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Ethical & Professional Standards and Financial Statement Analysis
CFA Level I 2003

Review Notes

Study Sessions 1, 7, 8, 9 & 10

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ETHICAL & PROFESSIONAL STANDARDS
&
FINANCIAL STATEMENT ANALYSIS
CFA LEVEL I B 2003

REVIEW NOTES

STUDY SESSIONS 1, 7, 8, 9 & 10

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Note to CFA Level I Candidates: These study notes are intended to be a supplement to, and not a substitute for, the assigned candidate readings in Ethical and Professional Standards and Financial Statement Analysis. Please read the assigned candidate readings for the study sessions before we meet to discuss them. Also, please bring the assigned candidate readings to the appropriate study session.

Ethical and Professional Standards

Ethical and professional standards have been assigned one study session for the 2003 CFA Level I Exam. Reading assignment material is found in the *Standards of Practice Handbook* (8th edition). In past years, Level I candidates have been responsible for the material in the *AIMR Performance Presentation Standards Handbook* (2nd edition). For 2003, this source of readings and questions has been replaced by two new Level I candidate readings: *Global Investment Performance Standards and Global Investment Performance Standards - Level I Workbook.* These global standards (GIPS) have been covered previously in Level III only as part of the Portfolio Management area, but given their acceptance world-wide, the examiners have concluded that a basis understanding of GIPS is necessary for Level I candidates.

Ethical and professional standards play an integral role in establishing and maintaining the professionalism of financial analysts and in enhancing public trust. Historically, questions in the area of ethical and professional standards have required a detailed knowledge of the *Handbook and Standards.* The Level I Study Guide indicates that 15% of the questions on the 2003 exam will come from this area. Although only one study session has been assigned to the topic of ethical and professional standards in the 2003 Study Guide, it entails a significant amount of material. One principle, in particular, fiduciary responsibility, is emphasized again and again at all 3 levels. Candidates should be certain to gain an in-depth appreciation of AIMR=s ACode of Ethics@, AStandards of Professional Conduct,@ AStandards of Practice,@ an awareness of the AGlobal Investment Performance Standards@, and an understanding of the three primary aspects of fiduciary duty. The depth of knowledge of these areas - Standards, performance, and fiduciary duty - is expected to increase as the candidate progresses through the CFA program. Since Level I is the most basic level, candidates are expected to have a basic knowledge of these areas.

Level I exam questions in the ethics section are most likely to question knowledge/recognition of the standards (including the number and title) and an understanding of the concepts involved, as well as their application. The AIMR has been specifically cited by the SEC for its work in developing the Performance Presentation Standards and, more recently, the development of Global Investment Performance Standards. Therefore, candidates should understand the underlying reasons for this support and the importance of the SEC=s endorsement.

Standards of Practice Handbook

The AIMR *Standards of Practice Handbook* contains the AIMR Code of Ethics and Standards of Professional Conduct. The Handbook also addresses the application of the Code and Standards by discussing the purpose and scope of each standard, provides practical illustrations describing their application to factual situations, and provides compliance procedures. Developing an understanding of the Code and Standards will enable securities analysts to make ethical decisions that are in the best interests of their clients and employers and to accept responsibility on behalf of the investment profession. This conduct is crucial for maintaining public trust.

Code of Ethics

The AIMR Code of Ethics consists of four statements describing the conduct of the ethical financial analyst. Members of the Association for Investment Management and Research shall:

X Act with integrity, competence, dignity, and in an ethical manner when dealing with the public, clients, prospects, employers, employees, and fellow members.
X Practice and encourage others to practice in a professional and ethical manner that will reflect credit on members and their profession.
X Strive to maintain and improve their competence and the competence of others in the profession.
X Use reasonable care and exercise independent professional judgment.

Standards of Professional Conduct

The Standards of Professional Conduct embrace the ideals of the Code of Ethics and provide operational guidance to achieve the desired behaviors embodied in the Code. The five standards cover: (1) Fundamental Responsibilities; (2) Relationships with and Responsibilities to the Profession; (3) Relationships with and Responsibilities to the Employer; (4) Relationships with and Responsibilities to Clients and Prospects; and (5) Relationships with and Responsibilities to the Investing Public. The Handbook provides practical applications, examples, and cases studies of compliance with the Standards.

Standard I: Fundamental Responsibilities
A - Knowledge
B - Honor Code Responsibilities

Standard II: Relationships with and Responsibilities to the Profession
A - Designation
    1 - dignified manner
    2 - encourage use
    3 - candidate=s participation

B- Professional Misconduct
C- Prohibition of Plagiarism

Standard III: Relationships with and Responsibilities to the Employer

A - Obligation to Inform
- 1 - in writing
- 2 - provide copy

B - Duty

C - Disclosure of Conflicts
- 1 - disclose ownership interests
- 2 - comply with prohibitions

D - Disclose Additional Compensation

E - Supervisory Responsibilities

Standard IV: Relationships with and Responsibilities to Clients and Prospects

A - Investment Process
- 1 - representations
  - a - diligence & thoroughness
  - b - reasonable & adequate basis
  - c - no misrepresentations
  - d - maintain records
- 2 - research reports
  - a - reasonable judgment
  - b - fact vs. opinion
  - c - investment characteristics
- 3 - independence and objectivity

B - Interactions with Clients and Prospects
- 1 - fiduciary duties
- 2 - portfolio recommendations & actions
  - a - client=s objectives
  - b - evaluate suitability
  - c - fact vs. opinion
  - d - disclose process
- 3 - fair dealing
- 4 - priority of transactions
  - a - direct or pecuniary interest
  - b - voting power
  - c - disposition
- 5 - preservation of confidentiality
- 6 - no misrepresentations
  - a - capabilities
  - b - qualifications
  - c - credentials
- 7 - conflicts
- 8 - referral fees

Standard V: Relationships with and Responsibilities to the Investing Public
A - Material Nonpublic Information
B - Performance Presentation
1 - misrepresentations
2 - fair, accurate & complete presentation

Global Investment Performance Standards

At Level I, the Candidate is responsible for the material from the Global Investment Performance Standards (GIPS). These standards provide AIMR=s insights into the fair disclosure of promotional information given by firms to their clients and potential (prospective) clients. AIMR=s stated goals of GIPS are (1) to obtain worldwide acceptance of a standard for calculating and presenting investment performance; (2) to ensure accurate and consistent investment performance data; (3) to promote fair, global competition without creating barriers to entry; and (4) to bolster the notion of self-regulation on a global basis. The PPS are voluntary standards for the international investment industry. However, to claim compliance with the standards, the presentation should be verified by an independent party. Some of the standards are mandatory, while others remain voluntary. Candidates should know the major sections of the PPS shown below.

The AGlobal Investment Performance Standards@ (GIPS) are organized into five major sections: (1) Input Data; (2) Calculation Methodology; (3) Composite Construction; (4) Disclosures; and (5) Presentation and Reporting . The GIPS have an impact on firms, AIMR members, CFA charterholders, CFA candidates, and current and prospective clients. The primary beneficiaries of the GIPS are current and prospective clients of investment management firms who are attempting to compare the investment performance among firms.

Both the Standards and the GIPS have detailed information of which all candidates **must** be aware. There is no substitute for memorizing the subheadings of the five Standards. At Level I candidates should be able to distinguish between those standards that are mandatory (requirements) and those that are recommendations (optional, but encouraged). One important recommendation is that firms verify their claims that performance is in compliance with the standards. The verification must be performed by an independent third party. Although verification is currently optional, it is expected to become mandatory in the future. Only two options exist: either a presentation is in full compliance or it is not in compliance.

Fiduciary Responsibility

The ethics portion of the CFA material relies on the concept of **fiduciary duty** The three basic parts of fiduciary duty are:

- Responsibility to Client
- Knowledge, Care and Diligence
- Administrative Responsibilities

The concept of fiduciary responsibility is central to all of the professional ethics material. Ethical behavior is required because of a CFA=s fiduciary responsibility. The evolution of this responsibility should be understood by exam candidates. Years ago, when the managers first became responsible for the finances of others, English courts codified the responsibility of a prudent caretaker. This responsibility evolved over

many years and through many court cases into the present day concept of fiduciary duty. The three basic concepts cited above represent the current evolution of this basic tenet. Each concept should be understood separately and candidates should be able to grasp why each part supports the overall concept.

Fiduciary Duty - Responsibility to Client

The first fiduciary responsibility**,** *responsibility to client,* has been highlighted by court cases, actions of the Securities and Exchange Commission, and the AIMR. AIMR uses the phrase *Aclient first@* to describe this concept, and it stands as the central precept of the CFA profession. The first and overriding responsibility any financial professional has is to the participants in the market - - their clients. This primary obligation is required in order to maintain the perception and reality that the market is a fair game and thus encourage the broadest possible participation in the capital allocation process. The premise of the U.S. capital market is that broad participation in the market will result in the most efficient allocation of financial resources and, therefore, will lead to the best operation of the world-wide economy. Putting the Aclient first@ actually protects and promotes the entire financial community and, therefore, society as a whole.

The concept is operationalized by requiring that financial professionals place the interests of their clients ahead of all other concerns. Responsibilities to employers, colleagues and selves are all placed in a descending order of importance so that the financial markets can be best served. All relevant information must be disclosed to clients and all decisions must be made with their interests first in mind. The standards support and amplify this basic concept.

Insider trading is also specifically precluded by this concept. Insider trading is the use of information not available to the general public in a manner which will secure an unfair advantage for some specific party. Since the objective of the financial market is to incorporate all information toward the efficient allocation of resources, the use of nonpublic information to gain an unfair advantage is counter to the general objective. Insider trading is an area of specific concern to AIMR, and candidates should be able to define such activity, identify situations in which it is described and provide remedies to prevent it from occurring in the future.

Fiduciary Duty - Knowledge, Care and Diligence

The second fiduciary responsibility, *knowledge, care and diligence,* concerns the technical and behavioral responsibilities of the financial professional. *Knowledge* requires that investment managers and researchers have the necessary skills to discharge their duties. Financial professionals cannot be experts in all aspects of the complex financial markets that exist today and they should not try to represent themselves as such experts. However, CFAs and CFA candidates should strive to expand their expertise in areas which will best serve their clients. A lack of knowledge or expertise is, in itself, not a violation of ethical guidelines; however, continuing to do business in areas where expertise is required or not disclosing a lack of knowledge is an ethical violation. CFAs must make decisions and give advice only in areas which they understand fully the implications of their actions.

Care is the quality that financial professionals must exercise when making financial decisions and taking actions on those decisions. The concept of prudence, or the Aprudent man rule@, is key to this responsibility. Financial professionals must act in a manner in which their decisions and actions are in the best interests of their client=s requirements. The Aprudent man rule@ also relates to the obligation of Aclient first,@ but in this context it highlights the responsibility of principal retention of the client=s portfolio, and has evolved to include modern portfolio diversification. Care, or prudence, therefore, introduces a responsibility for financial professionals to know the investing characteristics and desires of their clients, and act in a manner that best promotes those concerns.

Diligence requires financial professionals to discharge their duties in a timely manner and to maintain full records of decisions and actions. Timeliness is necessary so that opportunities will not be lost due to inaction. Violations of ethical behavior can be caused by inaction when action should have been taken. This responsibility also requires full disclosure of actions undertaken by financial professionals. Full disclosure means that all information necessary for investors to make the best decision is publicly available. On a more individualized basis, full disclosure means that financial professionals must inform clients and potential clients of all information which affects or could affect the client=s reliance on the actions of the financial professional (such as conflicts of interest, referral fee arrangements, and the process by which investment decisions are made).

Fiduciary Duty - Administrative Responsibilities

The third aspect of fiduciary responsibility, *administrative responsibilities*, is of particular interest to Level III candidates, but Level I candidates should still be aware of these responsibilities. Level I candidates are considered to be in positions where they have few supervisory responsibilities, but since they are required to be in an institution which abides by AIMR=s guidelines, they should be aware of these responsibilities. Controlling and monitoring client expenses, internal control and the establishment of proxy voting rules are all examples of administrative responsibilities for which a CFA needs to be prepared.

Controlling costs and soft-dollar rules are basic applications of the administrative responsibilities of a financial professional. Since a financial professional has the objective of putting the client=s interests first, it is obvious that any costs passed on to clients be incurred wisely. This does not mean that the least expensive alternative should always be used, but it does mean that a cost-benefit analysis be considered for each expense. If certain brokerage fees are higher with one broker than with another broker, but the services provided by the more expensive broker more than compensate for the increased fees, the more expensive basic fee may be in the best long-term interest of the client. Soft dollar considerations include the assessment of how considerations received by an investment professional should be used. Again, the client=s interests come first and any considerations received should be used in the best interests of the client.

Investment firms must also establish proxy voting procedures to ensure their administrative responsibilities are fulfilled. Avoiding voting in proxy fights is an error of omission (inaction) that is not in the best interest of the client. Proxy votes are required so that the client=s investment goals and objectives can best be attained. Making informed proxy vote decisions requires that the investment professional considers the options available and then takes actions to help ensure the best outcome for the client.

Separation of information in an investment firm (Fire Walls) is required so that confidentiality is not breached. An investment professional is required not to attain insider information which can be used to give any parties an unfair advantage. Therefore, propriety information that is necessary to perform investment services must be isolated within the investment banking portion of an investment firm.

Ethics Summary

In summary, candidates must be able to master the five following aspects of AIMR material:

1. Know the *Standards of Professional Conduct*.
2. Know the general requirements of the *Global Investment Performance Standards.*
3. Understand the need for and importance of the *fiduciary duties* of investment professionals.

Overview B Financial Statement Analysis

The 2003 Study Guide for CFA I allocates four study sessions to the topic of Financial Statement Analysis. They are: (1) Study Session 7 B Financial Statement Analysis: Basic Concepts; (2) Study Session 8 B Financial Statement Analysis: Financial Ratios and Earning per Share; (3) Study Session 9 B Financial Statement Analysis: Assets; and (4) Study Session 10 B Financial Statement Analysis: Liabilities.

All of the readings for this area of the exam are from *The Analysis and Use of Financial Statements*, 2nd edition, Gerald I White, Ashwinpaul C. Sondhi, and Dov Fried (John Wiley & Sons, 1998) [WSF], with the exception of one candidate reading (ADilutive Securities and Earnings per Share@, which is an excerpt from Chapter 17 of *Intermediate Accounting*, 9th edition, by Donald E. Kieso and Jerry J. Weygandt (John Wiley & Sons, 1998) [KW] and one chapter in *Investment Analysis and Portfolio Management*, 6th edition, Frank K. Reilly and Keith C. Brown (Dryden, 2000) [KB] entitled AAnalysis of Financial Statements.@

Financial accounting concepts and financial statement analysis are important topics on the Level I exam. The 2003 Study Guide indicates that approximately 28% of the Level I exam questions will come from these topics. Level I candidates are expected to be able to demonstrate a working knowledge of financial accounting procedures and the rules that govern disclosure. The emphasis is on basic financial statements (balance sheet, income statement, statement of cash flows, and statement of stockholders= equity) and how alternative accounting methods (e.g., LIFO vs. FIFO) affect these statements.

Knowledge of the mechanics of accounting (debits and credits) is assumed in the Candidate Reading Assignments and may be required in answering questions on the exam. Candidates should also have an understanding of the construction of and interrelationships among the balance sheet, income statement, statement of cash flows, and statement of stockholders= equity, as well as a working knowledge of basic accounting and business vocabulary related to financial statements and financial reporting.

If you are **unfamiliar** with basic accounting concepts and terminology, **you should read the preliminary materials assigned for Study Session 7.** Review topics assigned from *Financial Accounting*, 7th edition, Belverd E. Needles, Jr. and Marian Powers (Houghton Mifflin, 2001) are: Measuring Business Income; Financial Reporting and Analysis; Short-Term Liquid Assets; Inventories; Current Liabilities and the Time Value of Money; Long-Term Assets; Long-Term Liabilities; Contributed Capital; The Corporate Income Statement and the Statement of Stockholders= Equity; and The Statement of Cash Flows. You should also review Chapter 1 B AFramework for Financial Statement Analysis B in WSF.

We will ***not*** review the preliminary readings during our review session B you need to conduct this review on your own so that we can focus our attention and efforts on the main reading assignments for these four study sessions.

Accounting Basics

The United States has the most complex financial reporting system in the world. It is comprised of detailed accounting principles and rules, most of which require supplementary disclosure in the footnotes to the financial statements. In order to provide external users with information that can be used to make rational economic choices, U.S. accounting rules are based on the *accrual basis of accounting*. The accrual basis of accounting, in general, results in revenue recognition (recording) when the earnings process is complete. Similarly, expenses, to the extent possible, are matched with the revenue that they help generate in the same accounting period in which the revenue is recognized (*matching concept*).

The accrual basis of accounting differs from the cash basis of accounting B some economic events are recorded in the accounting records before the cash inflow or cash outflow occurs, and not all cash inflows or cash outflows result in revenue or expense items C they may be deferred as assets or liabilities at the time the cash flow takes place and be reflected in the income statement in a later accounting period.

The accrual basis of accounting relies on the use of the double-entry method of recording transactions B debits and credits B and on the use of the following basic accounting equations:

Assets = Liabilities + Owners= Equity, and

Income = Revenues B Expenses

The second equation can be considered an extension of the owners= equity account, since at the end of each accounting period, the revenue and expense accounts of an entity are closed to the retained earnings account of owners= equity.

Most entities use a *classified balance sheet* format and a *multi-step income statement* format. This balance sheet format results in assets being reported as either current (cash, accounts receivable, inventory, and other items that will be converted into cash within the next year or the next operating cycle, whichever is longer) or non-current (investments, property, plant and equipment, intangibles). Similarly, liabilities are classified as either current (accounts payable, wages payable, current portion of long-term debt, and any other obligations that will require the use of cash during the next year or next operating cycle, whichever is longer) or non-current (long-term debt, deferred taxes). The owners= equity accounts are broken down between contributed capital (common stock, preferred stock, additional paid-in capital) and earned capital (retained earnings).

The income statement format provides information about operating income or loss, non-operating income or loss, and any unusual or infrequent nonrecurring items (extraordinary gains and losses, discontinued operations, and the cumulative effect of changes in accounting principles). U.S. entities are also required to disclose basic and diluted earnings per share along with reported income, as well as a per share impact from extraordinary items, discontinued operations and changes in accounting principles, if any are present.

Balance Sheet

The balance sheet is a collection of the basic accounting equation components. Asset categories include Acurrent assets,@ Ainvestments,@ Aoperational assets (or property, plant and equipment),@ Aintangible assets@ and Aother.@ Current assets are the things of value (resources) controlled by a company which will be turned into cash within the next year or next operating cycle (whichever is longer). Investments are assets which represent ownership of the financial instruments B debt and equity B of another company. Operational assets are the long-term assets used in the business (the equipment which makes the product, the buildings in which the equipment is used and the land upon which the buildings stand). Intangible assets are assets which have no physical substance, but derive their Avalue@ from the intangible right that they convey. Usually these are legal assets, like copyrights and patents, but sometimes they are conceptual assets, like goodwill. The Aother@ category of assets exists for those noncurrent assets that do not fit in one of the other four classifications. The CFA exam will not ask candidates about this category of assets.

Liabilities are amounts owed others (obligations of the entity). Current liabilities must be paid within one year and long-term liabilities will be paid in future periods of more than a year. An Aother@ category also exists for liabilities. Deferred taxes are included in this part of the balance sheet, and the CFA exam will have questions about this quasi-liability. (Income taxes and deferred taxes will be covered in a separate section of the review notes.)

Owner=s equity contains the balances equal to the amount of funds invested by the owners (contributed capital) and the funds earned and reinvested by the company over its entire existence (retained earnings). Contributed capital is split into common and preferred stock. All corporations must have common stock and, if a corporation issues (sells) other classes of common stock or preferred stock, it must be list each class separately. Retained earnings is the accumulation of all income ever earned and losses incurred by a company, less dividends, if any, paid out to owners. Retained earnings can be reduced by reserve accounts for foreign exchange adjustments or unrealized gains or losses on non-current investments. Retained earnings may also be reduced if a company buys back it own stock on the open market (treasury stock). Accounting principles do not allow such repurchases to be accounted for as an investment B it is actually a reduction in the number of shares of stock outstanding B so the retained earnings account is reduced by the cost of treasury shares.

Basic Equation

Assets = Liabilities + Owner=s Equity

- Current	- Current	- Contributions
- Investments	- Long-Term	- Retained Earnings
- PP&E	- Other	-Valuation adjustments
- Intangibles		
- Other		

Income Statement

The income statement is revenue less expenses. Some companies may present their earnings in this simple manner (known as a *single-stem format*), but most companies will show several steps of the earnings process. Cost of goods sold is subtracted from sales to show gross income in the first step of a *multi-step* income statement. Gross income is the earnings from the basic business process conducted by the company. After gross income, selling and administrative expenses are deducted and an operating income disclosed. Next, gains and losses from sideline (nonoperating) activities are added to or subtracted from operating income to produce earnings before interest and taxes (EBIT). Net interest (expense or income) is then subtracted or added to produce earnings before taxes and then taxes are deducted. The last step on the income statement includes reporting any nonrecurring events, such as gains or losses from discontinued operations, extraordinary events and/or the effect of changes in accounting principles. These last three items must be shown net of the related income tax effect (known as intra-period tax allocation, or allocation within the period).

At the bottom of the income statement, earnings per share (EPS) are disclosed. Basic and diluted EPS amounts must be disclosed if a corporation has a complex capital structure (i.e., any potentially dilutive securities are present), and the effects of any nonrecurring items must be disclosed separately.

Income Statement
Sales
<R&A>
Net Sales
<COGS>
Gross Income
<S,G&A>
Operating Income
Other +/-
EBIT
<Interest>
EBT
<Taxes>
EBDEC
+/- DEC
Net Income

Statement of Cash Flows

The cash flow statement has three sections: inflows and outflows from operations; inflows and outflows from investing activities; and inflows and outflows from financing activities. Cash flows from operations (CFO) measure the amount of cash generated or used by an entity as a result of its production and sale of goods and services. Operating cash flows include the cash actually received from customers during the year and the cash payments made for past current or future expenses during the current year. Operating cash outflows will, therefore, include current payments made for inventories even if the inventory was not sold during the current

year. Operating cash flows must be positive if the business is to succeed in the long-term. Short-term negative cash flows might exist early in a corporation=s life or if a new market is being explored, but these negative cash flows must turn around quickly, so that a corporation=s main business activities are generating a positive net cash flow.

Cash flows from investing activities (CFI) includes the purchase or sale of long-term assets. Cash spent on new operational assets, investments or intangibles is the outflow in this section. Inflows are cash receipts collected when those long-term assets are sold. Since most companies do not want to decrease in size, they should be buying more long-term assets than they sell. Companies also must replace existing assets that are used up, so cash flow from investing activities for a growing company should be negative.

Cash flows from financing activities (CFF) are the inflows from issuance of bonds or other debt or from selling stock. Cash outflows result from servicing these items -- repayments on debt, payment of dividends on stock, or purchase of treasury stock. These are activities that are dependent on the financial environment and the company=s strategy about external versus internal financing, so no particular direction of cash flows is necessarily desirable or predictable. Candidates should note that dividend payments are included as a CFF, but that interest payments are required to be treated as a CFO.

Statement of Cash Flows

From Operations

- Indirect	- Direct
. Net Income	. Cash from customers
. +/- Non-cash Items	. Cash expenses
. Change in Work. Cap.	

From Investing

- Plus Sale of L-T Assets
- Less Purchase of L-T Assets

From Financing

- Plus New Loans
- Plus Sale of Own Stock
- Less Loans Paid
- Less Purchase of Own Stock
- Less Cash Dividends Paid

Quick Assets

Quick assets consist of cash, short-term investments and accounts receivable -- items that are either cash or can be converted into cash in a relatively short period of time -- to satisfy current obligations. The CFA exam tends to ignore the first two quick assets and typically asks only a few questions about accounts receivable. The adequacy of the provision for bad debt is the primary point of interest to CFA candidates in this area. Comparisons of bad debt allowances on a percentage basis should be made and changes noted. Erosions of these percentages may indicate that the company is trying to overstate earnings and overstate the net realizable value of the accounts receivable by understating its estimated bad debts and allowance for doubtful accounts.

Accounts Receivable (A/R)
- Amounts Owed To Firm
- Allowance for Bad Debt = % of Gross A/R
OR
- Bad Debt Expense = % of credit sales

Inventories

Inventories are a major area of interest on the CFA level I exam. Candidates should know the difference between the LIFO and FIFO cost flow assumptions and should be able to trace the effects of these assumptions to earnings. Since LIFO is the assumption that old inventory cost is retained and new inventory cost is sold, in periods of rising prices LIFO will result in lower net income (and lower taxes). FIFO assumes the older inventory cost is sold first and the newer inventory cost is kept in the ending inventory balance. These two opposite cost flow assumptions are often and repeatedly tested on the Level I exam.

Inventory (during period of rising prices)

	LIFO	FIFO (and LIFO liquidation)
Inventory	Lower	Higher
Sales	Same	Same
COGS	Higher	Lower
EBT	Lower	Higher
Taxes	Lower	Higher
Net Income	Lower	Higher
Cash Flow	Higher *	Lower *
		* because of taxes paid

Inventory is also subject to a lower-of-cost-or-market valuation before the asset balance is reported on the balance sheet. Any decrease in inventory value is recognized at the year-end. However, holding gains are not recorded or disclosed.

Investments

Companies can invest in the debt and equity instruments of other companies. In fact, this is often a good idea. If a company knows it will have excess cash for a short period of time, it can invest that cash and obtain a return on its investment. If management intends to keep the investment for only a short period of time (less than one year) , the investment is classified as a current asset. If the investment will be kept for a longer period of time it is classified as a long-term Investment. These investments have different accounting rules which apply to their measurement. If an investment is held because it is normal for the company to hold investments in its business (banks, insurance companies, etc.), the investment is said to be a Atrading@ investment and must be valued at fair market value in the entity=s balance sheet. Any unrealized gains or losses due to changes in fair market value of these investments are reported as part of net income when the Amark-to-market@ valuation is made.
Debt securities of another entity owned by that reporting entity that the entity intends to hold until the debt matures are classified as Aheld to maturity@ investments. These are accounted for at cost, adjusting for any amortization of premium or discount and no unrealized gains or losses due to subsequent changes in market value are recorded in connection with these investments. All other investments are classified as Aavailable-for-sale@ investments and are adjusted to and reported at fair market value. Any unrealized gains or losses associated with these investments are reflected as an adjustment to owner=s equity - now through the Statement of Comprehensive Income.

Investments

- Trading = FMV, Unreal G/L on Income Statement
- Available-for-sale = FMV, Unreal G/L adj to Ret. Earn.
- Held-to-maturity = Cost, no adj. for FMV

There are additional accounting rules for very large investments in other companies. When one company buys more than 20% (but less than 50%) of the equity of another company, the investor must account for the investment using the Aequity@ method. If the ownership interest goes above 50%, the investor must Aconsolidate@ the investment, since it owns a controlling percentage of the equity of another entity.

Consolidations can apply either the Apurchase@ or Apooling of interests@ method. [Note: New business combinations can no longer be accounted for as a Apooling of interest@, effective fall of 2002. However, any combinations that were accounted for properly as poolings prior to that date will continue to be accounted for as poolings.] Fortunately, Level I candidates must only be aware of these different treatments for acquisitions and business combinations B in Level II you will learn these accounting methods in detail and be responsible for understanding the effects of these requirements.

Operational Assets

Operational assets consist of land (which is held at cost until sold); building and equipment, which are subject to depreciation; natural resources, which are subject to depletion; and intangible assets, which are subject to amortization. These assets are measured at Acost@ value, the cost the company had to pay to attain the asset.

This process of acquiring an operational asset is called capitalization.

Capitalizing Assets

- Costs added to PP&E
  - . Increases current Net Income + EPS
  - . Increases Assets (decrease ROA)
  - . Decreases future Net Income

OR

- Costs expensed (not added to PP&E)
  - . Decreases current Net Income + EPS
  - . Decreases Assets (increases ROA)
  - . No effect on future Net Income

The CFA Level I exam emphasizes the straight line (SL), double declining balance (DDB), and sum-of-the-year=s-digits (SYD) methods of depreciation, and the units of output method of depletion. Additions to these long-term assets are capitalized or added to the asset account. The full cost of acquisition should be capitalized, but companies do have some discretion over capitalizing some costs or including them as current year expenses. Interest on self-constructed assets is an example of this capitalization option.

Depreciation

- Estimates
  - . Economic Life
  - . Salvage Value (at conclusion of economic life)
- Depreciable Base = Cost - Salvage Value
- Book Value = Cost - Acc. Depr.
- Straight Line = DB/life
- Declining Balance = HC * (1/life*descriptor)
- SYD = DB * inverse year/tot. yrs.
- Declining Balance = Book Value * (1/life*descriptor)

The descriptor is the word preceding Declining Balance, for instance Double Declining Balance would mean two and 150% Declining Balance would mean one and a half (or 1.5).

Intangible assets are amortized over the shorter of their legal or economic lives. The lives of these assets are either well defined (patents, and copyrights have legally defined lives) or quite vague (such as goodwill). In the latter case, current accounting guidelines require assignment of an economic life to intangible assets of definite duration, which is typically shorter than the assets legal life. Goodwill is not permitted to be amortized. It must be assessed at each reporting date and, if impairment has occurred, it must be written down to its fair value.

Intangibles
- Cost only!
- Amortized
  - . over life
  - . no salvage
  - . SL method

Liabilities

Current liabilities include accounts payable, any other payables, current portions of long-term debt and any deposits held by the company. Since all of these will be paid in full, they are recorded at the amount due (i.e., the time value of money is ignored)
.

Current Liabilities (valued at amount owed)
- accounts payable = owed to suppliers
- notes payable
- taxes payable
- interest payable
- other payables

- current portion of long-term debt
  (due in next year)

Long-term liabilities consist of bonds payable more than one year in the future, lease commitments recorded by the capital lease method and pension liabilities. Such long-term liabilities are recorded at their present value B since settlement will occur in future accounting periods, the time value of money is important.

Bonds Payable = Long-Term Debts
- recorded at principal value
- portion due within one year
  listed as current liability
- length of duration and interest
  rate in footnote

Leases are rental contracts -- they convey the right to use property belonging to another over the term of the lease. The two major types of leases under U.S. accounting rules are operating leases and capital leases. Operating leases are accounted for as simple rental agreements and the expense is recognized when the asset is used and periodic lease payments are made. Capital leases are actually purchases of property in disguise. A leasehold operational asset and lease liability are recorded at the inception of a capital lease for the present value of the future lease payments. Corporate managers do not like capital leases, since the lease liability decreases slowly in the early years of the lease -- most of the payments in the early part of the lease are interest expenses B and the asset decreases quickly with the accelerated depreciation. Capital leases erode the debt-to-equity ratio, since the entity is required to record the long-term liability on its balance sheet.

Pensions are promises of future payments to employees for work done currently. The obligation that a company incurs for these promises is equal to the present value of the future promises. The liability is equal to the obligation less the amount of funds deposited into a pension trust (or plan) by the corporation. Level I candidates are not responsible for detailed knowledge regarding pension accounting B at Level II you will be expected to learn about pension accounting issues in detail.

Pensions = net present value of future payments promised to employees
- defined contribution = current cash paid
  . expense equals cash paid
- defined benefit = future promise
  . expense is estimate
  . liability equal to all unpaid expenses

Deferred Taxes

Deferred taxes are included as part of Aother liabilities.@ Deferred taxes are not a true liability since they are not due to the Internal Revenue Service (IRS) at the current time. The balance in the account will be paid to the IRS if the company continues to exist in the future and has future taxable income, but future tax avoidance strategies B e.g., continued investment in operational assets B may result in a growing deferred tax liability, which replaces the expired portion. Therefore, deferred taxes will often be a liability balance which continues to grow.

The balance in the deferred tax account is the difference between the IRS calculated liability and the accounting calculation of tax liability. Most often a long-term Aother@ liability will result, but in some instances a current asset, a current liability or a long-term asset balance will accrue. The calculations of deferred taxes are very complex and candidates typically are not asked to compute account balances. Instead, candidates should be aware that the long-term liability will Aturn around@ or decrease when the difference in accounting income and tax income decreases. Since most deferred taxes are a result of differences in depreciation calculations for tax purposes vs. accounting purposes, when the straight-line accounting depreciation begins to Acatch-up@ and overtake the accelerated tax depreciation, the deferred tax balance will Areverse@ and begin to decrease.

From an analyst=s point of view, the balance in the deferred tax account and the change in the balance from year to year is important. A long-term deferred tax liability actually indicates a good corporate tax strategy which delays tax payments. A decreasing deferred taxes liability indicates that the tax strategy is no longer effective, and that the taxes deferred in earlier years are being paid currently.

Other Liability Issues

The CFA exam sometimes asks questions about committed obligations (liabilities) that are **not reported as line items** in the financial statements. This means a business has avoided recording a liability and therefore improved its financial position. These types of liabilities are called off-balance sheet liabilities, and even though they may be technically in conformance with GAAP, they need to be recognized by a financial analyst and treated as an obligation of the entity B since an entity that uses off-balance sheet debt typically has an unrecorded obligation that requires future cash outflows, these obligations should be treated as recorded debt when computing ratios. Examples of off-balance sheet items are listed below.

Off-Balance Sheet Financing

- Operating Leases
- Sale and leasebacks
- Factored accounts receivable
- Buy or Sell Agreements
- Take-or-pay and throughput arrangements
- Commodity-linked bonds
- Joint ventures

Owner=s Equity

Owners= equity balances represent the contributions made to a business by its owners. Common stock, preferred stock, and additional paid-in capital are often the only accounts in this section of the balance sheet. Every corporation must sell common stock. This financial instrument allows the holder (owner) to vote in an annual election of board of directors who then run the corporation. The common stockholders are also entitled to any residual portion of funds which remain if and when the corporate assets are sold and debts paid. Since such liquidations rarely occur, the common stock has only a theoretical book value. However, the stock market does compute the common stock=s fair market value daily and this evaluation is the central point of equity analysis. Fair market value will differ from book value because the book values are often based on conservative measures of asset balances and because the market values reflect future growth potential.

Preferred stock is an equity instrument which sacrifices some ownership rights (usually voting rights) associated with common stock in exchange for a preference item (usually a set dividend rate). The additional paid-in capital represents any premium paid by initial stockholders above the par or stated value of the stock. Not all states require that a corporation establish a par or stated value for common stock. Thus, corporations that issue no-par stock have no Apaid in excess@ account.

Owners= Equity

- Common Stock
- Preferred Stock

- Capital Paid in Excess of Par
- Retained Earnings

Retained Earnings

Retained earnings is the owners= equity account that reflects the accumulated corporate earnings. Since the balance sheet is a statement of financial position at a specific point in time, the retained earnings account represents all the revenues earned and expenses spent over all the financial periods reported during the company=s existence. Any dividend payments made to stockholders are deducted from retained earnings, since these are earning not retained by the company, but instead are that portion of earnings distributed to the owners.

Retained earnings increases or decreases in any one period are the result of net income or loss, less dividends. Net income is simply revenues less expenses (any time expenses exceed revenues, a loss occurs). The decision to include revenues in any specific period is based on the revenue recognition concept. Revenue is generally recognized when it is earned and collection of the payment is reasonably estimable. Sometimes the revenue stream of a particular type of transaction results in early recognition or delayed recognition of revenue. For example, revenue may be recognized prior to sale or delivery when the earnings process is substantially complete and the proceeds from the sale can be reasonably measured (e.g., agricultural products). Obviously, early recognition of revenue will increase net income, so the accounting guidelines on this issue are very specific. Alternatively, the recognition of revenue may be delayed when significant uncertainties exist regarding collectibility (installment method or cost recovery method) or the estimation of remaining costs (percentage-of-completion vs. completed contract methods).

The timing of expense recognition is also critical to the earnings process. If expense recognition is deferred (delayed), net income for that accounting period will increase. If expenses are recognized early, net income will decrease. Ideally, expenses are matched with the revenue they help produce. This is often easy, as in the case when employees are paid for work they have done which produce sales in the present period. Sometimes expenses are difficult to match to a specific revenue, such as advertising costs, and may be expensed in accounting period in which incurred as a period cost. These difficulties contribute to making earnings measurement an inexact process.

The retained earnings section is also the section in which foreign currency exchange gains and losses and investment holding gains and losses are accumulated. These adjustments are not considered part of net income due to their long-term effect on an entity and are included as part of retained earnings in a reserve, or valuation, account. Retained earnings is also the section where treasury stock is recorded. A company which buys its own stock on the open market cannot record the purchase as an investment, so the cost of the purchase is recorded as a decrease to retained earnings. If the treasury stock is later reissued, the cash received increases assets and the treasury stock balance is reduced so that retained earnings is increased.

Retained Earnings
Cumulative Net Income kept by Company
+/- Foreign Exchange Gains/Losses
+/- Unrealized FMV Gains/Losses

Earnings Per Share

Note to Level I candidates: With the issuance of SFAS No. 128 B Earnings per Share B U.S. entities are required to change the method of calculating earnings per share that was required by APB Opinion No. 15 B Earnings per Share. As a result, the materials in WSF on pp. 172-179 are outdated and *should not be read.* Instead, please focus on Reading Assignment 2 in Study Session 8 B *Dilutive Securities and Earnings per Share* B which is an updated discussion of the calculation of earnings per share under the requirements of SFAS No. 128.

SFAS No. 128 requires all public companies with complex capital structures to provide dual presentation of basic earnings per share (EPS) and diluted earnings per share, effective calendar year 1998. This presentation replaces the dual presentation of primary EPS and fully diluted EPS required under APBO No. 15.

Candidates should be cautious when reviewing questions from past CFA exams that deal with EPS issues. The questions may have suggested solutions based on the superceded APB Opinion No. 15 method of calculation. Focus your attention on the information in the KW reading and the calculation of basic and diluted EPS based on this information in Study Session 8.

Earnings per share are computed as net income divided by the number of shares outstanding. Problems arise with this computation if the number of common shares outstanding changed during the year or if there are equity financial instruments other than common stock. If the number of common shares changes because new shares are sold then the new shares are prorated over the year. Likewise, a purchase of treasury stock will affect the average number of shares outstanding during the year. If new shares are issued due to stock dividends or splits, the shares are assumed to have been in existence for the entire year. If preferred stock exists, any preferred dividends are subtracted from net income, since this income is not available to common shareholders. If options or other convertible financial instruments exist, the conversion features are assumed to have been exercised and income is adjusted for any interest expense not incurred. Cash which would be received from the conversion process is used to decrease the number of common shares issued. EPS calculations can be quite complex. Candidates should refer to the abstract and readings for more details. We will review EPS calculations during the review session.

Ratio Analysis

Ratio analysis typically makes up a significant percentage of the questions asked on the Level I CFA exam. Candidates should be able to calculate key ratios from a set of financial statements and interpret their significance, as well as interpret common-size balance sheets and income statements. Candidates should be aware that certain ratios are defined differently and calculated differently in practice. Candidates should also be aware that some differences exist in the way ratios are presented in WSF and RB.

Please note: when a ratio can be calculated in a different way or can be called by a different name, for Level I exam purposes, you should use the computational form and terminology used in RB. This should be done even when the same ratio is presented with a different formula in WSF.

Analysts use financial ratios because numbers in isolation usually are not meaningful. Ratios provide information on relationships between and among individual items in a set of financial statements. As well, an individual ratio is not useful by itself B financial ratios become relevant and useful when used to make comparisons. Comparisons can be made about an entity=s financial performance relative to the aggregate economy, its industry, its major competitors, and to its past performance.

RB divide ratios into six major components:

- X Common-size financial statements
- X Internal liquidity (solvency)
- X Operating performance (operating efficiency and operating profitability)
- X Risk analysis (business risk and financial risk)
- X Growth analysis
- X External liquidity (marketability)

Ratio analysis is an important Level I topic. Candidates should be familiar with both the computation and use of key ratios. Internal liquidity (solvency) ratios indicate an entity=s ability to meet future short-term financial obligations. They include the current, quick, cash, receivables turnover, and inventory turnover ratios, as well as the cash conversion cycle. Operating performance ratios indicate how well management is operating the business. Operating efficiency is measured by the total asset turnover, net fixed asset turnover, and equity turnover ratios. Gross profit margin , operating profit margin, net profit margin, return on total capital, return on owner=s equity measure operating profitability. The DuPont system breaks down return on equity (ROE) into three components: profit margin, total asset turnover, and financial leverage. The DuPont system is a series of ratios that have been tested on almost every CFA exam over the last ten years. Candidates should take special care to learn the components of the DuPont system and what each means in financial statement analysis.

Risk analysis enables an analyst to examine the uncertainty of income flows for the firm as a whole and for the individual sources of capital B debt, preferred stock, and common stock. Business risk is measured by sales variability and operating leverage. Financial risk is measured by debt to equity and earnings or cash flow ratios. Cash flow analysis should be performed via the accounting cash flow statement and the financial concept of Afree cash flow.@

Growth analysis is used to assess the rate at which an entity should grow. External market liquidity (the ability to buy or sell an asset quickly with little price change from a prior transaction assuming no new information) enables investors to assess the impact of a change in the composition of their portfolios. Several market indicators are good proxies for market liquidity B the number of and dollar value of shares traded and the bid-ask spread.

Financial`Ratios (Liquidity)

Quick = (Cash + MS + A/R) : Current Liabilities
Current = Current Assets : Current Liabilities
Cash = Cash + Marketable Securities : Current Liabilities
Receivables Turnover = Net Annual Sales : Average Receivables
Average Receivables Collection Period = 365 : Receivables Turnover
Inventory Turnover = COGS : Average Inventory
Average Processing Period = 365 : Inventory Turnover
Payables Turnover = COGS : Average Trade Payables
Payables Payment Period = 365 : Payables Turnover
Cash Conversion Cycle = Receivables Days + Inv. Proc. Days - Payables Pmt.

Financial Ratios (Operating)

Total Asset Turnover = Net Sales : Average Total Net Assets
Net Asset Turnover = Net Sales : Average Net Fixed Assets
Equity Turnover = Net Sales : Average Equity
Gross Profit Margin = Gross Profit : Net Sales
Operating Profit Margin = Operating Profit : Net Sales
Net Profit Margin = Net Income : Net Sales
Return on Total Capital = Net Income + Interest Expense : Average Total Capital
Return on Total Equity = Net Income : Average Total Equity
Return on OE = Net Income - Preferred Dividend : Average Common Equity

DuPont System

ROE = Net Income/Common Equity, or
Net Income/Sales (profit margin) x
Sales/Total Assets (total asset turnover) x
Total Assets/Common Equity (financial leverage) x

Extended DuPont System

ROE = Net Income/Common Equity, or
EBIT/Sales (operating profit margin) x
Sales/Total Assets (total asset turnover) x
Interest Expense/Total Assets (int. exp. rate) x
Total Assets/Common Equity (fin. leverage mult.) x
100% - Income Tax/Net Before Tax (tax retention rate)

Financial Ratios (Risk)

Debt/Equity = Total Long-Term Debt : Total Equity
L.T. Debt/Total Capital = Total L.T. Debt : Total L.T. Capital
Interest Coverage = EBIT : Interest Expense

Financial Statement Analysis Summary

Candidates should gain an sound awareness of the topics outlined above. The Level I exam will most likely include definitional and computational questions in these areas. Test questions also tend to ask candidates what changes will occur to information under alternative accounting choices (such as LIFO vs. FIFO inventory assumptions or SL vs. DDB depreciation calculations).

Study Session 1: Ethical and Professional Standards

Abstract -- AIMR Code of Ethics

The *Code of Ethics* is reproduced on page 1of the *Standards of Practice Handbook.* The code indicates that dealings between members of the AIMR and the public, clients, prospects, employers, employees and fellow members should follow the ethical guidance provided. Integrity, competence, dignity, professionalism, and independence are all qualities which the *Code* indicates should be observed in these relationships.

LO 1: *Components of Code of Ethics*

Abstract -- AIMR Standards of Professional Conduct (pp. 2-7), *Standards of Practice Handbook*

The Standards are summarized below:

Standard I: Fundamental Responsibilities
- A.) Maintain Knowledge and Comply with all Applicable Laws, Rules and Regulations
- B.) Not Knowingly Participate or Assist in any Violations of Laws, Rules and Regulations

Standard II: Relationships with and Responsibilities to the Profession
- A.) Use of Professional Designation
  1. Use in a dignified and judicious manner
  2. Encouragement of use
  3. Candidates refer to participation in program
- B.) Professional Misconduct
- C.) Prohibition Against Plagiarism

Standard III: Relationships with and Responsibilities to the Employer
- A.) Obligation to Inform Employer of Code and Standards
  1. Inform supervisor of obligation to comply with Code and Standards
  2. Provide employer with copy of Code and Standards
- B.) Duty to Employer
- C.) Disclosure of Conflicts to Employer
  1. Disclose ownership interests which could interfere with independence
  2. Comply with prohibitions imposed by employer if conflict of interest exists
- D.) Disclosure of Additional Compensation Arrangements
- E.) Responsibilities of Supervisors

Standard IV: Relationships with and Responsibilities to Clients and Prospects
- A.) Investment Process
  1. Reasonable basis and representations
     - a. diligence and thoroughness
     - b. reasonable and adequate basis
     - c. avoid material misrepresentations
     - d. maintain appropriate records

2. Research reports
    a. use reasonable judgment
    b. distinguish between fact and opinion
    c. indicate basic characteristics of investment when distributing reports
3. Independence and objectivity

B.) Interactions with Clients and Prospects
1. Fiduciary duties
2. Portfolio investment recommendations and actions
    a. determine client=s investment objectives
    b. evaluate portfolio selections
    c. distinguish between fact and opinion
    d. disclose investment processes
3. Fair dealing
4. Priority of transactions (first to owners who have)
    a. direct or indirect pecuniary interest
    b. power to vote
    c. power to dispose of security
5. Preservation of confidentiality
6. Prohibition against misrepresentation
    a. of services capabilities
    b. of qualifications
    c. of credentials
7. Disclosure of conflicts to clients and prospects
8. Disclosure of referral fees

Standard V: Relationships with and Responsibilities to the Investing Public
A.) Prohibition Against Use of Material Nonpublic Information
B.) Performance Presentation
1. Prohibition against misrepresentations
2. Fair, accurate and complete presentations

LO 2: *Ethical responsibilities imposed by Code and Standards.*

Abstract -- AIMR Standards of Practice Handbook (APreface@ and pp. 9-264)

This reading contains much of the material upon which past Level I exams have been centered. Candidates should concentrate their ethics study on a thorough reading of the entire handbook, taking notes for exam review. The following brief review summarizes the material. Close and careful reading of all of the individual Standards and the supplementary material included with each Standard is **strongly** recommended (This material is concise and makes for a hard reading assignment, but if you master this material at Level I, you will only need to review it in subsequent years as you progress through Levels II and III of the CFA program).

On pages 9 through 159, the Handbook provides sections that expand upon each of the standards, explaining the purpose and scope of the standard, providing applications of the standard, and listing procedures for compliance. Topical studies on Corporate Governance, Soft Dollar Standards, Fiduciary Duty, Insider

Trading, and Personal Investing are provided on pages 161 through 243. The last section of the Handbook is a self-administered exam (pages 245 through 264), which provides an excellent review for candidates.

Since the AIMR has its headquarters in America, and U.S. security laws predominate in the CFA curriculum, the international section (pages 10B15) is very important. CFA candidates from other countries should know that the Standards require U.S. analysts to abide by a higher code of conduct than what is required under U.S. security laws. It is the intention of AIMR that CFAs be more critically judged than ordinary analysts and non-U.S. CFAs are required to adhere to the same high standards. The *Code of Conduct* is not normal practice for all financial analysts, but it is the code for CFAs.

LO 3: *Application of Standards to specific situations; identify conduct that violates Standards; know compliance procedures for each standard.*

Abstract -- AIMR Global Investment Performance Standards & GIPS Level I Workbook B 2003 Candidate Readings

Since the AIMR Global Investment Performance Standards (GIPS) were adopted in April 1999, this topic has been covered as part of the Level III examination. This is the first time that the topic of GIPS has appeared at Level I, replacing the topic of Performance Presentation Standards (PPS). Therefore, there is a high probability that several Level I questions will come from these readings in 2003. Candidates should read the workbook and the standards closely and carefully and make detailed notes for future reference.

Global standards were needed for the following reasons:

- Globalization of financial markets and the investment management industry and corresponding need for global standardization for presentation of investment performance
- Benefit of global standards for presentation of investment performance
- Level playing field in all countries
- Increased confidence in presentation contents; increased worldwide comparability

The stated *objectives* of GIPS are as follows:

- Worldwide standard for calculation and presentation of investment performance
- Accurate and consistent investment performance data
- Promote global competition among investment firms
- Global industry self-regulation

GIPS represent ethical standards for investment performance presentation to ensure fair representation and full disclosure of an investment firm's performance history. They exist as *minimum* worldwide standards where local or country-specific law, regulation, or industry standards may not exist for investment performance measurement and/or presentation. GIPS are divided into five sections: (1) input data; (2) calculation methodology; (3) composite construction; (4) disclosures; and (5) presentation and reporting.

Candidates should read through the specific requirements and recommendations of GIPS on pages 20-27 of the Level I Candidate Readings. (The requirements and recommendations are not included in the study notes, so please bring the Level I candidate readings to our review session in March 2003.) GIPS represent guidelines that firms must follow if they wish to claim compliance with the standards. For those instances in which local or country-specific law or regulation conflicts with GIPS, the standards require compliance with the local law or regulation, with full disclosure of the conflict included in the report. GIPS will evolve over time to address additional aspects of investment performance, and it is likely that some recommended elements will become requirements in the future. GIPS must be applied on a firm-wide basis.

In order for a firm to claim compliance with GIPS, it must meet *all* of the requirements set forth in the standards. Certain requirements, however, will not become effective until future dates to allow firms time to transition. Earlier application prior to the required date is encouraged. Once a firm has met all the required elements of GIPS, it is permitted to include a "Compliance Statement" on its report. (A sample presentation, including disclosures, is presented as an Appendix to GIPS – page 28 in the Level I Candidate Readings.) Verification of compliance must be performed by an independent third-party "verifier". Without a report from the verifier, a firm cannot claim compliance with GIPS.

LOs 4 & 5: *Explain rational for creation of GIPS; parties affected; objectives, characteristics, and scope of GIPS; requirements of 5 main topics; and key aspects of verification of a GIPS presentation.*

Problem Review B Financial Statement Analysis

Please solve the following problems in White, Sondhi & Fried, *The Analysis and Use of Financial Statements, 2nd edition* prior to the May, 2002 problem session*:*

Chapter 2 B Problems 1, 2
Chapter 3 B Problems 1, 2, 4, 5, 7
Chapter 6 B Problems 1, 2, 3, 7, 8, 12, 15, 21
Chapter 7 B Problems 1, 2, 3, 6
Chapter 8 B Problems 1,2, 5, 6, 7, 8, 9
Chapter 9 B Problems 1, 2, 3, 4, 5, 6
Chapter 10 B Problems 1, 3, 4, 6, 7, 11
Chapter 11 B Problems 1, 3, 11, 14, 19

Please solve the following problems from Chapter 12 in Reilly & Brown B *Analysis of Financial Statements:*
Questions 2, 4, 9; Problems 2, 3, 4

Please solve the following problems from Chapter 17 of Keiso & Weygandt B Dilutive Securities and Earnings per Share (Candidate reading 8-2):

Questions 16, 18, 19; Exercise 16; Problem 4

Study Session 7: Financial Statement Analysis - Basic Concepts

Needles & Powers, *Financial Accounting*, Chapters 3, 5, 7, 8, 9, 10, 11, 12, 13 and 14.

Candidates are expected to understand basic financial accounting concepts. It is not necessary to know the detailed mechanics of debits and credits, the process of recording economic events in journal entry form, making end-of-period adjusting entries, assembling the data into financial statements. Such knowledge would make this part of the material easier, but such an in-depth knowledge of accounting basics is not mandatory.

Instead, candidates should understand the basic balance sheet equation, how changes in assumptions change the equation, and the effects of different accounting choices on the financial statements. Once again, the basic accounting equation is:

Assets = Liabilities + Owner=s Equity

Notice that it is a *balanced* equation -- it must stay in balance at all times. If an asset is acquired and added to the left side then either some other asset must be decreased or some liability or owner=s equity increased (buy a car for cash - increase one asset and decrease another or acquire a car by incurring debt - increase an asset and increase a liability). However, if an asset is decreased then the opposite must occur (the car is used - decrease an asset and decrease owner=s equity through the depreciation expense account, which decreases retained earnings when the income statement accounts are closed).

For many CFA Exam questions in this area, candidates will be asked to analyze the effects of a change or choice between accounting alternatives. It is important to remember that each single change MUST cause another change to keep the basic equation in balance.

The second most asked type of question in this section is the computation of the dollar effect of basic accounting methods, such as depreciation methods (straight-line vs. double-declining balance) or recording inventory using LIFO vs. FIFO accounting. Candidates should be familiar with the following terms and/or know the following elementary computations.

Inventory - LIFO, FIFO and Average Costing
Investments - Cost and Fair Market Valuation
Depreciation - Straight Line, Sum-of-Year=s-Digits, and Declining Balance
Asset Valuation - Capitalization or Expensing
Amortization (intangibles) and Depletion (natural resources)
Bond Valuation - Premium and Discount Amortization
Leases - Capitalization Requirements
Contributed Capital - Difference Between Common, Preferred and APIC
Retained Earnings = Computation from One Year to the Next; Effect of Prior Period Adjustments

Cash flow analysis has also been a favorite area of the exam over the past years. Candidates should know both how to analyze and to compute cash flows. Cash flows from operations (CFO) should be positive (that is the cash the company gets from its primary business) in the long-run and cash flows from investing (CFI) should be negative (that means the company is growing) in the long-run. Candidates should be able to

produce a cash flow statement from basic information, separate activities into operations (revenues less expenses +/- changes in working capital), investing (changes in long-term assets) and financing (changes in long-term liabilities or owner=s equity). Remember that, from an accounting perspective, interest payments and receipts are an operating activity and dividend *payments* are a financing activity (the receipt of dividends from investments in another entity=s equity instruments is also an operating activity).

In the past, Level I of the CFA Exam covering Financial Statement Analysis has focused on inventory, ratio analysis, and cash flows. Each of these topics, plus others are covered abstract of the primary assigned readings. While having a complete knowledge of debits and credits is very useful, candidates without such expertise should not despair. Rather, a complete understanding of the basic accounting equation and learning a few rules will allow candidates to pass this section of the exam.

Abstract B White, Sondhi & Fried, Chapter 1 (pp. 1B28) B AFramework for Financial Statement Analysis@

External financial reporting in the U.S. is based on the preparation of general-purpose financial statements intended to satisfy the information needs of several groups of external users. A common characteristic of these users is their general lack of authority to prescribe the information provided by an entity. Statement of Financial Accounting Concepts (SFAC) 1, issued by the Financial Accounting Standards Board (FASB), identifies three general groups of external users:

* Credit and equity investors
* Government, regulatory authorities and tax authorities
* General public and special interest groups

Equity investors and creditors are the primary users, and rely on financial reporting to make rational investment and credit decisions.

Financial Reporting System

Financial reporting covers the following financial statements:

* Balance Sheet
* Income Statement
* Statement of Cash Flows
* Statement of Stockholders= Equity

In addition, entities are expected to provide footnotes and supplementary data to enable external users to gain a better understanding of the basic financial statements.

The general principles and measurement rules underlying financial reporting include:

* accrual accounting
* matching principle
* historical cost
* going concern assumption

Rules Makers

Securities and Exchange Commission (SEC)

In the U.S., the SEC has the authority to establish financial reporting rules for publicly traded companies. While the SEC has delegated much of this authority to the FASB, it frequently adds its own requirements. It requires the following reports to be filed:

* 10-K Annual Report
* 10-Q Quarterly Reports
* 8-K Current Reports

Financial Accounting Standards Board (FASB)

The FASB is the independent, private-sector body that sets accounting standards for all companies issuing audited financial statements. Its official pronouncements are known as Statements of Financial Accounting Standards (SFAS). Prior to the creation of FASB in 1973, financial accounting standards (APB Opinions) were issued by the Accounting Principles Board (APB), a committee of the AICPA. Some of these opinions are still in effect.

FASB Conceptual Framework

The FASB has developed a framework within which it sets standards for financial reporting. To date, the FASB has issued six SFACs. SFAC 1, AObjectives of Financial Reporting by Business Enterprises, states that:

> Financial reporting should provide information that is useful to present and potential investors and creditors and other users in making rational investment, credit, and similar decisions. The information should be comprehensible to those who have a reasonable understanding of business and economic activities and are willing to study the information with reasonable diligence.

SFAC 2, Qualitative Characteristics of Accounting Information, identifies the following qualitative characteristics of accounting information:

* Understandability
* Decision Usefulness
* Relevance (Predictive Value, Feedback Value, Timeliness)
* Reliability (Verifiability, Representational Faithfulness, Neutrality)
* Comparability (including Consistency)

These characteristics are subject to two constraints: Costs vs. Benefits and Materiality

Principal Financial Statements

The principal financial statements are composed of the following elements:

Balance Sheet:

* Assets
* Liabilities
* Equity

Income Statement:

* Revenue (and Gains)
* Expenses (and Losses)

Statement of Cash Flows:

* Operating Cash Flows
* Investing Cash Flows
* Financing Cash Flows

Statement of Stockholders= Equity:

* Preferred Stock
* Common Stock
* Additional Paid-In Capital
* Retained Earnings
* Treasury Stock
* Valuation Allowances

Footnotes & Supplementary Schedules

Management Discussion & Analysis (MD&A)

Contingencies

SFAS 5, Accounting for Contingencies, requires companies to sometimes disclose and/or accrue contingent losses. If a loss is both probable and the amount of the loss can be reasonably estimated, a company must accrue an estimated liability and disclose the nature of the contingent loss in its footnotes. If the amount of the loss cannot be reasonably estimated, an accrual is not required, but the contingency must be disclosed in the footnotes. If the contingent loss is only reasonably possible, only footnote disclosure is required B no liability must be accrued. Lastly, if the probability of the contingent loss is remote, no disclosure or accrual is required.

Role of the Auditor

In the U.S., independent certified public accountants (CPAs) are responsible for auditing a company=s financial statements and related information to see if they are in conformity with GAAP. A standard unqualified (Aclean@) opinion on the financial statements states that the statements are fairly stated , in all material respects, in conformity with GAAP B see Exhibit 1B2 on p. 25 in WSF. In addition to an unqualified opinion, a CPA may add an uncertainty paragraph, issue a qualified opinion, issue an adverse opinion, or issue a disclaimer of opinion.

International Accounting Standards

The International Accounting Standards Committee (IASC) attempts to harmonize (conform) accounting standards globally. It relies on consensus and, as a result, many of its standards are broad. It has received the support of the International Organization of Securities Commissions (IOSC). In Europe, the European Economic Community (EEC) has attempted to reduce alternative accounting treatments among member nations.

LOs for Preliminary Readings: *See CFA Level I Study Guide, pp. 41-43.*

At Level I, the LOs for the preliminary candidate readings are covered fully by the material in the primary readings. The main reason that the preliminary readings are assigned is so that candidates who are not familiar with the basic accounting model and rules under U.S. generally accepted accounting principles (GAAP) can gain the prerequisite knowledge to handle the primary readings. I will determine the necessary level and depth of review early on when we meet face-to-face to review the candidate readings.

Study Session 7: Financial Statement Analysis - Basic Concepts

Abstract B White, Sondhi and Fried B Chapter 2 (pp. 35B51 and 55-76, including Box 2-4) B AAccounting Income and Assets: The Accrual Concept@

The accrual concept of income from the GAAP model differs from the concept of *economic earnings*, which are defined as net cash flow plus the change in market value of a firm=s assets. Other possible definitions of earnings include: (a) distributable earnings, (b) sustainable income, and (c) permanent earnings.

The accrual basis of accounting is required under GAAP. It is based on transactions, accruals, and deferrals, and differs from cash flow B cash flows may occur in different accounting periods than the accrual or deferral that gave rise to them. In general, accounting income is equal to revenue minus expenses.

Income statement components can include the following:

* Revenues
* Other income and revenues
* Expenses
* Unusual or infrequent items
* Income tax expense
* Discontinued operations (net of tax effects)
* Extraordinary items (net of tax effects0
* Cumulative effect of changes in accounting principles (net of tax effects)

A multi-step income statement format is useful for financial statement analysis because it separates the effects of operating items from nonoperating items and nonrecurring items, including the effects of *intraperiod tax allocation. (*Please review the multi-step income statement format on page 44 of WSF before our review session.)

Revenue and Expense Recognition

In general, revenue should be recognized when it is realized (earned) and the earnings process is completed. Expenses should be Amatched@ with the revenue they helped generate. If expenses cannot be matched, they should be treated as period costs and expensed in the accounting period in which they are incurred.

For many entities, the earnings process is deemed complete when a sale occurs, and revenue is recorded at that time. Departures from the sales basis include:

* Percentage-of-Completion and Completed Contract Methods
* Installment Method
* Cost Recovery Method

The accrual basis of accounting does not necessarily correspond with cash flows. That is, the timing of revenue and expense recognition is not based on the timing of associated cash inflows and outflows. Analysts, however, are concerned with the nature, timing and uncertainty of cash flows. In recognition of this, the FASB issued SFAS 95, Statement of Cash Flows. Prior to SFAS 95, companies were required to prepare a Statement of Changes in Financial Position (also called a Funds Flow Statement). However, under the old rules, companies were allowed to select their definition of Afunds@ B most usually cash or working capital. SFAS 95 requires all companies to define funds as cash.

Nonrecurring Items

A classified income statement format requires a company to show nonrecurring items separately from recurring items. The four classifications of nonrecurring items are as follows:

* Unusual or infrequent items
* Extraordinary items
* Discontinued items
* Accounting changes

A final type of nonrecurring item, if present, is not reflected in a company=s income statement: Prior Period Adjustments (PPA). SFAS 16 generally restricts PPA treatment to error corrections and certain adjustments due to the realization of tax benefit carryforwards of purchased subsidiaries. Accounting treatment involves adjusting the beginning balance of retained earnings, net of the related income tax effects.

Balance Sheet

The balance sheet, also called the statement of financial position, reports the categories and amounts of an entity=s resources (assets), outside claims on those resources (liabilities), and residual claims on those resources (stockholders= equity).

Balance sheet components may include the following:

Assets:
* Current Assets:
    * Cash and cash equivalents
    * Marketable securities
    * Accounts receivable
    * Inventory
    * Prepaid expenses
    * Deferred taxes

* Noncurrent Assets:
    * Property, plant & equipment
    * Capital Leases
    * Investments in securities
    * Investments in affiliates
    * Prepaid pension obligations
    * Intangible assets

Liabilities:
* Current Liabilites:
    * Accounts payable
    * Short-term debt
    * Interest payable
    * Income taxes payable
    * Wages payable
    * Current portion of long-term debt
* Noncurrent Liabilities:
    * Long-term debt
    * Capital lease obligations
    * Pensions & postretirement benefits
    * Deferred taxes
    * Minority interest

Stockholders= Equity:
    * Preferred stock
    * Common stock
    * Additional paid-in capital
    * Retained earnings
    * Valuation allowances
        * Cumulative foreign currency translation adjustment
        * Minimum pension liability
        * Unrealized gains/losses on noncurrent investments
    * Treasury stock

Most companies prepare a separate Statement of Stockholders= Equity, which reconciles the beginning balances of the stockholders= equity accounts to the ending balances, giving effect to the impact of current period transactions.

LO 1: *Income statement format; revenue recognition; matching principle; earnings manipulation.*

Abstract B White, Sondhi and Fried, Chapter 3 (pp. 87-100, 102-117), AAnalysis of Cash Flows@

Because the accrual method of accounting does not report the impact of cash inflows and outflows directly in either the balance sheet or the income statement of an entity, U.S. corporations are required to prepare a Statement of Cash Flows as one of their basic financial statements. This cash flow information provides users of the financial statements with a basis of assessing prospective cash flows. Statement of Financial Accounting Standards (SFAS) No. 95, AStatement of Cash Flows@, requires entities to report cash flows in three categories: operating cash flows, investing cash flows, and financing cash flows.

The statement of cash flows provides information about a firm=s ability to generate cash flows from operations and the cash consequences of investing and financing decisions. It explains the change in cash and cash equivalents during the year.

Cash flows from operations (CFO) measure the amount of cash generated or used by an entity as a result of its production and sale of goods and services. Cash flows from investing activities (CFI) report cash outflows used for investments (property, plant and equipment, investments in debt and equity instruments of other entities) and cash inflows from the sale or disposal of those items. Cash flows from financing activities (CFF) include cash inflows from financing transactions (issuance of bonds or stock) and cash outflows to service those items (repayments of debt, payment of dividends on stock, purchase of treasury stock).

Under SFAS 95, interest and dividend revenue (cash inflows) and interest expense (cash outflow) are considered operating activities, but dividends paid (cash outflow) are considered financing activities. All income taxes are considered operating activities, even if they arise from financing or investing transactions.

SFAS 95 permits firms to report cash flows using either the direct method or the indirect method. Under the indirect method, CFO is determined by adjusting net income (accrual basis) for noncash revenues and expenses, nonoperating items included in net income, and noncash changes in operating assets and liabilities. The direct method, on the other hand, provides more detailed information on the sources of cash inflows and outflows from operating activities. (CFI and CFF are determined the same way under either the direct or indirect method B the difference in the two methods is in the calculation and presentation of CFO only.) Although the direct method provides more useful information to an analyst, most firms use the indirect method to compute CFO.

An analysis of changes in the balances of assets and liabilities can be summarized as follows:

* Increases (decreases) in assets represent net cash outflows (inflows).
* Increases (decreases) in liabilities represent net cash inflows (outflows).

LO 2: *Elements of CFO, CFI and CFF; relevance of cash flows; classification of items; direct vs. indirect method; and free cash flow.*

Study Session 8: Financial Statement Analysis B Financial Ratios and Earnings per Share

Abstract -- Reilly and Brown, Chapter 12 (pp. 388-429, including Tables 1, 2 & 3) B AAnalysis of Financial Statements@

Analysis of financial statements consists of a thorough review of key ratios (including the DuPont Model) and an assessment of the quality of the financial information presented in the income statement and balance sheet. To accomplish this, CFA Level I candidates need to know the definitions and computational forms of the financial ratios, be aware of the ways the components of the ratios can change if the underlying accounting choices used to derive them change, understand what each ratio implies about a firm=s financial health and performance, and understand the implications of the Aquality@ of the financial data.

Basic generally accepted accounting principles (GAAP) are reviewed briefly in this chapter in Table 12.1. This review supplements information about these principles found in other candidate readings. They are: revenue recognition guidelines; accounts receivable write off policies; inventory measurement alternatives; valuation of investments in securities methods; and depreciation options.

The primary focus of this reading is a discussion of the ratios useful to financial analysts. The *liquidity ratios* (current, quick, cash, receivables turnover, inventory turnover, and cash conversion cycle) are listed and illustrated. Liquidity ratios provide information about a firm=s ability to meet its future short-term financial obligations. The total asset turnover, net fixed asset turnover and equity turnover ratios are shown as examples of measures of *operating efficiency*, or how well management is utilizing its assets and capital. *Operating profitability* is measured by the gross profit margin, operating profit margin, net profit margin, return on total capital, return on owner=s equity and the DuPont system, which breaks down return on equity into several related components. Financial risk is measured using the debt/equity ratio, long-term debt/total capital ratio, and total debt ratio. Earnings and cash flow ratios (interest coverage, total fixed charge coverage, cash flow to interest expense, cash flow coverage, cash flow to long-term debt, cash flow to total debt) and alternative measures of cash flow are explained and their usefulness cited.

The explanation of the DuPont system is perhaps the single most important part of this reading. The CFA Level I exam will very likely have a question or questions on the DuPont model (either explicitly or implicitly). Candidates should understand the DuPont Model is comprised of five components: operating profit margin, total asset turnover; interest expense rate; financial leverage multiplier; and tax retention rate.

Risk analysis, in the form of business risk and financial risk is explained and the analysis of growth potential illustrated. The differences in financial statement analysis when statements of different countries is introduced, and a good listing of the basic accounting differences from several major countries are presented in table form. The learning outcomes do not list international differences as one of the objectives of this reading. It is unlikely that questions from this section will be on the exam.

This reading concludes with a brief discussion of the Aquality@ of earnings. The importance of the choice of accounting methods is repeated. The primary contribution of this reading, however, is the focus on ratio calculation and interpretation and the illustration of the DuPont Model.

LO 1: *Common-size financial statements; calculation, interpretation and use of ratios; limitations of ratios.*

Abstract B Candidate Reading 8-2, ADilutive Securities and Earnings per Share,@ Chapter 17, pp. 860B871, *Intermediate Accounting*, 9th edition, Donald E. Kieso and Jerry J. Weygandt (John Wiley & Sons, 1998)

Earnings per share (EPS) is probably the most widely used performance statistic for publicly traded firms. Previously, EPS reporting requirements were mandated be APBO No. 15, which has been superceded by SFAS No. 128. Under APB 15, firms with simple capital structures (i.e., no convertible preferred stock and no other potentially dilutive securities) were required to report a single EPS amount B basic EPS. Companies with complex capital structures (i.e., convertible preferred stock, convertible debt, stock options or warrants) were required to report two EPS amounts C primary EPS and fully diluted EPS. These requirements were

changed with the issuance of SFAS 128. The rules for firms with simple capital structures are unchanged. They must still report a single EPS figure for basic EPS. However, for firms with complex capital structures, the two EPS amounts reported under SFAS 128 are basic EPS and diluted EPS. Basic EPS is computed as Income available for common shares/weighted average common shares outstanding. Diluted EPS is computed as Adjusted income available for common shares/Weighted average common and potential common shares outstanding.

Diluted EPS requires both numerator (income) adjustments and denominator (number of shares) adjustments, which are discussed later.

Basic EPS is computed as the earnings (or net income) available to common stockholders divided by the weighted average number of common shares outstanding for the year. The CFA candidate should realize that the computation of EPS can be complicated by several issues: determination of the earnings available to common shareholders; calculation of the weighted average number of common shares outstanding; and dilutive effects that complex capital structures can have of the diluted EPS calculation.

Earnings available are obtained from the income statement. If a company only has common stock, the net income figure is used as the Aearnings available to common shareholders.@ However, if a company has outstanding preferred stock, the preferred stock dividends must be deducted from net income. These preferred dividends are not available to common stockholders since they are paid to preferred stockholders. The earnings available to common stockholders are net income less preferred dividends.

The computation of weighted average number of shares outstanding is straightforward if no shares of common stock have been issued or repurchased during year and if no stock dividends, stock splits or reverse splits have occurred. In this case, the number of shares outstanding remains constant throughout the year and the average for the year is equal to the number of shares outstanding for the year. If shares are sold or repurchased during the year, the date of sale or repurchase is used to compute the weighted average number of share outstanding (i.e., 100 shares sold on 7/1 count as 50 share in the EPS denominator). If a company issues any stock dividends or has any stock splits or reverse splits during the year, the number of outstanding share will also increase during the year. Under FASB guidelines, any changes in the number of shares outstanding due to stock dividends or splits is given retroactive treatment to the beginning of the year (i.e., the shares are assumed to have been outstanding for the entire year B 1,000 share issued on 3/1 through a stock dividend increases the denominator by the entire 1,000 shares).

Complex capital structures add another level of complexity to the EPS calculation, but only for the calculation of diluted EPS. If a firm has issued convertible financial instruments (convertible preferred stock, convertible debt, stock options and warrants), it is said to have a complex capital structure. The convertible instruments must be analyzed to determine if they are common stock equivalents (CSEs). CSEs are securities that derive a significant portion of their value from their conversion right. Options and warrants are always CSEs, but their inclusion in the diluted EPS calculation depends on whether they are dilutive. Convertible preferred stock and debt may be CSEs if their assumed conversion would dilute basic EPS (i.e., their inclusion would decrease EPS or increase Loss per Share.

SFAS 128 requires the treasury stock method to be used when making adjustments for options and warrants.

This method assumes that the proceeds from exercise are used to purchase shares in the open market, using the ending market price of common stock. Warrants and options will have a dilutive effect on EPS whenever the exercise price is less than the ending market price. If the market price is less than the exercise price, the options or warrants would be antidilutive and would be excluded from diluted EPS.

For convertible securities, the if converted method is used B the denominator of the diluted EPS formula is increased by the number of shares issued upon conversion and the numerator is increased by the after-tax interest savings and/or the amount of preferred dividend payments.

LO 2: *Simple vs. complex capital structure; weighted average shares outstanding; impact of stock dividends and splits; dilutive vs. antidilutive securities; impact of convertible securities, options and warrants; calculation of basic and diluted earnings per share; reporting requirements.*

Abstract B White, Sondhi and Fried, Chapter 17 (pp. 956B958), AAnalylis of Financial Statements: A Synthesis@

These 3 pages from WSF provide an overview of the types of choices among GAAP alternatives that result in a higher quality of earnings. The term "quality of earnings" refers to the degree of conservatism in a firm's reported earnings based on its choice of accounting treatment and application of alternative GAAP choices. Indicators of high earnings quality include:

1. Conservative revenue recognition methods
2. Use of LIFO inventory accounting, assuming rising prices
3. Bad-debt reserves high relative to receivables and past credit losses
4. Use of accelerated depreciation methods and shorter lives
5. Rapid write-off of acquired goodwill and other acquired intangibles
6. Minimal interest and overhead capitalization
7. Minimal computer software cost capitalization
8. Expensing start-up costs
9. Use of completed contract method of accounting
10. Conservative assumptions regarding employee benefit plans
11. Adequate provisions for loss contingencies
12. Minimal use of off-balance sheet financing
13. Absence of nonrecurring charges
14. Absence of noncash earnings
15. Clear and adequate disclosures

LO3: *Identify indicators of high quality earnings*

Study Session 9: Financial Statement Analysis - Assets

Abstract B White, Sondhi and Fried, Chapter 6 (pp. 257B283), AAnalysis of Inventories@

The Level I CFA exam expects an understanding of the basics of three inventory methods: *first-in, first-out (FIFO), last-in, last-out (LIFO), and weighted average cost (WAC),* with the emphasis on FIFO vs. LIFO. Although numerous variations in inventory valuation exist under U.S. GAAP and U.S. tax laws, candidates will be safe in limiting their study time to these three methods.

The basic relationships between inventories (an asset) and cost of goods sold (an expense) are as follows:

EI = BI + P - COGS, or
BI + P = GAS = COGS + EI

When the cost of inventory items is **constant,** LIFO, FIFO, and WAC will result in the same valuation for EI and COGS. When the cost of inventory items is **rising,** LIFO will result in the highest COGS and lowest EI valuation, FIFO will result in the lowest COGS and the highest EI valuation, and WAC will fall between the two. When the cost of inventory items is **falling,** LIFO will result in the lowest COGS and highest EI valuation, FIFO will result in the highest COGS and lowest EI valuation, and WAC will fall between the two.

The following table is a very useful reminder of the effects which will occur when the different inventory cost flow assumptions are used in periods of rising inventory prices.

Effect of Inventory Flow Methods During Periods of Rising Prices

	LIFO	FIFO
Cost of Goods Sold	**higher**	**lower**
Income Before Taxes	**lower**	**higher**
Income Taxes	**lower**	**higher**
Net Income	**lower**	**higher**
Cash Flows	**higher**	**lower**
Inventory Balance	**lower**	**higher**
Working Capital	**lower**	**higher**

Candidates must remember that the above relationships will be exactly reversed if prices are falling. Simple memorization of the above chart will not take the place of a complete understanding of inventory accounting. Since this one area illustrates both the accounting knowledge which a candidate can attain and the use that knowledge has in financial statement analysis, the CFA exam has often stressed inventory type questions. Well prepared candidates should review these relationships carefully.

Other Inventory Issues

X For retailers and wholesalers, inventory is purchased in a form ready for resale to customers.

X For manufacturers, raw materials must be converted , through the application of labor and overhead, to create a salable product. Manufacturers have three inventory classifications:
* Raw materials
* Work in process
* Finished goods

X For service entities, inventories are usually immaterial.

X GAAP requires the application of lower-of-cost-or-market (LCM) to inventories. In general, market value is defined as replacement cost. This is an application of conservatism.

X In general, companies must use the same inventory valuation method for financial accounting and income tax purposes.

X FIFO, LIFO, and WAC are *cost flow* assumptions. They do not have to coincide with the *physical flow* of inventory items.

X A change from LIFO to another method of inventory valuation requires a retroactive restatement of prior years to the new method.

X A change from another method of inventory valuation to LIFO must be accounted for on a prospective basis.

LO 1-A: *FIFO, LIFO, and average cost inventory methods; impact of changing prices; impact of method on ratios; impact of decline in LIFO reserve.*

Abstract B White, Sondhi and Fried, Chapter 7 (pp. 321B334 & pp. 338B340), AAnalysis of Long-Lived Assets, Part I B The Capitalization Decision@

Long-lived assets, a noncurrent classification, include both tangible fixed assets (e.g., plant, machinery, and office facilities) and intangible assets (e.g., computer software, patents, and trademarks). The costs of acquiring a long-lived asset that provides service of longer than one accounting period are capitalized and carried as assets on the balance sheet. Acquisition costs include all costs incurred in placing the asset into operation B invoice price, sales tax, delivery costs, insurance, and installation costs.

The capitalization decision is subject to the materiality constraint, and may also be subject to specific accounting rules. Certain types of expenditures have the potential to benefit a company over more than one accounting period, but they are not allowed to be capitalized under GAAP. Notable examples are research and development costs (R&D), advertising, oil and gas wells, and operating leases.

SFAS 34 requires companies to capitalize the cost of interest on funds borrowed to construct assets. If

specific debt is associated with the construction, that interest must be capitalized as part of the asset=s cost. If no specific borrowing is identifiable with the constructed asset, the weighted average interest rate on outstanding debt, up to the amount invested in the project, is capitalized. If no debt is present, no capitalization occurs.

AIdentifiable@ intangible assets B patents, copyrights, licenses, franchises, brand names, computer software B are capitalized at their acquisition cost. Similar to R&D, costs incurred in developing patents and copyrights must be expensed. Only legal fees incurred in registering internally developed patents and copyrights can be capitalized. The full acquisition cost is capitalized when they are acquired from another party. The same accounting treatment is true of brand names and trademarks. Amortization should be over the useful economic life of the intangible or its legal life, whichever is shorter.

SFAS 86 requires developers of computer software to expense all costs incurred in establishing the feasibility of the software. Once economic feasibility is established, subsequent costs are capitalized as part of product inventory and amortized either based on product revenues or on a straight-line basis.

Goodwill is considered to be an Aunidentifiable@ intangible asset. Internally created goodwill cannot be capitalized. However, goodwill identified as part of the purchase cost in a business combination accounted for as a purchase must be capitalized and (historically) subsequently amortized over a period not to exceed 40 years. Effective 2001, U.S. GAAP no longer permits amortization of goodwill.

LO 1-B: *Capitalization vs. expensing; impact of capitalizing interest cost; capitalization of intangible assets.*

Abstract B White, Sondhi and Fried, Chapter 8 (pp. 377-403), AAnalysis of Long-Lived Assets, Part II B Analysis of Depreciation and Impairment@

Amortization (for intangible assets), depletion (for natural resources) and depreciation (for tangible long-lived assets) all denote the systematic and rational allocation of the cost of the underlying asset over its useful economic life. All three processes should be thought of as allocation (cost recovery) processes and not as valuation processes.

Accounting depreciation and *economic depreciation* are not the same concept. As stated above, accounting depreciation is an allocation process and represents cost recovery. Economic depreciation takes into account the rate of return on the asset.

For the Level I CFA exam, you should be familiar with the major depreciation methods allowed under U.S. GAAP B straight-line, accelerated methods, units-of-production, and service hours methods. With straight-line depreciation (SL), an equal amount of depreciation is recorded in each year of an asset=s useful life. Any residual (salvage) value must be subtracted from the original cost to determine the depreciable amount.

Accelerated methods of depreciation result in higher annual depreciation in the early years of an asset=s life and lower annual depreciation in later years, relative to straight-line. The two most common methods are sum-of-years=-digits (SYD) and double-declining balance (DDB). **Please study Exhibit 8-4 on pp. 382 and 383 prior to the review session.**

Units-of-production and service hours methods of depreciation depreciate assets in proportion to their actual usage rather than as a function of the passage of time. Thus, depreciation is a variable, rather than a fixed, cost when they are used. (See Exhibit 8-5 on p. 384 in WSF).

Over the useful economic life of an asset, the **total depreciation** under all of these methods will be equal. The difference in the methods relates to the **amount of annual depreciation expense** taken in any accounting period. Since U.S. tax laws permit a company to use a different depreciation method for tax purposes than is used for accounting purposes, differences in annual depreciation expense for tax vs. accounting gives rise to temporary differences, resulting in deferred taxes.

Several methods can be used to estimate the relative age of a company=s fixed assets. These analyses should be used only when straight-line depreciation is used by the company. The latter two equations will also be affected if the mix of assets has changed.

Average Age % = Accumulated Depreciation/Ending Gross Investment

Average Depreciable Life = Ending Gross Investment/Depreciation Expense

Average Age = Accumulated Depreciation/Depreciation Expense

Under SFAS 121, AAccounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed of@, when the remaining useful life of an asset or a group of assets is impaired (e.g., can no longer be recovered), the asset(s) must be written down to a recoverable amount, with recognition of the resulting loss in the income statement.

LO 1-C: *Impact of depreciation methods and assumptions; impairment of assets.*

Study Session 10: Financial Statement Analysis B Liabilities

Abstract B White, Sondhi and Fried, Chapter 9 (pp. 425B455), AAnalysis of Income Taxes@

In the U.S., the objectives of tax policy and the objectives of financial reporting can differ significantly. A firm has a strong incentive to minimize its tax liability through tax avoidance strategies that may vary from the objectives of income measurement under the GAAP basis of accounting. To the extent that tax laws permit revenues and expenses to be treated differently from GAAP requirements, differences in taxable income and accounting income arise. Some of these differences (temporary differences) give rise to deferred taxes. Others (permanent differences) will never result in cash flows for taxes in different periods than for accounting recognition, and do not create deferred taxes.

Deferred tax *liabilities* arise when future taxable income is expected to exceed pretax accounting income. Deferred tax *assets* arise when future taxable income is expected to be less than pretax accounting income. Accounting standard setters have made three major attempts to deal with differences between taxable income and accounting income:

X APB Opinion 11 (1967) provided rules that were essentially based on the matching concept.
X SFAS 96 (1987) required a more temporal approach, known as the liability method.
X SFAS 109 (1992), the standard that is effective currently, adopted a modified liability approach.

SFAS 109 has two primary objectives: (1) to recognize taxes payable or refundable for the current year; and (2) to recognize deferred tax liabilities and assets measured as the future tax consequences of events that have been recognized in financial statements or tax returns.

The basic issue in accounting for income taxes is how an entity should reflect differences between taxable and accounting income in its financial statements when such differences result in deferred tax assets or liabilities (due to the existence of temporary differences). Note that none of the three standards required deferred tax allocation for permanent differences.

Under the liability method adopted in SFAS 109, comprehensive interperiod tax allocation is required whenever temporary differences between taxable income and accounting income are present. The amount of deferred tax is computed using the tax rate expected to be in effect when the temporary difference(s) reverse. Balances in the deferred tax asset and liability accounts are adjusted to reflect the impact of changes in tax rates or tax laws.

A significant change involving deferred taxes under SFAS 109 results in the recognition of deferred tax assets under certain circumstances C deferred tax assets resulting from net operating losses and tax credit carryforwards may be recognized, but an evaluation of the realizability of future taxable income must be performed to determine the benefit from the deferred tax asset. Under SFAS 109, when it is *more likely than not* that some portion of or all of the deferred tax asset will ***not be realized,*** a company is required to establish a valuation allowance reducing the carrying value of the deferred tax asset.

While SFAS 109 resolved many of the measurement issues associated with deferred taxes, some analytical issues remain unresolved. For example, a growing company will continually generate deferred tax liabilities, and the balance in the deferred tax liability account will grow even as individual items reverse. Conversely, future losses may result in the deferred taxes never being paid even when the temporary differences reverse. Thus, it can be argued that the deferred tax balance is not really a liability.

Further, even assuming that the deferred taxes will be paid at some time in the future, the present value of eventual payment will be considerably lower than the recorded amount (SFAS 109 requires that deferred taxes be recorded at an undiscounted amount).

Because of this, analysts may want to treat the deferred tax amount as part of permanent equity instead of as a liability when analyzing a company=s financial statements and computing key ratios.

LO 1-A: *Income tax accounting and deferred taxes; liability method of computing deferred taxes; impact of deferred taxes on analysis; temporary vs. permanent differences; impact of changes in tax rate.*

Abstract B White, Sondhi and Fried, Chapter 10 (pp. 473-485, 490-498, 503-504), AAnalysis of Financing Liabilities@

Current liabilities are defined as liabilities due within one year or one operating cycle, whichever is longer. More specifically, they are items whose settlement in the next year will require the use of cash (or other assets) or the creation of new liabilities.

Current liabilities fall into four categories:

* operating and trade liabilities
* advances from customers
* short-term (interest-bearing) debt
* current portion of long-term debt

In general, current liabilities are carried at undiscounted amounts (i.e., present value is ignored due to the relatively short period between incurrence and payment.

Long-term debt is interest bearing. It is typically carried at the present value of future cash flows associated with it (for periodic interest payments and repayment of the principal amount at maturity).

When bonds are issued, they may be issued at a discount (less than maturity value), at a premium (greater than maturity value), or at par (equal to maturity value). When bonds are issued at a discount or a premium, this indicates that the market (yield) rate of interest on the issue date was different from the coupon (stated) rate of interest on the bonds.

If the market rate was higher than the coupon date, the bonds sold at a discount. If the market rate was lower than the coupon rate, the bonds sold at a premium. (Note: If the market rate of interest was equal to the coupon rate, the bonds sold at par.) The resulting discount or premium adjusts the issue price of the bonds so that investors will receive an effective return that is equal to the market rate of interest.

Any discount or premium must be amortized over the term of the bond using the effective interest method of amortization. Since the cash flow for interest is determined by the coupon rate, the amortization of discount or premium is treated as an adjustment to interest expense.

Please study Exhibit 10-1 on pp. 478-479 before the review session. We will go over the mechanics of bond accounting during the review.

Sometimes, companies build equity features into a bond to attract a lower interest rate. Two possibilities exist: (1) issuing convertible bonds, or (2) issuing bonds with warrants attached. In accounting for a convertible bond, the conversion feature is ignored B the entire proceeds are recorded as bond liability. If and when the convertible bonds are converted into common stock, the entire proceeds are reclassified from debt to equity. When warrants are attached, however, the issuing company must allocate a portion of the total

proceeds to the outstanding warrants. Because of this, U.S. companies rarely issue bonds with warrants attached.

Many companies issue mor than one class of stock. Frequently, at least one class is preferred stock, called preferred because it has certain preferences over common stock. These preferences typically relate to a fixed dividend rate, dividend preferences, and priority over common stock in case of sale or liquidation. In return for these preferences, voting rights are usually absent for preferred shares. Preferred shares are almost always callable by the issuer. Some issues are redeemable by the investor. Thus, when analyzing a company, preferred stock should be treated as debt.

Long-term debt reported on a company=s balance sheet is reported at the present value of future cash payments discounted at the market rate of interest *on the date of issuance.* Any subsequent changes in the market value of the outstanding bonds occur in the secondary market and do not impact the cash flows of the issuing company. Nevertheless, subsequent changes in the market rate represent economic gains and losses that are not reflected on the issuing company=s books.

Based on the relationship between the market rate on the date of issuance vs. the current rate in the secondary market, a corporation may decide to retire some or all of its debt prior to maturity. When a company retires its debt prior to maturity, any resulting Again@ or Aloss@ must be treated as an extraordinary item. Theoretically, the gain or loss is due to changes in the market rate of interest since the bonds were issued. However, rather than allowing companies to treat the difference as an adjustment to retained earnings, SFAS 4 requires that it appear in the income statement.

LO 1-B: *Accounting for debt; impact of debt issuance and amortization; impact of zero-coupon bonds; impact of convertible debt, options & warrants; impact of changing interest rates; early retirement of debt.*

Abstract B White, Sondhi and Fried, Chapter 11 (pp. 531-557 and Appendix 11-A), ALeases and Off-Balance Sheet Debt@ and AFinancial Reporting by Lessors for Sale Leasebacks@

Companies often acquire the right to use property (and sometimes assume some or all of the risks of ownership) using a contractual arrangement called a lease. Historically, companies have attempted to use leasing as a method of off-balance sheet financing B obtaining the economic rights of property ownership without reflecting any associated asset or liability on their balance sheets. Because of this potential abuse, strict accounting rules governing leases by both lessors and lessees have been promulgated by the FASB in SFAS 13 and subsequent pronouncements and interpretations.

SFAS 13 requires a lease to be accounted for as a *capital lease* by the lessee if ***any*** of the following conditions is met:

1. The lease transfers ownership to the lessee at the end of the lease term.
2. The lease contains a bargain purchase option.
3. The lease term is equal to or greater than 75% of the leased asset=s estimated useful economic life.
4. The present value of minimum lease payments is greater than or equal to 90% of the fair

value of the leased property.

Leases not meeting any of these criteria are accounted for as *operating leases.*

For *lessors,* in addition to satisfying any of the four preceding conditions, SFAS 13 requires lessors to meet **both** of the following revenue recognition criteria to account for a lease as a *capital lease:*

1. Collectibility of minimum lease payments is reasonably predictable.
2. No significant uncertainties regarding unreimbursable costs yet to be incurred by the lessor exist.

If these conditions are not met, the lease must be accounted for as an operating lease by the lessor.

Operating leases are not the only type of contractual arrangement that give rise to off-balance sheet financing. WSF provide the following examples of OBS financing transactions: take-or-pay and throughput arrangements, sale of accounts receivable with recourse, use of finance subsidiaries (with less than 50% ownership), joint ventures, investments in affiliates, and commodity-linked bonds. CFA candidates should realize that these types of items represent asset rights and financial commitments to the firm using them, and, as such, have an impact on meaningful financial statement analysis.

Many manufacturers and dealers offer customers leases to market their products. Such leases are known as *sales-type leases*, and include both a manufacturing profit (the difference between the fair value of the property at the inception of the lease and the cost or carrying value of the leased property) and interest income from the lease contract (financing charge).

Under a sales-type lease, the lessor recognizes as sales revenue the present value of MLPs. The cost of goods sold is equal to the carrying value of the leased asset less the present value of any unguaranteed residual value. The lessor is permitted to record the gross profit on the sale in the accounting period in which the lease originates. The interest income, related to the lease financing, must be recognized in a systematic manner over the term of the lease.

When no gross profit is implicit in the lessor=s transfer of the asset (i.e., the cost or carrying value is equal to the present value of the MLPs), the lease is a pure financing transaction. Such leases are called direct financing leases, and provide only interest income to the lessor.

A third type of lease is a sale leaseback transaction. These are sales of property by the owner who then leases it back from the buyer-lessor. The amount and timing of profit or loss recognized on a sale leaseback transaction are determined by the proportion of the rights to use the leased property retained by the owner-lessee after the sale: (1)if it is a minor leaseback B the PV of reasonable rents is less than 10% of the fair value of the leased property, any gain or loss is recognized in full at the lease=s inception; (2) when the PV of rents exceeds 10% but is less than 90% of the fair value of the leased asset, some or all of the gain or loss must be deferred and amortized over the lease term; (3) when the PV of MLPs equals or exceeds 90% of the fair value of the property, the total gain or loss must be deferred and amortized over the lease term.

LO 1-C: *Capital vs. operating leases; off-balance sheet financing; sales-type vs. direct financing leases.*