transferred from the profit or loss (in the first half of the statement of comprehensive income) of the company to the 'other comprehensive income' (in the second half of the statement of comprehensive income) of the group.

7.3.2 An illustration on consolidation of foreign subsidiary

To illustrate the preparation of consolidated financial statements for a group with a foreign subsidiary, assume the following case.

Example 7.2

The financial statements of S Ltd (a company incorporated in Singapore with Singapore Dollar [S\$] as its presentation currency) and its subsidiary company, M Bhd (a company incorporated in Malaysia with Ringgit Malaysia [RM] as its presentation currency) for the year 20X8 are as follows:

(a) Statement of comprehensive income for the year ended 31 December 20X8

	S Ltd	M Bhd
	S\$'000	RM'000
Sales	5,000	9,000
Opening stock	500	1,000
Purchases	2,000	5,500
Closing stock	1,000	2,000
Cost of sales	1,500	4,500
Gross profit	3,500	4,500
Interest income	45	—
Interest expense	—	60
Amortization expense	—	100
Depreciation expense	400	300
Exchange loss	100	—
Other expenses	1,045	1,040
Profit before tax	2,000	3,000
Tax	600	1,000
Profit after tax	1,400	2,000
Other comprehensive income		
Revaluation reserve	2,000	500
Total comprehensive income	<u>3,400</u>	<u>2,500</u>

(b) Statement of changes in equity (partial) for the year ended 31 December 20X8

	S Ltd	M Bhd
Beginning retained profit	3,600	2,300
Profit for the year	1,400	2,000
Ending retained profit	<u>5,000</u>	<u>4,300</u>
Beginning revaluation reserve	—	1,000
Revaluation surplus for the year	2,000	500
Ending revaluation reserve	<u>2,000</u>	<u>1,500</u>

(c) Balance sheet as at 31 December 20X8

	S Ltd	M Bhd
	S\$'000	RM'000
Patent	—	200
Land	5,000	6,000
Machinery	3,000	3,000
Accumulated depreciation	(1,000)	(700)
Interests in M Bhd	4,700	—
Current assets		
Stock	1,000	2,000
Trade debtors	1,000	2,000
Cash	300	500
	2,300	4,500
Current liabilities		
Trade creditors	1,400	2,200
Tax payable	600	1,000
	2,000	3,200
Net current assets	300	1,300
	12,000	9,800
Share capital	5,000	3,000
Revaluation reserves	2,000	1,500
Retained profit	5,000	4,300
	12,000	8,800
Long-term loan	—	1,000
	12,000	9,800

In this example, M Bhd is the same as M Bhd in Example 7.1. All the 'additional information' thereof, reproduced below for ease of reference, is therefore equally applicable to this example:

- (a) The intangible asset, a patent, was acquired on 10 March 20X6 for RM 500,000. It is amortized over five years on a straight-line basis with a full year's amortization charge for the year 20X6;
- (b) Land was acquired in December 20X1 for RM 4,500,000. M Bhd revalues its land on 31 December 20X4 and on 31 December 20X8;
- (c) The machines were acquired as follows:

Date	Cost
10 January 20X6	RM 2,000,000
30 March 20X8	RM 1,000,000

The machinery is depreciated on a straight-line basis over ten years with no salvage value. A full year's depreciation is provided if the machinery has been used for more than six months in the year.

- (d) Under the valuation basis of lower of cost and net realizable value as required by FRS 2, both the opening stock and closing stock were valued at cost based on FIFO assumption. The stock at year-end is deemed to have been purchased during the last three months of the year.
- (e) The ordinary shares of M Bhd were issued at par of RM 1 each in January 20X1.
- (f) The revaluation reserves arise as follows:

Surplus on revaluation of land on 31 Dec 20X4: RM 1,000,000

Surplus on revaluation of land on 31 Dec 20X8: RM 500,000

- (g) The long-term loan was obtained from S Ltd on 20 February 20X7. The loan is denominated in RM. It bears the market interest rate of 6% per annum, but no repayment schedule is stipulated; in fact, both companies have agreed that it may be convertible into shares at a later date. The loan is presented in M Bhd's balance sheet as part of shareholders' equity, as required by FRS 32.
- (h) In the 31 December 20X7 translated balance sheet, the retained profit was S\$1,980,000 and the translation reserve was S\$540,000 (loss).
- (i) The relevant exchange rates between RM and S\$ are as follows:

10 January 20X6	RM 1.00 = S\$0.90
10 March 20X6	RM 1.00 = S\$0.88
31 December 20X6	RM 1.00 = S\$0.85
20 February 20X7	RM 1.00 = S\$0.84
31 December 20X7	RM 1.00 = S\$0.80
30 March 20X8	RM 1.00 = S\$0.77
31 December 20X8	RM 1.00 = S\$0.70
Average for October–December 20X7	RM 1.00 = S\$0.82
Average for October–December 20X8	RM 1.00 = S\$0.72
Average for 20X8	RM 1.00 = S\$0.75

Additional information

- (a) S Ltd acquired 80% of the share capital of M Bhd on 10 January 20X6. Interests in M Bhd consist of the following:

Cost of investment in M Bhd	S\$4,000,000
Long-term loan due from M Bhd	700,000
Total	<u>S\$4,700,000</u>

- (b) On 11 November 20X8, S Ltd made sales denominated in S\$ of S\$1,500,000 to M Bhd at cost +50% on cash terms. The exchange rate prevailing on 11 November 20X8 was RM 1.00 = S\$0.71. The stock of M Bhd as at 31 December 20X8 included 20% of these goods.
- (c) The long-term loan due from M Bhd was denominated in Ringgit Malaysia at RM 1,000,000. Thus, it is a foreign currency monetary asset in S Ltd's books. As at 31 December 20X8, when the exchange rate was RM 1.00 = S\$0.70, it is reported at S\$700,000. (It was reported at S\$800,000 as at 31 December 20X7, when the exchange rate was RM 1.00 = S\$0.80.) The exchange loss of S\$100,000 ($1,000,000 \times [0.80 - 0.70]$) for the year 20X8 is charged to the 'profit or loss' of S Ltd (but will have to be transferred to the 'other comprehensive income' at group level).

Required

Translate the final accounts of M Bhd into S\$ in accordance with FRS 21, and prepare the consolidated financial statements for S Ltd group for the year 20X8 in accordance with FRS 110.

Solution

The first process is to translate the financial statements of M Bhd into S\$. The translated financial statements of M Bhd in S\$ are shown in the solution to Example 7.1. After the financial statements of M Bhd have been translated into S\$, the second process is to consolidate S Ltd's financial statements with the translated financial statements of M Bhd. The consolidation journal entries, consolidation worksheet, and consolidated accounts are as follows:

- (a) Consolidation journal entries:

(i)	<table border="0"> <tr> <td>Dr Share capital (M)</td><td style="text-align: right;">2,160</td></tr> <tr> <td>Dr Revaluation reserve (M)</td><td style="text-align: right;">720</td></tr> <tr> <td>Dr Beginning retained profit (M)</td><td style="text-align: right;">720</td></tr> <tr> <td>Dr Goodwill on consolidation</td><td style="text-align: right;">400</td></tr> <tr> <td>Cr Investment in M Bhd</td><td style="text-align: right; vertical-align: bottom;">4,000</td></tr> <tr> <td>(elimination of investment account)</td><td></td></tr> </table>	Dr Share capital (M)	2,160	Dr Revaluation reserve (M)	720	Dr Beginning retained profit (M)	720	Dr Goodwill on consolidation	400	Cr Investment in M Bhd	4,000	(elimination of investment account)	
Dr Share capital (M)	2,160												
Dr Revaluation reserve (M)	720												
Dr Beginning retained profit (M)	720												
Dr Goodwill on consolidation	400												
Cr Investment in M Bhd	4,000												
(elimination of investment account)													
(ii)	<table border="0"> <tr> <td>Dr Beginning translation reserve</td><td style="text-align: right;">45</td></tr> <tr> <td>Dr Translation loss</td><td style="text-align: right;">44</td></tr> <tr> <td>Cr Goodwill on consolidation</td><td style="text-align: right;">89</td></tr> <tr> <td>(translation of goodwill)</td><td></td></tr> </table>	Dr Beginning translation reserve	45	Dr Translation loss	44	Cr Goodwill on consolidation	89	(translation of goodwill)					
Dr Beginning translation reserve	45												
Dr Translation loss	44												
Cr Goodwill on consolidation	89												
(translation of goodwill)													
(iii)	<table border="0"> <tr> <td>Dr Sales</td><td style="text-align: right;">1,500</td></tr> <tr> <td>Cr Purchases</td><td style="text-align: right;">1,500</td></tr> <tr> <td>(elimination of inter-company transaction)</td><td></td></tr> </table>	Dr Sales	1,500	Cr Purchases	1,500	(elimination of inter-company transaction)							
Dr Sales	1,500												
Cr Purchases	1,500												
(elimination of inter-company transaction)													

(iv)	Dr Closing stock (P&L) (S)	100
	Cr Closing stock (B/S)	100
	(unrealized inter-company profit)	
(v)	Dr Long-term loan payable	700
	Cr Long-term loan receivable	700
	(elimination of inter-company loan)	
(vi)	Dr Interest income	45
	Cr Interest expense	45
	(elimination of inter-company interest)	
(vii)	Dr Non-controlling interest (CSCI)	300
	Cr Non-controlling interest (CBS)	300
	(non-controlling interest in the profit of M Bhd)	
(viii)	Dr Non-controlling interest (CBS)	85
	Dr Non-controlling interest (revaluation surplus)	70
	Cr Non-controlling interest (translation loss) (20% × [730 + 44])	155
	(non-controlling interest in other comprehensive income of M Bhd)	
(ix)	Dr Share capital (M)	540
	Dr Beginning revaluation reserve (M)	180
	Dr Beginning retained profit (M)	396
	Cr Beginning translation reserve (M) (20% × [540 + 45])	117
	Cr Non-controlling interest (CBS)	999
	(non-controlling interest in other shareholders' equity of M Bhd)	
(x)	Dr Translation loss (OCI of group)	100
	Cr Exchange loss (profit or loss of S Ltd)	100
	(transfer of exchange loss on long-term loan)	

(b) Consolidation worksheet

	S Ltd	M Bhd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	5,000	6,750	iii 1,500		10,250
Opening stock	500	750			1,250
Purchases	2,000	4,125		iii 1,500	4,625
Closing stock	1,000	1,500	iv 100		2,400
Cost of sales	1,500	3,375			3,475
Gross profit	3,500	3,375			6,775
Interest	45	—	vi 45		—
Interest expense	—	45		vi 45	—
Amortization	—	75			75
Depreciation	400	225			625
Exchange loss	100	—		x 100	—
Other expenses	1,045	780			1,825
Profit before tax	2,000	2,250			4,250
Tax	600	750			1,350
Profit after tax	1,400	1,500			2,900
NCI	—	—	vii 300		300
Group profit	—	—			2,600
Revaluation surplus	2,000	350			2,350
NCI	—	—	viii 70		70
Group revaluation surplus	—	—			2,280
Translation loss	—	(730)	ii 44 x 100		(874)
NCI	—	—		viii 155	(155)
Group translation loss	—	—			(719)
Group total income	—	—			4,161
Goodwill	—	—	i 400	ii 89	311
Patent	—	140			140
Land	5,000	4,200			9,200
Machinery	3,000	2,100			5,100
Accumulated depreciation	(1,000)	(490)			(1,490)
M Bhd	4,700	—		i 4,000 v 700 iv 100	—
Stock	1,000	1,400			2,300
Trade debtors	1,000	1,400			2,400
Cash	300	350			650
Trade creditors	1,400	1,540			2,940
Tax payable	600	700			1,300
Share capital	5,000	2,700	i 2,160 ix 540		5,000
Revaluation reserves					
Beginning balance	—	900	i 720 ix 180		—
Surplus for the year	2,000	350			2,280
Ending balance	2,000	1,250			2,280
Translation					
Beginning balance	—	(540)	ii 45	ix 117	(468)
Loss for the year	—	(730)			(719)
Ending balance	—	(1,270)			(1,187)
Retained profit					
Beginning balance	3,600	1,980	i 720 ix 396		4,464
Profit for the year	1,400	1,500			2,600
Ending balance	5,000	3,480			7,064
Non-controlling interest	—	—	viii 85 vii 300 ix 999		1,214
Loan	—	700	v 700		—

(c) Consolidated financial statements

S Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	S\$'000
Sales	10,250
Opening stock	1,250
Purchases	4,625
Closing stock	2,400
Cost of sales	<u>3,475</u>
Gross profit	6,775
Amortization expense	75
Depreciation expense	625
Other expenses	<u>1,825</u>
Profit before tax	4,250
Tax	<u>1,350</u>
Profit after tax	2,900
Other comprehensive income	
Revaluation surplus	2,350
Translation loss	874
Total	<u>1,476</u>
Total comprehensive income	<u>4,376</u>
Profit for the year attributable to:	
Shareholders of the parent	2,600
Non-controlling interest	<u>300</u>
	2,900
Total comprehensive income for the year attributable to:	
Shareholders of the parent	4,161
Non-controlling interest	<u>215</u>
	4,376

S Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	S\$'000
Beginning retained profit	4,464
Profit for the year	2,600
Ending retained profit	<u>7,064</u>
Beginning revaluation reserve	—
Revaluation surplus for the year	<u>2,280</u>
Ending revaluation reserve	<u>2,280</u>
Beginning translation reserve (loss)	(468)
Translation loss for the year	<u>(719)</u>
Ending translation reserve (loss)	<u>(1,187)</u>

S Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	S\$'000
Goodwill on consolidation	311
Patent	140
Land	9,200
Machinery	5,100
Accumulated depreciation	<u>(1,490)</u>
Current assets	
Stock	2,300
Trade debtors	2,400
Cash	650
	<u>5,350</u>
Current liabilities	
Trade creditors	2,940
Tax payable	1,300
	<u>4,240</u>
Net current assets	1,110
	<u>14,371</u>
Share capital	5,000
Revaluation reserves	2,280
Translation reserves	<u>(1,187)</u>
Retained profit	<u>7,064</u>
	<u>13,157</u>
Non-controlling interest	1,214
	<u>14,371</u>

Notes to the solution

- (a) The goodwill on consolidation is computed as follows (in RM'000):

RM'000	
Cost of investment (S\$4,000 × exchange rate of RM 1.00 = S\$0.90)	4,444
Share of net assets (80% × RM 5,000)	4,000
Goodwill	444

Under FRS 21, the subsidiary is deemed to have an asset (i.e., goodwill) of RM 444,000. Further, as required by FRS 21, this goodwill of RM 444,000 has to be translated at the closing rate.

On 10 January 20X6, when the exchange rate was RM 1.00 = S\$0.90, the goodwill of RM 444,000 would be reported at S\$400,000 (as shown in CJE [i]).

For 20X7 consolidation, when the closing exchange rate is RM 1.00 = S\$0.80, the goodwill should be reported at S\$355,000 (RM 444,000 × 0.80), giving rise to a translation reserve of S\$45,000 (S\$400,000 – S\$355,000).

For 20X8 consolidation, when the closing exchange rate is RM 1.00 = S\$0.70, the goodwill should be reported as S\$311,000 (RM 444,000 × 0.70). Compared with the goodwill on 10 January 20X6 of S\$400,000, an adjustment has to be made to write down goodwill by S\$89,000 (S\$400,000 – S\$311,000). Thus, in CJE (ii), adjustments are made to Dr Beginning translation reserve S\$45,000, being the cumulative translation losses up to 31 December 20X7, Dr Translation loss S\$44,000, being the translation loss for 20X8 (S\$89,000 – S\$45,000), and Cr Goodwill on consolidation S\$89,000.

FRS 21 has adopted the concept that the goodwill on consolidation arising from acquisition of a foreign subsidiary is an asset belonging to the foreign subsidiary. Thus, the translation difference arising from the translation of goodwill is allotted to both the owners of the parent and the non-controlling interest.

Also, under FRS 103, the goodwill is not subject to amortization, but subject to impairment. In this case, it is assumed that the goodwill is not impaired.

- (b) The long-term loan forms, in substance, part of S Ltd's net investment in M Bhd. Thus, in accordance with the requirement of paragraph 32 of FRS 21, the exchange loss of S\$100,000 is charged to S Ltd's profit or loss, but is charged to group's 'other comprehensive income'. CJE (x) is to transfer the exchange loss on the long-term loan from S Ltd's profit for the year to the consolidated other comprehensive income for the year.

- (c) The total translation loss of S\$874,000 in the 'other comprehensive income' section of the consolidated statement of comprehensive income comprises the following:

	S\$'000
(i) Loss arising from translation of M Bhd's financial statements	730
(ii) Loss on translation of goodwill (Note [a] above)	44
(iii) Loss on long-term loan (Note [b] above)	100
Total	<u>874</u>

- (d) Non-controlling interest in the after-tax profit is S\$300,000. This may be proved as equal to the non-controlling interest of 20% in the subsidiary's after-tax profit of S\$1,500,000 (see Example 7.1).
- (e) The group's share of the after-tax profit is S\$2,600,000. This may be proved as equal to parent's adjusted profit of S\$1,300,000 ($\$1,400,000 - \text{unrealized profit of } \$100,000$) + parent's share of subsidiary's profit of S\$1,200,000 ($80\% \times \$1,500,000$) + exchange loss of S\$100,000 on the long-term loan (which is transferred to 'other comprehensive income' at the group level).
- (f) Non-controlling interest in the 'total comprehensive income' is S\$215,000. This may be proved as equal to non-controlling interest in the subsidiary's after-tax profit of S\$300,000 ($20\% \times \$1,500,000$) + non-controlling interest in the subsidiary's revaluation surplus of S\$70,000 ($20\% \times \$350,000$) – non-controlling interest in the subsidiary's translation loss of S\$155,000 ($20\% \times [\$730,000 + \$44,000]$).
- (g) The group's share of the total comprehensive income is S\$4,161,000. This may be proved as equal to parent's share of after-tax profit of S\$2,600,000 + parent's revaluation surplus of S\$2,000,000 + parent's share of subsidiary's revaluation surplus of S\$280,000 ($80\% \times \$350,000$) – parent's share of the subsidiary's translation loss of S\$619,000 ($80\% \times [\$730,000 + \$44,000]$) – the exchange loss of S\$100,000 on the long-term loan that is transferred to 'other comprehensive income' at the group level.
- (h) The retained profit in the consolidated balance sheet is S\$7,064,000. This may be proved as equal to parent's adjusted retained profit of S\$4,900,000 ($\$5,000,000 - \text{unrealized profits of } \$100,000$) + parent's share of the subsidiary's post-acquisition retained profit of S\$2,064,000 ($80\% \times [\$3,480,000 - \$900,000]$) + exchange loss of \$100,000 on the long-term loan that is transferred to translation reserve in the consolidated balance sheet at the group level.
- (i) The translation reserve in the consolidated balance sheet is S\$1,187,000 (loss). This may be proved as equal to parent's exchange loss of S\$100,000 on the long-term loan (which is transferred to translation reserve in the consolidated balance sheet at the group level) + parent's share of subsidiary's translation loss of S\$1,087,000 ($80\% \times [\$1,270,000 + \$89,000]$).

- (j) The revaluation reserve in the consolidated balance sheet is S\$2,280,000. This may be proved as equal to parent's revaluation reserve of S\$2,000,000 + parent's share of subsidiary's post-acquisition revaluation reserve of S\$280,000 ($80\% \times [\text{S\$1,250,000} - \text{S\$900,000}]$).
- (k) Note that for presentation purposes, 100% of M Bhd's statement of comprehensive income items are added, line by line, to those of S Ltd, in accordance with the full consolidation principle of FRS 110, and the non-controlling interest thereof is shown as 'attributed to non-controlling interest' in the consolidated statement of comprehensive income. However, in the consolidated statement of changes in equity, the profit for the year and other comprehensive income items for the year are shown net of non-controlling interest.
- (l) Non-controlling interest in the consolidated balance sheet is S\$1,214,000. This can be proved as non-controlling interest of 20% in the subsidiary's net assets of S\$6,160,000 (see Example 7.1) less non-controlling interest of 20% in the translation loss in goodwill of S\$89,000 ($20\% \times \text{S\$6,160,000} - 20\% \times \text{S\$89,000} = \text{S\$1,214,000}$ [rounded to nearest S'000]).

7.4 Foreign associate

As mentioned, FRS 28 requires the use of the equity method, at the group level, to account for investments in associates (including foreign associates).

Assuming the foreign associate adopts a presentation currency that is different from that of the parent, it would be necessary to first translate the financial statements of the foreign associate into the presentation currency of the parent. As mentioned, FRS 21 requires the use of the 'closing rate method' in the translation. The issues in translation are as discussed in Section 7.2.

Once translated, the financial statements of a foreign associate will be no different from those of a local associate, and the equity accounting will follow the normal procedures as discussed in Chapter 6.

An example for accounting for a foreign associate in the consolidated financial statements is given below.

Example 7.3

The consolidated financial statements (before equity accounting for associate) of H Ltd group (with a Singapore-incorporated parent and subsidiary companies and with Singapore Dollar [S\$] as the presentation currency) and the financial statements of its foreign associated company, M Bhd (a Malaysia-incorporated company with Ringgit Malaysia [RM] as its presentation currency) for the year 20X8 are as follows.

(a) Statement of comprehensive income for the year ended 31 December 20X8:

	H Ltd Group S\$'000	M Bhd RM'000
Sales	5,000	9,000
Opening stock	500	1,000
Purchases	2,000	5,500
Closing stock	1,000	2,000
Cost of sales	1,500	4,500
Gross profit	3,500	4,500
Interest income	45	—
Interest expense	—	60
Amortization expense	—	100
Depreciation expense	400	300
Exchange loss	100	—
Other expenses	1,045	1,040
Profit before tax	2,000	3,000
Tax	600	1,000
Profit after tax	1,400	2,000
Other comprehensive income		
Revaluation surplus	2,000	500
Total comprehensive income	3,400	2,500
Profit after tax attributable to:		
Shareholders of the parent	1,200	
Non-controlling interest	200	
	1,400	
Total comprehensive income attributable to:		
Shareholders of the parent	3,100	
Non-controlling interest	300	
	3,400	

(b) Statement of changes in equity (partial) for the year ended 31 December 20X8

	H Ltd Group S\$'000	M Bhd RM'000
Beginning retained profit	3,600	2,300
Profit for the year	1,200	2,000
Ending retained profit	4,800	4,300
Beginning revaluation reserve	—	1,000
Revaluation surplus for the year	2,000	500
Ending revaluation reserve	2,000	1,500

(c) Balance sheet as at 31 December 20X8

	H Ltd Group	M Bhd
	S\$'000	RM'000
Patent	—	200
Land	5,000	6,000
Machinery	6,650	3,000
Accumulated depreciation	(1,000)	(700)
Investment in associate	1,350	—
Loan receivable	700	—
Current assets		
Stock	1,000	2,000
Trade debtors	1,000	2,000
Cash	300	500
	2,300	4,500
Current liabilities		
Trade creditors	1,400	2,200
Tax payable	600	1,000
	2,000	3,200
Net current assets	300	1,300
	13,000	9,800
Share capital	5,000	3,000
Revaluation reserves	2,000	1,500
Retained profit	4,800	4,300
	11,800	8,800
Non-controlling interest	1,200	—
	13,000	8,800
Long-term loan	—	1,000
	13,000	9,800

In this example, M Bhd is the same as M Bhd in Example 7.1. All the 'additional information' thereof, reproduced below for ease of reference, is therefore equally applicable to this example except for long-term loan, which is now assumed to be obtained from H Ltd:

- (a) The intangible asset, a patent, was acquired on 10 March 20X6 for RM 500,000. It is amortized over five years on a straight-line basis with a full year's amortization charge for the year 20X6.
- (b) Land was acquired in December 20X1 for RM 4,500,000. M Bhd revalues its land on 31 December 20X4 and on 31 December 20X8.

- (c) The machines were acquired as follows:

Date	Cost
10 January 20X6	RM 2,000,000
30 March 20X8	RM 1,000,000

The machinery is depreciated on a straight-line basis over ten years with no salvage value. A full year's depreciation is provided if the machinery has been used for more than six months in the year.

- (d) Under the valuation basis of lower of cost and net realizable value as required by FRS 2, both the opening stock and closing stock were valued at cost, based on FIFO assumption. The stock at year-end is deemed to have been purchased during the last three months of the year.
 (e) The ordinary shares of M Bhd were issued at RM 1.00 each in January 20X1.
 (f) The revaluation reserves arise as follows:

Surplus on revaluation of land on 31 December 20X4: RM 1,000,000
Surplus on revaluation of land on 31 December 20X8: RM 500,000

- (g) The long-term loan was obtained from H Ltd on 20 February 20X7. The loan is denominated in RM. It bears the market interest rate of 6% per annum, but no repayment schedule is stipulated; in fact, both companies have agreed that it may be convertible into shares at a later date. The long-term loan, being an equity (not liability) in substance, is presented as part of shareholders' equity, as required by FRS 32.
 (h) In the 31 December 20X7 translated balance sheet, the retained profit was S\$1,980,000 and the translation reserve was S\$540,000 (loss).
 (i) The relevant exchange rates between RM and S\$ are as follows:

10 January 20X6	RM 1.00 = S\$0.90
10 March 20X6	RM 1.00 = S\$0.88
31 December 20X6	RM 1.00 = S\$0.85
20 February 20X7	RM 1.00 = S\$0.84
31 December 20X7	RM 1.00 = S\$0.80
30 March 20X8	RM 1.00 = S\$0.77
31 December 20X8	RM 1.00 = S\$0.70
Average for October–December 20X7	RM 1.00 = S\$0.82
Average for October–December 20X8	RM 1.00 = S\$0.72
Average for 20X8	RM 1.00 = S\$0.75

Additional information

- (a) H Ltd acquired 30% of the share capital of M Bhd on 30 June 20X5 for a cash consideration of S\$1,350,000.
- (b) There were no transactions between H Ltd group and M Bhd, except for the long-term loan.

Required

Translate the financial statements of M Bhd into S\$ in accordance with FRS 21, and prepare the consolidated financial statements for H Ltd group for the year 20X8.

Solution

The first process is to translate the financial statements of M Bhd into S\$. The translated financial statements of M Bhd into S\$ are as shown in the solution to Example 7.1. After the financial statements of M Bhd have been translated into S\$, the second process is to equity account for the investment.

(a) Consolidation journal entries

Dr Investment in associate	450
Cr Share of associate's profit ($30\% \times 1500$)	450
(equity account for profit of M Bhd)	
Dr Investment in associate	324
Cr Beginning retained profit ($30\% \times 1080$)	324
(equity account for post-acquisition reserve in M Bhd)	
Dr Investment in associate	105
Cr Share of revaluation surplus ($30\% \times 350$)	105
(equity account for revaluation surplus of M Bhd)	
Dr Beginning translation reserve ($30\% \times 540$)	162
Cr Investment in associate	162
(equity account for beginning translation reserve of M Bhd)	
Dr Share of translation loss ($30\% \times 730$)	219
Cr Investment in associate	219
(equity account for translation loss of M Bhd)	
Dr Translation loss (OCI of Group)	100
Cr Exchange loss (profit or loss of H Ltd)	100
(to transfer exchange loss on equity loan)	

(b) Consolidated financial statements

H Ltd Group	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	S\$'000
Sales	5,000
Opening stock	500
Purchases	2,000
Closing stock	1,000
Cost of sales	1,500
Gross profit	3,500
Interest income	45
Depreciation expense	400
Other expenses	1,045
Operating profit	2,100
Share of associate's profit	450
Profit before tax	2,550
Tax	600
Profit after tax	1,950
Other comprehensive income/(loss)	
Revaluation surplus	2,000
Translation loss	100
Share of associate's other comprehensive loss	114
Total other comprehensive income	1,786
Total comprehensive income	3,736
Profit after tax attributable to:	
Shareholders of the parent	1,750
Non-controlling interest	200
	1,950
Total comprehensive income attributable to:	
Shareholders of the parent	3,436
Non-controlling interest	300
	3,736

H Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	S\$'000
Beginning retained profit	3,924
Profit for the year	1,750
Ending retained profit	5,674
Beginning revaluation reserve	-
Revaluation surplus for the year	2,105
Ending revaluation reserve	2,105
Beginning translation reserve (loss)	(162)
Translation loss for the year	(319)
Ending translation reserve (loss)	(481)

H Ltd Group
Consolidated balance sheet
As at 31 December 20X8

	S\$'000
Land	5,000
Machinery	6,650
Accumulated depreciation	(1,000)
Investment in associate	1,848
Loan due from associate	700
Current assets	
Stock	1,000
Trade debtors	1,000
Cash	300
	2,300
Current liabilities	
Trade creditors	1,400
Tax payable	600
	2,000
Net current assets	300
	13,498
Share capital	5,000
Revaluation reserves	2,105
Translation adjustment	(481)
Retained profit	5,674
	12,298
Non-controlling interest	1,200
	13,498

Notes to the solution

- (a) After the translation of the associate's financial statements (as shown in Example 7.1), the only consolidation journal entry required is to equity account for the investment.
- (b) The group's revaluation surplus for the year of S\$2,105,000 can be proved as equal to H Ltd group's revaluation surplus of S\$2,000,000 + H Ltd group's share of M Bhd's revaluation surplus of S\$105,000 ($30\% \times \$350,000$).
- (c) The group's translation loss for the year of S\$319,000 can be proved as equal to H Ltd group's share of M Bhd's translation loss of S\$219,000 ($30\% \times \$730,000$) + translation loss on the long-term loan of S\$100,000 (see Note [e] below).
- (d) The investment in associate of S\$1,848,000 can be proved as equal to the group's 30% interest in the net assets of M Bhd of S\$6,160,000 ($30\% \times 6,160,000 = 1,848,000$).
- (e) The long-term loan forms, in substance, part of H Ltd's net investment in M Bhd. Thus, in accordance with the requirement of paragraph 32 of FRS 21, the exchange loss of S\$100,000 is recognized as H Ltd's profit or loss, but is treated as part of the group's 'other comprehensive income'.
- (f) FRS 1 requires the group's share of associate's after-tax profit to be presented as a separate line item in the consolidated statement of comprehensive income. In this case, the group's share of associate's profit is S\$450,000, which may be proved as equal to the group's 30% interest in M Bhd's after-tax profit of S\$1,500,000.
- (g) FRS 1 also requires the group's share of associate's other comprehensive income/(loss) to be presented as a separate line item in the consolidated statement of comprehensive income. In this case, the group's share of associate's other comprehensive income/(loss) is (S\$114,000), which may be proved as equal to the group's 30% interest in M Bhd's revaluation surplus of S\$350,000 – the group's 30% interest in M Bhd's translation loss of S\$730,000.

75 Foreign joint ventures

As mentioned, FRS 111 requires interest in joint ventures to be incorporated into the consolidated financial statements using the equity method (see Section 6.10 in Chapter 6).

Assuming the foreign joint venture adopts a presentation currency that is different from that of the parent, it would be necessary to first translate the financial statements of the foreign joint venture into the presentation currency of the parent. As mentioned, FRS 21 requires the use of the 'closing rate method' in the translation. The issues in translation are as discussed in Section 7.2 above.

Once translated, the financial statements of a foreign joint venture will be no different from those of a local joint venture, and consolidation will follow the procedures under equity accounting as discussed in Section 6.10 in Chapter 6.

7.6 Summary

In the preparation of the consolidated financial statements for a group with foreign subsidiaries, associates, and joint ventures whose presentation currencies are not the same as that of the parent, two processes are involved.

The first process is the translation of the financial statements of the foreign subsidiaries, associates, and joint ventures into the presentation currency of the parent.

FRS 21 requires the use of the closing rate method in the translation. Under the closing rate method, all balance sheet items except share capital and pre-acquisition reserves are translated using the closing rate. The statement of comprehensive income items are translated using the transaction rates (or as an approximation, average rates). Translation differences are recognized as part of the 'other comprehensive income' in the statement of comprehensive income.

The share capital and pre-acquisition reserves of the foreign subsidiaries are translated using the exchange rate prevailing at the date of the share acquisition. Any goodwill arising from the acquisition of foreign subsidiaries during annual periods beginning on or after 1 January 2005 is to be translated using the closing rate.

After the financial statements of the foreign subsidiaries, associates, and joint ventures are translated, the second process, namely, consolidation can then be carried out. The consolidation procedures involved are the same as those discussed in the previous chapters.

Problems for self-study

PROBLEM 7.1

Lion Ltd is a company incorporated in Singapore and Tiger Bhd is a company incorporated in Malaysia. Both companies adopt 31 December accounting year-ends. The functional and presentation currency of Lion Ltd is Singapore Dollar (\$\$), and those of Tiger Bhd is Ringgit Malaysia (RM).

On 1 April 20X8, Lion Ltd paid \$110 million to acquire 100% interest in Tiger Bhd, when Tiger Bhd's identifiable net assets at fair value were represented by share capital of RM 100 million and retained profit of RM 100 million.

On 1 August 20X8, Lion Ltd extended an interest-free loan of RM 22 million to Tiger Bhd, for which repayment was not scheduled for. This loan had been properly accounted for as 'part of a reporting entity's net investment in a foreign operation'.

The exchange rates were \$1.00 = RM 2.00 on 1 April 20X8, \$1.00 = RM 2.20 on 1 August 20X8, and \$1.00 = RM 2.50 on 31 December 20X8.

Required

- Compute the amounts of 'goodwill on consolidation' in S\$ in Lion Ltd's 20X8 consolidated financial statements.
- Prepare the journal entries for both Lion Ltd and Tiger Bhd in relation to the loan, and show how the 'exchange difference arising from the loan' in S\$ is presented in Lion Ltd's 20X8 consolidated financial statements.

Solution

- Goodwill on consolidation

Cost (\$\$110 million x 2.00)	RM 220 million
Net asset	RM 200 million
Goodwill in RM	RM 20 million
At closing rate of S\$1.00 = RM 2.50	
Goodwill in S\$	S\$ 8 million

- Journal entries

Lion Ltd (S\$ million)

1/8 Dr Loan receivable	10
Cr Cash	10
31/12 Dr Exchange loss*	1.2
Cr Loan receivable	1.2

* Recognized as 'profit or loss'

Tiger Bhd (RM million)

1/8 Dr Cash	22
Cr Loan payable	22

In the consolidated financial statements, exchange loss of S\$1.2 million is recognized as 'other comprehensive income'.

PROBLEM 7.2

A Ltd is a company incorporated in Singapore whose functional and presentation currency is Singapore Dollar (S\$). B Bhd is a company incorporated in Malaysia whose functional and presentation currency is Ringgit Malaysia (RM). Both companies have adopted 31 December accounting year-ends.

A Ltd acquires a controlling interest in B Bhd on 1 January 20X8, when B Bhd's balance sheet comprises Share capital RM 200 million, Revaluation reserve RM 60 million, Retained profit RM 40 million, Land RM 200 million, and other net assets RM 100 million.

B Bhd revalues its land from RM 100 million to RM 120 million on 30 September 20X8. For the year ended 31 December 20X8, B Bhd makes a profit of RM 60 million and pays an interim dividend of RM 10 million on 31 July 20X8. As at 31 December 20X8, B Bhd's balance sheet comprises Share capital of RM 200 million, Revaluation reserve RM 80 million, Retained profit of RM 90 million, Land RM 220 million and other net assets RM 150 million.

The exchange rates between RM and S\$ are as follows:

- 1/1/20X8: RM 1.00 = S\$0.40
- 31/7/20X8: RM 1.00 = S\$0.34
- 30/9/20X8: RM 1.00 = S\$0.33
- 31/12/20X8: RM 1.00 = S\$0.30
- Average for 20X8: RM 1.00 = S\$0.35

Required

Compute the translation gain/loss for the year 20X8 (A Ltd's policy is to translate 'other comprehensive income' items and dividends paid at the exchange rate existing at the date of transaction).

Solution

Translation loss

On beginning net assets (RM 300 million × [0.3 – 0.4])	= S\$30 million
Add revaluation surplus (RM 20 million × [0.3 – 0.33])	= S\$ 0.6 million
Add profit for the year (RM 60 million × [0.3 – 0.35])	= S\$ 3 million
Less dividend (RM 10 million × [0.3 – 0.34])	= S\$ 0.4 million
Total	= <u><u>S\$33.2 million</u></u>

PROBLEM 7.3

ABC Bhd is a company incorporated in Malaysia. Its functional and presentation currency is Ringgit Malaysia (RM).

AAA Ltd, a company incorporated in Singapore (whose presentation currency is Singapore Dollar [S\$]) acquired a controlling interest in ABC Bhd on 5 May 20X5. On 5 May 20X5, ABC Bhd's net assets are represented by share capital of RM 3 million and retained profit of RM 1 million.

The financial statements of ABC Bhd for the year 20X8 are as follows:

(a) Statement of comprehensive income for the year ended 31 December 20X8

	RM'000
Sales	9,000
Opening stock	1,000
Purchases	5,500
Closing stock	2,000
Cost of sales	4,500
Gross profit	4,500
Amortization expense	100
Depreciation expense	300
Other expenses	1,100
Profit before tax	3,000
Tax	1,000
Profit after tax	2,000
Other comprehensive income	
Revaluation surplus	1,500
Total comprehensive income	<u>3,500</u>

(b) Statement of changes in equity (partial) for the year ended 31 December 20X8

	RM'000
Beginning retained profit	2,300
Profit for the year	2,000
Ending retained profit	<u>4,300</u>
Beginning revaluation reserve	—
Revaluation surplus for the year	1,500
Ending revaluation reserve	<u>1,500</u>

(c) Balance sheet as at 31 December 20X8

	RM'000
Intangible asset	200
Land	5,000
Machinery	3,000
Accumulated depreciation	(700)
 Current assets	
Stock	2,000
Trade debtors	2,000
Cash	500
	4,500
 Current liabilities	
Trade creditors	2,200
Tax payable	1,000
	3,200
 Net current assets	1,300
	8,800
 Share capital	3,000
Revaluation reserves	1,500
Retained profit	4,300
	8,800

Additional information

- (a) The ordinary shares of ABC Bhd were issued at RM 1.00 each in January 20X1.
- (b) The intangible asset, a patent, was acquired on 10 March 20X6 for RM 500,000. It is amortized over five years on a straight-line basis with a full year's amortization charge for the year 20X6.
- (c) Land was acquired on 30 January 20X6 for RM 34,500,000. ABC Bhd revalues its land for the first time on 31 December 20X8.
- (d) The machines were acquired as follows: RM 2,000,000 on 30 January 20X6 and RM 1,000,000 on 30 March 20X8. The machinery is depreciated on a straight-line basis over ten years with no salvage value. A full year's depreciation is provided if the machinery has been used for more than six months in the year.
- (e) Under the valuation basis of lower of cost and net realizable value as required by FRS 2, both the opening stock and closing stock were valued at cost, based on FIFO assumption. The stock at year-end is deemed to have been purchased during the last three months of the year.
- (f) In the 31 December 20X7 translated balance sheet, the retained profit was S\$1,980,000 and the translation reserve was S\$740,000 (loss).

(g) The relevant exchange rates between RM and S\$ are as follows:

5 May 20X5	RM 1.00 = S\$1.00
30 January 20X6	RM 1.00 = S\$0.90
10 March 20X6	RM 1.00 = S\$0.88
31 December 20X6	RM 1.00 = S\$0.85
20 February 20X7	RM 1.00 = S\$0.84
31 December 20X7	RM 1.00 = S\$0.80
30 March 20X8	RM 1.00 = S\$0.77
31 December 20X8	RM 1.00 = S\$0.70
Average for October–December 20X7	RM 1.00 = S\$0.82
Average for October–December 20X8	RM 1.00 = S\$0.72
Average for 20X8	RM 1.00 = S\$0.75

Required

Translate the 20X8 financial statements of ABC Bhd into S\$, in compliance with FRS 21.

Solution

The translation of the 20X8 financial statements of ABC Bhd in compliance with FRS 21 will be as follows:

(a) Statement of comprehensive income for the year ended 31 December 20X8

	RM'000	Rate	S\$'000
Sales	9,000	0.75	6,750
Opening stock	1,000	0.75	750
Purchases	5,500	0.75	4,125
Closing stock	2,000	0.75	1,500
Cost of sales	4,500		3,375
Gross profit	4,500		3,375
Amortization expense	100	0.75	75
Depreciation expense	300	0.75	225
Other expenses	1,100	0.75	825
Profit before tax	3,000		2,250
Tax	1,000	0.75	750
Profit after tax	2,000		1,500
Other comprehensive income			
Revaluation reserve	1,500	0.70	1,050
Translation loss	—	Note c	(630)
Total other comprehensive income ..	1,500		420
Total comprehensive income ..	3,500		1,920

(b) Statement of changes in equity (partial) for the year ended 31 December 20X8

	RM'000	Rate	S\$'000
Retained profit			
Beginning balance			
Pre-acquisition reserve	1,000	1.00	1,000
Post-acquisition reserve	1,300	Note b	980
Profit for the year	2,000	SCI	1,500
Ending balance	<u>4,300</u>		<u>3,480</u>
Revaluation reserve			
Beginning balance	—	—	—
Revaluation surplus for the year	1,500	0.70	1,050
Ending balance	<u>1,500</u>		<u>1,050</u>
Translation reserve/(loss)			
Beginning balance	—	(20X7)	(740)
Translation loss for the year	—	Note c	(630)
Ending balance	<u>—</u>		<u>(1,370)</u>

(c) Balance sheet as at 31 December 20X8

	RM'000	Rate	S\$'000
Intangible assets	200	0.70	140
Land	5,000	0.70	3,500
Machinery	3,000	0.70	2,100
Accumulated depreciation	(700)	0.70	(490)
Current assets			
Stock	2,000	0.70	1,400
Trade debtors	2,000	0.70	1,400
Cash	500	0.70	350
	<u>4,500</u>		<u>3,150</u>
Current liabilities			
Trade creditors	2,200	0.70	1,540
Tax payable	1,000	0.70	700
	<u>3,200</u>		<u>(2,240)</u>
Net current assets	<u>1,300</u>		<u>910</u>
	<u>9,800</u>		<u>6,160</u>
Share capital	3,000	1.00	3,000
Revaluation reserves	1,500	SCE	1,050
Translation reserve (loss)	—	SCE	(1,370)
Retained profit	<u>4,300</u>	SCE	<u>3,480</u>
	<u>8,800</u>		<u>6,160</u>

Notes to the solution

- (a) Under the closing rate method, all the balance sheet items are translated using the closing rate (that is, the exchange rate prevailing on 31 December 20X8 of RM 1.00 = S\$0.70), except for the share capital and the pre-acquisition retained profit, which are translated at the rate prevailing at the time when AAA Ltd acquired ABC Bhd (RM 1.00 = S\$1.00). The profit and loss items are, in this case, translated using the average rates, as an approximation of the actual transaction rates.
- (b) The translated post-acquisition profit in the beginning retained profit of S\$980,000 is obtained by deducting the pre-acquisition retained profit of S\$1,000,000 (RM 1,000,000 × historical rate of RM 1.00 = S\$1,000) from the beginning retained profit of S\$1,980,000 (from the 20X7 translated balance sheet). It can also be re-computed as follows (the balancing figure in the S\$ column):

	RM'000	Rate	S\$'000
Net assets as at 31 December 20X7 ..	<u>5,300</u>	0.80	<u>4,240</u>
Share capital	3,000	1.00	3,000
Translation reserve	—		(740)
Retained profit			
Pre-acquisition	1,000	1.00	1,000
Post-acquisition	<u>1,300</u>		<u>980</u>
Total shareholders' equity	<u>5,300</u>		<u>4,240</u>

- (c) The translation loss for the year comprises two components:
- translation difference on net assets (which is equal to beginning net assets × change in the exchange rates from the beginning to the end of the current year); and
 - translation difference on profit (which is equal to profit retained for the year × change in the exchange rates from the average rate to the closing rate).

The calculations are shown below:

On beginning net assets: RM 5,300,000 × (0.70 – 0.80) =	S\$530,000 loss
On profit for the year: RM 2,000,000 × (0.70 – 0.75) =	<u>S\$100,000 loss</u>
Total	<u><u>S\$630,000 loss</u></u>

Note: The beginning net asset is obtained using the following formula: Beginning net asset + retained profit for the year + revaluation surplus for the year = ending net asset.

- (d) The 'Other comprehensive income' items, like profit or loss items, may be translated using the rate at the date of transaction or using the average rate (paragraph 39). In this case, the revaluation of land is done on 31 December 20X8, and the revaluation surplus

is translated using the transaction rate (which is also the closing rate in this case). Consequently, there is no translation gain/loss arising from this 'Other comprehensive income' item.

If the revaluation was done on 30 March 20X8, and the revaluation surplus was translated using the transaction rate on 30 March 20X8 of RM 1.00 = S\$0.77, then there would be a translation exposure from the revaluation surplus. In this case, the translation loss in Note (c) above would be calculated with an additional line item 'On other comprehensive item: RM 1,500,000 × (0.70 – 0.77) = S\$105,000 loss', and the total translation loss for the year would be S\$735,000.

If, regardless of the date of the revaluation, the 'Other comprehensive income' item is translated using the average rate as that applied to profit or loss items, then the translation loss in Note (c) above will be calculated based on 'Total comprehensive income of RM 3,500,000' (instead of 'Profit for the year of RM 2,000,000'), and the total translation loss for the year would be S\$705,000.

PROBLEM 7.4

On 30 June 20X5, X Ltd, a company incorporated in Singapore, acquired 60% interest in Y Bhd, a company incorporated in Malaysia. On this date, Y Bhd's net assets were represented by share capital of RM 10,000,000, revaluation reserve of RM 2,000,000, and retained profit of RM 2,000,000.

On 1 January 20X8, X Ltd acquired 40% interest in Z Ltd, a company incorporated in Hong Kong. The presentation currencies of X Ltd, Y Bhd, and Z Ltd are Singapore Dollar (S\$), Ringgit Malaysia (RM), and Hong Kong Dollar (HK\$), respectively.

The financial statements of X Ltd, its subsidiary Y Bhd, and its associate Z Ltd for the year 20X8 are as follows:

(a) Statements of comprehensive income for the year ended 31 December 20X8

	X Ltd S\$'000	Y Bhd RM'000	Z Ltd HK\$'000
Sales	9,000	7,000	5,000
Cost of sales	3,000	2,000	1,000
Gross profit	6,000	5,000	4,000
Operating expenses	2,540	2,000	3,000
Profit before tax	3,460	3,000	1,000
Tax	1,040	1,000	150
Profit after tax	2,420	2,000	850
Other comprehensive income	—	—	—
Total comprehensive income	2,420	2,000	850

(b) Balance sheets as at 31 December 20X8

	X Ltd	Y Bhd	Z Ltd
	S\$'000	RM'000	HK\$'000
Land	—	12,000	5,000
Machinery	23,000	3,000	—
Accumulated depreciation	(5000)	(1,400)	—
Investment in Y Bhd	7,650	—	—
Investment in Z Ltd	650	—	—
Current assets			
Stock	1,000	4,800	2,000
Trade debtors	500	2,000	755
Cash	300	500	195
	1,800	7,300	2,950
Current liabilities			
Trade creditors	260	2,200	450
Tax payable	1,040	1,000	150
	1,300	3,200	600
Net current assets	500	4,100	2,350
	26,800	17,700	7,350
Share capital	20,000	10,000	5,000
Revaluation reserve	—	2000	—
Retained profit	6,800	5,700	2,350
	26,800	17,700	7,350

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	X Ltd	Y Bhd	Z Ltd
	S\$'000	RM'000	HK\$'000
Beginning retained profit	5,080	3,700	1,500
Profit for the year	2,420	2,000	850
Dividend paid	700	—	—
Ending retained profit	6,800	5,700	2,350

In 20X8, X Ltd started to sell to Y Bhd and Z Ltd. For the year, X Ltd sold goods invoiced at S\$500,000 to Y Bhd and sold goods invoiced at S\$200,000 to Z Ltd. At 31 December 20X8, there are unrealized profits (arising from the intragroup sales) of S\$100,000 in Y Bhd's stock, and S\$50,000 in Z Ltd's stock.

X Ltd has adopted FRS 21 and FRS 103 since 1 January 20X5. There has been no impairment on goodwill.

Additional information regarding Y Bhd's financial statements

- (a) There was an accumulated translation loss of S\$1,500,000 and retained profit of S\$3,260,000 in the 31 December 20X7 translated balance sheet of Y Bhd.
- (b) Y Bhd adopts the Malaysian accounting standards, which are similar to the FRS in Singapore. As such, there is no adjustment required to make Y Bhd's financial statements in compliance with FRS.
- (c) Land was acquired in December 20X1 for RM 10,000,000. It was revalued to RM 12,000,000 on 31 December 20X4.
- (d) RM 1,000,000 of the machinery was purchased in January 20X1, and RM 2,000,000 was purchased on 10 January 20X6. The machinery is depreciated on a straight-line basis over ten years with no salvage value. A full year's depreciation is provided if the machinery has been used for more than six months in the year.
- (e) Under the valuation basis of lower of cost and market, both the opening stock and closing stock were valued at net realizable value at the respective year-end. The stock at year-end is deemed to have been purchased during the last three months of the year.
- (f) The ordinary shares of Y Bhd were issued at par of RM 1.00 each in January 20X1.
- (g) The relevant exchange rates between RM and S\$ are as follows:

30 June 20X5	RM 1.00 = S\$0.90
10 January 20X6	RM 1.00 = S\$0.88
20 February 20X7	RM 1.00 = S\$0.84
31 December 20X7	RM 1.00 = S\$0.80
31 December 20X8	RM 1.00 = S\$0.70
Average for October–December 20X7	RM 1.00 = S\$0.82
Average for October–December 20X7	RM 1.00 = S\$0.72
Average for 20X8	RM 1.00 = S\$0.75

Additional information regarding Z Ltd's financial statements

- (a) Z Ltd adopts the Hong Kong accounting standards, which are similar to the FRS in Singapore. As such, there is no adjustment required to make Z Ltd's financial statements in compliance with FRS.
- (b) The land was purchased in 20X3 for a cash consideration of HK\$5,000,000. There has been no change in the fair value of the land.
- (c) Z Ltd was incorporated in 20X1 with a paid-up capital of 5,000,000 ordinary shares, issued at HK\$1.00 per share.
- (d) The relevant exchange rates between HK\$ and S\$ are as follows:

1 January 20X8	HK\$1.00 = S\$0.25
31 December 20X8	HK\$1.00 = S\$0.20
Average for 20X8	HK\$1.00 = S\$0.22

Required

Prepare the consolidated financial statements for X Ltd for the year 20X8.

Solution

The first process is to translate the financial statements of Y Bhd and Z Ltd into the presentation currency of the parent, X Ltd, which is S\$. The translation of the 20X8 financial statements of Y Bhd under the closing rate method will be as follows:

(a) Statement of comprehensive income for the year ended 31 December 20X8

	RM'000	Rate	S\$'000
Sales	7,000	0.75	5,250
Cost of sales	2,000	0.75	1,500
Gross profit	5,000		3,750
Operating expenses	2,000	0.75	1,500
Profit before tax	3,000	0.75	2,250
Tax	1,000	0.75	750
Profit after tax	2,000		1,500
Other comprehensive income			
Translation loss	—	Note c	(1,670)
Total comprehensive income/(loss)	2,000		(170)

(b) Balance sheet as at 31 December 20X8

	RM'000	Rate	S\$'000
Land	12,000	0.70	8,400
Machinery	3,000	0.70	2,100
Accumulated depreciation	(1,400)	0.70	(980)
Current assets			
Stock	4,800	0.70	3,360
Trade debtors	2,000	0.70	1,400
Cash	500	0.70	350
	7,300		5,110
Current liabilities			
Trade creditors	2,200	0.70	1,540
Tax payable	1,000	0.70	700
	3,200		2,240
Net current assets	4,100		2,870
	17,700		12,390
Share capital	10,000	0.90	9,000
Revaluation reserves	2,000	0.90	1,800
Translation reserve	—	SCE	(3170)
Retained profit	5,700	SCE	4,760
	17,700		12,390

(c) Statement of changes in equity (partial) for the year ended 31 December 20X8

	RM'000	Rate	S\$'000
Retained profit			
Beginning balance			
Pre-acquisition	2,000	0.90	1,800
Post-acquisition	1,700	Note b	1,460
	<u>3,700</u>		<u>3,260</u>
Profit for the year	2,000	SCI	1,500
Ending retained profit	<u>5,700</u>		<u>4,760</u>
Translation reserve			
Beginning balance	—		(1,500)
Loss for the year	—	Note c	(1,670)
Ending balance	<u>—</u>		<u>(3,170)</u>
Revaluation reserve			
Beginning balance	2,000	0.90	1,800
Change for the year	—		—
Ending balance	<u>2,000</u>	0.90	<u>1,800</u>

Notes on the translation of Y Bhd

- (a) Under the closing rate method, all the balance sheet items are translated using the exchange rate prevailing as at 31 December 20X8 of RM 1.00 = S\$0.70, except for the share capital and the preacquisition reserves, which are translated using the exchange rate prevailing at the date of investment on 30 June 20X5 of RM 1.00 = S\$0.90. All profit and loss items are translated using the average exchange rate for 20X8 of RM 1.00 = S\$0.75.
- (b) The translated post-acquisition profit in the beginning retained profit of S\$1,460,000 is obtained by deducting the pre-acquisition retained profit of S\$1,800,000 (RM 2,000,000 × historical rate of RM 1.00 = S\$0.90) from the beginning retained profit of S\$3,260,000 (from the 20X7 translated balance sheet). It can also be re-computed as follows (the balancing figure in the S\$ column):

	RM'000	Rate	S\$'000
Net assets as at 31 December 20X7	<u>15,700</u>	0.80	<u>12,560</u>
Share capital	10,000	0.90	9,000
Revaluation reserve	2,000	0.90	1,800
Translation reserve	—		(1,500)
Retained profit			
Pre-acquisition	2,000	0.90	1,800
Post-acquisition	1,700		1,460
Total shareholders' equity	<u>15,700</u>		<u>12,560</u>

(c) The translation difference for the year will consist of two components:

- translation difference on net assets (which is equal to Beginning net assets × change in the exchange rates from the beginning to the end of the current year); and
- translation difference on profit (which is equal to Profit for the year × change in the exchange rates from the average rate to the closing rate).

The translation difference for the year 20X8 is computed as shown below:

On net assets: RM 15,700,000 × (0.70 – 0.80)	=	S\$1,570,000 loss
On profit: RM 2,000,000 × (0.70 – 0.75)	=	S\$ 100,000 loss
Total	=	<u>S\$1,670,000 loss</u>

The beginning balance of the translation reserve was S\$1,500,000 (loss). Therefore, the translation reserve at 31 December 20X8 is S\$3,170,000 (loss).

(Note: Alternatively, the ending balance of the translation reserve of S\$3,170,000 [loss] may be simply inserted as the balancing figure in the translated balance sheet. In this case, the statement of comprehensive income and the statement of changes in equity would have to be translated first. The translated retained profit of S\$4,760,000 and revaluation reserve of S\$1,800,000 are then brought forward to the balance sheet. The translation reserve is inserted as the figure necessary to balance the translated balance sheet.)

The translation of the 20X8 financial statements of Z Ltd under the closing rate method will be as follows:

(a) Statement of comprehensive income for the year ended 31 December 20X8

	HK\$'000	Rate	S\$'000
Sales	5,000	0.22	1,100
Cost of sales	1,000	0.22	220
Gross profit	4,000		880
Operating expenses	3,000	0.22	660
Profit before tax	1,000	0.22	220
Tax	150	0.22	33
Profit after tax	850		187
Other comprehensive income			
Translation loss	–	Note b	(342)
Total comprehensive income/(loss)	850		<u>(155)</u>

(b) Balance sheet as at 31 December 20X8

	HK\$'000	Rate	S\$'000
Land	5,000	0.20	1,000
Current assets			
Stock	2,000	0.20	400
Trade debtors	755	0.20	151
Cash	195	0.20	39
	2,950		590
Current liabilities			
Trade creditors	450	0.20	90
Tax payable	150	0.20	30
	600		120
Net current assets	2,350		470
	7,350		1,470
Share capital	5,000	0.25	1,250
Translation reserve	—	SCE	(342)
Retained profit	2,350	SCE	562
	7,350		1,470

(c) Statement of changes in equity (partial) for the year ended 31 December 20X8

	HK\$'000	Rate	S\$'000
Retained profit			
Beginning balance	1,500	0.25	375
Profit for the year	850	SCI	187
Ending balance	2,350		562
Translation reserve			
Beginning balance	—		—
Loss for the year	—	Note b	(342)
Ending balance	—		(342)

Notes on the translation of Z Ltd

- (a) Under the closing rate method, all the balance sheet items are translated using the exchange rate prevailing as at 31 December 20X8 of HK\$1.00 = S\$0.20, except for the share capital and the pre-acquisition reserves, which are translated using the exchange rate prevailing at the date of investment on 1 January 20X8 of HK\$1.00 = S\$0.25. All profit and loss items are translated using the average exchange rate for 20X8 of HK\$1.00 = S\$0.22.

(b) The translation difference for the year will consist of two components:

- translation difference on net assets (which is equal to Beginning net assets × change in the exchange rates from the beginning to the end of the current year); and
- translation difference on profit (which is equal to Profit for the year × change in the exchange rates from the average rate to the closing rate).

The translation difference for the year 20X8 is computed as shown below:

On net assets: HK\$6,500,000 × (0.20 – 0.25)	=	S\$325,000 loss
On profit: HK\$850,000 × (0.20 – 0.22)	=	S\$ 17,000 loss
Total	=	<u>S\$342,000 loss</u>

There was no beginning balance. Therefore, the translation reserve at 31 December 20X8 is S\$342,000 (loss).

(Note: Alternatively, the translation loss of S\$342,000 may be simply inserted as the balancing figure in the translated balance sheet. In this case, the statement of comprehensive income and the statement of changes in equity would have to be translated first. The translated retained profit figure of S\$562,000 is then brought forward to the balance sheet. The translation reserve is the figure necessary to balance the translated balance sheet.)

After the financial statements of Y Bhd and Z Ltd have been translated into S\$, the second process is to consolidate X Ltd's financial statements with the translated financial statements of Y Bhd and to equity account for the investment in Z Ltd. The consolidated journal entries, consolidated worksheet, and consolidated financial statements are as follows:

(a) Consolidation journal entries

(i)	Dr Share capital (Y)	5,400
	Dr Revaluation reserve (Y)	1,080
	Dr Beginning retained profit (Y)	1,080
	Dr Goodwill on consolidation	90
	Cr Investment in Y Bhd	7,650
	(elimination of investment account)	
(ii)	Dr Beginning translation reserve	10
	Dr Translation loss	10
	Cr Goodwill on consolidation	20
	(translation of goodwill)	
(iii)	Dr Sales	500
	Cr Cost of sales	500
	(elimination of intragroup sales)	

(iv)	Dr Cost of sale (X)	100	
	Cr Stock		100
	(elimination of unrealized profit)		
(v)	Dr Non-controlling interest (CSCI) ($40\% \times 1500$)	600	
	Cr Non-controlling interest (CBS)		600
	(non-controlling interest in profit of Y Bhd)		
(vi)	Dr Non-controlling interest (CBS)	672	
	Cr Non-controlling interest (CSCI) ($40\% \times [1,670 + 10]$)		672
	(non-controlling interest in translation loss of Y Bhd)		
(vii)	Dr Share capital (Y)	3,600	
	Dr Revaluation reserve (Y) ($40\% \times 1,800$)	720	
	Dr Beginning retained profit (Y) ($40\% \times 3,260$)	1,304	
	Cr Beginning translation reserve ($40\% \times [1,500 + 10]$)	604	
	Cr Non-controlling interest (B/S)		5,020
	(non-controlling interest in other shareholders' equity of Y Bhd)		
(viii)	Dr Investment in Z Ltd	75	
	Cr Share of associate's profit		75
	(to equity account for profit of associate)		
(ix)	Dr Share of associate's profit	20	
	Cr Investment in Z Ltd		20
	(elimination of unrealized profit)		
(x)	Dr Share of associate's translation loss	137	
	Cr Investment in Z Ltd		137
	(share of associate's translation loss)		

(b) Consolidation worksheet

	X Ltd	Y Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	9,000	5,250	iii 500		13,750
Cost of sales	3,000	1,500	iv 100	iii 500	4,100
Gross profit	6,000	3,750			9,650
Expenses	2,540	1,500			4,040
Operating profit	3,460	2,250			5,610
Share of profit	—	—	ix 20	viii 75	55
Profit before tax	3,460	2,250			5,665
Tax	1,040	750			1,790
Profit after tax	2,420	1,500			3,875
NCI	—	—	v 600		600
Group profit	—	—			3,275
Dividend	700	—			700
Beginning retained profit ..	5,080	3,260	i 1,080		5,956
			vii 1,304		
Ending retained profit	6,800	4,760			8,531
Goodwill	—	—	i 90	ii 20	70
Land	—	8,400			8,400
Machinery	23,000	2,100			25,100
Accumulated depreciation ..	(5,000)	(980)			(5,980)
Y Bhd	7,650	—		i 7,650	—
Z Ltd	650	—	viii 75	ix 20	
			x 137		568
Stock	1,000	3,360		iv 100	4,260
Trade debtors	500	1,400			1,900
Cash	300	350			650
Trade creditors	260	1,540			1,800
Tax payable	1,040	700			1,740
Share capital	20,000	9,000	i 5,400		
			vii 3,600		2,0000
Revaluation	—	1,800	i 1,080		
			vii 720		
Retained profit	6,800	4,760			8,531
Translation	—	(3,170)	ii 10	vi 672	
			ii 10	vii 604	
			x 137		2,051
NCI	—	—	vi 672	v 600	
			vii 5,020		4,948

(c) Consolidated financial statements

X Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	S\$'000
Sales	13,750
Cost of sales	4,100
Gross profit	9,650
Operating expenses	4,040
Operating profit	5,610
Share of associate's profit	55
Profit before tax	5,665
Tax	1,790
Profit after tax	3,875
Other comprehensive income	
Translation loss	(1,680)
Share of associate's other comprehensive income	(137)
Total other comprehensive income/(loss)	(1,817)
Total comprehensive income	<u>2,058</u>
Profit after tax attributable to:	
Shareholders of the parent	3,275
Non-controlling interest	600
	3,875
Total comprehensive income attributable to:	
Shareholders of the parent	2,130
Non-controlling interest	(72)
	<u>2,058</u>

X Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	S\$'000
Goodwill on consolidation	70
Land	8,400
Machinery	25,100
Accumulated depreciation	(5,980)
Investment in associate	568
Current assets	
Stock	4,260
Trade debtors	1,900
Cash	650
	6,810
Current liabilities	
Trade creditors	1,800
Tax payable	1,740
	3,540
Net current assets	3,270
	31,428
Share capital	20,000
Translation reserve	(2,051)
Retained profit	8,531
	25,480
Non-controlling interest	4,948
	31,428

X Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	S\$'000
Retained profits	
Beginning balance	5,956
Profit for the year	3,275
Dividend	(700)
Ending balance	8,531
Translation reserve	
Beginning balance	(906)
Loss for the year	(1,145)
Ending balance	(2,051)

Notes to the solution

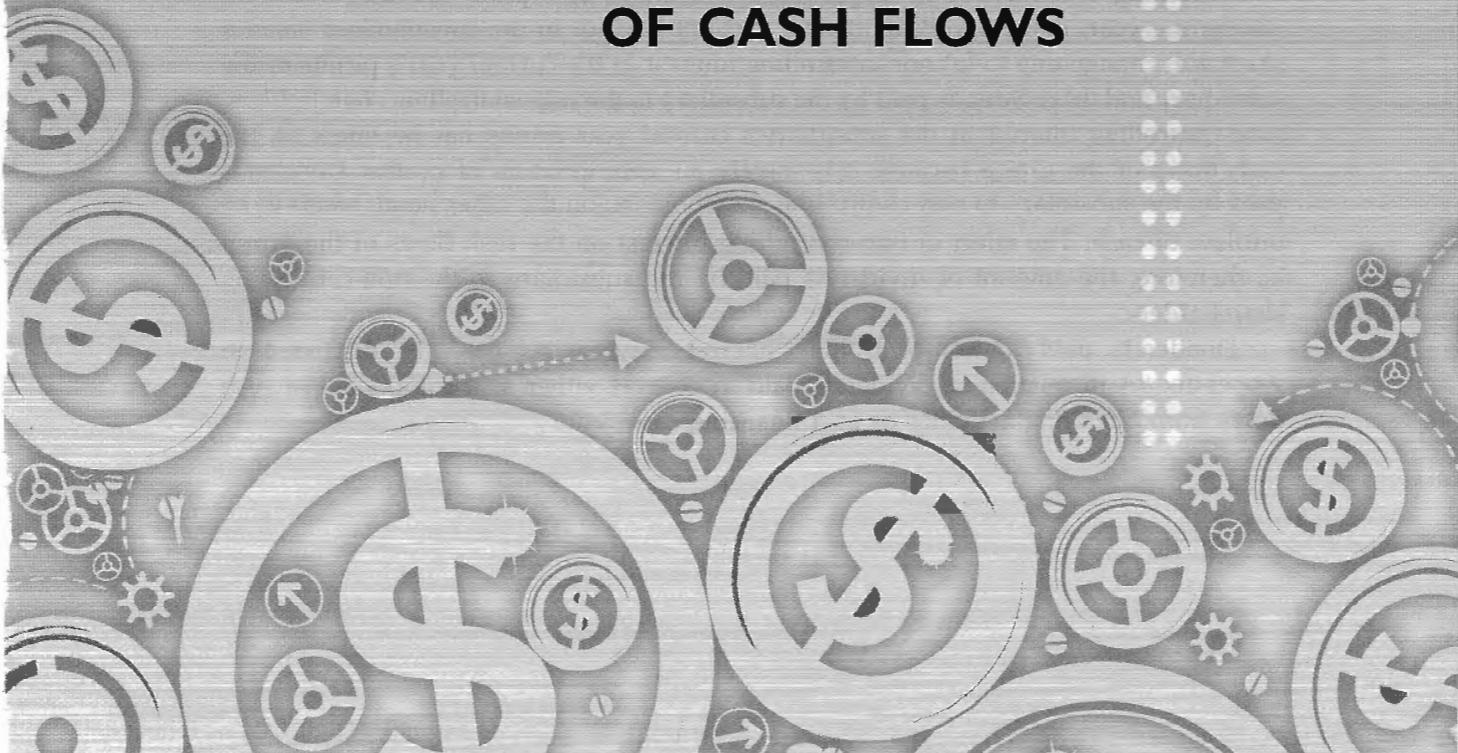
- (a) It is a historical fact that X Ltd has made an excess payment of S\$90,000 (as goodwill) in the acquisition of Y Bhd. This fact is recorded in CJE (i). This is also the justification for translating the share capital and pre-acquisition reserves of the subsidiary using the exchange rate prevailing at the date of acquisition. As previously discussed, FRS 21 requires this goodwill to be viewed as an asset belonging to the subsidiary. Thus, in this case, Y Bhd is deemed to have goodwill valued at RM 100,000 ($\text{S\$90,000} \times \text{RM 1.00/S\$0.90}$). At the date when X Ltd acquired Y Bhd, the exchange rate was $\text{RM 1.00} = \text{S\$0.90}$, and the goodwill was expressed at S\$90,000. As at 31 December 20X7, when the exchange rate was $\text{RM 1.00} = \text{S\$0.80}$, the goodwill will have to be translated using this closing rate into S\$80,000. The cumulative translation loss of S\$10,000 ($\text{S\$90,000} - \text{S\$80,000}$) for the years 20X5 to 20X7 has been recognized in the 20X7 consolidated balance sheet (note: the translation loss has not been recognized in Y Bhd's translated balance sheet because this translation loss arises during the consolidation process, not during the translation process). As at 31 December 20X8, when the exchange rate was $\text{RM 1.00} = \text{S\$0.70}$, the goodwill will have to be translated using this closing rate into S\$70,000. This further translation loss of S\$10,000 ($\text{S\$80,000} - \text{S\$70,000}$) for 20X8 is recognized as part of 'other comprehensive income' in the 20X8 consolidated statement of comprehensive income (see CJE [ii]).
- (b) FRS 21 has adopted the concept that the goodwill on consolidation arising from acquisition of a foreign subsidiary is an asset belonging to the foreign subsidiary. Thus, the translation difference arising from translation of the goodwill should be allotted to both the owners of the parent and to the non-controlling interest.
- (c) In the consolidation adjusting entries, it is necessary to account for the beginning translation reserve separately from the translation gain/loss for the year. This is to ensure that the beginning translation reserve in the 20X8 consolidated financial statements is equal to the ending translation reserve in the 20X7 consolidated financial statements.
- (d) Note that Y Bhd's revaluation reserve, being a pre-acquisition reserve in this case, is fully eliminated and not presented in the consolidated financial statements.
- (e) The group's share of the after-tax profit of S\$3,275,000 may be proved as equal to X Ltd's profit of S\$2,320,000 ($\text{S\$2,420,000} - \text{unrealized profit of S\$100,000}$) + group's share of Y Bhd's profit of S\$900,000 ($60\% \times \text{S\$1,500,000}$) + group's share of Z Ltd's profit of S\$55,000 ($40\% \times [\text{S\$187,000} - \text{S\$50,000}]$).
- (f) The non-controlling interest in the after-tax profit of S\$600,000 may be proved as equal to non-controlling interest of $40\% \times \text{Y Bhd's after-tax profit of S\$1,500,000}$.
- (g) The group's share of the total comprehensive income of S\$2,130,000 may be proved as equal to the group's share of after-tax profit of S\$3,275,000 – group's share of Y Bhd's translation loss for the year of S\$1,008,000 ($60\% \times [\text{S\$1,670,000} + \text{S\$10,000}]$) – group's share of Z Ltd's translation loss for the year of S\$137,000 ($40\% \times \text{S\$342,000}$).
- (h) The non-controlling interest in the total comprehensive income of S\$72,000 (loss) may be proved as equal to non-controlling interest in after-tax profit of \$600,000 – non-controlling interest in Y Bhd's translation loss of S\$672,000 ($40\% \times [\text{S\$1,670,000} + \text{S\$10,000}]$).

- (i) Group retained profit of S\$8,531,000 can be proved as equal to X Ltd's adjusted retained profit of S\$6,680,000 ($\$6,800,000 - \text{unrealized profit of } \$120,000 [\$100,000 + 40\% \times \$50,000]$) + group's share of Y Bhd's post-acquisition retained profit of S\$1,776,000 ($60\% \times [\$1,460,000 + \$1,500,000]$) + group's share of Z Ltd's post-acquisition retained profit of S\$75,000 ($40\% \times \$187,000 = \$74,800$ rounded to S\$75,000) (see CJE [vii]).
- (j) Group translation reserve of S\$2,051,000 (loss) can be proved as equal to group's share of Y Bhd's accumulated translation loss of S\$1,914,000 ($60\% \times [\$3,170,000 + \$20,000]$) + group's share of Z Ltd's accumulated translation loss of S\$137,000 ($40\% \times \$342,000$).
- (k) Non-controlling interest of S\$4,948,000 in the consolidated balance sheet can be proved as equal to non-controlling interest in Y Bhd's net assets of S\$4,956,000 ($40\% \times \$12,390,000$) – non-controlling interest in the translation loss of goodwill of S\$8,000 ($40\% \times \$20,000$).
- (l) Investment in associate of S\$568,000 can be proved as equal to cost of investment of S\$650,000 – group's share of Z Ltd's post-acquisition profit of S\$75,000 ($40\% \times \$187,000 = \$74,800$ rounded to S\$75,000; see CJE [vii]) – group's share of the translation loss of S\$137,000 ($40\% \times \$342,000 = \$136,800$ rounded to S\$137,000; see CJE [ix]) – unrealized profit of \$20,000 ($40\% \times \$50,000$). The investment balance of S\$568,000 can also be proved as equal to the group's share of Z Ltd's net assets of S\$588,000 ($40\% \times \$1,470,000$) – unrealized profit of S\$20,000 ($40\% \times \$50,000$).

C H A P T E R

8

CONSOLIDATED STATEMENT OF CASH FLOWS



8.1 Introduction

FRS 7 requires a statement of cash flows to be presented as an integral part of the financial statements. Thus, a consolidated statement of cash flows is required as an integral part of the consolidated financial statements.

It should be noted at the outset that the consolidated statement of cash flows is normally not prepared by consolidating the statements of cash flows of individual companies in the group. Instead, it is prepared based on the information contained in the consolidated balance sheets and consolidated statement of comprehensive income of the group. Hence the preparation and presentation of the consolidated statement of cash flows is the same as the preparation and presentation of the statement of cash flows for an individual company, as discussed in Appendix 8A.

However, there are certain items that are presented in the consolidated balance sheet and consolidated statement of comprehensive income but not in the entity balance sheet and statement of comprehensive income. These items, which may pose problems in the preparation and presentation of the consolidated statement of cash flows, are discussed below.

8.2 Non-controlling interest

The question is: What is the impact of non-controlling interest on the cash flows of the group?

Assuming that there is no acquisition or disposal of a partly owned subsidiary during the year, non-controlling interest account balance in the consolidated balance sheet will change due to (a) non-controlling interest in the current year's profits of the subsidiary and (b) dividends paid by the subsidiary to the non-controlling shareholders. Non-controlling interest in the subsidiary's current year profits has no effect on the cash flows of the group because it is merely an appropriation of profits. Dividends paid by the subsidiary to non-controlling shareholders, on the other hand, result in an outflow of cash. The effect of non-controlling interest on the cash flows of the group is, therefore, the amount of dividends paid by the subsidiary to the non-controlling shareholders.

Dividends paid to non-controlling interest may be reported, as discussed in Appendix 8A in relation to dividends paid in general, either as a component of cash flows from operating activities or as a financing cash flow.

Example 8.1

To illustrate the presentation of the effects of non-controlling interest in the consolidated statement of cash flows, assume that P Ltd holds 60% of S Ltd, and the consolidated statement of comprehensive income (CSCI), the partial consolidated statement of changes in equity (CSCE), the subsidiary's statement of comprehensive income (SCI), and partial statement of changes in equity (SCE) for the year ended 31 December 20X8 are as follows:

	CSCI	SCI
	\$'000	\$'000
Profit before tax	500	100
Tax	200	40
Profit after tax	<u>300</u>	<u>60</u>
Attributable to:		
Shareholders of the parent	276	
Non-controlling interest	24	
	<u>300</u>	
	CSCE	SCE
	\$'000	\$'000
Beginning retained profit	500	300
Profit for the year	276	60
Dividend	<u>100</u>	<u>10</u>
Ending retained profit	<u>676</u>	<u>350</u>

In the consolidated balance sheet, non-controlling interest account balance will increase by \$20,000 (40% of the \$50,000 increase in the subsidiary's net assets, or 40% of the subsidiary's after-tax profit of \$60,000 – 40% of the subsidiary's dividend of \$10,000). In this case, it is obvious that the effect of non-controlling interest is to decrease group cash by \$4,000 (the amount of dividend paid to non-controlling interest). This fact may be reflected in the consolidated statement of cash flows, as shown below:

Alternative A

P Ltd and its subsidiaries	
Consolidated statement of cash flows (partial)	
For year ended 31 December 20X8	
Cash flows from operating activities	\$'000
Profit before tax	500
Dividend paid to non-controlling shareholders	(4)

Alternative B

P Ltd and its subsidiaries Consolidated statement of cash flows (partial) For year ended 31 December 20X8	
	\$'000
Cash flows from operating activities	
Profit before tax	500
Cash flows from financing activities	
Dividend paid to non-controlling shareholders	(4)


Associates

In the consolidated financial statements, investment in associate should be accounted for using the equity method, as required by FRS 28. Investment in associate account balance in the consolidated balance sheet will, therefore, change due to (a) group's share of associate's profit and (b) dividend received from associate.

The group's share of the associate's profit will have no effect on the cash flows of the group because there is no inflow or outflow of cash or its equivalent. Dividend received from the associate, on the other hand, results in an inflow of cash. The effect of the associate on the cash flows of the group is, therefore, the amount of dividend received from the associate.

Dividends received from the associate may be reported, as discussed in Appendix 8A in relation to dividends received in general, either as a component of cash flows from operating activities or as an investing cash flow.

It should be noted that if the indirect method is used to compute cash flows from operating activities, the group's share of the associate's profit before tax (which has been included in the group's profit before tax) would have to be deducted from the group's profit before tax as a 'non-cash' item, so as to avoid double-counting.

If the group has presented its share of the associate's after-tax profit on a single-line basis (instead of two-line basis: (a) share of the associate's profit before tax and (b) share of the associate's tax), then the group's share of the associate's after-tax profit (which has been included in the group's profit before tax) would have to be deducted from the group's profit before tax as a 'non-cash' item, so as to avoid double-counting.

Example 8.2

To illustrate the presentation of the effects of an associate on the consolidated statement of cash flows, assume that P Ltd holds 60% of S Ltd and 20% of A Ltd, and the consolidated statement of comprehensive income (CSCI), the partial consolidated statement of changes in equity (CSCE), the associate's statement of comprehensive income (SCI), and the partial statement of changes in equity (SCE) for the year ended 31 December 20X8 are as follows:

	CSCI	SCI
	\$'000	\$'000
Operating profit	500	100
Share of associate's profit	12	—
<u>Profit before tax</u>	<u>512</u>	<u>100</u>
Tax	200	40
<u>Profit after tax</u>	<u>312</u>	<u>60</u>
 Attributable to:		
Shareholders of the parent	280	
Non-controlling interest	32	
<u>312</u>		

	CSCE	SCE
	\$'000	\$'000
Beginning retained profit	600	200
Profit for the year	280	60
Dividend	100	10
<u>Ending retained profit</u>	<u>780</u>	<u>250</u>

In the consolidated balance sheet, the investment in associate account balance will increase by \$10,000 (20% of the \$50,000 increase in associate's net assets, or 20% of the associate's profit of \$60,000 – 20% of the associate's dividend of \$10,000). It is obvious that the effect of A Ltd is to increase the group cash by \$2,000 (the amount of dividend received from A Ltd). This fact may be reflected in the consolidated statement of cash flows, as shown below:

Alternative A

P Ltd and its subsidiaries Consolidated statement of cash flows (partial) For year ended 31 December 20X8	
	\$'000
Cash flows from operating activities	
Profit before tax	512
Less non-cash item:	
Share of associate's profit	(12)
Dividends received from associate	2

Alternative B

P Ltd and its subsidiaries Consolidated statement of cash flows (partial) For year ended 31 December 20X8	
	\$'000
Cash flows from operating activities	
Profit before tax	512
Less non-cash item:	
Share of associate's profit	(12)
Cash flows from investing activities	
Dividends received from associate	2

8.4 Acquisition of subsidiary

An acquisition of subsidiary increases the group's assets and liabilities by the assets and liabilities of the subsidiary acquired, and decreases group cash by the amount of cash paid for the acquisition.

FRS 7 provides that the aggregate cash flow arising from acquisitions of subsidiary companies should be presented separately and classified as cash flow from investing activities (paragraph 39). The incorporation of the acquisition of subsidiary should, therefore, be on a single line item basis (paragraph 41).

FRS 7 also provides that the aggregate amount of the cash paid as purchase consideration should be reported in the consolidated statement of cash flows 'net of cash and cash equivalents acquired' (paragraph 42). For example, if H Ltd group paid \$100 to acquire 100% of S Ltd, which has a cash balance of \$10, the amount of cash flow relating to the acquisition should be reported as \$90 (\$100 – \$10) in the consolidated statement of cash flows.

FRS 7 further requires certain details on the acquisition of subsidiary to be presented as supplementary information in the consolidated statement of cash flows (paragraph 40). The information to be presented is: (a) total purchase consideration, (b) the portion of the purchase consideration discharged by means of cash and cash equivalents, (c) the amount of cash and cash equivalents in the subsidiary acquired, and (d) the amount of the other assets and liabilities in the subsidiary acquired, summarized by major categories.

The separate presentation of the cash flow effects of the acquisition as a single line item, together with the separate disclosure of the amounts of assets and liabilities acquired, helps to distinguish the cash flows arising from acquisition of subsidiary from the cash flows arising from the other operating, investing, and financing activities.

Example 8.3

To illustrate the presentation of the effects of acquisition of subsidiary during the current year in the consolidated statement of cash flows, assume that P Ltd group acquired another subsidiary, S Ltd, during the year 20X8, and at the time of acquisition S Ltd's balance sheet was as follows:

	\$'000		\$'000
Share capital	100	Land	80
Retained profit ...	20	Machinery (net) ..	70
Long-term loan ..	50	Stock	40
Trade creditors ..	30	Cash	10
	<hr/> 200		<hr/> 200

P Ltd acquired its 80% interest in S Ltd for a cash consideration of \$100,000. The effect of the acquisition of S Ltd in the consolidated statement of cash flows may be as shown below:

P Ltd and its subsidiaries	
Consolidated statement of cash flows (partial)	
For year ended 31 December 20X8	
	\$'000
Cash flow from investing activities	
Acquisition of subsidiary	90

Note to the consolidated statement of cash flows

(a) Acquisition of subsidiary

During the year, the group acquired 80% interest in S Ltd. The fair value of assets acquired and liabilities assumed were as follows:

	\$'000
Goodwill	4
Fixed assets	150
Long-term loan	(50)
Stocks	40
Trade creditors	(30)
Cash	10
Non-controlling interest	(24)
Total purchase price	100
Less cash of S Ltd	(10)
Cash flow on acquisition	90

8.5 Disposal of subsidiary

The effect of a disposal of subsidiary is to reduce the group's assets and liabilities by the assets and liabilities of the subsidiary disposed of, and to increase group cash by the amount of cash received on disposal.

FRS 7 provides that the aggregate cash flow arising from disposal of subsidiary companies should be presented separately and classified as cash flow from investing activities (paragraph 39). The incorporation of the disposal of subsidiary should, therefore, be on a single line item basis (paragraph 41).

FRS 7 further provides that the aggregate amount of the cash received as sale consideration should be reported in the consolidated statement of cash flows 'net of cash and cash equivalents disposed of' (paragraph 42). For example, if H Ltd group received \$100 cash on disposal of its wholly owned subsidiary, which has a cash balance of \$10, the amount of cash flow in relation to the disposal should be reported at \$90 in the consolidated statement of cash flows.

As in the case of acquisition of subsidiary, FRS 7 also requires certain details on the disposal of subsidiary to be presented as supplementary information in the consolidated statement of cash flows (paragraph 40). The information to be presented is: (a) total disposal price, (b) the portion of the disposal price received in cash and cash equivalents, (c) the amount of cash and cash equivalents in the subsidiary disposed

of, and (d) the amount of the other assets and liabilities in the subsidiary disposed of, summarized by major categories.

The separate presentation of the cash flow effects of the disposal as a single line item, together with the separate disclosure of the amounts of assets and liabilities disposed of, helps to distinguish the cash flows arising from disposal of subsidiary from the cash flows arising from the other operating, investing, and financing activities.

Example 8.4

To illustrate the presentation of the effects of disposal of subsidiary during the current year in the consolidated statement of cash flows, assume that during the year 20X8, P Ltd group disposed of one of its subsidiary companies, S Ltd, for a cash consideration of \$100,000. At the time of disposal, S Ltd's balance sheet was as follows:

	\$'000		\$'000
Share capital	100	Land	80
Retained profit ...	20	Machinery (net) ..	70
Long-term loan ..	50	Stock	40
Trade creditors ..	30	Cash	10
	<u>200</u>		<u>200</u>

P Ltd acquired 80% interest in S Ltd for \$80,000 when S Ltd was incorporated in 20X8. The effect of the acquisition of S Ltd in the consolidated statement of cash flows may be shown below:

P Ltd and its subsidiaries	
Consolidated statement of cash flows (partial)	
For year ended 31 December 20X8	
	\$'000
Cash flow from investing activities	
Disposal of subsidiary	90

Note to the consolidated statement of cash flows

(a) Disposal of subsidiary

During the year, the group disposed of one of its subsidiary companies, S Ltd. The effects of the disposal were as follows:

	\$'000
Net assets disposed of:	
Fixed assets	150
Long-term loan	(50)
Stocks	40
Trade creditors	(30)
Cash	10
Non-controlling interest	<u>(24)</u>
	96
Profit on disposal	4
Total disposal price	<u>100</u>
Less cash of S Ltd	<u>10</u>
Cash flow on disposal	<u>90</u>

8.6 | Foreign subsidiary and associate

FRS 7 provides that the cash flows of a foreign subsidiary should be translated at the exchange rates between the reporting currency and the foreign currency at the dates of the cash flows (paragraph 26). However, where transactions are numerous during a period, FRS 7 also permits the use of the average exchange rate for the period as an approximation of the actual transaction rates (paragraph 27).

FRS 21 requires the use of the closing rate method (which basically requires the balance sheet items of a foreign subsidiary to be translated at the closing rate and the statement of comprehensive income items at the transaction rates or the average rate as an approximation of the actual transaction rate) in the translation of the financial statements of foreign subsidiaries and associates.

It is noted that the provisions of FRS 7 are consistent with those of FRS 21. Thus, the consolidated statement of cash flows (which includes the cash flows of the foreign subsidiary) may simply be prepared from the consolidated balance sheet and the consolidated statement of comprehensive income, as in the case of preparing an entity statement of cash flows from the entity financial statements.

One other issue that may arise relates to translation difference. In accordance with the provisions of FRS 21, the translation difference is taken directly to shareholders' equity. In terms of its effect on cash flows, translation difference is very much the same as unrealized exchange gains/losses arising from non-operating items. However, since the translation difference is not included as part of the profit or loss of the current period, there is no need for any adjustment to arrive at the operating cash

flow (assuming the indirect method is used). Any translation difference relating to cash and cash equivalent items will, however, have to be presented as one of the reconciling items in the reconciliation of beginning and ending balances of cash and cash equivalents. It should be noted that in the worksheet, all changes in balance arising from changes in exchange rates are to be properly accounted for.

8.7

A comprehensive illustration

The consolidated financial statements of P Ltd and its subsidiary companies for the year 20X8 (with 20X7 comparative figures) are as follows:

- (a) Consolidated balance sheet as at 31 December 20X8

	20X8	20X7
	\$'000	\$'000
Machinery (net)	2,270	2,265
Investment in associate	280	240
Stock	900	400
Trade debtors	300	200
Cash	634	94
	<u>4,384</u>	<u>3,199</u>
Share capital	1,000	1,000
Retained profits	1,351	900
Non-controlling interests	953	709
Deferred tax	100	—
Long-term loan	—	100
Trade creditors	520	250
Tax payable	360	140
Dividends payable	100	100
	<u>4,384</u>	<u>3199</u>

(b) Consolidated statement of comprehensive income for the year ended 31 December 20X8

	20X8	20X7
	\$'000	\$'000
Sales	3,000	2,000
Less cost of sales	1,100	800
Gross profit	1,900	1,200
Depreciation expense	(445)	(300)
Other expenses	(373)	(281)
Share of profit of associate	60	8
Profit before tax	1,142	627
Tax	(427)	(260)
Profit after tax	715	367
Other comprehensive income	—	—
Total comprehensive income	<u>715</u>	<u>367</u>
 Attributable to:		
Shareholders of the parent	551	242
Non-controlling interest	164	125
	<u>715</u>	<u>367</u>

(c) Consolidated statement of changes in equity (partial) for the year ended 31 December 20X8

	20X8	20X7
	\$'000	\$'000
Retained profit as at 1 January	900	758
Profit for the year	551	242
Dividend	(100)	(100)
Retained profit as at 31 December	<u>1,351</u>	<u>900</u>

In July 20X8, P Ltd disposed of one of its subsidiaries, S Ltd, for a cash consideration of \$700,000. S Ltd was incorporated by P Ltd as a wholly owned subsidiary in 20X5. On the date of disposal, S Ltd's balance sheet was as follows:

	\$'000
Machinery (net)	700
Stock	100
Trade debtors	50
Cash	20
	<u>870</u>
Share capital	500
Retained profits	200
Long-term loan	100
Trade creditors	50
Tax payable	20
	<u>870</u>

Besides the disposal of S Ltd, there was no other disposal of non-current assets by the companies in the group. In December 20X8, P Ltd acquired 80% interest in T Ltd for a cash consideration of \$400,000. At the date of acquisition, T Ltd had not commenced operation and its balance sheet consisted of share capital \$500,000 and machinery \$500,000.

Required

Prepare the consolidated statement of cash flows for P Ltd and its subsidiary companies for the year ended 31 December 20X8.

Suggested Solutions

Preparation

The preparation of the consolidated statement of cash flows for P Ltd group for the year ended 31 December 20X8 is illustrated below with four different options:

1. Using the worksheet approach and where the cash flows from operating activities are reported using the indirect method,
2. Using the worksheet approach and where the cash flows from operating activities are reported using the direct method,
3. Using the T-account approach and where the cash flows from operating activities are reported using the indirect method, and
4. Using the T-account approach and where the cash flows from operating activities are reported using the direct method.

I. Worksheet approach and indirect method

Assuming that the cash flows from operating activities are to be reported using the indirect method, the worksheet for preparation of the consolidated statement of cash flows for P Ltd group for the year ended 31 December 20X8 is as shown below:

P Ltd and its subsidiaries Worksheet for preparation of consolidated statement of cash flows For year ended 31 December 20X8				
	20X7	Analysis		
	\$'000	Debit	Credit	20X8
Debit balances				
Machinery (net)	2,265	b 500 i 650 d 445	a 700	2,270
Investment	240	e 60	j 20	280
Stock	400	n 600	a 100	900
Trade debtors	200	o 150	a 50	300
Cash	94	a 20	a 20	
		q 540		634
Credit balances				
Share capital	1,000			1,000
Retained profits	900	f 427 g 164 h 100	c 1,142	
Non-controlling interests	709	m 20	b 100 g 164 f 100	1,351
Deferred tax	—			100
Long-term loan	100	a 100		—
Trade creditors	250	a 50	p 320	520
Tax payable	140	a 20	f 327	
		k 87		360
Dividends payable	100	l 100	h 100	100
Operating activities				
Profit before tax		c 1,142		
Depreciation		d 445		
Share of profit			e 60	
Payment of tax			k 87	
Stock			n 600	
Trade debtors			o 150	
Trade creditors		p 320		
Investing activities				
Disposal of subsidiary		a 700	a 20	
Acquisition of subsidiary			b 400	
Dividend from associate		j 20		
Purchase of machinery			i 650	
Financing activities				
Payment of dividend			l 100	
Dividend to non-controlling interest			m 20	
Increase in cash.....		q 540		

Explanation

- (a) *Disposal of subsidiary:* All the assets and liabilities of the subsidiary disposed of are written off their respective accounts. The proceeds from the disposal, net of cash of S Ltd disposed of, are shown as a cash flow from investing activities of \$680,000 ($700,000 - 20,000$). These are entered in the worksheet as follows:

Dr Investing activities	700,000
Dr Long-term loan	100,000
Dr Trade creditors	50,000
Dr Tax payable	20,000
Cr Machinery	700,000
Cr Stock	100,000
Cr Trade debtors	50,000
Cr Cash	20,000
Dr Cash	20,000
Cr Investing activities	20,000

- (b) *Acquisition of subsidiary:* The cash consideration of \$400,000 is reported as cash used in investing activities. The asset acquired and the related non-controlling interests are recorded in their respective accounts. These are entered in the worksheet as follows:

Dr Machinery	500,000
Cr Non-controlling interests	100,000
Cr Investing activities	400,000

- (c) *Profit before tax:* \$1,142,000. This is the first item in determining the amount of cash flow from operation. This item is entered in the worksheet as follows:

Dr Operating activities	1,142,000
Cr Retained profit	1,142,000

- (d) *Depreciation charge for the year:* \$445,000. Since profit before tax was arrived at after deducting depreciation, which is a non-cash item, the depreciation must be added back to profit before tax. The other entry is to credit machinery account or the accumulated depreciation account, as the case may be. This item is entered in the worksheet as follows:

Dr Operating activities	445,000
Cr Machinery	445,000

- (e) *Share of profit of associate:* \$60,000. Share of associate's profit before tax has been included as part of group pre-tax profit, and since it is a non-cash item, it has to be deducted from the group pre-tax profit. The debit entry is to the investment in associate account, because under equity accounting the investment account balance is increased by the share of associate's profit. This item is entered in the worksheet as follows:

Dr Investment	60,000
Cr Operating activities	60,000

- (f) *Tax charge for the year:* \$427,000. Since retained profit has been credited with group profit before tax in (c), it must now be debited with the group tax charge for the year. The other entries are to credit the tax payable and deferred tax accounts. This item is entered in the worksheet as follows:

Dr Retained profit	427,000
Cr Tax payable	327,000
Cr Deferred tax	100,000

- (g) *Non-controlling interest in the current year's profit:* \$164,000. This decreases the amount of group retained profit and increases non-controlling interest in the subsidiary's net assets. This item is entered in the worksheet as follows:

Dr Retained profit	164,000
Cr Non-controlling interest	164,000

- (h) *Dividend appropriation:* \$100,000. As the result of (c), (e), (f), and (g) above, the retained profit account has been credited with the group after-tax profit. However, the retained profit account is increased by the year's retained profit only. Therefore, dividend appropriation has to be deducted from the retained profit. The other entry is to credit to the dividend payable account. This item is entered in the worksheet as follows:

Dr Retained profit	100,000
Cr Dividend payable	100,000

- (i) *Purchase of machinery:* \$650,000. This is the balancing figure in the machinery account in the worksheet ($2265 + 500 - 700 - 445 + x = 2270$). Since there is no disposal of non-current assets, it can be inferred that the balancing figure is

the cost of purchase during the year. This item is entered in the worksheet as follows:

Dr Machinery	650,000
Cr Investing activities	650,000

- (j) *Dividend received from associate:* \$20,000. This is the balancing figure in the investment in associate account in the worksheet ($240 + 100 - 40 - x = 280$). It can be inferred that the balancing figure is the amount of dividend received from the associate. This is because under equity accounting, the investment account balance is reduced by the amount of dividends received. This item is entered in the worksheet as follows:

Dr Investing activities	20,000
Cr Investment	20,000

- (k) *Payment of tax:* \$87,000. This is the balancing figure in the tax payable account in the worksheet ($140 + 327 - 20 - x = 360$). It can be inferred that the company has paid tax of \$87,000 during the year. This item is entered in the worksheet as follows:

Dr Tax payable	87,000
Cr Operating activities	87,000

- (l) *Payment of dividend:* \$100,000. This is the balancing figure in the dividend payable account in the worksheet ($100 + 100 - x = 100$). It can be inferred that the company has paid dividend of \$100,000 during the year. This item is entered in the worksheet as follows:

Dr Dividend payable	100,000
Cr Financing activities	100,000

- (m) *Payment of dividend to non-controlling interest:* \$20,000. This is the balancing figure in the non-controlling interest account in the worksheet ($709 + 100 + 164 - x = 953$). It can be inferred that the subsidiary companies have paid \$20,000 dividends to non-controlling shareholders during the year. This item is entered in the worksheet as follows:

Dr Non-controlling interest	20,000
Cr Financing activities	20,000

(n) *Increase in stock:* \$600,000. This is the net change in stock balance. The increase in stock means that part of the funds from operation is tied up in stock and consequently cash inflow from operating activities is reduced. It is entered in the worksheet as:

Dr Stock	600,000
Cr Operating activities	600,000

(o) *Increase in trade debtors:* \$150,000. This is the net change in debtors balances. The increase in debtors means that part of the funds from operation is tied up in debtors and consequently cash inflow from operating activities is reduced. It is entered in the worksheet as follows:

Dr Debtors	150,000
Cr Operating activities	150,000

(p) *Increase in creditors:* \$320,000. This is the net change in creditors balances. The increase in creditors means that part of the purchases for the period has not been paid for and consequently cash outflow from operating activities is reduced. It is entered in the worksheet as follows:

Dr Operating activities	320,000
Cr Creditors	320,000

(q) *Increase in cash:* \$540,000. This is the net change in the cash and cash equivalents accounts. This is the final reconciling item and is entered in the worksheet as follows:

Dr Cash	540,000
Cr Increase in cash	540,000

2. Worksheet approach and direct method

Assuming that the cash flows from operating activities are to be reported using the direct method, the worksheet for preparation of the consolidated statement of cash flows for P Ltd group for the year ended 31 December 20X8 is as shown below:

P Ltd and its subsidiaries
Worksheet for preparation of consolidated statement of cash flows
For year ended 31 December 20X8

	20X7	Analysis		20X8
		Debit	Credit	
Debit balances	\$'000	\$'000	\$'000	\$'000
Machinery (net)	2,265	b 500	a 700	
		k 650	e 445	2,270
Investment	240	g 60	l 20	280
Stock	400	d 600	a 100	900
Trade debtors	200	c 150	a 50	300
Cash	94	a 20	a 20	
		p 540		634
Credit balances				
Share capital	1,000			1,000
Retained profits	900	h 427	f 1,082	
		i 164	g 60	
		j 100		1,351
Non-controlling interests	709	o 20	b 100	
			i 164	953
Deferred tax	—		h 100	100
Long-term loan	100	a 100		—
Trade creditors	250	a 50	d 320	520
Tax payable	140	a 20	h 327	
		m 87		360
Dividends payable	100	n 100	j 100	100
Statement of comprehensive income				
Sales	3,000		c 3,000	
Cost of sales	1,100	d 1,100		
Depreciation expense	445	e 445		
Other expenses	373	d 373		
Operating profit	1,082	f 1,082		
Operating activities				
From customers			c 2,850	
To suppliers and employees			d 1,753	
Payment of tax			m 87	
Investing activities				
Disposal of subsidiary		a 700	a 20	
Acquisition of subsidiary			b 400	
Dividend from associate		l 20		
Purchase of machinery			k 650	
Financing activities				
Payment of dividend			n 100	
Dividend to non-controlling interest			o 20	
Increase in cash			p 540	

Explanation

- (a) *Disposal of subsidiary:* The proceeds from the disposal, net of cash of S Ltd disposed of, is shown as a cash flow from investing activities of \$680,000 (700,000 – 20,000).

All the other assets and liabilities of the subsidiary disposed of are written off their respective accounts. These are entered in the worksheet as follows:

Dr Investing activities	700,000
Dr Long-term loan	100,000
Dr Trade creditors	50,000
Dr Tax payable	20,000
Cr Machinery	700,000
Cr Stock	100,000
Cr Trade debtors	50,000
Cr Cash	20,000
 Dr Cash	20,000
Cr Investing activities	20,000

- (b) *Acquisition of subsidiary:* The cash consideration of \$400,000 is reported as cash used in investing activities. The asset acquired and the related non-controlling interest are recorded in their respective accounts. These are entered in the worksheet as follows:

Dr Machinery	500,000
Cr Non-controlling interests	100,000
Cr Investing activities	400,000

- (c) *Cash receipts from customers:* \$2,850,000. This is equal to sales of \$3,000,000 – increase in trade debtors balance of \$150,000. It is entered in the worksheet as follows:

Dr Operating activities	2,850,000
Dr Debtors	150,000
Cr Sales	3,000,000

- (d) *Cash paid to suppliers and employees:* \$1,753,000. This is equal to cost of sales of \$1,100,000 + increase in stock of \$600,000 + operating expenses of \$373,000 – increase in creditors balance of \$320,000. It is entered in the worksheet as follows:

Dr Cost of sales	1,100,000
Dr Stock	600,000
Dr Other operating expenses	373,000
Cr Operating activities	1,753,000
Cr Creditors	320,000

- (e) *Depreciation charge for the year:* \$445,000. This is a non-cash item. The other entry is to credit machinery account or the accumulated depreciation account, as the case may be. This item is entered in the worksheet as follows:

Dr Depreciation expense	445,000
Cr Machinery	445,000

- (f) *Operating profit:* \$1,082,000. This is the profit before share of associate's profit and is one component of income transferred from the statement of comprehensive income to the retained profit in the balance sheet. It is entered in the worksheet as follows:

Dr Operating profit	1,082,000
Cr Retained profit	1,082,000

- (g) *Share of profit of associate:* \$60,000. In (f) above, only the operating profit has been transferred to retained profits. Share of associate's profit before tax is now transferred to retained profits, so that the retained profit is credited with the group's total pre-tax profit. The debit entry is to the investment in associate account, because under equity accounting, the investment account balance is increased by the share of associate's profit. This item is entered in the worksheet as follows:

Dr Investment	60,000
Cr Retained profit	60,000

- (h) *Tax charge for the year:* \$427,000. Since retained profit has been credited with group pre-tax profit after (f) and (g), it must now be debited with the group tax charge for the year. The other entries are to credit the tax payable and deferred tax accounts. This item is entered in the worksheet as follows:

Dr Retained profit	427,000
Cr Tax payable	327,000
Cr Deferred tax	100,000

- (i) *Non-controlling interest in the current year's profit:* \$164,000. This decreases the amount of group retained profit and increases non-controlling interest in the subsidiary's net assets. This item is entered in the worksheet as follows:

Dr Retained profit	164,000
Cr Non-controlling interest	164,000

- (j) *Dividend appropriation:* \$100,000. As a result of (f), (g), (h), and (i) above, the retained profit account has been credited with the group after-tax profit. However, the retained profit account is increased by the year's retained profit only. Therefore, dividend appropriation has to be deducted from the retained profit account. The other entry is to credit to the dividend payable account. This item is entered in the worksheet as follows:

Dr Retained profit	100,000	
Cr Dividend payable	100,000	

- (k) *Purchase of machinery:* \$650,000. This is the balancing figure in the machinery account in the worksheet ($2,265 + 500 - 700 - 445 + x = 2,270$). Since there is no disposal of non-current assets, it can be inferred that the balancing figure is the cost of purchase during the year. This item is entered in the worksheet as follows:

Dr Machinery	650,000	
Cr Investing activities	650,000	

- (l) *Dividend received from associate:* \$20,000. This is the balancing figure in the investment in associate account in the worksheet ($240 + 60 - x = 280$). It can be inferred that the balancing figure is the amount of dividend received from the associate. This is because under equity accounting, the investment account balance is reduced by the amount of dividend received. This item is entered in the worksheet as follows:

Dr Investing activities	20,000	
Cr Investment	20,000	

- (m) *Payment of tax:* \$87,000. This is the balancing figure in the tax payable account in the worksheet ($140 + 327 - 20 - x = 360$). It can be inferred that the company has paid tax of \$87,000 during the year. This item is entered in the worksheet as follows:

Dr Tax payable	87,000	
Cr Operating activities	87,000	

- (n) *Payment of dividend:* \$100,000. This is the balancing figure in the dividend payable account in the worksheet ($100 + 100 - x = 100$). It can be inferred that the company has paid dividend of \$100,000 during the year. This item is entered in the worksheet as follows:

Dr Dividend payable	100,000	
Cr Financing activities	100,000	

- (o) *Payment of dividend to non-controlling interest:* \$20,000. This is the balancing figure in the non-controlling interest account in the worksheet ($709 + 100 + 164 - x = 953$). It can be inferred that the subsidiary companies have paid \$20,000 dividend to non-controlling shareholders during the year. This item is entered in the worksheet as follows:

Dr Non-controlling interest 20,000
 Cr Financing activities 20,000

- (p) *Increase in cash:* \$540,000. This is the net change in the cash and cash equivalents accounts. This is the final reconciling item and is entered in the worksheet as follows:

Dr Cash	540,000
Cr Increase in cash	540,000

3. T-account approach and indirect method

Assuming that the cash flows from operating activities are to be reported using the indirect method, the T-accounts for preparation of the consolidated statement of cash flows for P Ltd group for the year ended 31 December 20X8 are as shown below:

P Ltd and its subsidiaries
T-accounts for preparation of consolidated statement of cash flows
For year ended 31 December 20X8

Cash and Cash Equivalents			Operating Activities		
Beginning balance	94		(c) Profit before tax	1,142	(e) Share of associate's profit
			(d) Depreciation	445	60
			(p) Creditors	320	87
					600
					150
Investing Activities			Financing Activities		
(a) Disposal of S Ltd	680	(b) Acquisition of T Ltd	400	(l) Payment of dividend	100
(j) Dividend received	20	(i) Purchase of machine	650	(m) Payment of dividend to non-controlling interest	20
Machinery			Investment in Associate		
Beginning balance	2,265	(a) S Ltd	700	Beginning balance	240
(b) T Ltd	500	(d) Depreciation	445	(e) Share of profit	100
(i) Purchase	650	Ending balance	2,270		340
	<u>3,415</u>		<u>3,415</u>	Ending balance	<u>280</u>
Ending balance	2,270				
Stock			Trade Debtors		
Beginning balance	400	(a) S Ltd	100	Beginning balance	200
(n) Increase	600	Ending balance	900	(o) Increase	150
	<u>1,000</u>		<u>1,000</u>		<u>350</u>
Ending balance	900			Ending balance	<u>300</u>

Share Capital			Retained Profit		
Ending balance	1,000	Beginning balance	1,000	(f) Tax	427
	<u>1,000</u>		<u>1,000</u>	(g) Non-controlling interest	164
		Ending balance	1,000	(h) Dividends	100
				Ending balance	<u>1,351</u>
					2,042
					Ending balance
					<u>1,351</u>
Non-controlling Interests			Deferred Tax		
(m) Dividend	20	Beginning balance	709	Ending balance	100
Ending balance	953	(b) T Ltd	100		<u>100</u>
	<u>973</u>	(g) Profit	164		
			<u>973</u>		
		Ending balance	953	Ending balance	100
Long-term Loan			Trade Creditors		
(a) S Ltd	100	Beginning balance	100	(a) S Ltd	50
Ending balance	<u>—</u>		<u>—</u>	Ending balance	<u>520</u>
	<u>100</u>				<u>570</u>
		Ending balance	<u>—</u>	Ending balance	520
Tax Payable			Dividend Payable		
(a) S Ltd	20	Beginning balance	100	(l) Payment	100
(k) Payment	87	(f) Charge for the year	327	Ending balance	<u>100</u>
Ending balance	360		<u>467</u>		<u>200</u>
	<u>467</u>	Ending balance	360	Ending balance	100

Explanation

- (a) *Disposal of subsidiary.* All the assets and liabilities of the subsidiary disposed of are written off their respective accounts. The proceeds from the disposal, net of cash of S Ltd disposed of, are shown as a cash flow from investing activities of \$680,000 ($700,000 - 20,000$). These are entered in the T-accounts as follows:

Dr Investing Activities	700,000
Dr Long-term loan	100,000
Dr Trade creditors	50,000
Dr Tax payable	20,000
Cr Machinery	700,000
Cr Stock	100,000
Cr Trade debtors	50,000
Cr Cash	20,000
Dr Cash	20,000
Cr Investing activities	20,000

- (b) *Acquisition of subsidiary.* The cash consideration of \$400,000 is reported as cash used in investing activities. The asset acquired and the related non-controlling interest are recorded in their respective accounts. These are entered in the T-accounts as follows:

Dr Machinery	500,000
Cr Non-controlling interests	100,000
Cr Investing activities	400,000

- (c) *Profit before tax:* \$1,142,000. This is the first item in determining the amount of cash flow from operation. This item is entered in the T-accounts as follows:

Dr Operating activities	1,142,000
Cr Retained profit	1,142,000

- (d) *Depreciation charge for the year:* \$445,000. Since profit before tax was arrived at after deducting depreciation, which is a non-cash item, the depreciation must be added back to profit before tax. The other entry is to credit the machinery account or the accumulated depreciation account, as the case may be. This item is entered in the T-accounts as follows:

Dr Operating activities	445,000
Cr Machinery	445,000

- (e) *Share of profit of associate:* \$60,000. Share of associate's profit before tax has been included as part of group pre-tax profit, and since it is a non-cash item it has to be deducted from the group pre-tax profit. The debit entry is to the investment in associate account, because under equity accounting the investment account balance is increased by the share of associate's profit. This item is entered in the T-accounts as follows:

Dr Investment	60,000
Cr Operating activities	60,000

- (f) *Tax charge for the year:* \$427,000. Since retained profit has been credited with group profit before tax in (c), it must now be debited with the group tax charge for the year. The other entries are to credit the tax payable and deferred tax accounts. This item is entered in the T-accounts as follows:

Dr Retained profit	427,000
Cr Tax payable	327,000
Cr Deferred tax	100,000

- (g) *Non-controlling interest in the current year's profit:* \$164,000. This decreases the amount of group retained profit and increases non-controlling interest in the subsidiary's net assets. This item is entered in the T-accounts as follows:

Dr Retained profit	164,000
Cr Non-controlling interest	164,000

- (h) *Dividend appropriation:* \$100,000. As a result of (c), (e), (f), and (g) above, the retained profit account has been credited with the group after-tax profit. However, the retained profit account is increased by the year's retained profit only. Therefore, dividend appropriation has to be deducted from the retained profit. The other entry is to credit to the dividend payable account. This item is entered in the T-accounts as follows:

Dr Retained profit	100,000
Cr Dividend payable	100,000

- (i) *Purchase of machinery:* \$650,000. This is the balancing figure in the machinery T-account ($2,265 + 500 - 700 - 445 + x = 2,270$). Since there is no disposal of non-current assets, it can be inferred that the balancing figure is the cost of purchase during the year. This item is entered in the T-accounts as follows:

Dr Machinery	650,000
Cr Investing activities	650,000

- (j) *Dividend received from associate:* \$20,000. This is the balancing figure in the investment in associate T-account ($240 + 60 - x = 280$). It can be inferred that the balancing figure is the amount of dividend received from the associate. This is because under equity accounting, the investment account balance is reduced by the amount of dividend received. This item is entered in the T-accounts as follows:

Dr Investing activities	20,000
Cr Investment	20,000

- (k) *Payment of tax:* \$87,000. This is the balancing figure in the tax payable T-account ($140 + 327 - 20 - x = 360$). It can be inferred that the company has paid tax of \$87,000 during the year. This item is entered in the T-accounts as follows:

Dr Tax payable	87,000
Cr Operating activities	87,000

- (l) *Payment of dividend:* \$100,000. This is the balancing figure in the dividend payable T-account ($100 + 100 - x = 100$). It can be inferred that the company has paid dividend of \$100,000 during the year. This item is entered in the T-accounts as follows:

Dr Dividend payable	100,000
Cr Financing activities	100,000

- (m) *Payment of dividend to non-controlling interest:* \$20,000. This is the balancing figure in the non-controlling interest T-account ($709 + 100 + 164 - x = 953$). It can be inferred that the subsidiary companies have paid \$20,000 dividend to non-controlling shareholders during the year. This item is entered in the T-accounts as follows:

Dr Non-controlling interest	20,000
Cr Financing activities	20,000

- (n) *Increase in stock:* \$600,000. Increase in stock means that part of the funds from operation is tied up in stock and consequently cash inflow from operating activities is reduced. It is entered in the T-accounts as follows:

Dr Stock	600,000
Cr Operating activities	600,000

- (o) *Increase in trade debtors:* \$150,000. Increase in debtors means that part of the funds from operation is tied up in debtors and consequently cash inflow from operating activities is reduced. It is entered in the T-accounts as follows:

Dr Debtors	150,000
Cr Operating activities	150,000

- (p) *Increase in creditors:* \$320,000. Increase in creditors means that part of the purchases for the period has not been paid and consequently cash outflow from operating activities is reduced. It is entered in the T-accounts as follows:

Dr Operating activities	320,000
Cr Creditors	320,000

- (q) *Increase in cash:* \$540,000. This is the final reconciling item and is entered in the T-accounts as follows:

Dr Cash	540,000
Cr Increase in cash	540,000

4. T-account approach and direct method

Assuming that the cash flows from operating activities are to be reported using the direct method, the T-accounts for preparation of the consolidated statement of cash flows for P Ltd group for the year ended 31 December 20X8 are as shown below:

P Ltd and its subsidiaries T-accounts for preparation of consolidated statement of cash flows For year ended 31 December 20X8			
Cash and Cash Equivalents		Operating Activities	
Beginning balance	94	(c) From customers	2,850
		(d) To suppliers and employees	1,753
		(m) Payment of tax	87
Investing Activities		Financing Activities	
(a) Disposal of S Ltd	680	(b) Acquisition of T Ltd	400
(l) Dividend received	20	(k) Purchase of machinery	650
		(n) Payment of dividend	100
		(o) Payment of dividend to non-controlling interest	20
Machinery		Investment in Associate	
Beginning balance	2,265	(a) S Ltd	700
(b) T Ltd	500	(r) Depreciation	445
(k) Purchase	650	Ending balance	2,270
	<u>3,415</u>		<u>3,415</u>
Ending balance	2,270		
Stock		Trade Debtors	
Beginning balance	400	(a) S Ltd	100
(d) Increase	600	Ending balance	900
	<u>1,000</u>		<u>1,000</u>
Ending balance	900		
		(c) Increase	150
		Ending balance	300
			<u>350</u>
		Ending balance	300

	Share Capital		Retained Profit	
Ending balance	1,000	Beginning balance 1,000	(h) Tax 427	Beginning balance 900
	<u>1,000</u>	<u>1,000</u>	(i) Non-controlling interest 164	(f) Profit before tax 1,082
		Ending balance 1,000	(j) Dividend 100	(g) Share of associate's profit 60
			Ending balance 1,351	
			<u>2,042</u>	<u>2,042</u>
				Ending balance 1,351
Non-controlling Interests				
(o) Dividend	20	Beginning balance 709	Ending balance 100	Beginning balance -
Ending balance	<u>953</u>	<u>100</u>	<u>100</u>	<u>100</u>
	<u>973</u>	<u>164</u>		
		<u>973</u>		
		Ending balance 953		Ending balance 100
Deferred Tax				
(a) S Ltd	100	Beginning balance 100	(a) S Ltd 50	Beginning balance 250
Ending balance	<u>-</u>	<u>100</u>	<u>520</u>	<u>320</u>
	<u>100</u>		<u>570</u>	<u>570</u>
				Ending balance 520
Long-term Loan				
(a) S Ltd	100	Beginning balance 100	(a) S Ltd 50	Beginning balance 250
Ending balance	<u>-</u>	<u>100</u>	<u>520</u>	<u>320</u>
	<u>100</u>		<u>570</u>	<u>570</u>
		Ending balance -		Ending balance 520
Trade Creditors				
(a) S Ltd	20	Beginning balance 140	(n) Payment 100	Beginning balance 100
(m) Payment	87	(h) Charge for the year 327	Ending balance 100	(j) Appropriation 100
Ending balance	<u>360</u>	<u>467</u>	<u>200</u>	<u>200</u>
	<u>467</u>			
		Ending balance 360		Ending balance 100
Tax Payable				
(a) S Ltd	20	Beginning balance 140	(n) Payment 100	Beginning balance 100
(m) Payment	87	(h) Charge for the year 327	Ending balance 100	(j) Appropriation 100
Ending balance	<u>360</u>	<u>467</u>	<u>200</u>	<u>200</u>
	<u>467</u>			
		Ending balance 360		Ending balance 100
Dividend Payable				
(d) Cost of sales	1,100	(c) Sales 3,000	(n) Payment 100	Beginning balance 100
(e) Depreciation	445		Ending balance 100	(j) Appropriation 100
(d) Other expenses	373			<u>200</u>
(f) Operating profit	<u>1,082</u>	<u>3,000</u>		
	<u>3,000</u>			

Explanation

- (a) *Disposal of subsidiary.* The proceeds from the disposal, net of cash of S Ltd disposed of, are shown as a cash flow from investing activities of \$680,000 ($700,000 - 20,000$). All the other assets and liabilities of the subsidiary disposed of are written off their respective accounts. These are entered in the T-accounts as follows:

Dr Investing activities	700,000
Dr Long-term loan	100,000
Dr Trade creditors	50,000
Dr Tax payable	20,000
Cr Machinery	700,000
Cr Stock	100,000
Cr Trade debtors	50,000
Cr Cash	20,000
 Dr Cash	20,000
Cr Investing activities	20,000

- (b) *Acquisition of subsidiary.* The cash consideration of \$400,000 is reported as cash used in investing activities. The assets acquired and the related non-controlling interest are recorded in their respective accounts. These are entered in the T-accounts as follows:

Dr Machinery	500,000
Cr Non-controlling interests	100,000
Cr Investing activities	400,000

- (c) *Cash receipts from customers:* \$2,850,000. This is equal to sales of \$3,000,000 – increase in trade debtors balance of \$150,000. It is entered in the T-accounts as follows:

Dr Operating activities	2,850,000
Dr Debtors	150,000
Cr Sales	3,000,000

- (d) *Cash paid to suppliers and employees:* \$1,753,000. This is equal to cost of sales of \$1,100,000 + increase in stock of \$600,000 + operating expenses of \$373,000 – increase in creditors balance of \$320,000. It is entered in the T-accounts as follows:

Dr Cost of sales	1,100,000
Dr Stock	600,000
Dr Other operating expenses	373,000
Cr Operating activities	1,753,000
Cr Creditors	320,000

- (e) *Depreciation charge for the year:* \$445,000. This is a non-cash item. The other entry is to credit the machinery account or the accumulated depreciation account, as the case may be. This item is entered in the T-accounts as follows:

Dr Depreciation expense	445,000
Cr Machinery	445,000

- (f) *Operating profit:* \$1,082,000. This is transferred to the retained profit as the link between the detailed statement of comprehensive income and the balance sheet. It is entered in the T-accounts as follows:

Dr Operating profit	1,082,000
Cr Retained profit	1,082,000

- (g) *Share of profit of associate:* \$60,000. In (f) above, only the operating profit has been transferred to retained profits. The share of associate's profit before tax is now transferred to retained profits, so that the retained profit is credited with the group's total pre-tax profit. The debit entry is to the investment in associate account, because under equity accounting, the investment account balance is increased by the share of associate's profit. This item is entered in the T-accounts as follows:

Dr Investment	60,000
Cr Retained profit	60,000

- (h) *Tax charge for the year:* \$427,000. Since retained profit has been credited with group pre-tax profit after (f) and (g), it must now be debited with the group tax charge for the year. The other entries are to credit the tax payable and deferred tax accounts. This item is entered in the T-accounts as follows:

Dr Retained profit	427,000
Cr Tax payable	327,000
Cr Deferred tax	100,000

- (i) *Non-controlling interest in the current year's profit:* \$164,000. This decreases the amount of group retained profit and increases non-controlling interest in the subsidiary's net assets. This item is entered in the T-accounts as follows:

Dr Retained profit	164,000
Cr Non-controlling interest	164,000

- (j) *Dividend appropriation:* \$100,000. As a result of (f), (g), (h), and (i) above, the retained profit account has been credited with the group after-tax profit. However, the retained profit account is increased by the year's retained profit only. Therefore, dividend appropriation has to be deducted from the retained profit account. The other entry is to credit to the dividend payable account. This item is entered in the T-accounts as follows:

Dr Retained profit	100,000
Cr Dividend payable	100,000

- (k) *Purchase of machinery:* \$650,000. This is the balancing figure in the machinery T-account ($2265 + 500 - 700 - 445 + x = 2270$). Since there is no disposal of non-current assets, it can be inferred that the balancing figure is the cost of purchase during the year. This item is entered in the T-accounts as follows:

Dr Machinery	650,000
Cr Investing activities	650,000

- (l) *Dividend received from associate:* \$20,000. This is the balancing figure in the investment in associate T-account ($240 + 60 - x = 280$). It can be inferred that the balancing figure is the amount of dividend received from the associate. This is because under equity accounting, the investment account balance is reduced by the amount of dividend received. This item is entered in the T-accounts as follows:

Dr Investing activities	20,000
Cr Investment	20,000

- (m) *Payment of tax:* \$87,000. This is the balancing figure in the tax payable T-account ($140 + 327 - 20 - x = 360$). It can be inferred that the company has paid tax of \$87,000 during the year. This item is entered in the T-accounts as follows:

Dr Tax payable	87,000
Cr Operating activities	87,000

- (n) *Payment of dividend:* \$100,000. This is the balancing figure in the dividend payable T-account ($100 + 100 - x = 100$). It can be inferred that the company has paid dividend of \$100,000 during the year. This item is entered in the T-accounts as follows:

Dr Dividend payable	100,000
Cr Financing activities	100,000

- (o) *Payment of dividend to non-controlling interest:* \$20,000. This is the balancing figure in the non-controlling interest T-account ($709 + 100 + 164 - x = 953$). It can be inferred that the subsidiary companies have paid \$20,000 dividend to non-controlling shareholders during the year. This item is entered in the T-accounts as follows:

Dr Non-controlling interest	20,000
Cr Financing activities	20,000

- (p) *Increase in cash:* \$540,000. This is the net changes in the cash and cash equivalents accounts. This is the final reconciling item and is entered in the T-accounts as follows:

Dr Cash	540,000
Cr Increase in cash	540,000

Presentation

The presentation of the consolidated statement of cash flows for P Ltd group for the year ended 31 December 20X8 is shown below with two different options: (a) where the cash flows from operating activities are reported using the indirect method, and (b) where the cash flows from operating activities are reported using the direct method.

- (a) Presentation of the consolidated statement of cash flows for P Ltd group for the year ended 31 December 20X8 where the cash flows from operating activities are reported using the indirect method.

P Ltd and its subsidiaries Consolidated statement of cash flows For year ended 31 December 20X8	
	\$'000
Cash flows from operating activities	
Profit before tax	1,142
Add/(less) non-cash items	
Depreciation	445
Share of profit of associate	(60)
Add/(less) changes in working capital	
Stock	(600)
Debtors	(150)
Creditors	320
Payment of tax	(87)
Net cash from operating activities	<u>1,010</u>
Cash flows from investing activities	
Disposal of subsidiary	680
Acquisition of subsidiary	(400)
Purchase of machinery	(650)
Dividend received from associate	20
Net cash used in investing activities	<u>(350)</u>
Cash flows from financing activities	
Payment of dividend	(100)
Payment of dividend to non-controlling interests	(20)
Net cash used in financing activities	<u>(120)</u>
Net increase in cash and cash equivalents	540
Cash and cash equivalents at 1 January 20X8	<u>94</u>
Cash and cash equivalents at 31 December 20X8	<u>634</u>

- (b) Presentation of the consolidated statement of cash flows for P Ltd group for the year ended 31 December 20X8 where the cash flows from operating activities are reported using the direct method.

P Ltd and its subsidiaries
Consolidated statement of cash flows
For year ended 31 December 20X8

	\$'000
Cash flows from operating activities	
Cash receipts from customers	2,850
Cash paid to suppliers and employees	(1,753)
Payment of tax	(87)
Net cash from operating activities	<u>1,010</u>
Cash flows from investing activities	
Disposal of subsidiary	680
Acquisition of subsidiary	(400)
Purchase of machinery	(650)
Dividends received from associate	20
Net cash used in investing activities	<u>(350)</u>
Cash flows from financing activities	
Payment of dividend	(100)
Payment of dividend to non-controlling interests	(20)
Net cash used in financing activities	<u>(120)</u>
Net increase in cash and cash equivalents	540
Cash and cash equivalents at 1 January 20X8	<u>94</u>
Cash and cash equivalents at 31 December 20X8	<u>634</u>

Notes to the consolidated statement of cash flows (for both indirect method and direct method)

1. *Cash and Cash Equivalents*

Cash and cash equivalents consist of cash on hand and balances with banks.

2. *Acquisition of Subsidiary*

During the year, the group acquired a subsidiary, T Ltd. The effects of the acquisition are as follows:

	\$'000
Land	500
Non-controlling interest	<u>(100)</u>
Cash flow used in acquisition	<u>400</u>

3. Disposal of Subsidiary

During the year, the group disposed of one of its subsidiary companies, S Ltd. The effects of the disposal are as follows:

	\$'000
Net assets disposed of	
Fixed assets	700
Long-term loan	(100)
Stock	100
Trade debtors	50
Trade creditors	(50)
Tax payable	(20)
Cash	20
Disposal price	700
Less cash of S Ltd	20
Cash flow from disposal	<u>680</u>

Notes to the solution

- (a) The effect of the acquisition of subsidiary is presented in the consolidated statement of cash flows as a single line item, 'Acquisition of subsidiary \$400,000'.
- (b) The effect of the disposal of subsidiary is presented in the consolidated statement of cash flows as a single line item, 'Disposal of subsidiary \$680,000'. (The amount of \$680,000 is arrived at after netting-off the \$20,000 cash of the subsidiary disposed of with the \$700,000 cash received as disposal price).
- (c) The effect of non-controlling interest on group cash is presented in the consolidated statement of cash flows as 'Payment of dividend to non-controlling interest \$20,000'.
- (d) The effect of the associate on group cash is presented in the consolidated statement of cash flows as 'Dividend from associate: \$20,000'. (The profit before tax includes the group's share of the associate's profit, and therefore under the indirect method the share of associate's profit is deducted from the profit before tax.)



Summary

The preparation and presentation of the consolidated statement of cash flows are not different from the preparation and presentation of the entity statement of cash flows, except for certain items that are encountered in the consolidated financial statements and not in the entity financial statements. Some of these items, which are dealt with

in this chapter, are (a) non-controlling interest, (b) investment in associate accounted for under the equity method, and (c) acquisition and disposal of subsidiary during the year.

appendix **8A**

Statement of cash flows

This appendix discusses the basic issues in the preparation and presentation of statement of cash flows for individual reporting entities (instead of for a group). FRS 7, which is operative for financial statements covering periods beginning on or after 1 January 1995, requires presentation of a statement of cash flows as an integral part of the financial statements for each period in which the financial statements are presented.

8A.1 Cash flows

FRS 7 requires statement of cash flows to report cash flows during the period classified by operating, investing, and financing activities (paragraph 10). It defines cash flows as inflows and outflows of cash and cash equivalents (paragraph 6).

Cash generally comprises cash on hand and cash in bank (including bank overdraft).

Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value (paragraph 6). Thus, an investment normally qualifies as a cash equivalent only when it has a short maturity of three months or less from the date of acquisition and is held for the purpose of meeting short-term cash commitments rather than for investment or other purposes. It should be noted that the three-month period is calculated from the acquisition date, not the balance sheet date. Some examples of cash equivalents are Treasury bills, commercial paper, and money market funds.

Although the focus of the statement is on cash flows, restricting the measurement base to cash would not reflect the reality. Under the cash management policies of many enterprises, cash in excess of immediate needs is often placed in short-term investments. These investments are highly liquid and are, in fact, equivalent to cash. The statement therefore focuses not just on flows of cash, but on flows of cash and cash equivalents.

8A.I.I Cash flows from operating activities

The amount of cash flows arising from operating activities is a key indicator of the extent to which the operations of the enterprise have generated sufficient cash flows to repay loans, maintain the operating capability of the enterprise, pay dividends, and make new investment without recourse to external sources of financing (paragraph 13).

Operating activities are defined in FRS 7 as the principal revenue-producing activities of the enterprise and other activities that are not investing or financing activities (paragraph 6). It should be noted that under this definition, 'operating activities' is the 'catch-all residual', that is, any cash flow that does not fall within the definition of cash flow from investing or financing activities would automatically be reported as cash flow from operating activities.

Cash flows from operating activities are therefore primarily derived from the principal revenue-producing activities of the enterprise. Some common examples of cash flows from operating activities are as follows:

- (a) cash receipts from sale of goods;
- (b) cash receipts from rendering of services;
- (c) cash receipts from royalties, commission, and other revenue;
- (d) cash payments to suppliers of goods;
- (e) cash payments to employees; and
- (f) cash payments to suppliers of other services (for example, power and electricity).

FRS 7 provides that the cash flows from operating activities may be presented in the statement of cash flows using either the direct method or the indirect method (paragraph 18).

8A.I.I.I Direct method

Under the direct method, FRS 7 requires the disclosure of 'major classes of gross cash receipts and gross cash payments' (paragraph 18). However, it does not specifically mention what constitute a 'major' class. In this respect, it should be noted that in the United States, SFAS No. 95 requires disclosure of the following classes of operating cash receipts and payments:

- (a) cash collected from customers;
- (b) interest and dividend received;
- (c) cash paid to employees and other suppliers;
- (d) interest and dividend paid; and
- (e) other operating cash receipts and payments.

The above major classes of gross cash receipts and gross cash payments may be obtained from the accounting records (for example, the cash book) of the enterprise.

Otherwise, they may be obtained by adjusting the amounts of sales, cost of sales and other items in the statement of comprehensive income from the accrual basis to the cash basis, as shown below:

- Sales + beginning balance of trade debtors – ending balance of trade debtors = cash collected from customers
- Cost of sales + ending stock – beginning stock = purchases; and purchases + beginning balance of trade creditors – ending balance of trade creditors = cash payments to suppliers of goods
- Operating expenses + beginning balance of accrued expenses – ending balance of accrued expenses + ending balance of prepaid expenses – beginning balance of prepaid expenses – other non-cash expenses (for example, depreciation) = cash payment for operating expenses

8A.1.1.2 Indirect method

Under the indirect method, the net cash flow from operating activities is determined by adjusting the net profit or loss for the effects of (a) non-cash items (for example, depreciation), (b) items for which the cash effect is investing or financing cash flows (for example, profit on sale of fixed assets), and (c) changes in the operating working capital (for example, changes in stock, debtors, and creditors balances).

It should be noted that only working capital items that are 'operating' in nature in the context of the statement of cash flows should be taken into account in the adjustment. Working capital items that are 'investing' or 'financing' in nature (for example, amount payable on purchase of a fixed asset, and interest payable on loans), should not be taken into account in the above adjustment.

Since FRS 7 requires cash flows arising from taxes on income to be separately disclosed (paragraph 35), it will be more convenient to deal with the 'pre-tax', rather than 'after-tax', net profit or loss in the above calculations. (It may also be noted that in the illustration in Appendix 1 of FRS 7, the 'profit before taxation' is used).

The formula for conversion of 'profit from operation' to 'cash from operation' may be stated as below:

Profit before tax +/- non-cash items +/- non-operating activities items +/- changes in operating working capital = cash flows from operating activities

8A.1.2 Cash flows from investing activities

Investing activities are defined in FRS 7 as the acquisition and disposal of long-term assets and non-cash-equivalent investments (paragraph 6). Cash flows from investing activities represent the extent to which expenditures have been made for resources intended to generate future income and cash flows. Some common examples of cash flows from investing activities are as follows:

- (a) cash payments for the acquisition and cash receipts from the sale of fixed assets;
- (b) cash payments for the acquisition and cash receipts from the sale of long term investments; and
- (c) cash advances and loan made to other parties and cash receipts from the repayment thereof.

8A.1.3 Cash flows from financing activities

Financing activities are activities that result in changes in the size and composition of the equity capital and borrowing of the enterprise (paragraph 6). Information on cash flows from financing activities is useful in predicting claims on future cash flows by providers of capital (both equity and debt) to the enterprise. Some common examples of cash flows from financing activities are:

- (a) cash receipts from the issuance and cash payments for redemption of equity (for example, shares) and debt instruments (for example, debentures); and
- (b) cash receipts from other short-or long-term borrowing and cash repayments of amounts borrowed.

8A.2 Further issues

This section discusses some of the more complex cash flow issues.

8A.2.1 Interest and dividend

FRS 7 provides that cash flows from interest and dividend received and paid should each be disclosed separately (paragraph 31). FRS 7 allows each interest and dividend received and paid to be classified as either operating, investing, or financing cash flow. However, it provides that the classification should be consistent from period to period (paragraph 31).

It is interesting to note that in the United States, SFAS No. 95 requires all interest and dividend received and paid to be reported as cash flows from operating activities.

8A.2.1.1 Interest paid

Interest paid may be classified as an operating cash flow or as a financing cash flow (paragraph 33). The rationale for classifying interest paid as an operating cash flow is that interest is normally taken into account in the determination of operating results. In such a case, a cash repayment of loan that includes both interest and capital may be reported as two separate components in the statement of cash flows: the interest

element is classified as an operating activity, and the capital element is classified as a financing activity. (This is an example of a single transaction that may include cash flows that are classified differently, as mentioned in paragraph 12).

Alternatively, interest paid may be classified as a financing cash flow because it is a cost of obtaining financial resources. The total amount of interest paid during the period should be disclosed in the statement of cash flows, whether it has been recognized as an expense in the statement of comprehensive income or capitalized in accordance with FRS 23 *Borrowing Costs*.

8A.2.1.2 Dividend paid

Dividend paid may be classified as a financing cash flow or as an operating cash flow (paragraph 34). Dividend paid may be classified as a financing cash flow because it is a cost of obtaining financial resources. The advantage of classifying dividend paid as an operating cash flow is that it helps users to determine the ability of an enterprise to pay dividends out of operating cash flows.

8A.2.1.3 Interest received

Interest received may be classified as an operating cash flow or as an investing cash flow (paragraph 33). The rationale for classifying interest received as an operating cash flow is that interest received is normally taken into account in the determination of operating results. Interest received may be classified as an investing cash flow because it is a return on investment.

8A.2.1.4 Dividend received

The treatments for dividend received are the same as those for interest received, as discussed above. Under the one-tier system, the recipient will receive the net dividend, and this dividend income is not subject to tax. For example, when a company receives dividend of \$70, the journal entry to record the dividend received would be simply Dr Cash \$70, and Cr Dividend income \$70. In the preparation of the statement of cash flows, using either the worksheet approach or the T-account approach, the entries in relation to dividends received will simply be Dr Dividends received (either financing or operating activities) and Cr Dividend income.

8A.2.2 Taxes paid

FRS 7 requires that cash flows arising from taxes on income should be separately disclosed (paragraph 35). There may, however, be problems with classifying taxes paid into one of the three categories of operating, investing, and financing activities. Firstly,

there may be problems with the identification of the tax effects of each underlying transaction. For example, it may be difficult or impractical to separately identify the tax effects on the balancing charges or balancing allowances on disposal of fixed assets from the tax effects on the operating profits. Secondly, the cash flows of the tax effect and the underlying transactions that give rise to the tax effect may occur in different accounting periods. This is especially so in Singapore, where the year of assessment is one year behind the basis year.

In view of the above-mentioned problems, FRS 7 provides that cash flows arising from taxes on income should be classified as cash flows from operating activities unless they can be specifically identified with financing and financing activities (paragraph 35). When it is practicable to identify the tax cash flow with an individual transaction that gives rise to cash flow that is classified as investing or financing activities, the tax cash flow should be classified as an investing or financing activity, as appropriate. When tax cash flows are allocated over more than one class of activity, FRS 7 requires that the total amount of taxes paid be disclosed (paragraph 36).

(For classroom exercises, where the amount of tax paid may have to be computed, it should be noted that the tax expense in relation to dividend income under the imputation system should be excluded and the group's share of the associate's tax expense should also be excluded. If the group has adopted the one-tier system for dividend and also presents its share of associate's after-tax profit [instead of share of associate's profit less share of associate's tax], then these two adjustments will not be necessary.)

8A.2.3 Foreign currency cash flows

For cash flows arising from transactions in a foreign currency, FRS 7 generally requires that they be reported in a manner consistent with the provisions of FRS 21 *The Effects of Changes in Foreign Exchange Rates*. Specifically, FRS 7 provides that cash flows arising from transactions in a foreign currency should be recorded in an entity's presentation currency by applying to the foreign currency amount the exchange rate at the date of the cash flow (paragraph 25). FRS 7 also permits the use of an exchange rate that approximates the actual rate (paragraph 27). For example, an average rate for a week or a month might be used for all foreign currency transactions occurring during that period. This is consistent with the provisions of FRS 21.

The above is straightforward. The amount to be reported in the statement of cash flows is equal to the foreign currency received/paid converted at the exchange rate ruling at the date of transaction (or the average rate, as an approximation). However, accounting for foreign currency transactions under FRS 21 often gives rise to exchange gains/losses. These exchange gains and losses, which are accounted for as part of profit

or loss for the year, may either be realized or unrealized. Realized exchange gains and losses arise on settlement of foreign currency monetary items. These realized exchange gains and losses are part and parcel of the actual cash flows, that is, cash inflow/outflow = carrying amount of the monetary item add/less realized exchange gains/losses. Unrealized exchange gains and losses, on the other hand, arise on unsettled foreign currency monetary items and therefore do not involve cash flows.

The treatment of an exchange gain/loss in the preparation and presentation of the statement of cash flows depends on (a) whether the direct or indirect method is used in the computation and presentation of cash flows from operating activities, (b) whether the exchange gain/loss is realized or unrealized, and (c) whether the underlying monetary item that gives rise to the exchange gain/loss is an operating item or non-operating item.

Thus, there are eight possible scenarios, as discussed below. For the purpose of illustration, assume four monetary assets that are denominated in foreign currencies:

1. A trade debtor with carrying amount of \$10 is collected, and due to changes in exchange rate, the amount realized in Singapore dollars is only \$9 (a cash flow from operating activities of \$9 and a realized loss of \$1).
2. Another trade debtor with carrying amount of \$10 is restated at balance sheet date at \$9 due to changes in exchange rate (an unrealized loss of \$1 and no cash flow).
3. A loan receivable with carrying amount of \$10 is collected, and due to changes in exchange rate, the amount realized in Singapore dollars is only \$9 (a cash flow of \$9 from investing activities and a realized loss of \$1).
4. Another loan receivable with carrying amount of \$10 is restated at balance sheet date at \$9 due to changes in exchange rate (an unrealized loss of \$1 and no cash flow).

The eight scenarios are:

- (a) *Indirect method, realized gain/loss and operating monetary item.* There are two approaches available in dealing with realized gain/loss from operating monetary items under the indirect method. One approach is to have no adjustment, and the other approach is to adjust the profit for the realized exchange gain/loss. To illustrate, refer to monetary asset 1 in the above illustration. If no adjustment is made, the profit before tax is reduced by the realized loss of \$1 and there is a reduction of \$10 in the trade debtor, resulting in a cash flow of \$9 from operating activities. Alternatively, if an adjustment is made to Dr Operating activities (Profit before tax) \$1 and Cr Trade debtor \$1 for the realized loss, then in the statement of cash flows, the profit before tax will not be affected (the unrealized loss that was deducted from profit is now added

back) and the trade debtor will show a reduction of \$9, resulting in a cash flow of \$9 from operating activities. Thus, both approaches will yield the same cash flow effect, that is, a cash flow of \$9 from operating activities. However, it may be argued that since realized gain/loss is part of cash flow, the 'no adjustment' approach may be more appropriate.

- (b) *Indirect method, unrealized gain/loss and operating monetary item.* There are also two ways to deal with unrealized gain/loss from operating monetary items under the indirect method, as in the case of realized gain/loss discussed in (a) above. Both approaches will result in the statement of cash flows showing no cash flow, which is consistent with the economic reality. However, in this case, it may be argued that since unrealized exchange gain/loss does not involve cash flow, the 'adjustment to profit' approach may be more appropriate.
- (c) *Indirect method, realized gain/loss and non-operating monetary item.* Under the indirect method, the realized exchange gain/loss should be adjusted back to the profit. With reference to monetary asset 3 in the above illustration, the adjustments will be Dr Profit before tax \$1 and Cr Loan receivable \$1 for the realized loss, and Dr Cash collection \$9 and Cr Loan receivable \$9 for the collection. In the statement of cash flows, the profit before tax will not be affected (and therefore, there is no effect on cash flows from operating activities), and cash collected from loan receivable (under investing activities) will be \$9. The 'no adjustment' approach discussed in (a) above will not be applicable. Its use will result in the statement of cash flows showing 'cash used in operating activities of \$1' and 'cash flow from investing activities of \$10', which does not present a true and fair view of the actual cash flows of the enterprise.
- (d) *Indirect method, unrealized gain/loss and non-operating monetary item.* As for realized gain/loss discussed in (c) above, the unrealized gain/loss arising from non-operating monetary items should be adjusted back to the profit under the indirect method. With reference to monetary asset 4 in the above illustration, the adjustment will be Dr Profit before tax \$1 and Cr Loan receivable \$1 for the unrealized loss. In the statement of cash flows, the profit before tax will not be affected by the unrealized loss (and therefore, there is no effect on cash flow from operating activities) and also, there will be no other cash flows. The 'no adjustment' approach discussed in (a) above will not be applicable, otherwise the statement of cash flows will show that there is cash used of \$1 in operating activities and cash flow of \$1 from investing activities, which is not consistent with the underlying transactions.
- (e) *Direct method, realized gain/loss and operating monetary item.* Under the direct method, the realized exchange gain/loss arising from operating monetary items should be adjusted together with sales and trade debtors to arrive at 'cash collected from customers'. With reference to monetary asset 1 in the

above illustration, the entry to compute the cash collected from customers will be (assuming no sales) Dr Cash collection \$9, Dr Realized loss \$1 and Cr Trade debtors \$10. The statement of cash flows will then show, as part of cash flows from operating activities, 'cash collected from customers \$9', which is consistent with the underlying transactions.

- (f) *Direct method, unrealized gain/loss and operating monetary item.* As for realized gain/loss discussed in (e) above, the unrealized gain/loss arising from operating monetary items should also be adjusted together with sales and trade debtors to arrive at 'cash collected from customers'. With reference to monetary asset 2 in the above illustration, the entry to compute the cash collected from customers will be (assuming no sales) Dr Cash collection \$0, Dr Unrealized loss \$1 and Cr Trade debtors \$1. The statement of cash flows will then show no cash collected from customers, which is, again, consistent with the underlying transactions.
- (g) *Direct method, realized gain/loss and non-operating monetary item.* Under the direct method, the realized exchange gain/loss arising from non-operating monetary items should be adjusted together with the related non-operating monetary items to compute the cash collected from or paid on the monetary items. With reference to monetary asset 3 in the above illustration, the entry to compute the cash collected from loan will be Dr Cash collection \$9, Dr Realized loss \$1 and Cr Loan receivable \$10. The statement of cash flows will then show, as part of cash flows from investing activities, 'cash collected from loan \$9', which is, of course, consistent with the underlying transactions.
- (h) *Direct method, unrealized gain/loss and non-operating monetary item.* The unrealized gain/loss arising from non-operating monetary items should, under the direct method, be adjusted back to the related non-operating monetary items so as to account for the changes in the item balances. With reference to monetary asset 4 in the above illustration, the entry will be Dr Unrealized loss \$1 and Cr Loan receivable \$1. This will have no effect on the statement of cash flows, which is of course consistent with the underlying transactions.

If the exchange gains/losses relate to 'cash and cash equivalents' (for example, a one-month foreign currency fixed deposit), they should be included in the 'reconciliation' section of the statement of cash flows to reconcile the beginning balances of cash and cash equivalents to their ending balances. If the cash flows from operating activities are to be computed using the 'indirect' method, these exchange gains/(losses) should also be deducted from/(added back to) the profit before tax figure as 'non-cash items'. If, on the other hand, the cash flows from operating activities are to be computed using the 'direct' method, no such adjustment to the cash flows from operating activities is required. Instead, an entry involving the exchange gains/losses and the cash and cash equivalent accounts is required to account for the balances.

Issues relating to translation differences were discussed in Section 8.6.

8A.2.4 Bad and doubtful debts

When an enterprise provides for bad and doubtful debts, the statement of comprehensive income will be charged for the amount of the bad and doubtful debts expense. Also, the trade debtors balance will be reduced or the provision for bad and doubtful debt increased. How does this transaction affect the statement of cash flows?

It is obvious that the cash flow effect of this transaction is the same as that for exchange gains/losses arising from operating monetary items. Therefore, the treatments for bad debt expenses will be the same as those discussed under scenarios (a), (b), (f), and (g) of Section 8A.2.3 above, as the case may be. (The allowance for doubtful debt account balance may be set off against the trade debtors account balance before applying the approaches discussed.)

8A.2.5 Non-cash transactions

Many investing and financing activities do not have a direct impact on current cash flows. Some examples of these non-cash transactions are as follows:

- (a) acquisition of assets by issuing shares;
- (b) exchange of non-monetary assets; and
- (c) conversion of debentures to shares.

FRS 7 provides that these non-cash transactions should be excluded from the statement of cash flows (paragraph 43). The exclusion of these non-cash transactions from the statement of cash flows is consistent with the objective of a statement of cash flows, as these items do not involve cash flows in the current period.

Nevertheless, FRS 7 provides that these non-cash investing and financing transactions should be disclosed elsewhere in the financial statements in a way that provides all the relevant information about these investing and financing activities (paragraph 43). In the illustration in Appendix 1 of FRS 7, the information is disclosed in the notes to the statement of cash flows. It may be noted that in the United States, SFAS No. 95 requires these non-cash investing and financing activities to be disclosed in a separate schedule at the bottom of the statement of cash flows, or in a separate note to the financial statements.

8A.2.6 Reporting cash flows on a net basis

FRS 7 generally requires cash flows to be reported on a 'gross' basis (see paragraph 21). Each major class of gross cash receipts and gross cash payments should be separately reported in the statement of cash flows.

However, for the following two categories of cash flows, FRS 7 permits reporting on 'net' basis (paragraphs 22 and 23).

- (a) Cash receipts and payments on behalf of customers when the cash flows reflect the activities of the customer rather than those of the enterprise: For example, if the enterprise is the main tenant and collects rent from the sub-tenants on behalf of the landlord, then the rent collected and the rent paid may be netted-off and only the excess of rent paid over the rent collected is reported in the statement of cash flows.
- (b) Cash receipts and payments for items in which the turnover is quick, the amounts are large, and the maturities are short: An example would be cash receipts and payments on purchase and sale of quoted shares.

8A.3 Preparation

The source information for the preparation of the statement of cash flows is found in the balance sheet, statement of comprehensive income and the notes to accounts and through inquiry from the management. Using this source information, the transactions that caused a change in cash and cash equivalents can be identified.

There are two approaches that will facilitate the preparation of the statement of cash flows. These are the worksheet approach and the T-account approach.

Under the worksheet approach, the procedures are as follows:

1. For each balance sheet item, enter the beginning balances in the first column and the ending balances in the fourth column.
2. Enter, in the second and third columns, transactions that caused the changes in the account balances of all the accounts in the worksheet. It is most convenient to commence with the items in the statement of comprehensive income, starting with profit before tax, followed by tax charge, dividend appropriation, etc. Next, refer to the notes to accounts for information on any transactions undertaken during the year. The last resort is to think of transactions that are normally undertaken that will cause a change in the account balance.
3. In performing step 2 above, use the normal debit-credit rule and enter the cash flows under the specific sections in the lower part of the worksheet. For example, purchase of land will be entered as 'debit Land and credit Cash flows from investing activities'.

4. Ensure that all the transactions that caused the changes in the account balances have been entered. A test calculation may be done to ensure that for each balance sheet item, the beginning balance plus or minus the transactions for the year equals the ending balance.
5. Use the data at the lower part of the worksheet to prepare the statement of cash flows.
6. If the cash flows from operating activities are to be reported using the direct method, the detailed statement of comprehensive income items will also have to be dealt with. Under step 1 above, enter the amounts of each item in the detailed statement of comprehensive income in the first column of the worksheet. Work through steps 2 and 3. Under step 4, the test calculation would be to ensure that every credit item in the statement of comprehensive income has been accounted for with a credit entry (in the third column), and every debit item accounted for by a debit entry (in the second column).

The procedures under the T-account approach are as follows:

1. Set up a T-account for 'Cash and cash equivalents'. Enter the total beginning balance and the total ending balance of the cash and cash equivalent account. Within this T-account, set up three separate sections, namely, operating activities, investing activities, and financing activities.
2. Set up a T-account for each of the balance sheet accounts. Enter their respective beginning and ending balances.
3. Enter all transactions undertaken during the period that affect the T-accounts. It is most convenient to commence with the items in the statement of comprehensive income starting with profit before tax, followed by tax charge, dividend appropriation, etc. Next, refer to the notes to accounts for information on any transactions undertaken during the year. The last resort is to think of transactions that are normally undertaken that will cause a change in the account balances.
4. In performing step 3 above, use the normal debit-credit rule. Also, debit or credit the cash flows to the appropriate section of the Cash and cash equivalent T-account. For example, shares issued will be recorded as a debit to the Financing activities section of the Cash and cash equivalent T-account and a credit to Share capital T-account.
5. Ensure all the transactions affecting the T-accounts set up in step 2 have been entered. A test calculation may be done to ensure that for each T-account set up in step 2, the beginning balance plus or minus the transactions for the year equals the ending balance.
6. Ensure that in the Cash and cash equivalent T-account, the beginning balance plus or minus the cash flows equals the ending balance.

7. Prepare the statement of cash flows from the information contained in the Cash and cash equivalent T-account.
8. If the cash flows from operating activities are to be reported using the direct method, the detailed statement of comprehensive income items will also have to be dealt with. Under step 2, set up a T-account for the detailed statement of comprehensive income, without the content. In conjunction with steps 3 and 4 above, enter the statement of comprehensive income items in the T-account. Finally, ensure that the items in the detailed profit and loss T-account have been accounted for.

8A.4 Presentation

FRS 7 provides that the statement of cash flows should report cash flows during the period classified by operating, investing and financing activities (paragraph 10). It does not, however, specify any particular format of reporting. It merely requires that each enterprise present its cash flows from operating, investing, and financing activities 'in a manner which is most appropriate to its business' (paragraph 11). In this respect, the format of presentation shown in Appendix 1 to FRS 7 may be referred to.

Besides presenting the cash flow under the three categories of operating, investing, and financing activities, FRS 7 also requires a reconciliation of the amounts of cash and cash equivalents in the statement of cash flows with the amount reported in the balance sheet (paragraph 45). This reconciliation is generally presented as part of the statement of cash flows.

In view of the variety of cash management practices and banking arrangements around the world, FRS 7 requires an enterprise to disclose the policy that it adopts in determining the composition of cash and cash equivalents. If there is a change in the policy for determining the components of cash and cash equivalents, FRS 7 requires the enterprise to account for the effect of the change in accordance with FRS 8.

FRS 7 also requires that if significant cash and cash equivalent balances held by the enterprise are not available for use by the group, the fact and the amount thereof should be disclosed, together with a commentary by management (paragraph 48).

Problems for self-study

PROBLEM 8.1

The consolidated financial statements of H Ltd and its subsidiaries for the year 20X8 (with 20X7 comparative figures) are as follows:

- (a) Consolidated balance sheet as at 31 December 20X8

	20X8	20X7
	\$'000	\$'000
Goodwill on consolidation	100	—
Machinery (net)	3,100	2,200
Stock	300	320
Trade debtors	400	200
Cash	<u>100</u>	<u>80</u>
	<u>4,000</u>	<u>2,800</u>
Share capital	1,000	1,000
Retained profit	1,550	990
Non-controlling interest	140	120
Long-term loan	200	—
Trade creditors	520	250
Tax payable	490	340
Dividend payable	<u>100</u>	<u>100</u>
	<u>4,000</u>	<u>2,800</u>

- (b) Consolidated statement of comprehensive income for the year ended 31 December 20X8

	20X8	20X7
	\$'000	\$'000
Sales	3,000	2,000
Cost of sales	<u>1,000</u>	<u>700</u>
Gross profit	2,000	1,300
Profit on sale of machinery*	10	—
Operating expenses**	<u>900</u>	<u>600</u>
Profit before tax	1,110	700
Tax	<u>400</u>	<u>250</u>
Profit after tax	710	450
Other comprehensive income	—	—
Total comprehensive income	<u>710</u>	<u>450</u>
Attributable to:		
Shareholders of the parent	660	430
Non-controlling interest	<u>50</u>	<u>20</u>
	<u>710</u>	<u>450</u>

* The book value of the machinery sold was \$80,000.

** This includes depreciation expense of \$200,000 (20X7: \$150,000).

(c) Consolidated statement of changes in equity (partial) for the year ended 31 December 20X8

	20X8	20X7
	\$'000	\$'000
Retained profit as at 1 January	990	660
Profit for the year	660	430
Dividend	100	100
Retained profit as at 31 December	<u>1,550</u>	<u>990</u>

During the year 20X8, H Ltd acquired the entire issued share capital of Z Ltd for a cash consideration of \$500,000. Z Ltd's balance sheet at the time it was acquired was as follows (all the assets and liabilities were stated at their respective fair values):

	\$'000
Machinery (net)	500
Trade debtors	140
Cash	10
	<u>650</u>
Share capital	300
Retained profit	100
Long-term loan	200
Trade creditors	50
	<u>650</u>

H Ltd group uses the indirect method for the presentation of operating cash flows.

Required

Prepare the consolidated statement of cash flows for H Ltd and its subsidiaries for the year ended 31 December 20X8.

Solution**Preparation (using the worksheet approach)**

H Ltd and its subsidiaries Worksheet for preparation of consolidated statement of cash flows For year ended 31 December 20X8				
	Analysis			
	20X7	Debit	Credit	20X8
	\$'000	\$'000	\$'000	\$'000
Debit balances				
Goodwill on consolidation	—	a 100		100
Machinery (net)	2,200	a 500 h 680	c 200 d 80	3,100
Stock	320		l 20	300
Trade debtors	200	a 140 m 60		400
Cash	80	a 10 o 20	a 10	100
Credit balances				
Share capital	1,000			1,000
Retained profit	990	e 400 f 50 g 100	b 1,110	
				1,550
Non-controlling interest	120	k 30	f 50	140
Long-term loan	—		a 200	200
Trade creditors	250		a 50 n 220	520
Tax payable	340	i 250	e 400	490
Dividend payable	100	j 100	g 100	100
Operating activities				
Profit before tax			b 1,110	
Depreciation			c 200	
Profit on sale of machinery				d 10
Payment of tax				i 250
Stock		l 20		
Trade debtors				m 60
Trade creditors			n 220	
Investing activities				
Acquisition of subsidiary			a 490	
Sale of machinery		d 90		h 680
Purchase of machinery				
Financing activities				
Payment of dividend				j 100
Payment of dividend to NCI				k 30
Decrease in cash and cash equivalent				
Cash			o 20	

Explanation

- (a) *Acquisition of subsidiary.* The cash consideration, net of cash of S Ltd acquired, is shown as a negative cash flow in investing activities of \$490,000 ($500,000 - 10,000$). All the other assets and liabilities of the subsidiary acquired are separately accounted for in their respective accounts. These are entered in the worksheet as follows:

Dr Goodwill on consolidation	100,000
Dr Machinery	500,000
Dr Trade debtors	140,000
Dr Cash	10,000
Cr Long-term loan	200,000
Cr Trade creditors	50,000
Cr Investing activities	500,000
Dr Investing activities	10,000
Cr Cash	10,000

- (b) *Profit before tax: \$1,110,000.* This is the first item in determining the amount of cash flow from operation. This item is entered in the worksheet as follows:

Dr Operating activities	1,110,000
Cr Retained profit	1,110,000

- (c) *Depreciation charge for the year: \$200,000.* Since profit before tax was arrived at after deducting depreciation, which is a non-cash item, the depreciation must be added back to profit before tax. The other entry is to credit the machinery account or the accumulated depreciation account, as the case may be. This item is entered in the worksheet as follows:

Dr Operation activities	200,000
Cr Machinery	200,000

- (d) *Sale of machinery.* The net proceeds from the sale of \$90,000 are to be shown as an investing cash flow. The profit on sale of machinery of \$10,000 must therefore be deducted from profit before tax to prevent double-counting. The other entry is to reduce the machinery account by the book value of machinery sold. This item is entered in the worksheet as follows:

Dr Investing activities	90,000
Cr Profit on sale of machinery	10,000
Cr Machinery	80,000

- (e) *Tax charge for the year: \$400,000.* Since retained profit has been credited with profit before tax in (b), it must now be debited with the tax charge for the year. The other entry is to credit the tax payable account. This item is entered in the worksheet as follows:

Dr Retained profit	400,000
Cr Tax payable	400,000

- (f) *Non-controlling interest in the current year's profit:* \$50,000. This decreases the amount of group retained profit and increases non-controlling interest in the subsidiary's net assets. This item is entered in the worksheet as follows:

Dr Retained profit	50,000
Cr Non-controlling interest	50,000

- (g) *Dividend appropriation:* \$100,000. As the result of (b), (e), and (f) above, the retained profit account has been credited with the group after-tax profit. However, the retained profit account is increased by the year's retained profit only. Therefore, dividend appropriation has to be deducted from the retained profit account. The other entry is to credit to dividend payable account. This item is entered in the worksheet as follows:

Dr Retained profit	100,000
Cr Dividend payable	100,000

- (h) *Purchase of machinery:* \$680,000. This is the balancing figure in the machinery account in the worksheet ($2200 + 500 + x - 200 - 80 = 3100$). It can be inferred that the transaction is purchase of machinery. This item is entered in the worksheet as follows:

Dr Machinery	680,000
Cr Investing activities	680,000

- (i) *Payment of tax:* \$250,000. This is the balancing figure in the tax payable account in the worksheet ($340 + 400 - x = 490$). It can be inferred that the company has paid tax of \$250,000 during the year. This item is entered in the worksheet as follows:

Dr Tax payable	250,000
Cr Operating activities	250,000

- (j) *Payment of dividend:* \$100,000. This is the balancing figure in the dividend payable account in the worksheet ($100 + 100 - x = 100$). It can be inferred that the company has paid dividend of \$100,000 during the year. This item is entered in the worksheet as follows:

Dr Dividend payable	100,000
Cr Financing activities	100,000

- (k) *Payment of dividend to non-controlling interest:* \$30,000. This is the balancing figure in the non-controlling interest account in the worksheet ($120 + 50 - x = 140$). It can be inferred that the subsidiary companies have paid \$30,000 dividend to non-controlling shareholders during the year. This item is entered in the worksheet as follows:

Dr Non-controlling interest	30,000
Cr Financing activities	30,000

- (l) *Decrease in stock:* \$20,000. This is the net change in stock balances. The decrease in stock means that part of the cash flows from operation is released from stock and consequently cash inflow from operating activities is increased. It is entered in the worksheet as follows:

Dr Operating activities	20,000
Cr Stock	20,000

- (m) *Increase in trade debtors:* \$60,000. This is the net change in debtors balances. The increase in debtors means that part of the cash flows from operation is tied up in debtors and consequently cash inflow from operating activities is reduced. It is entered in the worksheet as follows:

Dr Debtors	60,000
Cr Operating activities	60,000

- (n) *Increase in creditors:* \$220,000. This is the net change in creditors balances. The increase in creditors means that part of the purchases for the period has not been paid for and consequently cash flows from operating activities are increased. It is entered in the worksheet as follows:

Dr Operating activities	220,000
Cr Creditors	220,000

- (o) *Increase in cash:* \$20,000. This is the net changes in the cash and cash equivalents accounts. This is the final reconciling item and is entered in the worksheet as follows:

Dr Cash	20,000
Cr Increase in cash	20,000

Presentation

H Ltd and its subsidiaries
Consolidated statement of cash flows
For year ended 31 December 20X8

	\$'000
Cash flows from operating activities	
Profit before tax	1,110
Add/(less) non-cash items	
Depreciation	200
Profit on sale of machinery	(10)
Add/(less) changes in working capital	
Stock	20
Trade debtors	(60)
Trade creditors	220
Payment of tax	<u>(250)</u>
Net cash from operating activities	<u>1,230</u>
Cash flow from investing activities	
Acquisition of subsidiary	(490)
Sale of machinery	90
Purchase of machinery	<u>(680)</u>
Net cash used in investing activities	<u>(1,080)</u>
Cash flow from financing activities	
Payment of dividend	(100)
Payment of dividend to non-controlling interest	<u>(30)</u>
Net cash used in financing activities	<u>(130)</u>
Net increase in cash and cash equivalents	20
Cash and cash equivalent at 1 January 20X8	<u>80</u>
Cash and cash equivalent at 31 December 20X8	<u>100</u>

The following is a summary of the effects of the acquisition of subsidiary:

	\$'000
Net assets acquired	
Fixed assets	500
Long-term loan	<u>(200)</u>
Trade debtors	140
Trade creditors	(50)
Cash	10
Goodwill on consolidation	<u>100</u>
Cash consideration	500
Less cash of subsidiary acquired	<u>10</u>
Cash flow used in acquisition	<u>490</u>

Notes to the solution

- (a) The effect of the acquisition of subsidiary is presented in the consolidated statement of cash flows as a single line item, net of cash of subsidiary acquired, under investing activities, as 'Acquisition of subsidiary \$490,000'.
- (b) The effect of non-controlling interest on group cash is presented in the consolidated statement of cash flows as 'Payment of dividend to non-controlling interest \$30,000'.

PROBLEM 8.2

The consolidated financial statements of A Ltd and its subsidiary companies for the year 20X8 (with 20X7 comparative figures) are as follows:

- (a) Consolidated balance sheet as at 31 December 20X8

	20X8	20X7
	\$'000	\$'000
Machinery (net)	1,770	2,265
Investment in associate	320	240
Stock	1,300	400
Trade debtors	300	200
Cash	444	94
	<u>4,134</u>	<u>3,199</u>
Share capital	1,000	1,000
Retained profits	1,201	900
Non-controlling interest	853	709
Long-term loan	—	100
Trade creditors	520	250
Tax payable	460	140
Dividend payable	100	100
	<u>4,134</u>	<u>3,199</u>

(b) Consolidated statement of comprehensive income for the year ended 31 December 20X8

	20X8	20X7
	\$'000	\$'000
Sales	3,000	2,000
Cost of sales	1,018	700
Gross profit	1,982	1,300
Loss on disposal of subsidiary	150	—
Operating expenses*	900	681
Share of profit of associate	100	12
Profit before tax	1,032	631
Tax	467	264
Profit after tax	565	367
Other comprehensive income	—	—
Total comprehensive income	<u>565</u>	<u>367</u>
 Attributable to:		
Shareholders of the parent	401	242
Non-controlling interest	164	125
	<u>565</u>	<u>367</u>

* This includes depreciation expense of \$445,000 (20X7: \$332,000).

(c) Consolidated statement of changes in equity (partial) for the year ended 31 December 20X8

	20X8	20X7
	\$'000	\$'000
Retained profit as at 1 January	900	758
Profit for the year	401	242
Dividend	100	100
Retained profit as at 31 December	<u>1,201</u>	<u>900</u>

During the year 20X8, A Ltd purchased a piece of machinery and paid a cash consideration of \$650,000. On 1 January 20X8, it disposed of one of its subsidiaries, D Ltd, for a cash consideration of \$550,000. Besides this, there was no disposal of non-current assets by the entities in the group.

D Ltd was incorporated by A Ltd as a wholly owned subsidiary in 20X4. On 1 January 20X8, D Ltd's balance sheet was as follows:

	\$'000
Machinery (net)	700
Stock	100
Trade debtors	50
Cash	20
	<u>870</u>
Share capital	500
Retained profits	200
Long-term loan	100
Trade creditors	50
Tax payable	20
	<u>870</u>

A Ltd acquired a 20% interest in an associate, E Ltd in 20X1. For the year ended 31 December 20X8, E Ltd reports an after-tax profit of \$500,000 and pays a net dividend of \$100,000.

A Ltd group uses the indirect method for the presentation of operating cash flows.

Required

Prepare the consolidated statement of cash flows for A Ltd and its subsidiary companies for the year ended 31 December 20X8.

Solution**Preparation**

A Ltd and its subsidiary companies
Worksheet for preparation of consolidated statement of cash flows
For year ended 31 December 20X8

	20X7	Analysis		20X8
		Debit	Credit	
	\$'000	\$'000	\$'000	\$'000
Debit balances				
Machinery (net)	2,265	i 650	a 700 c 445	1,770
Investment	240	e 100	d 20	280
Stock	400	m 1,000	a 100	1,300
Trade debtors	200	n 150	a 50	300
Cash	94	a 20	a 20	484
		p 390		
Credit balances				
Share capital	1,000			1,000
Retained profits	900	f 467 g 164 h 100	b 1,032	1,201
Non-controlling interest	709	l 20	g 164	853
Long-term loan	100	a 100		—
Trade creditors	250	a 50	o 320	520
Tax payable	140	a 20	f 467	460
Dividend payable	100	k 100	h 100	100
Operating activities				
Profit before tax		b 1,032		
Loss on sale of subsidiary		a 105		
Depreciation		c 445		
Share of associate's profit			e 100	
Payment of tax			j 127	
Stock			m 1,000	
Trade debtors			n 150	
Trade creditors		o 320		
Investing activities				
Disposal of subsidiary		a 530		
Dividend from associate		d 20		
Purchase of machinery			i 650	
Financing activities				
Payment of dividend			k 100	
Payment of dividend to NCI			l 20	
Decrease in cash and cash equivalents				
Cash			p 390	

Explanation

- (a) *Disposal of subsidiary.* The proceeds from the disposal, net of cash of D Ltd disposed of, are shown as a cash flow from investing activities of \$530,000 ($550,000 - 20,000$). All the other assets and liabilities of the subsidiary disposed of are written off their respective accounts. These are entered in the worksheet as follows:

Dr Investing activities	550,000
Dr Loss on sale of subsidiary	150,000
Dr Long-term loan	100,000
Dr Trade creditors	50,000
Dr Tax payable	20,000
Cr Machinery	700,000
Cr Stock	100,000
Cr Trade debtors	50,000
Cr Cash	20,000
Dr Cash	20,000
Cr Investing activities	20,000

- (b) *Profit before tax:* \$1,032,000. This is the first item in determining the amount of cash flow from operation. This item is entered in the worksheet as follows:

Dr Operating activities	1,032,000
Cr Retained profit	1,032,000

- (c) *Depreciation charge for the year:* \$445,000. Since profit before tax was arrived at after deducting depreciation, which is a non-cash item, the depreciation must be added back to profit before tax to arrive at 'cash flows from operation'. The other entry is to credit the machinery account or the accumulated depreciation account, as the case may be. This item is entered in the worksheet as follows:

Dr Operating activities	445,000
Cr Machinery	445,000

- (d) *Dividend received from associate:* \$20,000. The dividend received from associate is presented as an investing cash inflow. The credit entry is against the investment in associate account, because under equity accounting the investment account balance is reduced by the amount of dividend received. This item is entered in the worksheet as follows:

Dr Investing activities	20,000
Cr Investment	20,000

- (e) *Share of profit of associate:* \$100,000. The group's share of associate's profit is treated as a non-cash item and is to be deducted from profit before tax in arriving at the amount of cash flows from operation. The debit entry is to the investment in associate account,

because under equity accounting the investment account balance is increased by the share of associate's profit. This item is entered in the worksheet as follows:

Dr Investment	100,000
Cr Operating activities	100,000

- (f) *Tax charge for the year: \$467,000.* Since retained profit has been credited with group profit before tax in (b), it must now be debited with the group tax charge for the year. The other entry is to credit the tax payable account. This item is entered in the worksheet as follows:

Dr Retained profit	467,000
Cr Tax payable	467,000

- (g) *Non-controlling interest in the current year's profit: \$164,000.* This decreases the amount of group retained profit and increases non-controlling interest in the subsidiary's net assets. This item is entered in the worksheet as follows:

Dr Retained profit	164,000
Cr Non-controlling interest	164,000

- (h) *Dividend appropriation: \$100,000.* As a result of (b), (e), (f), and (g) above, retained profit account has been credited with the group after-tax profit. However, the retained profit account is increased by the year's retained profit only. Therefore, the dividend appropriation has to be deducted from the retained profit account. The other entry is to credit to dividend payable account. This item is entered in the worksheet as follows:

Dr Retained profit	100,000
Cr Dividend payable	100,000

- (i) *Purchase of machinery: \$650,000.* This item, which is an investing cash outflow, is entered in the worksheet as follows:

Dr Machinery	650,000
Cr Investing activities	650,000

- (j) *Payment of tax: \$127,000.* This is the balancing figure in the tax payable account in the worksheet ($140 + 467 - 20 - x = 460$). It can be inferred that the company has paid tax of \$87,000 during the year. This item is entered in the worksheet as follows:

Dr Tax payable	127,000
Cr Operating activities	127,000

- (k) *Payment of dividend: \$100,000.* This is the balancing figure in the dividend payable account in the worksheet ($100 + 100 - x = 100$). It can be inferred that the company has paid dividend of \$100,000 during the year. This item is entered in the worksheet as follows:

Dr Dividend payable	100,000
Cr Financing activities	100,000

- (l) *Payment of dividend to non-controlling interest: \$20,000.* This is the balancing figure in the non-controlling interest account in the worksheet ($709 + 164 - x = 853$). It can be inferred that the subsidiary companies have paid \$20,000 dividend to non-controlling shareholders during the year. This item is entered in the worksheet as follows:

Dr Non-controlling interest	20,000
Cr Financing activities	20,000

- (m) *Increase in stock: \$1,000,000.* This is the net change in stock balances. The increase in stock means that part of the cash flows from operation is tied down in stock and consequently cash inflow from operating activities is decreased. It is entered in the worksheet as follows:

Dr Stock	1,000,000
Cr Operating activities	1,000,000

- (n) *Increase in trade debtors: \$150,000.* This is the net change in debtors balances. The increase in debtors means that part of the cash flows from operation is tied up in debtors and consequently cash inflow from operating activities is reduced. It is entered in the worksheet as follows:

Dr Debtors	150,000
Cr Operating activities	150,000

- (o) *Increase in creditors: \$320,000.* This is the net change in creditors balances. The increase in creditors means that part of the purchases for the period has not been paid for and consequently cash flow from operating activities is increased. It is entered in the worksheet as follows:

Dr Operating activities	320,000
Cr Creditors	320,000

- (p) *Increase in cash: \$410,000.* This is the net change in the cash and cash equivalents accounts. This is the final reconciling item and is entered in the worksheet as follows:

Dr Cash	410,000
Cr Increase in cash	410,000

Presentation

A Ltd and its subsidiaries
Consolidated statement of cash flows
For year ended 31 December 20X8

	\$'000
Cash flows from operating activities	
Profit before tax	1,032
Add/(less) non-cash items:	
Loss on sale of subsidiary	150
Share of profit of associate	(100)
Depreciation	445
Add/(less) changes in working capital items	
Stock	(1,000)
Trade debtors	(150)
Trade creditors	320
Payment of tax	<u>(127)</u>
Net cash from operating activities	<u>570</u>
Cash flows from investing activities	
Disposal of subsidiary	530
Dividend from associate	20
Purchase of machinery	<u>(650)</u>
Net cash used in investing activities	<u>(100)</u>
Cash Flows from financing activities	
Payment of dividend	(100)
Payment of dividend to non-controlling interests	<u>(20)</u>
Net cash used in financing activities	<u>(120)</u>
Net increase in cash and cash equivalents	350
Cash and cash equivalents at 1 January 20X8	<u>94</u>
Cash and cash equivalents at 31 December 20X8	<u>444</u>

The following is a summary of the effects of the disposal of subsidiary:

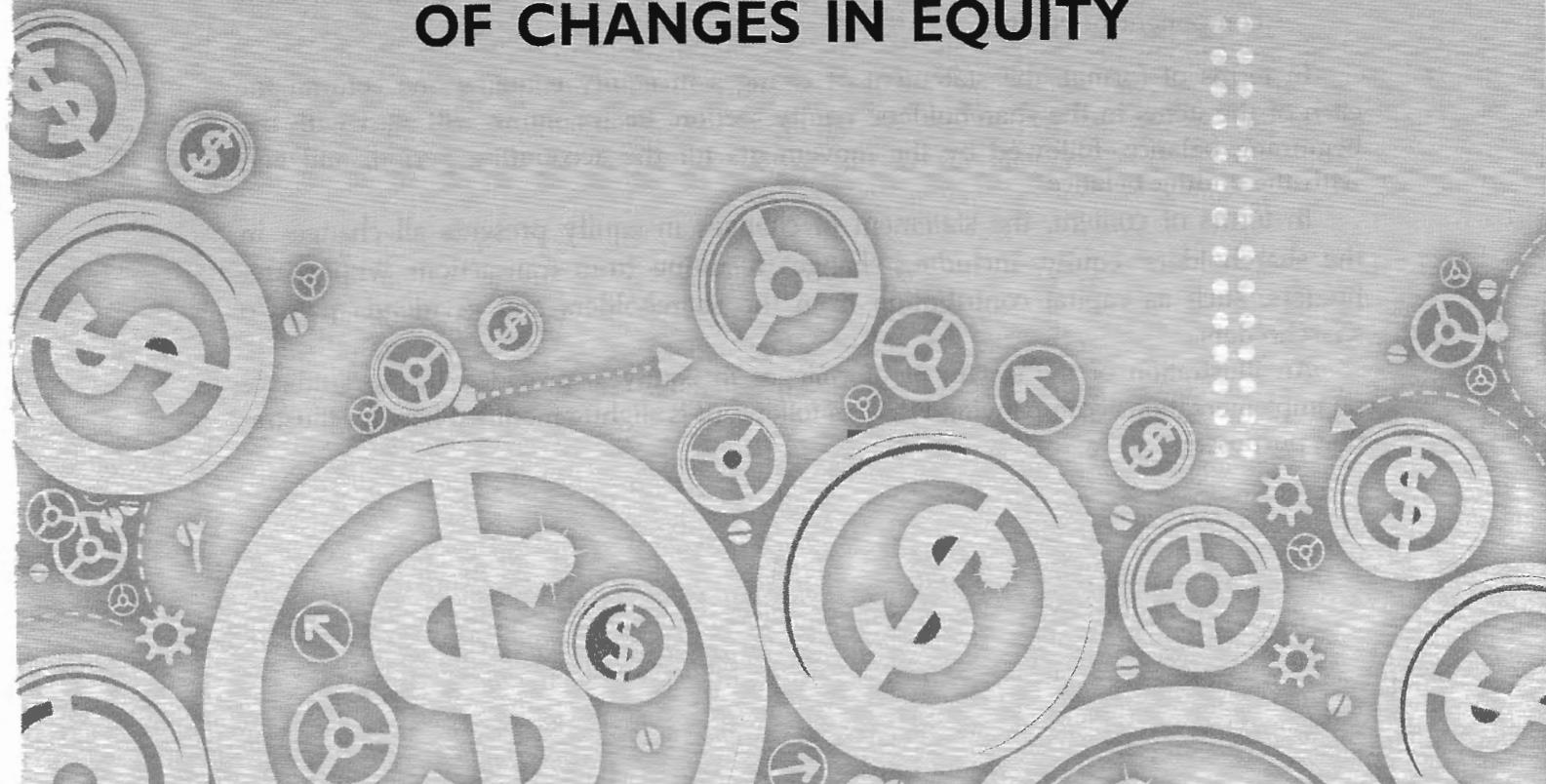
	\$'000
Net assets disposed of	
Fixed assets	700
Long-term loan	(100)
Stock	100
Trade debtors	50
Trade creditors	(50)
Tax payable	(20)
Cash	<u>20</u>
	700
Loss on disposal of subsidiary	150
Cash consideration	550
Less cash of subsidiary disposed of	<u>20</u>
Cash flow from disposal	<u>530</u>

Notes to the solution

- (a) The effect of the disposal of subsidiary is presented in the consolidated statement of cash flows as a single line item, net of the cash of subsidiary disposed of, under investing activities, as 'Disposal of subsidiary \$530,000'.
- (b) The effect of non-controlling interest on group cash is presented in the consolidated statement of cash flows as 'Payment of dividend to non-controlling interest \$20,000'.
- (c) The effect of associate on group cash is presented in the consolidated statement of cash flows as 'Dividend from associate: \$20,000'. (The profit before tax includes the group's share of the associate's profit, and therefore under the indirect method, the share of associate's profit of \$100,000 is deducted from the profit before tax.)

CHAPTER
9

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY



9.1 Introduction

Besides the statement of financial position (balance sheet), the statement of comprehensive income and the statement of cash flows, FRS 1 also requires a statement of changes in equity to be presented as an integral component of the published financial statements.

9.2 Requirements of FRS 1

The statement of changes in equity is to present the change in equity of an entity during a period arising from transactions with owners in their capacity as owners. (All non-owner changes in equity are required to be presented in the statement of comprehensive income.)

Specifically, FRS 1 requires the disclosure of the following information in the statement of changes in equity (paragraph 106):

- (a) total comprehensive income (showing separately the amount attributable to owners of the parent and to the non-controlling interest);
- (b) the effect of any retrospective adjustment (for changes in accounting policy or correction of error);
- (c) the amount of transactions with owners in their capacity as owners;
- (d) the cumulative effect of any changes in accounting policy and corrections of errors; and
- (e) a reconciliation between the beginning balance and ending balance of each component of equity.

In terms of format, the statement of changes in equity contains one column for each of the items in the shareholders' equity section. Each column will start with the beginning balance, followed by the movements for the accounting period, and end with the ending balance.

In terms of content, the statement of changes in equity presents all changes in the shareholders' equity, including changes resulting from transactions with shareholders, such as capital contribution from the shareholders and dividends paid to shareholders.

An illustration of the statement of changes in equity is provided in the guidance on implementation accompanying FRS 1 as follows (it is slightly modified here for illustration purposes):

XYZ Ltd Statement of changes in equity For year ended 31 December 20X7					
	Share capital	Retained earnings	Fair value reserve	Revaluation reserve	Total equity
	\$'000	\$'000	\$'000	\$'000	\$'000
Balance at January 20X6	600,000	148,550	2,000	—	750,550
Changes in accounting policy	—	500	—	—	500
Restated balance	600,000	149,050	2,000	—	751,050
Changes in equity for 20X6					
Dividends	—	(10,000)	—	—	(10,000)
Total comprehensive income for the year	—	65,500	20,000	3,000	88,500
Balance at 31 December 20X6 ..	600,000	204,550	22,000	3,000	829,550
Changes in equity for 20X7					
Issue of share capital	50,000	—	—	—	50,000
Dividend	—	(15,000)	—	—	(15,000)
Total comprehensive income for the year	—	121,250	(18,000)	500	103,750
Transfer to retained earnings	—	200	—	(200)	—
Balance at 31 December 20X7 ..	650,000	311,000	4,000	3,300	968,300

In the consolidated statement of changes in equity, there should be an additional column for 'non-controlling interest' (assuming the parent has less than 100%-owned subsidiaries). This is because under FRS 110, non-controlling interest is presented as part of owners' equity in the consolidated balance sheet.



Consolidation issues

The consolidation issues involved in the preparation and presentation of the consolidated statement of changes in equity are very similar to those related to consolidated balance sheet and consolidated statement of comprehensive income, but relatively simpler.

9.3.1 Add across

The most basic consolidation issue is to combine the items in the statement of changes in equity of subsidiaries to those of the parent, on a line-by-line basis.

Example 9.1

H Ltd acquired an 80% interest in S Ltd in 20X1. On 31 December 20X5, both H Ltd and S Ltd revalue their respective land for the first time, and the revaluation surplus is as follows:

- H Ltd: \$10 million
- S Ltd: \$5 million

Assume also that for the year ended 31 December 20X5, the profit after tax for each of the companies is \$50 million. In this case, the statements of comprehensive income (partial) and the statements of changes in equity (partial) for the year ended 31 December 20X5 of the two companies are as follows:

	H Ltd	S Ltd
	\$'million	\$'million
Profit after tax	50	50
Other comprehensive income		
Revaluation reserve	10	5
Total comprehensive income	<u>60</u>	<u>55</u>

	H Ltd	S Ltd
	\$'million	\$'million
Revaluation reserve		
Beginning balance	—	—
Surplus for the year	10	5
Ending balance	<u>10</u>	<u>5</u>

For the 20X5 consolidation, the relevant consolidation adjusting entries are as follows:

Dr Non-controlling interest – profit	10
Cr Non-controlling interest (CBS)	10
(non-controlling interest in profit of S Ltd)	

Dr Non-controlling interest – revaluation surplus	1
Cr Non-controlling interest (CBS)	1
(non-controlling interest in revaluation surplus of S Ltd)	

The consolidated statement of comprehensive income (partial) and the consolidated statement of changes in equity (partial) for the year ended 31 December 20X5 of H Ltd group will be as follows:

H Ltd and its subsidiary	
Consolidated statement of comprehensive income (partial)	
For year ended 31 December 20X5	
	\$'million
Profit after tax	100
Other comprehensive income	
Revaluation surplus	15
Total comprehensive income	<u>115</u>
Profit attributable to:	
Shareholders of the parent	90
Non-controlling interest	10
	<u>100</u>
Total comprehensive income attributable to:	
Shareholders of the parent	104
Non-controlling interest	11
	<u>115</u>

H Ltd and its subsidiary				
Consolidated statement of changes in equity (partial)				
For year ended 31 December 20X5				
	Retained profit	Revaluation reserve	Non-controlling interest	Total
	\$'million	\$'million	\$'million	\$'million
Beginning balance	X1	X2	X3	X4
Total comprehensive income for the year	90	14	11	115
Ending balance	<u>Y1</u>	<u>Y2</u>	<u>Y3</u>	<u>Y4</u>

Notes to the solution

- The group profit of \$90 million can be proved as equal to H Ltd's after-tax profit of \$50 million + group's share of S Ltd's after-tax profit of \$40 million ($80\% \times \50 million).
- The group total comprehensive income of \$104 million can be proved as equal to H Ltd's total comprehensive income of \$60 million (\$50 million + \$10 million) + group's share of S Ltd's total comprehensive income of \$44 million ($80\% \times [\$50 \text{ million} + \$5 \text{ million}]$).
- The group revaluation surplus of \$14 million can be proved as equal to H Ltd's revaluation surplus of \$10 million + group's share of S Ltd's revaluation surplus of \$4 million ($80\% \times \5 million).

- (d) The non-controlling interest in after-tax profit of \$10 million can be proved as equal to the non-controlling interest in S Ltd's after-tax profit ($20\% \times \$50 \text{ million} = \10 million).
- (e) The non-controlling interest in total comprehensive income of after-tax profit of \$11 million can be proved as equal to the non-controlling interest in S Ltd's total comprehensive income ($20\% \times [\$50 \text{ million} + \$5 \text{ million}] = \$11 \text{ million}$).
- (f) It should be noted that the amount of after-tax profit shown in the consolidated statement of comprehensive income of \$100 million is arrived at before deduction of non-controlling interest thereof. It can be proved as equal to H Ltd's after-tax profit of \$50 million + S Ltd's after-tax profit of \$50 million (in accordance with the full consolidation principle). However, in the consolidated statement of changes in equity, the amount of after-tax profit shown is \$90 million, being the net amount after deduction of non-controlling interest of \$10 million (20% of S Ltd's after-tax profit).
- (g) Similarly, it should be noted that the amount of revaluation surplus shown in the consolidated statement of comprehensive income of \$15 million is arrived at before deduction of non-controlling interest thereof. It can be proved as equal to H Ltd's revaluation surplus of \$10 million + S Ltd's revaluation surplus of \$5 million (in accordance with the full consolidation principle). However, in the consolidated statement of changes in equity, the amount of revaluation surplus shown is \$14 million, being the net amount after deduction of non-controlling interest of \$1 million (20% of S Ltd's revaluation surplus).



9.3.2 Pre-acquisition versus post-acquisition

Another consolidation issue relates to pre-acquisition/post-acquisition categorization. As a general principle, all the pre-acquisition reserves are eliminated, and only the post-acquisition reserves will be presented in the consolidated financial statements.

Example 9.2

P Ltd acquires a 60% interest in S Ltd in July 20X5. S Ltd revalues its land on 1 January 20X5, and reports a revaluation surplus of \$10 million in its statement of comprehensive income and statement of changes in equity for the year ended 31 December 20X5.

In this case, the revaluation surplus of \$10 million reported in S Ltd's statement of comprehensive income and statement of changes in equity for the year is pre-acquisition in nature and has to be eliminated during the consolidation process. Thus, the revaluation surplus will not be reported in the group's 20X5 consolidated statement of comprehensive income and consolidated statement of changes in equity. (However, in the consolidated balance sheet,

the non-controlling interest will be credited with \$4 million, being its share of the revaluation surplus of the subsidiary.)



9.3.3 Others

In the process of combining the items in the statement of comprehensive income and statement of changes in equity of the subsidiaries to those of the parent, it should be noted that some of the items to be reported in the consolidated statement of comprehensive income and the consolidated statement of changes in equity may not have been recognized in the financial statements of the individual company.

One example of such an item is the translation gain or loss arising from the translation of the financial statements of foreign subsidiaries.

Example 9.3



A Ltd (a company incorporated in Singapore with Singapore Dollar (S\$) as its presentation currency) acquires a 70% interest in B Bhd (a company incorporated in Malaysia with Ringgit Malaysia [RM] as its presentation currency) in 20X1.

For the purposes of the consolidated financial statements for the year 20X5, B Bhd's financial statements are translated using the closing rate method, in accordance with the provisions of FRS 21. A translation gain of S\$100,000 arises from the translation.

In this case, the translation gain of S\$100,000 does not appear in A Ltd's financial statements, nor in B Bhd's pre-translated financial statements. However, the parent's share of the translation gain of S\$70,000 ($70\% \times \$100,000$) has to be reported in A Ltd group's 20X5 consolidated statement of comprehensive income and consolidated statement of changes in equity. The other 30% of the translation gains will, of course, be allocated to the non-controlling interest.



9.3.4 Associates

All the issues discussed above are also equally applicable to associates, except that the associate will be equity accounted for under FRS 28 (instead of being fully consolidated on a line-by-line basis under the full consolidation principle in FRS 110).

Example 9.4

H Ltd has an 80% owned subsidiary S Ltd, and a 40% interest in an associate A Ltd. The shareholdings were acquired in 20X1. On 31 December 20X5, all the three companies revalue their respective land for the first time, and the revaluation surplus reported by each of the companies is as follows:

- H Ltd: \$10 million
- S Ltd: \$5 million
- A Ltd: \$5 million

Assume also that for the year ended 31 December 20X5, the profit after tax for each of the three companies is \$50 million. In this case, the statements of comprehensive income (partial) and the statements of changes in equity (partial) for the year ended 31 December 20X5 of the companies are as follows:

	H Ltd \$'million	S Ltd \$'million	A Ltd \$'million
Profit after tax	50	50	50
Other comprehensive income			
Revaluation reserve	10	5	5
Total comprehensive income	<u>60</u>	<u>55</u>	<u>55</u>

	H Ltd \$'million	S Ltd \$'million	A Ltd \$'million
Revaluation reserve			
Beginning balance	—	—	—
Surplus for the year	10	5	5
Ending balance	<u>10</u>	<u>5</u>	<u>5</u>

For the 20X5 consolidation, the relevant consolidation adjusting entries are as follows:

Dr Non-controlling interest – profit	10
Cr Non-controlling interest (CBS)	10
(non-controlling interest in profit of S Ltd)	

Dr Non-controlling interest – revaluation surplus	
Cr Non-controlling interest (CBS)	
(non-controlling interest in revaluation surplus of S Ltd)	

Dr Investment in A Ltd	20
Cr Share of associate's profit	20
(equity accounting for A Ltd's profit)	

Dr Investment in A Ltd	2
Cr Share of associate's other comprehensive income	2
(equity accounting for A Ltd's revaluation surplus)	

The consolidated statement of comprehensive income (partial) and the consolidated statement of changes in equity (partial) for the year ended 31 December 20X5 of H Ltd group will be as follows:

H Ltd and its subsidiary Consolidated statement of comprehensive income (partial) For year ended 31 December 20X5	
	\$'million
Profit after tax	120
Other comprehensive income	
Revaluation surplus	15
Share of associate's other comprehensive income	2
Total	17
Total comprehensive income	137
Profit attributable to:	
Shareholders of the parent	110
Non-controlling interest	10
Total	120
Total comprehensive income attributable to:	
Shareholders of the parent	126
Non-controlling interest	11
Total	137

H Ltd and its subsidiary Consolidated statement of changes in equity (partial) For year ended 31 December 20X5			
	Retained profit	Revaluation reserve	Non-controlling interest
	\$'million	\$'million	\$'million
Beginning balance	X1	X2	X3
Total comprehensive income for the year ...	110	16	11
Ending balance	Y1	Y2	Y3
	Y4		

Notes to the solution

- (a) The group profit of \$110 million can be proved as equal to H Ltd's after-tax profit of \$50 million + group's share of S Ltd's after-tax profit of \$40 million ($80\% \times \50 million) + group's share of associate's after-tax profit of \$20 million ($40\% \times \50 million).
- (b) The group's total comprehensive income of \$126 million can be proved as equal to H Ltd's total comprehensive income of \$60 million (\$50 million + \$10 million) + group's share of S Ltd's total comprehensive income of \$44 million ($80\% \times [\$50 \text{ million} + \$5 \text{ million}]$) + group's share of associate's total comprehensive income of \$22 million ($40\% \times [\$50 \text{ million} + \$5 \text{ million}]$).
- (c) The group revaluation surplus of \$16 million can be proved as equal to H Ltd's revaluation surplus of \$10 million + group's share of S Ltd's revaluation surplus of \$4 million ($80\% \times \5 million) + group's share of associate's revaluation surplus of \$2 million ($40\% \times \5 million).
- (d) The non-controlling interest in after-tax profit of \$10 million can be proved as equal to the non-controlling interest in S Ltd's after-tax profit ($20\% \times \$50$ million = \$10 million).
- (e) The non-controlling interest in total comprehensive income of after-tax profit of \$11 million can be proved as equal to the non-controlling interest in S Ltd's total comprehensive income ($20\% \times [\$50 \text{ million} + \$5 \text{ million}] = \$11 \text{ million}$).
- (f) It may be noted that the amount of revaluation surplus shown in the consolidated statement of comprehensive income is \$15 million, which is arrived at by simply adding 100% of S Ltd's revaluation surplus to that of H Ltd (\$5 million + \$5 million = \$15 million). The non-controlling interest in S Ltd's revaluation reserve (together with non-controlling interest in S Ltd's profit) is shown as a separate line item. H Ltd's share of A Ltd's revaluation surplus is also shown as a separate line item. However, in the consolidated statement of changes in equity, the amount of revaluation surplus shown is \$16 million, which is arrived at by adding H Ltd's revaluation surplus of \$10 million to H Ltd's share in S Ltd's revaluation reserve of \$4 million ($80\% \times \5 million) to H Ltd's share of A Ltd's revaluation surplus of \$2 million ($40\% \times \5 million).

94 Summary

This chapter discusses the consolidation issues involved in the preparation and presentation of the consolidated statement of changes in equity. The issues involved are similar to those involved in the preparation and presentation of consolidated balance sheet and consolidated statement of comprehensive income.

Basically, all the post-acquisition items (whether reported or not reported) in the statements of changes in equity of subsidiaries in the group are combined on a line-by-line basis; and all the post-acquisition items (whether reported or not reported) in the statements of changes in equity of associates in the group are equity accounted for.

Problems for self-study

PROBLEM 9.1

P Ltd acquired 60% of the issued share capital of S Ltd in 20X5, when S Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$200,000. There are no fair value adjustments and no intragroup transactions. The 20X8 financial statements of P Ltd and S Ltd are as follows:

- (a) Balance sheets as at 31 December 20X8

	P Ltd	S Ltd
	\$'000	\$'000
Land	350	220
Investment in S Ltd	180	—
Investment in shares	250	140
Current assets	120	140
	<u>900</u>	<u>500</u>
Share capital	500	100
Retained profit	280	330
Fair value reserve	50	40
Revaluation reserve	50	20
Current liabilities	20	10
	<u>900</u>	<u>500</u>

- (b) Statements of comprehensive income for the year ended 31 December 20X8

	P Ltd	S Ltd
	\$'000	\$'000
Sales	100	80
Cost of sales	30	20
	<u>70</u>	<u>60</u>
Gross profit	70	60
Operating expenses	20	30
	<u>50</u>	<u>30</u>
Profit before tax	50	30
Tax	15	10
	<u>35</u>	<u>20</u>
Profit after tax	35	20
Other comprehensive income		
Fair value gain	10	10
Revaluation surplus	50	20
	<u>60</u>	<u>30</u>
Total	95	50
Total comprehensive income	<u>95</u>	<u>50</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	P Ltd	S Ltd
	\$'000	\$'000
Share capital		
Beginning balance	500	100
Change for the year	—	—
Ending balance	500	100
Retained profit		
Beginning balance	260	310
Profit for the year	35	20
Dividend	15	—
Ending balance	280	330
Fair value reserve		
Beginning balance	40	30
Gain for the year	10	10
Ending balance	50	40
Revaluation reserve		
Beginning balance	—	—
Surplus for the year	50	20
Ending balance	50	20

P Ltd and S Ltd revalue their respective land for the first time in 20X8. The investments in shares are acquired in 20X6 and classified as 'available for sale'. The mark-to-market gains/losses arising therefrom are taken to the fair value reserve each year under FRS 39.

Required

Prepare the consolidated balance sheet, consolidated statement of comprehensive income and consolidated statement of changes in equity for P Ltd and its subsidiary for the year ended 31 December 20X8.

Solution

(a) Consolidation journal entry

(i)	Dr Share capital (S)	60
	Dr Beginning retained profit (S)	120
	Cr Investment in S Ltd	180
	(elimination of investment account)	
(ii)	Dr Non-controlling interest – profit after tax	8
	Cr Non-controlling interest (CBS)	8
	(non-controlling interest in subsidiary's profit after tax)	

(iii)	Dr Non-controlling interest – fair value gain	4
	Dr Non-controlling interest – revaluation surplus	8
	Cr Non-controlling interest (CBS)	12
	(non-controlling interest in subsidiary's other comprehensive income)	
(iv)	Dr Share capital (S)	40
	Dr Beginning retained profit (S)	124
	Dr Beginning fair value reserve (S)	12
	Cr Non-controlling interest	176
	(non-controlling interest)	

(b) Consolidation worksheet

	P Ltd	S Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	100	80			180
Cost of sales	30	20			50
Gross profit	70	60			130
Operating expenses	20	30			50
Profit before tax	50	30			80
Tax	15	10			25
Profit after tax	35	20			55
NCI	—	—	ii 8		8
Group profit	—	—			47
Fair value gain	10	10	iii 4		16
Revaluation surplus	50	20	iii 8		62
Group comprehensive income					125
Share capital	500	100	i 60 iv 40		500
Retained profit					
Beginning balance	260	310	i 120 iv 124		326
Profit for the year	35	20			47
Dividend	15	—			15
Ending balance	280	330			358
Fair value reserve					
Beginning balance	40	30	iv 12		58
Gain for the year	10	10			16
Ending balance	50	40			74
Revaluation reserve					
Beginning balance	—	—			—
Surplus for the year	50	20			62
Ending balance	50	20			62
NCI			ii 8 iii 12 iv 176		196
Current liabilities	20	10			30
Land	350	220			570
Investment in S Ltd	180	—	i 180		—
Investment in shares	250	140			390
Current assets	120	140			260

(c) Consolidated financial statements

P Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Land	570
Investment in shares	390
Current assets	260
	<u>1,220</u>
Share capital	500
Retained profit	358
Fair value reserve	74
Revaluation reserve	62
Non-controlling interest	196
Current liabilities	30
	<u>1,220</u>

P Ltd and its subsidiary Consolidated statement of comprehensive income For year ended 31 December 20X8	
	\$'000
Sales	180
Cost of sales	50
Gross profit	130
Operating expenses	50
Profit before tax	80
Tax	25
Profit after tax	55
Other comprehensive income	
Fair value gain	20
Revaluation surplus	70
Total	90
Total comprehensive income	145
Profit attributable to:	
Shareholders of the parent	47
Non-controlling interest	8
	<u>55</u>
Total comprehensive income attributable to:	
Shareholders of the parent	125
Non-controlling interest	20
	<u>145</u>

P Ltd and its subsidiary
Consolidated statement of changes in equity
For year ended 31 December 20X8

	\$'000
Share capital	
Beginning balance	500
Change for the year	—
Ending balance	<u>500</u>
Retained profit	
Beginning balance	326
Profit for the year	47
Dividend	15
Ending balance	<u>358</u>
Fair value reserve	
Beginning balance	58
Gain for the year	16
Ending balance	<u>74</u>
Revaluation reserve	
Beginning balance	—
Surplus for the year	62
Ending balance	<u>62</u>
Non-controlling interest	
Beginning balance	176
Share of total comprehensive income	20
Ending balance	<u>196</u>

Notes to the solution

- (a) Note that in the worksheet, the group profit, group fair value gain, and group revaluation surplus in the consolidated statement of changes in equity section are copied from the figures in the consolidated statement of comprehensive income section.
- (b) Note that for presentation purposes, 100% of S Ltd's statement of comprehensive income items are added, line by line, to those of P Ltd, in accordance with the full consolidation principle of FRS 110, and the non-controlling interest thereof is shown as 'attributed to non-controlling interest' in the consolidated statement of comprehensive income. However, in the consolidated statement of changes in equity, the profit for the year and other comprehensive income items for the year are shown net of non-controlling interest.
- (c) The group profit ('Profit attributable to shareholders of the parent') of \$47,000 may be proved as equal to parent's after-tax profit of \$35,000 + parent's 60% share of the subsidiary's after-tax profit of \$12,000 ($60\% \times \$20,000$).

- (d) The group total comprehensive income ('Total comprehensive income attributable to shareholders of the parent') of \$125,000 may be proved as equal to parent's total comprehensive income of \$95,000 + parent's 60% share of the subsidiary's total comprehensive income of \$30,000 ($60\% \times \$50,000$).
- (e) The non-controlling interest of \$196,000 in the consolidated balance sheet may be proved as equal to the non-controlling interest in S Ltd's net assets ($40\% \times \$490,000 = \$196,000$). The beginning balance of non-controlling interest of \$176,000 may be proved as equal to the non-controlling interest in S Ltd's net assets at the beginning of 20X8 ($40\% \times [\$490,000 - \$20,000 - \$10,000 - \$20,000] = \$176,000$).

PROBLEM 9.2

H Ltd acquired 60% of the issued share capital of S Ltd in 20X5, when S Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$200,000. H Ltd also acquired 30% of A Ltd in 20X5, when A Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. There are no fair value adjustments and no intragroup transactions. The 20X8 financial statements of the three companies are as follows:

- (a) Balance sheets as at 31 December 20X8

	H Ltd \$'000	S Ltd \$'000	A Ltd \$'000
Land	350	220	110
Investment in S Ltd	180	—	—
Investment in A Ltd	60	—	—
Investment in shares	250	140	110
Current assets	60	140	80
	<u>900</u>	<u>500</u>	<u>300</u>
Share capital	500	100	100
Retained profit	280	330	150
Fair value reserve	50	40	20
Revaluation reserve	50	20	10
Current liabilities	20	10	20
	<u>900</u>	<u>500</u>	<u>300</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	H Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Sales	100	80	50
Cost of sales	30	20	25
Gross profit	70	60	25
Operating expenses	20	30	10
Profit before tax	50	30	15
Tax	15	10	5
Profit after tax	35	20	10
Other comprehensive income			
Fair value gain	10	10	10
Revaluation surplus	50	20	10
Total	60	30	20
Total comprehensive income	95	50	30

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	H Ltd	S Ltd	A Ltd
	\$'000	\$'000	\$'000
Share capital			
Beginning balance	500	100	100
Change for the year	—	—	—
Ending balance	500	100	100
Retained profit			
Beginning balance	260	310	140
Profit for the year	35	20	10
Dividend	15	—	—
Ending balance	280	330	150
Fair value reserve			
Beginning balance	40	30	10
Gain for the year	10	10	10
Ending balance	50	40	20
Revaluation reserve			
Beginning balance	—	—	—
Surplus for the year	50	20	10
Ending balance	50	20	10

All three companies revalue their respective land for the first time in 20X8. The investments in shares are acquired in 20X6 and classified as 'available for sale'. The mark-to-market gains/losses arising therefrom are taken to the fair value reserve each year under FRS 39.

Required

Prepare the consolidated balance sheet, consolidated statement of comprehensive income and consolidated statement of changes in equity for H Ltd and its subsidiary for the year ended 31 December 20X8.

Solution

(a) Consolidation journal entry

(i)	Dr Share capital (S)	60
	Dr Beginning retained profit (S)	120
	Cr Investment in S Ltd	180
	(elimination of investment account)	
(ii)	Dr Non-controlling interest – profit after tax	8
	Cr Non-controlling interest (CBS)	8
	(non-controlling interest in subsidiary's profit after tax)	
(iii)	Dr Non-controlling interest – fair value gain	4
	Dr Non-controlling interest – revaluation surplus	8
	Cr Non-controlling interest (CBS)	12
	(non-controlling interest in subsidiary's other comprehensive income)	
(iv)	Dr Share capital (S)	40
	Dr Beginning retained profit (S)	124
	Dr Beginning fair value reserve (S)	12
	Cr Non-controlling interest	176
	(non-controlling interest)	
(v)	Dr Investment in A Ltd	3
	Cr Share of associate's profit	3
	(equity account for associate's profit)	
(vi)	Dr Investment in A Ltd	6
	Cr Share of associate's fair value gain	3
	Cr Share of associate's revaluation surplus	3
	(to equity account for revaluation surplus of associate)	
(vii)	Dr Investment in A Ltd	15
	Cr Beginning retained profit	12
	Cr Beginning fair value reserve	3
	(equity account for associate's post-acquisition beginning reserves)	

(b) Consolidation worksheet

	H Ltd	S Ltd	Adjustments		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	100	80			180
Cost of sales	30	20			50
Gross profit	70	60			130
Operating expenses	20	30			50
Share of associate	—	—	v 3		3
Profit before tax	50	30			83
Tax	15	10			25
Profit after tax	35	20			58
NCI	—	—	ii 8		8
Group profit	—	—			50
Fair value gain	10	10	iii 4	vi 3	19
Revaluation surplus	50	20	iii 8	vi 3	65
Group comprehensive income ...	—	—			134
Share capital	500	100	i 60 iv 40		500
Retained profit					
Beginning balance	260	310	i 120 iv 124	vii 12	338
Profit for the year	35	20			50
Dividend	15	—			15
Ending balance	280	330			373
Fair value reserve					
Beginning balance	40	30	iv 12	vii 3	61
Gain for the year	10	10			19
Ending balance	50	40			80
Revaluation reserve					
Beginning balance	—	—			—
Surplus for the year	50	20			65
Ending balance	50	20			65
NCI			ii 8 iii 12 iv 176		196
Current liabilities	20	10			30
Land	350	220			570
Investment in S	180	—	i 180		—
Investment in A	60		v 3 vi 6 vii 15		84
Investment in shares	250	140			390
Current assets	60	140			200

(c) Consolidated financial statements

H Ltd and its subsidiary Consolidated balance sheet As at 31 December 20X8	
	\$'000
Land	570
Investment in associate	84
Investment in shares	390
Current assets	200
	<u>1,244</u>
Share capital	500
Retained profit	373
Fair value reserve	80
Revaluation reserve	65
Non-controlling interest	196
Current liabilities	30
	<u>1,244</u>
 H Ltd and its subsidiary Consolidated statement of comprehensive income For year ended 31 December 20X8	
	\$'000
Sales	180
Cost of sales	50
Gross profit	130
Operating expenses	50
Operating profit	80
Share of associate's profit	3
Profit before tax	83
Tax	25
Profit after tax	58
Other comprehensive income	
Fair value gain	20
Revaluation surplus	70
Share of associate's other comprehensive income	6
Total	96
Total comprehensive income	<u>154</u>
Profit attributable to:	
Shareholders of the parent	50
Non-controlling interest	8
	<u>58</u>
Total comprehensive income attributable to:	
Shareholders of the parent	134
Non-controlling interest	20
	<u>154</u>

H Ltd and its subsidiary
Consolidated statement of changes in equity
For year ended 31 December 20X8

	\$'000
Share capital	
Beginning balance	500
Change for the year	—
Ending balance	500
Retained profit	
Beginning balance	338
Profit for the year	50
Dividend	15
Ending balance	373
Fair value reserve	
Beginning balance	61
Gain for the year	19
Ending balance	80
Revaluation reserve	
Beginning balance	—
Surplus for the year	65
Ending balance	65
Non-controlling interest	
Beginning balance	176
Share of total comprehensive income	20
Ending balance	196

Notes to the solution

- (a) Note that in the worksheet, the group profit, group fair value gain, and group revaluation surplus in the consolidated statement of changes in equity section are copied from the figures in the consolidated statement of comprehensive income section.
- (b) The group profit ('Profit attributable to shareholders of the parent') of \$50,000 may be proved as equal to parent's after-tax profit of \$35,000 + parent's 60% share of the subsidiary's after-tax profit of \$12,000 ($60\% \times \$20,000$) + parent's share of the associate's after-tax profit of \$3,000 ($30\% \times \$10,000$).
- (c) The group total comprehensive income ('Total comprehensive income attributable to shareholders of the parent') of \$134,000 may be proved as equal to parent's total comprehensive income of \$95,000 + parent's 60% share of the subsidiary's total comprehensive income of \$30,000 ($60\% \times \$50,000$) + parent's share of the associate's total comprehensive income of \$9,000 ($30\% \times \$30,000$).
- (d) The non-controlling interest of \$196,000 in the consolidated balance sheet may be proved as equal to the non-controlling interest in S Ltd's net assets ($40\% \times \$490,000 = \$196,000$). The beginning balance of non-controlling interest of \$176,000 may be proved as equal to

the non-controlling interest in S Ltd's net assets at the beginning of 20X8 ($40\% \times [\$490,000 - \$20,000 - \$10,000 - \$20,000] = \$176,000$).

- (e) The investment in associate of \$84,000 in the consolidated balance sheet may be proved as equal to the parent's share of associate's net assets ($30\% \times \$280,000 = \$84,000$). The investment in associate of \$84,000 may also be proved as equal to the cost of \$60,000 + parent's share of associate's post-acquisition reserves of \$24,000 ($30\% \times [(\$150,000 - \$100,000) + \$20,000 + \$10,000]$).
- (f) It may be noted that for presentation purposes, the subsidiary is accounted for on the full consolidation basis (i.e., line by line, 100%), and the associate is accounted for using the equity method (i.e., single line, proportionate). Thus, the amount of fair value gain shown in the consolidated statement of comprehensive income is \$20,000, which is arrived at by simply adding 100% of the subsidiary's fair value gain to that of the parent's ($\$10,000 + \$10,000 = \$20,000$). The non-controlling interest in the subsidiary's fair value gain is shown as a separate line item. The group's share of the associate's fair value gain (together with the group's share of associates other comprehensive income) is shown as a separate line item. However, in the consolidated statement of changes in equity, the amount of fair value gain is \$19,000, which is arrived at by adding parent's fair value gain of \$10,000 to parent's share of subsidiary's fair value gain of \$6,000 ($60\% \times \$10,000$) and parent's share of associate's fair value gain of \$3,000 ($30\% \times \$10,000$).
- (g) Similarly, the amount of revaluation surplus shown in the consolidated statement of comprehensive income is \$70,000, which is arrived at by simply adding 100% of subsidiary's revaluation surplus to that of the parent's ($\$50,000 + \$20,000 = \$70,000$). The non-controlling interest in subsidiary's revaluation surplus is shown as a separate line item. The group's share of the associate's revaluation surplus (together with the group's share of associate's other comprehensive income) is shown as a separate line item. However, in the consolidated statement of changes in equity, the amount of revaluation surplus is \$65,000, which is arrived at by adding parent's revaluation surplus of \$50,000 to parent's share of subsidiary's revaluation surplus of \$12,000 ($60\% \times \$20,000$) and parent's share of associate's revaluation surplus of \$3,000 ($30\% \times \$10,000$).
- (h) FRS 1 requires the group's share of associate's after-tax profit to be presented as a single line item in the consolidated statement of comprehensive income. In this case, the group's share of associate's profit is \$3,000, which may be proved as follows: $30\% \times \$10,000 = \$3,000$.
- (i) FRS 1 also requires the group's share of associate's other comprehensive income to be presented as a single line item in the consolidated statement of comprehensive income. In this case, the group's share of associate's other comprehensive income is \$6,000, which may be proved as follows: $30\% \times (\$10,000 + \$10,000) = \$6,000$.

CHAPTER

10

FURTHER ISSUES



10.1 Introduction

It is the intention of this book to present one single method of consolidation that conforms with the prevailing accounting standards and is most commonly used in practice. Thus, in the previous chapters, the issues were discussed without making reference to the underlying theories and the alternative methods of consolidation.

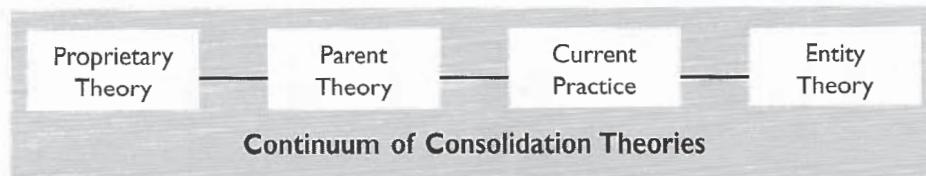
In this last chapter of the book, firstly, the consolidation theories underlying consolidated financial statements are presented (Section 10.2); and secondly, the two methods of accounting for business combinations, namely, the acquisition (or purchase) method and the pooling of interests (or merger) method, are discussed (Section 10.3).

10.2 Consolidation theories

There are three theories that might serve as the bases for the preparation and presentation of consolidated financial statements. These consolidation theories are:

- (a) the proprietary theory;
- (b) the parent theory; and
- (c) the entity theory.

None of these theories has been adopted in its entirety in existing accounting standards and in practice. The consolidation procedure required by the existing standard and that used in practice, as discussed in the previous chapters, lies between the parent theory and entity theory (albeit getting closer and closer to the entity theory with the recent adoption of new standards). The theories and the current practice can be visualized as a continuum as shown below:



The main difference between the various theories lies basically in the interpretation and treatment of non-controlling interest. In cases where the parent owns less than 100% interest in the subsidiary, the choice of any one of these underlying theories has a significant impact on the resulting consolidated financial statements. However, where the subsidiary is wholly owned, the consolidated financial statements will not be affected by the choice of the underlying theories.

The theories may be discussed in respect to three issues, namely, (a) non-controlling interest, (b) difference between cost of investment and underlying net assets, and (c) unrealized intragroup profits and losses.

For the purpose of illustration, assume the following case.

Example 10.1

A Ltd acquired 80% of B Ltd for a cash consideration of \$200,000 in 20X7, when B Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. The excess payment of \$40,000 ($\$200,000 - 80\% \times [\$100,000 + \$100,000]$) is analyzed as follows: \$20,000 for goodwill, and \$20,000 for undervaluation of land (B Ltd has not accounted for the new valuation in its books).

During the year 20X8, A Ltd sold raw materials to B Ltd for \$25,000. As at 31 December 20X8, B Ltd's stock included raw materials purchased from A Ltd with an unrealized profit of \$10,000. On 30 December 20X8, B Ltd sold a piece of machinery to A Ltd for a profit of \$20,000, which is disclosed in the statement of comprehensive income as 'other income'.

The financial statements of the companies for 20X8 are as follows:

(a) Balance sheets as at 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Land	—	100
Machinery	100	—
Investment	200	—
Stock	100	100
Net current assets	200	100
	<hr/>	<hr/>
600	300	
	<hr/>	<hr/>
Share capital	400	100
Retained profit	100	200
Long-term loan	100	—
	<hr/>	<hr/>
600	300	
	<hr/>	<hr/>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Sales	500	200
Cost of sales	200	50
	<hr/>	<hr/>
Gross profit	300	150
Other income	—	20
Operating expenses	200	100
	<hr/>	<hr/>
Profit before tax	100	70
Tax	30	20
	<hr/>	<hr/>
Profit after tax	70	50
Other comprehensive income	—	—
	<hr/>	<hr/>
Total comprehensive income	70	50
	<hr/>	<hr/>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Beginning retained profit	40	150
Profit after tax	70	50
Dividends	10	—
Ending retained profit	<u>100</u>	<u>200</u>

**10.2.1 Proprietary theory**

Proprietary theory views the business entity as an extension of its proprietor. When applied to consolidation, this theory results in what is called 'proportionate consolidation'. The consolidated balance sheet will consist of the assets and liabilities of the parent plus the parent's proportionate share of the assets and liabilities of the subsidiary. The consolidated statement of comprehensive income will consist of the revenue and expenses of the parent plus the parent's proportionate share of the revenue and expenses of the subsidiary. Non-controlling interest, therefore, will not be presented in the consolidated financial statements.

Where there is a difference between the cost of investment and the underlying net assets, no 'gross-up' is necessary. Only the parent's proportionate share of the excess of fair value over book value of the subsidiary's assets and liabilities is included in the consolidated financial statements. Thus, the assets and liabilities in the consolidated balance sheet are arrived at by adding together the assets and liabilities of the parent at book value and the parent's proportionate interest in the assets and liabilities of the subsidiary at fair value.

Where there are unrealized intragroup profits and losses, either from downstream or upstream transactions, only the parent's proportionate interest thereof is eliminated. Thus, the group's profit in the consolidated statement of comprehensive income is arrived at by adding together the 'realized' profit of the parent and the parent's proportionate interest in the 'realized' profit of the subsidiary.

Based on the case in Example 10.1, the consolidation journal entries, consolidation worksheet, and consolidated financial statements under the proprietary theory are as follows:

(a) Consolidation journal entries

(i)	Dr Goodwill	20
	Dr Land ($80\% \times 100 + 20$)	100
	Dr Stock ($80\% \times 100$)	80
	Dr Other net assets ($80\% \times 100$)	80
	Dr Cost of sales ($80\% \times 50$)	40
	Dr Operating expenses ($80\% \times 100$)	80
	Dr Tax ($80\% \times 20$)	16
	Cr Investment in B Ltd	200
	Cr Sales ($80\% \times 200$)	160
	Cr Other income ($80\% \times 20$)	16
	Cr Beginning retained profit ($80\% \times 50$)	40
	(to recognize proportionate interest)	
(ii)	Dr Sales	20
	Cr Cost of sales	20
	(elimination of intragroup sales)	
(iii)	Dr Cost of sales	8
	Cr Stock	8
	(unrealized profit in stock, downstream sales)	
(iv)	Dr Other income	16
	Cr Machinery	16
	(unrealized profit in machinery, upstream sales)	

(b) Consolidation worksheet

	A Ltd	Consolidation		Consolidated balances
		Dr	Cr	
	\$'000	\$'000	\$'000	\$'000
Sales	500	ii 20	i 160	640
Cost of sales	200	i 40	ii 20	
		iii 8		228
Gross profit	300			412
Other income	—	iv 16	i 16	—
Expenses	200	i 80		280
Profit before tax	100			132
Tax	30	i 16		46
Profit after tax	70			86
Dividend	10			10
Beginning retained profit	40		i 40	80
Ending retained profit	100			156
Share capital	400			400
Loan	100			100
Machinery	100		iv 16	84
Investment in B Ltd	200		i 200	—
Stock	100	i 80	iii 8	172
Net current assets	200	i 80		280
Goodwill	—	i 20		20
Land	—	i 100		100

(c) Consolidated financial statements

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	640
Cost of sales	228
<hr/>	
Gross profit	412
Operating expenses	280
<hr/>	
Profit before tax	132
Tax	46
<hr/>	
Profit after tax	86
Other comprehensive income	—
<hr/>	
Total comprehensive income	86
<hr/>	

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	400
Retained profit	156
Long-term loan	100
<hr/>	
Goodwill on consolidation	20
Land	100
Machinery	84
Stock	172
Net current assets	280
<hr/>	
	656
<hr/>	

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	80
Profit after tax	86
Dividend	10
<hr/>	
Ending retained profit	156
<hr/>	

10.2.2 Parent theory

Parent theory is based on the view that consolidated financial statements are an extension of the parent's account and should be prepared from the viewpoint of the shareholders of the parent. It differs from proprietary theory in that it argues that the parent does not just own a percentage of the net assets of the subsidiary; rather, it has an undivided interest in the subsidiary. The parent has an effective control over all the assets and liabilities of the subsidiary, even though it owns less than 100% interest in the subsidiary. Thus, irrespective of the percentage of shareholding, in the consolidated balance sheet all the assets and liabilities of the subsidiary are added to those of the parent, and in the consolidated statement of comprehensive income all the revenue and expenses of the subsidiary are added to those of the parent. Where the parent's shareholding percentage is less than 100%, that portion of the subsidiary's net assets and profit attributable to the non-controlling shareholders should be recognized respectively in the consolidated balance sheet and in the consolidated statement of comprehensive income.

Under this theory, non-controlling interests are treated as 'outsiders'. They are reported in the consolidated balance sheet as a liability and initially measured based on their share of the pre-acquisition book value of the net assets of the subsidiary. In the consolidated statement of comprehensive income, non-controlling interests are reported as an expense and computed based on their share of the reported after-tax profit of the subsidiary. The presentation of non-controlling interest in the consolidated financial statements is no different from that for any other source of debt financing, for example, a bank loan.

As in the case of proprietary theory, where there is a difference between the cost of investment and the underlying net assets, no 'gross-up' is necessary. Only the parent's proportionate share of the fair value of the subsidiary's assets and liabilities is included in the consolidated financial statements. The non-controlling interest in the assets and liabilities of the subsidiary is consolidated at book value. This approach reflects the cost principle from the parent's viewpoint. However, it leads to balance sheet valuation that reflects neither historical costs nor fair value. In the consolidated balance sheet, the assets and liabilities of the group are arrived at by adding together the assets and liabilities of the parent at book value, the assets and liabilities of the subsidiary at book value and the parent's proportionate share of the excess of fair value over the book value of the subsidiary's net assets.

Again, as in the case of proprietary theory, where there are unrealized intragroup profits and losses from both downstream and upstream transactions, only the parent's proportionate interest thereof is eliminated. That portion of the intragroup profits and losses attributable to the non-controlling interests is deemed to be realized. The non-controlling shareholders are treated as 'outsiders', and consequently their interests

in the profit of the subsidiaries are not affected by the unrealized intragroup profits and losses.

Based on the case in Example 10.1, the consolidation journal entries, consolidation worksheet, and consolidated financial statements under parent theory are as follows:

(a) Consolidation journal entries

(i)	Dr Share capital (B)	80
	Dr Beginning retained profit (B)	80
	Dr Goodwill on consolidation	20
	Dr Land	20
	Cr Investment in B Ltd	200
	(elimination of investment account)	
(ii)	Dr Sales	20
	Cr Cost of sales	20
	(elimination of intragroup sales)	
(iii)	Dr Cost of sales	8
	Cr Stock	8
	(unrealized profit in stock, downstream sales)	
(iv)	Dr Other income	16
	Cr Machinery	16
	(unrealized profit in machinery, upstream sales)	
(v)	Dr Non-controlling interest (CSCI) ($20\% \times 50$)	10
	Cr Non-controlling interest (CBS)	10
	(non-controlling interest in profit of B Ltd)	
(vi)	Dr Share capital (B)	20
	Dr Beginning retained profit (B)	30
	Cr Non-controlling interest (CBS)	50
	(non-controlling interest in share capital and BRP of B Ltd)	

(b) Consolidation worksheet

	A Ltd	B Ltd	Consolidation Dr	Cr	Consolidated balances
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	500	200	ii 20		680
Cost of sales	200	50	iii 8	ii 20	238
Gross profit	300	150			442
Other income	—	20	iv 16		4
Expenses	200	100			300
Profit before tax	100	70			146
Tax	30	20			50
Profit after tax	70	50			96
Non-controlling interest	—	—	v 10		10
Dividend	10	—			10
Beginning retained profit	40	150	i 80		
			vi 30		80
Ending retained profit	100	200			156
Share capital	400	100	i 80		
			vi 20		400
Loan	100	—			100
Non-controlling interest	—	—	v 10		
			vi 50		60
Land	—	100	i 20		120
Machinery	100	—	iv 16		84
Investment in B Ltd	200	—	i 200		—
Stock	100	100	iii 8		192
Net current assets	200	100			300
Goodwill	—	—	i 20		20

(c) Consolidated financial statements

A Ltd and its subsidiary	
Consolidated statement of comprehensive income	
For year ended 31 December 20X8	
	\$'000
Sales	680
Cost of sales	238
Gross profit	442
Other income	4
Operating expenses	300
Profit before tax	146
Tax	50
Profit after tax	96
Non-controlling interest	10
Profit for the year	86
Other comprehensive income	—
Total comprehensive income	86

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Shareholders' fund	
Share capital	400
Retained profit	156
	<hr/>
	556
Liabilities	
Long-term loan	100
Non-controlling interest	60
	160
	716
Assets	
Goodwill on consolidation	20
Land	120
Machinery	84
Stock	192
Net current assets	300
	<hr/>
	716

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	80
Profit for the year	86
Dividend	10
	<hr/>
Ending retained profit	156

10.2.3 Entity theory

Entity theory is based on the view that the consolidated financial statements are prepared for the economic entity that comprises all the companies in a group. Thus, all the shareholders of all the companies in the group are deemed to be the equity shareholders.

Under this theory, non-controlling interest is presented in the consolidated balance sheet as part of the shareholders' equity and initially measured based on its share of the post-acquisition fair value of the net assets of the subsidiary. In the consolidated statement of comprehensive income, non-controlling interest is presented as a distribution of profit and computed based on its share of the adjusted after-tax profit of the subsidiary.

Where there is a difference between the cost of investment and the underlying net assets, the difference must be 'grossed-up', so that the imputed fair value (based on the price the parent pays for its share) of the subsidiary's assets and liabilities is included in the consolidated financial statements. For example, if the parent pays \$40 for its 80% share of the undervaluation of one of the subsidiary's assets (be it an identifiable or a non-identifiable asset), then the undervaluation is 'grossed-up' to \$50 ($\$40 \times 100/80$) and the asset will be revalued upwards by \$50 in the consolidated financial statements. On a conceptual basis, this valuation approach has considerable appeal when the parent acquires essentially 100% interest in the subsidiary. However, the approach has much less appeal if the parent acquires a slim majority in the subsidiary. The assets and liabilities of the group are arrived at by adding together the assets and liabilities of the parent at book value and the assets and liabilities of the subsidiary at fair value.

Where there are intragroup transactions, the transactions would be deemed to be entirely within the entity – there is no outside party involved. Thus, the entire amount of the unrealized profits and losses arising therefrom, both downstream and upstream transactions, should be eliminated in full and borne by the controlling and non-controlling shareholders in their respective proportion. Non-controlling interest in the consolidated statement of comprehensive income would therefore be calculated based on its share of the subsidiary's profit and its share of all the unrealized intragroup profits and losses.

Based on the case in Example 10.1, the consolidation journal entries, consolidation worksheet, and consolidated financial statements under entity theory are as follows:

(a) Consolidation journal entries

(i)	Dr Share capital (B)	80
	Dr Beginning retained profit (B)	80
	Dr Goodwill	20
	Dr Land	20
	Cr Investment in B Ltd	200
	(elimination of investment account)	
(ii)	Dr Sales	25
	Cr Cost of sales	25
	(elimination of intragroup sales)	
(iii)	Dr Cost of sales	10
	Cr Stock	10
	(unrealized profit in stock, downstream sales)	
(iv)	Dr Other income	20
	Cr Machinery	20
	(unrealized profit in machinery, upstream sales)	

(v)	Dr Non-controlling interest (CSCI) ($20\% \times 50 - 20\% \times 30$)	4
	Cr Non-controlling interest (CBS)	4
	(non-controlling interest in profit of B Ltd)	
(vi)	Dr Share capital (B)	20
	Dr Beginning retained profit (B)	30
	Dr Goodwill on consolidation	5
	Dr Land	5
	Cr Non-controlling interest (CBS)	60
	(non-controlling interest in share capital and BRP of B Ltd)	

(b) Consolidation worksheet

	A Ltd	B Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	500	200	ii 25		675
Cost of sales	200	50	iii 10	ii 25	235
Gross profit	300	150			440
Other income	—	20	iv 20		—
Expenses	200	100			300
Profit before tax	100	70			140
Tax	30	20			50
Profit after tax	70	50			90
Non-controlling interest	—	—	v 4		4
Dividend	10	—			10
Beginning retained profit	40	150	i 80		80
			vi 30		
Ending retained profit	100	200			156
Share capital	400	100	i 80		400
			vi 20		
Loan	100	—			100
Non-controlling interest	—	—		v 4	
			vi 60		64
Land	—	100	i 20		
			vi 5		125
Machinery	100	—		iv 20	80
Investment in B Ltd	200	—		i 200	—
Stock	100	100		iii 10	190
Net current assets	200	100			300
Goodwill	—	—	i 20		
			vi 5		25

(c) Consolidated financial statements

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	675
Cost of sales	235
Gross profit	440
Operating expenses	300
Profit before tax	140
Tax	50
Profit after tax	90
Other comprehensive income	—
Total comprehensive income	<u>90</u>

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Shareholders' fund	
Share capital	400
Retained profit	156
Non-controlling interest	64
	<u>620</u>
Liability	
Long-term loan	100
	<u>720</u>
Assets	
Goodwill on consolidation	25
Land	125
Machinery	80
Stock	190
Net current assets	300
	<u>720</u>

A Ltd and its subsidiary	
Consolidated statement of changes in equity (partial)	
For year ended 31 December 20X8	
	\$'000
Beginning retained profit	80
Profit after tax	90
Appropriations	
Non-controlling interest	4
Dividend	10
	14
Ending retained profit	156

10.2.4 Current practice

The current practice, as discussed in the previous chapters, represents a mix of the parent theory and the entity theory. In fact, in itself, the current practice allows for some variations.

The current set of accounting standards has, however, moved closer to the entity theory. In the consolidated balance sheet, FRS 110 requires non-controlling interest to be presented as a separate component of shareholders' equity, and FRS 103 requires non-controlling interest to be measured based on 'the acquisition-date fair value of the net identifiable assets of the subsidiary' or at its 'fair value'. In the consolidated statement of comprehensive income, FRS 1 requires non-controlling interest to be presented on the same basis as equity holders of the parent. The FRSs are silent on the measurement of non-controlling interest in the consolidated statement of comprehensive income in relation to unrealized intragroup profits and losses (this book has adopted the 'full proportionate' method).

Where non-controlling interest is measured based on the acquisition-date fair value of the net identifiable assets of the subsidiary, any difference between the cost of investment and the underlying net assets must be further analyzed, because depending on the nature of the difference, it may or may not be 'grossed-up'. If the difference is due to 'goodwill on consolidation' (a non-identifiable asset/liability), the amount should not be 'grossed-up', but if the differences are caused by undervaluation or overvaluation of identifiable assets and liabilities, they have to be 'grossed-up'. In other words, goodwill on consolidation is treated based on parent theory, whereas identifiable assets and liabilities are treated based on entity theory.

Where the non-controlling interest is measured based on its fair value, any difference between the cost of investment and the underlying net assets that is due to undervaluation or overvaluation of identifiable assets and liabilities would have to be 'grossed-up'. The difference between the fair value of non-controlling interest and its share of the acquisition-date fair value of the net identifiable assets of the subsidiary is then treated as addition to or deduction from goodwill on consolidation.

As for unrealized intragroup profits and losses, FRS 110 requires the unrealized intragroup profits and losses to be eliminated in full. However, FRS 110 is silent on the issue of who should bear the consequence of the elimination. The most commonly adopted method in current practice is the 'full proportionate' approach. Under this approach, a distinction is made between intragroup profits and losses arising from downstream transactions and those from upstream transactions. For unrealized profits or losses arising from downstream transactions, the entire amount of the profits or losses is eliminated against the group profit (after non-controlling interest). On the other hand, for unrealized profits and losses arising from upstream transactions, the non-controlling interest's proportionate share is charged against the non-controlling interest, and consequently, the group profit (after non-controlling interest) is charged with the parent's proportionate share only. There seems to be some inconsistency here. However, the approach is justified on the ground that for downstream transactions, the unrealized profit is recorded in the parent's books and therefore the elimination of the profit would only affect the parent's profit. For an upstream transaction, the unrealized profit is recorded in the subsidiary's books and the elimination thereof would affect the subsidiary's profit, which would in turn affect the non-controlling interest and the group profit.

Based on the case in Example 10.1, the consolidation journal entries, consolidation worksheet, and consolidated financial statements under the current practice are as follows (non-controlling interest is measured based on its share of the acquisition-date fair value of the net identifiable assets of the subsidiary):

(a) Consolidation journal entries

(i)	Dr Share capital (B)	80
	Dr Beginning retained profit (B)	80
	Dr Goodwill	20
	Dr Land	20
	Cr Investment in B Ltd	200
	(elimination of investment account)	
(ii)	Dr Sales	25
	Cr Cost of sales	25
	(elimination of intragroup sales)	
(iii)	Dr Cost of sales	10
	Cr Stock	10
	(unrealized profit in stock, downstream sales)	
(iv)	Dr Other income	20
	Cr Machinery	20
	(unrealized profit in machinery, upstream sales)	

(v)	Dr Non-controlling interest (CSCI) ($20\% \times [50 - 20]$)	6
	Cr Non-controlling interest (CBS)	6
	(non-controlling interest in profit of B Ltd)	
(vi)	Dr Share capital (B)	20
	Dr Beginning retained profit (B)	30
	Dr Land	5
	Cr Non-controlling interest (CBS)	55
	(non-controlling interest in share capital and BRP of B Ltd)	

(b) Consolidation worksheet

	A Ltd	B Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	500	200	ii 25		675
Cost of sales	200	50	iii 10	ii 25	235
Gross profit	300	150			440
Other income	—	20	iv 20		—
Expenses	200	100			300
Profit before tax	100	70			140
Tax	30	20			50
Profit after tax	70	50			90
Non-controlling interest	—	—	v 6		6
Profit for shareholders	—	—			84
Dividend	10	—			10
Beginning retained profit	40	150	i 80		80
			vi 30		
Ending retained profit	100	200			154
Share capital	400	100	i 80		400
			vi 20		
Loan	100	—			100
Non-controlling interest	—	—	v 6		61
			vi 55		
Land	—	100	i 20		125
			vi 5		
Machinery	100	—	iv 20		80
Investment in B Ltd	200	—	i 200		—
Stock	100	100	iii 10		190
Net current assets	200	100			300
Goodwill	—	—	i 20		20

(c) Consolidated financial statements

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	675
Cost of sales	235
Gross profit	440
Operating expenses	300
Profit before tax	140
Tax	50
Profit after tax	90
Other comprehensive income	—
Total comprehensive income	<u>90</u>
 Attributable to:	
Shareholders of the parent	84
Non-controlling interest	6
	<u>90</u>

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Shareholders' fund	
Share capital	400
Retained profit	154
	<u>554</u>
Non-controlling interest	61
	<u>615</u>
Liability	
Long-term loan	100
	<u>715</u>
Assets	
Goodwill on consolidation	20
Land	125
Machinery	80
Stock	190
Net current assets	300
	<u>715</u>

A Ltd and its subsidiary Consolidated statement of changes in equity (partial) For year ended 31 December 20X8	
	\$'000
Beginning retained profit	80
Profit for the year	84
Dividend	10
Ending retained profit	154

10.2.5 Notes to the solutions to Example 10.1

- (a) Under proprietary theory, the consolidated financial statements are prepared on the basis of proportionate consolidation. Only the parent's share of the subsidiary's assets, liabilities, expenses, and revenue is added to the consolidated financial statements. (Note that B Ltd's financial statements are not included in the consolidation worksheet.) Non-controlling interest is, therefore, not presented.
- (b) The amounts of group profit and non-controlling interest are computed and presented differently in the consolidated statement of comprehensive income under the different theories.

Under proprietary theory, non-controlling interest is not shown. The group's profit of \$86,000 is arrived at by adding together the parent's profit of \$70,000 and the parent's proportionate interest in the subsidiary's profit of \$40,000 ($80\% \times \$50,000$) and deducting therefrom the parent's proportionate share of the unrealized intragroup profit of \$24,000 ($\$8,000 + \$16,000$).

Under parent theory, group profit of \$96,000 is arrived at by adding together the parent's profit of \$70,000 and subsidiary's profit of \$50,000 and deducting therefrom the parent's proportionate share of the unrealized intragroup profit of \$24,000. As for non-controlling interest, since the non-controlling shareholders are considered 'outsiders' under this theory, they are not affected by unrealized intragroup profits and losses. Non-controlling interest in the consolidated statement of comprehensive income is therefore \$10,000, which is equal to its proportionate share of the subsidiary's profit ($20\% \times \$50,000 = \$10,000$).

Under entity theory, group profit of \$90,000 is arrived at by adding together the parent's profit of \$70,000 and the subsidiary's profit of \$50,000 and deducting therefrom the full amount of the unrealized intragroup profit of \$30,000 ($\$10,000 + \$20,000$). As for non-controlling interest, since non-controlling shareholders are treated as part of the equity under this theory, they are charged or credited for their share of the unrealized intragroup profits and losses. Non-controlling interest in the consolidated profit of \$4,000 is therefore equal to its proportionate share of the subsidiary's profit of \$10,000 ($20\% \times \$50,000$) less its proportionate share of the unrealized intragroup profit of \$6,000 ($20\% \times [\$10,000 + \$20,000]$).

Under the current practice, the computation of group profit and non-controlling interest is affected by the nature of the unrecorded or undervalued or overvalued assets and liabilities (identifiable versus non-identifiable) and the direction of the flow of transactions (upstream versus downstream) that give rise to unrealized intragroup profits and losses. The group profit of \$90,000 is arrived at by adding together the parent's profit of \$70,000 and the subsidiary's profit of \$50,000 and deducting therefrom the full amount of the unrealized intragroup profit of \$30,000. Non-controlling interest in the consolidated statement of comprehensive income of \$6,000 is computed based on its share of the subsidiary's profit adjusted for the unrealized intragroup profit arising from the upstream transaction ($20\% \times [\$50,000 - \$20,000] = \$6,000$).

It should be noted that the elimination of intragroup sales has no effect on the profit; only the elimination of unrealized intragroup profits or losses will affect consolidated profit.

- (c) The amounts of group assets and liabilities and non-controlling interest are computed and presented differently in the consolidated balance sheet under different theories.

Under proprietary theory, the assets and liabilities of the subsidiary are brought to the consolidated financial statements at the parent's proportionate share of the fair value. For example, land is shown at \$100,000, which is equal to the parent's proportionate share of the fair value ($80\% \times \$125,000$). (This is, of course, also equal to the parent's proportionate share of the book value of \$80,000 [$80\% \times \$100,000$] + parent's proportionate share of the excess of the fair value over the book value of \$20,000 [$80\% \times \$25,000$].) Goodwill on consolidation is valued at the parent's proportionate share of the fair value of the goodwill or the amount of \$20,000 which the parent has actually paid.

Under parent theory, the assets and liabilities of the subsidiary are brought to the consolidated financial statements at book value plus the parent's share of the excess of fair value over the book value. For example, land is shown at \$120,000, which is the book value of \$100,000 + parent's share of the excess of the fair value over the book value of \$20,000 ($80\% \times \$25,000$). This is consistent with the cost principle, but the resultant value of \$120,000 represents neither the historical cost nor the current value of the land. Goodwill on consolidation is valued at the parent's proportionate share of the fair value (or the amount that the parent has actually paid for) of \$20,000. Non-controlling interest is shown as a liability and valued at \$60,000, being its proportionate share of the book value of the subsidiary's net assets ($20\% \times \$300,000 = \$60,000$).

Under entity theory, the assets and liabilities of the subsidiary and the goodwill on consolidation are brought to the consolidated financial statements at the imputed fair value. For example, since the parent pays \$100,000 ($80\% \times \$100,000 + \$20,000$) for its 80% interest in the land, the land is therefore deemed to have a fair value of \$125,000 ($\$100,000 \times 100/80$), which is the amount reported in the consolidated

balance sheet. Goodwill on consolidation is similarly 'grossed-up' and reported at its imputed fair value of \$25,000. Non-controlling interest is presented as part of the shareholders' equity and is valued at \$64,000, being equal to its proportionate share of the fair value of the subsidiary's net identifiable assets of \$65,000 ($20\% \times [\$300,000 + \$25,000]\right) + its share of the imputed value of goodwill on consolidation of $5,000 ($20\% \times \$25,000\right) - its share of the unrealized profit of $6,000 ($20\% \times \$30,000\right).$$$

Under the current practice, the assets and liabilities of the subsidiary are brought into the consolidated balance sheet at fair value (as under the entity theory); however, goodwill on consolidation to be brought into the consolidated balance sheet will depend on the measurement basis used for non-controlling interest. If the non-controlling interest is measured based on the acquisition-date fair value of the net identifiable assets of the subsidiary, the goodwill on consolidation will be just the amount that the parent has paid (i.e., the parent's share of the goodwill, as under the parent theory). If the non-controlling interest is measured based on its acquisition-date fair value, the goodwill on consolidation will be the parent's share plus/minus the difference between the fair value of non-controlling interest and the non-controlling interest in the acquisition-date fair value of the net identifiable assets of the subsidiary. Non-controlling interest is presented as a component of shareholders' equity and is measured based on the acquisition-date fair value of the net identifiable assets of the subsidiary (or its acquisition-date fair value) and adjusted for its share of unrealized profit/loss from upstream transactions. In this illustration (where non-controlling interest is measured based on the acquisition-date fair value of the net identifiable assets of the subsidiary), non-controlling interest is \$61,000, being its proportionate share of the fair value of the net identifiable assets of the subsidiary (with no share in the goodwill on consolidation) of \$65,000 ($20\% \times [\$300,000 + \$25,000]\right) less its share of the unrealized profit from upstream transaction of $4,000 ($20\% \times \$20,000\right).$ Goodwill on consolidation is reported at the parent's proportionate share of the fair value of the goodwill or the amount that the parent has actually paid for of $20,000. (In this illustration, if the non-controlling interest is measured based on its acquisition-date fair value of, say $48,000, then goodwill on consolidation will be $23,000 [$\$20,000 + (\$48,000 - 20\% \times \$225,000)\right]).$$

- (d) It should be noted that the amount of the group's profit (that is, profit after tax after non-controlling interest), and the amount of the group's net assets (that is, assets less liabilities less non-controlling interest) are the same, reported at \$86,000 and \$556,000 respectively, under all three consolidation theories. However, the corresponding figures computed under the current practice (which is a hybrid of parent theory and entity theory) are \$84,000 and \$554,000, respectively.
- (e) It should be noted that if B Ltd is a wholly owned subsidiary, the consolidated financial statements will be the same under each of the theories and the current practice.

10.3 Pooling of interests (merger) method

Traditionally, there are two methods of accounting for business combinations, namely, the acquisition method and the pooling of interests method (also known as the 'purchase method' and the 'merger method', respectively).

FRS 103 requires all business combinations to be accounted for using the acquisition method; it has therefore effectively disallowed the use of the pooling of interests method. However, FRS 103 is not applicable to business combinations involving entities under common control. Thus, the pooling of interests method can still be used in business combinations involving entities under common control, for example, in cases involving group restructuring.

Group restructuring may involve, for example, a subsidiary in the group selling its own subsidiary to the parent, or the parent selling one of its subsidiaries to another subsidiary. In group restructuring, the combining enterprises are under common control and have simply re-pooled their resources; there is no purchase transaction. It is therefore more appropriate to use the pooling of interests method under these circumstances.

Under the pooling of interests method:

- (a) the assets and liabilities of the combining enterprises are combined at their respective book values;
- (b) no goodwill, either positive or negative, is to be recorded;
- (c) the reserves and the current-year profit of the combining enterprises are added together as if the combination has taken place on the day the enterprises are formed; and
- (d) the difference between the amount recorded as share capital issued and the amount recorded for share capital acquired is to be adjusted to the shareholders' interests.

On the other hand, under the acquisition method, as discussed in the previous chapters:

- (a) the assets and liabilities of the acquired entity are included in the consolidated financial statements at fair value;
- (b) the reserves and profit of the acquired entity at the date of acquisition are eliminated; only the post-acquisition reserves and profit are added to the consolidated financial statements; and
- (c) the difference between the cost of investment and the fair value of the underlying identifiable net assets acquired is recorded as goodwill, either positive or negative.

Example 10.2

A Ltd combined with B Ltd on 31 December 20X5. A Ltd issued 80,000 of its shares at \$1 per share to B Ltd's existing shareholders in exchange for their 100% shareholding in B Ltd. A Ltd's shares were traded in the stock exchange at \$1.25 per share. The balance sheets of A Ltd and B Ltd, before the above transactions, were as follows:

	A Ltd	B Ltd
	\$'000	\$'000
Land	—	190
Other assets	250	—
	<u>250</u>	<u>190</u>
Share capital	100	100
Retained profit	50	10
Liabilities	<u>100</u>	<u>80</u>
	<u>250</u>	<u>190</u>

A Ltd and B Ltd agreed that B Ltd's land has a fair value of \$200,000. Assume that the above business combination arises from group restructuring (and therefore falls outside the scope of FRS 103), and the group adopts the pooling of interests (merger) method in the preparation of the consolidated financial statements.

Required

Prepare the consolidated balance sheet for the group as at 31 December 20X5 using the pooling of interests method. There are basically two approaches in applying the pooling of interests method. Solution A below shows the approach that is commonly used in the United States, while Solution B shows the approach commonly used in the United Kingdom.

Solution A

(a) In this case, A Ltd will record the issuance of the shares as follows:

Dr Investment	80,000
Cr Share capital	80,000

(b) A Ltd's balance sheet after the share issuance will be as follows:

	\$'000
Investment	80
Other assets	250
	<u>330</u>
Share capital	180
Retained profit	50
Liabilities	100
	<u>330</u>

(c) The consolidation journal entry will be as follows:

Dr Share capital (B)	100,000
Cr Investment in B Ltd	80,000
Cr Merger reserve	20,000
(elimination of investment account)	

(d) The consolidated balance sheet will be as follows:

	\$'000
Land	190
Other assets	250
	<u>440</u>
Share capital	180
Merger reserve	20
Retained profit	60
Liabilities	180
	<u>440</u>

Solution B

(a) In this case, A Ltd will record the issuance of the shares as follows:

Dr Investment	100,000
Cr Share capital	80,000
Cr Merger reserve	20,000

(b) A Ltd's balance sheet after the share issuance will be as follows:

	\$'000
Investment	100
Other assets	250
	<u>350</u>
Share capital	180
Merger reserve	20
Retained profit	50
Liabilities	100
	<u>350</u>

(c) The consolidation journal entry will be as follows:

Dr Share capital (B)	100,000
Cr Investment in B Ltd	100,000
(elimination of investment account)	

(d) The consolidated balance sheet will be as follows:

	\$'000
Land	190
Other assets	250
	<u>440</u>
Share capital	180
Merger reserve	20
Retained profit	60
Liabilities	180
	<u>440</u>

Notes to the solutions

- (a) The consolidated balance sheets under both Solution (A) and Solution (B) are the same.
- (b) If the above business combination is accounted for using the acquisition method, the solution will require A Ltd to record the issuance of the shares as follows:

Dr Investment	100,000
Cr Share capital	100,000

A Ltd's balance sheet after the share issuance will be as follows:

	\$'000
Investment	100
Other assets	250
	<u>350</u>
Share capital	200
Retained profit	50
Liabilities	100
	<u>350</u>

The consolidation journal entry will be as follows:

Dr Share capital (B)	100,000
Dr Retained profit (B)	10,000
Dr Land	10,000
Cr Investment in B Ltd	100,000
Cr Negative goodwill	20,000
(elimination of investment account)	

The consolidated balance sheet will be as follows:

	\$'000
Land	200
Other assets	250
	<u>450</u>
Share capital	180
Share premium	20
Retained profit*	70
Liabilities	180
	<u>450</u>

* (Inclusive of negative goodwill)

Some of the notable differences between the consolidated balance sheet prepared under the acquisition method and that under the pooling of interests method are as follows:

- (i) The subsidiary's land is brought into the consolidated balance sheet at book value under the pooling method, but at fair value under the acquisition method.
- (ii) The subsidiary's retained profit at the date of the business combination is treated as part of group's reserves under the pooling method, but will be eliminated as 'pre-acquisition reserves' under the acquisition method.

- (iii) There is a merger reserve under the pooling method. Under the acquisition method, there is a negative goodwill instead.



A more elaborate illustration of the acquisition method and pooling of interests method is given below.

Example 10.3



Case A

On 30 June 20X8, A Ltd issued 100,000 of its shares to the shareholders of B Ltd in exchange for 90,000 of B Ltd's shares. (Assume B Ltd's revenue and expenses for 20X8 accrued evenly throughout the year.) At the date of this transaction, the market value of A Ltd's shares was \$2 per share, and B Ltd's net assets were stated at their respective fair value, except for the land, which is deemed to be undervalued by \$10,000. Any other excess payment was deemed to be payment for goodwill.

During December 20X8, B Ltd sold raw materials of \$50,000 (invoiced at cost + 50%) to A Ltd. As at 31 December 20X8, A Ltd's stock included \$30,000 of raw materials purchased from B Ltd.

Assume the above business combination is accounted for using the acquisition method in accordance with the provisions of FRS 103. Assume also that the financial statements of the companies for 20X8 are as follows:

- (a) Balance sheets as at 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Land	—	100
Investment	200	—
Stock	200	100
Other assets	200	100
	<hr/> 600	<hr/> 300
Share capital	400	100
Retained profit	100	100
Long-term loan	100	100
	<hr/> 600	<hr/> 300

(b) Statement of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Sales	300	200
Cost of sales	100	100
Gross profit	200	100
Operating expenses	100	40
Profit before tax	100	60
Tax	30	20
Profit after tax	70	40
Other comprehensive income	—	—
Total comprehensive income	<u>70</u>	<u>40</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Beginning retained profit	40	60
Profit after tax	70	40
Dividend	10	—
Ending retained profit	<u>100</u>	<u>100</u>

The consolidation journal entries, consolidation worksheet, and consolidated financial statements under the acquisition method are as follows:

(a) Consolidation journal entries

(i)	Dr Share capital (B)	90
	Dr Beginning retained profit (B)	54
	Dr Sales (B) ($90\% \times [200/2]$)	90
	Dr Goodwill on consolidation	29
	Dr Land	9
	Cr Cost of sales (B) ($90\% \times [100/2]$)	45
	Cr Operating expenses (B) ($90\% \times [40/2]$)	18
	Cr Tax (B) ($90\% \times [20/2]$)	9
	Cr Investment in B Ltd	200
	(elimination of investment account)	
(ii)	Dr Sales	50
	Cr Cost of sales	50
	(intragroup sales)	

(iii)	Dr Cost of sales (B)	10		
	Cr Stock		10	
(unrealized profit in stock; upstream sales)				
(iv)	Dr Non-controlling interest (CSCI) ($10\% \times [20 - 10]$) ...		1	
	Dr Sales (B) ($10\% \times [200/2]$)	10		
	Cr Cost of sales (B) ($10\% \times [100/2]$)		5	
	Cr Operating expenses (B) ($10\% \times [40/2]$)		2	
	Cr Tax (B) ($10\% \times [20/2]$)		1	
	Cr Non-controlling interest (CBS)	3		
(non-controlling interest in profit of B Ltd)				
(v)	Dr Share capital (B)	10		
	Dr Beginning retained profit (B)		6	
	Dr Land		1	
	Cr Non-controlling interest (CBS)		17	
(non-controlling interest in other equity of B Ltd)				

(b) Consolidation worksheet

	A Ltd	B Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	300	200	i 90 iv 10 ii 50		350
Cost of sales	100	100	iii 10	i 45 iv 5 ii 50	110
Gross profit	200	100			240
Expenses	100	40		i 18 iv 2	120
Profit before tax	100	60			120
Tax	30	20		i 9 iv 1	40
Profit after tax	70	40			80
Non-controlling interest	—	—	iv 1		1
Profit for shareholders	—	—			79
Dividend	10	—			10
Beginning retained profit	40	60	i 54 v 6		40
Ending retained profit	100	100			109
Share capital	400	100	i 90 v 10		400
Loan	100	100			200
Non-controlling interest	—	—		iv 3 v 17	20
Land	—	100	i 9 v 1		110
Investment in B Ltd	200	—		i 200	—
Stock	200	100		iii 10	290
Other assets	200	100			300
Goodwill	—	—	i 29		29

(c) Consolidated financial statements

A Ltd and its subsidiary
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000
Sales	350
Cost of sales	110
Gross profit	240
Operating expenses	120
Profit before tax	120
Tax	40
Profit after tax	80
Other comprehensive income	—
Total comprehensive income	80
<hr/>	
Attributable to:	
Shareholders of the parent	79
Non-controlling interest	1
	80
<hr/>	

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	400
Retained profit	109
Non-controlling interest	20
Long-term loan	200
	729
Goodwill on consolidation	29
Land	110
Stock	290
Other assets	300
	729
<hr/>	

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	40
Profit for the year	79
Dividend	10
Ending retained profit	109
<hr/>	

Case B

Assume in the above case that A Ltd and B Ltd were subsidiaries of P Ltd (and the business combination therefore fell outside the scope of FRS 103), and the group used the pooling of interests method. In this case, the financial statements of the companies for 20X8 will be as follows:

(a) Balance sheets as at 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Land	—	100
Investment	100	—
Stock	200	100
Other assets	200	100
	500	300
	500	300
Share capital	300	100
Retained profit	100	100
Long-term loan	100	100
	500	300
	500	300

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Sales	300	200
Cost of sales	100	100
	200	100
Gross profit	100	40
Operating expenses	—	—
	100	60
Profit before tax	—	30
Tax	—	20
	70	40
Profit after tax	70	40
Other comprehensive income	—	—
	70	40

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd	B Ltd
	\$'000	\$'000
Beginning retained profit	40	60
Profit after tax	70	40
Dividend	10	-
Ending retained profit	100	100

The consolidation journal entries, consolidation worksheet, and consolidated financial statements under the pooling of interests method are as follows:

(a) Consolidation journal entries

(i)	Dr Share capital (B)	90
	Dr Beginning retained profit	10
	Cr Investment in B Ltd	100
	(elimination of investment account)	
(ii)	Dr Sales	50
	Cr Cost of sales	50
	(intragroup sales)	
(iii)	Dr Cost of sales (B)	10
	Cr Stock	10
	(unrealized profit in stock, upstream sales)	
(iv)	Dr Non-controlling interest (CSCI) ($10\% \times [40 - 10]$)	3
	Cr Non-controlling interest (CBS)	3
	(non-controlling interest in profit of B Ltd)	
(v)	Dr Share capital (B)	10
	Dr Beginning retained profit (B)	6
	Cr Non-controlling interest (CBS)	16
	(non-controlling interest in other net assets of B Ltd)	

(b) Consolidation worksheet

	A Ltd	B Ltd	Consolidation		Consolidated balances
			Dr	Cr	
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	300	200	ii 50		450
Cost of sales	100	100	iii 10	ii 50	160
Gross profit	200	100			290
Expenses	100	40			140
Profit before tax	100	60			150
Tax	30	20			50
Profit after tax	70	40			100
Non-controlling interest	—	—	iv 3		3
Profit for shareholders	—	—			97
Dividend	10	—			10
Retained profit	60	40			87
Beginning retained profit	40	60	i 10		
			v 6		84
Ending retained profit	100	100			171
Share capital	300	100	i 90		
			v 10		300
Loan	100	100			200
Non-controlling interest	—	—	iv 3		
			v 16		19
Land	—	100			100
Investment in B Ltd	100	—	i 100		—
Stock	200	100	iv 10		290
Other assets	200	100			300

(c) Consolidated financial statements

A Ltd and its subsidiary Consolidated statement of comprehensive income For year ended 31 December 20X8	
	\$'000
Sales	450
Cost of sales	160
Gross profit	290
Operating expenses	140
Profit before tax	150
Tax	50
Profit after tax	100
Other comprehensive income	—
Total comprehensive income	100
Attributable to:	
Shareholders of the parent	97
Non-controlling interest	3
	100

A Ltd and its subsidiary
Consolidated balance sheet
As at 31 December 20X8

	\$'000
Share capital	300
Retained profit	171
Non-controlling interest	19
Long-term loan	200
	<u>690</u>
Land	100
Stock	290
Other assets	300
	<u>690</u>

A Ltd and its subsidiary
Consolidated statement of changes in equity (partial)
For year ended 31 December 20X8

	\$'000
Beginning retained profit	84
Profit for the year	97
Dividend	10
Ending retained profit	<u>171</u>

Notes to the solutions

- (a) Under the acquisition method (Case A), the shares issued are recorded in A Ltd's books at market value, as follows:

Dr Investment	\$200,000
Cr Share capital	\$200,000

Under the pooling of interests method (Case B), the shares issued are recorded in A Ltd's books at par value, as follows:

Dr Investment	\$100,000
Cr Share capital	\$100,000

- (b) Under the acquisition method, the assets and liabilities of the subsidiary are brought into the consolidated financial statements at fair value, for example, land is reported in the consolidated balance sheet at its fair value of \$110,000.

Under the pooling of interests method, the assets and liabilities of the subsidiary are brought to the consolidated financial statements at book value. For example, the land of the subsidiary, even though it has a fair value of \$110,000, is reported in the consolidated balance sheet at its book value of \$100,000.

- (c) Under the acquisition method, all the pre-acquisition reserves and profit of the subsidiary are eliminated in the consolidated process. Only the post-acquisition reserves and profit are reported in the consolidated financial statements.

Under the pooling of interests method, all the reserves and profit of the subsidiary are brought into the consolidated financial statements, as if the business combination has taken place on the day the subsidiary was incorporated. (The entry crediting 'beginning retained profit' in CJE [i] under the pooling of interests method is merely for the purpose of adjusting the shareholders' equity for the difference between the shares issued and the shares acquired [see Note (d) below], and not for the elimination of the pre-acquisition retained profit of the subsidiary).

- (d) Under the acquisition method, the difference between the cost of investment and the fair value of the net assets acquired is recorded as 'goodwill on consolidation'.

Under the pooling of interests method, the above difference would not arise. However, there may be a difference between the amount recorded as the share capital issued and the amount recorded for the share capital acquired, which would be adjusted to the shareholders' equity in the consolidated financial statements. If the former is larger than the latter, as it is in this example, the difference would be written off against the group's retained profit (see consolidation journal entry [i]). If the former is less than the latter, the difference would be reported as a capital reserve (may be named the 'merger reserve') in the consolidated financial statements. For example, if in the example, A Ltd issues 70,000 shares instead of 100,000 shares, consolidation journal entry (i) would be as follows:

Dr Share capital (B)	\$90,000
Cr Investment	\$70,000
Cr Merger reserve	\$20,000

- (e) The elimination of intragroup account balances (for example, consolidation journal entry [ii]) and unrealized intragroup profits and losses (for example, consolidation journal entry [iii]) are the same under both the purchase method and the pooling of interests method.

10.4 Summary

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In this chapter, the various alternatives to the preparation and presentation of consolidated financial statements are discussed. The preparation and presentation of consolidated financial statements may be different due to (a) the adoption of different consolidation theories and (b) the use of different methods of accounting for the different types of business combinations.

The various consolidation theories adopt different assumptions as to the purposes of consolidated financial statements and the nature of non-controlling interests. Thus, the consolidated financial statements prepared under each of the different consolidation theories will be different. It should be noted that the current practice is not based on any of the general consolidation theories; rather, it is based on a combination of parent theory and entity theory.

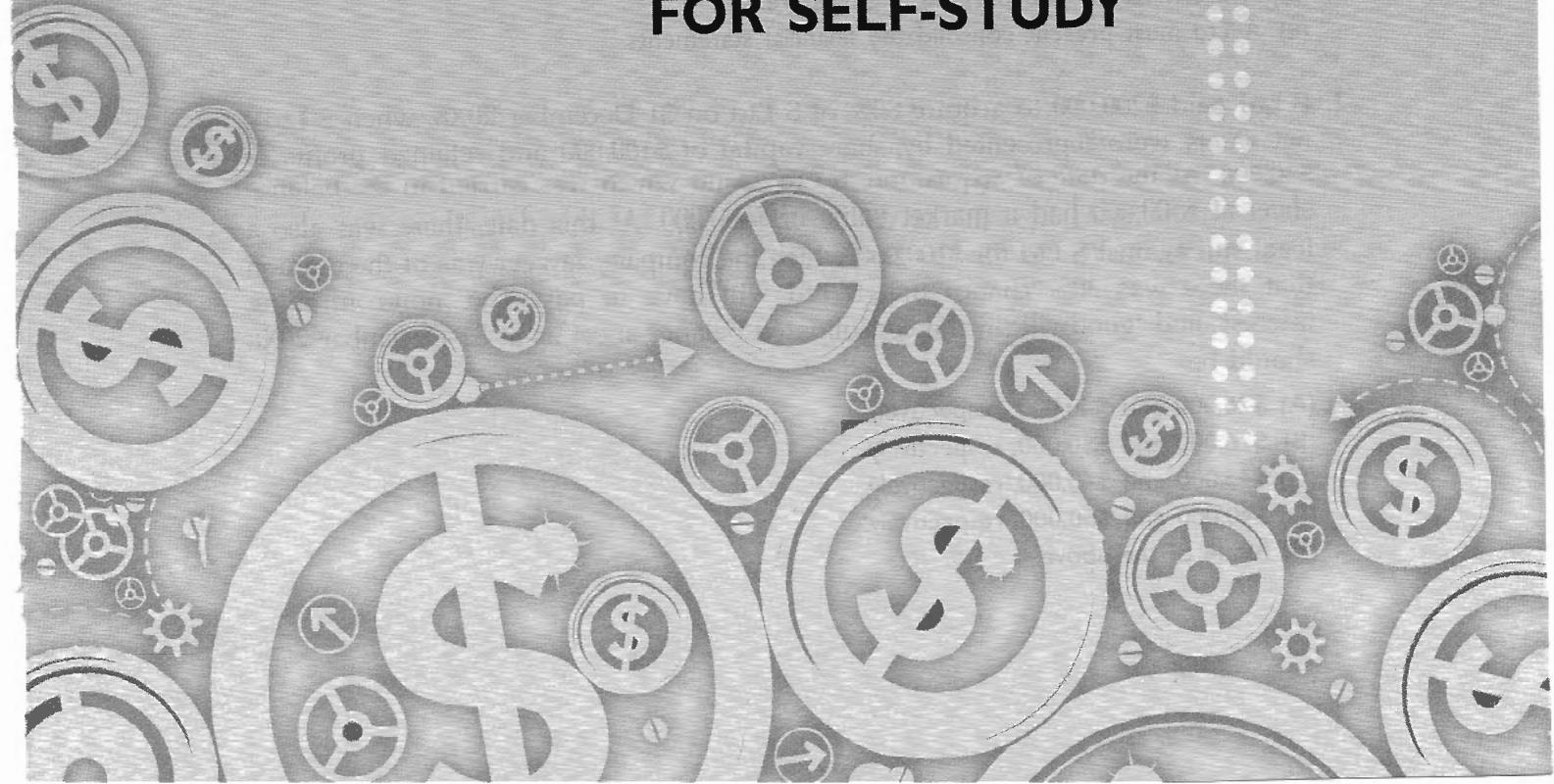
There are different types of business combinations. There may be business combinations that are in the nature of an acquisition (where an acquirer is present), or business combinations arising from group restructuring. For business combinations in the nature of an acquisition, FRS 103 requires the use of the acquisition method. For business combinations arising from group restructuring (which is outside the scope of FRS 103), the pooling of interests method may be used. Consolidated financial statements prepared under different accounting methods that assume a different nature of the business combination will obviously be very different.

It should be noted that in all the previous chapters, the preparation and presentation of consolidated financial statements are discussed based on (a) current practice, which is a combination of parent theory and entity theory, and (b) the assumption that the business combination is in the nature of an acquisition and that the acquisition method is used.

CHAPTER

11

FURTHER PROBLEMS FOR SELF-STUDY



This chapter presents four quizzes with 12 multiple-choice questions each and five examination-styled questions for the readers' self-study.



QUIZ 11.1

For each of the questions below, select the most appropriate answer. Unless expressly stated otherwise, assume that (i) the companies are incorporated in Singapore with 31 December accounting year-end, applying Singapore Financial Reporting Standards that are effective as at 1 January 2013, and adopting the group policy of measuring non-controlling interest based on its proportionate share of the acquisition-date fair value of identifiable net assets of subsidiaries acquired, and the full proportionate method; (ii) over the years, there is no change in the issued share capital of the companies, and no change in the parent shareholding interest in subsidiary; and (iii) shareholding of more than 50% will give rise to having control. Ignore the deferred tax effect.

1. A Ltd controls B Ltd, and B Ltd controls C Ltd. Which of the following is a condition that must be met for B Ltd to be exempted from presenting its consolidated financial statements?
 - (A) C Ltd must be incorporated in Singapore.
 - (B) C Ltd must be 100% owned by B Ltd.
 - (C) B Ltd must be 100% owned by A Ltd.
 - (D) A Ltd must be incorporated in Singapore.
 - (E) A Ltd must present consolidated financial statements.

2. P Ltd paid \$200,000 to acquire 80% of S Ltd on 31 December 20X8, when S Ltd's net assets were represented by share capital of \$100,000 and retained profits of \$30,000. At the date of acquisition, S Ltd's land which was carried in the balance sheet at \$500,000 had a market value of \$600,000. At this date, there was also a legal suit against S Ltd for \$100,000 which the company lawyer was of the opinion that there was 30% chance that S Ltd will have to pay. The 'non-controlling interest' and 'goodwill' in the consolidated balance sheet as at 31 December 20X8 should be
 - (A) \$26,000 and \$40,000, respectively.
 - (B) \$26,000 and \$50,000, respectively.
 - (C) \$40,000 and \$40,000, respectively.
 - (D) \$40,000 and \$50,000, respectively.
 - (E) None of the above.

3. Refer to the facts in Question 2 above. Assume that on 31 December 20X8, S Ltd's share capital comprised 100,000 shares, traded at a market value of \$2.10 per share, and the group policy was to measure its non-controlling interest based on its acquisition-date fair value. The 'land', 'provision for legal suit', and 'goodwill' in the consolidated balance sheet as at 31 December 20X8 should be
- (A) \$580,000, \$24,000, and \$40,000, respectively.
 - (B) \$580,000, \$24,000, and \$42,000, respectively.
 - (C) \$600,000, \$30,000, and \$40,000, respectively.
 - (D) \$600,000, \$30,000, and \$42,000, respectively.
 - (E) None of the above.
4. A Ltd acquired 80% of B Ltd in January 20X5. In February 20X6, A Ltd sold goods to B Ltd at cost plus 50%. B Ltd sold some of these goods to outsiders during 20X6 and sold the remaining during 20X7. The consolidation adjusting entries required to adjust for the inter-company profit for the 20X6, 20X7, and 20X8 consolidation should be
- (A) 20X6: Dr Sales; Cr Purchases
20X7: Dr Beginning retained profit; Cr Cost of sales
20X8: Nil
 - (B) 20X6: Dr Cost of sales; Cr Inventory (CBS)
20X7: Dr Beginning retained profit; Cr Cost of sales
20X8: Nil
 - (C) 20X6: Dr Sales; Cr Cost of sales
20X7: Dr Beginning retained profit; Cr Inventory (CBS)
20X8: Dr Beginning retained profit; Cr Ending retained profit
 - (D) 20X6: Dr Cost of sales; Cr Inventory (CBS)
20X7: Dr Beginning retained profit; Cr Cost of sales
20X8: Dr Beginning retained profit; Cr Ending retained profit
 - (E) 20X6: Dr Sales; Cr Cost of sales
20X7: Dr Beginning retained profit; Cr Ending retained profit
20X8: Nil
5. C Ltd acquired 80% of D Ltd in January 20X5, when D Ltd's retained profit was \$500,000. For the year ended 31 December 20X8, the 'profit after tax' of C Ltd and D Ltd were \$200,000 and \$100,000, respectively. The 'profit after tax' of C Ltd included dividend income of \$8,000 received from D Ltd in December 20X8. As at 31 December 20X8, the 'retained profits' of C Ltd and D Ltd were \$1,000,000 and \$800,000, respectively. In the 2008 consolidated financial statements, the 'profit after tax attributable to shareholders of the parent' and the 'group retained profits' should be
- (A) \$280,000 and \$1,232,000, respectively.
 - (B) \$280,000 and \$1,240,000, respectively.
 - (C) \$272,000 and \$1,240,000, respectively.
 - (D) \$272,000 and \$1,232,000, respectively.
 - (E) None of the above.

6. N Ltd acquired a piece of land in 20X1 for \$100 million. The land was correctly accounted for as 'property, plant, and equipment'. In December 20X4, the land was revalued to \$130 million. When M Ltd acquired 80% of N Ltd in January 20X5, the land was deemed to have a market value of \$130 million. In December 20X6, the land was revalued to \$160 million. In December 20X8, the land was further revalued to \$180 million. M Ltd did not have any 'property, plant, and equipment' and 'revaluation reserve'. The group policy was to carry the land at revalued amount. In the consolidated balance sheet as at 31 December 20X8, the 'revaluation reserve' should be
- (A) \$80 million.
 - (B) \$64 million.
 - (C) \$50 million.
 - (D) \$40 million.
 - (E) None of the above.
7. A Ltd acquired 80% of B Ltd in 20X4, when B Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. B Ltd acquired 80% of C Ltd in 20X6, when C Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$50,000. At this date, B Ltd's retained profit was \$120,000. As at 31 December 20X8, the retained profits of A Ltd, B Ltd, and C Ltd were \$300,000, \$200,000, and \$100,000, respectively. In A Ltd's consolidated balance sheet as at 31 December 20X8, the 'group retained profits' and 'non-controlling interests' should be
- (A) \$412,000 and \$108,000, respectively.
 - (B) \$412,000 and \$132,000, respectively.
 - (C) \$420,000 and \$108,000, respectively.
 - (D) \$420,000 and \$132,000, respectively.
 - (E) None of the above.
8. Y Ltd acquired 80% of Z Ltd in 20X4, when Z Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. X Ltd acquired 80% of Y Ltd in 20X6, when Y Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$200,000. At this date, Z Ltd's retained profit was \$150,000. As at 31 December 20X8, the retained profits of X Ltd, Y Ltd and Z Ltd were \$500,000, \$400,000, and \$300,000, respectively. In X Ltd's consolidated balance sheet as at 31 December 20X8, the 'group retained profits' and 'non-controlling interests' should be
- (A) \$756,000 and \$204,000, respectively.
 - (B) \$788,000 and \$204,000, respectively.
 - (C) \$756,000 and \$212,000, respectively.
 - (D) \$788,000 and \$212,000, respectively.
 - (E) None of the above.

9. L Ltd acquired 80% of M Ltd in 20X4 and M Ltd acquired 80% of N Ltd in 20X6. For the year ended 31 December 20X8, the profit after tax of L Ltd, M Ltd, and N Ltd were \$300,000, \$200,000, and \$100,000, respectively. In November 20X8, N Ltd paid dividends of \$50,000. In L Ltd's consolidated statement of comprehensive income for the year ended 31 December 20X8, the 'profit after tax attributable to the shareholders of the parent' and the 'profit after tax attributable to non-controlling interests' should be
- (A) \$524,000 and \$76,000, respectively.
 - (B) \$492,000 and \$102,000, respectively.
 - (C) \$524,000 and \$36,000, respectively.
 - (D) \$492,000 and \$68,000, respectively.
 - (E) None of the above.
10. P Ltd acquired 80% of Q Ltd and 10% of R Ltd. Q Ltd acquired 80% of R Ltd. All the above share acquisitions were transacted on 1 January 20X8. For the year ended 31 December 20X8, the profit after tax of P Ltd, Q Ltd, and R Ltd were \$100,000, \$80,000, and \$50,000, respectively. There were no 'other comprehensive income'. As at 31 December 20X8, the net assets of P Ltd were represented by share capital of \$500,000 and retained profit of \$500,000, the net assets of Q Ltd were represented by share capital of \$300,000 and retained profit of \$300,000, and the net assets of R Ltd were represented by share capital of \$100,000 and retained profit of \$100,000. In P Ltd's 20X8 consolidated financial statements, the 'non-controlling interests' in the consolidated statement of comprehensive income and the 'non-controlling interests' in the consolidated balance sheet should be
- (A) \$29,000 and \$148,000, respectively.
 - (B) \$29,000 and \$168,000, respectively.
 - (C) \$34,000 and \$168,000, respectively.
 - (D) \$34,000 and \$173,000, respectively.
 - (E) None of the above.
11. P Ltd acquired 80% of S Ltd and 30% of A Ltd in 20X1. For the year ended 31 December 20X8, all the three companies revalued their respective land (which were accounted for as part of property, plant and equipment). P Ltd reported revaluation surplus of \$100,000, S Ltd reported revaluation surplus of \$50,000, and A Ltd reported revaluation surplus of \$20,000. In the P Ltd group's 20X8 consolidated statement of comprehensive income, the 'other comprehensive income' section will show
- (A) Revaluation surplus \$170,000.
 - (B) Revaluation surplus \$146,000.
 - (C) Revaluation surplus \$140,000; and
Share of associates other comprehensive income \$6,000.
 - (D) Revaluation surplus \$150,000; and
Share of associates other comprehensive income \$6,000.
 - (E) None of the above.

12. H Ltd acquired 80% of S Ltd and 30% of A Ltd in 20X1. For the year ended 31 December 20X8, H Ltd's profit after tax was \$100,000, S Ltd's profit after tax was \$50,000, and A Ltd's profit after tax was \$20,000. H Ltd started to sell goods to S Ltd and A Ltd during 20X8, and as at 31 December 20X8, the unrealized inter-company profits arising from the sales to S Ltd and A Ltd were \$20,000 and \$10,000, respectively. In H Ltd's consolidated statement of comprehensive income for the year ended 31 December 20X8, the 'profit after tax attributable to the shareholders of the parent' should be
- (A) \$116,000.
 (B) \$123,000.
 (C) \$126,000.
 (D) \$127,000.
 (E) None of the above.

Answers to Quiz 11.1

- | | | | |
|--------|--------|--------|---------|
| 1. (E) | 4. (B) | 7. (A) | 10. (A) |
| 2. (C) | 5. (C) | 8. (C) | 11. (D) |
| 3. (D) | 6. (D) | 9. (D) | 12. (B) |



QUIZ 11.2

For each of the questions below, select the most appropriate answer. Unless expressly stated otherwise, assume that (i) the companies are incorporated in Singapore with 31 December accounting year-end, applying Singapore Financial Reporting Standards that are effective as at 1 January 2013, and adopting the group policy of measuring non-controlling interest based on its proportionate share of the acquisition-date fair value of identifiable net assets acquired, and the full proportionate method; (ii) over the years, there is no change in the issued share capital of the companies, and no change in the parent shareholding interest in subsidiaries; and (iii) shareholding of more than 50% will give rise to having control. Ignore the deferred tax effect.

1. A Ltd holds 51% shareholding in B Ltd and controls B Ltd. M Ltd holds 49% shareholding in N Ltd and controls N Ltd. X Ltd holds 51% shareholding in Y Ltd but has no control in Y Ltd. Which of the companies has/have to present consolidated financial statements in accordance with FRS 110?

- (A) A Ltd
 (B) A Ltd and M Ltd
 (C) A Ltd and X Ltd
 (D) A Ltd, M Ltd, and X Ltd
2. P Ltd acquired 100% of S Ltd in June 20X7. In 20X8, P Ltd sold goods invoiced at \$120,000 to S Ltd, and S Ltd sold all these goods to an outsider for \$130,000. The cost of these goods to P Ltd was \$100,000. The consolidation adjusting entries for 20X8 consolidation should be
 (A) Dr Sales \$120,000; Cr Cost of goods sold \$100,000; Cr Unrealized profit \$20,000.
 (B) Dr Sales \$130,000; Cr Cost of goods sold \$100,000; Cr Unrealized profit \$30,000.
 (C) Dr Sales \$120,000; Cr Cost of goods sold \$120,000.
 (D) Dr Sales \$130,000; Cr Cost of goods sold \$130,000.
3. P Ltd acquired 80% of T Ltd in January 20X5. In February 20X6, P Ltd sold a piece of land, which was carried in its books at \$100 million to T Ltd for \$120 million. In March 20X8, T Ltd sold the land to an outsider for \$150 million. The consolidation adjusting entries required in relation to the land for 20X6, 20X7, and 20X8 consolidation should be
 (A) 20X6: Dr Profit \$20 million; Cr Land \$20 million
 20X7: Dr Beginning retained profit \$20 million; Cr Land \$20 million
 20X8: Dr Beginning retained profit \$20 million; Cr Profit \$20 million
 (B) 20X6: Dr Profit \$20 million; Cr Land \$20 million
 20X7: Dr Beginning retained profit \$20 million; Cr Land \$20 million
 20X8: Dr Beginning retained profit \$30 million; Cr Profit \$30 million
 (C) 20X6: Dr Profit \$20 million; Cr Land \$20 million
 20X7: Dr Beginning retained profit \$20 million; Cr Land \$20 million
 20X8: Nil
 (D) 20X6: Dr Profit \$20 million; Cr Land \$20 million
 20X7: Dr Beginning retained profit \$20 million; Cr Profit \$20 million
 20X8: Nil
4. P Ltd acquired 100% of A Ltd in 20X1 which gave rise to goodwill on consolidation of \$100,000. P Ltd acquired 100% of B Ltd in 20X2 which gave rise to negative goodwill of \$100,000. When P Ltd transited from FRS 22 to FRS 103 in 20X5, there was an unamortized goodwill of \$40,000 and an unamortized negative goodwill of \$40,000. For 20X8 consolidation, the consolidation journal entries for the transition from FRS 22 to FRS 103 in respect of the goodwill on consolidation and the negative goodwill should be

- (A) Dr Beginning retained profit \$40,000 and Cr Goodwill on consolidation \$40,000;
 Dr Negative goodwill \$40,000 and Cr Beginning retained profit \$40,000, respectively.
- (B) Dr Beginning retained profit \$60,000 and Cr Goodwill on consolidation \$60,000;
 Dr Negative goodwill \$60,000 and Cr Beginning retained profit \$60,000, respectively.
- (C) Dr Beginning retained profit \$60,000 and Cr Goodwill on consolidation \$60,000;
 Dr Negative goodwill \$100,000 and Cr Beginning retained profit \$100,000, respectively.
- (D) Dr Beginning retained profit \$100,000 and Cr Goodwill on consolidation \$100,000;
 Dr Negative goodwill \$100,000 and Cr Beginning retained profit \$100,000, respectively.
5. C Ltd paid \$333,000 to acquire 60% of D Ltd on 31 December 20X8, when D Ltd's recognized net assets at fair value were represented by share capital of \$100,000 and retained profits of \$100,000. At the date of acquisition, there were two items that were not recognized by D Ltd, namely (i) a brand with a fair value of \$100,000, and (ii) a legal suit against D Ltd for \$100,000 which the company lawyer was of the opinion that there was 30% chance that D Ltd would lose the suit. The 'non-controlling interest' and 'goodwill' in the consolidated balance sheet as at 31 December 20X8 should be
- (A) \$80,000 and \$213,000, respectively.
 (B) \$108,000 and \$171,000, respectively.
 (C) \$120,000 and \$153,000, respectively.
 (D) \$120,000 and \$255,000, respectively.
 (E) None of the above.
6. Refer to Question 5 above. Assume that on 31 December 20X8, D Ltd's share capital comprised 100,000 shares which were traded in the Singapore Exchange at \$5.00 per share and the group policy was to measure its non-controlling interest based on its acquisition-date fair value. The 'brand', 'provision for legal suit' and 'goodwill' in the consolidated balance sheet as at 31 December 20X8 should be
- (A) \$100,000, \$nil, and \$171,000, respectively.
 (B) \$100,000, \$18,000, and \$153,000, respectively.
 (C) \$100,000, \$30,000, and \$153,000, respectively.
 (D) \$100,000, \$30,000, and \$171,000, respectively.
 (E) None of the above.
7. X Ltd acquired 90% of Y Ltd in January 20X5, when Y Ltd's retained profit was \$300,000. For the year ended 31 December 20X8, the 'profit after tax' of X Ltd and Y Ltd were \$200,000 and \$100,000, respectively. As at 31 December 20X8, the 'retained profits' of X Ltd and Y Ltd were \$1,000,000 and \$500,000, respectively. During the consolidation process, it was learnt that X Ltd sold some goods to Y Ltd during 20X7, which Y Ltd sold to outsiders during December 20X7 and January 20X8, and it was determined that there was unrealized profit of \$20,000 as at 31 December 20X7 arising from this inter-company sales. In the 2008 consolidated financial statements, the 'profit after tax attributable to shareholders of the parent' and the 'group retained profits' should be

- (A) \$270,000 and \$1,162,000, respectively.
(B) \$270,000 and \$1,180,000, respectively.
(C) \$310,000 and \$1,162,000, respectively.
(D) \$310,000 and \$1,180,000, respectively.
(E) None of the above.
8. B Ltd acquired 80% of C Ltd in 20X4, when C Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$50,000. A Ltd acquired 80% of B Ltd in 20X6, when B Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. At this date, C Ltd's retained profit was \$100,000. As at 31 December 20X8, the retained profits of A Ltd, B Ltd, and C Ltd were \$500,000, \$400,000, and \$300,000, respectively. The 'group retained profits' in A Ltd's consolidated balance sheet as at 31 December 20X8 and in B Ltd's consolidated balance sheet as at 31 December 20X8 should be
(A) \$868,000 and \$560,000, respectively.
(B) \$868,000 and \$600,000, respectively.
(C) \$900,000 and \$560,000, respectively.
(D) \$900,000 and \$600,000, respectively.
(E) None of the above.
9. P Ltd acquired 80% of Q Ltd and 10% of R Ltd. Q Ltd acquired 70% of R Ltd. All the above share acquisitions were transacted on 1 January 20X5. For the year ended 31 December 20X8, the 'profit after tax' of P Ltd, Q Ltd, and R Ltd were \$300,000, \$200,000, and \$100,000, respectively. On 30 December 20X8, Q Ltd paid cash dividend of \$50,000 to all its shareholders. In P Ltd's 20X8 consolidated financial statements, the 'profit after tax attributable to the shareholders of the parent' should be
(A) \$540,000.
(B) \$526,000.
(C) \$500,000.
(D) \$486,000.
(E) None of the above.
10. X Ltd acquired 80% of Y Ltd and 70% of Z Ltd. Y Ltd acquired 10% of Z Ltd. All the above share acquisitions were transacted on 1 January 20X8. For the year ended 31 December 20X8, the 'profit after tax' of X Ltd, Y Ltd, and Z Ltd were \$300,000, \$200,000 and \$100,000, respectively. There were no 'other comprehensive income'. As at 31 December 20X8, the net assets of X Ltd were represented by share capital of \$500,000 and retained profit of \$500,000, the net assets of Y Ltd were represented by share capital of \$400,000 and retained profit of \$400,000, and the net assets of Z Ltd were represented by share capital of \$300,000 and retained profit of \$300,000. In X Ltd's 20X8 consolidated financial statements, the 'non-controlling interests' in the consolidated statement of comprehensive income and the 'non-controlling interests' in the consolidated balance sheet should be

- (A) \$62,000 and \$282,000, respectively.
 (B) \$62,000 and \$280,000, respectively.
 (C) \$60,000 and \$282,000, respectively.
 (D) \$60,000 and \$280,000, respectively.
 (E) None of the above.
11. P Ltd (which has other subsidiaries) paid \$70,000 to acquire a 70% interest in S Ltd (whose share capital of \$100,000 comprised 100,000 ordinary shares) when S Ltd was incorporated in February 20X2. In May 20X5, when S Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000, and when S Ltd's shares were traded at \$3 per share, P Ltd intended to dispose of some shares in S Ltd. Assume that P Ltd disposed of (i) 10,000 shares, (ii) 30,000 shares, and (iii) 70,000 shares, the gain on disposal reported in the consolidated statement of comprehensive income should be
 (A) (i) \$10,000, (ii) \$30,000, and (iii) \$70,000, respectively.
 (B) (i) \$nil, (ii) \$30,000, and (iii) \$70,000, respectively.
 (C) (i) \$nil, (ii) \$70,000, and (iii) \$70,000, respectively.
 (D) (i) \$10,000, (ii) \$70,000, and (iii) \$70,000, respectively.
 (E) None of the above.
12. In June 20X6, H Ltd paid \$200,000 to acquire an 80% interest in S Ltd (whose share capital of \$100,000 comprised 100,000 ordinary shares), when S Ltd's net assets at fair value was represented by share capital of \$100,000 and retained profit of \$100,000. In July 20X7, H Ltd paid \$27,000 to acquire another 10% of S Ltd, when S Ltd's net assets at fair value was represented by share capital of \$100,000 and retained profit of \$120,000. In August 20X8, H Ltd disposed of 20,000 of S Ltd's shares for \$40,000, when S Ltd's net assets at fair value was represented by share capital of \$100,000 and retained profit of \$150,000. The 'goodwill on consolidation' in the consolidated balance sheet as at 31 December 20X6, 20X7 and 20X8 should be
 (A) \$40,000, \$45,000, and \$35,000, respectively.
 (B) \$40,000, \$45,000, and \$45,000, respectively.
 (C) \$40,000, \$40,000, and \$40,000, respectively.
 (D) \$40,000, \$40,000, and \$35,000, respectively.
 (E) None of the above.

Answers to Quiz 11.2

- | | | | |
|--------|--------|--------|---------|
| 1. (B) | 4. (C) | 7. (D) | 10. (A) |
| 2. (C) | 5. (B) | 8. (B) | 11. (C) |
| 3. (A) | 6. (E) | 9. (D) | 12. (C) |



QUIZ 11.3

For each of the questions below, select the most appropriate answer. Unless expressly stated otherwise, assume that (i) the companies are incorporated in Singapore with 31 December accounting year-end, applying Singapore Financial Reporting Standards that are effective as at 1 January 2013, and adopting the group policy of measuring non-controlling interest based on its proportionate share of the acquisition-date fair value of identifiable net assets of subsidiaries acquired, and the full proportionate method; (ii) over the years, there is no change in the issued share capital of the companies, and no change in the parent shareholding interest in subsidiary; and (iii) shareholding of more than 50% will give rise to having control. Ignore the deferred tax effect.

Questions 1 and 2 are based on the case below.

A Ltd paid \$220,000 to acquire 90% of B Ltd on 31 December 20X8, when B Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. On this date, A Ltd's land which was carried in its balance sheet at \$100,000 had a market value of \$150,000, and B Ltd's land which was carried in its balance sheet at \$100,000 had a market value of \$130,000. There was also a legal suit against A Ltd for \$100,000 which the company lawyer was of the opinion that there was 40% chance that A Ltd would have to pay, and a legal suit against B Ltd for \$100,000 which the company lawyer was of the opinion that there was 20% chance that B Ltd would have to pay.

1. The 'goodwill' and the 'non-controlling interest' in the consolidated balance sheet as at 31 December 20X8 should be
 - (A) \$40,000 and \$20,000, respectively.
 - (B) \$13,000 and \$23,000, respectively.
 - (C) \$31,000 and \$21,000, respectively.
 - (D) \$58,000 and \$18,000, respectively.
 - (E) None of the above.

2. The 'land, at cost' and the 'provision for litigation loss' in the consolidated balance sheet as at 31 December 20X8 should be
 - (A) \$200,000 and \$20,000, respectively.
 - (B) \$230,000 and \$60,000, respectively.
 - (C) \$200,000 and \$60,000, respectively.
 - (D) \$230,000 and \$20,000, respectively.
 - (E) None of the above.

Questions 3 and 4 are based on the case below.

P Ltd acquired 90% of S Ltd in June 20X6. In 20X7, S Ltd sold goods invoiced at \$150,000 to P Ltd. The cost of these goods to S Ltd was \$100,000. P Ltd sold 80% of these goods to an outsider in 20X7 and the remaining 20% in 20X8. In 20X8, S Ltd paid total dividend of \$100,000 to all its shareholders. The 20X8 profits after tax of P Ltd and S Ltd were \$800,000 and \$500,000, respectively.

3. The 20X8 consolidation adjusting entries for the profits arising from the inter-company sales of goods should be
 - (A) Dr Beginning retained profit \$40,000; Cr Cost of goods sold \$40,000.
 - (B) Dr Beginning retained profit \$10,000; Cr Cost of goods sold \$10,000.
 - (C) Dr Cost of goods sold \$40,000; Cr Closing inventory \$40,000.
 - (D) Dr Cost of goods sold \$10,000; Cr Closing inventory \$10,000.
 - (E) None of the above.

4. The 'profit after tax attributable to the shareholders of the parent' and the 'profit after tax attributable to non-controlling interest' in the 20X8 consolidated statement of comprehensive income should be
 - (A) \$1,259,000 and \$51,000, respectively.
 - (B) \$1,214,000 and \$46,000, respectively.
 - (C) \$1,169,000 and \$51,000, respectively.
 - (D) \$1,124,000 and \$46,000, respectively.
 - (E) None of the above.

Questions 5 and 6 are based on the case below.

H Ltd acquired 90% of S Ltd in May 20X5, when S Ltd's retained profit was \$500,000. In January 20X6, H Ltd sold a piece of machinery to S Ltd for \$120,000. Immediately before the sale, the machinery was carried in H Ltd's books at cost of \$100,000 less accumulated depreciation of \$20,000. This machinery was expected to have a useful life of five years (it had been used by H Ltd as property, plant and equipment for one year and will be used by S Ltd as property, plant and equipment for four years). The group policy was to depreciate the machinery on a straight-line basis. For the year ended 31 December 20X8, the profits after tax of H Ltd and S Ltd were \$200,000 and \$100,000, respectively. As at 31 December 20X8, the retained profits of H Ltd and S Ltd were \$900,000 and \$800,000, respectively.

5. The 20X8 consolidation adjusting entries for the machinery should be
 - (A) (i) Dr Beginning retained profit \$40,000; Cr Machinery \$20,000;
Cr Accumulated depreciation \$20,000; and
 - (ii) Dr Accumulated depreciation \$30,000; Cr Beginning retained profit \$20,000;
Cr Depreciation expense \$10,000.

- (B) (i) Dr Beginning retained profit \$40,000; Cr Machinery \$20,000;
 Cr Accumulated depreciation \$20,000; and
 (ii) Dr Accumulated depreciation \$10,000; Cr Depreciation expense \$10,000.
- (C) Dr Accumulated depreciation \$30,000; Cr Beginning retained profit \$20,000;
 Cr Depreciation expense \$10,000.
- (D) Dr Accumulated depreciation \$10,000; Cr Depreciation expense \$10,000.
- (E) None of the above.
6. For the year 20X8, the 'profit after tax attributable to the shareholders of the parent' in the consolidated statement of comprehensive income and the 'retained profit' in the consolidated balance sheet should be
- (A) \$290,000 and \$1,160,000, respectively.
 (B) \$290,000 and \$1,170,000, respectively.
 (C) \$300,000 and \$1,160,000, respectively.
 (D) \$300,000 and \$1,170,000, respectively.
 (E) None of the above.

Questions 7 and 8 are based on the case below.

B Ltd acquired 90% of C Ltd in 20X4, when C Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$80,000. A Ltd acquired 90% of B Ltd in 20X6, when B Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. On this date, C Ltd's retained profit was \$100,000. During 20X8, C Ltd sold goods to A Ltd, and as at 31 December 20X8, there is unrealized profit of \$10,000 arising from these inter-company sales. For the year ended 31 December 20X8, the profits after tax of A Ltd, B Ltd, and C Ltd were \$100,000 each. As at 31 December 20X8, the retained profits of A Ltd, B Ltd, and C Ltd were \$500,000, \$400,000, and \$300,000, respectively.

7. The 'profit after tax attributable to the shareholders of the parent' and the 'profit after tax attributable to non-controlling interest' in A Ltd's 20X8 consolidated statement of comprehensive income should be
- (A) \$261,000 and \$27,000, respectively.
 (B) \$262,900 and \$27,100, respectively.
 (C) \$271,000 and \$28,000, respectively.
 (D) \$272,900 and \$28,100, respectively.
 (E) None of the above.
8. The 'retained profit' and the 'non-controlling interest' in A Ltd's 20X8 consolidated balance sheet should be
- (A) \$923,900 and \$106,100, respectively.
 (B) \$923,900 and \$107,900, respectively.
 (C) \$940,100 and \$106,100, respectively.
 (D) \$940,100 and \$107,900, respectively.
 (E) None of the above.

Questions 9 and 10 are based on the case below.

X Ltd acquired 90% of Y Ltd and 10% of Z Ltd. Y Ltd acquired 80% of Z Ltd. All these share acquisitions were transacted on 1 January 20X5, when the retained profits of X Ltd, Y Ltd, and Z Ltd were \$300,000, \$200,000, and \$100,000, respectively. For the year ended 31 December 20X8, the profits after tax of X Ltd, Y Ltd, and Z Ltd were \$100,000 each. In December 20X8, Z Ltd revalued its property, plant and equipment for the first time, and the revaluation surplus was \$100,000. As at 31 December 20X8, the net assets of X Ltd were represented by share capital of \$500,000 and retained profit of \$500,000, the net assets of Y Ltd were represented by share capital of \$400,000 and retained profit of \$400,000, and the net assets of Z Ltd were represented by share capital of \$300,000, revaluation reserve of \$100,000, and retained profit of \$300,000.

9. The 'total comprehensive income attributable to the shareholders of the parent' and the 'total comprehensive income attributable to non-controlling interests' in X Ltd's 20X8 consolidated statement of comprehensive income should be
 - (A) \$354,000 and \$46,000, respectively.
 - (B) \$334,000 and \$30,000, respectively.
 - (C) \$172,000 and \$28,000, respectively.
 - (D) \$162,000 and \$20,000, respectively.
 - (E) None of the above.

10. The 'revaluation reserve', the 'retained profit', and the 'non-controlling interests' in X Ltd's 20X8 consolidated balance sheet should be
 - (A) \$72,000, \$926,000, and \$166,000, respectively.
 - (B) \$72,000, \$926,000, and \$174,000, respectively.
 - (C) \$82,000, \$844,000, and \$166,000, respectively.
 - (D) \$82,000, \$844,000, and \$174,000, respectively.
 - (E) None of the above.

Questions 11 and 12 are based on the case below.

On 1 January 20X7, S Ltd (a Singapore-incorporated company with Singapore dollar [S\$] functional and presentation currencies) paid S\$120,000 to acquire 80% of M Bhd (a Malaysia-incorporated company with Ringgit Malaysia [RM] functional and presentation currencies) when M Bhd's net assets at fair value was represented by share capital of RM 100,000 and retained profit of RM 100,000. The profits after tax of M Bhd were RM 60,000 and RM 50,000 for the years ended 31 December 20X7 and 20X8, respectively. The exchange rates were as follows:

- 1 January 20X7: RM 1.00 = S\$0.60
- 31 December 20X7: RM 1.00 = S\$0.50
- 31 December 20X8: RM 1.00 = S\$0.40
- Average for 20X7: RM 1.00 = S\$0.55
- Average for 20X8: RM 1.00 = S\$0.44

11. The 'translation loss' in M Bhd's 20X8 translated statement of comprehensive income and the 'translation reserve' in M Bhd's translated 20X8 balance sheet should be
- S\$28,000 and S\$23,000, respectively.
 - S\$28,000 and S\$51,000, respectively.
 - S\$23,000 and S\$28,000, respectively.
 - S\$23,000 and S\$51,000, respectively.
 - None of the above.
12. The 'goodwill on consolidation' in the 20X7 consolidated balance sheet and 20X8 consolidated balance sheet of S Ltd should be
- S\$24,000 and S\$24,000, respectively.
 - S\$24,000 and S\$20,000, respectively.
 - S\$20,000 and S\$20,000, respectively.
 - S\$20,000 and S\$16,000, respectively.
 - None of the above.

Answers to Quiz 11.3

- | | | | |
|--------|--------|--------|---------|
| 1. (C) | 4. (C) | 7. (B) | 10. (D) |
| 2. (D) | 5. (A) | 8. (B) | 11. (B) |
| 3. (B) | 6. (C) | 9. (A) | 12. (D) |



QUIZ 11.4

For each of the questions below, select the most appropriate answer. Unless expressly stated otherwise, assume that (i) the companies are incorporated in Singapore with 31 December accounting year-end, and that they have been applying Singapore Financial Reporting Standards that are effective as at 1 January 2013, with the group policy of measuring non-controlling interest based on its proportionate share of the acquisition-date fair value of identifiable net assets of subsidiaries acquired and the full proportionate method; (ii) there is no change in the issued share capital of the companies, and no change in the parent shareholding interest in subsidiary over the years; and (iii) shareholding of more than 50% will give rise to having control. Ignore the deferred tax effect.

1. X Ltd and Y Ltd acquired 60 million and 40 million of the ordinary shares of Z Ltd, respectively when Z Ltd was incorporated with an issued share capital of 100 million ordinary shares in 20X5. In January 20X7, Z Ltd issued 50 million convertible preference shares to Y Ltd. The convertible preference shares were convertible into ordinary shares at the ratio of 1 for 1 from 1 January 20X8. The convertible preference shares were substantive in 20X8, but Y Ltd converted all the convertible preference shares into ordinary shares only in 20X9. For the year 20X8, the company that has to present consolidated financial statements and the equity interest of the non-controlling interest in the consolidated financial statements should be
 - (A) X Ltd and 40%, respectively.
 - (B) X Ltd and 60%, respectively.
 - (C) Y Ltd and 40%, respectively.
 - (D) Y Ltd and 60%, respectively.
 - (E) None of the above.
2. A Ltd paid \$250,000 to acquire 90% of B Ltd on 31 December 20X5, when B Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. On this date, A Ltd's land which was carried in its balance sheet at \$100,000 had a market value of \$150,000 and B Ltd's land which was carried in its balance sheet at \$100,000 had a market value of \$120,000. There was also a legal suit against B Ltd for which B Ltd had provided for \$100,000 in its balance sheet, but A Ltd and B Ltd agreed that the fair value of the provision was \$60,000. The 'goodwill' and the 'non-controlling interest' in the consolidated balance sheet as at 31 December 20X5 should be
 - (A) \$52,000 and \$22,000, respectively.
 - (B) \$16,000 and \$22,000, respectively.
 - (C) \$52,000 and \$26,000, respectively.
 - (D) \$16,000 and \$26,000, respectively.
 - (E) None of the above.
3. Refer to Question 2 above. During 20X8, A Ltd sold its land to a third party for \$190,000 and B Ltd sold its land to a third party for \$150,000. Both the land had been accounted for at cost before their disposal. B Ltd's profit after tax (inclusive of the profit on sale of land) for the year ended 31 December 20X8 was \$400,000. The 'profit on sale of land' and the 'profit after tax attributable to non-controlling interest' in the 20X8 consolidated financial statements should be
 - (A) \$70,000 and \$40,000, respectively.
 - (B) \$70,000 and \$38,000, respectively.
 - (C) \$120,000 and \$38,000, respectively.
 - (D) \$120,000 and \$40,000, respectively.
 - (E) None of the above.

4. C Ltd acquired 90% of D Ltd in May 20X5. In 20X6, D Ltd sold goods invoiced at \$150,000 (cost plus 50%) to C Ltd. C Ltd sold 80% of these goods to an outsider in 20X6 and the remaining 20% in 20X7. In 20X7, D Ltd sold another batch of goods to C Ltd invoiced at \$200,000 (cost plus 100%), and C Ltd sold 60% of these goods to outsiders in 20X7 and the remaining 40% in 20X8. The 20X7 profits after tax of C Ltd and D Ltd were \$500,000 and \$300,000, respectively. The 'profit after tax attributable to the shareholders of the parent' and the 'profit after tax attributable to non-controlling interest' in the 20X7 consolidated statement of comprehensive income should be
- (A) \$770,000 and \$30,000, respectively.
 - (B) \$740,000 and \$30,000, respectively.
 - (C) \$743,000 and \$27,000, respectively.
 - (D) \$734,000 and \$26,000, respectively.
 - (E) None of the above.
5. In 20X2, P Ltd paid \$250,000 to acquire 90% of Q Ltd, when the fair value of Q Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. In January 20X4, Q Ltd bought a piece of machinery at a cost of \$70,000. In January 20X6, Q Ltd sold the machinery to P Ltd for \$60,000. As at 31 December 20X8, the machinery was still being used by P Ltd in its operation. The machinery had been properly classified as 'property, plant and equipment' by both Q Ltd and P Ltd. The group's depreciation policy was to depreciate the cost of machinery on a straight-line basis over a useful life of seven years, and to provide a full year's depreciation if the machinery has been used for more than six months in that year. There were no other inter-company transactions. Q Ltd's profit after tax of the year ended 31 December 20X8 was \$100,000 and its retained profit as at 31 December 20X8 was \$500,000. For 20X8, the 'non-controlling interest' in the consolidated statement of comprehensive income and the consolidated balance sheet should be
- (A) \$10,000 and \$60,000, respectively.
 - (B) \$10,200 and \$59,600, respectively.
 - (C) \$10,000 and \$59,600, respectively.
 - (D) \$10,200 and \$60,000, respectively.
 - (E) None of the above.
6. In 20X5, R Ltd paid \$300,000 to acquire 100% of S Ltd, when S Ltd's balance sheet comprised share capital of \$100,000 and land (carried at cost) of \$100,000. On this date, S Ltd's land was deemed to have a fair value of \$250,000. During 20X7, S Ltd sold the land to a third party for \$500,000. The accounting policy of R Ltd, S Ltd, and the group was to account for land at cost. The relevant consolidation adjusting entries for 20X8 consolidated financial statements should be

- (A) Dr Share capital \$100,000; Dr Goodwill \$200,000; Cr Investment \$300,000.
- (B) Dr Share capital \$100,000; Dr Land \$150,000; Dr Goodwill \$50,000;
Cr Investment \$300,000.
- (C) (i) Dr Share capital \$100,000; Dr Land \$250,000; Cr Investment \$300,000;
Cr negative goodwill \$50,000; and
(ii) Dr Negative goodwill \$50,000; Cr Beginning retained profit \$50,000.
- (D) (i) Dr Share capital \$100,000; Dr Land \$150,000; Dr Goodwill \$50,000;
Cr Investment \$300,000; and
(ii) Dr Beginning retained profit \$150,000; Cr Land \$150,000.
- (E) None of the above.
7. B Ltd acquired 90% of C Ltd in 20X4, when C Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$80,000. A Ltd acquired 90% of B Ltd in 20X6, when B Ltd's net assets were represented by share capital of \$100,000 and retained profit of \$100,000. On this date, C Ltd's retained profit was \$100,000. There had been no inter-company transactions among the three companies. As at 31 December 20X8, the retained profits of A Ltd, B Ltd, and C Ltd were \$400,000, \$300,000, and \$200,000, respectively. The 'retained profit' and the 'non-controlling interest' in A Ltd's 20X8 consolidated balance sheet should be
- (A) \$661,000 and \$79,000, respectively.
- (B) \$661,000 and \$80,800, respectively.
- (C) \$677,200 and \$79,000, respectively.
- (D) \$677,200 and \$80,800, respectively.
- (E) None of the above.
8. D Ltd acquired 90% of E Ltd in 20X4 and E Ltd acquired 90% of F Ltd in 20X6. For the year ended 31 December 20X8, each of their respective statement of comprehensive income showed a profit after tax of \$100,000, and each of their respective statement of changes in equity showed a dividend paid of \$20,000. The 'profit after tax attributable to the shareholders of the parent', and the 'profit after tax attributable to non-controlling interest' in D Ltd's 20X8 consolidated statement of comprehensive income should be
- (A) \$236,800 and \$27,200, respectively.
- (B) \$236,800 and \$29,000, respectively.
- (C) \$271,000 and \$27,200, respectively.
- (D) \$271,000 and \$29,000, respectively.
- (E) None of the above.
9. L Ltd acquired 90% of M Ltd and 10% of N Ltd. M Ltd acquired 80% of N Ltd. All these share acquisitions were transacted on 1 January 20X6, when the retained profits of L Ltd, M Ltd, and N Ltd were \$300,000, \$200,000, and \$100,000, respectively. There had been no inter-company transactions among the three companies. As at 31 December 20X8, the net assets of L Ltd were represented by share capital of \$500,000 and retained profit of \$500,000, the net assets of M Ltd were represented

by share capital of \$400,000 and retained profit of \$400,000, and the net assets of N Ltd were represented by share capital of \$300,000 and retained profit of \$300,000. The 'retained profit' and the 'non-controlling interests' in L Ltd's 20X8 consolidated balance sheet should be

- (A) \$844,000 and \$156,000, respectively.
 - (B) \$858,000 and \$142,000, respectively.
 - (C) \$844,000 and \$142,000, respectively.
 - (D) \$858,000 and \$156,000, respectively.
 - (E) None of the above.
10. X Ltd acquired 90% of Y Ltd and 80% of Z Ltd. Y Ltd acquired 10% of Z Ltd. All these share acquisitions were transacted on 1 January 20X6, when the retained profits of X Ltd, Y Ltd, and Z Ltd were \$300,000, \$200,000, and \$100,000, respectively. There had been no inter-company transactions among the three companies. As at 31 December 20X8, the net assets of X Ltd were represented by share capital of \$500,000 and retained profit of \$500,000, the net assets of Y Ltd were represented by share capital of \$400,000 and retained profit of \$400,000, and the net assets of Z Ltd were represented by share capital of \$300,000 and retained profit of \$300,000. The 'retained profit' and the 'non-controlling interests' in X Ltd's 20X8 consolidated balance sheet should be
- (A) \$844,000 and \$156,000, respectively.
 - (B) \$858,000 and \$142,000, respectively.
 - (C) \$844,000 and \$142,000, respectively.
 - (D) \$858,000 and \$156,000, respectively.
 - (E) None of the above.
11. P Ltd acquired 80% of S Ltd and 40% of A Ltd in 20X1. For the year ended 31 December 20X8, the 'other comprehensive income' section of the statement of comprehensive income of the three companies showed the following: P Ltd: Revaluation surplus \$100,000, and Fair value gain \$10,000; S Ltd: Revaluation surplus \$50,000, and Fair value gain \$10,000; and A Ltd: Revaluation surplus \$20,000, and Fair value gain \$10,000. In the P Ltd group's 20X8 consolidated statement of comprehensive income, the 'other comprehensive income' section will show
- (A) Revaluation surplus \$170,000; and
Fair value gain \$30,000.
 - (B) Revaluation surplus \$148,000; and
Fair value gain \$22,000.
 - (C) Revaluation surplus \$150,000;
Fair value reserve \$20,000; and
Share of associates other comprehensive income \$12,000.
 - (D) Revaluation surplus \$140,000;
Fair value reserve \$18,000; and
Share of associates other comprehensive income \$12,000.
 - (E) None of the above.

12. H Ltd acquired 60% of S Ltd and S Ltd acquired 25% of A Ltd in 20X1. For the year ended 31 December 20X8, H Ltd's profit after tax was \$100,000, S Ltd's profit after tax was \$50,000, and A Ltd's profit after tax was \$40,000. In H Ltd's consolidated statement of comprehensive income for the year ended 31 December 20X8, the 'profit after tax attributable to the shareholders of the parent' and the 'profit after tax attributable to non-controlling interests' should be
- (A) \$136,000 and \$20,000, respectively.
 (B) \$136,000 and \$24,000, respectively.
 (C) \$140,000 and \$20,000, respectively.
 (D) \$140,000 and \$24,000, respectively.
 (E) None of the above.

Answers to Quiz 11.4

- | | | | |
|--------|--------|--------|---------|
| 1. (D) | 4. (C) | 7. (B) | 10. (B) |
| 2. (D) | 5. (B) | 8. (A) | 11. (C) |
| 3. (C) | 6. (D) | 9. (A) | 12. (B) |



QUESTION 11.1

In January 20X1, A Ltd paid \$90,000 to acquire 90% interest in B Ltd, when B Ltd was incorporated with a paid-up capital of \$100,000. On 1 January 20X9, A Ltd paid \$30,000 to acquire additional 10% interest in B Ltd, when B Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$100,000.

In January 20X2, C Ltd paid \$80,000 to acquire 80% interest in D Ltd, when D Ltd was incorporated with a paid-up capital of \$100,000.

In January 20X3, A Ltd acquired 80% interest in C Ltd for cash consideration of \$200,000, when C Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$80,000, and D Ltd's retained profit was \$25,000.

In January 20X5, A Ltd acquired 40% interest in E Ltd for cash consideration of \$100,000, when E Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$100,000.

All the relevant Singapore Financial Reporting Standards that were issued by the Accounting Standards Council as at 1 January 2013 (including FRS 110 *Consolidated Financial Statements*, FRS 28 [2013] *Investments in Associates and Joint Ventures*, and FRS 103 [2009] *Business Combinations*) are assumed to have been effective on 1 January 20X9.

Prior to 1 January 20X5, A Ltd group adopted FRS 22 *Business Combinations*, under which the group policy was to amortize goodwill on consolidation on a straight-line

basis over five years commencing from the year of business combination. Commencing 1 January 20X5, Singapore Financial Reporting Standards provide that goodwill on consolidation is not to be amortized but is to be subject to impairment. However, there has been no impairment of goodwill for all the year 20X5 to 20X9.

The group policy is to measure non-controlling interests based on their proportionate share of the acquisition-date fair value of identifiable net assets of subsidiaries acquired.

A Ltd, C Ltd, and E Ltd invested in quoted equity securities during the year 20X7. These investments are accounted for as available-for-sale under FRS 39 *Financial Instruments: Recognition and Measurement*. The investments are included in the 'Other assets' and the fair value gains/losses on these investments are recognized in the 'Fair value reserves'. No dividends have been received from these investments during the year 20X9.

A Ltd started to sell goods to C Ltd and E Ltd during the year 20X8. Arising from these intragroup sales, there were unrealized profits of \$20,000 and \$15,000 in the inventory of C Ltd and E Ltd, respectively as at 31 December 20X8. During the year 20X9, A Ltd sold goods invoiced at \$90,000 to C Ltd and \$30,000 of these goods was still in the inventory of C Ltd as at 31 December 20X9. During the year 20X9, A Ltd sold goods invoiced at \$60,000 to E Ltd and \$15,000 of these goods was still in the inventory of E Ltd as at 31 December 20X9. A Ltd's sales to C Ltd and E Ltd are invoiced at cost plus 50%. Ignore the deferred tax effects arising from these transactions.

All the dividends declared out of the profits for 20X9 have been duly paid and received. The 20X9 financial statements of the companies are as follows:

(a) Balance sheets as at 31 December 20X9

	A Ltd	B Ltd	C Ltd	D Ltd	E Ltd
	\$'000	\$'000	\$'000	\$'000	\$'000
Investment in B Ltd	120	—	—	—	—
Investment in C Ltd	200	—	—	—	—
Investment in D Ltd	—	—	80	—	—
Investment in E Ltd	100	—	—	—	—
Other assets	380	400	420	300	600
	<hr/> <u>800</u>	<hr/> <u>400</u>	<hr/> <u>500</u>	<hr/> <u>300</u>	<hr/> <u>600</u>
Share capital	300	100	100	100	100
Fair value reserves	100	—	40	—	30
Retained profits	200	130	160	100	170
Liabilities	200	170	200	100	300
	<hr/> <u>800</u>	<hr/> <u>400</u>	<hr/> <u>500</u>	<hr/> <u>300</u>	<hr/> <u>600</u>

(b) Statements of comprehensive income for the year ended 31 December 20X9

	A Ltd	B Ltd	C Ltd	D Ltd	E Ltd
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	500	200	400	100	300
Cost of sales	200	90	200	40	150
Gross profit	300	110	200	60	150
Dividend income	30	—	—	—	—
Operating expenses	200	70	140	25	50
Profit before tax	130	40	60	35	100
Tax	30	10	15	10	25
Profit after tax	100	30	45	25	75
Other comprehensive income					
Fair value gain	20	—	10	—	10
Total comprehensive income	120	30	55	25	85

(c) Statements of changes in equity (partial) for the year ended 31 December 20X9

	A Ltd	B Ltd	C Ltd	D Ltd	E Ltd
	\$'000	\$'000	\$'000	\$'000	\$'000
Fair value reserves					
Beginning balance	80	—	30	—	20
Gain for the year	20	—	10	—	10
Ending balance	100	—	40	—	30
Retained profits					
Beginning balance	150	100	140	75	120
Profit for the year	100	30	45	25	75
Dividend	50	—	25	—	25
Ending balance	200	130	160	100	170

Required

1. Prepare all the *consolidated journal entries* necessary for the preparation of the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity for A Ltd group for the year 20X9 (the consolidated financial statements are not required).

2. Provide *independent proof* of the following items in the 20X9 consolidated financial statements of A Ltd group:
- Profit after tax attributable to the shareholders of A Ltd,
 - Profit after tax attributable to the non-controlling interests,
 - Group retained profit in the consolidated balance sheet,
 - Group fair value reserve in the consolidated balance sheet,
 - Non-controlling interests in the consolidated balance sheet, and
 - Investment in associate in the consolidated balance sheet.

Solution to Question 11.1

I. Consolidation journal entries

B Ltd

(a)	Dr Share capital (B)	90
	Cr Investment in B Ltd	90
(to eliminate investment account)		
(b)	Dr Share capital (B)	10
	Dr Beginning retained profit (B)	10
	Dr Goodwill	10
	Cr Investment in B Ltd	30
(to eliminate investment account)		
(c)	Dr Capital reserve	10
	Cr Goodwill	10
(to effect FRS 103 [2009])		

C Ltd + D Ltd

(d)	Dr Ordinary share capital (D)	80
	Cr Investment in D Ltd	80
(to eliminate investment account)		
(e)	Dr Non-controlling interest (PAT)	5
	Cr Non-controlling interest (CBS)	5
(to record non-controlling interest in profit)		
(f)	Dr Ordinary share capital (D)	20
	Dr Beginning retained profits (D)	15
	Cr Non-controlling interest (CBS)	35
(to record non-controlling interest in other equity)		

A Ltd + (C Ltd + D Ltd)

(g)	Dr Ordinary share capital (C)	80	
	Dr Beginning retained profits ($80\% \times [80 + 20]$)	80	
	Dr Goodwill on consolidation	40	
	Cr Investment in C Ltd		200
	(to eliminate investment account)		
(h)	Dr Beginning retained profits	16	
	Cr Goodwill on consolidation		16
	(to record goodwill amortization for two years)		
(i)	Dr Beginning retained profit (A)	20	
	Cr Cost of sales (A)		20
	(realization of unrealized profit in beginning stock)		
(j)	Dr Sales	90	
	Cr Cost of sales		90
	(to eliminate intragroup sales)		
(k)	Dr Cost of sales (A)	10	
	Cr Other assets		10
	(to eliminate unrealized profit in closing stock)		
(l)	Dr Dividend income (A)	20	
	Cr Dividend paid (C)		20
	(to eliminate intragroup dividends)		
(m)	Dr Non-controlling interest (PAT)	13	
	Cr Non-controlling interest (CBS)		13
	(to record non-controlling interest in profit)		
(n)	Dr Non-controlling interest (CBS)	5	
	Cr Dividend paid (C)		5
	(to record non-controlling interest in dividend)		
(o)	Dr Non-controlling interest (FV)	2	
	Cr Non-controlling interest (CBS)		2
	(to record non-controlling interest in FV gain)		
(p)	Dr Ordinary share capital (C)	20	
	Dr Beginning FV reserve (C)	6	
	Dr Beginning retained profits (C)	40	
	Cr Non-controlling interest (CBS)		66
	(to record non-controlling interest in C Ltd's other shareholders' equity)		

A Ltd + E Ltd

(q)	Dr Investment in E Ltd	30
	Cr Share of profit of associate	30
	(to equity account for profit of associate)	
(r)	Dr Dividend income (A)	10
	Cr Investment in E Ltd	10
	(to convert from cost method to equity method for dividend from associate)	
(s)	Dr Beginning retained profit	6
	Cr Share of profit of associate	6
	(realization of unrealized profit in opening stock)	
(t)	Dr Share of profit of associate	2
	Cr Investment in E Ltd	2
	(to adjust for unrealized profit in closing stock)	
(u)	Dr Investment in E Ltd	8
	Cr Beginning retained profit	8
	(to equity account for the post-acquisition reserves in BRP of associate)	
(v)	Dr Investment in E Ltd	4
	Cr Share of FV gain	4
	(to equity account for FV gain of associate)	
(w)	Dr Investment in E Ltd	8
	Cr Beginning FV reserve	8
	(to equity account for the FV reserve of associate)	

2. Proof

(i) The group profit of \$196,000 can be proved as follows:

	\$'000
Adjusted after-tax profit of the parent, A Ltd	
$(100 + 20 + 6 - 10 - 2 - 30)$	84
Add group's share of the after-tax profit of B Ltd	
$(100\% \times 30)$	30
Add group's share of the after-tax profit of C Ltd	
$(80\% \times 45)$	36
Add group's share of the after-tax profits of D Ltd	
$([80\% \times 80\%] \times 25)$	16
Add group's share of the after-tax profits of E Ltd	
$(40\% \times 75)$	30
Total	<u>196</u>

- (ii) The non-controlling interest in the after-tax profit of \$18,000 can be proved as follows:

	\$'000
Non-controlling interest in C Ltd's after-tax profit (20% × 45)	9
Non-controlling interest in D Ltd's adjusted after-tax profit ([20% + 20% × 80%] × 25)	9
Total	<u>18</u>

- (iii) The group retained profit of \$432,000 can be proved as follows:

	\$'000
Retained profit of the parent, A Ltd (200 – 10 – 2)	188
Add group's share of the post-acquisition retained profit of B Ltd (90% × 100 + 100% × 30)	120
Add group's share of the post-acquisition retained profits of C Ltd (80% × [160 – 80])	64
Add group's share of the post-acquisition retained profit of D Ltd (80% × 80% × [100 – 25])	48
Add group's share of the post-acquisition retained profits of E Ltd (40% × [170 – 100])	28
Less goodwill amortization under FRS 22	16
Total	<u>432</u>

- (iv) Group fair value reserve in the consolidated balance sheet of \$144,000 can be proved as follows:

A Ltd FVR of \$100,000 plus group's share of C Ltd's FVR of \$32,000 (80% × \$40,000) plus group's share of E Ltd's FVR of \$12,000 (40% × \$30,000). Note that all of C Ltd's and E Ltd's FVR are post-acquisition reserves.

- (v) Non-controlling interest in the consolidated balance sheet of \$116,000 can be proved as follows:

	\$'000
Non-controlling interest in C Ltd (20% × [100 + 40 + 160])	60
Non-controlling interest in D Ltd Direct: (20% × [100 + 100])	40
Indirect: (20% × 80% × 100)	16
Total	<u>116</u>

- (vi) The investment in associate of \$138,000 can be proved as follows: cost of investment of \$100,000 plus group's share of the post-acquisition reserves of E Ltd of \$38,000 ($40\% \times [\$170,000 - \$100,000 - \$5,000 + \$30,000]$). The figure of \$138,000 can also be proved as equal to group's equity interest in the associate's net assets of \$120,000 ($40\% \times \$300,000$) less unrealized profits of \$2,000 ($40\% \times \$5,000$) plus goodwill of \$20,000 ($\$100,000 - 40\% \times [\$100,000 + \$100,000]$).



QUESTION 11.2

In January 20X5, B Ltd paid \$150,000 to acquire 60% interest in C Ltd, when C Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$100,000.

In January 20X6, A Ltd paid \$300,000 to acquire 60% interest in B Ltd, when B Ltd's recognized net assets at fair value were represented by share capital of \$100,000, revaluation reserve of \$100,000 and retained profit of \$100,000. It was mutually agreed that B Ltd had an unrecognized brand-name with a fair value of \$100,000. At this date, C Ltd's retained profit was \$150,000.

In January 20X7, A Ltd paid \$100,000 to acquire 30% interest in D Ltd, when D Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$200,000.

All the relevant Singapore Financial Reporting Standards that were issued by the Accounting Standards Council as at 1 January 2013 (including FRS 110 *Consolidated Financial Statements*, FRS 28 [2013] *Investments in Associates and Joint Ventures*, and FRS 103 [2009] *Business Combinations*) are assumed to have been effective on 1 January 20X5.

A Ltd and B Ltd revalued their respective land on 31 December 20X5 and again on 31 December 20X8. D Ltd acquired its land in July 20X7 and revalued it on 31 December 20X8. All the companies' land were properly accounted for as 'property, plant, and equipment'.

During 20X8, A Ltd sold goods invoiced at \$100,000 to B Ltd, and \$30,000 of these goods was still in the inventory of B Ltd as at 31 December 20X8. During 20X8, A Ltd sold goods invoiced at \$80,000 to D Ltd, and \$20,000 of these goods was still in the inventory of D Ltd as at 31 December 20X8. A Ltd's sales to B Ltd and D Ltd were invoiced at cost plus 100%.

All the dividends were declared out of the 20X8 profits, and had been duly paid and received. There has been no impairment of goodwill. The group policy is to measure non-controlling interests based on their proportionate share of the acquisition-date fair value of identifiable net assets of subsidiaries acquired. Ignore deferred tax effects, if any, arising from consolidation.

The 20X8 financial statements of the companies are as follows:

(a) Balance sheets as at 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Ltd
	\$'000	\$'000	\$'000	\$'000
Land	380	350	—	600
Investment in B Ltd	300	—	—	—
Investment in C Ltd	—	150	—	—
Investment in D Ltd	100	—	—	—
Other assets	200	300	600	200
	<u>980</u>	<u>800</u>	<u>600</u>	<u>800</u>
Share capital	300	100	100	100
Revaluation reserves	180	150	—	100
Retained profits	400	300	300	300
Liabilities	100	250	200	300
	<u>980</u>	<u>800</u>	<u>600</u>	<u>800</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Ltd
	\$'000	\$'000	\$'000	\$'000
Sales	500	400	300	600
Cost of sales	200	200	150	400
Gross profit	300	200	150	200
Dividend income	45	—	—	—
Operating expenses	200	100	90	80
Profit before tax	145	100	60	120
Tax	25	20	10	20
Profit after tax	120	80	50	100
Other comprehensive income				
Revaluation surplus	80	50	—	100
Total comprehensive income	<u>200</u>	<u>130</u>	<u>50</u>	<u>200</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Ltd
	\$'000	\$'000	\$'000	\$'000
Revaluation reserves				
Beginning balance	100	100	—	—
Surplus for the year	80	50	—	100
Ending balance	<u>180</u>	<u>150</u>	—	<u>100</u>
Retained profits				
Beginning balance	340	270	250	250
Profit for the year	120	80	50	100
Dividend	60	50	—	50
Ending balance	<u>400</u>	<u>300</u>	<u>300</u>	<u>300</u>

Required

1. Prepare all the *consolidated journal entries* necessary for the preparation of the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity for A Ltd group for the year 20X8 (the consolidated financial statements are not required).
2. Provide *independent calculation* of the following items in the 20X8 consolidated financial statements of A Ltd group:
 - (i) Profit after tax attributable to the shareholders of A Ltd,
 - (ii) Profit after tax attributable to the non-controlling interests,
 - (iii) Group retained profit in the consolidated balance sheet,
 - (iv) Group revaluation reserve in the consolidated balance sheet,
 - (v) Non-controlling interests in the consolidated balance sheet, and
 - (vi) Investment in associate in the consolidated balance sheet.

Solution to Question 11.2

I. B Ltd + C Ltd

(a)	Dr Ordinary share capital (C)	60
	Dr Beginning retained profit (C)	60
	Dr Goodwill on consolidation	30
	Cr Investment in C Ltd	150
	(to eliminate investment account)	
(b)	Dr Non-controlling interest (PAT)	20
	Cr Non-controlling interest (CBS)	20
	(to record non-controlling interest in profit)	

(c)	Dr Ordinary share capital (C)	40	
	Dr Beginning retained profits (C)	100	
	Cr Non-controlling interest (CBS)		140
	(to record non-controlling interest in other equity)		

A Ltd + (B Ltd + C Ltd)

(d)	Dr Ordinary share capital (B)	60	
	Dr Beginning revaluation reserve (B)	60	
	Dr Beginning retained profits ($60\% \times [100 + 30]$)	78	
	Dr Brand	60	
	Dr Goodwill on consolidation	42	
	Cr Investment in B Ltd		300
	(to eliminate investment account)		
(e)	Dr Sales	100	
	Cr Cost of sales		100
	(to eliminate intragroup sales)		
(f)	Dr Cost of sales (A)	15	
	Cr Other assets		15
	(to eliminate unrealized profit in closing stock)		
(g)	Dr Dividend income (A)	30	
	Cr Dividend paid (B)		30
	(to eliminate intragroup dividends)		
(h)	Dr Non-controlling interest (PAT) ($40\% \times [80 + 30]$) ...	44	
	Cr Non-controlling interest (CBS)		44
	(to record non-controlling interest in profit)		
(i)	Dr Non-controlling interest (CBS)	20	
	Cr Dividend paid (B)		20
	(to record non-controlling interest in dividend)		
(j)	Dr Non-controlling interest (Revaluation)	20	
	Cr Non-controlling interest (CBS)		20
	(to record non-controlling interest in Revaluation surplus)		
(k)	Dr Ordinary share capital (B)	40	
	Dr Beginning FV reserve (B)	40	
	Dr Beginning retained profits	*144	
	Dr Brand	40	
	Cr Non-controlling interest (CBS)		264
	(to record non-controlling interest in other shareholders' equity)		

* $(40\% \times [270 + 60\% \times (250 - 100)])$

A Ltd + D Ltd

(l)	Dr Investment in D Ltd	30
	Cr Share of profit of associate	30
	(to equity account for profit of associate)	
(m)	Dr Dividend income (A)	15
	Cr Investment in D Ltd	15
	(to convert from cost method to equity method for dividend from associate)	
(n)	Dr Share of profit of associate	3
	Cr Investment in D Ltd	3
	(to adjust for unrealized profit in closing stock)	
(o)	Dr Investment in D Ltd	30
	Cr Share of revaluation surplus of associate	30
	(to equity account for revaluation surplus of associate)	
(p)	Dr Investment in D Ltd	15
	Cr Beginning retained profit	15
	(to equity account for the post-acquisition reserves in BRP of associate)	

2. (i) The group profit of \$153,000 can be proved as follows:

	\$'000
Adjusted after-tax profit of the parent, A Ltd	
(120 – 45 – 15 – 3)	57
Add group's share of the after-tax profit of B Ltd	
(60% × 80)	48
Add group's share of the after-tax profit of C Ltd	
(60% × 60% × 50)	18
Add group's share of the after-tax profit of D Ltd	
(30% × 100)	30
Total	<u>153</u>

- (ii) The non-controlling interest in the after-tax profit of \$64,000 can be proved as follows:

	\$'000
Non-controlling interest in B Ltd's after-tax profit	
(40% × 80)	32
Non-controlling interest in C Ltd's after-tax profit	
([40% + 40% × 60%] × 50)	32
Total	<u>64</u>

(iii) The group retained profit of \$586,000 can be proved as follows:

	\$'000
Retained profit of the parent, A Ltd	
(400 – 15 – 3)	382
Add group's share of the post-acquisition retained profits of B Ltd	
(60% × [300 – 100])	120
Add group's share of the post-acquisition retained profit of C Ltd	
(60% × 60% × [300 – 150])	54
Add group's share of the post-acquisition retained profits of D Ltd	
(30% × [300 – 200])	30
Total	<u>586</u>

(iv) Group revaluation reserve of \$240,000 can be proved as follows:

	\$'000
Revaluation reserve of the parent, A Ltd	
(180)	180
Add group's share of the post-acquisition revaluation reserve of B Ltd	
(60% × [150 – 100])	30
Add group's share of the post-acquisition revaluation reserve of D Ltd	
(30% × 100)	30
Total	<u>240</u>

(v) Non-controlling interest in the consolidated balance sheet of \$468,000 can be proved as follows:

	\$'000
Non-controlling interest in B Ltd	
(40% × [100 + 150 + 300 + 100*])	260
Non-controlling interest in C Ltd	
Direct: (40% × [100 + 300])	160
Indirect: (40% × 60% × [300 – 100])	48
Total	<u>468</u>

* Note: Brand \$100,000

(vi) The investment in associate of \$157,000 can be proved as follows:

	\$'000
Cost of investment	100
Add share of D Ltd's adjusted post-acquisition reserves (30% × [300 – 200 – 10 + 100#])	57
Total	157

Note: Post-acquisition revaluation reserve \$100,000



QUESTION 11.3

In January 20X5, B Ltd paid \$30,000 to acquire 30% interest in C Ltd, when C Ltd was incorporated with a paid-up capital of \$100,000 comprising 100,000 ordinary shares. In December 20X5, B Ltd paid \$36,000 to acquire an additional 30% interest in C Ltd, when C Ltd's identifiable net assets at fair value were represented by share capital of \$100,000 and retained profit of \$20,000, and its shares were valued at \$1.20 per share.

In June 20X6, A Ltd paid \$250,000 to acquire 80% interest in B Ltd, when B Ltd's identifiable net assets at fair value were represented by share capital of \$100,000 and retained profit of \$100,000. At this date, C Ltd's retained profit was \$60,000.

In July 20X7, A Ltd paid \$100,000 to acquire 40% interest in D Ltd, when D Ltd's identifiable net assets at fair value were represented by share capital of \$100,000 and retained profit of \$100,000.

All the relevant Singapore Financial Reporting Standards that were issued by the Accounting Standards Council as at 1 January 2013 (including FRS 110 *Consolidated Financial Statements*, FRS 28 [2013] *Investments in Associates and Joint Ventures*, and FRS 103 [2009] *Business Combinations*) are assumed to have been effective on 1 January 20X5. The group policy was to measure non-controlling interests based on their proportionate share of the acquisition-date fair value of identifiable net assets of subsidiaries acquired.

On 31 December 20X7, A Ltd sold goods invoiced at \$50,000 and \$40,000 to B Ltd and D Ltd, respectively. A Ltd invoiced these goods at cost plus 100%. All these goods were subsequently sold by B Ltd and D Ltd to outsiders during 20X8.

In January 20X8, both B Ltd and D Ltd invested in quoted equity securities. These investments were properly classified as 'available-for-sale' (AFS) under FRS 39 *Financial Instruments: Recognition and Measurement*. The mark-to-market gains on these AFS investments were recognized in the fair value reserves.

All the dividends were declared out of the 20X8 profits, and had been duly paid and received. There has been no impairment of goodwill. Ignore deferred tax effects, if any, arising from consolidation.

The 20X8 financial statements of the companies are as follows:

(a) Balance sheets as at 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Ltd
	\$'000	\$'000	\$'000	\$'000
Investment in B Ltd	250	—	—	—
Investment in C Ltd	—	66	—	—
Investment in D Ltd	100	—	—	—
AFS investment	—	300	—	200
Other assets	550	234	400	300
	<u>900</u>	<u>600</u>	<u>400</u>	<u>500</u>
Share capital	200	100	100	100
Fair value reserve	—	100	—	80
Retained profit	500	330	210	180
Liabilities	200	70	90	140
	<u>900</u>	<u>600</u>	<u>400</u>	<u>500</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Ltd
	\$'000	\$'000	\$'000	\$'000
Sales	800	300	200	400
Cost of sales	400	100	80	150
Gross profit	400	200	120	250
Dividend income	80	—	—	—
Operating expenses	190	100	60	70
Profit before tax	290	100	60	180
Tax	40	20	10	30
Profit after tax	250	80	50	150
Other comprehensive income				
Fair value gain	—	100	—	80
Total comprehensive income	250	180	50	230

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Ltd
	\$'000	\$'000	\$'000	\$'000
Fair value reserve				
Beginning balance	—	—	—	—
Gain for the year	—	100	—	80
Ending balance	—	100	—	80
Retained profit				
Beginning balance	350	300	160	130
Profit for the year	250	80	50	150
Dividend	100	50	—	100
Ending balance	500	330	210	180

Required

1. Prepare all the *consolidation journal entries* necessary for the preparation of the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity for A Ltd group for the year 20X8 (the consolidated financial statements are not required).
2. Provide *independent calculation* of the following items in the 20X8 consolidated financial statements of A Ltd group:
 - (i) Profit after tax attributable to shareholders of A Ltd,
 - (ii) Total comprehensive income attributable to non-controlling interests,
 - (iii) Group retained profit in the consolidated balance sheet,
 - (iv) Group fair value reserve in the consolidated balance sheet,
 - (v) Non-controlling interests in the consolidated balance sheet, and
 - (vi) Investment in associate in the consolidated balance sheet.

Solution to Question 11.3

I. B Ltd + C Ltd

(a)	Dr Investment in C Ltd	6
	Cr Beginning retained profit (B)	6
	(assume sale and re-purchase)	
(b)	Dr Ordinary share capital (C)	60
	Dr Beginning retained profit (C)	12
	Cr Investment in C Ltd	72
	(to eliminate investment account)	

(c)	Dr Non-controlling interest (PAT)	20	
	Cr Non-controlling interest (CBS)	20	
(to record non-controlling interest in profit)			
(d)	Dr Ordinary share capital (C)	40	
	Dr Beginning retained profits (C)	64	
	Cr Non-controlling interest (CBS)	104	
(to record non-controlling interest in other equity)			

A Ltd + (B Ltd + C Ltd)

(e)	Dr Ordinary share capital (B)	80	
	Dr Beginning retained profits	*104	
	Dr Goodwill on consolidation	66	
	Cr Investment in B Ltd	250	
(to eliminate investment account)			
* $(80\% \times [100 + 6 + 60\% \times (60 - 20)])$			
(f)	Dr Beginning retained profit (A)	25	
	Cr Cost of sales (A)	25	
(to eliminate unrealized profit in closing stock)			
(g)	Dr Dividend income (A)	40	
	Cr Dividend paid (B)	40	
(to eliminate intragroup dividends)			
(h)	Dr Non-controlling interest (PAT)	22	
	Cr Non-controlling interest (CBS)	22	
(to record non-controlling interest in profit)			
$(20\% \times [80 + (60 \times 50)])$			
(i)	Dr Non-controlling interest (CBS)	10	
	Cr Dividend paid (B)	10	
(to record non-controlling interest in dividend)			
(j)	Dr Non-controlling interest (FV)	20	
	Cr Non-controlling interest (CBS)	20	
(to record non-controlling interest in fair value gain)			
(k)	Dr Ordinary share capital (B)	20	
	Dr Beginning retained profits	*78	
	Cr Non-controlling interest (CBS)	98	
(to record non-controlling interest in other shareholders' equity)			

* $(20\% \times [300 + 6 + 60\% \times (160 - 20)])$

A Ltd + D Ltd

(l)	Dr Investment in D Ltd	60
	Cr Share of profit of associate	60
	(to equity account for profit of associate)	
(m)	Dr Dividend income (A)	40
	Cr Investment in D Ltd	40
	(to convert from cost method to equity method for dividend from associate)	
(n)	Dr Beginning retained profit	8
	Cr Share of profit of associate	8
	(to adjust for unrealized profit in closing stock)	
(o)	Dr Investment in D Ltd	32
	Cr Share of fair value gain of associate	32
	(to equity account for fair value gain of associate)	
(p)	Dr Investment in D Ltd	12
	Cr Beginning retained profit	12
	(to equity account for the post-acquisition reserves in BRP of associate)	

2. (i) Profit after tax attributable to members of A Ltd

	\$'000
Adjusted after-tax profit of the parent, A Ltd	
$(250 + 25 + 8 - 80)$	203
Add group's share of the after-tax profit of B Ltd	
$(80\% \times 80)$	64
Add group's share of the after-tax profit of C Ltd	
$(80\% \times 60\% \times 50)$	24
Add group's share of the after-tax profit of D Ltd	
$(40\% \times 150)$	60
Total	<u>351</u>

(ii) Total comprehensive income (TCI) attributable to non-controlling interest

	\$'000
Non-controlling interest in B Ltd's TCI	
$(20\% \times 180)$	36
Non-controlling interest in C Ltd's TCI	
$([40\% + 20\% \times 60\%] \times 50)$	26
Total	<u>62</u>

(iii) The group retained profit

	\$'000
Retained profit of the parent, A Ltd	
(500)	500
Add group's share of the post-acquisition retained profits of B Ltd (80% × [330 + 6 – 100 – 6])	184
Add group's share of the post-acquisition retained profit of C Ltd (80% × 60% × [210 – 60])	72
Add group's share of the post-acquisition retained profits of D Ltd (40% × [180 – 100])	32
Total	<u>788</u>

(iv) Group fair value reserve

	\$'000
Group's share of the post-acquisition revaluation reserve of B Ltd (80% × 100)	80
Group's share of the post-acquisition revaluation reserve of D Ltd (40% × 80)	32
Total	<u>112</u>

(v) Non-controlling interest in consolidated balance sheet

	\$'000
Non-controlling interest in B Ltd (20% × [100 + 100 + 330 + 6])	107.2
Non-controlling interest in C Ltd Direct: (40% × [100 + 210])	124
Indirect: (20% × 60% × [210 – 20])	22.8
Total	<u>254</u>

(vi) Investment in associate

	\$'000
Cost of investment	100
Add share of D Ltd's adjusted post-acquisition reserves (40% × [180 – 100 + 80#])	64
Total	<u>164</u>

Note: Post-acquisition fair value reserve

Alternatively,

	\$'000
Share of net assets $(40\% \times [100 + 80 + 180])$	144
Goodwill $(\$100 - 40\% \times [100 + 100])$	20
Total	<u>164</u>



QUESTION 11.4

On 1 April 20X4, A Ltd acquired 10,000 shares of B Ltd (whose share capital of \$100,000 comprised 100,000 shares), when B Ltd's shares were traded at \$3.00 per shares.

On 12 December 20X4, A Ltd acquired 50,000 shares in B Ltd, when B Ltd's shares were traded at \$4.00 per shares. At this date, B Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$100,000.

On 6 June 20X6, A Ltd acquired 10,000 shares of B Ltd, when B Ltd's shares were traded at \$4.50. At this date, B Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$150,000.

On 7 July 20X7, A Ltd paid \$70,000 to acquire 30% interest in C Ltd, when C Ltd's net assets at fair value were represented by share capital of \$100,000 and retained profit of \$100,000.

On 1 January 20X8, A Ltd paid \$120,000 to acquire 100% interest in D Bhd (a Malaysia-incorporated company whose functional and presentation currency was RM), when D Bhd's net assets at fair value were represented by share capital of RM 100,000 and retained profit of RM 100,000. There were no significant differences between the Malaysian accounting standards adopted by D Bhd and the Singapore accounting standards adopted by A Ltd.

All the relevant Singapore Financial Reporting Standards that were issued by the Accounting Standards Council as at 1 January 2013 (including FRS 21 *The Effects of Changes in Foreign Exchange Rates*, FRS 110 *Consolidated Financial Statements*, FRS 28 [2013] *Investments in Associates and Joint Ventures*, and FRS 103 *Business Combinations*) are assumed to have been effective on 1 January 20X1.

During 20X8, A Ltd sold goods invoiced at \$100,000 to B Ltd, and \$40,000 of these goods was still in the inventory of B Ltd as at 31 December 20X8. During 20X8, A Ltd sold goods invoiced at \$60,000 to C Ltd and \$20,000 of these goods was still in the inventory of C Ltd as at 31 December 20X8. A Ltd's sales to B Ltd and C Ltd were invoiced at cost plus 100%.

All the companies revalued their respective land on 31 December 20X8. A Ltd had also previously revalued its land on 31 December 20X3. All dividends were declared out of 20X8 profits, and had been duly paid and received. The exchange rates were

RM 1.00 = \$0.50 on 1 January 20X8, and RM 1.00 = \$0.30 on 31 December 20X8. The average exchange rate for the year 20X8 was RM 1.00 = \$0.40.

The group policy is to measure non-controlling interests based on their proportionate share of the acquisition-date fair value of identifiable net assets of subsidiaries acquired. Ignore deferred tax effects, if any, arising from consolidation.

The 20X8 financial statements of the companies are as follows:

(a) Balance sheets as at 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Bhd
	\$'000	\$'000	\$'000	RM'000
Land	400	400	300	600
Investment in B Ltd	275	—	—	—
Investment in C Ltd	70	—	—	—
Investment in D Bhd	120	—	—	—
Other assets	100	300	200	200
	<u>965</u>	<u>700</u>	<u>500</u>	<u>800</u>
Share capital	300	100	100	100
Revaluation reserve	200	100	50	100
Retained profit	400	320	200	200
Liabilities	65	180	150	400
	<u>965</u>	<u>700</u>	<u>500</u>	<u>800</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd	B Ltd	C Ltd	D Bhd
	\$'000	\$'000	\$'000	RM'000
Sales	500	400	300	600
Cost of sales	200	150	100	400
Gross profit	300	250	200	200
Dividend income	85	—	—	—
Operating expenses	200	100	80	60
Profit before tax	185	150	120	140
Tax	35	30	20	40
Profit after tax	150	120	100	100
Other comprehensive income				
Revaluation surplus	100	100	50	100
Total comprehensive income	<u>250</u>	<u>220</u>	<u>150</u>	<u>200</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000	D Bhd RM'000
Revaluation reserve				
Beginning balance	100	—	—	—
Surplus for the year	100	100	50	100
Ending balance	<u>200</u>	<u>100</u>	<u>50</u>	<u>100</u>
Retained profit				
Beginning balance	350	300	150	100
Profit for the year	150	120	100	100
Dividend	100	100	50	—
Ending balance	<u>400</u>	<u>320</u>	<u>200</u>	<u>200</u>

Required

1. Translate D Bhd's balance sheet and statement of comprehensive income into \$ for the purpose of consolidation. Show the calculation for the 'translation gain/loss' arising from the translation.
2. Prepare all the *consolidation journal entries* necessary for the preparation of the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity for A Ltd group for the year 20X8 (the consolidated financial statements are not required).
3. Provide *independent calculation* of the following items in the 20X8 consolidated financial statements of A Ltd group:
 - (i) Profit after tax attributable to the shareholders of A Ltd,
 - (ii) Retained profit in the consolidated balance sheet,
 - (iii) Revaluation reserve in the consolidated balance sheet,
 - (iv) Capital reserve arising from change in shareholding in a subsidiary in the consolidated balance sheet,
 - (v) Non-controlling interests in the consolidated balance sheet, and
 - (vi) Investment in associate in the consolidated balance sheet.

Solution to Question 11.4**I. Translation**

Balance sheets as at 31 December 20X8			
	RM'000	Rate	\$'000
Land	600	0.3	180
Other assets	200	0.3	60
	<u>800</u>		<u>240</u>
Share capital	100	0.5	50
Revaluation reserve	100	0.3	30
Translation reserve		*	(50)
Retained profits			
Pre-acquisition	100	0.5	50
Post-acquisition	100	0.4	40
Liabilities	400	0.3	120
	<u>800</u>		<u>240</u>

Statements of comprehensive income			
For the year ended 31 December 20X8			
	RM'000	Rate	\$'000
Sales	600	0.4	240
Cost of sales	400	0.4	160
Gross profit	200		80
Operating expenses	60	0.4	24
Profit before tax	140		56
Tax	40	0.4	16
Profit after tax	100		40
Other comprehensive income			
Revaluation surplus	100	0.3	30
Translation loss		*	50
Total comprehensive income	<u>200</u>		<u>20</u>

* Translation loss: RM 200 × (0.30 – 0.50) + RM 100 × (0.30 – 0.40) = \$50

2. CJE**B Ltd**

(a) Dr Investment in B Ltd	10
Cr Beginning retained profit (A)	10

(assume sale and re-purchase)

(b)	Dr Ordinary share capital (B)	60
	Dr Beginning retained profit (B)	60
	Dr Goodwill	120
	Cr Investment in B Ltd	240
	(to eliminate 60% investment account)	
(c)	Dr Ordinary share capital (B)	10
	Dr Beginning retained profit (B)	15
	Dr Goodwill	20
	Cr Investment in B Ltd	45
	(to eliminate 10% investment account)	
(d)	Dr Capital reserve	20
	Cr Goodwill	20
	(FRS 27 requirement)	
(e)	Dr Sales	100
	Cr Cost of sales	100
	(inter-company sales)	
(f)	Dr Cost of sales (A)	20
	Cr Other assets	20
	(unrealized inter-company profit)	
(g)	Dr Dividend income (A)	70
	Dr Non-controlling interest (CBS)	30
	Cr Dividend (B)	100
	(inter-company dividend and dividend to NCI)	
(h)	Dr Non-controlling interest (PAT)	36
	Cr Non-controlling interest (CBS)	36
	(to record non-controlling interest in profit)	
(i)	Dr Non-controlling interest (OCI)	30
	Cr Non-controlling interest (CBS)	30
	(to record non-controlling interest in OCI)	
(j)	Dr Ordinary share capital (C)	30
	Dr Beginning retained profits (C)	90
	Cr Non-controlling interest (CBS)	120
	(to record non-controlling interest in other equity)	

C Ltd

(k)	Dr Investment in C Ltd	30	
	Cr Share of profit of associate	30	
	(to equity account for profit of associate)		
(l)	Dr Dividend income (A)	15	
	Cr Investment in C Ltd	15	
	(to convert from cost method to equity method for dividend from associate)		
(m)	Dr Share of profit of associate	3	
	Cr Investment in C Ltd	3	
	(to adjust for unrealized profit in closing stock)		
(n)	Dr Investment in C Ltd	15	
	Cr Share of OCI of associate	15	
	(to equity account for OCI of associate)		
(o)	Dr Investment in C Ltd	15	
	Cr Beginning retained profit	15	
	(to equity account for the post-acquisition reserves in BRP of associate)		

D Ltd

(p)	Dr Ordinary share capital (D).....	50	
	Dr Beginning retained profits (D).....	50	
	Dr Goodwill on consolidation.....	20	
	Cr Investment in B Ltd	120	
	(to eliminate investment account)		
(q)	Dr Translation loss	8	
	Cr Goodwill on consolidation.....	8	
	(to translate goodwill)		

3. (i) Profit after tax attributable to members of A Ltd

		\$'000
Adjusted after-tax profit of the parent, A Ltd		
(150 – 85 – 20 – 3)	42	
Add group's share of the after-tax profit of B Ltd		
(70% × 120)	84	
Add group's share of the after-tax profit of C Ltd		
(30% × 100)	30	
Add group's share of the after-tax profit of D Bhd		
(100% × 40)	40	
Total		<u>196</u>

(ii) Group retained profit

	\$'000
Retained profit of the parent, A Ltd	
(400 – 20 – 3 + 10)	387
Add group's share of the post-acquisition retained profits of B Ltd	
(60% × [150 – 100] + 70% × [320 – 150])	149
Add group's share of the post-acquisition retained profit of C Ltd	
(30% × [200 – 100])	30
Add group's share of the post-acquisition retained profits of D Bhd	
(100% × [90 – 50])	40
Total	<u>606</u>

(iii) Group revaluation reserve

	\$'000
Revaluation reserve of the parent, A Ltd	
(200)	200
Add group's share of the post-acquisition revaluation reserve of B Ltd	
(70% × 100)	70
Add group's share of the post-acquisition revaluation reserve of C Ltd	
(30% × 50)	15
Add group's share of the post-acquisition revaluation reserve of D Bhd	
(100% × 30)	30
Total	<u>315</u>

(iv) Capital reserve arising from change in shareholding in subsidiary

	\$'000
Purchase consideration	
(10,000 × \$4.50)	45
Change in non-controlling interest	
([40% – 30%] × [100 + 150])	25
Capital reserve	<u>20</u>

(v) Non-controlling interest in consolidated balance sheet

	\$'000
Non-controlling interest in B Ltd	
(30% × [100 + 100 + 320])	<u>156</u>

(vi) Investment in associate

	\$'000
Cost of investment	70
Add share of C Ltd's adjusted post-acquisition reserves $(30\% \times [200 - 100 + 50])$	45
Less unrealized profit $(30\% \times 10)$	3
Total	<u><u>112</u></u>

Alternatively, 

	\$'000
Share of net assets $(30\% \times [100 + 50 + 200])$	105
Less unrealized profit $(30\% \times 10)$	3
Add Goodwill $(\$70 - 30\% \times [100 + 100])$	10
Total	<u><u>112</u></u>

QUESTION 11.5

In June 20X6, B Ltd paid \$10,000 to acquire 10% interest in C Ltd, when C Ltd was incorporated with a paid-up capital of \$100,000 comprising 100,000 ordinary shares. In December 20X6, B Ltd paid \$65,000 to acquire an additional 50% interest in C Ltd, when the fair value of C Ltd's identifiable net assets was represented by share capital of \$100,000 and retained profit of \$30,000, and the shares of C Ltd were valued at \$1.30 per share.

In July 20X7, A Ltd paid \$200,000 to acquire 60% interest in B Ltd, when the fair value of B Ltd's identifiable net assets was represented by share capital of \$100,000 and retained profit of \$100,000. At this date, C Ltd's retained profit was \$100,000.

On 1 January 20X8, B Ltd paid \$120,000 to acquire 40% interest in D Ltd, when the fair value of D Ltd's identifiable net assets was represented by share capital of \$100,000 and retained profit of \$150,000.

All the relevant Singapore Financial Reporting Standards that were issued by the Accounting Standards Council as at 1 January 2013 (including FRS 110 *Consolidated Financial Statements*, FRS 28 [2013] *Investments in Associates and Joint Ventures*, and FRS 103 [2009] *Business Combinations*) are assumed to have been effective on 1 January 20X6.

The group policy was to measure non-controlling interests based on their proportionate share of the acquisition-date fair value of identifiable net assets of subsidiaries acquired.

During 20X8, B Ltd sold goods invoiced at \$60,000 and \$40,000 to C Ltd and D Ltd, respectively, on cash terms. B Ltd invoiced these goods at cost plus 100%. As at 31 December 20X8, C Ltd and D Ltd had each sold 50% of these goods to outsiders.

All the dividends were declared out of the 20X8 profits, and had been duly paid and received. There had been no impairment of goodwill. Ignore deferred tax effects, if any, arising from consolidation.

The 20X8 financial statements of the companies are as follows:

(a) Balance sheets as at 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000	D Ltd \$'000
Investment in B Ltd	200	—	—	—
Investment in C Ltd	—	75	—	—
Investment in D Ltd	—	120	—	—
Other assets	600	505	400	500
	<u>800</u>	<u>700</u>	<u>400</u>	<u>500</u>
Share capital	200	100	100	100
Retained profit	400	220	200	210
Liabilities	200	380	100	190
	<u>800</u>	<u>700</u>	<u>400</u>	<u>500</u>

(b) Statements of comprehensive income for the year ended 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000	D Ltd \$'000
Sales	600	400	200	500
Cost of sales	200	200	80	140
Gross profit	400	200	120	360
Dividend income	60	40	—	—
Operating expenses	160	100	60	170
Profit before tax	300	140	60	190
Tax	50	20	10	30
Profit after tax	250	120	50	160
Other comprehensive income	—	—	—	—
Total comprehensive income	<u>250</u>	<u>120</u>	<u>50</u>	<u>160</u>

(c) Statements of changes in equity (partial) for the year ended 31 December 20X8

	A Ltd \$'000	B Ltd \$'000	C Ltd \$'000	D Ltd \$'000
Retained profit				
Beginning balance	250	200	150	150
Profit for the year	250	120	50	160
Dividend	100	100	—	100
Ending balance	<u>400</u>	<u>220</u>	<u>200</u>	<u>210</u>

Required

1. Prepare all the *consolidation journal entries* necessary for the preparation of the consolidated statement of comprehensive income, the consolidated balance sheet, and the consolidated statement of changes in equity for A Ltd group for the year 20X8.
2. Present the *Consolidated statement of comprehensive income* for A Ltd group for the year ended 31 December 20X8. (Other consolidated financial statements are not required.)
3. Provide *independent calculation* of the following items in the consolidated balance sheet of A Ltd group as at 31 December 20X8:
 - (i) Retained profit,
 - (ii) Non-controlling interests, and
 - (iii) Investment in associate.

Solution to Question 11.5

I. B Ltd + C Ltd

(a)	Dr Investment in C Ltd.....	3
	Cr Beginning retained profit (B).....	3
	(assume sale and re-purchase).....	
(b)	Dr Ordinary share capital (C).....	60
	Dr Beginning retained profit (C).....	18
	Cr Investment in C Ltd.....	78
	(to eliminate investment account)	
(c)	Dr Sales.....	60
	Cr Cost of sales.....	60
	(to eliminate inter-company sales)	

(d)	Dr Cost of sales (B)	15	
	Cr Other assets		15
	(to eliminate unrealized profit)		
(e)	Dr Non-controlling interest (PAT)	20	
	Cr Non-controlling interest (CBS)		20
	(to record non-controlling interest in profit)		
(f)	Dr Ordinary share capital (C).....	40	
	Dr Beginning retained profits (C).....		60
	Cr Non-controlling interest (CBS)		100
	(to record non-controlling interest in other equity)		

A Ltd + (B Ltd + C Ltd)

(g)	Dr Ordinary share capital (B).....	60	
	Dr Beginning retained profits	*87	
	Dr Goodwill on consolidation.....	53	
	Cr Investment in B Ltd		200
	(to eliminate investment account)		
	* $(60\% \times [100 + 3 + 60\% \times (100 - 30)])$		
(h)	Dr Dividend income (A)	60	
	Cr Dividend paid (B)		60
	(to eliminate intragroup dividends)		
(i)	Dr Non-controlling interest (PAT)	62	
	Cr Non-controlling interest (CBS)		62
	(to record non-controlling interest in profit)		
	(40% $\times [120 - 40 - 15 + 60\% \times 50 + 60]$)		
	(60 = share of associate $(40\% \times [160 - 10])$)		
(j)	Dr Non-controlling interest (CBS)	40	
	Cr Dividend paid (B)		40
	(to record non-controlling interest in dividend)		
(k)	Dr Ordinary share capital (B).....	40	
	Dr Beginning retained profits	*110	
	Cr Non-controlling interest (CBS)		150
	(to record non-controlling interest in other shareholders' equity)		

*(40% $\times [200 + 3 + 60\% \times (150 - 30)]$)

B Ltd + D Ltd

(l)	Dr Investment in D Ltd.....	64	
	Cr Share of profit of associate.....	64	
	(to equity account for profit of associate)		
(m)	Dr Dividend income (B)	40	
	Cr Investment in D Ltd.....	40	
	(to convert from cost method to equity method for dividend from associate)		
(n)	Dr Share of profit of associate.....	4	
	Cr Investment in D Ltd.....	4	
	(to adjust for unrealized profit in closing stock)		

2.

A Ltd and its subsidiaries
Consolidated statement of comprehensive income
For year ended 31 December 20X8

	\$'000	Marks
Sales	1,140	1
Cost of sales	435	1
Gross profit.....	705	1
Operating expenses	320	1
Share of associate's profit	60	1
Profit before tax	445	1
Tax	80	1
Profit after tax	365	1
OCI	—	—
Total comprehensive income.....	365	1
Attributable to members of A Ltd	283	2
Attributable to non-controlling interests	82	2
	365	13
Group profit	\$'000	
A: $250 - 60$	190	
B: $60\% \times (120 - 40 - 15)$	39	
C: $60\% \times 60\% \times 50$	18	
D: $60\% \times 40\% \times (160 - 10)$	36	
	283	
NCI		
From CJE: $20 + 62 = 82$		
B: $40\% \times (120 - 40 - 15)$	26	
C: $40\% + 40\% \times 60\% \times 50$	32	
D: $40\% \times 40\% \times (160 - 10)$	24	
	82	

3. (i) Retained profit

	\$'000
Retained profit of the parent, A Ltd (100% × 400)	400
Add group's share of the post-acquisition retained profits of B Ltd (60% × [(220 + 3) – (100 + 3) – 15])	63
Add group's share of the post-acquisition retained profit of C Ltd (60% × 60% × [200 – 100])	36
Add group's share of the post-acquisition retained profits of D Ltd (60% × 40% × [210 – 150 – 10])	12
Total	<u><u>511</u></u>

(ii) Non-controlling interests

	\$'000
Non-controlling interest in B Ltd (40% × [100 + 220 + 3 – 15])	123.2
Non-controlling interest in C Ltd Direct: (40% × [100 + 200])	120
Indirect: (40% × 60% × [200 – 30])	40.8
Non-controlling interest in D Ltd (40% × 40% × [210 – 150 – 10])	8
Total	<u><u>292</u></u>

(iii) Investment in associate

	\$'000
Cost of investment	120
Add share of D Ltd's adjusted post-acquisition reserves (40% × [210 – 150 – 10])	20
Total	<u><u>140</u></u>

Alternatively,

	\$'000
Share of net assets (40% × [100 + 210 – 10])	120
Goodwill (\$120 – 40% × [100 + 150])	20
Total	<u><u>140</u></u>

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