Financial Statement Analysis -- 2017

Instructor: Jarod

Brief Introduction

Topic weight:

SS1	Ethics & Professional Standards	15%
SS2 - SS3	Quantitative Methods	12%
SS4 - SS5	Economics	10%
SS6 - SS9	Financial Reporting and Analysis	20%
SS10 - SS11	Corporate Finance	7%
SS12	Portfolio Management	7%
SS13 - SS14	Equity Investment	10%
SS15 - SS16	Fixed Income	10%
SS17	Derivatives	5%
SS18	Alternative Investments	4%
	Weights:	100%

Brief Introduction

Content:

- **Study Session 6: An Introduction**
  - Reading 21: Introduction
  - Reading 22: Financial Reporting Mechanics
  - Reading 23: Financial Reporting Standards
- **Study Session 7: Financial Statements and Technique**
  - Reading 24:Understanding Income Statements
  - Reading 25: Understanding Balance Sheets
  - Reading 26: Understanding Cash Flow Statements
  - Reading 27: Financial Analysis Techniques

Brief Introduction

Content:

- **Study Session 8: Inventories, Long-lived Assets, Income Taxes, and Non-current Liabilities**
  - Reading 28: Inventories
  - Reading 29: Long-lived Assets
  - Reading 30: Income Taxes
  - Reading 31: Non-current (Long-term) Liabilities
- **Study Session 9: Financial Reporting Quality Analysis**
  - Reading 32: Financial Reporting Quality
  - Reading 33: Applications

Brief Introduction

Exam-importance ranking:

- Session 8: Reading 28 - 31
- Session 7: Reading 24 - 27
- Session 6: Reading 21 – 23
- Session 9: Reading 32 – 33

Brief Introduction

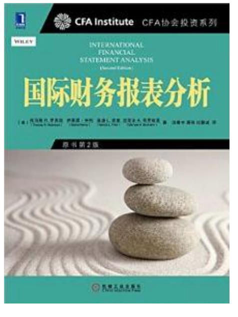
考纲对比:

- 与2016年相比，2017年的考纲变化如下：
- 2017年财报的考纲和2016年几乎一致，但由于在2015年发生了较大变化，主要是加入了二级中存货计量方法转换的相应内容，要求考生更多的关注存货计量方法发生变化后对于财务报表的影响，我们仍然需要关注此项变化。

Brief Introduction

推荐阅读:

- 《国际财务报表分析》
  - Robinson T.R. 等著
  - ISBN: 978-7-1114-6112-8
  - 机械工业出版社



Brief Introduction

学习建议:

- 本门课程难度比较高，知识点的记忆与理解并重；
- 注意各个知识点之间的关联，需加强总结；
- 如遇到一遍没听懂的，建议重听一到两遍；
- 听课与做题相结合，但并不建议“刷题”；
- 最重要的，认真、仔细的听课。

Brief Introduction

Life is short. If there was ever a moment to follow your passion and do something that matters to you, that moment is now.

人生苦短，如果你有一个机会跟随自己的激情去做你认为重要的事情，那么这个机会就是现在。

The roles of financial reporting and financial statement analysis & key financial statements

Tasks:

- Describe the roles of financial reporting and financial statement analysis.
- Describe the roles of the key financial statements in evaluating a company's performance and financial position.

The roles of financial reporting and analysis

Definition of financial reporting (IASB)

- The way companies show their financial performance to investors, creditors, and other interested parties.
- Objectives of financial statement is to provide information about:
  - ✓ Financial position
  - ✓ Financial performance
  - ✓ Changes in financial position of an entity

The role of financial reporting analysis

- Using the information in a company's financial statements, alone with other relevant information, to ***make economic decisions***.

key financial statements

Financial reports

- Balance sheet, Income statement, Cash flow statement, Statement of change in equity.

Supplemental disclosures

- Footnotes, MD&A, Press release, conference call, Auditor's Report.

key financial statements

Balance sheet

- Presents a company's current financial position by disclosing the resources the company controls (Assets) and its obligations to the other creditors (Liabilities) *at a specific point of time.*

Income statement/P&L

- Reports on the financial performance of the firm *over a period of time.*

key financial statements

Cash flow statement

- Reports the company's cash receipts and payments *over a period of time.*

Statement of changes in equity

- Reports the amounts and sources of changes in equity investors' investment in the firm *over a period of time.*

Balance Sheet

Assets = Liabilities + Owners' Equity

Assets: Economic resources which owned by a business and expected to benefit future operations.

Liabilities: Obligations of the entity to outside parties who have furnished resources.

Owners' Equity: Residual value of a firm calculated as Assets minus Liabilities, also called net assets.

Income statement

"The Bottom Line"

$$\boxed{\text{Revenue} - \text{Expenses} = \text{Net Income}}$$

- **Revenues:** Inflows from a firm's primary operations.
- **Expenses:** Cost of producing goods and services sold over the period.
- **Gains/Losses:** Increases/decreases in equity or net assets from peripheral or incidental transactions.

Statement of comprehensive income

Statement of comprehensive income

- Reports all changes in equity *except for shareholder transactions*. (eg: issuing stock, repurchasing stock)
- Comprehensive income= Net Income + Other comprehensive income

Cash flow statement

Cash Flow Statement

Dynamic Statement

	Cash flow from operations	(CFO)	X/(X)
+	Cash flow from investing	(CFI)	X/(X)
+	Cash flow from financing	(CFF)	X/(X)
=	Change in cash balance		X/(X)
+	Beginning cash		X
=	Ending cash		X

Statement of changes in equity

Statement change in equity

- The statement of change in equity reports the amount and sources of changes in equity investors' investment in the firm *over a period of time*.
- The basic components of owners' equity are paid-in capital and retained earnings.

	Retained Earning	OCI	Capital
Beginning	2000	300	4000
Profit during the year	300	100	
Owner Contribution			2000
Ending	**2300**	**400**	**6000**

Summary

- **Importance:** ☆
- **Content:**
  - The roles of financial reporting and financial statement analysis.
  - key financial statements (四张报表)
- **Exam tips:**
  - 是FSA这门课的导入和介绍；
  - 注意区分四张报表的特征，记忆相应的会计元素。

Supplementary Information of Financial Statement

Tasks:

- Describe the importance of financial statement notes and supplementary information.
- Describe the objective of audits of financial statements, the types of audit reports.

Supplemental disclosure

Footnotes

- Disclosures that provide further details about the information summarized in the financial statements
  - Information about *accounting methods, assumptions and estimate.*
  - Additional information about *business acquisition or disposal, legal actions, employee benefit plans (DB), etc.*
  - Are audited.

Supplemental disclosure

MD&A(management's discussion and analysis)

- Including the nature of business, past performance, and future outlook. (part of commentary may be unaudited)
  - Providing assessment of the financial performance *from the perspective of its management.*
  - Discussion of *trends in sales and expense.*
  - Capital resource and liquidity, with a discussion of *trends in cash flow.*
  - *Business overview* based on known trends.
  - *Material events and uncertainties.*

Audit & Internal control

Audit

- An independent review of an entity's financial statements.(objective, fairness and reliability)
- Must provide opinion on company's internal controls under U.S. GAAP

Audit & Internal control

Standard auditor's opinion (*reasonable assurance*)

- Unqualified opinion (clean opinion): Free from material omissions and errors.
- Qualified opinion: If statements make any exceptions to the accounting principles.
- Adverse opinion: If statements are not presented fairly.
- Disclaimer of opinion: unable to express and opinion.

Other relevant information

Quarterly or semiannual reports

- The most updated information on the major financial statement and footnotes.

SEC filings

- **Form 8-K**
  - *Acquisitions and disposals* of major assets.
  - Changes in its management.
  - Changes in *corporate governance*.
- **Form 10-K**
  - Annual financial statements. (*Audited*)
- **Form 10-Q**
  - Quarterly financial statements. (*Not necessarily audited*)

Other relevant information

Proxy statements

- Issued to shareholders when there are matters that *require a share holder vote.*
- Providing *information about board members, management compensation and issuance of stock options.*

Corporate reports and press releases

- Public relationship

Other necessary information

- Information on economic condition, industry and competitors.

Financial statement analysis framework

1. Purpose and Context of Analysis
2. Collect Data
3. Process Data
4. Analyze/Interpret Data
5. Conclusions and Recommendations
6. Update analysis periodically

Summary

- **Importance:** ☆☆
- **Content:**
  - Financial statement notes and supplementary information.
  - The objective of audits of financial statements, the types of audit reports and other sources of information.
- **Exam tips:**
  - 辨析Footnotes和MD&A所包含的信息及内容。
  - 记忆审计报告的特点和意见。
  - 了解SEC Filings。

Financial Statement Elements & Accounting Equation

Tasks:

- Describe relationship of financial statement elements and accounts.
- Explain the accounting equation in its basic and expanded forms.

Financial statement elements

Accounts are the specific records within each element where various transactions are entered.

- Eg: “Inventory” , “Account Payable”

Contra accounts are used for entries that offset some part of the value of another account.

- Eg: “Accumulative Depreciation”

Classifying accounts into the financial statement elements.

- Assets, Liability, Owners' equity, Revenue, Expense

Financial statement elements

Assets are the firm’s economic resources

- **Cash and cash equivalents**
  - Liquid securities with 90 days or cash.
- **Account receivable**
  - Allowance for bad debt expense as a contra account.
- **Inventory**
- **Financial assets**
  - Such as marketable securities.
- **Prepaid expense**
  - Expense on future income statement.

Financial statement elements

Assets are the firm's economic resources

- **Property, Plant, and equipment. (PP&E)**
  - Includes a contra account for accumulated depreciation.
- **Investment in affiliates (Equity method)**
- **Deferred tax assets**
- **Intangible assets**
  - Patents, trademarks, licenses, and goodwill.
  - Reduced by "accumulative amortization" except goodwill.

Financial statement elements

Liabilities are creditor claims on the company's resource

- **Account payable**
- **Financial liabilities**
  - Such as short-term notes payable.
- **Unearned revenue**
  - Items that will show up on future income statement as revenues.
- **Income tax payable**
  - Taxes accrued during the past year but not yet paid.
- **Long-term debt**
  - Such as bonds payable.
- **Deferred tax liabilities**

Financial statement elements

Owners' equity is the owners' residual claim on a firm's resources, which is the amount by which assets exceed liabilities.

- **Capital**
  - Par value of common stock.
- **Additional paid-in capital**
  - Proceeds from common stock sales in excess of par value.
- **Retained earnings**
  - Cumulative net income that has not been distributed as dividends.

To the Next Page

Financial statement elements

Owners' equity is the owners' residual claim on a firm's resources, which is the amount by which assets exceed liabilities.

- **Other comprehensive income**
  - Changes resulting from *foreign currency translation*, minimum pension liability adjustment, unrealized gains and losses from *cash flow hedging derivatives*, or unrealized gain and losses from *available-for-sale securities*.

Financial statement elements

Expenses are outflows of economic resources

- **Cost of goods sold (COGS)**
- **Selling, general, and administrative expenses (SG&A)**
  - Including such expenses as advertising, management salaries, rent, and utilities.
- **Depreciation and amortization**
  - To reflect the "using up" of tangible and intangible assets.
- **Tax expense**
- **Interest expense**
- **Losses**
  - Decreases in assets from transactions incidental to the firm's day-to-day activities.

Financial statement elements

Gains are inflows of economic resources

- **Sales**
  - Revenue
- **Gains**
  - Increases in assets from transactions incidental to the firm's day-to-day activities.

Accounting equation

Asset = liability + Equity

$$\boxed{\textbf{Capital} \quad + \quad \underbrace{\textbf{Revenue} \quad - \quad \textbf{Expense}}_{\textbf{Income statement}}}$$

Asset + Expense = Capital + Revenue + liability

Difference between asset and expense is whether it provides future benefit

Accounting equation

The basic accounting equation:

- Assets = liabilities + owners' equity

The Expanded accounting equation:

- Owners' equity = Contributed capital + Retained earnings
- Assets = Liabilities + Contributed capital + Ending retained Earnings
- Ending retained earnings = Beginning retained earnings + Net income – Dividend
- Net income = Revenue – Expense

Assets = Liabilities + Contributed capital + Beginning retained earnings + Revenue – Expense - Dividend

Summary

- Importance: ☆☆
- Content:
  - Financial statement elements and accounts, and classify accounts into the financial statement elements.
  - Accounting equation in its basic and expanded forms.
- Exam tips:
  - 辨析各类会计要素下的不同科目。
  - 记忆会计恒等式以及其扩展形式。（常考计算题）

Accrual Accounting

Tasks:

- Describe the process of recording business transactions using an accounting system based on the accounting equation.
- Describe the need for accruals and other adjustments in preparing financial statements.

Double – entry accounting

Double-entry accounting

- Each transaction will affect at least two accounts to let balance sheet balance

For example: Purchase equipment for 20,000 dollar

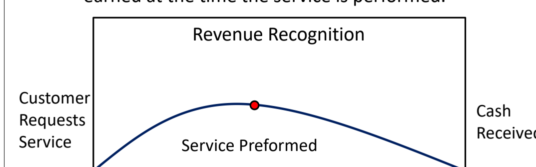
- Equipment increase 20,000
- Cash decrease 20,000

One asset account increase and another asset account decrease.

Accrual accounting

Timing issue

- Companies recognize revenue in the accounting period in which it is earned not the cash received.
- In a service enterprise, revenue is considered to be earned at the time the service is performed.



Accrual accounting

- Record the revenue before the cash receive
  - Accrued revenue
- Receive the cash before record the revenue
  - Unearned revenue
- Record the expense before the cash pay
  - Accrued expense
- Pay the cash before record the expense
  - Prepaid expense

Accrual accounting

		Asset	Liability	Equity	Revenue	Expense
Unearned Revenue	• No revenue recognized	↑	↑			
	• A liability		↓	↑	↑	
Accrued Revenue	• Revenue recognition	↑		↑	↑	
	• An asset	↓↑				
Prepaid Expense	• No expense recognized	↓↑				
	• An asset	↓		↓		↑
Accrued Expense	• Expense recognition		↑	↓		↑
	• A liability	↓	↓			

Relationship between financial statements

Income statement

Revenue
.
.
.
(Expenses)

Net Income → Dividend / Retained Earnings → Equity ↑

Balance Sheet

Asset	Liability
	Equity ↑

Accounting system flow

Journal Entries
↓
General Journal
↓
General Ledgers
↓
Initial Trial Balance
↓
Adjusted Trial Balance
↓
Financial Statements

Summary

- Importance: ☆☆☆
- Content:
  - Accruals and other adjustments in preparing financial statements.
  - Relationships among the financial statements.
  - The flow of information in an accounting system.
- Exam tips:
  - 辨析权责发生制下产生的各个科目。
  - 了解财务报表之间的联系。（主要是利润表和资产负债表）

Standard-setting bodies and regulatory authorities & SEC filings

Tasks:

- Describe the objective and importance of financial reporting standards.
- Describe standard-setting bodies and regulatory authorities and SEC filings.
- Describe global convergence of accounting standards .

Objective and importance of financial reporting standards

Objective of financial statements

- The objective of financial statements is to provide information about the financial position, performance and change in financial position of an entity; this information should be *useful to a wide range of users for the purpose of making economic decisions.*

Standard-setting bodies

Standard-setting bodies

- Financial Accounting Standards Board (FASB)
  - Sets U.S. GAAP
- International Accounting Standards Board (IASB)
  - Sets IFRS

Regularly authorities

Government agencies have the enforcement power (IASB and FASB don't have)

- The Securities and Exchange Commission (***SEC***) in the U.S.
- The Financial Service Authority (***FSA***) in the U.K.

Most national authorities belong to the International Organization of Securities Commissions (***IOSCO***).

- Protect investors
- Ensure the fairness, efficiency, and transparency of markets
- Reduce systemic risk. (*Globalization of securities markets*)

SEC filings required

Form S-1

- Registration statement filed prior to sale of new securities.

Form 10-K

- Annual financial statements

Form 10-Q

- Quarterly financial statements

Form DEF-14A

- Proxy statements

Barriers to developing on universally accepted set of standards

- Different standard setting bodies and the regulatory authorities may disagree on particular item or issue.
- Business groups will be affected by changes in reporting standards.

Summary

- **Importance:** ☆
- **Content:**
  - The objective of financial reporting standards.
  - Standard-setting bodies and regulatory authorities.
  - The status of global convergence of accounting standards and ongoing barriers to developing one universally accepted set of financial reporting standards.
- **Exam tips:**
  - 辨析财务准则的制定机构和监管机构的职能差异。
  - 了解阻碍形成一个通用的财务准则的障碍。

IASB Conceptual Framework

Tasks:

- Describe the IASB conceptual framework.
- Describe IASB general requirements for financial statements.
- Describe IASB general features for preparing financial statements.

IASB conceptual framework

Framework of IASB

- The IASB framework includes:
  - Qualitative characteristics of financial statements
  - Specifies the required reporting elements
  - Constraints
  - Assumptions

IASB conceptual framework

Qualitative characteristics

Fundamental Characteristics
- Relevance
- Faithful Representation

SUPPORT

Enhancement Characteristics
- Comparability
- Verifiability
- Timeliness
- Understandability

Constraint
- Cost (cost/benefit considerations)

Underlying assumption
- Accrual basis
- Going concern

Performance
- Income
- Expense
- Capital maintenance
- Past cash flows

Financial position
- Assets
- Liabilities
- Equity

IASB conceptual framework

Qualitative Characteristics: *two fundamental characteristics*

- **Relevance**
  - Information is relevant if it would potentially affect or make a difference in user's decisions. *If omission or misstatement of information could influence decisions*, it is considered relevant.
- **Faithful representation**
  - Information that is *faithfully representative* is complete (all information necessary is depicted), neutral (without bias), and free from error.

IASB conceptual framework

Four characteristics that *enhance* relevance and faithful representation:

- ***Comparability***
  - Financial statement presentation should be *consistent* among firms and across time periods.
- ***Verifiability***
  - Independent observers, using the same methods, obtain similar results.

IASB conceptual framework

Four characteristics that *enhance* relevance and faithful representation: (cont.)

- ***Timeliness***
  - *Information is available* to decision makers before the information is stale.
- ***Understandability***
  - Can understand the information the statements with a *basic accounting knowledge.*

IASB conceptual framework

Required Reporting Elements

- *Assets*
- *Liabilities*
- *Equity*
- *Revenue*
- *Expense*

IASB general requirements for financial statements

Required financial statements

- Balance sheet
- Statement of *comprehensive income*
- Cash flow statement
- Statement of changes in owners' equity
- Footnotes

IASB general requirements for financial statements

Principles for preparing financial statements

- ***Going concern basis***
  - Assume *the firm will continue to exist* unless its management intends to (or must) liquidate it.
- ***Accrual basis of accounting***
  - Accrual basis of accounting is used to prepare the financial statements other than the statement of cash flows.

IASB general features for preparing financial statements

Fair presentation

- Faithfully representing the effects of the entity's transactions and events according to the standards for recognizing assets, liabilities, revenues, and expense.

Consistency

- Consistency between periods in how items are presented and classified, with prior-period amounts disclosed for comparison.

IASB general features for preparing financial statements

Materiality

- Financial statements should be free of misstatements or omissions that could influence the decisions of users of financial statements.

Comparative information

- Comparative information for prior periods should be included.

IASB general features for preparing financial statements

Aggregation

- Aggregation of similar items and separation of dissimilar items.

No offsetting

- No offsetting of assets against liabilities or income against expenses unless a specific standard permits or requires it.

Reporting frequency

- Reporting frequency must be at least annually.

The structure and content of financial statements

Classified balance sheet

- A classified balance sheet showing *current and non-current assets* and liabilities.

Minimum information

- Minimum information is required on the face of each financial statement and in the notes.

Comparative information

- Comparative information for *prior periods* should be included.

Coherent financial reporting framework

Transparency

- Full disclosure and fair presentation create transparent.

Comprehensiveness

- An effective financial reporting framework is based on principles that are universal enough to provide guidance for recording both existing and newly developed transactions.

Consistency

- Similar transactions should be accounted for in a similar manner regardless of industry company size, geography or other characteristics.

Barriers to a Single Framework

Valuation

- Historic cost → minimal judgement (***Reliable***)
- Fair value → considerable judgement (***Relevant***)
- Both IASB and FASB recognize that some elements should be measured at fair value.
- ***Standard setting***
  - Principles – based → IFRS
  - Rules – based → GAAP
  - Objectives – based → GAAP

Barriers to a Single Framework

Measurement

- Asset/Liability approach B/S
- Revenue/Expense approach I/S
- Standards regarding one statement will have an effect on the other.
- Standard writers focus on Asset/Liability approach.

Summary

- Importance: ☆☆
- Content:
  - International Accounting Standards Board's conceptual framework, including the objective and qualitative characteristics of financial statements.
  - General requirements for financial statements under IFRS.
- Exam tips:
  - 了解国际准则框架的内容（质量特性，两个假设）。
  - 了解国际准则框架唯一性的障碍（估值标准，准则设立）。

Income Statement Format and Components

Tasks:

- Describe the components of the income statement and alternative formats of that statement.
- Describe general principles of revenue recognition and accrual accounting.
- Distinguish between the operating and non-operating components of the income statement.

Income Statement Format and Components

Net income = revenues - ordinary expenses + other income
- other expense + gains – losses

- ***Revenues*** are the amounts reported from the sale of goods and services in the normal course of business.
  - Revenue less adjustments for estimated returns and allowances is known *as net revenue*.
- ***Expenses*** are the amounts incurred to generate revenue and include cost of goods sold, operating expenses, interest, and taxes.
  - Expenses are grouped together by their *nature or function*.

Expenses grouped by nature or function

By nature

- Presenting all depreciation expense from manufacturing and administration together in one line of the income statement.

By function

- Combining all costs associated with manufacturing (raw materials, depreciation, labor, etc.) as a cost of goods sold.

Multi-step I/S VS Single-step I/S

Multi-Step I/S ($)	
Revenue	5000
Cost of Good Sold (COGS)	(2000)
Gross Profit	3000
SG&A	(1000)
EBIT	2000
Interest Expense	(500)
Earning Before Tax	1500
Tax Expense	(300)
Net Income	1200

Single-Step I/S ($)	
Revenue	5000
Total Revenue	5000
Purchase	(1800)
Marketing Expense	(800)
Depreciation	(400)
Interest Expense	(500)
Tax Expense	(300)
Total Expense	(3800)
Net Income	1200

Income Statement Format and Components

Income Statement
Net Revenue
- Cost of Good Sold (COGS)
Gross Profit
- SG&A
Operating Income
- Other Gain or Loss (Non Operating Item)
EBIT
- Interest Expense
Earning Before Tax

Income Statement (cont...)
Earning Before Tax
- Tax Expense
Net Income (Continuing Operations)
- Income from Discontinued Operation (Net of Tax)
- Extraordinary Items (Net of Tax)
Net Income

Income Statement Format and Components

Unusual or infrequent items *(nonrecurring items)*

- Reported "***above the line***" and presented on a pretax basis.
  - G/L from the sale of assets or part of a business.
  - Impairments, write-offs, write-downs, and restructuring costs.

Extraordinary items *(US GAAP only, presented on net of tax)*

- Loss from expropriation of assets.
- Gains or losses from early retirement of debt.
- Uninsured losses from natural disasters.

Discontinued operations *(presented on net of tax)*

- ***Next Slide***

Discontinued operations

Phaseout Period

Measurement date *Actual disposal date*

- **Measurement date**
  - The date when the company develops a formal plan for disposing of an operation.
- **Actual disposal date**
  - The date when the company actually finish the disposal.
- **Loss or gain on discontinued operation**
  - Any loss or gain during the phase out period should be recognized below the Line
- Any loss or gain on the sale of the business should be recognized above the line

Accrual accounting & Revenue Recognition

Accrual method of accounting

- Revenue is recognized when earned and expenses are recognized when incurred.
- Accrual accounting does not necessarily coincide with the receipt or payment of cash.

Accrual accounting & Revenue Recognition

According to IASB

- For sale of goods, revenue is recognized when:
  - The risk and reward of ownership is transferred.
  - There is no continuing control or management over the goods sold.
  - Revenue can be reliably measured.
  - There is a probable flow of economic benefits.
  - The cost can be reliably measured.
- For services rendered, revenue is recognized when:
  - The amount of revenue can be reliably measured.
  - There is a probable flow of economic benefits.
  - The stage of completion can be measured.
  - The cost incurred and cost of completion can be reliably measured.

Accrual accounting & Revenue Recognition

According to FASB

- Revenue is recognized in the I/S when ***realized*** or ***realizable*** and ***earned***.

According to SEC

- There is evidence of an arrangement between the buyer and seller.
- The product has been delivered or the service has been rendered.
- The price is determined or determinable.
- The seller is reasonably sure of collecting money.

Summary

- **Importance:** ☆☆
- **Content:**
  - Components of the income statement and alternative presentation formats of that statement.
  - General principles of revenue recognition and accrual accounting.
- **Exam tips:**
  - 了解利润表的格式以及包含的各项科目。
  - 了解三个non-recurring items科目的特征。
  - 了解收入确认的原则。（IFRS，GAAP，SEC）

Accounting for Long Term Contract

Tasks:

- Describe general principles of revenue recognition for long term contract in both U.S. GAAP and IFRS.

Long term contract

Percentage of completion method

- Used for long-term projects when there is a *contract* **and** there are reliable estimates of the *revenues, costs and completion time*.
  - An engineering estimate or physical milestone.
  - The ratio of incurred costs to the total estimated cost.

Completed contract method

- Used for long-term projects when there is *no contract* **or** estimate of *revenues/costs are unreliable.*
  - There is evidence of an arrangement between the buyer and seller.

Revenue recognition between IFRS & GAAP

Long term contract

- If the outcome of a long-term contract can be reliably estimated the percentage of-completion method is used under both IFRS and U.S. GAAP.
- If the firm cannot reliably measure the outcome of the project.
  - GAAP: Using *completed-contract method*
  - IFRS: Revenue is recognized to the extent of contract costs, costs are expensed. Profit is recognized only at completion.
- If a loss is expected, the loss must be *recognized immediately* under IFRS and U.S. GAAP.

POC & CC method (US GAAP)

Assume that ABC construction company has a contract to build a ship for $1,000 and a reliable estimate of the contract's total cost is $800. Project costs incurred by ABC are as follows:

Year	2011	2012	2013	Total
Cost	$400	$300	$100	$800

Determine ABC's net income from this project for each year using the percentage – of – completion and completed contract methods.

POC & CC (US-GAAP)

Percentage of completion

Year	2011	2012	2013	Total
Revenue	$500	$375	$125	$1000
Expense	($400)	($300)	($100)	($800)
Net income	$100	$75	$25	$200

Completed contract method

Year	2011	2012	2013	Total
Revenue	-	-	$1000	$1000
Expense	-	-	($800)	($800)
Net income	-	-	$200	$200

POC vs. CC

Impact on financial statements

F/S	Items	POC	CC
CF/S	Cash flows	Same	Same
Income Statement	Income Volatility	Less	Greater
	Net income	Greater	Less

Installment contract

Installment sales method

- Used when *no way* to estimate the likelihood of collecting the proceeds *but* costs of the goods and services can be reliable measured.

Cost recovery method

- Used when costs of goods and services cannot be reliable measured and *uncertainties of* collection proceeds.

Revenue recognition between IFRS & GAAP

Installment contract

- If the outcome of the project *cannot be reliably estimated*, revenue recognition under IFRS is similar to the *cost recovery* method.
- Under IFRS, the discounted *present value* of the installment payments is recognized at the time of sale.
- The difference between the installment payments and the discounted present value is recognized as *interest* over time.

Installment & Cost recovery method (US GAAP)

Assume that ABC property company sells a piece of land for $1,000. The original cost of the land was $800. Collections received by ABC for the sale are as follows:

Year	2011	2012	2013	Total
Collection	$400	$400	$200	$1000

Determine ABC's profit under the installment and cost recovery methods.

Installment & Cost recovery (US GAAP)

Installment method

Year	2011	2012	2013	Total
Revenue	$400	$400	$200	$1000
Expense	($320)	($320)	($160)	($800)
Net income	$80	$80	$40	$200

Cost recovery method

Year	2011	2012	2013	Total
Revenue	$400	$400	$200	$1000
Expense	($400)	($400)		($800)
Net income	-	-	$200	$200

Installment vs. Cost recovery

Impact on financial statements

F/S	Items	Installment	Cost recovery
CFS	Cash flows	Same	Same
Income Statement	Income Volatility	Less	Greater
	Net income	Greater(earlier)	Less

Implications for Analysis

Review revenue recognition policies in footnotes

- Earlier revenue recognition ➡ Aggressive
- Later revenue recognition ➡ Conservative

Aggressive accounting policies means increase the assets, revenue and decrease liabilities and expense.

Summary

- Importance: ☆☆☆
- Content:
  - Accounting for long-term contracts, installment sales.
- Exam tips:
  - 计算美国准则下两大类长期合同的收入，费用及利润。
  - 定性辨析采用不同的收入确认方法会如何导致财务报表发生改变。

Barter Transaction， gross or net reporting of revenue and implications for analysis

Tasks:

- Describe the rules of barter transactions, gross and net reporting of revenue.
- Describe general principles of expense recognition and implications of expense recognition choices for financial analysis.

Revenue Recognition Barter transaction

Barter transaction

- **Barter transaction** means two parties exchange goods or services *without cash payment.*
- **Round-trip transaction** means the sale of goods to one party with the simultaneous purchase of *almost identical goods* from the same party.

Barter transaction under GAAP & IFRS

Under U.S. GAAP

- A barter transaction can be recognized at *fair value* only if the firm has *historically* received cash payments for such goods and services and can use this historical experience to determine fair value.

Under IFRS

- Revenue from barter transactions must be based on the fair value of revenue from *similar nonbarter transactions with unrelated parties*.

Gross vs. Net reporting of revenue

Gross and Net Reporting of Revenue

- Under **gross revenue reporting,** the selling firm reports sales revenue and cost of goods sold separately.
- Under **net revenue reporting,** only the difference in sales and cost is reported.

Gross reporting will report a higher revenue and same profit .

Gross vs. Net reporting of revenue

According to U.S. GAAP The firm reports gross revenue only:

- Be the primary obligor under the contract.
- Bear the inventory risk and credit risk.
- Be able to choose its supplier.
- Have reasonable latitude to establish the price.

Example: The ticket price is $10,000, and the travel agent receives a $1,000 commission.

- Using *gross reporting*, the travel agent would report $10,000 of revenue, $9,000 of expense, and $1,000 of profit.
- Using *net reporting*, the travel agent would simply report $1,000 of revenue and no expense.

Expense recognition

Accrual basis *(Matching Principle)*

- Match costs against the associated revenues (E.G. COGS)

Period expenses

- Expenditures less directly matching the timings of revenues .
  Eg: Admin cost

Analysis implications

- Inventory valuation
- Warranty expense
- Depreciation & Amortization
- Doubtful debt provisions

Estimates and assumptions involved in these expense

Changes in accounting standards

Change in accounting principle

- Requires *retrospective* application.
  (Eg: LIFO to FIFO, cost basis to fair value)

Change in accounting estimate

- Should be applied *prospectively* and *disclosed in footnotes* (Eg: Change in the estimated useful life of a depreciation asset).

Prior-period adjustment

- Requires *restatement* of prior period financial statements if change *incorrect* accounting method.

Summary

- **Importance:** ☆☆
- **Content:**
  - Accounting for barter transactions, gross and net reporting of revenue.
  - Implications of expense recognition choices for financial analysis.
  - financial reporting treatment and analysis of changes in accounting policies.
- **Exam tips:**
  - 辨析易货交易，了解收入确认的原则。
  - 了解费用确认的原则，以及一些分析运用。(费用确认主要在下一个SESSION中提到，此处只是简单介绍。)

Basic EPS & Dilutive EPS

Tasks:

- Describe how earnings per share is calculated.
- Distinguish between dilutive and antidilutive securities, and describe the implications of each for the earnings per share calculation.

Earnings per share

EPS is the most commonly used corporate profitability performance measures for publicly-traded firms.

- Basic EPS
- Dilutive EPS

A *simple capital structure* contains no potentially dilutive securities.

- Firm reports only basic EPS.

A *complex capital structure* contains potentially dilutive securities.

- Firm must report both basic and dilutive EPS.

Basic EPS

$$\text{Basic EPS} = \frac{\text{NI} - \text{Div}_{\text{preferred stock}}}{\text{Weighted average number of common shares outstanding}}$$

Weighted average number of common share outstanding

- New issue, repurchase is *weighted by time (days or months)*
- Stock dividend/split is *not weighted by time*, instead it should *adjust the number of common share* which exist before the stock dividend or split.
  (Eg: 3-for-2 split: two shares split to three shares)