ACCT7106 – Session #7: Reformulating the Financial Statements

PART 1 – Background

overarching objective:

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to conduct fundamental value for the purpose of estimating the 'intrinsic value' of a firm's common shares

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➞ requires an understanding of the firm's 'value drivers'

➡ need to accumulate a 'tool kit' as the basis for developing the *pro forma Financial Statements*

$\Rightarrow$ ***projected***

Balance Sheet (B/S)
Income Statement (I/S)
Statement of Cash Flows (SCF)

over the forecast horizon

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➡ core inputs into the valuation model → x g

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$$V_0 = \sum_{t=1}^{\infty} \frac{x_t}{(1+k_t)^t} = \sum_{t=1}^{n} \frac{E(x_t)}{(1+k)^t} + \frac{E(x_n)(1+g)}{k-g} \frac{1}{(1+k)^n}$$

Sessions #3 → #9

STEP 1
Understanding the past

1. Information collection
2. Understanding the business
3. Accounting analysis
4. Financial ratio analysis
5. Cash flow analysis

STEP 2
Forecasting the future

1. Structured forecasting
2. Income Statement forecasts
3. Balance sheet forecasts
4. Cash flow forecasts

STEP 3
Valuation

1. Cost of capital
2. Valuation models – *AE, FCF, D*
3. Valuation ratios
4. Complications
   a. Negative values
   b. Value creation and destruction

Figure 1.1 Lundholm & Sloan, *Framework for Equity Valuation*

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Stages of the Analysis

Stage 1 – Understanding the Business

→ 'Strategy Analysis'

- product market
- competition
- regulatory constraints
- business strategies
- technology

Stage 2 – Analysing Information

Accounting Analysis & Financial Analysis

- quality of accounting information
- reformulating the F/S to uncover business activities
- ratio and cash flow analysis

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Stage 3 – Prospective Analysis: Forecasting

⇨ *pro-forma*
- Income Statement
- Balance Sheet
- Statement of Cash Flows

Stage 4 – Prospective Analysis: Valuation

- Abnormal Earnings Model
- Alternative Valuation Models
- Statement of Cash Flows

Stage 5 – Prospective Analysis: Application

→ investment decision

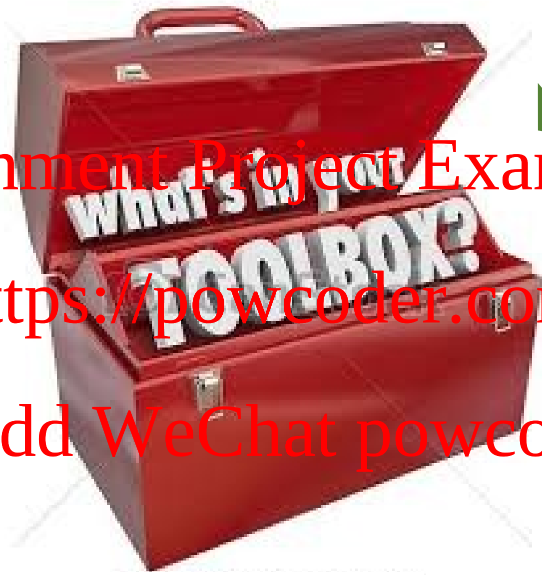
investor – decision to buy, hold, sell

manager – decision to adopt strategy or not

external environment

- economic prospects
- macroeconomic factors
- socio-cultural forces
- political / regulatory

Industry dynamics
→ Porter's five forces
(suppliers, buyers, new entrants, substitutes, rivalry)



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Analysis of Financial Statements

- understanding current F/S
- re-formulating the F/S
- accounting quality

- analysts' reports
- management forecasts
- financial press
- ???

- Financial Statements – AASB 101:
  - Balance Sheet
  - Income Statement *and/or* Statement of Comprehensive Income
  - Statement of Changes in Equity
  - Statement of Cash Flows
  - Notes to the financial statements

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- building blocks → definitions specific to accounting

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- accounting principles → AASB / IFRS rules to guide accounting decisions/choices

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- recognition (item to F/S) *versus* disclosure (notes)

- 'accountability' & 'stewardship'
  - ***'accountability'*** → preservation by management of the resources entrusted to them
  - ***'stewardship'*** → efficient use by management of resources entrusted to them (earning a return)

'articulation' → Financial Statements constitute an ***'integrated system'***

beginning stock → *flows* → *ending stock*

Beginning Balance Sheet

Cash

\+ Other assets

= Total Assets

– Liabilities

= Shareholders' Equity (BV_{t-1})

Cash Flow Statement

Cash from operations

\+ Cash from investing

\+ Cash from financing

= Net change in cash

Statement of Changes in S/E

± Cash from operations

\+ Net Income & OCI

= Net Change in S/E

Income Statement

Revenue

– Expenses

= Net Income (NPAT)

Ending Balance Sheet

Cash

\+ Other assets

= Total Assets

– Liabilities

= Shareholders' Equity (BV_t)

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pro forma Income Statement

	2019	2020	2021E	2022E	2023E
Sales	**38,176**	**37,408**	**± ?**	**± ?**	**± ?**
Other operating revenue	288	376			
Cost of sales	**(29,253)**	**(28,043)**	**± ?**	**± ?**	**± ?**
Other income	428	108			
Administrative expenses	**(8,031)**	**(8,081)**	**± ?**	**± ?**	**± ?**
Other expenses	(146)	---			
Share – equity investments	5	(6)			
Financing costs	**(42)**	**(443)**	**± ?**	**± ?**	**± ?**
Income tax expense	**(347)**	**(341)**	**± ?**	**± ?**	**± ?**

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caution – for ‘clean surplus’ and consistent estimates, the accounting system must reconcile

⇨ ‘***articulation***’**:** must concurrently develop the *pro forma* B/S and SCF

PART 2 – Reformulation

- **Objectives:**
  - separate **operating** activities from **financing** activities
    - *Operations*: buying and selling goods and services
    - *Financing*: the company's use of debt and equity to finance its operations, as well as the company's investment in financial assets

  Why separate? industrial companies generate value from their operations, not from their financial activities

  - alter several accounting classifications
  - for the Income Statement, separate revenues and expenses based on their *driver* (sales volume or other), and whether they are recurring or non-recurring

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Balance Sheet Reformulation

accounting equation

Assets

=

Liabilities

+

Shareholders' Equity

Operating Assets (OA)

Financial Assets (FA)

Operating Liabilities (OL)

Financial Obligations (FL)

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$$\text{Assets (A)} = \text{Liabilities (L)} + \text{Shareholders' Equity (S/E)}$$

$$[OA + FA] = [OL + FO] + S/E$$

reformulating

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$$(OA - OL) = (FO - FA) + S/E$$

net operating assets	=	net financial obligations	+	Shareholders' Equity
(OA – OL)		(FO – FA)		S/E

Step #1 **– Operating Assets (OA)** *versus* **Financial Assets (FA)**

- *Operating Assets (OA)* – assets used in selling goods and services (the company's business)
- *Financial Assets (FA)* – assets used to invest excess cash (investments not tied to the business)

  two broad criteria:
  - **nature** of the item itself
  - **function** of the item in the company's operations

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- typical indicators of Financial Assets (FA) (none are decisive on their own):
  - the item is financial nature, such as investments in debt/equity securities
  - typically measured at fair value e.g., investments in debt or equity
  - typically earn interest or dividends for the company
  - the asset is not integrated into the company's operations
- separating operating cash (OA) and financial cash (FA) is a matter of judgement (e.g., 0.5% of sales revenue)

Step #2 – Operating Liabilities (OL) *versus* Financial Obligations (FO)

- *Operating Liabilities (OL)* – liabilities associated with selling goods and services (the company's business)
- *Financial Obligations (FO)* – sources of financing other than CSE (basically debt)

- typical indicators of Financial Obligations (FO):
  - the company pays interest on them and has an obligation to repay
  - most are measured at amortised cost (or rarely fair value)
  - the liability is not integrated with the company's operations
- items for reclassification
  - dividends payable – treat as part of S/E
  - preference shares – treat as a financial obligation (FO) and dividend as a financial expense
  - derivative securities – given the challenges of specifically confirming the nature of each contract, we will treat 'derivative financial assets' as FA and 'derivative financial liabilities' as FO
  - leases – under AASB16, all leases recognised as finance leases → lease assets treated as operating assets, lease obligations as financial obligations, and lease interest as a financial expense

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re: Coles

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		CONSOLIDATED		
		28 JUNE 2020	30 JUNE 2019	
	NOTES	$M	$M	
Current assets				
Cash and cash equivalents	2.1	992	940	OA / FA (0.5%)
Trade and other receivables	2.2	434	360	OA (after checking note)
Inventories	2.4	2,166	1,965	OA (after checking note)
Income tax receivable		42	-	FA
Assets held for sale	5.2	75	94	OA (after checking note)
Other assets	2.3	70	47	OA (after checking note)
Total current assets		**3,779**	**3,406**	

	NOTES	28 JUNE 2020 $M	30 JUNE 2019 $M	
Non-current assets				
Property, plant and equipment	2.5	4,127	4,119	OA (after checking note)
Right-of-use assets	2.7	7,660	-	OA (after checking note)
Intangible assets	2.6	1,597	1,541	OA (after checking note)
Deferred tax assets	1.6	849	365	OA (after checking note)
Equity accounted investments	5.1	217	212	OA (after checking note)
Other assets	2.3	120	134	OA (after checking note)
Total non-current assets		**14,570**	**6,371**	

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* Note 2.9 reveals that 2019 ‘provisions’ include amounts for ‘lease provisions’ ≡ FO

		CONSOLIDATED		
Liabilities		28 JUNE 2020	30 JUNE 2019	
Current liabilities	NOTES	$M	$M	
Trade and other payables	2.8	3,737	3,380	OL (after checking note)
Provisions	2.9	861	743	OL/FO (after checking note)
Lease liabilities	2.7	885	-	FO (after checking note)
Other		198	168	OL (assumed)
Total current liabilities		**5,681**	**4,291**	
Non-current liabilities				
Interest-bearing liabilities	3.1	1,354	1,460	FO (after checking note)
Provisions	2.9	472	598	OL/FO (after checking note)
Lease liabilities	2.7	8,198	-	FO (after checking note)
Other		29	71	OL (assumed)
Total non-current liabilities		**10,053**	**2,129**	
Total liabilities		**15,734**	**6,420**	

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Reformulation Summary - Coles

	2020	2019			2020	2019
OA	17,502	9,028		FA	847	749
OL	5,297	6,308		FO	10,437	112
				NFO	9,590	(637)
				S/E	2,615	3,357
NOA	12,205	2,720		NFO + S/E	12,205	2,720

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** The reported 2019 figures are *NOT* directly comparable with the reported 2020 figures because of the adoption of AASB 16 (leases) which brought lease commitments into the B/S as both 'right of use assets' and 'lease liabilities'

PART 3 – Income Statement Reformulation

overview – reformulation of the AASB/IFRS Income Statement <u>*and*</u> Statement of Comprehensive Income into a *Reformulated Income Statement* such that it:

1. divides Income Statement items into operating versus financing activity related

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2. further divides operating income into three categories, based on whether the items are recurring and driven by sales

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3. reallocates income tax expense to remove the tax effects of debt financing/financial assets

4. divides OCI into operating and financing aspects

Process (as per schema on the next slide) **–**

Step #1: divide every line item in the Income Statement between operating and financing

Step #2: divide operating items into:

- core operating income from sales
- core other operating income
- unusual operating income

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Step #3: divide income tax expense between:

- core operating income from sales
- core other operating income
- unusual operating Income
- net financial expense (or net financial income)

Step #4: divide OCI items (after-tax) between operating and financing

AASB/IFRS Income Statement & Statement of Comprehensive Income

Sales
- COGS
= Gross margin
- Other expenses
= EBITDA
- Depreciation & amortisation
= EBIT
+ Interest revenue
- Interest expense
= PBT
- Income tax expense
= NPAT
+OCI (with tax effects)
= Comprehensive Income (CI)

Reformulated Income Statement

Steps 1 and 2

Core Operating Income from Sales (before-tax)
Core Other Operating Income (before-tax)
Unusual Operating Income (before-tax)
Net Financial Expense (before-tax)

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Step 3

Tax allocation:
Tax shield from NFE
Tax on Core Other OI
Tax on Unusual OI
Tax on Core OI from Sales

Step 4

Operating OCI (after-tax)
Financing OCI (after-tax)

Step #1: divide every line item in the Income Statement between operating and financing

- *Operating items* – revenues/expenses (or gains/losses) related to the company's operations
- *Financing items* – revenues/expenses (or gains/losses) related to the company's financing activities
  - consider information in the notes and the company's operating model (judgement)
  - try to be consistent in how you reformulate the B/S and I/S

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Step #2: divide 'operating items' into:

- core operating income from sales ➝ recurring operating income related to the company's main operations (*driven by sales volume*) e.g., sales, COGS, wage expense
- core other operating income ➝ recurring operating income that is not related to the company's main operations (*not driven by sales volume*)
- unusual operating income ➝ non-recurring (one-time) operating income

	NOTES	CONSOLIDATED YEAR ENDED 28 JUNE 2020 $M	CONSOLIDATED YEAR ENDED 30 JUNE 2019 $M	
Continuing operations				
Sales revenue	1.3	37,408	38,176	Core OI from sales
Other operating revenue		376	288	Core other OI
Total operating revenue		**37,784**	**38,464**	
Cost of sales		(28,043)	(29,253)	Core OI from sales
Gross profit		**9,741**	**9,211**	
Other income		108	426	Core other OI
Administration expenses	1.4	(8,081)	(8,031)	Core OI from sales & Unusual OI*
Other expenses		-	(146)	Core financing expense (NFE)
Share of net (loss) / profit of equity accounted investments	5.1	(6)	5	Core other OI
Earnings before interest and tax (EBIT)		**1,762**	**1,467**	
Financing costs	1.5	(443)	(42)	Core financing expense (NFE)
Profit before income tax		**1,319**	**1,425**	
Income tax expense	1.6	(341)	(347)	*Step #3*
Profit for the year from continuing operations		**978**	**1,078**	
Discontinued operations				
Profit from discontinued operations after tax	5.3	-	357	Unusual OI (also *Step #3* re: tax)
Profit for the year		**978**	**1,435**	

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* Note 1.4 indicates that 'Administrative expenses' include an 'impairment reversal' of $41 million in 2020 and an 'impairment expense' of $42 million in 2019 ⇢ 'Unusual OI'

Summary – Coles reformulated Income Statement (following Steps #1 & #2)

	2020	2019
Core OI from Sales (before tax)	1,243	934
Core Other OI (before tax)	478	721
Core OI (before tax)	**1,721**	**1,655**
Unusual OI (before tax)	41	315
Core NFE (before tax)	(443)	(188)

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versus reported profit before tax from the I/S

* **2020 reconciles;** 2019 does NOT ≡ 'profit from discontinued operations after tax' = 357

	2020	2019
Profit before tax	**1,319**	**1,425**

Step #3: divide income tax expense between:

- core operating income from sales
- core other operating income
- unusual operating Income
- net financial expense (or net financial income)

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Note: Australia has a stated corporate tax rate of 30% (for large companies)

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$\Rightarrow$ *we will use the 30% rate for the disaggregation process above*

(while the true tax rate is rarely exactly 30% for most companies, the staged approach that we adopt will accommodate the differences)

‘Staged approach’ ➝ allocation tax in the reverse order, with the tax expense deemed to be associated with core operating income from sales calculated as the residual amount i.e.,

1st – calculate the debt tax shield (extra tax) associated with NFE (NFI)

= NFE x 30% (or NFI x 30%)

2nd – calculate tax expense/deduction associated with Unusual Operating Income

= Unusual OI x 30%

3rd – calculate tax expense/deduction associated with Core Other Operating Income

= Core Other OI x 30%

4th – calculate tax expense associated with Core Operating Income from Sales

= Income tax expense + Tax shield from NFE (-Extra tax paid on NFI) - Tax expense (+deduction) from Unusual OI - Tax expense (+deduction) from Core Other OI

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To illustrate, consider the following reformulated Income Statement:

Core Operating Income from Sales	300
Core Other Operating Income	200
Unusual Operating Income	100
Net Financial Expenses	(200)
Profit Before Tax	400
Tax Expense	(130)
Net Profit After Tax (NPAT)	270

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$\Rightarrow$ allocation of the tax expense –

1st	tax shield from Net Financial Expenses	= 0.30 * 200	= 60
2nd	tax on Unusual Operating Income	= 0.30 * 100	= 30
3rd	tax on Core Other Operating Income	= 0.30 * 200	= 60
➔ 4th	tax on Core Operating Income from Sales	= 130 + 60 – 30 – 60 = 100	

Aside – why is the tax allocation associated with Net Financial Expenses added back?

- interest expense is tax deductible whereas dividends are paid out of after-tax income
  - → Net Financial Expenses provide a 'tax shield' (i.e., they reduce taxes)

to illustrate,

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	A – no debt	B – debt
Operating Income	1,000	1,000
Net Financial Expenses	- - -	(400)
Profit Before Tax	1,000	600
Tax Expense @ 30%	(300)	(180)
Net Profit After Tax	700	420

⇒ for B, debt provides a 'tax shield' of 120 (= 0.30*400)

→ the 'true' tax expense on Operating Income is 300 (= 180 + 120)

PART 4 – *further illustration*

Sales Revenue	2,000	Core Operating Income from Sales
Rental Income	20	Core Other Operating Income
Total Revenue	2,020	
Cost of Goods Sold	(1,000)	Core Operating Income from Sales
Wage Expense	(250)	Core Operating Income from Sales
Advertising Expense	(50)	Core Operating Income from Sales
Interest Income	20	Net Financial Expense
Share of profit from equity-accounted investments	10	Core Other Operating Income
Gain on sale of property	30	Unusual Operating Income
Restructuring charges	(10)	Unusual Operating Income
EBITDA	770	
Depreciation & Amortisation	(250)	Core Operating Income from Sales
EBIT	520	
Interest Expense	(100)	Net Financial Expense
Profit Before Tax (PBT)	420	
Tax Expense @ 30%	(126)	
Net Profit After Tax (NPAT)	294	

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⇒ *reformulated*

Core Operating Income from Sales (before tax)				
Sales		2,000		
COGS		(1,000)		
Wage expense		(250)		
Advertising expense		(50)		
Depreciation & Amortisation		(250)	450	
Core Other Operating Income (before tax)				
Rental income		20		
Share of profit from equity-accounted investments		10	30	
Unusual Operating Income (before tax)				
Gain on sale of property		30		
Restructuring charges		(10)	20	
Net Financial Expenses (before tax)				
Interest expense		(100)		
Interest income	20		(80)	420 = PBT

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Tax Allocation:

1st	tax shield from Net Financial Expenses	= 0.30 * 80	= 24
2nd	tax on Unusual Operating Income	= 0.30 * 20	= 6
3rd	tax on Core Other Operating Income	= 0.30 * 30	= 9
4th	tax on Core Operating Income from Sales	= 126 + 24 – 6 – 9 = 135	

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Core Operating Income from Sales (after tax)	450 – 135	=	315	
Core Other Operating Income (after tax)	30 – 9	=	21	
Unusual Operating Income (after tax)	20 – 6	=	14	
Net Financial Expenses (after tax)	(80) + 24	=	(56)	294 = NPAT

Step #4: divide Other Comprehensive Income items (after-tax) between operating and financing

- typical operating OCI items:
  - FX translation gain/loss
  - actuarial gain/loss on defined benefit plans
  - revaluation of PPE

- typical financial OCI items:
  - gain/loss from fair value changes in financial assets that go through OCI
  - gain/loss from cash flow hedges and fair value hedges
  - gain/loss from fair value changes in financial obligations

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Coles

note – tax effect on OCI item is provided

cash flow hedge
→ financial OCI

	NOTES	28 JUNE 2020 $M	30 JUNE 2019 $M
Profit for the year		978	1,435
Other comprehensive income			
Items that may be reclassified to profit or loss:			
Net movement in the fair value of cash flow hedges		(17)	(2)
Income tax effect	1.6	5	1
Other comprehensive loss which may be reclassified to profit or loss in subsequent periods		(12)	(1)
Total comprehensive income attributable to:			
Equity holders of the parent entity		966	1,434
Total comprehensive income from continuing operations attributable to:			
Equity holders of the parent entity		966	1,077

Returning to the *previous illustration*, now extended to include a series of OCI items

NPAT	294	
Other Comprehensive Income		
Asset revaluation	40	→ operating
fair value gain on shares carried at FV	20	→ financing
tax effect	(6)	
loss on re-measurement of defined benefits plan	(10)	→ operating
tax effect	3	
Total OCI	47	
Comprehensive Income	341	

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Core Operating Income from Sales (after tax)	450 – 135	=	315
Core Other Operating Income (after tax)	30 – 9	=	21
Unusual Operating Income (after tax)	20 – 6	=	14
Net Financial Expenses (after tax)	(80) + 24	=	(56)
Operating OCI (after tax)	40 – 10 + 3	=	33
Financing OCI (after tax)	20 – 6	=	14

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➔	Total Operating Income (after tax) = 315 + 21 + 14 + 33	383
	Total Net Financial Expense = (56) + 14	(42)
	Comprehensive Income (after tax)	341

Coles reformulated Income Statement

	2020	2019
Core OI from Sales (before tax)	1,243	934
Core Other OI (before tax)	478	721
Unusual OI (before tax)	41	315**
Core NFE (before tax)	(443)	(188)
Tax expense	**341**	**347**
OCI – cash flow hedge	**(17)**	**(2)**
tax effect	**5**	**1**

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315** ⇒ 357 'profit from discontinued operations *after tax*' – 42 'impairment expense'

re: discontinued note 5.3 ➜ profit before tax = 509; tax expense = 152

re: 2020

1st	tax shield from Net Financial Expenses	= 0.30 * 443	= 132.9
2nd	tax on Unusual Operating Income	= 0.30 * 41	= 12.3
3rd	tax on Core Other Operating Income	= 0.30 * 478	= 143.4
➔ 4th	tax on Core Operating Income from Sales	= 341 + 132.9 – 12.3 – 143.4 = 318.2	

Core Operating Income from Sales (after tax)	1,243 – 318.2	=	924.8
Core Other Operating Income (after tax)	478 – 143.4	=	334.6
Unusual Operating Income (after tax)	41 – 12.3	=	28.7
Net Financial Expenses (after tax)	(443) + 132.9	=	(310.1)
Financing OCI (after tax)	(17) + 5	=	(12)

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➔ Total Operating Income (after tax) = 924.8 + 334.6 + 28.7	1,288.1
Total Net Financial Expense (after tax) = (310.1) + (12)	<u>(322.1)</u>
Comprehensive Income (after tax)	966

re: 2019

1st	tax shield from Net Financial Expenses	= 0.30 * 188 = 56.4
2nd	tax on Unusual Operating Income	= 0.30 * 42 = 12.6
3rd	tax on Core Other Operating Income	= 0.30 * 721 = 216.3
➔ 4th	tax on Core Operating Income from Sales	= 347 + 56.4 + 12.6 – 216.3 = 199.7

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Core Operating Income from Sales (after tax)	934 – 199.7	=	734.3
Core Other Operating Income (after tax)	721 – 216.3	=	504.7
Unusual Operating Income (after tax)	(42 – 12.6) + 357	=	327.6
Net Financial Expenses (after tax)	(188) + 56.4	=	(131.6)
Financing OCI (after tax)	(2) + 1	=	(1)

➔	Total Operating Income (after tax) = 924.8 + 334.6 + 28.7	1,566.6
	Total Net Financial Expense (after tax) = (131.6) + (1)	(132.6)
	Comprehensive Income (after tax)	1,434

PART 5 – Reformulation of the Statement of Cash Flows

The IFRS / AASB SCF (direct method) has the following basic structure –

Cash Flow from Operations (CFO)

□

Cash Flow from Investing (CFI)

□

Cash Flow from Financing (CFF)

=

Change in Cash & Cash Equivalents

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Coles Group Limited 2020 Annual Report

	NOTES	28 JUNE 2020 $M	30 JUNE 2019 $M
Cash flows from operating activities			
Receipts from customers		39,971	41,126
Receipt from Viva Energy		-	137
Payments to suppliers and employees		(36,486)	(38,665)
Interest paid		(37)	(33)
Interest component of lease payments		(399)	-
Interest received		7	4
Income tax paid		(504)	(294)
Net cash flows from operating activities	2.1	**2,552**	**2,275**
Cash flows used in investing activities			
Purchase of property, plant and equipment and intangibles		(833)	(1,104)
Proceeds from sale of property, plant and equipment		211	288
Proceeds from sale of controlled entities		-	544
Net investments in joint venture and associate	5.1	(11)	(6)
Acquisition of subsidiaries or businesses, net of cash acquired		(25)	(2)
Net cash flows used in investing activities		**(658)**	**(280)**
Cash flows used in financing activities			
Proceeds from borrowings		5,120	10,260
Repayment of borrowings		(5,226)	(8,800)
Proceeds from borrowings with related parties		-	170
Repayment of borrowings with related parties		-	(3,678)
Payment of principal component of lease payments		(846)	-
Distributions to Wesfarmers		-	(320)
Redemption of redeemable preference shares		-	1,322
Dividends paid		(873)	-
Capital return		-	(538)
Purchase of shares under Equity Incentive Plan		(17)	(27)
Net cash flows used in financing activities		**(1,842)**	**(1,611)**
Net increase in cash and cash equivalents		**52**	**384**
Cash at the beginning of the financial period	2.1	940	556
Cash at the end of the financial period	2.1	**992**	**940**

The key objectives when reformulating the Statement of Cash Flows are:

- to separate operating activities (cash flows and investments to/from OAs and OLs) from financing activities (cash flows and investments to/from FAs and FOs)
- to calculate the firm's <u>free cash flow</u> (FCF), and show how it is generated and used (FCF is the cash that a company generates from its operations in excess of its cash used for investments in net operating assets)
- to separate equity and debt financing cash flows

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note: unlike the I/S, we are not doing a 'full' reformulation of the CF statement but rather just fixing several "*classification problems*"

why? the AASB/IFRS cash flow statement is also already formulated to separate financing cash flows from operating/investing cash flows

the SCF is not as important as the I/S and the B/S are for valuation

Reformulated Statement of Cash Flows

Adjusted Cash flow from operations		*C*
Adjusted Cash investment in operating assets		*I*
Free Cash Flow (FCF)		***C + I***
Equity financing flows		
dividends & share repurchases	XX	
share issuances	(XX)	*E*
Debt financing flows		
net purchase of financial assets	(XX)	
interest on financial assets (after tax)	XX	
net issue of debt	XX	
interest on debt (after tax)	(XX)	*F*
Total Financing cash flows		*E + F*

Generation of FCF from operating activities

‘Uses’ of FCF in financing activities

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Generation of Free Cash Flow (FCF) = *C* + *I*

➔ cash generated by operations less cash used for investment in operating assets

- adjusted cash flow from operations (*C*): cash receipts/payments related to the company's operations (operating assets and operating liabilities)

- adjusted cash flow from investing (*I*): cash receipts/payments related to investments in long-term operating assets (e.g., pp&e, intangibles, acquisitions)

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note: all of these cash flows are related to net operating assets (NOA)

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***FCF* > 0** ⇒ the company has spare (or 'free') cash that can paid out to shareholders and financial obligations, or invested in financial assets

***FCF* < 0** ⇒ the company's operations are not generating enough cash to fund its current investments in net operating assets

→ the company will need to raise capital from shareholders and financial obligations, or by selling financial assets

Uses of Free Cash Flow (FCF) = *E* + *F* :

- Equity financing cash flows (*E*): cash transactions with shareholders (dividends, share repurchases, and share issues)

- Debt financing cash flows (*F*):
  - cash receipts/payments related to financial obligations (FO) e.g., proceeds from borrowings/repayment of borrowing, and interest paid
  - cash receipts/payments related to financial assets e.g., investment in financial cash, sale of short-term investments/purchase of short-term investments, and interest received

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note: all of these cash flows are related to net financial obligations (NFO) and shareholders' equity (S/E) “classification problems” requiring adjustment –

- interest paid/received
- investments in financial assets
- separation of ‘cash & cash equivalents’ into ‘investment in operating cash’ and ‘investment in financial cash’

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re: net interest received / paid

- should be classified as a debt financing use of cash (*F*) – interest received is clearly related to FAs and interest paid is clearly related to FOs
- any reclassification must adjust for tax effects (i.e., remove tax shields)

re: investments in financial assets

- under AASB / IFRS, these items typically appear under CFI
- they are related to debt financing activities (not operating assets), and must be reclassified as debt uses of cash (*F*)

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re: operating versus financial cash

- in reformulating the B/S, 'cash & cash equivalents' were separated into 'operating cash' (an operating asset, OA) and 'financing cash' (a financial asset, FA) – 'rule of thumb' ≡ 0.5% of sales revenue
- given this separation
  - the change in 'operating cash' should be included in *I*
  - the change in 'financing cash' should be included in *F*

Illustration – reformulate the following

AASB Statement of Cash Flows

assuming

- 30% tax rate
- split in 'cash * cash equivalents' of
  - 30 *re:* operating cash
  - 300 *re:* financing cash

Cash Flow from Operations (CFO)	
cash receipts from customers	2,400
payments to suppliers	(1,000)
payments to employees	(500)
rent paid	(100)
interest received	10
interest paid	(100)
income tax paid	(180)
Net CFO	**530**
Cash Flow from Investing (CFI)	
purchase of short-term investments	(100)
payments for PPE	(200)
Net CFI	**(300)**
Cash Flow from Financing	
dividends paid	(150)
shares issued	50
proceeds from borrowings	200
Net CFF	**100**
Change in Cash & Cash Equivalents	**330**

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Reformulated Cash Flow Statement

Free Cash Flow:

Adjusted CFO = *C*	
reported CFO	530.0
interest received	(10.0)
interest paid	100.0
tax shield = (10 – 100) * 0.30	(27.0)
Adjusted CFO (C)	593.0
Adjusted CFI = *I*:	
reported CFI	(300.0)
purchase of short-term investments	100.0
investment in operating cash	(30.0)
Adjusted CFI (I)	(230.0)
FCF = *C* + *I* = 593 – 230	**363.0**

Uses of Free Cash Flow:

Debt financing cash flows = *F*	
net interest paid (after tax)	(63.0)
proceeds from borrowings	200.0
purchase of short-term investments	(100.0)
investment in financing cash	(300.0)
Debt financing cash flows (*F*)	(263.0)
Equity financing cash flows = *E*	
dividends paid	(150.0)
shares issued	50.0
Equity financing cash flows (*E*)	(100.0)
FCF = *E* + *F*	**(363.0)**

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Coles Group Limited 2020 Annual Report

Cash flows from operating activities				
Receipts from customers		39,971	41,126	
Receipt from Viva Energy		-	137	
Payments to suppliers and employees		(36,486)	(38,665)	
Interest paid		(37)	(33)	→ F
Interest component of lease payments		(399)	-	→ F
Interest received		7	4	→ F
Income tax paid		(504)	(294)	
Net cash flows from operating activities	**2.1**	**2,552**	**2,275**	
Cash flows used in investing activities				
Purchase of property, plant and equipment and intangibles		(833)	(1,104)	
Proceeds from sale of property, plant and equipment		211	288	
Proceeds from sale of controlled entities		-	544	
Net investments in joint venture and associate	5.1	(11)	(6)	→ 13 *E*; bal *I*
Acquisition of subsidiaries or businesses, net of cash acquired		(25)	(2)	
Net cash flows used in investing activities		**(658)**	**(280)**	

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	<u>**2020**</u>	<u>**2019**</u>
cash & cash equivalents	992	940
Sales revenue	37,408	38,176
‘operating cash’ @ 0.5%	187	191
→ ‘financing cash’	805	749

Cash flows used in financing activities			
Proceeds from borrowings	5,120	10,260	
Repayment of borrowings	(5,226)	(8,800)	
Proceeds from borrowings with related parties	-	170	Debt (D)
Repayment of borrowings with related parties	-	(3,678)	
Payment of principal component of lease payments	(846)	-	
Distributions to Wesfarmers	-	(320)	
Redemption of redeemable preference shares	-	1,322	
Dividends paid	(873)	-	Equity (E)
Capital return	-	(538)	
Purchase of shares under Equity Incentive Plan	(17)	(27)	
Net cash flows used in financing activities	**(1,842)**	**(1,611)**	

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Reformulated *Coles 2020* Cash Flow Statement

Free Cash Flow:

Adjusted CFO = C	
reported CFO	2,552
interest received	(7)
interest paid	37
interest – lease payments	399
tax shield = (7 – 429) * 0.30	(129)
Adjusted CFO (C)	2,852
Adjusted CFI = *I*:	
reported CFI	(658)
investment in operating cash	4
share-based payment expense	(13)
Adjusted CFI (I)	(667)
FCF = *C* + *I*	**2,185**

Uses of Free Cash Flow:

Debt financing cash flows = *F*	
net interest paid (after tax)	(300)
proceeds from borrowings	5,120
repayment of borrowings	(5,226)
payment of lease principal	(846)
investment in financing cash	(56)
Debt financing cash flows (*F*)	(1,308)
Equity financing cash flows = *E*	
dividends paid	(873)
share-based payment expense	13
shares purchased	(17)
Equity financing cash flows (*E*)	(877)
FCF = *E* + *F*	**(2,185)**

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PART 6 – Reformulation of the Statement of Changes in Owners' Equity

Basic objectives of the reformulation exercise

- separate transactions with shareholders (*E*) (equity financing) and comprehensive income (CI) (operating income and debt financing)
- fix some classification problems within accounting

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aside: basic reclassifications

- preference shares – remove from S/E balances and add to financial obligations (FO)
- non-controlling interest – group with S/E (for our purposes)
- dividends payable / dividends declared – adjust S/E balances and remove from FO

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note: the 'clean surplus' relation is based on Comprehensive Income (CI) and not NPAT

Statement of Changes in Equity

	ATTRIBUTABLE TO EQUITY HOLDERS OF THE PARENT				
	CONTRIBUTED EQUITY $M	SHARE-BASED PAYMENTS RESERVE $M	CASH FLOW HEDGE RESERVE $M	RETAINED EARNINGS $M	TOTAL $M
At 1 July 2019	**1,628**	**43**	**(1)**	**1,687**	**3,357**
Effect of adoption of AASB 16 *Leases*	-	-	-	(831)	(831)
At 1 July 2019 (adjusted)	**1,628**	**43**	**(1)**	**856**	**2,526**
Net profit for the year	-	-	-	978	978
Other comprehensive income	-	-	(12)	-	(12)
Total comprehensive income for the year	-	-	**(12)**	**978**	**966**
Share-based payments expense	-	13	-	-	13
Purchase of shares under Equity Incentive Plan	(17)	-	-	-	(17)
Dividends paid	-	-	-	(873)	(873)
Balance as at 28 June 2020	**1,611**	**56**	**(13)**	**961**	**2,615**

Accounting adjustment

BV_{t-1}

Comprehensive Income

NCC

Dividends

BV_t

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Reformulated Statement of Changes in Shareholders' Equity

Beginning Book Value of Common Equity BV_{t-1}

+ Net effect of Transactions with Common Shareholders

    + capital contributions (share issues)

    – share repurchases

    – cash dividends to common shareholders

    = Net cash contributions

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+ Effect of operations and non-equity financing

    + Net Income (from the I/S)

    + Other Comprehensive Income (OCI)

    – preferred share dividends

    = Comprehensive income available to common shareholders

Ending Book Value of Common Equity BV_t

PART 7 – Reformulation Summary

'new' (reformulated) accounting relations:

- Balance Sheet: NOA = NFO + S/E
- Income Statement: CI = OI (after tax) + NFE (after tax)
- Cash Flow Statement: FCF = C + I = F + E
- Equity Statement: Change in S/E = CI + E

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** *note*, within this formulation, NFE will be a negative number, and E will be a negative number if the only material net equity financing item is the payment of dividends

Now turn to consider the relations across the reformulated statements (insights provided)

- from the reformulated B/S $\quad NOA = NFO + S/E \quad \rightarrow \quad \triangle NOA = \triangle NFO + \triangle S/E$

- from the reformulated equity statement $\triangle S/E = CI + E$

  combining $\quad \Rightarrow \quad \triangle NOA = \triangle NFO + \triangle S/E = \triangle NFO + CI + E$

- assume from the reformulated SCF $\quad F = NFE \text{ (after tax)} + \triangle NFO \quad \rightarrow \quad \triangle NFO = F - NFE \text{ (after tax)}$

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  $\Rightarrow \quad \triangle NOA = \triangle NFO + CI + E = F - NFE \text{ (after tax)} + CI + E$

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- from the reformulated I/S $\quad CI = OI \text{ (after tax)} + NFE \text{ (after tax)}$

  $\Rightarrow \quad \triangle NOA = F - NFE \text{ (after tax)} + CI + E = OI \text{ (after tax)} + (F + E)$

  $\Rightarrow \quad \triangle NOA = OI \text{ (after tax)} + FCF$

  or rearranging $\quad FCF = \triangle NOA - OI \text{ (after tax)}$

$\triangle$NOA = OI (after tax) + FCF

note – this relation creates an important *theoretical* link between the cash flow statement and the income statement/balance sheet

note, through a similar algebraic process, it is also possible to show: $\triangle$NFO = *FCF* – *NFE* – *E*

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additionally, from the equity statement and the clean surplus relation, $\triangle$S/E = CI + E

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and from the reformulated I/S, CI = OI + NFE

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Beginning Stock	**Flows**	**Ending Stock**
NOA_{t-1}	$\triangle NOA = [OI_t + FCF_t]$	NOA_t
$-\ NFO_{t-1}$	$-\ \triangle NFO = -\ [FCF_t - NFE_t - E_t]$	$-\ NFO_t$
$=\ S/E_{t-1}$	$= OI_t + NFE_t + E_t$	$=\ S/E_t$

$\boxed{\triangle NOA = OI \text{ (after tax)} - FCF}$

FCF = OI (after tax) – △NOA

note – this relation creates an important *theoretical* link between the cash flow statement and the income statement/balance sheet

note, through a similar algebraic process, it is also possible to show: $\boxed{\triangle NFO = FCF - NFE - E}$

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additionally, from the equity statement and the clean surplus relation, $\triangle S/E = CI + E$

and from the reformulated I/S, $CI = OI - NFE$

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Beginning Stock	Flows	Ending Stock
NOA_{t-1}	$\triangle NOA = [OI_t + FCF_t]$	NOA_t
$-\ NFO_{t-1}$	$-\ \triangle NFO = -[FCF_t - NFE_t - E_t]$	$-\ NFO_t$
$=\ S/E_{t-1}$	$= \boxed{\underbrace{OI_t + NFE_t}_{CI} + E_t}$	$=\ S/E_t$

$\triangle S/E = CI + E$

Reconciliation – ***Coles 2020***

$NOA_{2019} = 13{,}102^{*}$

$\triangle NOA = [OI_t + FCF_t]$

$= 1{,}288 – 2{,}185$

$NOA_{2020} = 12{,}205$

$NFO_{2019} = 10{,}576^{**}$

$\triangle NFO = [FCF – NFE – E]$

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$= – 2{,}185 + 322 + 877$

$NFO_{2020} = 9{,}590$

$S/E_{2019} = 2{,}526 \; ^{***}$

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$OI_t + NFE_t + E_t$

$= 1{,}288 – 322 – 877$

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$S/E_{2020} = 2{,}615$

* 2019 reported NOA = 2,720	adoption of AASB 16 (leases) = + 10,832	adjusted 2019 NOA = 13,102
* * 2019 reported NFO = (637)	adoption of AASB 16 (leases) = + 11,213	adjusted 2019 NFO = 10,576
* * * 2019 reported S/E = 3,357	adoption of AASB 16 (leases) = – 831	adjusted 2019 S/E = 2,526

see Notes 1.6, 2.7, 2.9, 7.5

Note/recall* – the overarching objective of the reformulation process is to *facilitate the forecasting exercise