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THE CONCEPT OF THE QUALITY OF EARNINGS:
ANALYSIS AND EVALUATION

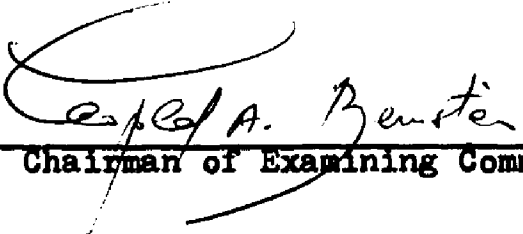
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This manuscript has been read and accepted for the Graduate Faculty in Business in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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CHAPTER I

INTRODUCTION

The notion of "quality of earnings" is widely discussed in both the accounting and investment analysis professions. References to this notion appear in the accounting literature, finance and investment literature, authoritative pronouncements of the Securities and Exchange Commission (SEC), brokerage reports, and "Management's Discussion and Analysis of the Summary of Earnings" (hereafter referred to as "Management's Analysis of Results of Operations"). The accounting profession concern is with the fairness with which reported net income reflects the operational performance of a business entity. Security analysts evaluate earnings quality in order to determine a relevant level of earnings, and to predict the future net income and stock price of a company.

The issuance of Accounting Series Release No. 159 makes this notion of paramount importance to financial management. The release requires "Management's Analysis of Results of Operations" in Forms 10-K, prospectuses, and annual reports. The SEC maintains that management must explain changes in the amount and source of revenue and expense items in order to enable investors to appraise the quality of earnings. Accounting Series Release No. 177 now requires this discussion in interim

statements.

The SEC and the Financial Accounting Standards Board (FASB) are responsible for the issuance of financial reporting requirements to improve the measurement of net income and to provide meaningful disclosure of information. It would be beneficial to these authoritative bodies if they knew the kinds of disclosure that would assist investors in evaluating earnings quality.

A definition of the notion "quality of earnings" is lacking. Further, no consensus exists as to what constitutes good or poor earnings quality.

Examples of criticisms which have been directed at the notion of quality of earnings as broadly conceived by various sources follow: (1) What a company actually earned may be quite different from what is reported by the company. Some firms report enormous earnings where often no true profit exists.¹ (2) Net income figures have become little more than a composite of a great many accounting estimates and judgments. This opens possibilities for the baldest of manipulation.²

¹
F. Block, "A Security Analyst Looks at Accounting," Financial Executive, (November, 1971), p. 22; P. Defilese, "What Makes Profits Look 'Obscene'," Business Week, (August 4, 1975), p. 10.

²
L. Burton and J. Lyons, "Managing the Numbers: The Accounting Game," Financial World, (October 31, 1973), p. 63; A. Hershman, "Accounting: New Numbers, Same Game," Dun's Review, (August, 1972), p. 38; "What Are Earnings? The Growing Credibility Gap," Forbes, (May 15, 1967), pp. 28, 30.

Statement of the Problem

There are many sources which refer to the "quality of earnings" but there is no common understanding or agreement of what it means. A wide variety of views and a lack of discipline exists in the use of the term among accountants, security analysts, financial managers, and authoritative bodies (e.g., SEC). In fact, quality of earnings sometimes means something different to persons within a single professional field.

Purpose of Study

The purpose of this dissertation is to derive the favorable and unfavorable characteristics associated with reported results. I will attempt to bring order out of the present chaos surrounding the usage of the term "earnings quality," build a logical rationale underlying it, and suggest ways to evaluate earnings that can most usefully be applied in practice by accountants and analysts.

The basis for and theory behind the measurement of the quality of earnings will be discussed. Approaches to measure and describe it will be presented. This measurement will be of particular interest to users of financial statements.

Disclosures which would be useful in evaluating earnings quality will be recommended.

In conclusion, I will attempt to clarify the scope and limitations of the notion "earnings quality."

Research Methodology

The research methodology is designed to: (1) elicit from accountants, security analysts, and financial managers their diverse viewpoints with respect to the definition of and the criteria used to evaluate the "quality of earnings"; (2) extract from the various sources the elements that make-up the "quality of earnings," particularly by exploring the reasons why this term was coined in the first place; and (3) obtain references to the quality of earnings of specific companies and industries as found in the literature and brokerage reports.

Survey of the Literature on Quality of Earnings

The survey will be broken down into two parts: (1) accounting literature and (2) financial and investment literature. An analysis will be made to determine how and in what context the notion originated in both fields. The literature search will provide the definition of earnings quality from a theoretical point of view.

Authoritative Pronouncements Dealing with the Quality of Earnings

A critique will be presented dealing with the SEC pronouncements which use quality of earnings as a rationale for their requirements. These releases provide disclosure requirements which assist in the evaluation of earnings quality. An analysis will also be made of the FASB pronouncements. Finally, interviews will be conducted with members of these authoritative bodies to determine their viewpoints on the subject.

Wall Street Special "Accounting Reports"

An analysis of approximately one-hundred reports will be made to determine the elements that make-up the definition of "quality of earnings" as viewed by security analysts. The reports refer to accounting practices and disclosure policies in different industries. The brokerage house reports listed below will be reviewed.

1. Bear Stearns & Co.* - Quality of Earnings Reports and Accounting Issues.
2. Drexel Burnham & Co. - Accounting Bulletins.
3. Merrill Lynch, Pierce, Fenner and Smith, Inc. - Accounting Report Alerts and Resume of 8-K Reports.
4. Oppenheimer & Co. - Accounting Briefs.

Investment Analytical Reports

By referring to the October 1974 issue of the Institutional Investor, I will obtain a listing of the best security analysts for 1974. In this publication there are 209 security analysts listed representing 34 industry groups. The analysts were rated by institutional investors who make use of brokerage reports in their decision making process and are thereby in the best position to evaluate the quality of these reports.

I will request from the analysts copies of their research reports which deal with the "quality of earnings." The reports include examples of accounting practices of companies that detract from or add to the quality of their net incomes. The reports also discuss the quality of earnings associated with different industries. Furthermore, qualitative factors that

* The Quality of Earnings Report was previously published by Coenen & Co. and then Arthur Wissenberger & Co.

bear on companies' earnings quality are presented. These qualitative factors primarily relate to the effect of the economy on the company (e.g., price-level changes, business cycle), industry characteristics (e.g., capital vs. labor intensive, product demand elasticity), and company characteristics (e.g., business risk).

**"Management's Analysis of Results of Operations" section
included in Annual Reports and Forms 10-K**

An evaluation will be made of "Management's Analysis of Results of Operations" for four hundred and fifty companies. As previously mentioned, management is required to discuss the reasons for changes in revenue and expense amounts so that investors are able to evaluate the company's quality of earnings. The objectives of the study are: (1) to see what management believes is necessary to be disclosed for investors to properly evaluate earnings quality and (2) to arrive at an over-all definition of the "quality of earnings" from the point of view of financial management.

Personal and Mail Interviews

Interviews will be conducted with accountants, security analysts, and financial managers. The objectives of the interviews are as follows:

1. To determine whether accountants, security analysts, and financial managers are familiar with the notion;
2. To determine whether the notion is meaningful and useful to preparers and users of financial statements;
3. To determine what each professional field views as the meaning of the term "quality of earnings";

4. To determine the areas of agreement and disagreement among the professional fields as to the definition of the term;
5. To determine whether quality of earnings has various meanings to persons within a single professional field;
6. To determine the elements that make-up the "quality of earnings";
7. To determine what corporate accounting and financial factors improve or detract from the "quality of earnings"; and
8. To determine the extent to which quality of earnings can be objectively measured, if at all. If it can be measured, how can this be accomplished?

In conclusion, the interviews will elicit the opinions of preparers and users of financial statements with respect to a definition of the term "quality of earnings."

A questionnaire will be mailed to accountants, security analysts, and financial managers who will be selected from the membership lists of their respective professional organizations.

Scope of Study

PART I discusses the conceptual foundations of the quality of earnings. It is organized in the following manner:

1. Chapter II - The Elements Comprising the Quality of Earnings - Views and Opinions. This chapter explores the reasons why security analysts have arrived at the notion "quality of earnings." It also discusses why the notion is important to preparers and users of financial statements. The elements making-up the definition of the quality of earnings are derived as referred to

by the following sources: Accounting Literature, Finance and Investment Literature, Wall Street Special "Accounting Reports," Investment Analytical Reports, "Management's Analysis of Results of Operations," and Personal Interviews. Each element discussed represents a main heading (e.g., Discretionary Costs) and the references made to the element by the sources represent sub-headings (e.g., Accounting Literature). The sources also refer to examples of company and/or industry practices that improve or detract from the quality of earnings. These examples are included as part of the discussion of each "quality of earnings" element. This organization allows the reader to see the divergent views among accountants, security analysts, and financial managers with respect to each "quality of earnings" element. I will analyze and evaluate these views in order to determine their relevance to the issue.

2. Chapter III - Authoritative Pronouncements and the Notion of the Quality of Earnings. This chapter presents the provisions of authoritative pronouncements which use the quality of earnings notion as a rationale for their requirements.

3. Chapter IV - Results of the Questionnaire Survey.

PART II discusses the special factors affecting the quality of earnings. It is organized in the following manner:

1. Chapter V - Implications of the Analysis of Other Elements of the Financial Statements. This chapter includes a discussion of how an analysis of the Balance Sheet and Statement of Changes in Financial Position hold clues as to the quality of earnings reported by companies. Other accounting considerations such as business combinations which have a bearing on the quality of

earnings are discussed. The chapter also identifies the various types of disclosure that should be presented so that financial readers can better evaluate the quality of reported earnings.

2. Chapter VI - Industry Characteristics and Political Factors. This chapter discusses factors affecting the quality of earnings of different industries. The sources refer to accounting practices and qualitative factors (e.g., economic considerations) that improve or detract from the quality of earnings. For example, the accounting practices of Real Estate Investment Trusts have been severely criticized in recent years. The chapter also discusses the impact that political factors have on the quality of earnings reported by business enterprises.

PART III provides an evaluation of the quality of earnings notion. The two chapters in this section are delineated as follows:

1. Chapter VII - Approaches to the Measurement, Description, and Evaluation of the Quality of Earnings. This chapter presents techniques that can be employed by financial experts to describe and evaluate a company's quality of earnings.

2. Chapter VIII - The Correlation Between the Value-Earnings Ratio and Quality of Earnings Factors. The chapter presents a statistical test in which correlation or regression coefficients are computed relating the value-earnings ratio (e.g., price-earnings ratio) to variables, such as financial ratios and stability of earnings. Such variables are the determinants of earnings quality. For example, the value-earnings ratio should be

positively correlated with the ratio of cash flow to accrual earnings, but negatively correlated to earnings variance or covariance with the market.

PART IV consists of Chapter IX titled "Towards A Useful and Operational Definition of the Concept 'Quality of Earnings'." In this chapter, I will recommend approaches to a definition of the meaning and develop the boundaries of the concept "quality of earnings." I will also discuss how it can most usefully be applied in practice.

PART I

CONCEPTUAL FOUNDATIONS

CHAPTER II

THE ELEMENTS COMPRISING THE QUALITY OF EARNINGS -
VIEWS AND OPINIONS

This chapter discusses the reasons behind the emergence of the notion "quality of earnings." It discusses why this notion is important to accountants, security analysts, and financial managers. Finally, it presents the views of financial experts concerning the factors which should be considered in gauging a company's quality of earnings. These factors relate to the nature of a company's accounting policies as well as to its financial and operating characteristics.

The chapter is organized into the following sections: (1) What is a Company's Reported Earnings? (2) The Emergence of the Notion "Quality of Earnings"; (3) The Significance of the Term "Quality of Earnings"; (4) Elements Comprising the "Quality of Earnings"; and (5) Effects of the Quality of Earnings.

What is a Company's Reported Earnings?

Some security analysts believe that there are "true earnings" or "real earnings" for a business entity.¹ How is it then possible that numerous acceptable reported earnings figures arise from a single set of facts? The reason is that there is no one "real net income" figure. The following are some reasons

¹
L. Bernstein, Accounting for Extraordinary Gains and Losses (New York: Ronald Press, 1967), pp. 55-56.

why net income cannot be a precise and flawless measure of operating performance: (1) Many estimates are required as to the outcome of future events in the income measurement process; (2) There exists a range of acceptable alternative accounting methods which result in the reporting of different earnings figures.

The FASB Discussion Memorandum on "Materiality" makes² the following references to the term "real earnings":

The investors' concept of real earnings, commonly defined as normal, recurring, cash-flow-generating earnings from operations, tends to highlight the results of substantially completed, normal, recurring, cash generating activities and the need for cash to replace depreciable assets . . . Real earnings are viewed as the primary indicator of an enterprise's profitability . . .

Real earnings normally fall between accounting net income and cash flow from operations less the amount of any nonrecurring or unusual items included therein and their related tax effects. Accounting net income is usually thought by investors to be the best indicator of an enterprise's earning power because it closely approximates their concept of real earnings. Although investors generally do not restate reported accounting net income in terms of real earnings, they do exclude identifiable nonrecurring or unusual items from reported net income in assessing an enterprise's earning power. Differences between reported and real earnings are considered subjectively in assessing the "quality" of an enterprise's earnings in relation to that of other enterprises . . .

In determining real earnings, analysts often eliminate from reported earnings the effect of non-cash items such as amortization of intangible assets, expense "reductions" due to the deferral of "soft" costs (i.e., start-up costs), and adjustments to some allowance accounts.

In some cases, non-cash items of the type described above would be considered subjectively in assessing the quality of an enterprise's reported earnings in terms of its real earnings. In other cases, such items as well as any related cash consequences (past, current, or prospective) would be excluded from net income in determining normal recurring earnings because the causative event or transaction is considered nonrecurring or unusual. An individual item is considered only once in the determination of real earnings - - as an adjustment of reported earnings or subjectively in determining the quality of reported earnings.

²

An absolute measure of "real earnings" will never exist because in our complicated changing economic environment, it is almost impossible to distill an entire year's operations into a single absolute figure. Further, financial statements are general-purpose in nature and are therefore designed to serve the needs of many users. Consequently, a single earnings figure cannot be meaningful to all financial readers. It is therefore the task of the analyst to adjust reported net income to arrive at an earnings figure which is most relevant to him. The issue of quality of earnings arises when the analyst attempts to determine the extent to which reported net income reflects what he considers to be "actual earnings."

In assessing the quality of earnings, analysts look at the make-up of the net income figure. They would consider, among others, the factors mentioned in the FASB Memorandum. The relative importance assigned to each factor affecting earnings quality would vary depending on an individual analyst's viewpoint.

Two companies that report identical net income figures may in fact be very dissimilar in terms of operating performance. (Operating performance relates to the increase in wealth related to the firm for the period that is due to its income generating activities). This is because the earnings may possess different degrees of quality. For example, one company may have employed liberal accounting policies while the other used realistic ones. Although both firms report the same dollar earnings, the quality of earnings of the latter is superior since its policies properly account for the economic substance of its

transactions.

The Emergence of the Notion "Quality of Earnings"

The purpose of this section is to present some of the reasons why the notion "quality of earnings" came into being.

The notion was first coined by security analysts because they felt that reported earnings did not measure the "earning power" of a company as they envisaged that concept. They found it difficult to predict future earnings based on reported results. The term was also introduced because analysts found it difficult to analyze companies' financial statements because of various weaknesses in accounting measurement of financial data. For example, problems exist in the timing of revenue recognition and the period of cost expiration. There exists a gap between what accountants and security analysts consider as earnings. In an interview, R. LaBlanc (security analyst with Salomon Bros.) made a typical comment: "Are earnings really what the accountant says they are? The answer is obviously no. A better alternative would be to exclude from net income unusual items and inflationary profits."

Analysts have been shocked by the sudden financial disasters of corporate giants (e.g., W.T. Grant) that previously received unqualified opinions. In addition, there have been cases (e.g., Penn Central) where outright deception has been perpetrated by management and accountants.

Such incidences undermine the security analysts' confidence in accounting numbers.

A company within certain limits is able to manage earnings in order to portray a desired earnings trend. The purpose is to give income and expense streams a semblance of stability which in fact does not exist. The management of earnings by some companies makes analysts wary of reported results.

Analysts are suspicious of companies that tend to speed up revenue and slow down expenses. This has been called "front-loading" of profits. Some companies (e.g., franchisers, homebuilders) recognized revenue before it was reasonably certain to be collected. This sometimes resulted in the reporting of earnings in one year and its reversal, with a resultant loss in a subsequent year.

Analysts retain a critical attitude toward changes in accounting policies that result in illusory earnings growth. They attempt to determine what earnings would have been if such changes were not made. For example, analysts attempt to adjust earnings for any unrealistic changes in estimates (e.g., pension plan assumptions, fixed asset lives).

Analysts complain that reported net income does not reflect economic reality*. For example, accountants do not take into account in determining earnings the effect of price-level changes. This results in inflationary profits

*Economic reality will be defined on page 24.

which are often excluded by analysts in their evaluation of reported results. Analysts also argue that many accounting principles are unrealistic since they do not accurately reflect the economic substance of a firm's transactions. An example is the straight-line method which often does not account for the decline in service potential of assets.

Diversity in accounting policies makes it difficult to compare firms within the same industry. It is even more difficult to compare firms within different industries. In order to compare these companies, analysts attempt to determine what the companies' earnings would have been if they had used similar accounting policies. The procedures used by analysts in comparing the operating results of companies in the same industry are subsumed under the "quality of earnings" notion.

Analysts attempt to evaluate the "earnings profile" of companies. "Earnings profile" refers to the mixture of desirable and undesirable characteristics in net income. For example, a company with stable income statement elements has higher quality of earnings than one with unstable elements. The former has greater stability in reported results which allows for more reliable prediction of future earnings.

Analysts consider various qualitative factors that may affect a company's future results. Examples are economic and political factors that may result in instability in earnings. For example, a company that is highly susceptible to the business cycle shows more vacillating earnings than one which is not. Consequently, in appraising the quality of earnings analysts consider qualitative as well as

quantitative factors.

Economists argue that accounting profit is not suitable as an accurate measure of operating performance. They offer economic income as a substitute. Economic income consists of income from operations (including purchasing power gains and losses) and unexpected losses and gains. The latter occur as a result of conditions of uncertainty.

In conclusion, security analysts look at reported earnings as a basis on which, given proper disclosures, they can make needed adjustments to incorporate their conceptions and needs. They do not accept reported results as a measure of a company's operating performance for their purposes. In addition, they consider various nonquantitative factors in their over-all evaluation of earnings. When these steps are completed, they are then in a position to assess and predict earnings.

The Significance of the Term "Quality of Earnings"

The meaning of the term "quality of earnings" is of interest to management, accountants, security analysts, and other financial statement users as well as to authoritative bodies.

Management is concerned with the notion since they are required to discuss in their "Management's Analysis of Results of Operations" sections the reasons for changes in revenue and expense items as they affect the quality of earnings. Management is also concerned with the notion since their position and reputation depend on the way reported results are viewed by the market place. For example, a company that engages in

income management, uses liberal accounting policies, and has erratic income statement elements will be viewed negatively by investors. As a result, its price-earnings ratio will probably decline.

The CPA is interested in the degree to which reported earnings present fairly the results of operations. Earnings are considered to be of lower quality if they do not accurately reflect the operating performance of the firm. This arises when earnings are either overstated or understated. For example, the auditor must satisfy himself that the measurement standards used are realistic* and that the earnings reported are reliable and verifiable.

The analyst is concerned with the notion since one of his basic functions is to adjust reported net income in order to determine a company's "earning power." For example, he may adjust reported earnings for unwarranted changes in discretionary costs, and for the under-accrual of expenses.

The analyst makes his earnings prediction partially based on the firm's earnings record. Since recurring performance can be projected with greater confidence than can random events, the analyst attempts to identify those elements included in earnings that are abnormal or erratic in nature.

The SEC and FASB are interested in the meaning of the term so that they can promulgate reporting requirements which will improve the measurement standards used in determining earnings and provide the types of disclosures that would assist investors in the evaluation of reported results.

* Realistic accounting policies are discussed on pages 24-25.

Elements Comprising the "Quality of Earnings"

This section identifies and discusses the elements making up the definition of the "quality of earnings." The sources of reference are as follows: Accounting Literature, Finance and Investment Literature, Wall Street Special "Accounting Reports," Investment Analytical Reports*, "Management's Analysis of Results of Operations," and Personal Interviews. The reader is also exposed to the great variety of views as well as lack of discipline in the use of the term among accountants, security analysts, and financial managers. I will analyze and evaluate the views and opinions expressed to determine what is relevant and what is not.

Quality of earnings is a multi-faceted concept that embraces many accounting and financial considerations. Therefore, in describing the quality of earnings we must consider all of the elements that make-up the definition of the term. These elements are of two types - - quantitative and qualitative. Quantitative elements such as cash flow are subject to measurement. Qualitative elements such as quality of management cannot be measured objectively.

Some elements of the quality of earnings are inherent in an enterprise such as the degree of recurrence in its earnings. Other elements are not inherent but are dependent on management choices such as the degree of maintenance of capital.

*The data presented in this section includes information obtained from the research reports and from personal interviews conducted with the analysts. The purpose of these interviews was to obtain clarification from the analysts of comments made in their research reports and to obtain additional information relevant to the "quality of earnings."

This section is organized into the following sub-sections which comprise the major elements to be considered within the framework of the "quality of earnings": (1) Accounting Policies in Use, (2) Risk and Variability, (3) Economics of Industry and Company, and (4) Financial Characteristics.

Accounting Policies in Use

This sub-section discusses how an evaluation of a company's accounting policies holds clues as to the quality of its reported earnings. It also deals with the ways in which accountants and management can deliberately show a desired earnings figure. It also discusses other measures of operating performance such as cash flow and taxable income which may be compared to net income in order to obtain an evaluation of the quality of reported results.

This sub-section is organized in the following manner: (1) Nature of Accounting Policies, (2) Discretionary Costs, (3) Cash Flow, and (4) Taxable Income.

Nature of Accounting Policies

Accounting Literature. A search was made of the National Automated Accounting Research System (NAARS) file for the "quality of earnings" term in all entered accounting literature and in annual reports issued from 1972-1974. The result was that only four entries were included in the file consisting of annual report disclosures of Medusa Corp. and National Gas and Oil Corp. as well as references to Accounting Series Releases Nos. 151 and 159. It is

interesting and significant that such a widely used term in security analysis has been neglected in the accounting literature and in annual reports.

Medusa Corporation's annual report (dated Dec. 31, 1973) discloses*: "The quality of earnings reflects the use of accounting policies which clearly and appropriately present the results of operation."

According to numerous sources³, the accounting input into the quality of earnings is the conservatism of a firm's accounting policies. The close scrutiny of a firm's accounting conservatism stems from the knowledge that the difference between the earnings of firms are due not only to intrinsic differences in results of operations, but also are attributable to mere differences in accounting methods adopted by the company's management.

Net income that has been determined based on conservative accounting policies is generally considered to be of higher quality than comparable earnings based on liberal accounting policies. Analysts prefer to rely on a conservatively constructed income base as a guide to future income projections. They regard the risk of a possible overstatement of income to be greater than that of understatement. However,

*Source: NAARS file.

³J. Dearden and J. Shank, Financial Accounting and Reporting (New Jersey: Prentice-Hall, 1975), p. 287; M. Tucker, "Estimate Degree of Conservatism in Your Corporate Earnings," Certified General Accountant, (March/April, 1974), p. 21; FASB Discussion Memorandum, Criteria for Determining Materiality, op. cit., p. 125.

ultra-conservatism may result in earnings that are both misleading to present investors and not useful in predicting performance.

Many financial readers believe that the accounting policies adopted should be conservative in the sense that they tend to track cash flow, except where there is strong evidence to support a departure. Liberal policies would be considered by many to be those which lack persuasive evidence to support deviations from cash flow. Examples of liberal policies are cost deferrals and revenue anticipations that are inappropriate.

Earnings quality also depends on the degree of conservatism with which the estimates of current and future conditions are made. This applies to concern that estimates or assumptions may be overoptimistic or misleading. An example of a questionable estimate is when an airline depreciates a plane over 15 years with a salvage value of 20% while its competitors are depreciating the same model over 10 years with a salvage value of 15%. This is coupled with the fact that new technology in the industry usually makes a plane obsolete in about 10 years. In this case, the airline's accounting estimates are overoptimistic. A possible indication of whether a company's estimates and assumptions are unwarranted may be when the company has misjudged the lives and salvage values of its assets in prior years. For example, if a company's prior estimates have shown to be significantly different from what had

actually occurred, one may question the reasonableness of the firm's estimates. For instance, if a company had estimated a salvage value of \$1,000,000 for a fleet of planes that were actually sold for \$100,000 at the end of their lives, we would infer that the estimate was overly optimistic. Another possible indication of unwarranted assumptions is when a company's estimate of interest rate, mortality, etc. in connection with its pension plan is significantly different from actual experience. This may be evidenced when the company experiences significant amounts of actuarial gains and losses.

A comparison may be made between the accounting policies employed by the firm and the standard accounting policies prevalent in the industry. If the company's accounting policies are considerably more liberal, its earnings quality may be lower. For example, a security analyst might consider the company's timing of the recognition of revenue and the deferral of costs in relation to the prevailing policies in the industry and other industries and in comparison with his own concept of cash-flow-generating earnings (with emphasis on the substance rather than the form of transactions).

A conservative accounting policy may not always result in the most meaningful earnings figure. For example, R&D costs must be expensed even though future periods may benefit from such expenditures. It would be more appropriate to utilize the matching principle in recognizing that there should be some attempt to match R&D costs against future benefits flowing from such activities.

Earnings which reflect economic reality are of higher quality.⁴ Economic reality means that the "ups" and "downs" of business conditions are recognized without artificial smoothing. Economic reality also means that the measurement standards used in determining net income are realistic in accounting for the economic substance of the company's transactions. The accounting principles and estimates used should reflect the underlying business and financial realities of the firm and industry. For example, the depreciation method selected for a fixed asset should be the one that most closely approximates the decline in service potential and usefulness of that asset. An example of an accounting policy that does not reflect economic reality is when a company defers costs that do not have future economic benefit. For instance, a company may fail to write-down inventory during a recessionary period when its salability is doubtful. The economic reality of the industry may dictate such write-downs if it is highly susceptible to recessionary forces (e.g., jewelry industry). Another example of a dubious deferral is when a company fails to write-down goodwill even though it has been operating at substantial losses and its market share is evaporating. Arthur Andersen & Co. believes that the matching process is not indicative of

⁴Economic Reality in Financial Reporting (New York: Touche Ross & Co., 1976), p. 10.

economic reality.⁵

Quality of earnings is earnings that relate as reasonably as possible in the circumstances to the business operations of a company within a period of time. It assumes that the most realistic accounting alternative was employed for each set of facts. Compliance with GAAP doesn't necessarily mean that a company has high quality earnings. For example, it may use the most liberal accounting policies rather than realistic ones in order to show the highest possible earnings figure. (This is supported by Judge Friendly's decision in the Continental Vending Case in which he held that conformity with GAAP is not necessarily a valid defense to a lawsuit against the appropriateness of a company's financial statements). Examples of realistic accounting policies are cited in the AICPA Industry Audit Guides and in accounting policy guides published by various CPA firms. The most conservative accounting policy is not necessarily the most realistic one.

Analysts may wish to determine what the effect on net income would have been if a company used the most realistic accounting principles (e.g., as per the Audit

⁵The following appears in Arthur Andersen & Company's comment letter (dated April 26, 1974) to the FASB in response to the Discussion Memorandum on "Accounting for Future Losses":

"By trying to match all types of costs, expenses, and losses with revenue over some 'reasonable' period, debit and credit balances have been reported on the balance sheet whether or not they constituted economic resources or liabilities. The matching concept has been implemented in such a way as to result in much that is artificial; so that application of this concept often leads to statements of income that fail to reflect the earnings or losses really attributable to the period."

Guides) rather than the accounting principles it selected. If the use of realistic principles would have resulted in a substantially lower profit, the quality of earnings is lower.

The use of historical cost is not consistent with economic reality in times of rapid inflation because revenue in current dollars is being matched against expenses in "old" dollars (e.g., depreciation on assets acquired at lower price levels). Consequently, earnings are overstated in real economic terms. Replacement cost accounting would generally be more consistent with economic reality. However, R. Anthony⁶ believes that if a company's selling prices are such that it recovers its historical costs plus its cost of capital, then its annual profit is best measured using historical cost.

Economic reality also refers to the economics of the industry in which the firm operates. The economics of an industry relate to its inherent characteristics such as seasonality, nature of product demand, and nature of costs. Corporate accounting policies must be compared with the economic reality of the industry to evaluate earnings quality. For example, if an industry is highly seasonal, companies in that industry should take their inventory counts at the "ebb" of the season (e.g., June 30). Since the level of inventory items at the "ebb" is at a low point, there is less likelihood of estimation error. (Some examples of estimates made in inventory valuation are the allocation of costs and the determination of realizable value.) The use

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R. Anthony, "A Case for Historical Costs," Harvard Business Review, (November/December, 1976), pp. 69-79.

of another year-end date could have a distorting effect on operating results. For example, the taking of inventory at the "height" of the season could result in greater estimation error since the ending inventory will be much higher.

An unjustified accounting change results in an earnings increment of low quality. An unjustified change means that it is not justified according to the facts and is not consistent with economic reality. Unwarranted changes may be made in accounting principles, estimates, and assumptions. For example, a company may reduce its bad debt provision as a percent of sales and accounts receivable even though customer delinquencies are substantially on the rise and/or the company is selling to slower paying customers. Another example is a reduction in pension expense resulting from an unjustified change in actuarial assumptions. For instance, a company may increase its estimated interest rate on its pension portfolio from 8% to 10% even though the company and its competitors have only been earning an 8% rate of return. This is coupled with a trend in the market place toward lower interest rates on the types of securities held by the firm.

A lack of consistency in the application of accounting policies has a negative impact on the quality of earnings. This is because the effect of accounting changes is often to increase reported profits, resulting in illusory earnings growth. Further, if a company makes numerous accounting changes, it will be more difficult for analysts to use current year's earnings as a predictor for future earnings.

Earnings quality is dependent on the extent to which net income stands on its own for the current year as well as on the extent it borrows from the future or benefits from the past. A firm's management, through various actions, is capable of exerting influence on the measurement of various revenue and expense accounts and is thereby able to manage earnings.⁷ This results in a masking of the natural and cyclical irregularities which are part of the reality of the company's experience. Therefore, reported income may not accurately portray economic results as they are but rather in a way that management wants them presented. The artificial shifting of net income from one period to another results in lower quality of earnings.

It should be noted that although income manipulation and the quality of earnings interact, they are not the same thing. In defining the term "quality of earnings" we must narrow its boundaries in order to make it a useful and meaningful concept. We cannot say that everything that is bad in accounting falls under the quality of earnings notion. Consequently, the topic of income manipulation will only be superficially discussed. Suffice it to say that income manipulation is just one of many factors detracting from the quality of earnings.

The functional relationship between sales and net

⁷L. Godwin, "Income Smoothing," The CPA Journal, (February 1977), p. 27; R. Simpson, "An Empirical Study of Income Manipulation," Accounting Review, (October, 1969), p. 817.

income may be an indication of whether a company is managing earnings. E. Imhoff writes:

There are firms which have a strong functional relationship between sales and net income. Such firms are believed to be nonmanipulators, since the changes that occur in reported income streams are highly associated with changes in reported sales. There is an additional belief that such nonmanipulating firms will possess income statement variables that are also highly associated with changes in reported sales. Generally when the changes in income statement variables are all highly associated with changes in the pattern of sales, the variables are construed to be behaving rationally and the non-manipulator classification is appropriate. On the other hand, if a firm is manipulating its reported income, the functional relationship between reported sales and reported income will be weak. The firm that has a weak relationship between sales and income should also be characterized by the presence of income statement variables which are weakly associated with sales.

Income management may be accomplished in many ways.

A few examples should suffice.

A company that has deferred pre-opening costs will start to amortize them when a new facility opens. The company could accelerate or defer the opening date based on its desired earnings level. For example, if earnings are too low, the company will move the opening date from December to January in order to defer the initiation of amortization expense. There is also latitude in determining what constitutes an opening date (e.g., the day all employees are hired, the date the facility is first opened to the public).

A housing company with an affiliated mortgage banking company can trade their portfolio of securities with each other.

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E. Imhoff, "An Empirical Examination of Income Manipulation," Unpublished Ph.D. Dissertation, Michigan State University, 1973, p. 31.

In so doing, each may be able to pick-up earnings by trading low-cost securities that have higher market values.

A significant portion of the net income of Avis is derived from the sale of used vehicles. The company has managed earnings through the timing of such sales. The company makes these resale profits possible by depreciating the vehicles faster than the actual decline in market value. When the autos are sold, the excess of market value over book value is recognized in earnings. In 1969 and 1973, when the company's regular business (leasing and rentals) was on the downturn, it increased its sales of used vehicles in order to achieve its profit goals.

Another smoothing method involves the form in which employee benefits are declared. Bonuses paid in cash require a charge against earnings. However, if stock options are given, net income is not affected.

Finance and Investment Literature. Most authors believe that the selection of conservative accounting alternatives results in the highest quality of earnings.⁹ However, N. Lamson¹⁰ believes that accounting principles should be selected that represent the underlying business and financial

⁹W. Blackie, "The Quality of Earnings," Financial Executive, (July, 1972), p. 24; G. Murphy, "The Quality of Reported Earnings Under Generally Accepted Accounting Alternatives," Journal of Business Finance, (Summer, 1971), p. 43; "The Numbers Game: Who Shall Prevail?" Forbes, (August 1, 1973), p. 22.

¹⁰N. Lamson, "A Skeptical Eye for Earnings." The New York Times - Business and Finance Section, (February 2, 1975).

realities of the company. He believes that in some cases liberal accounting policies may better reflect economic reality than conservative ones.

According to P. Defilese,¹¹ it is possible under GAAP to create profits where in fact economic reality doesn't warrant them. The recognition of revenue before it is reasonably certain to be collected, without recognizing a sufficient provision for future losses, lowers the quality of earnings. An example is the recording of franchise sales that stand a good chance of not being realized or even cancelled. Another example was the sale of bowling equipment in the 1960s to inexperienced operators which resulted in the recognition of the full profit on the equipment without adequate provision for bad debts.

Some companies immediately recognize revenue even though certain services are yet to be performed. A correspondence school or health spa that derives income from membership dues may be recognizing revenue when the advance cash payment is received. This method may overstate current year's earnings. It would be more appropriate to allocate the fee over the enrollment period. Similarly, some magazine publishers recognize subscription income immediately when the full cash payment is received from subscribers. Subscription income should not be recognized until the earnings cycle is complete.

¹¹P. Defilese, "What Makes Profits Look 'Obscene'," Business Week, (August 4, 1975), p. 10.

A firm that unrealistically defers the recognition of revenue has poor earnings quality since net income is unjustifiably understated.

The reversal of previously recorded profits makes one suspicious of a company's revenue recognition policies. For example, Bath Industries makes the following disclosure in its 1973 annual report: "The ship contract was recorded at a breakeven, resulting in the reversal of \$718,000 income recorded in prior years." Similarly, a company that reverses a prior write-off of an asset has a questionable accounting policy. For example, in 1976, Lubrizol reversed an equipment write-off originally made in 1975 amounting to \$885,000 in order to partially offset a \$4.4 million exchange loss.

For the most part, publications in the finance literature cover the same areas as just discussed in the prior section. In order to avoid repetition, these areas will not be discussed again.

Wall Street Special "Accounting Reports".* The under-accrual or over-accrual of expenses results in lower quality of earnings. An example of an under-accrued expense is when a computer manufacturer does not provide normal maintenance service for rented computers because they are being used by lessees. Similarly, Pullman Transport Leasing Co. discloses: "Certain

¹²For example, see F. Block, "A Security Analyst Looks at Accounting," Financial Executive, (November, 1971), p. 23; K. Field, Introduction to Investment Analysis (New York: Ronald Press, 1940), p. 265; W. Norby and F. Stone, "Objectives of Financial Accounting and Reporting from the Viewpoint of the Financial Analyst," Financial Analysts Journal, (July/August, 1972), p. 76; "The Quality of Earnings is Under Attack," Business Week, (December 23, 1972), p. 74.

*Source: Quality of Earnings Reports.

repair and maintenance expense which might otherwise have been incurred during 1973 was postponed until 1974 due to demands from lessees for continued utilization of covered hopper cars during a period of unprecedented volume of grain shipments." It appears that 1973 earnings were overstated to the extent that these repair costs were not incurred. Another example is a firm's failure to provide for a sufficient warranty provision. For instance, a company may have sold defective products in the current period but failed to increase its normal provision. Analysts should attempt to determine what these normal charges are and adjust reported net income accordingly. An example of an over-accrued expense is when a company, with excessively high earnings, decides to accrue for possible sales returns which are highly unlikely to materialize.

The following accounting policies lower the quality of earnings:

1. A company may reduce its expenses for expected recoveries of excess costs resulting from changes in government contracts. Exaggerated expectations may unjustifiably reduce expenses with the resultant overstatement of net income. For example, in fiscal 1974, Combustion Equipment Associates filed suits against governmental agencies for the recovery of excess costs resulting from delays and modifications in certain contracts. Accordingly, it reflected \$800,000 in claim receivables and reduced its costs. The latter increased per share earnings by \$0.21. Subsequent events showed that only about 65% of the claim was collected.

2. There may be an unrealistic decline in a company's percentage of sales allowances to sales. For example, sales may increase by 200% while sales allowances may only increase by 20%. This trend may not be consistent with economic reality especially if dealer returns are substantially on the rise because of the larger sales base. In this case, earnings are overstated.
3. A company may provide a substantial provision for future costs (e.g., warranties) in the current year because it was remiss in making adequate provisions in prior years. This indicates an understatement in current period earnings since they must absorb charges that more properly belonged to prior periods.
4. A company may decide to take a "financial bath." This involves a "clean-up" of balance sheet accounts by writing down assets, and providing for estimated losses and expenses which may apply to the future. This results in lowering current period earnings while relieving future years' income of these charges.

Management's Analysis of Results of Operations.

Financial management believes that the use of realistic and conservative accounting policies results in the highest quality of earnings. For example, Global Marine makes the following disclosure:

We continue in our policy of presenting high quality financial results in a realistic and conservative manner. We expense many items frequently capitalized by other companies. Examples are start-up costs and shipyard expenses associated with the fleet modification program.

Some companies disclosed that they had changed to more conservative accounting methods. For example, Peoples Drug Stores discloses:

In 1974, the company changed its method of accounting for merchandise discounts from the flow-through method to the more preferable method of deferring recognition of income for merchandise discounts to the period in which such merchandise is sold.

Bank of New York discloses:

In 1974, the provision for loan losses of \$4.5 million was \$1.5 million greater than the amount required under the formula of the regulatory authorities. Each year since 1970, the provision charged to earnings has exceeded our net loan losses.

It appears that the bank's reserve provision is excessive. Ultra-conservatism is undesirable since it results in an understatement of current period earnings.

A change in corporate policy may result in profit distortion among reporting periods. For example, GEICO discloses:

A departure from normal policy renewal processing schedules caused written premiums in the amount of \$5.8 million to be entered in the fourth quarter of 1973 that normally would have been entered in the first quarter of 1974.

Discretionary Costs

Accounting Literature. Discretionary costs are costs that can to some degree be increased or decreased by management decision. They include advertising, promotion, repairs and maintenance, research and development, and training.

If a firm cuts-back on repairs and maintenance, the useful life of its equipment will decline. This necessitates an increase in the depreciation provision. Unless an upward

revision is made, earnings are overstated.

Finance and Investment Literature. C. Davis and E. Gee¹³ believe that when business is bad, expenditures for repairs and replacements may be reduced substantially or abandoned entirely as a means of bolstering profits. For example, railroads are known to reduce maintenance activity when they have difficulty meeting their profit objectives.

Wall Street Special "Accounting Reports".* Discretionary costs are often reduced when a firm is either in difficulty or desires to show a stable earnings trend. A reduction in discretionary costs may cause a deterioration in earnings quality since management is starving the firm of needed expenses. This will have a negative impact on future performance. For example, the absence of expenditures for new designs by a textile firm lowers its future earning potential since it will not be able to keep up with competitors. Similarly, a reduction in costs related to employee benefits (e.g., Christmas bonuses) may have an adverse effect on employee morale. A declining trend in training costs in a technologically-oriented company may result in employees failing to keep-up-to-date with recent developments. Analysts should determine the trend in discretionary costs as a percent of net sales. A declining trend may reflect a deterioration in earnings quality. For example, Standard Brands has maintained its profit margins during 1971-1973, in part by curtailing

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C. Davis and E. Gee, Analyzing Financial Statements (New York: American Institute of Banking, 1956), p. 385.

* Source: Quality of Earnings Reports.

advertising expenses as a percent of sales (2.3% in 1971, 2.2% in 1972, 1.8% in 1983). Similarly, in fiscal 1974 Colgate Palmolive's reduction in marketing expenditures as a percent of sales aided 1974 incremental comparisons by \$0.79 a share.

Analysts should also examine the relationship of discretionary costs to the assets with which they are associated. For example, a declining trend in repairs and maintenance as a percentage of fixed assets may indicate a company's failure to maintain capital.

Cost reduction programs may detract from earnings quality when significant cuts are made in discretionary costs. For example, White Motor Corporation earned \$0.78 a share in 1972 relative to \$0.19 a share in 1971. Although sales increased by \$106 million, selling and administrative expenses declined by \$9 million. The earnings per share gain of \$0.59 resulted from cost cutting. However, some discretionary expenses required for future growth were reduced below normal levels. These included research and development, marketing, and training costs.

It is important to recognize that one cannot automatically conclude that any reduction in discretionary expenditures relative to the prior year is unjustified. Such reductions may be necessary when the previous corporate strategy is found to be deficient and ill-conceived. For example, a reduction in R&D would be justified if the firm's research program has been unsuccessful and management is now considering a new research strategy which will shortly be implemented. A reduction in R&D may also be in order if the company suddenly becomes the

market leader because its principal competitors have gone out of business. Another legitimate reason for a cut-back in discretionary costs is when management engages in a cost-cutting program that eliminates waste and thus makes the firm leaner and more efficient.

Investment Analytical Reports. A significant increase in discretionary costs may have a positive effect on a company's "earning power" and future growth. For example, Dictaphone's R&D expenses in 1973 were more than double those in 1972. However, it must be noted that if an increase in a given company's R&D expenditures was prompted by a desire to make-up for a deficiency in its prior years' expenditures, then the firm's over-all research activity may have remained static. In this case, the company is not necessarily in a growth stage.

Management's Analysis of Results of Operations. A vacillating trend in discretionary costs as a percent of revenue may indicate that a firm is smoothing earnings by changing its discretionary expenditures. For example, Geo. A. Hormel discloses:

Advertising expense decreased 22% from 1972 to 1973.
Advertising expense increased 61% in 1974, representing
a return to a more normal relationship to sales dollars.

Cash Flow

Accounting Literature. Cash flow, which really refers to funds (i.e., working capital) flow, is equal to net income adjusted for income statement items not involving funds (i.e., depreciation, amortization).

Many authors believe that earnings are of higher quality if they are backed up by cash. A. Tietjen makes a typical

comment:

An important reason for the decline in credibility of financial reports is the growing disparity between reported income and the underlying movement of cash . . . There is even a special name for the current mode - - "front ending" - - which loosely translated means "speed up the income items and slow down related expenses." Some might say in defense of such accounting that the accrual method has merely been developed to a high degree, but others are convinced it has wandered too far from its moorings. The remedy is to bring reported income as close to cash movement as is possible consistent with fair presentation. In this way, earnings quality will be improved.

Finance and Investment Literature. The finance literature typically supports the premise that a cash flow materially less than accrual earnings denigrates the quality of earnings. For example, R. Lytle writes that "net income that is less than, but approximates, operating cash flow is a desired characteristic if net income is to properly reflect the results of operations." However, B. Graham, B. Dodd, and S. Cottle write that "some cash flow proponents argue that 'true' earnings are those before depreciation. However, the transfer of emphasis from net earnings is not warranted."

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A. Tietjen, "A Basis for Financial Reporting," The CPA Journal, (January, 1973), p. 40.

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W. FASTER, Speech before the Advanced SEC Seminar in Chicago on May 22, 1972, reprinted in the Accounting Newsletter (New York: The New York Society of Security Analysts, August 7, 1972), p. 2; F. Amling, Investments: An Introduction to Analysis and Management (New Jersey: Prentice-Hall, 1970), p. 370.

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R. Lytle, "Accounting for Retail Land Sales," Financial Analysts Journal (January/February, 1973), p. 98.

17

B. Graham, B. Dodd, and S. Cottle, Security Analysis: Principles and Techniques (New York: McGraw-Hill, 1962), p. 176.

The views expressed in the literature infer that the higher a company's cash flow is to net income, the higher the quality of earnings. However, cash flow may be increasing only because of increasing depreciation charges. Depreciation expense is not a source of funds and thus does not increase cash. The basic source of funds from operations is sales. It is from sales that all expenses are recovered and income earned. Although the trend in cash flow to net income is a proper analytical tool in financial statement analysis, it is not a valid measure of earnings quality.

Wall Street Special "Accounting Reports". Analysts are inclined to suspect management's motives if subjective evaluations are a major factor in the determination of net income. Analysts prefer the use of uniform accounting methods which track cash flow, except in cases in which persuasive evidence supports variation. The longer the period until cash is received, the more persuasive need be the evidence for current revenue recognition. An undesirable situation exists in their view when sales take a long time to convert to cash after being recorded.

The closer the proximity of a recorded transaction to cash, the "harder" the objective evidence supporting revenue or expense recognition. As the proximity to cash becomes further, the less objective the transaction and the more subjective the interpretations involved. High quality of earnings is associated with recording transactions that are close to cash realization.

Taxable Income

Accounting Literature. National Gas and Oil Corporation's¹⁸
annual report (dated December 31, 1972) discloses:

To the extent that deductions for federal income tax purposes do not appreciably exceed expenses for book purposes, better quality of earnings is considered to exist. As a means of evaluating the quality of this company's reported earnings, taxable income for the year 1972 is estimated to be \$1,264,000 as compared to reported earnings of \$1,324,000.

If a firm reports substantial book income while it reports a substantial tax loss, the analyst may wish to scrutinize the quality of reported results. For example, in 1973, Con Edison reported earnings of \$207.7 million to stockholders while reporting a \$41.5 million loss to the IRS. In this regard, A. Briloff writes that "the IRS concepts have greater stability than the public reports which are affected by changing accounting conventions and the management of earnings. Further, the apparent rapidly widening gap between publicly reported earnings and taxable earnings raises questions for the consumers of these data."¹⁹

Taxable income is generally more conservatively determined than book income because companies must or elect to use more conservative accounting policies for tax reporting. For example, firms write-off expenditures and defer revenue to the fullest extent for tax purposes. A firm's taxable income may be less than its book income only because of the firm's incentive to pay

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Source: NARRS file.

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A. Briloff, Unaccountable Accounting (New York: Harper & Row, 1972), pp. 12-13.

lower taxes. In other words, management does not want to pay higher taxes than that required by the Internal Revenue Service. Therefore, the comparison of taxable income to book income is not a proper yardstick to use in the evaluation of the quality of earnings.

Investment Analytical Reports. In a research report prepared in 1973, I. Silverberg wrote:

We have often stressed the quality of General Electric's earnings . . . GE uses virtually the same accounting practices for book and tax purposes but it has been reporting lower earnings to its stockholders than to the IRS - - e.g., the \$130.5 million deferred tax asset recorded on the asset side of the 1972 balance sheet.

The author's comment is open to criticism. The fact that there is a deferred tax charge doesn't necessarily mean GE's earnings are of higher quality. For example, the company may not be able to deduct certain expenses for tax purposes in the current period. An example is warranty expense that is not deductible until cash is paid for warranty services.

Personal Interviews. F. Weston (retired partner with Arthur Young) states:

A company with tax-sheltered income will have a lower effective tax rate. Earnings quality is lower when there is a high probability that such tax-shelter will be abolished within the next few years. In this case, the current year's earnings derived from the tax benefit is not expected to recur.

A decline in the effective tax rate due to a nonrecurring source (e.g., a loss carryforward that will shortly expire, an investment tax credit associated with significant plant expansion in the current year) results in an earnings increment of low quality. These tax benefits will not continue in the future.

Some financial managers stated that a low effective tax rate increases earnings quality since the company is deferring tax payments and thus has the use of greater cash for investment purposes. Cash flow is higher and so is income but the quality of currently reported earnings is not affected.

Risk and Variability

Discussed here is the degree of certainty and reliability associated with net income. Numerous subjective estimates involved in the income measurement process and an unreliable reporting system result in lower quality of earnings.

This sub-section is organized in the following manner:

- (1) Degree of Certainty of Accounting Estimates and
- (2) Reliability and Verifiability of Earnings.

Degree of Certainty of Accounting Estimates

Investment Analytical Reports. The greater the extent that subjective accounting estimates and judgments are used in arriving at earnings, the more uncertain is the net income figure. This reflects unfavorably on the quality of earnings. For example, a company engaged in long-term business activity (e.g., shipbuilder using the percentage of completion contract method) has greater uncertainty attached to income because of the material estimates involved. Other examples of subjective estimates and judgments are the lives and salvage values of long-term depreciable assets, and reserve provisions for risky operations (e.g., nuclear contracts).

Analysts may wish to ascertain the difference between a firm's estimated reserves and its actual losses for prior years.

A substantial deviation between the two may indicate lower quality of earnings. For example, a firm's warranty reserve provision could be compared to its actual warranty costs. A wide difference between the two figures, either way, may indicate that the company's over-all accounting estimates have been incorrect and uncertain or that the firm has failed to make adequate provision for future losses. In this connection,

G. Lewinsohn of Delafield Childs writes:

Fire and casualty companies price their products long before they know what the claim is going to cost them. As a result of "social inflation," these claims have resulted in unusually high payments. In prior years, the reserves established were inadequate and as a result reported earnings were overstated. The more uncertainty involved in arriving at reserve amounts, the more uncertain are reported results.

The affects of quality of earnings could be identified by separating factual and interpretative information which enters income determination. That would involve isolation of revenue and expense items representing cash and near cash transactions versus revenue and expense items which involve subjective estimates and interpretations. For example, analysts should attempt to segregate cash expenses versus estimated expenses. The latter have a higher degree of uncertainty attached to them.

Reliability and Verifiability of Earnings

Accounting Literature. Earnings that are reliable and verifiable are of higher quality. L. Bernstein writes:

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L. Bernstein, Financial Statement Analysis: Theory, Application, and Interpretation (Illinois: Richard Irwin, 1974), p. 271.

Periodic income reporting requires that we do not wait for final disposition of uncertainties but that we estimate them as best as we can. Such a system is subject to many errors; errors of estimation, errors of commission, and errors of omission. The better a company's management and the better its internal controls the less likely it is that such errors will substantially distort reported results.

Poor internal control lowers earnings reliability since errors may exist in the reporting process. It may be very difficult to discover these errors if the client's audit trail is weak.

Wall Street Special "Accounting Reports". Admiral Corporation's 1972 annual report discloses:

Restated financial statements for 1971 are presented because it was determined during an audit for the first quarter of 1972 that there was an overstatement of operating income of \$182,000 (\$0.04 per share) and of net income of \$590,000 (\$0.12 per share) for the year ended December 26, 1971. Errors in compilation resulted in previously reported consolidated inventories of \$73,744,000 being overstated by \$907,000 and the liability for product warranties of \$11,404,000 being overstated by \$453,000 at December 26, 1971.

These errors cast doubt upon the company's financial reporting system and internal audit function. This makes one wonder about the company's reliability in calculating earnings.

Investment Analytical Reports. Management's integrity has a bearing on the quality of earnings. A dishonest management is prone to use questionable accounting policies. Management's honesty can be evaluated by reviewing corporate actions. For example, recent disclosures of corporate bribes (which sometimes result in suits filed by governmental agencies and stockholders) taints management's image. Such incidences make a company's recurrence in earnings uncertain. For instance,

Lockheed may be unable to engage in future business with Japan because it made payoffs to Japanese politicians. Likewise, United Brands' bribe of \$1,250,000 to an official of Honduras may have an adverse impact on its future earning potential.

Economics of Industry and Company

This sub-section discusses certain characteristic conditions which relate to earnings quality that are inherent in industries and companies. An example is income stability which facilitates the prediction of future earnings and stock price. There are numerous reasons why earnings may not be stable such as the existence of a high degree of operating leverage inherent in a company's operations and the susceptibility of the firm and industry to the business cycle. Also discussed here are factors which enhance a company's future earning potential. Proper maintenance of capital will insure that plant and equipment will be efficient and productive in future years. A good quality management will insure the continued effective running of a business.

This sub-section is organized in the following manner: Stability of Earnings, Cost Structure, Maintenance of Capital, and The Quality of Management.

Stability of Earnings

Accounting Literature. Stability and repetitiveness are major factors affecting earnings quality. Stable earnings are of higher quality than erratic earnings. (However, reported results should not be artificially smoothed to show stability in earnings). Since analysts rely on the repetitiveness of occurrence in projecting future earnings, they separate stable elements of income and expense from those that are random and erratic. Analysts consider earnings derived from recurring transactions related to the basic business of the firm to be of higher quality than those resulting from isolated transactions.

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Arthur Andersen & Co. takes the following position:

Earnings result from many types and qualities of income categories. Where it is clear that the recurrence of an item is questionable, per-share data for the item may be of questionable usefulness and could mislead some investors. Similarly, some types of income are so volatile and unpredictable or of such probable limited duration that the concepts underlying investment valuation based on earnings per share may be very tenuous and a question may exist whether the per-share data should be shown.

The FASB Discussion Memorandum on "Materiality" makes

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the following reference to nonrecurring items:

In analyzing reported net income to determine real earnings, investors seek to identify nonrecurring items and unusual items, cash as well as noncash, especially those whose amount or timing may be determined at the discretion of management. In the usual situation, recurring transactions are thought not to require any special reporting treatment. However, some have suggested that, if the timing or amounts of significant recurring transactions were irregular, the results of such transactions

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Objectives of Financial Statements for Business Enterprises (Illinois: Arthur Andersen & Co., 1972), p. 75.

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FASB Discussion Memorandum, Criteria for Determining Materiality, op. cit., p. 123.

should be separately presented or otherwise disclosed. Examples of such transactions might include the sale of know-how by a manufacturing enterprise and major tanker overhauls of a shipping enterprise. The frequency of recurrence and the nature of unusual items also would be considered in assessing an enterprise's earning power and exposure to risk.

Nonrecurring, operating gains and losses are associated with the normal operations of the firm that recur infrequently and/or unpredictably. These items should be treated by the analyst as belonging to the results of operations in the year in which they are reported. This is because almost every business has its own inherent abnormality and lack of a recurring annual pattern.

Nonrecurring, nonoperating gains and losses are nonrepetitive and unpredictable, and are not considered as part of normal operations. These items should be omitted from the analyst's evaluation of reported results for a single year. However, they are part of the longer term record of results of the company. Consequently, they do enter into the computation of average earnings. This approach of emphasizing average earnings over a period of years becomes imperative in the case of companies which have widely fluctuating amounts of nonrecurring and abnormal items included in earnings. This is because a single year is too short a period on the basis of which to evaluate the "earning power" of a firm.

Erratic and abnormal elements of net income distort the current year's income as a predictor of future earnings. For example, a nonrecurring gain will result in a higher than normal level of earnings for the year. As a result, they are often eliminated from net income by the analyst in determining "relevant" earnings. The following are some examples of

erratic income statement items:

1. The receipt of a "once and for all" extraordinary large order from a customer, resulting in a "one-time" substantial increase in sales.
2. Collection of the proceeds of a life insurance policy on a deceased corporate executive.
3. Income derived from a special edition of a newspaper (e.g., the 100th anniversary of a City).
4. Income derived solely as a result of the bicentennial celebration (e.g., incremental sales of American flags).

The simple solution of some security analysts is to exclude nonrecurring items from net income. In so doing, they are attempting to exclude these distorting factors that thwart easy comparison. This way of disposing of the problem is rather a way of avoiding it and introduces an even more serious distortion. It allows the focusing of attention on a revised figure that does not reflect any part of the abnormal or nonrecurring item. The nonrecurring item may be as much a part of the company's income history and "earning power" as any other more operating item. Further, those earnings which exclude nonrecurring elements do not represent the core "earning power" of the firm. That "earning power" is the result, among other considerations, of the interaction of profitability and asset turnover. Their stability is dependent on two primary factors which account for profitability - - management and assets. Competent management is needed to optimize the utilization of

assets. Further, the assumption of stability of relationships implies a knowledgeable and stable management. There must also be an adequate asset base needed for the growth of the enterprise.

In conclusion, the quality of earnings depends on the stability and growth trend of earnings as well as the predictability of factors which effect their future levels. It also depends on a company's financial and operating characteristics which have a bearing on its future growth.

Finance and Investment Literature. The profit dollar is valued in one way if earned in a healthy, expanding industry, and in another if earned in an unhealthy, declining one. For example, the expanding industry, reasonably matured, with a limited number of companies controlling a large percentage of the output and whose selling prices are closely adjusted to unit costs, normally generates a good-grade earnings dollar. In evaluating a company's quality of earnings, analysts should consider the pattern of expansion or decline in the industry of which the corporation is a part.

S. Goodman²³ believes that in evaluating the quality of profit, the financial manager asks himself the following questions related to the company's product mix: How long will we receive this flow of profits? What is its weighting in the product

²³S. Goodman, Techniques of Profitability Analysis (New York: John Wiley & Sons, 1970), pp. 70, 106.

mix? How much of a contribution is there from growth, mature, declining, and developmental products? What is the nature of the risk entailed in each life cycle category? Shouldn't profit be weighted for the degree of risk inherent in its formation? With respect to product mix, a dollar of profit derived from growth products with a foreseeably longer stream of earning potential is worth more than that derived from mature products. Developmental products generate a lower quality dollar relative to mature products because of the higher risk of their not succeeding. Mature products already have a proven track record.

B. Graham, B. Dodd, and S. Cottle²⁴ believe that earnings possess more stability if it is probable that corporate operations will not be affected by sudden or unexpected developments. For instance, if in the current year a company loses a unique advantage of great importance (e.g., exhaustion of mineral rights), then its reported earnings are irrelevant in predicting future earnings because the analyst is dealing virtually with a new and different enterprise.

According to C. Elia,²⁵ foreign exchange gains and losses represent low quality of earnings elements since they show wide fluctuation from year to year. This comment must be qualified. Such items are erratic only when the foreign

²⁴B. Graham, B. Dodd, and S. Cottle, op. cit., p. 465.

²⁵C. Elia, "Heard on the Street," The Wall Street Journal, (May 2, 1974), p. 37.

exchange rate is erratic. For example, International Harvester's 1974 annual report discloses: "The translation of foreign currencies into U.S. dollar equivalents resulted in an unrealized loss for 1974 of \$7.4 million. Comparable translation adjustment for 1973 resulted in a gain of \$14.9 million." On the other hand, if the currency rate is stable, there will be no exchange problem. Since the exchange rates of some countries are more unstable than that of others, analysts should determine in which countries the company is operating. They should also determine for those countries that have erratic exchange rates whether such instability is of a long-term or short-term nature. Long-run instability means that there is a greater likelihood of continued vacillation in earnings arising from foreign currency translation.

According to D. Hayes,²⁶ analysts should consider litigation in their evaluation of reported earnings. Litigation against a company that will have a harmful effect on operations (e.g., anti-trust action) will lower its earnings stability. However, litigation of a routine nature or litigation that covers matters which will not affect future income (e.g., tax disputes) has no impact on the quality of earnings.

D. Hayes also believes that in evaluating earnings

²⁶ D. Hayes, Appraisal and Management of Securities (New York: Macmillan, 1956), p. 182.

quality, analysts should consider the effect of the tax structure on the company. For example, when a tax refund represents a repayment under a tax provision which has since expired, it would seem logical to exclude it from both current and average earnings since it represents a "windfall" which cannot recur in the future. He believes that such refunds should be added back to the earnings of the particular years involved.

Wall Street Special "Accounting Reports".* Whenever a company starts selling-off what appears to be part of its capital assets and running the profits through income, investors should look upon the earnings increment as suspect. For example, Amfac's 1973 third quarter showed increased land sale profits amounting to 243% of the quarterly comparative gain in share earnings.

Some analysts believe that operating income is of higher quality than nonoperating income because it represents the earnings generated from the selling activities of the firm. (Operating income refers to revenue derived from the normal and usual operations of the business). For example, the following comment was made about Pepsico:

100% of the company's comparative 1973 and 1974 interim earnings gain of \$0.25 were derived from the following lower quality of earnings sources . . . higher interest and other income . . .

This comment is open to criticism. Other income may be a highly stable earnings source (e.g., royalty income under

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Source: Quality of Earnings Reports.

long-term contracts with financially secure parties, rental income under long-term leases, and financial income such as interest income). These are some examples of when nonoperating income may be more stable than sales. If such is the case, nonoperating income is of higher quality than operating income.

It is important to recognize that even if other income is not of a stable or recurring nature, that does not automatically decrease its quality. An income statement item is not of lower quality if it applies to the business activities of the firm, and is part of the income history of that entity. Further, nonrecurring sources of earnings are not worthless because the company is capable of obtaining such earnings over the long-run.

Analysts should evaluate nonoperating income to determine the extent to which it is recurring and acts as a cushion to the stability of total income. For example, franchise income may act to stabilize revenue. However, such income may not recur at the same level in some cases. For instance, a hamburger franchiser may rapidly be expanding its stores. However, in a given geographical area many other hamburger stores may also be opening. There reaches a saturation point where so many stores cannot all succeed. Therefore, the chance of the same level of earnings persisting for all stores is low.

Investment Analytical Reports. A firm that derives further revenues for its original sales shows greater stability in earnings than one which does not. An example is a company (e.g., Xerox, Otis Elevator) that provides maintenance services and replacement parts to its customers. This source of revenue is stable and predictable. For example, the principal service Cooper Airmotive performs is engine work, ranging from periodic maintenance to complete overhaul. The unique aspect of this service market is that every aircraft must have specific work done on the engine on a regularly scheduled basis after a certain number of flying hours. (However, this type of service revenue may decline in a recessionary period because of the resulting decline in flying hours). Similarly, Tappan discloses that 56% of its sales are made to the replacement market.

An opportunist market (which is not a longevity market) is a low quality of earnings source because the saturation of a firm's market will lower its potential to generate continued earnings. In this case, its earnings stability is in doubt. For example, the explosive growth in the electronic calculator market was short-term in nature and could not be sustained. Similarly, Brunswick's earnings increased to a peak in 1973 as bowling equipment was installed in Japan to capacity limits.

Short-term "schemes" which increase income temporarily are of lower quality such as hula hoops and a single government contract. Such income cannot be sustained.

The constant fluctuations that take place in business conditions, accompanied by rising and falling prosperity,

cause industrial profits to fluctuate from period to period. During times of prosperity the purchasing power of the consumer is high, demand is large, and earnings are high. Increasing prices are likewise favorable to most manufacturing firms. During times of depression product demand declines, prices fall-off, and the profits of many companies are sharply reduced. In general, industrial profits closely follow the trend of business conditions.

Income which is stable over the business cycle is of higher quality than income which fluctuates over such cycle. Companies with product lines having inelastic demand (e.g., health care products) are least affected by the business cycle. Companies with product lines that are closely correlated to changes in real gross national product show more variability in earnings. An example is the auto industry. A good example of a company that is highly susceptible to the business cycle is Metro Media. The company's operating groups derive much of their revenues from advertising in various forms. However, advertising expenditures by the nation's businesses are particularly sensitive to changes in general economic conditions and tend to fluctuate in relation to such factors as the level of corporate profits and consumer spending. Some companies have attempted to change their product lines to more stable demand items. For example, Faberge discloses: "The Company's efforts to change the product mix from hair spray to less volatile fragrance and cosmetic products was successful."

A company's product line may have three types of variances: volume, price, and cost. The greater the extent to which each of these components are subject to variability, the lower a company's quality of earnings. For example, petroleum companies have recently experienced lower quality of earnings because of great variability in all of these components. In addition, a copper company earning \$4 a share is not as good as IBM earning \$4 a share. This is because there is a greater probability that IBM's earnings will be more repetitive in nature than the copper company's earnings. This arises since the demand and selling price for IBM's product line shows greater stability than those of a copper company. It should be noted that earnings may still show stability even though there is variability in these components. For example, the price variance may fully offset the cost variance.

A substantial increase in earnings is of low quality if it results from extraordinary product demand coupled with sky-rocketing prices (e.g., copper, fertilizer). This is an unusual situation which is not expected to recur. For example, Amstar had an unusually large increase in earnings in 1974 principally because of a temporary bulge in demand for sugar due to a shortage situation. In 1974, the company reported earnings of \$14.07 per share compared to \$4.22 per share in 1973. The company's product market returned to competitive conditions in 1975. Similarly, Southern Peru Copper's net income increased to \$61.3 million in 1973 from

\$26.9 million in 1972 because of a considerable increase in the realized price of copper.

A single product company may have less earnings stability than a multi-product company. The former is more susceptible to fluctuating net income and has a higher risk of product obsolescence. A diversified product mix reduces the range of possible results that may occur under differing economic conditions. For example, Nalco Chemical discloses that "no one product accounted for more than 10% of revenue."

A company with a product line of low unit cost items offers promise of both continued success in times of economic health and resistance to demand decline during recession. For example, more than half of Dart Industries operating earnings are derived from such items. If a company with low priced goods also provides an adequate substitute for more expensive goods (e.g., cereal for higher priced protein foods), it has a built-in hedge in an inflationary and recessionary period. This gives earnings a higher degree of stability. However, the demand for high priced quality goods that appeal to a select market may remain stable during recessionary periods. An example is an expensive automobile such as the Rolls Royce. This is because the affluent are not significantly affected by short-term changes in economic conditions.

A company with a product line that is subject to rapid changes in consumer taste has lower earnings stability. For example, the garment industry is highly sensitive to fashion trends. For instance, Farah Manufacturing discloses

that "a rapid change in consumer preference to double knit fabrics contributed to the decline in the market value of the company's large inventory of woven goods during 1972." In addition, the loss of a "top" fashion designer will have a devastating effect on earnings.

When product demand is vulnerable to external factors, the stability in sales revenue is decreased. For example, if a major portion of demand is derived from a few very large industrial users, changes in the nature of their business may filter down to the supplier. Further, a loss of a major customer can have a devastating effect on earnings. Export sales to a major foreign market may suddenly disappear as that country seeks to develop a domestic capacity for making the goods in question.

A company with sales to diversified industries (e.g., industries that are affected in different ways by cyclical factors) has greater protection from cyclical turns in the economy. This is because there is a higher probability that the demand factors in these industries may counteract each other. The net effect being to provide greater stability in the revenue stream for the company. For example, Skil Corporation is a manufacturer of portable electric tools. Its product is well diversified with sales being distributed between industrial and service trades and the home consumer. Because of this diversity, sales trends are insulated somewhat from business cycles. Shipment to industrial markets are very closely tied to such cyclical factors as general industrial activity and

housing starts and to less cyclical factors such as the level of industrial repair and maintenance activity.

A diversified revenue base that makes a company less susceptible to economic cycles imparts greater quality of earnings. T. Donnelly of Kuhn, Loeb & Co. writes:

The commodity grouping of Union Pacific reveals a better diversified revenue base than that of the average railroad. For example, farm products accounted for 14% of Union Pacific's freight revenues in 1972 compared with 9.5% for the industry. This imparts somewhat greater resistance to fluctuations in the general economy, especially since another 15% of revenues is derived from relatively stable food products. Since Union Pacific's broader traffic mix does make the carrier less vulnerable to the economic cycle than the average railroad, its quality of earnings is higher.

A company can reduce its exposure to the effects of the economic cycle by entering non-cyclical or counter-cyclical lines of business. Such diversification will improve its earnings stability. Examples of companies with counter-cyclical operations are Weyerhaeuser, General Electric, and American Express. Weyerhaeuser operates in three separate but inter-related areas: (1) lumber manufacturing, (2) paper manufacturing, and (3) sales of raw materials. These three markets are cyclical, but the cycles generally differ. For example, strength in paper demand usually is largely affected by the level of housing activity, which is often on a different cycle from the rest of the economy. Finally, export sales are affected by economic trends in Europe and Japan which have historically tended to lag trends in the U.S. General Electric serves a number of areas which are affected by economic and other factors, the respective cycles have differing

periodicities so that the company's earnings enjoy reasonable underlying stability. American Express has two primary revenue sources - insurance and travel. The tendency of property and casualty underwriting profits is to decline normally during a period of economic strength, and to strengthen during periods of economic stagnation. The opposite in each case applies to the behavior of travel (cards and checks) operations. Another example follows: A marine service company sells drilling tools for exploration purposes to oil companies. By acquiring a company that sells tools for extracting the oil when found such as Hughes Tool, a marine service company can significantly improve its stability of earnings. This is because the exploration cycle is counter-cyclical to the extracting cycle.

A number of disclosures were made with respect to companies' attempts to diversify in order to reduce their exposure to the economic cycle. Merrill Lynch discloses that "diversification efforts into new financial services aided operating results and came at a time of volatile and declining markets." Trans World Airlines discloses that "the company's recent acquisition of Canteen Corp., an institutional food service company, will act to moderate the cyclical nature of TWA's earnings." Further, an elimination of a cyclical business will tend to stabilize earnings. For example, Pillsbury discloses that "in 1974, the company's sale of its broiler division eliminated its exposure to cyclical poultry profits and therefore upgraded the quality of its overall continuing earnings."

A company that geographically diversifies its operations has less susceptibility to economic downturns. This will improve its earnings stability. For example, a department store chain that reduces its reliance on metropolitan stores to an increasing contribution from suburban stores has lessened its exposure to downturns in economic, regional, and retail cycles.

An unusual combination of economic factors may distort a company's earnings in a given year. For example, Shell Oil discloses that "an extraordinary combination of economic factors influenced its financial results in 1974. They included sharply higher crude oil prices, raw material shortages, federal pricing controls, and the effects of both inflation and recession on the general economy. The presence of all these forces was unprecedented and affected 1974 results in such a way as to distort comparison with other periods."

A company with excellent employee relations has greater earnings stability because work stoppages will not occur to hinder corporate operations. For example, Delta Airlines enjoys greater earnings stability relative to its competitors because of its management-employee rapport.

A firm that is highly dependent on a few "key" employees (e.g., executives, salesman) has lower earnings stability since the loss of these employees will have an adverse effect on corporate operations.

Extreme adverse publicity about a firm will result in lower earnings stability. An example is the disclosure that

the government has placed a company's product line (e.g., cigarettes, drugs, food) off the market because they were health hazards. In this case, the firm will not be able to sell its product at the same level as it had in the past.

E. Sharpe of William D. Witter has a section in his research report (dated 5/29/75) entitled "The Quality of Earnings Outlook for Norton Simon." He writes:

The company's sale of its Redbook Magazine improves the quality of its earnings. This is because the company will concentrate, to a greater extent, on its basic business (which has proven very successful in the past) . . .

The company's quality of earnings suffered in 1974 because of some operating difficulties due to England's three day work week during the energy crisis. This resulted in an abnormal decline in earnings for the period.

The company's quality of earnings improved because of increased expenditures for new product and market development. These expenditures were designed to enhance future growth.

The first comment is open to criticism. The type of business a company is in has nothing to do with the quality of earnings. The detraction of management to another type of business or its concentration on its basic business does not make reported results of higher or lower quality. Further, it is doubtful whether E. Sharpe can decide what is a right or wrong business for Norton Simon.

Management's Analysis of Results of Operations. Earnings are affected by controllable factors (e.g., management decision) and uncontrollable factors (e.g., political interference). The greater the extent that uncontrollable factors exist, the more uncertain is a company's earnings stream. In general, a company with greater control over its environment has potential

for higher quality of earnings than a firm subject to uncontrollable factors.

Risk and uncertainty are associated with the abnormal and the unexpected. The frequency of occurrence of abnormal or special items is an important measure of the element of risk in a company. Income possesses greater stability if it is highly unlikely that business operations will be adversely affected by sudden developments. The potential impact of uncertainties facing a company may be of such magnitude that reported results have little predictive value. The greater a company's risk, the lower its earnings stability. Therefore, a risky business (e.g., retail land sales) generally has lower earnings stability than a more secure business (e.g., manufacturing).

Companies have variability in earnings and greater operating risk when their product lines or services are susceptible to changes in the weather. For example, a recreation type of business will experience a sharp drop in income if weather is unusually bad during the summer months. Similarly, the weather cycle affects revenues of utilities. An unusually warm winter and/or an unusually cool summer reduces consumer electricity requirements. The impact of bad weather on corporate operations is illustrated in the following disclosure made by Giant Portland Cement: "The Company suffered an ice storm in January and an unprecedented 21" snow fall in February which were extremely disruptive to production." Such bad weather affecting the company's operations

appears to be of a one-time nature resulting in a significant and temporary decline in earnings.

A company's insurance coverage program may have an effect on the quality of earnings. Under-insured assets will not provide adequate income to compensate for losses. For example, a fire at one of four plants will substantially reduce production and sales of that plant while fixed costs will remain constant. If the fire loss is not properly covered by insurance, earnings will be substantially reduced. In effect, by under-insuring its productive assets the company has made the sustenance of its earnings stream to be less certain.

A company with a high risk product line (e.g., explosives) that involves potential product liability suits in which insurance coverage is non-existent has greater uncertainty associated with its future earnings stream.

A company which has recently been acquired by Arabs may find its sales drop if the Jewish people are the major customers for the firm's products. This situation indicates corporate instability and a lack in earnings recurrence.

A company that experiences variability in its raw material costs (e.g., agricultural products) shows greater fluctuation in earnings. For example, G. Heileman Brewing discloses:

Beginning in the later part of 1973 and continuing throughout 1974, the brewing industry experienced unprecedented increases in the cost of agricultural commodities. Barley prices in 1972 were 300% of historic averages. Corn goods prices increased 70% in 1973 and another 30% in 1974.

If the availability of a firm's raw material sources is highly erratic, its earnings stability is lower. For example, shortages of raw materials prevent continuous manufacturing operations. For instance, White Motor discloses that "in 1974, persisting parts and component shortages interrupted production scheduling, adversely impacting earnings." Further, if a firm is unable to obtain raw materials from its usual source in a given year, it may have to purchase them at significantly higher prices from other suppliers. A firm that does not have alternative raw material sources possesses higher risk and uncertainty with respect to its future earnings stream. The analyst should determine if a company is dependent on potentially unreliable sources of supply (e.g., petroleum, natural gas).

Vertical integration that reduces a company's price and supply risk of raw materials improves its earnings stability. An example is an electronics company that has a joint venture with a mining company in order to guarantee a steady source of supply of an important raw material.

Interest expense may be unstable because of changes in the prime rate, the level of borrowing, and changes in the type of financing. Interest expense on short-term obligations varies with changes in the prime interest rate which in turn varies with the business cycle. Interest expense on long-term obligations shows greater stability. A firm with substantial interest expense on short-term debt will show fluctuation in this expense category. It will therefore have lower earnings

stability. For example, Browning discloses that "interest expense increased 25% in 1974 despite lower borrowings due to the unprecedented increase in the prime rate." Swank & Co. discloses "in all years, fluctuations in interest rates have affected the results of operations." Similarly, interest income on short-term investments has more volatility and is therefore of lower quality than interest income on long-term investments.

Personal Interviews. Some interviewees expressed the belief that one-time items included in net income lowers the quality of earnings. This is because such items result in reported earnings being at variance with the normal earnings of the company. For example, J. Norman (financial manager with Texaco) states:

Texaco's 1974 earnings were of lower quality. The company incurred significant one-time costs to transport oil from the Middle East in 1974 through the use of charter ships. This was necessary since the company did not have adequate shipping to transport its oil for long-distances. (The company's ships were acquired on the expectation that the Suez Canal would be open. However, the blockage of the Suez Canal forced the company to hire charter ships). After the Suez Canal was re-opened, the substantial charter expense did not recur.

Cost Structure

Investment Analytical Reports. Operating leverage refers to the existence of fixed costs in a company's cost structure. High operating leverage magnifies earnings fluctuations from small variations in revenue. A company with a high degree of operating leverage along with a highly elastic product demand generally experiences the most variation in earnings. Some

industries (e.g., airlines, automobile) are particularly affected by high leverage.

The impact of high leverage on earnings is evidenced from the following disclosure made by Eastern Gas and Fuel Associates:

Net income for 1974 was a record high representing a 143% increase over 1973. This increase was a result of the large revenue gains experienced by all of Eastern's operations, with much of this consolidated gain flowing through to net income because of the fixed cost nature of Eastern's businesses.

A company will incur a loss until it reaches a sales volume which is sufficient to cover its fixed costs. Once fixed costs have been met, additional increases in volume will result in more than proportionate increases in earnings. The effects of operating leverage diminish as revenue increases above the break-even point since the bases to which increases in earnings are compared get progressively larger.

Companies operating at close to their break-even level will have relatively larger percentage changes in earnings or losses for a specific change in volume. On the downside, this can cause adverse results which are much worse than those indicated by changes in volume alone.

C. Bradford of Jas. H. Oliphant states:

A firm that has a high percent of variable costs to sales has better matching of expenses against revenue. This improves earnings quality.

This comment is open to criticism. There are many fixed costs (e.g., rent expense) that also result in proper matching. Further, the matching process does not relate to the quality of reported earnings. For example, it is possible that unstable

elements of expenses are being matched against unstable elements of revenue.

Maintenance of Capital

Finance and Investment Literature. Earnings quality partially depends on the extent to which a firm has made adequate provision for the maintenance of assets and for the maintenance and improvement of present and future earning power. In a report issued by the American Institute of Management entitled the Health of Earnings, the following conclusion was²⁷ drawn:

Failure to maintain plant and equipment will seriously affect a company's long-term earnings. At a moment of high demand, antiquated plant and inefficient equipment may be productive of extremely high profits. The marginal price may then be high enough to cover all costs, including overhead, and also to bestow an abnormally high profit, earned by the willingness of consumers to pay extortionate prices.

Such profits, "earned" only under propitious circumstances, are not healthy. They indicate only that supply is inadequate to meet demand, and they vanish when the two approach a balance. Consequently, modernity, efficiency, and upkeep of plant and equipment - - because they vitally effect operating costs and ability to meet competition - - affect health of earnings . . . Reported earnings are frequently not fully representative of the truth, even in companies famed for peak efficiency and for imaginative and aggressive sales policies.

The maintenance of the initial investment in fixed assets is not accomplished by merely depreciating the historical cost of the asset. It is accomplished only if the old parts of the permanent property are replaced with new ones having an equal or greater earning power. In other words, there must be

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Health of Earnings (New York: American Institute of Management, 1955), pp. 89-90.

continuous replacement of obsolete and outmoded equipment by new and more efficient ones. The increased expenditures of this improved equipment is a cost, in addition to depreciation, which the company must incur to maintain its real capital intact in order to preserve its earning power. Insufficient maintenance of physical plant results in an overstatement of earnings and ultimately decreased operating efficiency. Therefore, analysts may wish to determine the age and condition of each major asset category as well as the cost to replace these assets. A company with out-dated and low-cost basis fixed assets may not have properly maintained its capital investment and will have greater uncertainty in generating recurring earnings (e.g., breakdown of assets curtailing production). For instance, International Paper had to establish a \$39.6 million reserve for expected close-downs of obsolete facilities (88 years old) in 1970 due to new pollution control requirements.

A firm that must acquire specialized fixed assets incidental to its business activities is more susceptible to fixed asset obsolescence and deterioration. An example is machinery needed to make specialized products such as missiles that are dependent on governmental spending policies.

The Quality of Management

Finance and Investment Literature. B. Graham, B. Dodd, and S. Cottle write that "the quality of management is considered to be a primary determinant of value, and therefore of the

appropriate multiplier of earnings."²⁸

Management Analysis of Results of Operations. Church's Fried Chicken makes a typical disclosure:

Wages increased as a result of new pay plans adopted during the past two years aimed at making the Company more competitive in its hiring. Management believes that these plans have resulted in the upgrading of middle and upper management personnel.

Management quality refers to the skill and depth of the management group in conducting corporate activities. It takes a resourceful management to "breathe life" into assets by efficiently utilizing them. A high quality management constitutes an important ingredient for the future generation of earnings. However, even the best of management is a passing phenomenon. The quality of earnings is something more inherent in an enterprise. Thus, management quality does not relate to the quality of currently reported earnings. For example, management may be competent in running its affairs but the firm's earnings may be unstable because of inherent economic cyclicality associated with the business. Still, the evaluation of earnings is related to the evaluation of management. This is because earnings over a period of time are the acid test of management's competence, and that competence is an important factor in the prediction of future earnings.

A lack of a qualified and stable leadership may make investors less confident in a company's earning potential. For example, previous incidences of mismanagement of corporate affairs

and/or the past occurrence of corporate bankruptcy makes one question the ability of management.

A drastic change in management can break the continuity of business operations and can have a negative effect on earnings stability. Instability in earnings may also arise if the nature of the business in which management has proven successful, changes.

If management is unable to adjust to changes in the social, political, or economic environment, the company's earnings stability may be lessened. Past incidences of management's failure to meet these changes adequately and on a timely basis infers that management may have such difficulty again. For example, the auto industry was late in recognizing the shift in demand to small, economical automobiles.

Financial Characteristics

This sub-section discusses financial characteristics of a company that may relate to its quality of earnings. These characteristics are partly planned and partly involuntary. They include financial leverage, liquidity, and availability of financing.

A financially insecure firm may have a lack in earnings recurrence as it does not have adequate financial resources or the ability to obtain funds for future growth. A high debt position results in high fixed interest costs, and may make it difficult for the firm to obtain future needed debt and equity financing because of the risk associated with its capital structure. A poor liquidity position may make it difficult

for the firm to meet its maturing obligations. Deficient financial characteristics of a firm may put it into a position of decline, or even worse, future bankruptcy.

Finance and Investment Literature. Financial leverage involves the use of debt funds in order to increase the return to common stockholders. Favorable leverage occurs when earnings on assets purchased with borrowed funds exceed borrowing costs.

Some sources ²⁹ indicate that excessive financial leverage reflects poor quality of earnings because it indicates high fixed interest expense which causes earnings variability. In evaluating the degree of a company's leverage, the analyst compares, among other measures, its debt to equity ratio to the norm of the industry.

Investment Analytical Reports. Availability of funds is needed in order for a firm to grow. Therefore, a lack of adequate financing may lower earnings stability. Analysts should ascertain any restrictions on the company's borrowing ability such as breaches in loan provisions, and should assess the company's ability to obtain financing at reasonable interest rates.

A company that is financing long-term assets with short-term debts may have difficulty in meeting the obligations

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D. Fischer and R. Jordan, Security Analysis and Portfolio Management (New Jersey: Prentice-Hall, 1975), p. 254; L. Vance and R. Taussig, Accounting Principles and Control (New York: Holt, Rinehart & Winston, 1966), p. 648; "How Solid Are Those Profits," Forbes, (January 1, 1974), p. 40.

when they mature. Such a company is particularly vulnerable in a tight money market. The financial plight of New York City is an excellent example of an entity's inability to meet short-term obligations. Analysts may wish to examine trends in short-term debt to long-term debt and long-term assets to short-term debt.

Some security analysts believe that a company with a poor liquidity position has lower earnings quality. A study of a firm's liquidity is a different area of security analysis than the evaluation of earnings quality. Liquidity refers to an enterprise's ability to meet its current obligations. It implies the ready ability to convert assets into cash or to obtain cash. The existence of liquid assets has no bearing on the quality of currently reported earnings. It must be noted, however, that in an extreme case where a firm cannot meet any of its obligations, earnings are likely to be questionable as far as the future is concerned.

Effects of the Quality of Earnings

A firm's earnings quality has an effect upon its stockholders' equity ratio, price-earnings ratio, and effective interest rate.

The stockholders' equity ratio is equal to the market value of stock divided by the par value of bonds. A sharp drop in the market value of stock may indicate that the market place views the company's quality of earnings to be lower. (Of course, such a decline may also be due to other factors such as a reduction in the company's market share). B. Graham, B. Dodd, and S. Cottle write that "a low stock equity not only indicates

quantitative deficiency of the bond issue but it usually implies qualitative inferiority as well and at times casts doubt upon the accuracy of the reported earnings.³⁰"

The price-earnings ratio reflects the quality of earnings of a company. It should decline when earnings quality deteriorates. For example, if a company makes unjustified accounting changes that bolster net income, its P/E multiple should drop. The ratio should also decline when earnings are less predictable due to such reasons as exchange rate fluctuations, and rapidly changing political and economic factors. When earnings are less visible (earnings visibility refers to the security analysts' ability to foresee future earnings based on analyzing reported results), investors have less confidence in their earnings predictions. Those companies with the higher quality of earnings per share within their industry usually achieve through open market mechanisms higher P/E ratios.

In lending decisions, the quality of earnings has an impact on the effective interest rate. For example, if a company's quality of earnings deteriorates, lenders will demand higher interest rates and/or greater compensating balances. This will raise the effective cost of obtaining funds. If the problem is acute, current sources of debt financing may be unavailable to the firm. For instance, a company may be forced to borrow from non-bank sources (e.g., finance companies) resulting in higher interest costs.

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B. Graham, B. Dodd, and S. Cottle, op. cit., p. 363.

CHAPTER III

AUTHORITATIVE PRONOUNCEMENTS AND THE NOTION OF THE
QUALITY OF EARNINGS

This chapter discusses the provisions of SEC pronouncements which use the quality of earnings concept as a rationale for their requirements. These releases require disclosures which in turn provide new tools for the evaluation of earnings quality. The chapter also discusses the provisions of the FASB pronouncements which have assisted in improving and in evaluating the quality of earnings. A review of these pronouncements provides the reader with a background of the views of authoritative bodies concerning the "quality of earnings." The results of interviews conducted with members of the SEC and FASB on the subject are also presented.

Securities and Exchange Commission

On December 18, 1972, W. Casey, then Chairman of the SEC, made the following statement concerning the quality of earnings:

Serious concern exists about the ability of some companies to exaggerate earnings or obscure declines in earnings by selecting from among acceptable accounting principles, shifting from one accounting method to another, changing assumptions used in determining income and expense, using available tax elections which enhance net income in a current year and depress net income in future years, and accelerating or deferring optional expense items like Advertising.

Accounting Series Release No. 138 - Disclosure of Unusual
Charges or Credits to Income

The release requires disclosure of the periods in which unusual items were or are expected to be incurred and the amount of the item for each period by major components, explanations for the charges or credits, and an itemization and reconciliation for future losses. It also requires disclosure of the accounting principles followed in connection with the unusual items. Disclosure of operating problems which might lead to large losses is recommended. These disclosures are intended to assist the investor in his evaluation of a firm's earnings stability.

Accounting Series Release No. 148 - Compensating Balances
and Short-term Borrowing Arrangements

The release requires the following disclosures:

- (1) amount of compensating balances; (2) average interest rates on various types of borrowing arrangements; and
- (3) weighted average amount of debt during the year along with the weighted average interest rate.

The release clarifies the company's seasonal borrowings and its susceptibility to short-term credit squeezes and interest rate fluctuations. It enables investors to ascertain whether a company's effective rate of interest is in line with the prime rate or the applicable rate for its class of credit risk.

The release also assists investors in their evaluation of a firm's ability to obtain suitable financing at reasonable

interest rates. This will provide information relative to the future stability of a company's operations.

Accounting Series Release No. 149 - Income Tax Expense

Disclosure is required of the following items: (1) components of income tax expense; (2) reasons for timing differences resulting in deferred income taxes; and (3) reconciliation between the effective tax rate and the statutory tax rate.

These disclosures enable investors to evaluate tax deferrals for the purpose of determining a company's quality of earnings. Many companies have increased income by moving the effective tax rate inherent in their book tax expense provision to a level materially below the statutory rate. Some of these gains are of a short-time frame, of uncertain future, or a distortion resulting from accounting rules related to reporting income tax expense. The release enables investors to ascertain the degree to which tax advantages of a company will be continuing or merely one-time events.

Accounting Series Release No. 151 - Inventory Profits

The release states:

Where "inventory profits" are material in income statements presented, disclosure of their impact on reported earnings is important information for investors assessing the quality of earnings.

In a rapid inflationary environment, revenue which is in terms of current dollars is matched against cost of goods sold which is in terms of "older" dollars. As a

result, net income is overstated in an economic sense. The resulting inventory profits are nothing more than "paper profits" because they must be used to replenish a company's stocks at current prices. Thus, such profits are unrealized gains and are not available for paying dividends or investing in new plant and equipment. However, management may deserve credit for a good and timely buying job.

During the recent oil crisis, petroleum refining companies reported especially high inventory profits. For example, Exxon reported that it had \$80 million of inventory profits on operations abroad in 1974 that did not recur in the 1975 period.

Disclosure of the effect of inventory profits on reported net income is necessary so that investors can properly evaluate the source and replicability of earnings.

Accounting Series Release No. 159 - "Management's Discussion and Analysis of the Summary of Earnings"

The following reference is made to the notion "quality of earnings":

Securities Act Guide 22 requires an explanation of the Summary of Earnings to enable investors to appraise the quality of earnings . . . Investors should understand the extent to which accounting changes, as well as changes in business activity, have affected the comparability of year-to-year data and should be in a position to assess the source and probability of recurrence of net income . . .

If management's discussion indicates future uncertainty and instability, this detracts from the financial analysts' ability to predict. Hence, currently reported earnings are not a reliable barometer for the future.

The release provides the following examples of subjects to be discussed by management:

1. Material changes in product mix or in the relative profitability of lines of business.
2. Material changes in advertising, research, development, product introduction or other discretionary costs.
3. The acquisition or disposition of a material asset other than in the ordinary course of business.
4. Material and unusual charges or gains, including credits or charges associated with discontinuation of operations.
5. Material changes in assumptions underlying deferred costs and the plan for amortization of such costs.
6. Material changes in assumed investment return and actuarial assumptions used to calculate contributions to pension funds.
7. The closing of a material facility or material interruption of business or completion of a material contract.

Accounting Series Release No. 163 - Capitalization of
Interest

Companies, other than utilities and other minor exceptions (savings and loan associations, and retail land developers) are prohibited from capitalizing interest. However, these latter companies (excluding utilities) must make disclosure in the face of their income statements of the amount capitalized and must disclose the effect on net income of this accounting policy as compared to a policy of charging interest to expense as incurred. In evaluating the quality of earnings, the analyst should take this downward adjustment to

net income into account if he considers the intangible asset to be overstated in value.

Accounting Series Release No. 164 - Long-term Contracts

The purpose of the release is to highlight assets that might be vulnerable to downward valuation in long-term contracts. The intent is to make substantial write-offs less of a surprise. The release requires detailed disclosure of inventory costs, the effect of cost accumulation policies on cost of goods sold, and the effect of revenue recognition practices on receivables and inventory. For example, disclosure required for inventories include:

1. The basis of determining the amounts of inventoried costs (including the cost method and cost components).
2. The method by which inventory is reduced. If the estimated average cost per unit is used, disclosure of the assumptions employed is necessary (including number of units expected to be delivered, number of units already delivered, and the number of units on order).
3. Amount of production costs and related deferred costs which exceed the estimated cost of all delivered and in-process units on the basis of the estimated average cost of all units expected to be produced under long-term contracts not yet complete. Disclosure is also required for the amount which would not be absorbed in cost of sales based on existing firm orders at year-end. The amount of deferred costs by category is recommended.

4. Amount of claims subject to uncertainty concerning their determination or realization. A description of the type and status of the major items is required.

Some of the disclosures are designed to enable investors to recognize the effect of changes in inventory policies on reported results.

The release assists investors in evaluating the realization risk associated with assets arising under long-term contracts. Assets with high realization risk often require future write-offs.

Accounting Series Release No. 165 - Disclosure of
Relationships Between Registrants and Their Independent
Public Accountants

A firm must disclose whether a change in CPAs resulted from a disagreement between the parties over a contemplated accounting change. If the new CPA firm concurs to the accounting change, the company must disclose what the earnings would have been if the previous accounting policy was retained. This disclosure will make investors aware of situations where alternative accounting approaches may be followed and are favored by at least one professional accountant, and the effect of such alternative approaches.

Analysts should compare reported earnings (with the new method) to what net income would have been if the accounting change was not made. If the accounting change results in substantial incremental earnings, the quality of that increment may be suspect. A downward adjustment to reported

income may be necessary. Analysts may question such an increment in cases where the company has previously terminated its auditors in order to gain acceptance of accounting changes designed to bolster earnings, when the company is known to manage income, or when the firm is known to use very liberal accounting policies.

The release enables investors to identify those firms that have a tendency to change auditors when they wish to obtain approval for accounting changes. A high turnover rate in CPA firms may reflect a warning signal about a company's accounting policies.

Accounting Series Release No. 166 - Disclosure of
Unusual Risks and Uncertainties in Financial Reporting

Disclosure is required of unusual risks and uncertainties associated with a company's operations. For example, banks must disclose when there have been substantial changes in the risk characteristics of portfolios, even when increased provisions for losses have been made. Construction companies must disclose cases where a limited number of projects have a substantial effect on operations.

In the utility industry, the deferral of fuel costs is inappropriate where uncertainty exists as to whether the regulatory commission will allow recovery of the deferred costs in newly established rates. If uncertainty does exist, the utility should disclose this fact and indicate the effect on the financial statements of failing to recover these costs. Under such circumstances, the failure of a utility to accrue

fuel expense overstates net income, resulting in a deterioration in earnings quality.

The release enables investors to evaluate the quality of earnings since it highlights unusual risks or uncertainties which may make a company's recurrence in earnings uncertain.

Release No. 11,079 - Disclosure in Annual Reports

The release requires disclosure of more meaningful information in annual reports to stockholders. Companies are required to describe their business activities for the most recent fiscal year and disclose line-of-business information for the last five years. Line of business disclosure assists the reader in his evaluation of a company's repeatability of earnings since each business segment has its own peculiar characteristics (e.g., risk, growth potential).

Release No. 33-5427 - Disclosure of Significant Accounting Policies

The release provides that companies should disclose their significant accounting policies. If such principles are at variance with prevailing accounting practices within the industry, the dollar effect on net income should be disclosed. Additionally, a company using more than one accounting principle in reporting similar types of transactions should disclose the dollar effect on net income if all the transactions were accounted for according to each principle used.

The SEC states that "the disclosures set forth are necessary for a proper assessment of the quality of earnings of a registrant."

A comparison may be made between the accounting policies employed by the firm and the standard accounting policies prevalent in the industry. If the company's accounting policies are considerably more liberal, its earnings quality may be lower.

A problem with the release is that it does not indicate what criteria would be used to establish the prevailing accounting practice. Is the prevailing practice to be one followed by a selected few dominant companies in the industry or by a number of companies within the industry? Another problem is that the prevailing accounting practice which may be assigned as the standard may not always be the best accounting practice within the particular industry.

Interviews

Interviews were conducted with J. Burton (former Chief Accountant, SEC), C. Samson (Chief Accountant, SEC), and J. Horton (member of the Chief Accountant's office, SEC). The interviews elicited the views of the members of the SEC on the "quality of earnings" notion. The results of the interviews follow:

J. Burton. Quality of earnings consist of two basic elements - replicability of earnings and conservative accounting policies. A continuing stream of earnings are of the highest

quality. For example, IBM has extremely high quality of earnings because its lease revenue is repeatable and does not require additional sales effort. Further, its assets are already in place and the company will continue to receive cash flow continuously. Conservatism in accounting leads to high quality earnings since there is less likelihood of reported results being unduly overstated.

Economic and political factors may detract from the repeatability of earnings of a company. Under such circumstances, earnings are of lower quality.

Corporate risk may have a negative effect on earnings quality. If the nature of the risk makes the company's basic business operations or structure susceptible to sudden change, the quality of earnings is lower.

If the SEC's proposal on forecasts becomes effective, it would improve the investors' evaluation of the quality of earnings. Forecasted financial statements would better enable the reader to determine the repeatability of income statement items. For example, if current year's earnings are at a high level and management's forecast shows an expectation of declining earnings, the recurrence of the same level of earnings is not probable. Further, if current year's earnings are high and the forecast shows certain economic and political problems or shows instability in the expected earnings stream, current year's earnings are of a lower quality.

C. Samson. The closer replacement cost income is to reported earnings, the higher the quality of the reported

results. The use of replacement cost in determining earnings will take out the impact of inflation on operating results.

If a company defers income in order to be conservative, this will result in a less meaningful reported income figure when the source of the revenue is of a repetitious nature (e.g., revenue occurs on a consistent yearly basis).

J. Horton. The SEC is currently working on a proposed release dealing with pension plan disclosure. It will require a company to disclose what net income would have been if alternative assumptions were used (e.g., interest, mortality). This release is needed because companies are using overly optimistic assumptions. The resulting range of earnings figures will assist analysts in evaluating the quality of reported earnings. The proposal will also require more detailed disclosure of pension plan portfolios (e.g., percentage of NYC bonds held). This will provide analysts with information about a portfolio's realization risk.

Financial Accounting Standards Board

FASB Statement No. 2 - Research and Development Costs

The Statement requires the expensing of R & D costs. Companies with unamortized costs in their balance sheets will be relieved of future amortization of the amounts. The unamortized balances will be charged to retained earnings and will never pass through the income statements. For example, Lockheed removed about \$500 million of R & D costs from its balance sheet without a charge to earnings.

If a large project succeeds after research costs have

been expensed, subsequent profits are overstated since there are no research costs to amortize against revenue. B. Graham, B. Dodd, and S. Cottle recommend an alternative accounting treatment:¹

Most R & D expenses could be allocated to specific projects; the unsuccessful outlays could be charged off and the successful ones capitalized and amortized over the conservatively estimated life of the related income producer. This would place R & D on a basis fairly close to the exploration and development expense which is generally capitalized by mining and oil companies. The result might well be a fairer and more informative picture of many companies' results.

FASB Statement No. 4 - Early Extinguishment of Debt

The Statement provides that gains and losses on the early extinguishment of debt are to be classified as extraordinary items. Prior to the Statement, some companies failed to separately identify such items. The Statement, therefore, improves the investors' evaluation of earnings.

FASB Statement No. 5 - Accounting for Contingencies

An estimated loss contingency shall be accrued by a charge to income if both of the following conditions are met:

1. Information available prior to issuance of the financial statements indicates that it is probable that an asset had been impaired or a liability had been incurred at the date of the financial statements.

¹B. Graham, B. Dodd, and S. Cottle, Security Analysis: Principles and Techniques (New York: McGraw-Hill, 1962), p. 168.

2. The amount of loss can be reasonably estimated.

This requirement restricts the use of reserve accounts to manage earnings.

FASB Statement No. 14 - Segmental Reporting

If 10 percent or more of a company's revenue is derived from sales to any single customer, domestic governmental bodies in the aggregate, or to foreign governments in the aggregate, that fact, the amount of sales to each and the identity of the industry segment responsible for the revenue should be disclosed. The earnings derived from foreign operations may be broken down by geographic areas.

The Statement improves the evaluation of the quality of earnings. Earnings derived from a single customer may lack stability if that customer is having severe operating problems or has very cyclical operations. A deficiency of the Statement, however, is that there is no requirement to identify the major customers.

Earnings derived from government contract work are of poor quality if such work is dependent on changing governmental policies.

Earnings obtained from unsettled foreign areas are of lower quality because of the potential risk of future restrictions on corporate operations.

Proposed FASB Statement - Restructuring of Debt in a Troubled Loan Situation

The proposed Statement would require that restructuring of a troubled loan be accounted for by measuring the gain or

loss based on the effective interest rate of the old debt except that issuance of stock or other equity securities for debt would be considered a capital transaction on which no gain or loss is recognized. A gain or loss would be recognized by the debtor when principal or accrued interest has been forgiven or when the future rate of interest is modified.

The proposal would not require a creditor to reduce the value of a loan to a debtor whose principal or accrued interest has been forgiven or when the future rate of interest is modified. A debtor could record a gain on restructuring of debt while a creditor could continue to carry the loan on his own books at face value. It would appear that under these circumstances the creditor's loan account is overstated.

Interviews

I interviewed O. Gellein (board member) and E. McGowen (technical research member) of the FASB. However, I was requested by M. Armstrong (Chairman of the FASB) not to make specific reference to their comments in this part of the dissertation.

J. MacNeill is director of education of the AICPA. He served as a technical research assistant on the FASB from 1973 to 1975. His thoughts on the subject follow.

A bank may renegotiate the terms of its loan with a financially weak borrower. This may involve a reduction of interest (e.g., 10% to 2%) along with a provision for contingent interest (e.g., 30% of earnings up to a maximum of 150% of prime). In accruing interest on these renegotiated debts,

some banks include an estimate of the contingent interest. However, the earnings increment due to the contingent interest is of a lower quality. Some banks have provided overly optimistic accruals even though the principal of the loan has a high degree of collection risk.

The acquisition of a Savings and Loan Association by another firm accounted for under the purchase method often results in lower quality earnings. Goodwill is recorded and amortized over 40 years. The firm acquires the mortgage portfolio which is recorded at the present value of the mortgages. The present value is based on the current mortgage rate over the average remaining mortgage life (e.g., 7 years). The company increases its mortgage portfolio and credits income over the remaining 7 years in order to bring the portfolio to its maturity value. In effect, the company is front-loading income over 7 years while amortizing goodwill over 40 years.

Conclusion

The discussion of the provisions of the authoritative pronouncements promulgated by the SEC and FASB was intended to provide the reader with the views of these rule-making bodies on the "quality of earnings" notion. As the reader has noted, these pronouncements provide direct and indirect references to the term.

CHAPTER IV

RESULTS OF THE QUESTIONNAIRE SURVEY

Mail questionnaires were sent to 350 financial experts comprising accountants, security analysts, and financial managers. Accountants were classified into faculty members and practitioners. The former were selected from the 1975 membership listing of the American Accounting Association. The faculty members chosen were primarily those that had publishing reputations in the financial accounting area. In order to survey practitioners, questionnaires were sent to the directors of accounting research of the large and medium-sized CPA firms. They were requested to distribute the questionnaires to partners within their professional staff. To obtain responses from security analysts, questionnaires were mailed to the directors of research of the major brokerage houses. They were requested to distribute the questionnaires to members of their staff. I also sent questionnaires direct to those security analysts whose reputations in the financial statement analysis area are well-known. Financial managers were selected from the 1975 membership listing of the Financial Executive Institute.

The questionnaires were mailed out during the period December 1975 to March 1976. I received 123 responses (48 accountants, 27 security analysts, and 48 financial managers).

D. Hawkins (Professor of Accounting, Graduate School of Business Administration, Harvard University) participated in the questionnaire survey. He decided to administer Questions VI and VII to his graduate students in his financial statement analysis courses. The writer received from him 132 completed questionnaires, the results of which are incorporated in this chapter.

The cover letter and questionnaire appear in Appendix I; the tabulation of the results appears in Appendix II; and a list of respondents that requested a summary of the results appears in Appendix III. There were numerous respondents, primarily accounting practitioners and financial managers, that wished to remain anonymous.

This chapter consists of the following sections: (1) Purpose of the Questionnaire Survey; (2) Questionnaire Construction; and (3) Analysis of the Questionnaire Results.

Purpose of the Questionnaire Survey

The objectives of the questionnaire are to determine:

1. The extent to which financial experts are familiar with the notion "quality of earnings."
2. Whether the notion is meaningful and useful to them.
3. The elements making-up the definition of earnings quality.
4. Whether financial experts believe that quality of earnings could be objectively measured and to extract from them possible approaches to its measurement, description, and evaluation.

5. Which industry factors affect earnings quality.
6. Whether financial experts believe that economic and political factors affect the quality of earnings.
7. The over-all view of each professional field as to the meaning of the term "earnings quality."
8. The areas of agreement and disagreement among accountants, security analysts, and financial managers as to the definition of the term.
9. The extent to which quality of earnings means something different to members within each professional field.
10. Whether the following situations have an effect on the quality of earnings: (a) change to a more conservative accounting policy; (b) unwarranted changes in accounting estimates; (c) unwarranted changes in discretionary costs; (d) change in deferral policies; (e) substantial increases in deferred costs and intangible assets; (f) sudden write-off of assets; (g) nonrecurring items included in net income; (h) change in the debt to equity ratio; (i) high degree of operating leverage; (j) stockholder income is substantially greater than taxable income; (k) non-cash earnings are a high percentage of net income; (l) "other income" is a high percentage of reported results; (m) reported income is substantially greater than price-level adjusted income; and (n) change in the P/E ratio.

Questionnaire Construction*

Question I was intended to elicit "yes" or "no" answers from financial experts as to whether they were familiar with the term "earnings quality." Question II determined whether this notion was meaningful to them. The objective of Question III was to discover the elements making-up the definition of the quality of earnings. (Question IV on the measurement of earnings quality is discussed in Chapter VII). The industry characteristics which affect earnings quality was answered by Question V. Questions II-V were essay oriented in order to stimulate the respondents to express their over-all views on the topic.

Question VI presented 30 situations** which affected a company's financial position or operating status during the year. The respondent was required to indicate whether the situation related to the notion "quality of earnings" as commonly defined by others*** and by him. If the situation related to the notion, the respondent was required to indicate whether it represented an improvement in, deterioration of, or had no effect on the quality of earnings. A "remarks" column

*In reading this section, the reader may wish to refer to the questionnaire in Appendix I.

**Situation 11 was deleted from the survey since FASB Statement No. 12 dealing with marketable securities prevents the situation from occurring in the future.

***Many respondents failed to express their opinions as to what other financial experts thought of the situation. Therefore, this column in the questionnaire was left blank by them.

was provided so that the respondent could elaborate on his answer or make any additional comments about the situation. Question VI was designed to accomplish objectives 6-10 as stated in the previous section.

Question VII presented 11 situations about a company's financial position or operating status for the year. The respondent was required to indicate whether the situation related to the notion "quality of earnings" as commonly defined by others and by him. In those cases where the situation related to the notion, the respondent was required to indicate whether it reflected good earnings quality, poor earnings quality, or had no effect on it. A "remarks" column was also provided. Question VII primarily related to objectives 6 and 10 as stated in the previous section.

Analysis of the Questionnaire Results

In reading this section, the reader may wish to refer to the tabulation of the results of the questionnaire survey which appears in Appendix II. The answers to Questions I, II, VI, and VII have been tabulated.* The questionnaire results will now be presented along with my analysis of them.

The tabulation of Question I indicates that accountants, security analysts, and financial managers were familiar with the notion "quality of earnings." The tabulation of Question II reveals that financial experts thought that the notion was

*Some respondents left the answers to some of the questions unanswered. Therefore, in some cases, the number of answers to a specific question was less than the number of respondents.

meaningful and useful. However, many financial experts complained that it was ambiguous and illusive. Some comments deserve highlighting.

R. Mautz (partner, Ernst & Ernst) writes:

Quality of earnings is a useful concept. However, it is not a concept of great precision, referring as it does to a wide range of choices made in determining net income.

F. Stone (vice-president, Merrill Lynch) comments:

Quality of earnings is a useful concept only if it is defined in a specific way.

A. Thomas (accounting faculty, McMaster University) states:

Quality of earnings makes sense in a general way, but seems to mean a wide variety of things in practice to different individuals.

A. Gambino (technical research staff, National Association of Accountants) writes:

The concept makes sense. However, it is not a very meaningful concept unless it can be measured by the use of appropriate criteria.

The above comments point to a need for a useful and operational definition of "earnings quality." They also indicate a need to develop appropriate criteria to describe and measure it. This will be discussed in Chapter VII.

Some financial experts presented their views as to the meaning and/or use of the notion. These comments are presented below.

J. Green (controller, Allied Chemical) indicates:

The concept differentiates between earnings that are largely the result of accounting adjustments and those which reflect an addition of value.

W. Ketner (controller, Owens-Corning Fiberglas) explains:

Quality of earnings means income that is factual and determined based on realistic and conservative assumptions.

H. Buirkie (comptroller, Allied Chemical) remarks:

There are two aspects to the "quality of earnings." The first relates to the accuracy in portraying economic performance of a business enterprise. The second relates to the reliability of reported earnings as a predictive indicator of future economic performance.

D. Carmichael (director, auditing and reporting division, AICPA) writes:

Two broad categories of earnings quality are: (1) Qualities of the company related to the ability to generate cash on a strong and consistent basis; (2) Qualities of financial statements, and the "earnings" number therein, related to the factual versus interpretive character of the amounts. I believe it should be confined to characteristics of the amounts in financial statements and should be directly related to the objectivity of those amounts.

G. Benston (accounting faculty, University of Rochester) has an unusual way of looking at the topic:

I believe that the published earnings figures basically are not useful for investment purposes. Therefore, a rearrangement of specific numbers neither improves nor deteriorates the quality of earnings. . . If the report tends to introduce a bias in the figures as a consequence of a deliberate manipulation, I consider that the quality of earnings has deteriorated. If the situation is a change in assumptions or procedures that are within the area of acceptable subjective judgment of management and accountants, I do not consider this a deterioration but an improvement in earnings quality. If the situation is a reshuffling of a number, I consider the result to have no effect on quality of earnings. Earnings are of low quality only when management intended to deceive investors.

G. Benston infers that financial analysis is not very useful in the evaluation of earnings quality. I have strong reservations about this belief. Financial statement

analysis is a valuable means to reach rational investment decisions. He states that a change in accounting assumptions or methods improves earnings quality. This comment is open to criticism since an unwarranted accounting change (e.g., an unrealistic decline in the warranty provision) results in a deterioration in the quality of earnings.

Question III deals with the elements comprising the "quality of earnings." Some relevant comments appear below.

F. Weston (retired partner, Arthur Young) writes:

Every material characteristic of a corporation's economic activities affects earnings quality. These include cyclicalities, capital needs and costs, labor needs and costs, management ability, competition, and industry risks.

C. Schretzman (director of corporate accounting, International Paper) comments:

"Mortgaging the future" by delaying discretionary expenditures has an adverse impact on earnings quality.

J. MacNeill (director of education, AICPA) observes:

The elements of earnings quality include: (1) revenue having a high degree of realizability, (2) major portion of earnings is expected to recur (i.e., it derives from continuing operations), (3) earnings reflect the activities of the period, and (4) earnings are not overly sensitive to volume changes.

J. McGourty (controller, Coca-Cola) mentions:

Accounting "gimmicks" to inflate reported earnings detract from earnings quality.

F. Stone (vice-president, Merrill Lynch) writes:

The problem related to earnings quality is the shift of income because of accounting flexibility.

Some financial managers commented that a high return on investment (ROI) indicates high quality of earnings. However,

a high ROI has nothing to do with earnings quality. High income does not mean good quality earnings. In fact, high earnings may have only resulted from a firm's use of liberal accounting policies in its income determination process. Furthermore, capital investment does not relate to earnings quality.

Question V deals with industry characteristics that affect earnings quality. Some responses are presented below.

T. Combes (controller, W.T. Grant) indicates:

The following industry characteristics relate to earnings quality: political stability of foreign sources of earnings and heavy dependence on volatile commodities.

R. LaBlanc (security analyst, Salomon Bros.) states:

The input-output conversion period relates to earnings quality. This period tends to be long for capital intensive businesses (e.g., utility) and contractual businesses (e.g., insurance). A long period maximizes the difference between accrued earnings and cash earnings providing the opportunity for quality distortions.

M. Block (editorial consultant, CPA Journal) remarks:

Companies in an industry with long-term contracts may have lower earnings quality because of the highly subjective estimates involved in determining yearly earnings.

Questionnaire Responses to Specific Situations

I will now summarize the questionnaire results for each of the 29 situations in Question VI along with an analysis of the findings. The frame of reference used for my analysis is the conceptual foundations developed in Chapter II.

The results for situation 1 indicate that a great majority of accountants, security analysts, financial managers,

and Harvard Graduate School of Business students (Harvard students) believe that when a company using the cost method to account for its investee receives "unusually" high cash dividends for the year its quality of earnings deteriorates. In the "remarks" column, the following relevant comments were made: (1) J. Olson (treasurer, GAF Corp.) stated that "if the unusually high earnings increment is not expected to recur, then the company's quality of earnings has deteriorated." (2) K. Marshall (partner, Coopers & Lybrand) commented that "the cost method can cause erratic changes in reported results, thus lowering earnings quality." (3) A. Wyatt (partner, Arthur Andersen) observed that "the situation reveals possible income management." This unusual increase in income results in a higher than normal level of earnings for the period. The earnings increment is of a transitory nature. It distorts the current year's income as a predictor of future earnings. A nonrecurring increase in earnings should be discounted in determining a firm's "earning power."

The results for situation 2 indicate that a great majority of accountants, security analysts, financial managers, and Harvard students believe that when a company makes a change in actuarial assumptions (e.g., mortality, interest rate) that materially increases income its quality of earnings deteriorates. For example, D. Meade (security analyst, H.C. Wainwright) stated that "the situation indicates the company is cheating by making an unwarranted change in its pension plan estimates in order to boost earnings." S. Axelrod (security analyst, Paine, Webber, Jackson & Curtis) indicated that "the earnings increment

is not a 'real' improvement in operations." A decline in pension expense resulting from an unwarranted change in actuarial assumptions lowers the quality of earnings.

Results for situation 3 reveal that a great majority of respondents in each category believe that a company experiences a deterioration in its earnings quality if it has a trend of lower depreciation charges as a percent of fixed assets coupled with a cut-back in repairs and maintenance. A. Wyatt (partner, Arthur Andersen) stated that "the short-run improvement in earnings is not sustainable." A reduction in discretionary expenses may adversely affect a company's success in future years. A cut-back in repairs and maintenance will reduce the productivity of a firm's assets. As a result, the useful lives of its fixed assets will decline. This necessitates an increase in the depreciation provision. However, situation 3 indicates that depreciation expense as a percent of fixed assets actually went down. Therefore, net income is overstated. This situation indicates a deterioration in the quality of earnings.

The tabulation for situation 4 shows that a majority of accountants, security analysts, and Harvard students believe that a company with disappointing earnings for a year that decides to reduce discretionary costs (e.g., advertising and promotion, training) experiences a deterioration in its earnings quality. For example, a Harvard student stated that "the company is taking in earnings now by deferring currently needed costs into the future." The majority of financial managers

do not believe that such a situation affects earnings quality. For example, H. Knortz (controller, International Telephone and Telegraph) stated that "a reduction in discretionary costs makes good business sense since the company is responsive to falling business activity." As discussed in Chapter II, an unjustified cut-back in discretionary costs results in a deterioration in earnings quality because management is starving the business of needed expenses required for future growth. In this case, future sales will suffer because of the decline in advertising expenditures.

The results for situation 5 reveal that a great majority of accountants, security analysts, financial managers, and Harvard students believe that a company that shows a substantial increase in deferred charges (e.g., moving and start-up costs, capitalized interest) experiences a deterioration in its earnings quality. J. Olson (treasurer, GAF Corp.) stated that "current income may be overstated since it may have been relieved of proper charges against it. This looks like 'mickey mouse' accounting." If a firm defers costs which carry a high degree of realization risk then reported earnings are of lower quality compared to earnings which do not involve the recording of such high risk assets. Assets with high realization risk often require future write-offs. In addition, a company may be deferring costs that should more properly be expensed. However, if the company started a new operation (e.g., moved to a new location) to better penetrate its market then the increase in deferred charges may be legitimate since it is due to increased

activity. In this case, earnings quality would not be affected.

Situation 6 results indicate that a great majority of respondents in each category believe that a company's quality of earnings deteriorates when a substantial percentage of its increase in earnings is due to a gain on the sale of land. For example, E. McGowen (technical research staff, FASB) observed that "the gain is a low quality of earnings increment since it represents a 'one-time deal'." A one-time gain arising from the sale of land is a low quality of earnings increment. The gain includes "inflationary profits" that have built-up over the years. In addition, the sale of low-cost basis land in order to boost profits may be an income management ploy.

Results for situation 7 show that a great majority of respondents in each category believe that when a company which has been holding obsolete inventory for the last two years suddenly decides to write-down the inventory in the current year there is an effect on the quality of earnings. However, there is disagreement among them as to whether the effect is to improve or deteriorate earnings quality. Of the 42 out of 48 accountants and of the 40 out of 48 financial managers that perceived the situation as affecting the quality of earnings, 62% of the former and 58% of the latter thought that the affect was a deterioration. However, of the 24 out of 25 security analysts that thought the situation had an impact on earnings quality, 54% of them thought that the affect was an improvement. 81% of the Harvard students thought that the situation indicated an improvement in the quality of earnings. It is interesting

to observe that while security analysts thought that the company's write-off of inventory improved its earnings quality, the preparers of the financial statements (accountants and financial managers) believed that the write-off reflected a deterioration in the quality of earnings. The following relevant comments were made: (1) F. Weston (retired partner, Arthur Young) stated that "the situation raises a question of management's forthrightness and integrity." (2) R. Sullivan (vice-president of finance, American Express) asked the following question: "What else are they hiding"? On the other hand, D. Londoner (security analyst, Wertheim & Co.) commented that "earnings in the current year are of higher quality, but I become suspicious of the company's accounting procedures." The firm's failure to write-down the inventory on a timely basis resulted in an overstatement of earnings in prior years. In addition, current year's earnings are understated since they have been charged with inventory losses that properly belonged to prior years. As a result, profits are distorted in all years. The company's failure to immediately write-off its obsolete inventory raises questions about its deferral policies and realizability of other assets. However, as a result of the write-down, inventory is more properly valued and earnings are more conservatively stated.

Situation 8 results indicate that a majority of respondents in each category believe that a company that shows a material gain on the early extinguishment of debt experiences a deterioration in its earnings quality. Such gains may impair

the quality of the earnings increment. They are often excluded by analysts in their determination of "relevant" earnings. Some companies (i.e., Western Union, Fedders Corp.) have engaged in income creation through debt retirement.

According to the results for situation 9, a majority of security analysts and financial managers do not believe that a company's increase in its earnings to fixed charges ratio from 1.2:1 to 2.5:1 has an effect on earnings quality. Although a majority of accountants thought that the situation had an impact on earnings quality, only 45% of them thought that the effect was an improvement. On the other hand, a majority of Harvard students believe that the situation indicates an improvement in the quality of earnings. A typical comment made by the Harvard students was that "an increase in the ratio reduces the company's operating leverage. This reduces the variability associated with its earnings stream." A significant increase in the earnings to fixed charges ratio indicates an improvement in the quality of earnings since lower fixed charges results in greater stability in earnings.

The results for situation 10 point out that a majority of accountants, security analysts, financial managers, and Harvard students believe that a significant increase in a company's percentage of intangible assets to total assets results in a deterioration in its earnings quality. The following relevant comments were made: (1) A. Wyatt (partner, Arthur Andersen) stated that "the situation may indicate the capitalization of items that should have been charged

to income." (2) B. Harter (vice-president of finance, Becton, Dickinson & Co.) stated that "I am skeptical when I see a substantial increase in intangible assets." (3) J. Feiner (security analyst, Drexel Burnham) commented that "a big increase in goodwill-type items would suggest 'acquired' earnings." The amounts recorded for intangibles may be overstated relative to their market value or future income-generating potential. An increasing percentage of intangible assets to total assets reflects an asset structure of higher realization risk. This indicates lower quality of earnings because of possible future charge-offs.

Situation 12 shows that a slight majority of accountants, security analysts, and financial managers do not believe that an increase in a company's debt to equity ratio from 1:1 to 2:1 has an effect on its quality of earnings. However, 79% of the Harvard students believe that the situation results in a deterioration in earnings quality. A. Tietjen (retired partner, Price Waterhouse) stated that "a large increase in fixed costs makes earnings more vulnerable to declines in demand." A substantial increase in the debt to equity ratio results in higher fixed interest expense which may cause variability in earnings. In addition, an excessively high ratio may make it extremely difficult for the company to obtain adequate financing to meet its future needs. For example, the

firm may already be at the limit of its borrowing capacity.

The results for situation 13 indicate that a great majority of respondents in each category believe that when a company's earnings increase as a result of recognizing tax carryforward losses its quality of earnings deteriorates. The following relevant comments were made: (1) An anonymous partner with an international CPA firm stated that "the company cannot continue to generate such earnings indefinitely." (2) J. Olson (treasurer, GAF Corp.) commented that "the recognition of tax carryforward losses may result from the acquisition or discontinuance of a business segment. This is a nonrecurring situation." On the other hand, R. Sullivan (vice-president of finance, American Express) thought that the situation improved the quality of earnings. He stated that "the recognition of carryforward losses means that the company's operating results are improving." One should not consider the tax saved because of tax carryforward losses as part of the current year's earnings. The tax credit portion of reported results does not reflect the "normal results" of the year. Such a tax saving constitutes a "special credit" (similar to a nonrecurring gain) which should be discounted in determining a company's "earning power."

The tabulation for situation 14 indicates that respondents are almost unanimous in their belief that a company experiences a deterioration in its earnings quality when it defers, to a greater extent, overhead and other indirect costs in inventory that were expensed in prior years. For example, F. Weston

(retired partner, Arthur Young) stated that "the situation indicates the existence of possible income manipulation with the resultant overstatement of earnings." Reported earnings are suspect when management classifies as inventoriable overhead costs which were treated as period expenses in prior years.

The information collected for situation 15 indicates that a great majority of respondents in each category believe that a company experiences a deterioration in its earnings quality when it deliberately liquidates low-cost LIFO inventories. This is nothing more than an income management ploy to bolster earnings.

Situation 16 demonstrates that a majority of accountants, security analysts, financial managers, and Harvard students believe that a company which receives a substantial payment on an insurance policy due to the death of its president which materially increases earnings experiences a deterioration in its earnings quality. For example, J. Olson (treasurer, GAF Corp.) stated that "the loss of management talent will have an adverse impact on future operations." The loss of a corporate president does not bear on the quality of earnings. The deceased president may have been incompetent and his loss may have a positive effect on the company. Further, the situation shows that the company has adequate life insurance for its key executives.

An analysis of the results for situation 17 evidenced that a majority of security analysts and Harvard students believe that a company which sells equipment in cyclical markets

that increases its level of rental and service income will experience an improvement in its earnings quality. However, only 44% of the accountants shared this view. A very slight majority of financial managers believe that the situation has no effect. J. Olson (treasurer, GAF Corp.) mentioned that "the situation reduces the firm's risk exposure." On the other hand, R. Sullivan (vice-president of finance, American Express) commented that "the situation indicates a deterioration in earnings quality because the company's basic market is weakening." A company which sells to cyclical markets will improve its earnings quality by increasing its level of rental and service income. It will reduce its exposure to the business cycle and generate stable sources of revenue. This will provide greater stability to earnings.

The results for situation 18 indicate that a majority of accountants and financial managers do not believe that a company's incurrence of nonrecurring costs in connection with a special sales convention and promotion plan has an effect on earnings quality. Of the 15 out of 26 security analysts and of the 67 out of 128 Harvard students that thought the situation had an effect on earnings quality, 53% of the former and 76% of the latter thought that it resulted in an improvement. J. Gunning (controller, Union Carbide) stated that "the situation has no effect on earnings quality because there is no identified benefit to future periods." On the other hand, D. Meade (security analyst, H.C. Wainwright) felt that "the nonrecurring loss results in a deterioration in earnings quality." A nonrecurring

increase in an expense item has no impact on earnings quality if it results from an unusual nonproductive expenditure. In other words, if a firm engages in a massive promotion effort that fails, it has incurred nonrecurring costs which have not generated revenue. This lowers net income but the quality of earnings is not affected.

Situation 19 results demonstrate that a majority of accountants and financial managers do not believe that a company's incurrence of uninsured casualty losses (which are not within the risk category to which it is considered susceptible) has an effect on earnings quality. A slight majority (57%) of security analysts believe that the situation has an effect on earnings quality. E. Akresh (financial manager, J.C. Penney) commented that "the situation has no effect on earnings quality because it does not relate to corporate operating performance." A casualty loss that will not have an adverse impact on future operations does not affect the quality of earnings.

For situation 20, the results showed that accountants, financial managers, and Harvard students do not believe that a company's incurrence of a \$1 million loss as a result of ransom paid for kidnapped executives has an effect on earnings quality. Security analysts are about equally divided as to whether the situation has an effect on earnings quality. The following comments were made supporting the contention that the situation resulted in a deterioration in earnings quality:

- (1) R. Freese (treasurer, Grumman Corp.) stated that "it appears

that the company's insurance program is inadequate." (2) F. Weston (retired partner, Arthur Young) mentioned that "if there is risk of repeated kidnappings, then the quality of overseas earnings is lower." On the other hand, J. Olson (treasurer, GAF Corp.) noted that "the situation has no effect on earnings quality because the loss does not relate to normal business activity." A trend toward repeated kidnappings of executives may make a company's earnings stability less certain. Kidnappings can impair the health of "key" executives and thus result in a lack of continuous leadership. If the firm's insurance coverage is inadequate to cover ransom payments, the problem is more serious.

The results for situation 21 reveal that a majority of respondents in each category believe that a company will experience a deterioration in its earnings quality if it derives income from the introduction of the 53rd week year. The majority of financial managers do not believe that the situation affects earnings quality. Incremental earnings derived from a 53rd week year is expected to occur periodically. It should be considered as part of the long-term income history of the company. It does not lower the quality of earnings.

A tabulation of comments to situation 22 indicate that a great majority of accountants and financial managers do not believe that a company's incurrence of nonrecurring costs associated with power breakdowns and material shortages has an effect on earnings quality. Security analysts are about equally divided. Although the Harvard students believe that

the situation affects earnings quality, there was a lack of consensus among them as to whether it represented an improvement or deterioration. W. Ketner (controller, Owens-Corning Fiberglas) put forth that "since the power breakdowns and material shortages are not expected to repeat there is no effect on earnings quality." On the other hand, an anonymous financial manager stated that "the situation may indicate that the company has a propensity to operating problems." The situation does not affect the quality of earnings. Since the power breakdowns and material shortages are not expected to recur, there will not be an adverse effect on future earnings. In addition, the situation was out of the control of management (e.g., power breakdowns may be due to energy shortages which affect all companies).

The results for situation 23 show that a majority of accountants and security analysts believe that a company which is susceptible to substantial commodity price changes (e.g., copper) has lower quality of earnings. Although a majority of Harvard students believe that the situation affects the quality of earnings, only 46% of them thought that it resulted in a deterioration. The majority of financial managers believe that such a situation has no effect on earnings quality. D. Londoner (security analyst, Wertheim & Co.) stated that "variability in earnings prohibits the insured prediction of future results." On the other hand, C. Schretzman (director, corporate accounting, International Paper) wrote that "the situation has no effect on earnings

quality because management would adequately hedge its exposure." A company which is susceptible to substantial commodity price changes shows instability in earnings. Such a situation indicates poor quality of earnings.

The results for situation 24 indicates that a majority of accountants, security analysts, and Harvard students as well as 48% of the financial managers believe that a company's quality of earnings deteriorates when it receives a "once and for all" extraordinary large order from a customer, resulting in a "one-time" substantial increase in sales. Such an order is a random and transitory occurrence, and results in a higher than normal level of earnings for the period. Because of its one-time nature, this source of earnings is of lower quality.

Situation 25 demonstrates that a great majority of security analysts and Harvard students, a slight majority of financial managers, and 44% of accountants believe that a company improves its earnings quality when it changes its depreciation method for new acquisitions from straight-line to accelerated. R. Sullivan (vice-president of finance, American Express) stated that "the accelerated method is more realistic in accounting for fixed assets during inflationary periods." J. Gunning (controller, Union Carbide) felt that "the accelerated method is a more conservative way of determining period earnings." The prime consideration in regard to depreciation is the rate of write-off that most accurately reflects the expiration in usefulness (service

potential) of the fixed asset. In general, the accelerated method accomplishes this better than the straight-line method. It therefore results in a more realistic depreciation charge.

The results for situation 26 indicate that respondents are almost unanimous in their belief that a company's quality of earnings deteriorates when its bad debt provision is lowered even though its bad debt write-off experience is worse. For example, W. Ketner (controller, Owens-Corning Fiberglas) stated that "it appears the firm is either asleep or managing earnings." It is unrealistic for a company to lower its bad debt provision when a greater percentage of its receivables are not being collected. An unwarranted decline in bad debt expense lowers the quality of earnings.

The results for situation 27 show that a majority of respondents in each category believe that a company's quality of earnings deteriorates when it sells assets picked up under a pooling of interests for \$1.5 million which were originally recorded at \$1 million. For example, a Harvard student stated that "even if a company does this regularly, there is a risk involved in expecting this type of gain to continue indefinitely." The suppression of asset values for which the acquiring company paid enabled it to generate instant earnings by later selling-off these assets. The resulting gain is a low quality of earnings source.

Situation 28 demonstrates that all of the security analysts and a great majority of accountants, financial managers, and Harvard students believe that a company's earnings quality

deteriorates when it unjustifiably shortens its performance schedules to complete long-term construction projects in order to increase profits. The situation applies to a company using the percentage of completion method. For example, A. Wyatt (partner, Arthur Andersen) commented that "this is nothing more than an accounting gimmick." The company's premature recognition of income results in a low quality of earnings increment.

Situation 29 results evidence that a majority of respondents in each category believe that a bank's earnings quality deteriorates when it has an increasing trend of loans in its portfolio which have stopped paying interest. For example, F. Weston (retired partner, Arthur Young) stated that "there is clearly a change in the quality or nature of the company's earnings." A Harvard student asked: "How many other loans are accruing interest but are marginally poor"? The company's quality of earnings has not been affected because net income does not include the interest income. In other words, earnings quality cannot decline when earnings already reflects the omission of interest.

The results for situation 30 indicate that a majority of accountants, security analysts, and Harvard students believe that a paper manufacturer's earnings quality deteriorates when it derives a substantial increase in earnings from unusual product demand coupled with sky-rocketing commodity prices. The majority of financial managers do not believe that such a situation affects earnings quality. P. Fertig (accounting

faculty, Ohio State University) stated that "the nonrecurring nature of the increase in income reflects a deterioration in the quality of earnings." Incremental earnings resulting from unusual product demand coupled with extraordinary commodity price increases is of poor quality. This sudden surge in earnings will not be sustained. Instability in earnings is also indicated.

I will now summarize the questionnaire results for each of the 11 situations in Question VII and present my analysis of the findings. The frame of reference used for my analysis is the conceptual foundations developed in Chapter II.

The results for situation 1 indicate that a majority of security analysts and Harvard students believe that a company that reports net income of \$10 million which includes cash earnings of \$3 million (the balance representing earnings from non-cash sources, primarily from sales on account) has poor earnings quality. Financial managers are about equally divided. A majority of accountants believe that the situation has no effect on earnings quality. Low cash earnings would not indicate poor earnings quality as long as the realizability of the accounts receivable was assured.

Results for situation 2 show that a majority of security analysts and Harvard students believe that a company which reports very high stockholder earnings while at the same time reports a loss to the IRS has lower quality earnings. The majority of accountants and financial managers do not believe that such a situation affects earnings quality.

J. MacNeill (director of education, AICPA) stated that "the effect of the situation on earnings quality depends on whether the discrepancy is due to permanent or timing differences. If it results from timing differences, then earnings quality may be poor." The fact that taxable income is less than book income has no effect on earnings quality. A company may only understate taxable income because of an incentive to pay less tax. Further, there are many expenses allowable for tax purposes but not for book purposes. For instance, if the firm was a petroleum refiner which drilled a well and found huge oil deposits it could report a taxable loss because the drilling costs may be expensed for tax purposes but cannot be for GAAP. However, a substantial deviation between taxable income and book income may lead analysts to more closely evaluate reported results.

An analysis of responses to situation 3 reveals that a majority of respondents in each category believe that a company with a very high percentage of "other income" to net income has poor quality earnings. For example, J. Olson (treasurer, GAF Corp.) commented that "a high percentage indicates that the basic business is in difficulty." One cannot conclude that "other income" is of poor quality. Such income may be a very stable source of earnings (e.g., royalty income under a long-term licensing agreement). In some cases, "other income" may show more stability than sales.

The results for situation 4 indicate that a great

majority of respondents in each category believe that a company which derives a major source of its earnings from foreign operations which are primarily located in politically unstable countries has poor quality of earnings. This risk of nationalization and restrictions on income make the company's future recurrence in earnings uncertain.

The results for situation 5 indicate that a majority of respondents in each category believe that a company using straight-line depreciation on very old assets has lower earnings quality if it must replace these assets shortly at very high replacement costs. For example, W. Ketner (controller, Owens-Corning Fiberglas) stated that "the situation reflects poor earnings quality since the company did not have a regular program of upgrading assets. This may inhibit the productivity of assets. In addition, the drain on resources may prevent growth opportunities from being undertaken." As noted in Chapter II (pp. 69-70), earnings quality partially depends on the degree to which sufficient provision has been made for the maintenance of plant assets. Improper maintenance of capital lowers the quality of earnings. Furthermore, a firm's failure to provide adequate depreciation charges for the possible obsolescence of plant assets results in overstated earnings.

The results for situation 6 indicate that a majority of accountants, security analysts, and Harvard students believe that a company with a high degree of operating leverage along

with a highly elastic product demand has poor quality of earnings. Financial managers are about equally divided. F. Weston (retired partner, Arthur Young) stated that "such a situation indicates a high operating risk factor. High risk indicates poor earnings quality." A Harvard student mentioned "no one expects consistency from these earnings." This situation reflects incredible up and downside potential. A high degree of operating leverage coupled with "swings" in revenue results in earnings variability, leading to poor earnings quality.

Situation 7 provides that a great majority of respondents in each category believe that inventory profits are a low quality of earnings element. As previously discussed in Chapter III (pp. 78-79), inventory profits impair the quality of the earnings increment.

The results for situation 8 demonstrate that a majority of respondents in each category believe that a company that reports net income that is substantially higher than what net income would be on a price-level adjusted or replacement cost basis has poor earnings quality. For example, R. Sullivan (vice-president of finance, American Express) stated that "the situation may indicate the existence of unrealistically low depreciation charges on out-dated assets. The resulting earnings figure is overstated." In some cases, conventional procedures have resulted in showing a level of earning power substantially above actual performance. This is due to the understatement of depreciation and cost of sales which are

based on historical cost. Therefore, net income may be overstated in an "economic sense" if the recorded amounts for such costs are significantly less than what they would be on a replacement cost basis.

The results for situation 9 indicate that the respondents are almost unanimous in their belief that a company which experiences a decline in its P/E ratio after making a number of accounting changes has poor earnings quality. (The P/E ratio is an effect and not a cause of earnings quality.) A decline in the ratio is an indication of a deterioration in a company's quality of earnings.

The results for situation 10 show that a majority of respondents in each category believe that a company with high earnings that has undertaken massive research and advertising projects has good quality of earnings. The financial experts pointed out that these programs will enhance the firm's earning potential. I agree that such expenditures will enhance future growth. However, the company may have increased these discretionary costs in order to bring down excessively high earnings.

The results for situation 11 indicate that a majority of respondents in each category believe that a company which derives its major demand for its product line from two large industrial users that have cyclical operations has poor earnings quality. C. Schretzman (director, corporate accounting, International Paper) stated that "there is a high risk that the company may lose its customer base with a devastating

effect on its operations." A company that is susceptible to the business cycle may show unstable earnings. This is a poor quality of earnings situation. Further, poor sales diversification enhances business risk and makes the recurrence in earnings more uncertain.

At the end of the questionnaire space was provided for any additional comments that the financial experts or Harvard students may have had. A number of comments are worthy of highlighting.

A. Tietjen (retired partner, Price Waterhouse) states:

The concept of "quality of earnings" originated with financial analysts. They are interested in anything that affects earnings, past, present or future. In general, absence of unusual features means "quality" to them. Businessmen and accountants have traditionally spoken in terms of "conservatism" or "sound" practices, with reliance on disclosure for any unusual features affecting earnings. The practical difference between the two viewpoints should not be great assuming there is integrity in the preparation of financial reports.

An anonymous financial vice-president writes;

Although many of the examples result in shifting income from year to year as long as they conform to GAAP I do not think they affect the "quality of earnings." There does need to be a more precise definition of GAAP, however, inasmuch as every year in our firm we have discretionary decisions that can affect reported results \pm 15%. Our company nets \$30 million of income.

A company which shifts income from year to year by making discretionary decisions may have lower earnings quality. For example, a cut-back in needed discretionary costs will have an adverse effect on future growth.

A Harvard student comments:

Any factor which reduces the continuous growth in a company's earnings stream lowers the quality of those earnings.

This comment is open to criticism. Many factors may restrict a company's growth that have nothing to do with the quality of presently reported earnings. An example is a company's inability to introduce new products.

H. Knortz (controller, International Telephone & Telegraph) writes:

"Quality of earnings" has deteriorated into a term of denigration.

With regard to the above comment, a major purpose of my study is to develop, based on this and other aspects of research, a useful definition of the term. In so doing, I hope to clarify the meaning of the concept so that it is properly understood and used by financial experts.

The following conclusions can be drawn from the mail interviews:

1. Accountants, security analysts, and financial managers are familiar with the term "quality of earnings." It is a meaningful concept to them. However, the concept is too ill-defined to be useful in practice and requires a clear and concise definition.
2. There are many areas of agreement and disagreement among accountants, security analysts, and financial managers as to the meaning of the concept.
3. There is a wide range of views and lack of discipline in the use of the term among the financial experts.
4. There is a lack of consensus among members within each professional field as to the meaning of the term.

5. There exists a number of misconceptions as to what represents "good" or "poor" earnings quality.
6. Accounting, financial, economic, and political factors affect the quality of earnings.
7. The P/E ratio is adjusted for changes in a firm's quality of earnings.

The following are some discernible and specific differences that can be identified with the different groups:

1. Accounting Factors. Accountants typically relate earnings quality to the soundness and consistency of the accounting policies employed. They believe that accounting methods and estimates must accurately reflect the economic substance of corporate transactions. Therefore, realistic and consistent accounting policies result in the highest quality earnings. Further, they are of the opinion that net income is of lower quality if many subjective accounting estimates are required in the income measurement process. Earnings that are reliable and verifiable are considered to be of higher quality. In conclusion, accountants view the concept as primarily relating to accounting factors that have an impact on the amount of net income reported for the period.

Security analysts typically believe that conservative accounting policies result in the highest quality earnings. They also believe that changes in accounting principles or estimates that increase income may lower earnings quality. Analysts also are of the opinion that income management detracts from earnings quality because it results in an

earnings figure which is unrepresentative of the firm's actual operating performance. Finally, they feel that a company's reduction in discretionary costs lowers the quality of earnings because the future earning potential of the firm has been negatively affected.

Financial managers believe that realistic accounting policies, whether they be conservative or liberal, result in the highest quality earnings. Consequently, financial managers do not typically view liberal accounting methods or estimates as detracting from the quality of reported results. They also do not feel that the shifting of income from year to year or the implementation of accounting changes has any bearing on earnings quality. Finally, they do not consider that a reduction in discretionary costs has an effect on the quality of earnings since management is being responsive to declining business activity.

Security analysts typically believe that the quality of earnings is lower if reported net income exceeds taxable income. Accountants and financial managers do not believe that such a situation affects earnings quality because of management's desire to pay less tax.

2. Economics of Company and Industry. Security analysts typically relate the notion "quality of earnings" to the stability in revenue and expense items. They believe that nonrecurring elements of income are of lower quality than recurring elements. They view reported net income to be of poor quality if it cannot be used as a reliable basis to predict

future earnings. Accountants and financial managers do not typically see earnings stability or the predictability of earnings as necessarily applying to the notion. For example, they do not consider cyclical effects on earnings to be relevant.

Security analysts typically consider any significant characteristic of a company's business activity that results in income instability as lowering the quality of earnings. These characteristics include business risk, employee relations, availability of raw materials, and quality of management. For example, they believe that a high degree of business risk may result in earnings instability. Financial managers basically agree with the analysts. For example, they believe that a highly qualified management tends to stabilize earnings. Accountants do not typically view a company's business characteristics as having an impact on earnings quality. As previously indicated, they relate the concept primarily to accounting matters.

Financial managers typically relate earnings quality to income derived from normal business operations (e.g., selling function). Therefore, income derived from nonoperating sources is viewed as being of poor quality. They also relate the concept to future growth in their product lines. For example, an increase in market share is seen as an improvement in the quality of earnings. Since security analysts typically believe that stable sources of income are of high quality, they would consider nonoperating income to be of higher quality than sales

in some cases. An example is rental income under a long-term lease.

Security analysts and financial managers generally believe that industry factors relate to the concept. For example, a company in an expanding industry is viewed as having higher earnings quality than a company in a declining one. Accountants deem industry factors to be irrelevant.

3. Political Factors. Security analysts and financial managers typically believe that political factors affect earnings quality. For example, earnings derived from politically unstable countries are viewed as being of lower quality. In addition, financial managers view negatively income derived from government contracts. Accountants generally do not believe that political factors have a bearing on the concept.

In a letter accompanying the results from the Harvard Business School students, D. Hawkins stated that he decided to discuss the areas covered in my questionnaire with his classes. This discussion took place after the questionnaires were completed. In his letter, he wrote:

The general conclusion of the discussion of the quality of earnings was that the term was a short hand way of communicating the qualities of a company that pertain to its price-earnings ratio. These qualities could be placed in four major categories: accounting characteristics, operating characteristics, financial characteristics, and cash-flow characteristics. Furthermore, they concluded that the term is used differently by different people and one must be careful how the term was being used in each situation.¹

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It is interesting to observe that the "general" characteristics of earnings quality as perceived by the Harvard students are consistent with the views of the financial experts as to the elements comprising the "quality of earnings" notion which were presented in Chapter II.

In general, the conclusion of the Harvard students is consistent with the views of many of the financial experts.

Part II will consist of an extensive discussion detailing the special factors affecting the quality of earnings. It consists of two chapters which deal with the following areas: (1) Implications of the Analysis of Other Elements of the Financial Statements; and (2) Industry Characteristics and Political Factors.

PART II

SPECIAL FACTORS AFFECTING THE QUALITY OF EARNINGS

CHAPTER V

IMPLICATIONS OF THE ANALYSIS OF OTHER ELEMENTS OF THE FINANCIAL STATEMENTS

This chapter discusses the implications of the analysis of some specific elements of the financial statements in the evaluation of the quality of earnings. An analysis of the Balance Sheet and of the Statement of Changes in Financial Position will provide clues as to the quality of earnings reported by business enterprises. Similarly, other accounting aspects such as business combinations and long-term construction contracts have a bearing on earnings quality and must be considered by analysts. This chapter also identifies various disclosures which should be presented in order that security analysts might better evaluate the quality of reported results.

Balance Sheet Analysis

Balance Sheet analysis provides a check upon the validity of reported earnings, and supplies the basis for analyzing the sources of earnings. If assets are overstated, earnings will be overstated also because the earnings will not include those charges which are required to reduce the assets to their proper valuations. Conversely, understated assets will result in the understatement of both current and cumulative

income. The same condition may exist on the liabilities side. When liabilities are understated, earnings will not include those charges which are required to reflect the proper valuation of liabilities and earnings will be overstated in consequence. Conversely, if present and future liabilities or losses are overstated, earnings will be understated. In these cases, reported earnings are of lower quality.

The quality of assets relates to the degree of certainty associated with the amount and timing of the realization of such assets. Asset quality may be affected by several factors such as changes in economic conditions and changes in the nature or operations of the business entity. A change in asset quality, that is, a change in realization, will signal a change in profits. A decline in the accounts receivable turnover, for example, may indicate future write-offs of customer balances.

Analysts can evaluate and measure the quality of earnings by analyzing assets according to risk category. The greater the dollar frequency of a company's assets in the high risk category, the lower is its quality of earnings. High asset realization risk indicates poor earnings quality because of possible future charge-offs. If a company has deferred costs which carry a high degree of realization risk then reported earnings are of lower quality compared to earnings which do not involve the recording of such high risk assets. For example, the future realization of accounts receivable has a higher

degree of probability than the future realization of deferred advertising costs. Similarly, the future realization of inventory is higher and can be predicted with greater certainty than can the future realization of start-up costs.

In evaluating asset realization risk, analysts must also consider the impact of changing government policies on the company. There is a new and greater exposure to risk for companies because of the increasing number of decisions of regulatory bodies that certain products (e.g., those containing cyclamates or other chemical ingredients) are hazardous to human health. For the affected firms, substantial inventories may have to be written-off as unsalable. Concern about the ecology has brought some pollution-causing industries under stricter control. The discontinuance of a product line or the costs of meeting anti-pollution standards could cause a manufacturing plant to be wholly or partially abandoned.

It would be advantageous to segregate and group assets according to the relative uncertainty of their prospective realization. For example, the future benefits of assets arising from certain expenditures (e.g., employee training costs) may be so uncertain that such items should be shown separately and in greater detail, perhaps in a separate statement. Such treatment would highlight the peculiar nature of such assets and would allow analysts to make their own judgments about potential benefits.

With respect to multi-purpose assets, the FASB Discussion Memorandum on "Materiality" states that such assets "generally

are considered to be of higher quality than single-purpose assets because of readier salability."¹

Arthur Andersen & Co. takes the position that "intangible assets and deferred charges are not economic resources and should not be reported as assets."² But if the amounts reflected for intangible assets or deferred charges represent their true future value to the firm, then they should be reported. For example, trademarks, patents, and other intangibles, often developed or purchased at great expense, generally possess future utility and may in fact have a value to the company which exceeds their unamortized costs.

In an interview, D. Carmichael (director, auditing and reporting division, AICPA) stated:

Assets which have no separable value, and which cannot be sold easily, have low realizability and high risk. Such assets include intangibles, work-in-process, and plant and equipment. Because of their low salability, these assets are of low quality, and detract from the quality of earnings. On the other hand, investments represent "solid" realization assets and are therefore of higher quality.

This comment is open to criticism. Realization risk in assets means that the assets may be overstated in value relative to their future utility. However, an asset that does not have separable value does not necessarily involve high realization risk. For example, a machine may not be salable because it cannot be used by others. However, the machine may be important

¹
FASB Discussion Memorandum, Criteria for Determining Materiality (Connecticut: FASB, March 21, 1975), p. 144.

²
Accounting Standards for Business Enterprises Throughout the World (Illinois: Arthur Andersen & Co., 1974), pp. 18, 23.

to the company to make its specialized products, and has realizable value and future utility even though it does not have separable value. Further, the concept of separable value (liquidation value) is contrary to the going-concern concept. In the normal course of business, plant and equipment would be retained by the firm. Therefore, the fact that an asset does not have separable value does not mean it is a low quality asset.

The following balance sheet accounts will now be discussed: Receivables, Inventory, Fixed Assets, Intangible Assets, Deferred Costs, Investments, and Reserves for Future Costs and Losses.

Receivables

Analysts should examine trends in ratios of bad debts to accounts receivable and to net sales. Unwarranted reductions in bad debt provisions lower the quality of earnings. This can occur when there is a reduction in bad debts even though the company is selling to less creditworthy customers.

Firms which intentionally overstate bad debt provisions to establish accounting cushions will report understated earnings. In 1973, for example, Dekalb Agresearch increased its allowance for bad debts by \$1,997,000 compared with \$496,000 in the previous year. Earnings were thereby reduced by \$0.04 per share. Actual bad debt write-offs, however, were only \$133,000 in 1973 as against \$421,000 in 1972. In fiscal 1973 then, the company established an accounting cushion for

future doubtful items.

Firms providing for substantial bad debt provisions in the current year because inadequate provisions were made in previous years distort their earnings trends. For example, Addressograph Multigraph had difficulty with slow and delinquent customers for a number of years. The company therefore made an addition of \$6.5 million to its bad debt provision in fiscal 1973. This substantial and unusual increase in its provision was necessary because the firm was remiss in adequately providing for bad debts in prior years. Similarly, firms which make sudden and substantial accounts receivable write-offs may have previously understated expense provisions. For example, W.T. Grant discloses that "in 1974, the firm wrote off \$92 million in accounts receivable."

Handy and Harman may have managed its earnings by first increasing and then lowering its bad debt provisions. The company discloses:

The firm's 1973 provision for doubtful accounts was increased by 174%. In 1974, the company's provision decreased 91% from the prior year's allowance based on the fact that the reserve level established in 1973 was deemed adequate for the present level and risk of trade receivables.

Failure to establish an adequate loss reserve on a loan portfolio results in lower quality of earnings. For example, S.D. Leidesdorf & Co. (representing Mill Factors' creditors) concluded that, as of Dec. 31, 1965, Mill Factors should have established a reserve of approximately \$18.5 million to cover possible losses on its then-existing commercial

loan portfolio of \$33.6 million. The company showed a concentration of lending which made no sense as related either to its size or underlying net worth. One group of loans totaled approximately \$11 million, an amount greater than the company's common stock equity. In addition, of the \$7 million advanced by Mill Factors to four inter-related companies, approximately \$5 million was advanced against unfilled sales orders.

A material reduction in a company's sales allowance account as a percent of sales is not consistent with economic reality when the firm has greater liability for dealer returns. The resulting earnings increment is of low quality. For example, an analysis of National Semiconductor's sales and sales allowance accounts for the period 1973-1975 reveals the following:

	<u>1975</u>	<u>1974</u> (000 omitted)	<u>1973</u>
Balance in sales allowance account at year-end	\$1,973	\$3,967	\$1,657
Sales	\$235,457	\$213,398	\$99,028
Percentage of sales allowance to sales	0.84%	1.86%	1.67%

A reduction in the reserve as a percent of sales benefited fiscal 1975 earnings by \$0.11 a share. Between 1973 and 1975, sales increased 237%, whereas the reserve increased by only 19%. This imbalance is inconsistent with economic reality when one considers the added liability for dealer returns and credits on the expanded sales base.

When a company's sales are lagging, it may attempt to improve profits by loading customers up with unneeded products via generous credit terms. Sales created in this fashion are

a fiction, are nonrecurring, and are made at the expense of future sales.

The realization risk of receivables may be evaluated by an analysis of the nature of the receivable balance. Certain types of receivables have high realization risk such as advances to unstable foreign governments and notes receivables arising from extensions of unpaid balances from delinquent customers. Receivable balances which diverge from those of past years may indicate that the firm is selling to poorer credit risks. The failure to write down questionable receivables results in the overstatement of net income.

In evaluating the quality of receivables, analysts should examine the trend in the collection period. The longer the receivables remain outstanding beyond the expected payment date, the lower will be the probability of collection. However, in some cases, a longer collection period may be justified. For example, the company may have extended its credit terms in connection with the introduction of a new product, or to meet unusual competitive conditions in the industry.

Firms dependent upon one or two customers are in a somewhat more vulnerable position than those with a large number of (equally important) accounts. For instance, the collapse of Rolls Royce in February 1971 required Howmet Corp., an almost-exclusive producer of precision castings for Rolls Royce, to provide a \$2.4 million reserve in fiscal 1970 to cover its exposure from that business.

A diversified loan portfolio generally has lower realization risk. For example, First Bank System discloses that "commercial and industrial loans, which account for the largest part of the loan portfolio, represent a broad diversity of industries and corporations which are regional, national and international in scope."

Inventory

Build-up of inventory may indicate that the amounts carried in inventory are uncertain with respect to future realization. This build-up may be at the plant, wholesalers, or retailers. Decreasing trends in inventory turnover, or a turnover rate which is below the industry norm, may indicate slow moving items. A build-up is also indicated when inventory increases at a rate which is much greater than the rate of increase in sales. For example, Wang Laboratories stated that "as of June 30, 1973, the company's finished goods inventory account increased by 54% while total inventory increased by 40% and revenues by only 19%." Because excessive inventory results in an overstatement of reported income, and because of the increased possibility of obsolescent inventory and future write-offs, analysts must consider the nature of the inventory involved.

Firms may increase income by treating as inventoriable overhead, costs which had been treated as period expenses in prior years. This may lower the quality of earnings. For example, American Seating charged to manufacturing overhead

certain expenses which were previously classified as selling and administrative expenses. This decreased the net loss per share by \$0.06. Similarly, Lykes-Youngstown discloses that "refractory brick and other supplies previously expensed upon purchase were included in raw materials and supplies inventories at Dec. 31, 1972, thereby increasing net income by \$1,361,000." These situations may be indicated when the ratio of cost of goods sold to sales declines substantially.

Changes in inventory methods may result in illusory earnings growth. For example, Swift & Company's annual report discloses:

The LIFO method of inventory valuation was discontinued. It was replaced with the current cost or market method. If this change had not been made, it is estimated that net earnings for 1972 would have been \$6.7 million or \$.55 per share less than the amounts reported.

A sudden write-off of inventory should make analysts suspicious of a company's deferral policy. For example, the annual report for Saxon Industries discloses:

During 1971, the company recognized the rapid technological changes taking place in the copier industry and initiated plans to manufacture a plain paper copier. These events resulted in a determination by the company to provide for technological obsolescence of its inventories of rental electrofax equipment and copier parts by writing down such inventories by \$13,649,712.

Why the sudden write-off in 1971? Was it not known in prior years that the inventory was becoming obsolete?

Overstatements in inventory may arise from errors in quantities, costing, pricing, or valuation of work-in-progress. The more technical the product and the more dependent the valuation is on internally developed cost records, the more

susceptible are the cost estimates to misstatement. The basic problem here arises when costs which should have been expensed are retained in the inventory accounts.

Management possesses wide latitude in the selection of valuation methods, as well as in the assignment of costs which are to be included in inventory accounts. Cost of goods sold might be altered by changing the timing of purchases. Firms using LIFO, for example, can increase cost of goods sold by making substantial purchases at year-end. Firms could also bolster earnings by intentionally allowing LIFO inventories to become depleted. Further, management has flexibility in assigning values to unsalable and obsolete items.

In appraising the quality of a company's earnings, analysts should consider the inventory method used - - that is, LIFO, FIFO, or average cost - - in relation to the general trend of prices. In the "Management's Analysis of Results of Operations" sections, numerous companies disclosed that they favored the LIFO valuation method. For example, Cutler-Hammer discloses: "We have become increasingly aware of the concern among investors regarding the quality of corporate earnings during the current highly inflationary period. We use the LIFO method of valuing half of our inventories. This has the effect of keeping the short-term, artificial benefits of inflationary cost increases out of current profits." Similarly, Tasty Baking discloses: "Management believes the LIFO method minimizes the inflation-induced inventory profit during periods of rising prices and thus more clearly reflects income through

the closer matching of current costs against current revenues." However, in an interview, D. Norr (vice-president, First Manhattan Co.) stated that "LIFO does not reflect economic reality because it does not account for the actual physical movement of goods. FIFO is superior."

During periods of rapid inflation FIFO often results in exaggerated earnings because "old" costs are being matched against current revenue. However, LIFO may not be a solution to inflation accounting because if LIFO inventories are depleted, costs incurred in the past - - perhaps the distant past - - find their way into the current measurement of cost of goods sold, and distort the measurement of income. For example, in 1974, Sohio Corp. derived \$8.7 million of earnings resulting from the sale of abnormally high levels of low cost heating oil inventories. Had it not been for the sale of the low-cost inventory the company would have been "in the red." Similarly, Fort Howard Paper discloses that "during 1974 the inventory of market pulp was reduced, resulting in a LIFO liquidation gain equivalent to \$0.15 per share." In conclusion, when inventories include products which are subject to wide price fluctuations and/or shortages, the use of LIFO may cause erratic earnings. During period of inflation, the use of the current replacement cost method results in a more realistic net income figure because current costs and current revenue are more properly matched.

Fixed Assets

There is a wide divergence of views among financial experts as to which depreciation method results in the highest quality of earnings. For example, in an interview, T. O'glove (co-author of the Quality of Earnings Report) stated: "The straight-line method of depreciation is inadequate in reflecting the declining value of plant and equipment. This method detracts from earnings quality. Even the accelerated depreciation methods used for tax purposes may be inadequate in inflationary times." On the other hand, D. Norr (vice-president, First Manhattan Co.) stated "Accelerated depreciation does not reflect economic reality. The straight-line method is superior since it is a simple and uniform way of amortizing historical cost."

In evaluating the quality of a company's earnings, analysts should consider the depreciation method used and the period over which fixed assets are depreciated. That depreciation method which results in the highest quality of earnings is the one in which the depreciation rate used best approximates the expiration in the asset's usefulness. Different types of assets require different depreciation methods. The units-of-production method may provide the most realistic depreciation charge for machinery because its service potential declines as it is used in production activities. On the other hand, accelerated depreciation may be the most appropriate measurement of the decline in value of automobiles, while straight-line may be most realistic in measuring the expiration in value of furniture.

The trend in depreciation expense as a percent of both fixed assets and net sales should be examined by the analyst. Declining trends may indicate inadequate depreciation charges for the possible obsolescence of assets. This results in lower quality of earnings. (However, the lower depreciation provision may be justified if depreciation in the past was too high). For example, in 1972, Teleprompter's average property, plant and equipment rose by 52% while depreciation advanced by only 12%; \$0.15 per share was fed into earnings.

Another possible indication of inadequate depreciation charges is a concurrent moderate increase in depreciation along with a significant increase in capital spending. For example, in 1974, U.S. Steel's depreciation and depletion rose by 7.8%, the smallest annual gain in three years. At the same time, capital spending rose by 16.5%. Significant declines in sales coupled with significant increases in capital expenditures may be also inconsistent. It may reflect possible over-expansion and future write-offs of productive assets.

In evaluating the adequacy of a company's depreciation rate, analysts should compare it with the industry norm. B. Graham, B. Dodd, and S. Cottle³ believe that analysts should accept the tax basis of depreciation as the norm for the typical company, and they should adjust to this basis the earnings of most companies which use lower rates on their reports than on their tax returns.

A decline in depreciation expense resulting from unwarranted changes in the lives or salvage values of fixed

³ B. Graham, B. Dodd, and S. Cottle, Security Analysis: Principles and Techniques (New York: McGraw-Hill, 1962), p. 157.

assets lowers the quality of earnings. For example, in 1970, Continental Airlines extended the depreciable life of its Douglas DC-9 from 10 years to 12 years, and of its Boeing 727 from 10 years to 14 years. This lengthening of depreciable lives had the effect of lowering 1970 depreciation expense by \$8.7 million, and increasing net earnings by \$4.4 million. Earnings per share was increased by \$0.38. Because reported earnings per share for 1970 was only \$0.32, the effect of the change was to avoid reporting a loss of \$0.06 per share.

Firms might classify newly-acquired assets in different depreciation categories from those which are being replaced in order to manage earnings. For example, a company may depreciate new assets based on the straight-line method rather than the previously used double declining balance method. Changes in classification to less appropriate depreciation categories will lower the quality of earnings.

Vacillating depreciation policies will violate the continuity in the reporting of earnings. L. Bernstein⁴ illustrates such a case:

Prior to 1960 Cudahy Packaging Company reported net income, and in retrospect it appears that the depreciation provision was inadequate in that it did not allow for the obsolescence of the company's plant. Losses in the years 1960 to 1965 convinced the management of the need to relieve future operations of heavy depreciation charges, and the write-off has achieved just that. It is interesting to note that in 1967, after what management described as further "study and analysis" of the situation, management reversed itself and re-established part of the 1965 write-down of plant and equipment. Thus, depreciation on the book values was resumed and retroactively restated . . . Such vacillating accounting destroys continuity and

⁴
L. Bernstein, Financial Statement Analysis: Theory, Application, and Interpretation (Illinois: Richard D. Irwin, 1974), pp. 111-12.

introduces confusion into the reporting of operating results.

Analysts should examine the nature of a company's fixed assets. For example, Burroughs' rental machines account includes obsolete systems which are neither on rent nor being depreciated. Failure to write-down such equipment results in overstated earnings.

In Cutler-Hammer's "Quality of Earnings" section appearing in its annual report, the following reference was made to depreciation:

Cutler-Hammer suffers from income tax regulations which require the calculation of depreciation based on historical costs rather than current replacement costs. The resultant under-depreciation of fixed assets taxes the consumption of capital assets as profit. Because of our company's high turnover rate of sales to fixed assets, the effect of this practice is less pronounced in our earnings. We attempt to even further minimize its impact by using accelerated rather than straight line depreciation methods for book as well as tax purposes . . .

We feel that Cutler-Hammer's earnings are an accurate reflection of the current cost picture and do not include distortions resulting from the effects of inflation. . . .

Analysts should eliminate the effect of under-depreciation. This can be accomplished by determining the difference between depreciation based on replacement cost and depreciation based on historical cost. (Accounting Series Release No. 190 requires companies to disclose what depreciation would be if it were based on replacement cost).

Intangible Assets

A high ratio of intangible assets to total assets and/or to net worth indicates an asset structure of high realization risk. The amounts recorded for intangibles may be overstated

relative to their market value, or to their future income-generating capacity. For example, during business recessions a company's goodwill may be overstated, and perhaps worthless. United Brands is an example of a company with a high percentage of goodwill to total assets. In 1972, over 25% of its assets (\$281 million) represented "goodwill." \$252.9 million of that goodwill resulted from its acquisition of AMK in 1970 - - an incredibly high value to place on the reputation, trademarks and patents of a company that had difficulty earning a decent return on investment. The high ratio of goodwill to total assets for United Brands indicates an asset structure of high realization risk. General Housewares discloses: "It was decided to write-off all intangible assets related to trade names and goodwill. This action was taken because it did not appear realistic to anticipate recovery of that portion of the original purchase price allocated to these intangibles through either future earnings or upon disposition. The intangible write-off, totalling \$4.2 million, permits a more conservative presentation of the company's financial statements." Similarly, Midland Ross discloses: "Amortization costs rose 32% in 1974 partly due to a decision to accelerate the amortization of certain intangible assets which were determined to have reached the extent of their useful lives."

Analysts should examine the relationship between the change in capitalized intangibles (e.g., patents) and the change in reported earnings. If a significant portion of the change arose from capitalization rather than expensing, this

should be regarded as a red flag because net income may have been relieved of proper charges against it. D. Hawkins writes: ⁵

In most cases, intangible assets end up on companies' balance sheets because profits are not sufficient to permit expensing these costs as incurred. Given a choice, most managements would prefer to expense as incurred rather than defer these kinds of costs. However, if profits are not high enough to absorb these costs, managements may defer them in order to meet profit goals.

Unwarranted changes in the amortization period for intangible assets will lower the quality of earnings. For example, a company may increase its amortization period for goodwill from 10 years to 30 years even though the company's reputation has been impaired because of political bribes and environmental violations. In this case, the change in estimate does not reflect the economic reality of the situation.

Deferred Costs

Deferred expenses depend to a greater degree on estimates of future probabilities and developments than do other assets. These estimates are often overly optimistic; and the risk of failure to achieve expectations is relatively higher than with other assets. Furthermore, deferred costs are extremely varied in their character and their validity, and therefore require careful scrutiny. Firms may be deferring items which have no future economic benefit, merely to defer costs in order not to burden reported results. For example, Haskins and Sells declined to predict in its report on Wells, Rich, Greene Inc.'s fiscal 1974 results whether the company would recover deferred costs of a movie venture. Similarly, some computer manufacturers defer software and hardware engineering

⁵
D. Hawkins, "Accounting Dodges and Red Flags," Financial Executive, (May, 1974), p. 89.

costs for leased computer systems in their rental equipment accounts. These accounts will be overstated if there exists, to any major degree, a potential exposure of unexpected equipment returns. An example was Memorex Corporation's write-off of \$90 million of previously capitalized costs in 1974. Examples of deferred charges which have dubious future benefit are moving expenses, start-up costs, and promotional costs.

In this connection, the FASB Discussion Memorandum on
6
Materiality states:

Deferred "soft" costs are often excluded in the determination of real earnings because of the uncertainty associated with the realization of the resultant asset, and the lack of a direct cause and effect relationship between the asset and future cash flows . . .

Investors believe that all costs (excluding "hard" costs related to the acquisition or production of tangible assets having future economic benefit or associated with production activities) should be expensed as incurred . . .

Analysts should closely scrutinize the propriety of any increase in deferred charges which have a material bearing on the reported profits. Analysts should determine the trend in deferred costs to net sales and/or earnings, and the trend in the ratio of deferred costs (e.g., deferred promotion costs) to total expenditures (e.g., total promotion expenditures). Rising trends may indicate an unjustified change to more liberal deferral policy. For example, in fiscal 1975, Marriott Corporation showed deferred pre-opening costs for Theme Parks

6
FASB Discussion Memorandum, Criteria for Determining Materiality, op. cit., p. 125.

in the amount of \$1,792,000, compared with \$175,000 in fiscal 1974. The incremental sum of the deferred expenses amounted to \$0.25 a share. Part of the \$1,792,000 which was capitalized was only a postponement into the future of current expenses. Similarly, Calcomp's deferral of marketing expenses of \$5.6 million in 1971 allowed it to avoid reporting a \$0.30 per share loss. In other words, firms which show growth in earnings at the same time that they are showing significant increases in deferred charges may be unjustifiably increasing deferred costs. Deterioration in the quality of earnings will result because net income has been relieved of appropriate charges.

In evaluating the realization risk associated with the deferred exploration cost account of petroleum refiners, analysts should examine the trend in the ratio of the present value of reserves to capitalized costs. A declining trend may indicate higher realization risk in assets. For example, from 1974-1976 Getty's gas reserves declined substantially while over the same period capitalized costs relating to exploration and production activities increased by 70%. The decline in the company's reserves per dollar of capitalized costs indicates that the deferred account was overstated in terms of its future economic benefit.

Firms may attempt to hide declining profitability by deferring costs which were expensed in prior years. For example, in 1972, Scott, Foresman boosted earnings by deferring costs of teachers' manuals which had been expensed as incurred in pre-1972 years. Similarly, in fiscal 1974, Sears, Roebuck

adopted the policy of capitalizing the carrying costs, real estate taxes, and interest of construction-in-process on land held for future use. The effect of the change was to increase earnings by \$14.1 million (\$0.09 per share). Another example is a company that now decides to capitalize rather than expense plant rearrangement costs. Such deferral is inappropriate when the rearrangement will not generate increased production volume. This may be due to an error in production planning and/or a permanent decline in product demand.

Unrealistic extensions in the amortization period for deferred costs lower the quality of earnings. For example, a firm in an industry subject to rapid technological change may extend the amortization period for pre-operating costs of a division and then suddenly phase-out the new operation because of a newer market study which shows that consumers are no longer interested in the division's product line. As a result, the company shows the earnings of this division under discontinued operations in its income statement. The extension of the amortization period is obviously unjustified.

In their analysis of Pepsico,* T. O'glove and R. Olstein made the following comment:

One hundred percent of Pepsico's comparative 1973 and 1974 interim earnings gain of \$0.25 was derived from the following lower earnings quality sources: . . . increase in prepaid expenses . . . increase in other assets . . .

There is a greater chance that an increase in "other assets" relative to prepaid expenses may include questionable deferral of expenses. However, I have reservations about their premise

* Source: Quality of Earnings Reports.

that an increase in prepaid expenses means lower quality of earnings. An increase in prepaid expenses (e.g., prepaid insurance) may be legitimate and proper.

Investments

A company with an investment portfolio of volatile securities has higher realization risk than one with an investment portfolio diversified by industry and economic sector. However, the former company's portfolio can be more profitable in a bull market. Analysts should evaluate the degree of diversification and stability associated with a company's portfolio. South Carolina Insurance Company discloses: "The Company's investment posture is to give major emphasis to safety. The Company is maintaining a substantial position in short term U.S. Government obligations and is continuing to hold its portfolio mix to 67% in bonds, a relatively conservative position." Sears & Roebuck discloses: "During the five years and nine months ended Sept. 30, 1974, the difference between cost and market on the equity investments of the Allstate insurance companies at their fiscal reporting dates has fluctuated between a cumulative market value over cost of \$211.3 million at Dec. 31, 1972 and a cumulative cost over market of \$498 million at Sept. 30, 1974."

Reserves for Future Costs and Losses

The use of reserves for future costs and losses may impair the significance of reported earnings and should be viewed with skepticism. Arbitrary adjustments of reserve

accounts should be eliminated in determining a company's "earning power." In other words, analysts who find that reserves are used to manage earnings should add back the amounts charged to income, and deduct the amounts credited to income. For example, earnings derived from a recoupment of prior year reserves may require elimination. For instance, in 1971, Quaker Oats established a \$9.1 million reserve for estimated costs to be incurred in closing several plants. The reserve account was drawn down by \$5.1 million in 1972 and by \$4 million in 1973.

Firms may also improve earnings by altering their reserve policies. Fireman's Fund always charged losses to its catastrophe reserve in two respects: for individual casualties, and for cumulative wind and earthquake losses. Prior to the tornadoes in April 1974, the company never used the cumulative part of the reserve. However, in April 1974, when this reserve element was affected, Fireman's Fund changed its accounting method of charging the reserve. The cut-off point for taking losses against earnings was reduced from 1.25% to 0.90% of premiums earned. In other words, losses over 0.90% of premiums earned was charged to the catastrophe reserve. This change in rate constituted a new accounting policy. It improved 1974 pre-tax earnings by \$4 million. This amount represented a decline of more than 25% from the \$14 million charge against earnings which might have occurred had the rules not been tampered with.

Sometimes when a company realizes a material extraordinary gain, it simultaneously provides for a reserve of the same amount in order to cancel out the effect. The objective is to remove from the earnings stream an unusual income increase which may be impossible to meet in the following year. It also provides a "cushion" against which the reserve account can be charged in order to improve the earnings trend, or it will enable a reserve provision which was impractical to provide for previously. For instance, Amerada Hess established a provision of \$14.6 million in 1972 for "contingencies arising from economic and other factors in operating areas" in order to offset the net effect of an extraordinary credit of \$24.9 million on the sale of assets, and an extraordinary charge of \$10.3 million on discontinued business operations and currency revaluations. The net effect of the company's gains and losses for the period cancelled each other out to the dollar. By establishing a reserve of \$14.6 million for future expenses, Amerada had provided \$0.78 a share for future profits.

A company that provides for an unrealistically low provision for future costs (e.g., warranty reserve) has lower earnings quality. For example, Allstate Insurance increased its Reserve for Claims by a lower amount in 1973 than in the previous year in spite of increased claim losses during this period and a rapid-inflation environment.

A lower earnings quality source may be when more operating expenses and losses are being charged to reserve accounts relative to previous years.

J. Grodinsky⁷ believes that a firm which sets up a higher reserve, for similar contingencies, relative to its competitors will have higher earnings quality. This statement must be qualified. The firm may be setting up a higher reserve because it has excessive earnings in the current year, and wishes to provide an additional reserve for a "rainy day."

Statement of Changes in Financial Position

L. Tso states that "in order to get a company's real profit picture, investors ought to study the kind of information that belongs in a funds statement."⁸ Comparative Statements of Changes in Financial Position should be thoroughly analyzed because they hold clues to a firm's earnings quality. For example, they will show the degree of repeatability of the firm's sources of funds, and whether such sources may be relied upon in the future. The Statements may also reveal whether the company's cost of funds is subject to variability. Sources and applications of funds may also reveal the existence of nonrecurring gains and losses (e.g., sale of property, early extinguishment of debt in connection with a sinking fund). For instance, IU International's Statement shows that a redemption of long-term debt amounting to \$91.7 million took place in 1974 compared to \$58.5 million in the previous year. A substantial portion of the redemption represented the

⁷ J. Grodinsky, Investments (New York: Ronald Press Co., 1953), pp. 188-89.

⁸ L. Tso, Techniques for Discovering Hidden Value Stocks (New York: Frederick Fell, 1965), p. 269.

retirement of debt at a discount, resulting in a nonrecurring gain. Burroughs' Statement shows as a source of funds "sales of rental equipment" for \$32.9 million for 1974 relative to \$15.7 million in 1973. The company indicates that this applies to the net book value of leased equipment which was sold. A determination should be made of the earnings increment arising from such sales.

Other Elements of the Financial Statements

This section includes a discussion of pension plans, business combinations, accounting for subsidiaries, long-term construction contracts, and disclosure policies as they relate to the quality of earnings topic.

Pension Plans

Unwarranted changes in actuarial assumptions which reduce pension expense may impair the quality of the earnings increment. For example, when General Electric made retroactive price adjustments of more than \$200 million in response to claims of treble damages from an alleged price-fixing conspiracy, it was able to offset much of the adverse impact on reported earnings by assuming that the pension fund assets would earn a higher return than had been previously thought likely. Similarly, in 1970, Weyerhaeuser increased its assumed rate of earnings for fund assets from 4% to 7%. Pension expense declined from \$7.4 million in 1969 to \$2.5 million in 1970 as a result. In 1971, the pension provision shot back up to \$7.7 million.

Business Combinations

Business combinations often create an appearance of earnings and growth when they are not really present, and increase reported sales and earnings without actually improving performance. For example, in an article titled "The Sardine That Became a Whale," appearing in the June 15, 1968 issue of Fortune, it was reported that AMK recorded growth in sales from \$40 million one year to \$800 million the next. This came about because AMK absorbed a company 20 times its own size, John Morrell & Co. Without Morrell, AMK had earnings of \$1.8 million; with it, \$7.9 million - - an increase of 3,457 percent over AMK's previous year's net income of \$209,000.

The pooling method allows for the suppression of asset values for which the acquirer has paid. This may result in an understatement of assets and an overstatement of earnings. This is a major reason why earnings which result from pooling combinations are generally considered as being overstated relative to similar earnings resulting from purchase accounting. As a result of using the pooling method, Leasco was able to show earnings growth by selling-off some of the assets it acquired from Reliance Insurance Company. In 1968, Leasco obtained the potential for instant earnings of more than \$100 million by carrying over the Reliance securities portfolio at its historical cost to Reliance rather than at its market value. Leasco made use of this suppressed asset by injecting more than \$24 million of the suppression into its 1969 fiscal year income statement as "realized gains on investment of

property and casualty companies."

Accounting for Subsidiaries

In accounting for subsidiaries, the equity method must be used for domestic unconsolidated investees when the parent's ownership interest in the investee is between 20%-50%. Under the equity method, the parent recognizes its interest in the investee's income on a proportionate basis. If the parent does not own 20% of the equity securities of the investee, the cost method must be used. Under the cost method, income is reported on the basis of dividends paid to the parent. It is conceivable that dividends included in the parent's income may be unrelated to the investee's earnings, and losses of the investee may go unreported for a number of periods. The trend in earnings can therefore be distorted by the use of the cost method. For example, Teasgulf discloses that "the company only recognized \$250,000 in income from Beker Industries in 1974 even though its equity share of the investee's income was \$4.8 million." Johnson Controls discloses that "the company changed its accounting for its investments in partially-owned foreign companies from the cost to the equity method to more clearly reflect the results of current operations." Further, if the parent company can exert influence over the investee, it can also manage income by deciding whether to have the investee declare dividends or not.

Dow Chemical recently acquired a 19.5% interest in another company. Dow wanted to program its earnings by selecting either the equity method (rounding 20%) or the cost method (rounding 19%).

If a relatively unimportant subsidiary has continually experienced losses, the parent may plan to dispose of it in the near future. In such a situation, the subsidiary's loss in the current year may be considered as a nonrecurring item.

In a research report prepared on Oct. 23, 1973, A. Nadler of Hayden Stone wrote:

Fireman's Fund, the largest division of American Express, had a nine month decline in earnings. This division generated 65% of 1972 operating income, but only 50% of operating income for the first nine months of 1973. A decline in profitability of a large subsidiary is not an indication of quality of earnings in any company.

This comment is open to criticism. A decline in profitability of a major subsidiary is an indication of a problem. It has no impact on the quality of currently reported results.

Long-term Construction Contracts

The percentage of completion method allows management a great deal of flexibility and subjectivity in estimating how much revenue and income should be picked up on work-in-progress. As a result companies may change such estimates in order to reach a desired earnings level. Further, there exists the possibility that income may be recognized in the earlier years of a project only to find out that there will be a loss on the project at its completion.

Failure to make adequate provision in the current year for cost overruns on long-term contracts will result in lower earnings quality. For example, Lockheed continued to ignore the cost overruns on its C-5A project until massive write-offs

were required. Cost overruns may be indicated when there is a drop in progress payments as a percent of inventories.

Unwarranted reductions in warranty provisions in connection with long-term contracts may impair the quality of the earnings increment. For example, despite a 20% increase in long-term contract revenues, Babcock & Wilcox's provision for warranties was reduced from \$42.4 million at year-end 1973 to \$40.8 million at December 31, 1974. This reduction was made even though the company experienced the same level of warranty services. Furthermore, inflationary cost increases should have mandated an even higher provision.

Negotiation of long-term contracts returned for extended warranties should be analyzed to determine whether the additional costs of the extended warranties exceed the higher prices received under the contracts. Lower earnings quality is indicated when the warranty reserve does not reflect the added risk of extended warranties arising under such contracts.

A. Briloff⁹ provides an example of an inventory (and therefore income) manipulative process accounted for on a "program basis" which is similar to "percentage-of-completion" by citing the following SEC complaint of the accounting policies of Talley Industries:

At year-end a gross profit ratio was established for each program and used in computing cost of sales. The ratio was established and used in the following manner: Annual sales for the year were added to projected sales in the following year as determined by backlog and projection of contracts not on hand but anticipated;

⁹
A. Briloff, "We Often Paint Fakes," Vanderbilt Law Review, (January, 1975), p. 182.

actual costs for the year's projection were added to estimated cost to complete the sales projected for the following year; a gross profit was established and applied to the dollar amount of sales made in the audit year; and any costs expended in the audit year in excess of the amount recognized by this computation were carried forward as part of inventory. The gross profit as determined, adjusted for actual manufacturing overhead, was used throughout the following fiscal year to compute cost of sales for interim periods.

Under this method, the company determined the profit it wanted to show and then "plugged in" the appropriate inventory figure. According to the SEC, in order for the company's 1969 and 1970 earnings to meet the projection based on the March 31, 1969 inventory figure, the company would have had to realize \$100 million in sales from its Mesa operations in fiscal 1970. The auditors should have disclosed the absurdity of the projection. The actual backlog was \$24 million in fiscal 1969, and no reasonable basis existed for the firm's expectation to generate the remainder of the \$100 million.

Disclosures

In gauging companies' quality of earnings, analysts may be able to utilize certain disclosures appearing in SEC filings and annual reports. Very useful disclosures appear in "Management's Analysis of Results of Operations" sections. Some of these disclosures facilitate an assessment of the source as well as of the probability of recurrence in earnings. The more important disclosures in this regard refer to:

1. Revenues, expenses, and operating income by product line, division, and geographic area. Segmental reporting assists

in the evaluation of the recurrence in earnings, risk, and product demand elasticity. Firms also disclose the nature of changes in the product mix, the dependency of product demand upon rapidly changing tastes, and the variability in price and volume of each product line.

2. The availability of funds, anticipated money market trends, changes in the cost of funds, and the relevant contents of debt contracts (e.g., restrictive covenants, options for future financing). Such disclosures indicate current sources of funds which may be unavailable in the future, the unavailability inhibiting the firm from undertaking operating activities necessary for continuous growth.

3. The realizable value of assets. Some companies refer to the existence of excessive inventory levels and to inventory markdowns. References are also made to increases in interest rates associated with borrowed funds which are required to carry higher inventory levels. Some companies refer to collection problems associated with accounts receivable. Such disclosures are useful in evaluating the realization risk associated with the firm's asset structure.

4. Material changes which have occurred in the nature of the firm's customary business activities. If management lacks expertise in this new area of business, the firm's earnings stability will be adversely affected. Other helpful disclosures include sudden or unexpected developments (e.g., the loss of an important advantage such as the exhaustion of natural resources)*, the degree of competition facing the company, and

* This type of disclosure appears in Form 8-K.

significant interruptions in business activity. These disclosures are useful in evaluating the company's earnings stability.

5. Unusual elements included in net income such as a significant increase in earnings caused by a temporary boost in demand arising from industry-wide strike threats. Analysts attempt to identify unusual components of earnings in order to determine whether currently reported results are above or below normal levels.

6. The availability of raw materials. Companies refer to past incidences of raw material shortages and their effect on manufacturing operations. Firms susceptible to raw material shortages have lower earnings stability.

7. Information relative to labor tranquility such as the number and duration of previous strikes. Labor unrest lowers earnings stability.

8. The stability of "other income" and "other expense." Some companies describe the nature of rental income and royalty income being earned. Reference is made to the percentage of revenue and net income being derived from these sources as well as to the time period for lease and royalty agreements.

Foreign exchange gains and losses as well as the firm's currency exposure are often highlighted. Some firms disclose changes in interest rates and the volume of borrowing as they affect interest expense. Any information along these lines assists analysts in determining the extent to which "other income" and "other expense" provide stability to the regular operating earnings of the firm.

9. The effect economic conditions have on business activities such as the firm's exposure to the business cycle. Such information enables analysts to identify cyclical effects on

earnings.

Some proposals have been offered to revise the format of the income statement to provide more meaningful information to security analysts so that they can better evaluate the quality of earnings. Arthur Andersen & Co. proposes the following separation of income statement categories:¹⁰

Operating earnings.
 Nonoperating holding gains or losses.
 Expenditures for intangibles.
 Unusual items not relevant to an assessment of future operating earnings.
 Provision for income taxes.
 Financial expenses.
 Provision for the maintenance of capital.

The reason for the above proposal is outlined in the following paragraph:¹¹

The purpose of the statement of income is to provide a summary analysis of the significant events and factors that gave rise to an increase or decrease in the net economic resources of a business enterprise for a period of time, after provision for maintenance of capital to reflect the effects of price-level changes and except for changes that resulted from additional investments by, or distributions to, the owners and disbursements for goodwill. Except for normal, recurring corrections and adjustments that usually result from the use of estimates inherent in the accounting process, adjustment of earnings for a prior period, whether attributable to changes in the application of accounting principles or to better information that has become available with respect to conditions that were inherent in the prior period, should be excluded from the statement of income since they do not represent real changes during the period in net economic resources . . . Through disclosure, the effects of recurring events can be distinguished from the effects of nonrecurring events, and the effects of value changes can be distinguished from the effects of recurring operating transactions.

¹⁰
Accounting Standards for Business Enterprises
Throughout the World, op.cit., p. 71.

¹¹
Ibid., pp. 140-41.

In an interview, J. Treynor (editor, Financial Analysts Journal) stated:

The following suggested changes would result in a more meaningful earnings figure:

- a. Inventory should be charged to operations at current cost.
- b. Depreciation and amortization expenses involve too many subjective variables. They should be excluded from the income statement. Companies should impute a rental cost of assets (e.g., what the rental would be if the assets were leased). This charge should be in lieu of depreciation expense.
- c. The gain or loss on the sale of fixed assets should be excluded from the income statement since a reduction of plant and equipment makes no contribution to current or future earnings.
- d. Financial income and expenses (e.g., interest income, dividend income, and interest expense) should be excluded from the income statement since they do not relate to the generation of earnings from business operations.

Treynor's recommendations that gains and losses from the sale of fixed assets and financial income and expense should be excluded in determining earnings are open to criticism. Such items are relevant income statement elements and should be disclosed separately. However, it may be advantageous to recognize the accretion of capital since it is generally good for averaging income. Cost of goods sold based on replacement cost is a good recommendation since it takes into account the effect of inflation on earnings. The substitution of imputed cost for depreciation and amortization expense is inappropriate since it does not represent an actual cost incurred by the firm.

The preparation of a three-part income statement would assist investors in their evaluation of a company's quality of earnings. Such an income statement might take the following form:

1. Highly Probable Income. This section would consist of all cash income statement items and all accrued items which have a high probability of cash realization or payment. Noncash items (e.g., depreciation) would be omitted.
2. Reasonably Possible Income. This section would measure the performance of the firm in terms of the realization of its long-term goals. It would include earnings derived from judgmental income statement items where estimates are involved (e.g., percentage of completion contract method).
3. Holding gains and losses. This section would consist of changes in the value of net assets for the period not reflected above. This section would be highly subjective in nature.

CHAPTER VI

INDUSTRY CHARACTERISTICS AND POLITICAL FACTORS

An evaluation of the quality of earnings of various industries is presented. The quality of earnings of companies in an industry depend upon the accounting practices employed and qualitative factors (e.g., economic considerations). The following industries are analyzed: Airline, Banking, Broadcasting, Consumer Finance, Franchising, Home Building, Insurance, Land Development, Petroleum Refining, Real Estate Investment Trusts, Savings and Loan, and Electric and Gas.

The chapter also discusses the impact that political factors have on earnings quality. Such factors include operations in politically and economically unstable foreign countries, government regulations (e.g., environmental regulations, regulatory control), and government contracts.

Industry Analysis

Airlines

Earnings of firms in the airline industry tend to be volatile. Airlines invest heavily in expensive fixed assets and finance those assets with large percentages of debt. The combined impact of high operating leverage and extreme financial leverage causes approximately 85% of every revenue dollar

generated beyond the breakeven load factor to drop down directly into operating profit.

Airlines collect payment for transportation in advance of performing the service. As a result, current liabilities include an estimate of the revenues received from advance ticket sales, which is counterbalanced by an equivalent current asset. The "Unearned Transportation Revenue" account is not primarily a cash liability because of the eventual use of the passengers' tickets. However, part of this liability may involve a cash outlay. Many tickets issued by airlines are for interline trips on several carriers. Thus, the issuing airline, which collects the revenue, is eventually liable to other carriers for travel coupons to be used on their flights. Management has discretion in estimating the tickets which have not been used within a financial period, or which have only been partially used. It is to be expected that adjustments of some magnitude can occur to produce out-of-phase changes in reported passenger revenues. For example, Pan American made a favorable adjustment to passenger revenues of \$28.3 million in the second quarter of 1975. TWA made a similar favorable adjustment of \$11.6 million in 1971. Adjustments to the "Unearned Transportation Account" allow airlines some latitude in reporting earnings.

In recent years, many airlines have protested the sharply rising level of fuel prices charged by suppliers. A number of settlements have been arranged retroactively which have distorted earnings figures. For example, Eastern recorded a \$4.9 million credit adjustment in the second quarter of 1975.

Labor contracts may also raise analytical problems. Settlements usually occur many months after expiration of the prior agreement. There is no way of predetermining the final contract agreement but carriers set aside funds each period to cover eventual retroactive awards. The amount of the funds is left to the discretion of management. Actual payments may either exceed or fall short of accruals for this purpose. Airlines which intentionally under- or over-accrue for expected settlements will have lower earnings quality than airlines which provide realistic provisions.

In conclusion, the high degree of financial and operating leverage inherent in the industry can create instability in earnings for airlines. Furthermore, they have some flexibility in the reporting of earnings.

Banking

Banks should not take credit for above average interest rates earned on higher risk loans without providing for higher anticipated loan losses. In general, the higher the ratio of loan loss provisions to actual loss charge-offs, the more conservative the accounting being used by the bank, and the higher the quality of the bank's earnings.

Some banks have sharply cut their interest rates on delinquent loans (e.g., loans to REITs), and accrued the interest at the lower rates. It is preferable when there is a possibility of default to recognize interest income only when cash is actually received.

A high percentage of non-interest-paying loans in a portfolio indicates realization risk in assets and casts doubt upon the stability of the earnings stream. For example, Chase Manhattan Mortgage and Realty Trust recently reported that 94 projects totaling \$463 million in loans (representing 47% of its portfolio) were not collecting income.

Real Estate Investment Trusts are having a ravishing effect on the banking industry, 34% of all REITs paying no interest on their loans. In 1974, charge-offs by banks on REIT loans reached \$2 billion, or 166% of 1973 REIT loan losses.

Banks with sizable loan portfolios to owners of shipping vessels are having similar difficulties. The value of the collateral standing behind these loans has fallen well short of the credit extended, ship values declining 50% or more. Banks are reluctant to repossess vessels because any attempts to sell them would further depress ship prices. These types of loans therefore will have high realization risk as long as the shipping surplus lasts.

Disclosure by banks of international loans, classified by country, will assist investors in evaluating the realization risk associated with these loans. Disclosure of the diversification of domestic loan portfolios will also assist investors in determining whether loans are being made to counter-cyclical industries. Such diversification provides greater stability to the loan portfolio and therefore leads to greater stability in the earnings stream.

In an interview, F. Garcia (author of How to Analyze a Bank Statement) stated:

A bank with a lower growth in average deposits relative to its competitors has lower earnings quality, because revenue from investments on deposits will decline to a greater extent than the decline in the costs of deposits (interest expense). This has a negative effect on earnings.

Lower earnings indicates that the bank has a problem. However, the quality of currently reported results is not affected.

In conclusion, banks' loan portfolios may have high realization risk (e.g., loans to the shipping industry), resulting in earnings instability because revenue derived from these sources are not stable. Furthermore, future write-offs may be required. The accrual of interest on these high risk loan categories without adequate provision for anticipated loan losses results in lower quality earnings.

Broadcasting

Broadcasters have complete discretion in allocating costs for television programs. An illustration of the result of such discretion follows. Assume the cost of a television program is \$100,000 for the first showing, and an estimated \$20,000 for the re-run in the following year. Assume also that the revenue from the first showing is \$80,000 while the re-run brings in an estimated revenue of \$60,000. If the allocation is based on revenue derived from each showing, the following will result:

		1974		1975
Revenue		\$80,000		\$60,000
Cost Allocation (approximate)				
	120x80	<u>68,400</u>	120x60	<u>51,600</u>
	140		140	
Profit		<u>\$11,600</u>		<u>\$8,400</u>

On the other hand, the company may elect to charge its actual costs to each showing in the year incurred. In this case, the first showing results in a loss of \$20,000 (Revenue of \$80,000 less costs of \$100,000) while the second showing results in a profit of \$40,000 (Revenue of \$60,000 less costs of \$20,000).

Broadcasters might allocate costs on other bases. Because different allocation methods can be employed for each type of television program, broadcasters can very easily manage their income.

Networks often acquire film packages at lump-sum prices. For example, ABC paid \$6 million for six James Bond films, and established a sliding scale of costs for each film. The network was therefore able to smooth earnings by deciding which film would be shown in a given period. If earnings were too low, the network would flow-out a low-cost film.

Also if earnings are low, networks can continue to defer the costs of out-dated films. The decision to write-down these films is very subjective and is based on the company's estimated future revenue to be derived from them. A broadcaster's failure to make an adequate write-down results in overstated earnings.

The AICPA Accounting Standards Division has prepared a Statement of Position on the Accounting Practices in the Broadcasting Industry (dated December 29, 1975). The

Statement provides:

The Division believes that film rights should now be amortized based on the number of future showings estimated by management. . . .

The Division has concluded that an accelerated method of amortization which takes into consideration the station's programming pattern is now required when the first showing, as is usually the case, is more valuable to a station than re-runs. Accordingly, the straight-line method of amortization is only acceptable in those instances where each telecast is expected to generate similar revenues.

Some broadcasters allocate all interest expense on borrowed funds to new systems thereby deferring all interest charges. Interest expense should be allocated to both new and existing projects because borrowed funds are used for both purposes. The deferral of the entire interest expense results in overstated earnings.

An intentional over-accrual for possible record returns and discounts also results in lower earnings quality because it understates net income. For example, in 1974, CBS added substantially to its allowance for doubtful accounts and for record returns and discounts. The amounts charged to costs and expenses significantly exceeded the amounts actually written off, and reserves were boosted by \$24 million to \$61 million, although gross receivables rose only slightly. The amount charged off was excessive and probably represents an accounting cushion.

In conclusion, income management practices in the industry have resulted in some broadcasters reporting earnings that portray results as management wishes them to look rather than portraying results as they actually are. Artificial

earnings do not reflect the operating activity for the period and must be considerably revised in order to evaluate "earning power." Further, certain assets of broadcasters must be closely scrutinized as to their realizability (e.g., film inventory).

Consumer Finance

Deferred income relates to the pre-computed interest and discount charges which must be paid by borrowers over the loan period. Some finance companies recognize in income a portion of deferred income as an "acquisition" charge at the time of the loan. An unrealistically high rate assigned to deferred income for "acquisition" charges will result in an overstatement in earnings.

The balance of deferred income may be recognized over the loan period under two methods. Under the straight-line approach, unearned income is liquidated over the loan period in equal monthly amounts. Under the sum-of-the-years' digits method, higher amounts of income are reflected in the earlier years than in later years. (For example, in a 12-month loan, 12/78 of the finance charge will be recognized in the first month while 1/78 will be recognized in the last month). The method results in greater earnings variability over the life of the loan, and in front-end loading of profits. Quality of earnings is thereby lowered.

With respect to insurance subsidiaries T. O'Glove writes:

¹
T. O'Glove, "Finance Company Accounting," Financial Analysts Journal, (January/February, 1968), p. 41.

Consumer finance companies include in operating earnings capital gains derived from insurance subsidiaries. These gains should be eliminated in arriving at real operating performance because they are not representative of business generated income. In the event that this portion of income is material, earnings may be accelerated either upward or downward depending on how fast new business is being placed on the books.

In conclusion, accounting practices in this industry have resulted in lower quality of earnings for some consumer finance companies. The inclusion in net income of unrealistically high acquisition charges, front-loaded finance charges, and unusually high capital gains, result in earnings which are not properly reflective of the operating results for the current period.

Franchising

Prior to 1970, initial franchise fees were recognized at the time of the sale of the franchise. In the early 1970s, the point of revenue recognition shifted to the inception date of the operations of the franchise. The AICPA accounting guide, "Accounting for Franchise Fee Revenue," recommends that initial franchise fee revenue not be recognized until the contractual services are substantially completed. Opening of a franchise unit is the event used to indicate substantial performance.

In making this switch in accounting treatment some franchise companies in their 1971 annual reports restated their 1970 earnings to conform to the new revenue recognition requirements. Some companies ran through twice some of their earnings for 1970. For example, Kampgrounds of America reported earnings per share of \$0.62 for 1970 in its 1970 annual

report. In the 1971 annual report this figure was adjusted downward to \$0.35 to adjust the 1970 results to the new 1971 accounting policies. The \$0.27 withdrawn from the original 1970 earnings per share was recognized again in 1971 and in future years.

The franchisee agrees to pay a fee on the acquisition of a franchise. Only a small part of the fee is paid in cash, the balance being evidenced by a long-term note payable. There exists a problem related to recognizing the entire fee at the date of the agreement since the value of the note received may be questionable because many franchisees are inexperienced and under-capitalized. The uncertainty involved in collecting on the note may justify recognizing the fee only in proportion to cash receipts. The recognition of the entire fee without adequate provision for future losses results in lower quality earnings. In a lawsuit against "Mr. Steak," it was alleged that the company boosted revenues and income by including in them franchise sales which stood a good chance of never being realized, or which had already been cancelled.

J. Hagler believes that sales of franchises are nonrecurring, and therefore detract from the stability of the earnings stream. He writes:

The recurring feature aspect of revenue is important. It is questionable whether the sales of franchises are recurring transactions. Within a defined area, only a limited number of franchise units can operate. In addition, competition will limit expansion.

The above comment must be qualified. Franchise revenue

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J. Hagler, "The Franchise Fee," Management Accounting, (July, 1974), p. 49.

may show stability when the franchiser has a unique reputation and the franchisees are financially sound.

In conclusion, franchise companies sometimes include in earnings fees which may not be collectible, thus overstating net income. Analysts must closely examine the financial structure of franchisees to determine whether there is a reasonable expectation that they will be able to honor their commitments.

Home Building

Homebuilders are able to manage earnings by assigning different values, ranging from high to low, for different plots of land; utilizing second mortgages to overstate the sales price of homes and plots sold; exchanging plots of low-cost land with other firms at inflated prices; and by over-estimating the degree of completion on home contracts accounted for under the percentage-of-completion method.

Some builders have in the past sold property to charitable organizations at unrealistic amounts of profit. These transactions were coupled with contracts stating that the builder would re-acquire the property at a later date at an agreed upon price, leaving substantial income for the exempt entity. This fictitious profit should be omitted from the homebuilder's reported net income.

Problems also exist with respect to the allocation of revenues and earnings on major projects which involve a number of separate efforts. Some builders have used the "packaging

concept," where they develop and sell major projects to unaffiliated third parties. In many instances, a "developing profit" is recognized before construction has commenced, or before it is completed, on the assumption that the transaction consists of a number of separate and distinct efforts. "Development profit" results in lower quality of earnings because substantial performance on the construction project has not occurred. Such profits should be deferred.

In conclusion, earnings manipulation by some homebuilders result in the reporting of net incomes which do not reflect economic reality but rather allows the masking of the performance of the homebuilders for the period. The artificial shifting of income makes it difficult to compare performance from period to period.

Insurance

In 1972 the AICPA issued an audit guide titled "Audits of Stock Life Insurance Companies." Prior to its issuance, acquisition costs incurred in obtaining new business were expensed. The Audit Guide provides for the deferral of these costs when they vary with, and are directly related to, the production of new business. Amortization of these deferred charges will be made against income in proportion to premium revenues recognized. A problem arises as to which acquisition costs are truly direct and variable and therefore eligible for deferral. Management may have some ability to classify the types of acquisition costs to best meet its desired earnings trend.

A. Briloff criticizes the use of the sum-of-the-years' premium method in amortizing acquisition costs and develops a superior method based on the present value of premiums.

His illustration follows:

Assume a life insurer incurs \$5,000 in acquisition costs to obtain an expected premium flow of \$10,000 in the first year, \$8,000 in the second year, and \$7,000 in the third year. If we assume an earnings rate of 6%, we would have the following comparative data:

(1) Year	(2) Premium Expected on 1/1	(3) Expense Allo- cated based on Col. 2	(4) PV* Factor 6% Table	(5) PV* of Premium Cols. 2x4	(6) Expense Allocated based on Col. 5
1	\$10,000	\$2,000	1.0	\$10,000	\$2,103
2	8,000	1,600	.943	7,544	1,587
3	7,000	1,400	.890	6,230	1,310
	<u>\$25,000</u>	<u>\$5,000</u>		<u>\$23,744</u>	<u>\$5,000</u>

*PV = Present Value

The table demonstrates that allocating acquisition costs on the basis of the sum-of-the-years' premiums (which appears to be a common practice) produces a less than equitable charge to the initial year's operations, and a correspondingly greater than equitable deferral to be absorbed in subsequent years.

It is significant to note that each of the amounts shown in Column 6, when extrapolated for the compound interest factor, stands in the same relationship to the premium expected to be collected in the corresponding year (21.03% of each year's anticipated premiums).

A deficiency of the Audit Guide is that it enables firms to recognize in current income that income which applies to future years. This has the effect of front-loading profits, thus resulting in lower quality of earnings.

Capital gains and losses on the sale of investments show less stability than underwriting income. The former source of earnings is of lower quality.

³
A. Briloff, "SLIC GAAP," Financial Analysts Journal, (March/April, 1974), pp. 82-83.

Certain lines of insurance (e.g., medical malpractice) require management to make very difficult estimates of future costs. Inflation as well as changing social attitudes makes it difficult for companies to estimate reliably future malpractice awards. Under these circumstances, the adequacy of the reserve provision is very uncertain. Inadequate or excessive reserves result in lower quality earnings.

Certain lines of insurance such as property and liability are highly cyclical in nature, and thus detract from earnings stability. More stable lines of insurance are life and health.

An article in the Wall Street Transcript (August 11, 1975) stated:

The quality of earnings of fire and casualty companies is not too good. 1975 pre-tax underwriting loss approximately equals pre-tax investment income, and the only way that companies showed earnings was because of the tax loss credit which has a very low value.

In conclusion, in evaluating the earnings quality of life insurance companies, analysts must closely scrutinize the accounting policies employed for acquisition costs. They should also be aware that certain types of insurance inherently require uncertain estimates of future costs which in turn may result in uncertain earnings.

Land Development

In response to accounting practices of land development companies which resulted in fictitious earnings, the AICPA issued an accounting guide entitled "Accounting for Retail Land Sales." The deficient accounting practices included the

recognition of profit on retail land sales contracts long before it was reasonably evident that the purchaser would meet his payment obligations. Prior to the accounting guide, many companies immediately recognized the entire contract price, less related costs, even though only a nominal down payment (as low as 2½%) had been made by financially unsecure purchasers and the payment period extended long into the future. This accounting practice resulted in lower quality earnings.

The provisions of the accounting guide follow:

1. Revenue may be recognized under either the deposit, installment, or accrual methods.
2. Until it is certain that a project will meet the terms of the sales contract, revenues are to be accounted for on the installment basis. When it appears that the company is in a position to meet its obligations, the firm will be allowed to use the accrual method.
3. A customer's payment must be recorded as a deposit until it is evident that he is likely to meet the contract provisions. The company must defer recognition of a sale until the payments of the customer (including interest) are at least 10% of the agreed contract price.

The 10% revenue recognition rule is a questionable one. The "earnings cycle" is not necessarily complete at the time the accounting guide suggests revenue can be realized. In most cases, the seller is obligated to complete improvements in future years so that the lots are in a usable state to the buyer. The "earnings cycle" is not complete then until the obligated improvements have been made. Furthermore, an exchange has not occurred when only 10% of the sales price has been collected. The buyer does not have title to the property, nor does he have use of the property, until he completes his payments. An exchange does not take place until the purchaser

has received consideration commensurate with the cash payments he has made. Partially completed lots then should only justify a partial realization of revenue.

With respect to retail land sales, B. Graham, B. Dodd,⁴ and S. Cottle write:

The current "fair value" of real estate holdings is difficult to determine. The analyst must separate the profits on real estate sales from the recurrent earnings realized through rentals. He is unable to state with confidence what the "true earnings" of such a company has been over a period of years, since the relationship between "earnings" and increases in property values - - realized and unrealized - - must be a cloudy one. Real estate operations in periods of rising or fluctuating values do not lend themselves to the concept of an established or continuing earning power.

Another accounting guide issued by the AICPA is entitled "Profit Recognition on Sales of Real Estate." It applies to all real estate transactions except for retail land sales. Before a company can recognize the entire profit on sales contracts, the seller must be rid of ownership risks in the property, and a down payment of 25% of the sales value must be made.

Petroleum Refining

Full cost accounting involves the capitalization of all exploration and development costs without consideration of the success of any particular project. The full cost method may overstate current reported earnings because it permits companies to stretch over a period of years such costs

⁴
B. Graham, B. Dodd, and S. Cottle, Security Analysis: Principles and Techniques (New York: McGraw-Hill, 1962), p. 113.

as unsuccessful exploration and drilling expenses. It is possible, in some cases, that the amount capitalized could exceed the value of the firm's reserves. Under such circumstances, the deferred account is overstated. Earnings are of lower quality since they do not reflect charges necessary to write-down the account to its proper amount.

S. Porter⁵ criticizes companies which change to the full-cost method because it creates "instant earnings" and represents unrealistic reporting. For example, in 1972, Basin Petroleum adopted full-cost accounting, and increased earnings from a \$700,000 loss to a \$750,000 profit.

An integrated oil company which performs both functions of extracting and refining oil has greater earnings stability than does a non-integrated company which is involved solely in the refining process. The latter company is highly dependent upon other firms to provide unrefined oil in times of energy shortage. It is also susceptible to highly fluctuating crude oil prices.

In an interview, D. Spriggs of Baker Weeks stated:

An oil company with a high petroleum reserve level has higher quality of earnings than a competitor with a low reserve level.

The above comment must be qualified. A company may have a good reserve position but may be operating in politically unstable foreign countries. Its long-term source of oil may

⁵
S. Porter, "Full Cost Accounting: The Problem It Poses for the Extractive Industries," in Accounting Newsletter (New York: The New York Society of Security Analysts, May 11, 1972), p. 1.

therefore be uncertain. Furthermore, a firm's oil reserve level has no bearing on the quality of currently reported earnings.

Real Estate Investment Trusts (REITs)

REITs have engaged in numerous accounting practices which have rendered their quality of earnings suspect. These practices relate to the accrual of interest, commitment fees, and loan loss reserves.

The accrual of interest by REITs on problem loans to land developers should be closely scrutinized. Many construction loans are made on a discount basis, with both interest and principal due when the loan matures. In many cases, the collectibility of interest and principal are doubtful.

Many REITs are reluctant to identify poor loans, and continue to accrue interest on such loans. For example, Cabot, Cabot & Forbes Land Trust continued to accrue rental or interest income on three bankrupt or foreclosed properties because management felt that "the loans could be worked out."

Trusts should stop accruing interest when the first signs of difficulty appear. This is the point at which the value of the real estate or building used as collateral declines sharply (the property is worth less than the principal and interest on the loan), and the developer has incurred significant cost overruns. Under such circumstances, REITs should reflect interest income only when it is received.

The Accounting Standards Executive Committee of the AICPA has prepared a position paper titled "Accounting Practices of REITs." It states that "recognition of interest revenue should be discontinued when it is not reasonable to expect that the revenue will be received." It enumerates conditions under which the recording of such interest should be discontinued.

Many trusts recorded commitment fees on loans immediately as income at the loan record date or shortly afterward. This resulted in overstating current period earnings. The AICPA proposal states that "commitment fees should be amortized over the combined commitment and loan period."

Many trusts consistently underestimated their loan loss reserves, thus overstating earnings. The AICPA's position paper provides that trusts would have to accrue in their loan loss provisions an amount equal to the cost of holding a problem asset. A REIT would be required to estimate the final sales price of the property on loan and reduce it by the estimated cost to complete, the estimated costs to dispose of the property, and estimated costs to hold the property.

First Mortgage Investors engaged in certain accounting practices which rendered its earnings quality suspect. One practice was the use of letters of intent by which the trust would promise to finance an upcoming project subject to the builder meeting what were in effect impossible requirements. The trust would record the fee as current income with full knowledge that further financing would never occur, and the

borrower would use the letter of intent to borrow from banks. The trust also created fictitious "shell" companies to buy poor loans. For example, in 1971, one of its \$15 million loans went into default. Management wanted to do something before the end of the fiscal year, January 31, 1972. First Mortgage Investors created a shell corporation called World Land and Investment Co. The new company bought out the original developers for approximately \$470,000, the funds supplied by the trust in a new and bigger loan. The danger of default was pushed into the future. The deal was closed approximately two weeks before FMI's fiscal year end.

Fidelity Mortgage Investors is a good example of a REIT which was forced to adjust its books because of fictitious profits previously recorded:

After a loan-by-loan portfolio analysis Fidelity Mortgage Investors announced early in February that it had paid out \$4.7 million more than came in. And, it was ceasing to accrue interest retroactively to Oct. 31, 1973 on loans totaling some \$40 million . . . Translated, this means that the company was wiping these "earnings" off its books, and the funds already paid out were being treated as a return of capital to shareholders.

Such incidences undermine the faith of the investor in the earnings determination process of REITs.

In conclusion, the accrual of interest on problem loans, the inclusion of commitment fees in full at the loan record date, and the understatement of loan loss reserves render a lower quality of earnings for REITs.

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"The Numbers Game: When Is a Lemon a Lemon?" Forbes, (March 15, 1974), p. 63.

Savings and Loan

The earnings stability of savings and loan associations (S&Ls) have improved substantially since the early 1960's. Fee income comprises only 4% to 7% of total revenues for most major companies compared to 15% to 20% in the early 1960's. This reduced dependency on fee income reduces sharply the potential impact on earnings of possible changes in yearly loan production which varies with the business cycle. The mix of construction loans in the S&Ls' loan portfolios is smaller now than in the past; therefore interest revenue has greater stability, and potential exposure to bad loans is reduced.

Penalties for premature conversion of certificates which add to earnings are volatile in nature. Such conversions vary with changes in market interest rates. The conversions also reduce long-term deposits and have an adverse effect on long-term profitability.

Capital gains or losses derived from the sale of foreclosed real estate are also volatile because foreclosures depend on the state of the economy.

Regulation Q has provided greater earnings stability to the S&L industry. Rising interest rates on long-term deposits have had the effect of lengthening the maturity of an S&L's liabilities - - previously one of the major weaknesses of the industry - - and securing the interest-sensitive portion of their deposits. The fact that depositors can be assured of a high return on their savings for as long as ten years

makes their deposits much more stable, and under such conditions, individuals are unlikely to seek temporary rate advantages from open-market instruments.

"Day of Deposit to Day of Withdrawal" accounts result in less earnings stability than do "Regular" accounts.

In the 1969-1970 period, many homeowners who wanted to buy more expensive houses held off because of high interest rates. This pent-up demand was released by the decline in mortgage rates that began toward the beginning of 1971. This resulted in a nonrecurring increase in commission fees in that year.

The quality of the S&L loan portfolio has some visibility due to regulatory practices. S&Ls are required to report monthly to the Federal Home Loan Bank on (1) slow loans (90 days past due), (2) foreclosed real estate, and (3) loans to facilitate the sale of foreclosed properties. The total of these three categories is related to total loans and is referred to as the scheduled-item ratio. A high ratio indicates that the loan portfolio has high realization risk.

Electric and Gas

Allowance for funds during construction (AFC) represents capitalized interest charges on funds borrowed to finance plant expansion. In most cases, charging the interest on these funds to net income would seriously penalize earnings. Therefore, regulatory commissions allow utilities to capitalize these costs during plant construction, thereby spreading the

cost over the life of the plant similar to other construction costs. This results in an AFC credit, an addition to current earnings. However, AFC does not represent cash earnings and cannot be used to pay dividends and interest.

AFC accounts for a very high percentage of net income of some utilities. It accounted for 67% of Vepco's 1972 reported earnings after preferred dividends. AFC is a constructive fiction. The more a company spends on construction, the higher its net income.

A utility which accrues AFC at an unrealistic rate (e.g., a rate that substantially exceeds its cost of capital) has lower quality of earnings.

AFC can create problems when a utility experiences a regulatory lag after "plant under construction" enters the rate base. A utility may not always receive regulatory approval for the full rate of return upon which it was predicting AFC. Furthermore, new plants may experience delays or there may be excess start-up costs for long periods of time.

For the ten months ended October 31, 1973, Public Service Electric and Gas announced a \$40 million increase in income over the comparable period in 1972. \$18.5 million of that increment was due to an accounting change. The utility initiated the recording of revenue and fuel costs on "services rendered" rather than on "services billed." The appropriateness of this accounting change is suspect.

The inflationary economy has rendered suspect the

depreciation policies of many electric utilities. Depreciation rates have trended downward since 1966. The current average depreciation rate of utilities is 2.8%, which is equivalent to about a 35 year composite life. Inadequate depreciation provisions have resulted in the overstatement of earnings.

The Effect of Political Factors

A variety of political factors must be considered when analyzing the quality of earnings. Such factors relate to the impact of foreign operations and governmental influence on the firm.

J. Grodinsky was one of the first authors to recognize that political factors affect the quality of earnings. He wrote:

Of equal significance with the managerial policies affecting the quality of corporate earnings are political and social changes which exert favorable or unfavorable effects upon these earnings and which are beyond the control of management. Wartime earnings in industries that are beneficially affected by government orders, for example, are nonrecurring. They are not of good quality.

The Effect of Foreign Operations on Corporate Activity

Earnings derived from operations in politically and economically unstable foreign countries, now especially in the Middle East and in South America, are of lower quality because of the risk of nationalization and restrictions on earnings. Therefore, the profit margin of a firm operating solely in a politically unstable country is not as indicative of future

⁷ J. Grodinsky, Investments (New York: Ronald Press, 1953), p. 198.

earnings as the profit margin of a firm operating in a politically stable one.

8

With respect to foreign operations, L. Tso wrote:

Companies that expand Western Hemisphere operations at the expense of Eastern Hemisphere operations show an improvement in earnings quality. For example, in 1963, Standard Oil Co. of California showed more rapid expansion from Western Hemisphere operations which increased some \$6.4 million to \$176.8 million, or 55% of total net, while Eastern Hemisphere net income expanded by only \$1.8 million to \$145.2 million. This division of earnings sources by hemisphere appears extremely enlightening since Wall Street traditionally has seen higher quality of earnings generated in this hemisphere over those from the other hemisphere, as the latter is more prone to political instability and economic uncertainty.

Many firms have experienced unstable results from foreign operations. Getty Oil discloses that "in the first five months of 1974, the company recorded a charge to income of \$20.9 million in order to reflect a probable participation or equivalent increase in Host Government take in the company's concession with the Kingdom of Saudi Arabia." Hughes Tool discloses that "the changing political situation in Argentina could have an adverse effect on the company's interests." And, Anaconda discloses that "a change in government mining policies in Peru in 1970 made the company abandon a planned \$175 million project and required the write-off of \$4.3 million in deferred costs."

Disclosure should be made of earnings derived from each foreign country to enable analysts to evaluate their

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L. Tso, Techniques for Discovering Hidden Value Stocks (New York: Frederick Fell, 1965), p. 309.

reliability and consequent worth on a separate basis. D. Hayes
9
wrote:

For the year ended October 31, 1954, Firestone derived \$12 million out of total earnings of \$40.5 million from foreign subsidiaries. It is most unfortunate that evaluation of the "quality" of such foreign earnings amounting to almost 40% of the total is impossible with the information provided by the company. If the earnings were largely derived from Liberia, where extensive plantations are owned and operated, and Canada, then the investor might justifiably have greater confidence in their future continuity than if they were largely obtained from more unsettled areas.

The Effect of Government Influence on Corporate Activity

Stringent government regulation of a firm may interfere with its business operations, and lead to low levels of management control over its own destiny. For example, Rorer-Amchem discloses that "in 1974, there was a decline in sales of the pharmaceutical 'Quaalude,' which in late 1973 was placed under restrictive production and prescribing controls in the U.S." Furthermore, government policies often change, with material implications for the firm. Companies which are highly susceptible to government interference, then, have less earnings stability. The degree of government interference in a firm's activities may be determined by reviewing laws and regulations of government agencies as they affect specific industries and/or companies.

Some industries are also susceptible to price controls. Railroads are a classic example of government regulation of

9
D. Hayes, Appraisal and Management of Securities (New York: Macmillan, 1956), pp. 196-98.

pricing policies which have had severe impacts on earnings flows. It is not unlikely that the quality of earnings of a number of railroads would have been viewed much differently by potential investors if regulation had not been present. The real estate rental industry in New York also faces stringent rent control regulations.

Environmental and safety regulations may interfere with corporate operations and result in earnings instability. For example, Eastern Gas and Fuel Associates discloses:

Effective August 1, 1973, it was determined that two coal mines, which had previously commenced production operations required significant additional development expenditures as the result of the changing requirement of Federal and state health and safety regulations. Approximately \$3.8 million of costs were incurred to meet these new requirements.

Firms which have poor relationships with their regulatory bodies will have lower earning potential. For example, General Telephone and Electronics disclosed that its subsidiaries had experienced delays ranging from three months to two years in obtaining rate increases, and that approved rate increases were often less than the amounts requested.

Governmental action against a company (e.g., anti-trust action, public accusations) lowers the probability of earnings recurrence. For example, a few years ago, the U.S. government accused Sears & Roebuck of deceptive selling tactics. As a result, its earnings showed a significant decline.

Companies highly dependent on government contract work and/or subsidy programs may have lower earnings stability because they are susceptible to erratic changes in government

spending policies. For example, firms tied to the agricultural market are susceptible to political interference related to subsidy programs to farmers. Some companies intentionally avoid government contracts. For example, U.S. Homes discloses that "the growth in net sales has been partly due to the avoidance of dependency on government programs which have been curtailed in recent years." The elimination of government contract work can severely affect corporate operations. For example, TMCA discloses that "the termination of the supersonic transport program in 1971 had an adverse impact on the company during 1970 and 1971." In conclusion, companies have lower quality of earnings if their major source of revenue is derived from governmental work that is subject to the whims of changing political attitudes.

PART III

THE QUALITY OF EARNINGS CONCEPT - AN EVALUATION

CHAPTER VII

APPROACHES TO THE MEASUREMENT, DESCRIPTION, AND
EVALUATION OF THE QUALITY OF EARNINGS

A variety of techniques have been proposed by financial experts to measure and describe a company's quality of earnings. Some of these approaches are quantitative; others are not. An analysis of these techniques will be provided. In addition, an attempt will be made to derive approaches of measuring, describing, and evaluating earnings quality that can be applied in practice by accountants, security analysts, and financial managers.

A number of approaches will be discussed that provide financial experts with a "feeling" about a company's earnings quality. For example, in appraising net income we can employ quantitative techniques such as ratio analysis as measuring instruments of the individual elements of the quality of earnings. We can therefore arrive at an over-all conclusion concerning the quality of earnings reported by the firm.

Some security analysts view quality of earnings as normal, recurring, cash flow generating earnings derived from operations. They believe that quality of earnings is a figure between reported net income and cash flow from operations less nonrecurring items. As this chapter will indicate, there is much more to the measurement and description of earnings quality than this.

Financial experts cannot arrive at a single "quality of earnings" figure independently. However, with proper adjustments, they can come up with a fairly close range of numbers that more accurately reflect a company's quality of earnings than does net income. The conversion of reported net income into what the analysts consider as a more "relevant" net income figure is both difficult and time-consuming. It is an attempt by them to arrive at an "acceptable quality" earnings figure. The concept of the quality of earnings, therefore, is not a fixed truth waiting to be discovered, but rather a concept which depends upon relevance and point of view. It is important to recognize that other types of adjustments -- not all falling within the notion of earnings quality -- are involved in this adjustment process by which the individual analyst arrives at what he considers to be the "earning power" of a company.

The first part of this chapter will consist of an analysis of the questionnaire responses dealing with the measurement of the quality of earnings. A discussion of the accounting aspects of the measurement, description, and evaluation of the quality of earnings will follow. The third part will analyze the financial aspects of the measurement, description, and evaluation of the quality of earnings, and the fourth part the effects of the quality of earnings.

Questionnaire Responses Dealing with the Measurement
of the Quality of Earnings*

Question IV of the questionnaire read as follows: Do you believe that "quality of earnings" can be objectively measured? If so, how can it be accomplished?

Excerpts from the more significant relevant responses indicate that some financial experts believe earnings quality is measurable at least in some way, and that others do not. Of those who do, several have offered approaches which might be used to measure and describe the quality of earnings. Overall, results indicate that financial experts have different views of the meaning of the term "measuring."

Some typical comments of those financial experts who believe earnings quality can be measured are presented below.

S. Hunt (director of corporate accounting, General Mills) writes:

Two fairly objective measuring sticks to evaluate earnings quality are as follows: (1) Fit - do current earnings "fit in" logically with the past earnings profile of a company? (2) Market response - how does the market interpret the quality of earnings? The market is rarely fooled by financial juggling and massaging of earnings. How are the P/E ratio and market price affected?

J. Hagan (comptroller, R.J. Reynolds Ind.) writes:

Quality of earnings can be measured to some extent by eliminating or identifying the effects of accounting changes, extraordinary or nonrecurring items, and market or cost conditions known to be temporary.

W. Hayford (Vice-President of Finance, Continental Can) and D. Meade (security analyst with H.C. Wainwright) write:

The analyst should determine "unusual" contributors to

*In Chapter IB (Results of the Questionnaire Survey), I pointed out that question IV would be discussed in this chapter since it related to the measurement of the quality of earnings.

earnings that result from management accounting decisions. The effect of income management devices should then be eliminated in measuring earnings quality.

C. Schretzman (director of corporate accounting, International Paper) writes:

While the measurement of earnings quality cannot be reduced to a mathematical formula, a comparison of accounting policies and analyses of ratio changes can give meaningful insight into the relative conservatism of companies and therefore indications of their earnings quality.

J. Connolly (security analyst, Faulkner, Dawkins and Sullivan) writes:

Quality of earnings can be measured by information is available to restate reported net income.

C. Cappanna (financial manager, Electronic Associates) writes:

Quality of earnings can be evaluated by measuring the realization value of assets. For example, analysts are suspicious of intangible assets and deferred charges.

D. Whalen (assistant comptroller, American Broadcasting) writes:

Earnings quality can be measured by subtracting inflationary profits from net income.

R. Burry (security analyst, H.C. Wainwright) writes:

Earnings quality can be measured only through a thorough examination of each element comprising the quality of earnings.

J. MacNeill (director of education, AICPA) writes:

Any measurement of quality of earnings would be subjective, but a system of relative weights or "normalized measures" assigned to assumed criteria of quality is conceivable.

F. Kopf (security analyst, Baker Weeks) writes:

Quality of earnings can certainly be broadly described and categorized, if not precisely measured or agreed on.

R. Mautz (partner, Ernst & Ernst) writes:

Quality of earnings can be measured only if you are satisfied with gross approximations.

R. Freese (treasurer, Grumman Corp.) writes:

Earnings quality cannot be measured in dollars but in degrees of quality.

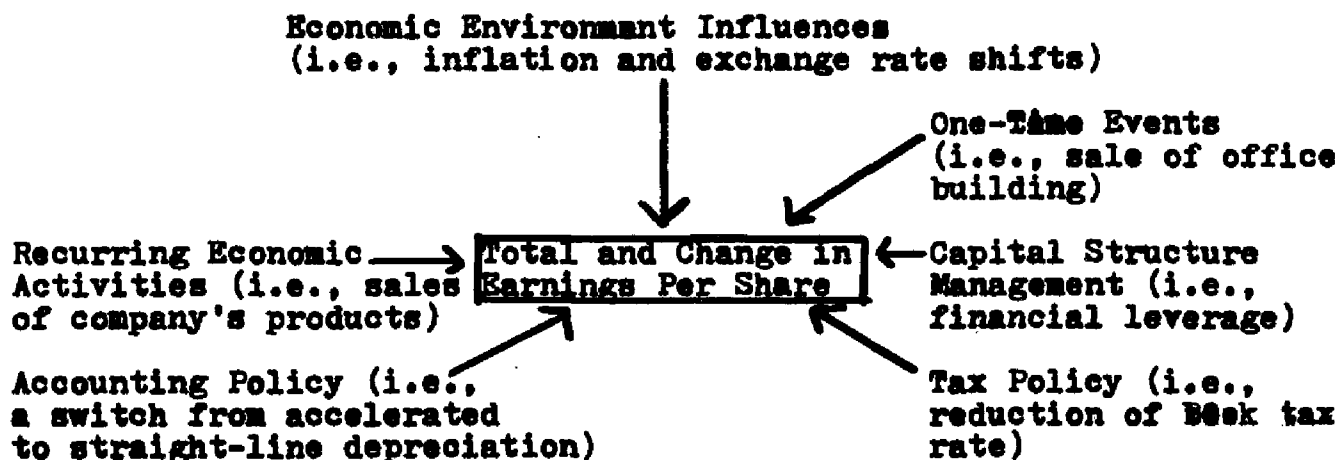
D. Hawkins (Professor of Accounting, Harvard University)

does not believe that earnings quality can be measured. However, he does describe the quality of earnings in the following manner:

In assessing the "quality" of a company's earnings per share the six factors shown in Illustration 1 and their relationship to the absolute level and change in earnings per share seem to be relevant. This assessment is a qualitative judgment.

ILLUSTRATION 1

QUALITY OF EARNINGS



High quality of earnings companies have these

characteristics:

1. A consistent conservative accounting policy that results in a prudent measurement of the company's financial condition and net income.
2. A pretax income stream that is derived from recurring, rather than one-time, transactions related to the basic business of the company. Sales that quickly convert to cash after being recorded for accounting purposes.

3. A net income level and growth rate that is not dependent on a lowering of the tax rate through means which may be vulnerable to future tax code changes or place detrimental constraints on the company's use of the tax savings or deferrals.
4. A debt level that is appropriate for the business.
5. A capital structure that has not been manipulated to produce earnings per share effects.
6. Earnings that are not materially inflated by unrealizable inflation or currency gains.

Some typical comments of these financial experts who believe earnings quality cannot be measured are presented below.

A. Tietjen (retired partner, Price Waterhouse) and R. Theurkauf (research director, Scudder Stevens & Clark) write:

Quality of earnings is largely judgmental. It cannot be set forth in dollar amounts or by rules.

R. Orben (controller, NCR Corp.) writes:

We do not believe that the concept of "quality of earnings" can be quantified for objective measurement. "Quality of earnings" would probably require judgment or subjective considerations.

A. Knertz (controller, International Telephone and Telegraph) writes:

Quality of earnings cannot be measured because the criteria change according to the size and nature of the respondent and the attitude of the environment at a given period.

F. Weston (retired partner, Arthur Young) writes:

Earnings quality cannot be measured. However, analysts might establish "relative quality of earnings."

Analysis of Questionnaire Responses

Many financial experts do believe the quality of earnings can be measured and evaluated. However, it is important to note that the measurement and description of the quality of earnings refers not only to the restatement of net income to arrive at a more "relevant" earnings figure, but to the evaluation of

accounting and financial characteristics of a company as well. Such characteristics include, for example, the realization risk associated with a firm's assets, and the degree to which the firm's earnings are stable in nature.

A single figure representing a company's "quality of Earnings" cannot be derived. However, quality of earnings can be approximated for any company within some minimum-maximum range. Such a range would contain earnings figures, restated, which security analysts consider "relevant" in their determination of a company's "earnings quality." Within this range, each analyst will decide which specific value represents to him a firm's "relevant" net income. Such a conversion process requires adjustments to reported earnings for accounting changes, for unjustified reductions in discretionary costs, and so forth.

The response from J. Hagan (above), that is, his approach to measuring earnings quality by eliminating nonrecurring items, is not a sound one. Such items may be part of the firm's income history, and, as such, do not of themselves lower earnings quality. However, they may be excluded from reported results in determining a company's "earning power." He also believes that earnings quality can be measured by eliminating the effect of accounting changes. If such changes are instituted to conform to more realistic policies they are desirable and do not negatively affect the quality of earnings. As for excluding the impact of market or cost conditions which are known to be temporary, it is not a simple matter to determine whether an item is temporary. If the item occurs sporadically,

it should not be excluded in the evaluation of net income because it is part of the long-run operating activity of the firm.

C. Schretzman implies that conservatism in accounting is an indication of earnings quality. This may not always be true. Conservative accounting principles do not result in the highest quality of earnings if the economic substance of the firm's transactions would be unrealistically accounted for thereby.

C. Cappaonna's suggestion that earnings quality can be measured by determining the percentage of intangible assets and deferred charges to total assets must be qualified. There are cases where such assets are properly stated; for example, amounts recorded for patents and trademarks may be equal to or less than their future value. In this case, such assets are appropriately valued and do not have realization risk.

Some respondents stated that the quality of earnings is largely judgmental. Although there is some subjectivity involved in determining a company's earnings quality, analysts can still rate a company's quality of earnings in a generalized manner. For example, many earnings characteristics, both favorable and unfavorable, such as the degree of recurrence in earnings, can be broadly described even if they cannot be measured precisely. Furthermore, a relative ranking of the quality of earnings of companies in an industry can be achieved.

Accounting Aspects of the Measurement, Description, and Evaluation of the Quality of Earnings

In measuring and evaluating the quality of earnings, security analysts must consider the nature of the accounting policies employed by the firm as well as such other accounting

aspects as the degree of certainty attached to accounting estimates and the degree of asset realization risk.

Accordingly, this section will undertake analysis of the following: (1) Adjustments to Reported Earnings Per Share Made In Order to Arrive at "Relevant" Earnings Per Share; (2) Putnam Advisory's "Earnings Quality" Checklist; (3) The Fourteen Research Corporation's "Quality Measurement of Stocks" Reports; (4) Nature of Accounting Policies; (5) Discretionary Costs; (6) Degree of Certainty of Accounting Estimates; (7) Reliability and Verifiability of Earnings; (8) Cash Flow; (9) Taxable Income; (10) Residual Income; and (11) Balance Sheet Analysis.

**Adjustments to Reported Earnings Per Share Made In Order
to Arrive at "Relevant" Earnings Per Share**

To bring into focus some of the problems relating to earnings per share adjustments, this section will begin with examples of different types of such adjustments. The following are excerpted from T. O'Glove and R. Olstein's Quality of Earnings Report wherein the authors make a number of EPS adjustments to reported EPS to develop what for them is a "higher quality" EPS figure. The excerpts will illustrate to the reader the approach used by this particular source and will highlight some of the errors made in the adjustment process.

Brunswick Corporation.^{*} In the authors' adjustment process, it was determined that the following items aided 1974 reported earnings by \$0.79 per share:

^{*}Source: Quality of Earnings Report (April 4, 1975).

Lower tax rate	\$.04
Lower R&D as a percent of sales	.06
Lower allowance for bad debts as a percent of receivables	.04
Lower selling and administrative expenses as a percent of sales	.26
Land sale	.03
Incremental currency gains	.06
Ozite acquisition	.03
Various lower reserves at Nippon Brunswick	.27
FIFO inventory profit	<u>?</u>
	\$ <u>.79</u>

According to O'Glove and Olstein, Brunswick's

1974 reported earnings were of low quality; without the aid of the items above the company would have reported 1974 earnings of \$1.27 per share instead of the \$2.06 per share reported, as against \$2.26 per share reported in 1973.

This analysis, however, has certain deficiencies.

A lower tax rate in and of itself does not necessarily mean lower quality of earnings. For example, a decline in the tax rate resulting from the inclusion in earnings of non-taxable income may simply reflect the desire on the part of management to lower taxes. A lower ratio of R&D to sales doesn't necessarily mean lower earnings quality. If the prior year's R&D costs were abnormally high, the cut-back in such costs may have been justified. Further, lower selling and administrative expenses as a percent of sales may not necessarily indicate lower quality of earnings. Cost cutting may have taken place to eliminate duplicate and wasteful selling and administrative activities. Furthermore, a significant increase in sales would by itself cause the percentage to decline since selling and administrative expenses do not rise proportionately to sales due to the fact that many of them are fixed and semi-variable

in nature. A decline in the allowance for bad debts as a percent of receivables may not reflect a deterioration in earnings quality if warranted by experience.

Chicago Bridge & Iron.* In the absence of certain nonrecurring items (summarized below), the company could have reported \$3.39 per share instead of the reported \$2.91 per share. The company thus reported, according to O'Glove and Olstein, a substantially improved quality of earnings in 1974.

Higher tax rate	(\$.10)
Increased losses in equity-owned affiliates	(.12)
Switch to LIFO	(.16)
Lower investment income	(.13)
Lower other income	(.08)
Higher real estate income	.11
	<u>(\$.48)</u>

The authors' analysis contains a number of deficiencies. They improperly identify investment income, other income, and real estate income as nonrecurring items. More importantly, a decline in investment or other income may not represent an improvement in earnings quality because these sources may in fact be highly stable. For example, other income may represent royalty income which usually shows more stability than sales. However, the authors are correct in concluding that higher real estate income represents improved earnings quality because it usually is a stable source of earnings. But increased losses in equity-owned affiliates does not necessarily represent an improvement in earnings quality. Such losses may reflect possible future problems in their operations.

*Source: Quality of Earnings Report (April 4, 1975).

Heublain.* The gain in the company's fiscal 1974 per share earnings was bolstered considerably by a combination of acquisition accounting, gain in "other income," lower allowance for doubtful accounts as a percent of accounts receivable, increase in capitalized Other Asset expense, and gain on the sale of fixed assets. These types of earnings increments are of lower quality and may be nonrecurring in nature.

One must have reservations about the authors' analysis. Acquisition accounting does not necessarily mean lower earnings quality. For example, an acquirer may simply include earnings of an acquired company from the date of acquisition to year-end. Such an accounting treatment is not necessarily suspect. In any case, the effect on earnings of such an increment is disclosed in the footnotes. A gain in "other income" is not necessarily suspect. Such income is often a stable and typical source of earnings (e.g., dividend income). A gain on the sale of a fixed asset is not necessarily a low quality of earnings increment. It may simply represent a nonrecurring item which is part of the long-term income history of the company rather than a one-time event.

In spite of the above criticisms and the difficulties involved, analysts can determine what are to them "relevant" earnings per share by making quantitative adjustments to reported earnings per share, with the revised figure reflecting more realistically the "earning power" of a company. The conversion process will result in a higher quality of earnings figure.

*Source: Quality of Earnings Report (November 15, 1974).

Analysts can determine more "relevant" or "acceptable" quality EPS by adjusting reported EPS for low quality items. An illustration of an adjustment process suggested by the writer follows.

Assume a company's reported EPS of \$10.00 includes numerous low quality components. These items are listed below as deductions from reported EPS. (Items that must be deducted from EPS in order to arrive at an "acceptable" quality EPS were chosen with a view toward developing an approach which allows for a clearer understanding of the adjustment process. In reality, of course, reported EPS would be adjusted upward or downward for various reconciling items. An example of an upward adjustment would be the adding back to EPS of the effect of an unjustified accounting chshion arising from over-estimated warranty provisions of bad debt pprovisions.)

Reported EPS	\$10.00
Deductions from Reported EPS In Order to Arrive at an "Acceptable Quality" EPS:	
Unjustified cut-backs in discretionary costs (e.g., advertising) as a percent of sales	.02
A decline in the ratio of bad debts to sales that is not warranted by experience	.03
One-time gains (e.g., gain on the sale of land) which are not expected to recur over the long-run	.04
Income derived from the sale of acquired assets which were recorded at suppressed amounts at the time of a pooling transaction	.05
Inventory profits	.06
Accounting changes designed to bolster earnings (e.g., LIFO to FIFO)	.07

Lower pension expense arising from an unrealistic change in pension assumptions (e.g., increase in the actuarially assumed interest rate)	.08
Increase in deferred expenditures that do not have future economic benefit	.09
Items included in inventory which were previously expensed (e.g., labor, interest, administrative costs), assuming such items have no future utility	.02
Items included in plant and equipment which were previously expensed (e.g., maintenance costs)	.03
Lower provision (relative to prior years) for cost overruns on long-term construction contracts. (For example, Monsanto Enviro-Chem Systems reduced income by \$1.6 million in 1974 and \$12.9 million in 1973 in connection with its provisions for cost overruns. The lower 1974 provision aided earnings comparisons by \$0.33 a share).	.04
Increase in expenses (relative to prior years) charged to reserve accounts	.05
Unjustified reduction in reserve accounts	.06
Incremental capitalized interest relative to prior year. (For example, in spite of a reduction in sales volume, Centex capitalized \$17.4 million of interest in fiscal 1975 versus \$12.4 million in fiscal 1974. The company disclosed the following: "Had the company continually expensed interest as incurred, net earnings would have been reduced by \$0.40 a share in fiscal 1975 and \$0.26 a share in 1974.")	.07
Amount of under-accrual of expenses (or reserve provision)	.08
One-time earnings increment arising from a change in revenue recognition policy. (For example, in 1974 Virginia Electric and Power adopted the policy of accruing estimated Unbilled Revenues. This change in accounting treatment resulted in net income for 1974 increasing by \$16,531,000, of which the cumulative effect of the change to January 1, 1974 was \$12,353,000).	.09
Lower effective tax rate arising from a one-time tax benefit such as investment tax credits arising from very significant plant expansion in the current year which is not expected to recur or a foreign tax credit which now becomes prohibited.	<u>.02</u>
"Acceptable Quality" EPS	<u>\$9.10</u>

Putnam Advisory's "Earnings Quality" Checklist

L. Speidell, vice-president of The Putnam Advisory Company, prepares an Earnings Quality Checklist to measure a company's quality of earnings. In a letter to the writer, he explained the purpose of his checklist:

Our checklist is designed to gain a subjective understanding of a company's accounting and, more important, to gain insight into the attitudes and quality of a company's management. We are not primarily concerned with accounting techniques and theory but rather with the evaluation of management's disposition towards or away from conservatism. Thus, the checklist has been biased towards those major accounting issues where alternatives exist, one of which is more conservative than the others. We have also emphasized those accounting policies which can be determined fairly easily from annual reports, Forms 10-K, etc.

The Earnings Quality Checklist evaluates the accounting policies of a company over the past three years. It consists of uniform penalty points for each accounting policy Speidell considers adverse to the quality of earnings. Different undesirable accounting policies are assigned different penalty points. In reviewing a company's accounting policies, the company is assigned penalty points if it uses liberal accounting policies. The greater the total of penalty points assigned to the firm, the lower its quality of earnings. The earnings quality of companies in an industry are ranked on the basis of their total penalty points. The format of the Earnings Quality Checklist is presented in Illustration 2.

ILLUSTRATION 2

EARNINGS QUALITY CHECKLIST FORMAT

<u>Undesirable Characteristics</u>	<u>Penalty Points</u>
Reports straight-line depreciation	-1
Flows through investment tax credit (if material)	-1

<u>Undesirable Characteristics (continued)</u>	<u>Penalty Points</u>
Capitalizes patents	-2
Uses full-cost accounting (oil industry)	-5
Capitalizes interest on construction	-1
Capitalizes start-up costs	-1
Loss reserve appropriation less than losses booked	-1
Reinvested foreign profits reported in amount greater than if repatriated (no U.S. tax provision on unremitted earnings)	-1
Company takes write-offs against surplus	-1
Depreciation based on physical life longer than economic life	-1
Unfunded pensions:	
Sum equals 1/2 year net income	-1
Sum equals 1 year of net income	-2
Sum equals 2 years of net income	-3
Reports earnings on contract but before payment	-3
Takes partial completion profits	-1
Carries long-term receivables in current assets	-2
Capitalizes rental equipment marketing expense	-1
Carries unimproved land in current assets	-3
No amortization of goodwill prior to 1970	-1
Uses FIFO inventory accounting	-1
Does not use a "big eight" accounting firm	-1
Includes capital gains in ordinary income	-1
Foreign exchange reserve used	-1
Does not provide deferred taxes on intangible write-offs	-1
Other accounting penalties	-5

The writer believes that, in general, the checklist is not a useful tool to measure a company's quality of earnings for the following reasons:

1. The penalty points assigned to each undesirable accounting policy are highly subjective and mechanical. For example, five penalty points are assigned to an oil company which uses the full-cost method, three to a company which reports earnings on contract but before payment, two to a company which capitalizes patents, and one to a company using the FIFO inventory method. The assignment of different weights to each accounting policy lacks objectivity.
2. Penalty points are primarily assigned to unconservative accounting policies. However, an unconservative accounting policy may be realistic in accounting for the economic substance of a company's transactions. In such a case, it would be improper to assign penalty points to the firm. For example, for some assets, the straight-line method may in fact be the most realistic. The use of a realistic accounting policy (which may be unconservative) does not reduce the firm's earnings quality.
3. Some of the items which are assigned penalty points do not indicate poor earnings quality. For example, Speidell assigns a penalty point of one to a company which does not use a "big eight" accounting firm. The fact that a "big eight" firm is not used is irrelevant to the quality of earnings. It is important only that a reputable CPA firm perform its proper role in the attest function. Also, the assignment of penalty points to companies which carry long-term receivables and unimproved land in current assets is irrelevant. These items do not influence earnings. A further example is the assignment of a penalty point to a company that recognizes partial completion profits. There is nothing wrong with such profits if they are

based on reliable estimates of the percentage of completion on long-term contracts.

The Fourteen Research Corporation's "Quality Measurement of Stocks" Reports

W. O'Connor and S. Ferrer prepare "Quality Measurement of Stocks" reports in which the quality of companies are rated by analyzing fourteen major areas involving various corporate and industry factors. Some of these factors relate to a company's accounting and financial characteristics which bear on the quality of earnings as that term is perceived by the authors.

A point scale from one through five is used in rating each corporate characteristic, with five representing the highest score. Since there are fourteen ratings, the highest total score possible is seventy (14 times 5).

The following point scale is used to rate the quality of a company's accounting policies:*

*The authors provide the following accounting quality definitions:

- a. Conservative - Profits all available for cash dividends in the USA when reported, and conservative or accelerated depreciation is basis of stockholder reports. ITC is amortized. Foreign earnings stated as if repatriated. Inventories are marked to selling rates.
- b. Normal - 80% of profits could be paid out in USA in year reported; depreciation is straight-line based on profits life rather than physical life. Inventories are valued based on selling prices. ITC is flowed through, R&D and start-ups are expensed currently.
- c. Liberal - 60% of profits could be paid out in cash as reported, but other earnings arise either from capitalized intangibles or are in assets which could never be transferred to the USA in cash.
- d. Extra liberal - Under 50% of earnings available for cash dividends.

Very conservative	5
Normal-near conservative	4
Normal-near liberal	3
Liberal	2
Extra liberal	1

The authors determine for a company the percent of its reported earnings that is available as current assets. The higher the percentage, the higher the quality of earnings since net income is backed-up by cash and near cash items.

The following point scale is used:

95% of earnings available as current assets	5
85% of earnings available as current assets	4
75% of earnings available as current assets	3
65% of earnings available as current assets	2
55% of earnings available as current assets	1

According to the authors, the percentage of cash dividends relative to net income is a measure of earnings quality. For example, if a company had the choice of reporting \$2 on the most conservative accounting basis or \$3 on the most liberal basis, its dividend capability should be the same. A very low percentage of cash dividends to reported earnings may indicate that net income has been liberally determined. The authors believe that where liberal accounting policies have been followed, less of reported earnings can be paid in cash dividends.

The following statement appears in a 1975 report:

To define the quality of reported earnings, we have to fall back on the acid test. The only way a company can give stockholders a return on their investment is to pay cash dividends. The idea that management can give them growth in market value as a reward is absurd. Neither managements or stockholders have ability to control stock prices. The duty of management is to produce profits which can be paid out in cash dividends.

The authors believe that a way to appraise the quality of earnings is by studying the relationship between net income and

book value. They derive an "Earned on Net Worth" (Book Equity) ratio by dividing net income for the year by stockholders' equity at January 1. If convertible preferred stock issues exist, their book value is also included in net worth. The higher the ratio, the higher the quality of earnings. The following point scale is used by them:

Above 20% in each of 5 consecutive years	5
Above 17% in each of 5 consecutive years	4
Above 15% in each of 5 consecutive years	3
Above 13% in each of 5 consecutive years	2
Above 11% in each of 5 consecutive years	1

Insufficient maintenance of capital has a negative effect on the quality of earnings. The following point scale is used to rate the quality of a company's plant facilities:

Unique, revolutionary new process that works	5
All modern and lowest cost in the industry	4
50% new in last 7 years and equal to lowest cost	3
In lowest cost one-half of industry	2
Capable of profitable operations under any condition	1

They also make use of the cash plowback ratio¹ as a percentage of assets in evaluating plant facilities. A low percentage indicates the existence of numerous unprofitable old fixed assets.

They view a high growth rate in earnings as a positive indication of a company's quality of earnings. The following point scale is used in evaluating the persistence of growth in EPS over the last 10 years:

No year with less than 30% of 10 year average gain	5
No year with less than 15% of 10 year average gain	4
No year with earnings less than year before	3
No year off over 10% from year before in earnings	2
No year off over 20% from year before in earnings	1

¹

$$\text{Cash plowback ratio} = \frac{\text{Cash Flow} - \text{Dividends}}{\text{Gross Plant} + \text{Net Working Capital} + \text{Investments} + \text{Other Assets}}$$

In evaluating a company's cyclicalities in revenue, the following point scale is used:

Gain in sales every year	5
No sales decline in any year	4
3% maximum sales decline in any year	3
6% maximum sales decline in any year	2
9% maximum sales decline in any year	1

Highly-leveraged firms are assumed to have lower earnings stability than firms with no debt. The following point scale is used to evaluate the effect of financial leverage on earnings stability:

No debt - 5 years	5
Under 15% debt - 3 years	4
Under 25% debt - 5 years	3
Under 25% debt - 2 years	2
Under 40% debt - 5 years	1

It is the writer's belief that the following deficiencies exist in the approach used by the Fourteen Research Corporation to measure the quality of earnings:

1. The number of points assigned to various accounting and financial characteristics of any given company are subjective, arbitrary, and mechanical.
2. It is difficult to determine just what is included in certain categories. For example, three points are assigned to a company with normal-near liberal accounting policies. But what constitutes such policies? They must be specifically identified.
3. Some tools used to measure earnings quality are invalid. For example, the "Earned on Net Worth" ratio has nothing to do with the quality of earnings. The ratio may be high because net income is high. However, a high earnings figure doesn't mean its of good quality. Furthermore, the amount of book equity of a firm reveals nothing about the quality of net income.

4. In rating the quality of a firm's plant facilities, one point is assigned for "capability of profitable operations under any condition." The writer does not understand why this should have the lowest rating. Such capability is a positive attribute of a company.
5. The higher the growth rate in EPS, the higher the points assigned. However, growth in EPS may not necessarily indicate whether reported results are of higher quality. For example, a firm may have had strong earnings growth over the past 10 years, but such growth may have arisen from income management.
6. In evaluating the cyclical nature of revenue higher points are assigned to companies which show revenue growth. However, revenue can grow but still show wide vacillation. For example, five points are assigned to a company that shows sales growth every year. However, such growth may be of a fluctuating nature (e.g., 10% growth in year 1, 20% growth in year 2, and 5% growth in year 3).
7. In evaluating the effect of financial leverage on earnings stability firms with less debt are automatically rated more highly. Yet the prudent use of financial leverage may enhance profitability when the return obtained on debt funds exceeds the after-tax interest cost. Furthermore, a higher debt position may result in greater monetary gains during inflationary periods.
8. A company with a low ratio of cash dividends to reported results is viewed as having lower earnings quality. The authors believe that a low ratio indicates that liberal accounting policies have been employed in the income measurement process

because fewer earnings can be paid out in cash dividends where liberal policies have been followed. This ratio is not relevant in evaluating earnings quality since it depends primarily on the company's need for retained funds.

Nature of Accounting Policies

In measuring the quality of earnings, it would be beneficial to determine the extent of conservatism associated with a company's reported net income. One method of measuring conservatism follows:²

Assume a firm reports net income of \$30 million and its estimated lower and upper earnings limits are \$17 million and \$47 million respectively. These limits would represent the minimum-maximum range of "relevant" earnings determined by various security analysts in their attempts to arrive at an earnings figure which is more representative of the company's "earnings power." The standard deviation, a measure of spread, can be a useful tool to estimate the extent of conservatism. Because of the symmetry of the normal curve, fifty per cent of the observations lie on either side of mean net income of \$32 million. Most of the income figures, 68.2% will cluster within \pm S.D. of mean net income, while 95.4% will fall within mean \pm 2 S.D. and 99.74% are included with mean \pm 3 S.D. Because the range embraces the mean \pm S.D. which comprises all the income data for all practical purposes, the S.D. of the probability distribution may be derived in the following manner:

2

M. Tucker, "Estimate Degree of Conservatism in Your Corporate Earnings," Certified General Accountant, (March/April, 1974), pp. 23-26.

$$\begin{aligned}
 \text{Extent of Conservatism} &= \frac{\text{Upper limit less mean}}{3} \\
 &= \frac{\$47,000,000 - \$32,000,000}{3} \\
 &= 5,000,000
 \end{aligned}$$

The derivation of reported results may be expressed in terms of its dispersion around mean net income or number S.D. units from the mean. For instance:

$$\begin{aligned}
 \text{Standard Normal Variate} &= \frac{\text{Reported earnings less mean}}{\text{S.D.}} \\
 &= \frac{\$30,000,000 - \$32,000,000}{5,000,000} \\
 &= -.4
 \end{aligned}$$

The extent of conservatism may be determined with the assistance of a normal curve table, representing a standardized normal distribution, found in a statistics text. Because reported earnings are less than the mean net income, it is evident that the reported figure is at least 50% conservative (covering 50% of the area to the right of mean earnings). The balance of the degree to which it is conservative may be determined by using the normal curve tables. Because reported net income was $-.40$ from mean income, from the table, about 15.5% of the area under the normal curve lies in the tail to the left of the mean less $.40$ S.D. Consequently, the total extent of conservatism would approximate 65.5%. Therefore:

$$\begin{aligned}
 \text{Extent of Conservatism} &= .50 + \text{Standard normal variate} \\
 &= .50 + .4
 \end{aligned}$$

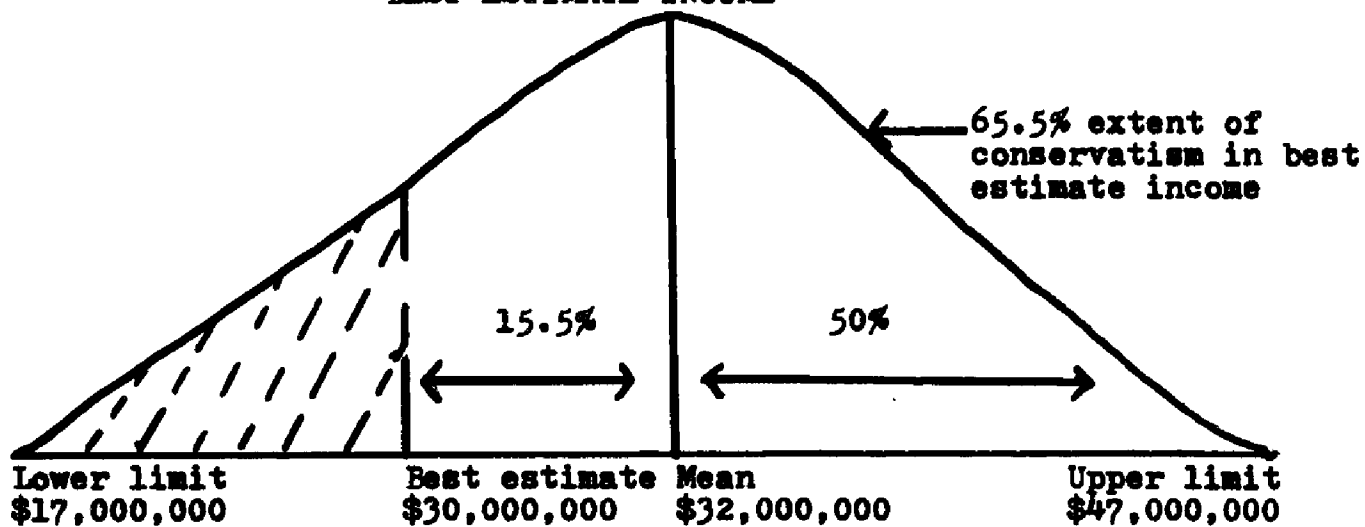
Converting the area under the normal curve to the right of reported net income (from the Normal Distribution Table):

$$\begin{aligned}\text{Extent of Conservatism} &= .50 + .1554 \\ &= .6554\end{aligned}$$

This percentage implies that the firm, within the range of alternative accounting principles, could have reported various combinations of net income, 65.5% of which would have been higher than that reported. In Illustration 3, which may be referred to as the "conservative curve", the unshaded area under the curve reflects the margin of safety inherent in the reported net income.

ILLUSTRATION 3

EVALUATION OF THE EXTENT OF CONSERVATISM IN BEST ESTIMATE INCOME



As a consequence of highlighting the lower and upper limits of reported earnings within the range of GAAPs and the extent of aggregate conservatism, along with the effects of the law of large numbers, the following opportunities are available to security analysts in their evaluations of a company's earnings quality:

1. The extent of conservatism in net income may be looked upon as a measure of the degree of conservatism associated with a company's accounting policies.
2. The lower and upper limits of reported net income may be plotted on a graph, and the directions examined over a given time period, as an indication of the firm's future profits.

In an interview, J. Treynor, editor of The Financial Analysts Journal, stated that the quality of earnings could be measured through the following steps:

1. Determine what the company's net income would be if it used the most liberal accounting principles.
2. Determine what the company's net income would be if it used the most conservative accounting principles.
3. The most liberal net income is a maximum and the most conservative net income is a minimum. This establishes a range.
4. Place the reported earnings within the GAAP range.
5. The closer the reported earnings are to the maximum amount, the lower the quality of reported earnings.
6. Calculate the percentage of reported earnings to minimum earnings. This percentage can be used for comparison purposes with other companies in the industry. If the company has a higher ratio of reported earnings to minimum earnings than other companies in the industry, its quality of earnings may be rated lower.

Although Treynor's measurement technique is theoretically sound, it does not admit to practical implementation because of the difficulty, or indeed the impossibility of determining earnings based on the most liberal and the most conservative accounting principles. In order to be able to do this, analysts would have to determine the different impacts on earnings using the accounting policy employed, the most liberal accounting principle, and the most conservative. The data required for this adjustment is not disclosed in corporate reports. In addition, even if such data were available, such an adjustment process

would be extremely time-consuming. And another problem arises. The determination of which accounting policy is the most liberal and which the most conservative is highly subjective.

Furthermore, Treynor's approach does not consider the impact of using realistic accounting policies. One cannot say arbitrarily that the most liberal accounting policies result in the lowest quality of earnings while the most conservative result in the highest quality. It is more important that the accounting policy employed be the most realistic one. Analysts should thus determine what the impact on earnings would have been had the firm employed the most realistic accounting policies (e.g., as per the AICPA Industry Audit Guides), assuming the given firm has not done so. If realistic policies would have resulted in substantially lower net income, the quality of earnings may be lower.

As was pointed out in Chapter III, Release No. 33-5427 states: "If a company's accounting principles are at variance with prevailing accounting practices within the industry, the dollar effect on earnings should be disclosed . . . The disclosures set forth are necessary for a proper assessment of the quality of earnings of a registrant." Analysts may wish to determine what the effect on net income would have been if a firm had used for its stockholder reporting the accounting practices prevailing within the industry. If the use of such practices would have resulted in substantially less earnings, the quality of reported net income may be lower.

A trend of inconsistency in a company's application of

principles and estimates may make it difficult for analysts to use current year's earnings as a surrogate for future earnings. Analysts may wish to determine the degree of this inconsistent trend, if any, when evaluating earnings quality.

If accounting changes were made during the reporting period, analysts should also attempt to restate earnings as they would have been reported originally had no unrealistic accounting changes (principles or estimates) been made. The dollar effect of these accounting changes on reported results should be isolated.

Analysts should also determine if a company has under-accrued expenses. For example, a computer lessor may not have provided for normal maintenance service to its computers on rental because they are currently being used by lessees. The failure of the lessor to provide for periodic maintenance costs results in lower earnings quality. Analysts should attempt to determine what these normal charges are, and adjust reported net income accordingly.

Discretionary Costs

A reduction in discretionary costs may cause a deterioration in earnings quality because management is starving the firm of some needed input. The result will be a negative impact on future performance. A declining trend in research and development costs, for example, may result in the firm's failure to develop new products needed to maintain market share. Analysts should examine trends in discretionary expenses (e.g., advertising, training) as a percent of net sales. Declining trends may

indicate lower quality of earnings.

Analysts should also examine the relationship between discretionary costs and the assets with which they are associated. For example, a declining trend in repairs and maintenance as a percent of fixed assets, together with inadequate depreciation charges, may indicate a failure to maintain capital. Lower earnings quality will result.

The quality of earnings impact can be approximated by removing from reported earnings any increments or reductions arising from unjustified changes in discretionary costs. For example, if an unjustified decrease in advertising as a percent of net sales resulted in a per share gain, such gain should be subtracted from reported earnings per share.

It is important to note that one cannot automatically assume that any reduction from the prior year in discretionary costs as a percent of sales is unjustified. There may be sound justification for such reductions. For example, a company may suddenly become the market leader because its major competitors have gone out of business. Under such a circumstance, a reduction in advertising costs may be justified.

A fluctuating trend in discretionary expenses as a percent of sales may indicate that the firm is managing earnings by changing discretionary costs. For example, analysts may question a trend in promotion expenses which shows an increase of 20% in one year, a decrease of 30% in the next, and an increase of 40% in the third.

Degree of Certainty of Accounting Estimates

Within a framework of periodic income determinations, material uncertainties as to accounting estimates present a serious problem of revenue and expense determination. Consequently, if many estimates are involved in the income measurement process (e.g., the lives of fixed assets in a highly technological industry), the reported income figure may have a high degree of uncertainty attached to it. For example, firms engaged in long-term contracts (e.g., shipbuilders using the percentage of completion method) have greater uncertainty attached to income because of the necessarily highly subjective estimates. Companies involved in risky business activities (e.g., manufacturers of explosives) may have great difficulty in determining reserve provisions. Certain lines of insurance (e.g., medical malpractice) require insurance companies to estimate future costs at times when changing social attitudes as well as inflation make it difficult for companies to estimate with any degree of certainty malpractice awards. Under these circumstances, the adequacy of the reserve provision is very uncertain. An inadequate or excessive reserve provision results in lower quality of earnings. Improper reserve provisions may also result in potential surprises.

Analysts may wish to determine trends in cash expenses to net sales and in estimated expenses to net sales. Estimated expenses have greater uncertainty attached to them, and rising trends in estimated expenses may indicate greater uncertainty associated with current year's reported results.

Analysts may wish to determine the variance between a company's estimated reserves and its actual losses for previous years. A company which has experienced substantial deviation between the two may have lower earnings quality. For example, a firm's warranty reserve provision could be compared to its actual warranty costs. A wide variance between the two figures, whether on the high or the low side, may indicate that the company's over-all accounting estimates have been unreliable and uncertain, or that the firm has failed to make proper provision for future losses.

The higher the percentage of assets which are subject to a large degree of accounting estimates (e.g., intangible assets), the more uncertain reported income may be. This is because charges against earnings for use of such assets may be uncertain in amount.

Reliability and Verifiability of Earnings

Earnings which are unreliable and not verifiable are of lower quality. For example, a weak internal control system may mean that earnings are less reliable because it is difficult for auditors to discover errors which may exist in the company's accounting system. Perhaps if audit fees substantially increase, additional audit time was required because of the client's poor internal control system.

A firm's continuous change of outside auditors may reflect a warning signal about the company's accounting policies. The turnover rate in CPA firms should be examined by analysts.

According to Accounting Series Release No. 165, firms must

disclose whether a change in CPAs resulted from a disagreement between the parties over a contemplated accounting change. If the new CPA firm concurs in the accounting change, the company must disclose what the earnings would have been had the previous accounting policy been maintained. Analysts should compare reported results (using the new policy) to what earnings would have been had the accounting change not been made. If the change resulted in substantially higher earnings, the quality of that increment may be suspect, and a downward adjustment to reported results may be required. Analysts may be wary of earnings increments when a company has fired auditors in prior years in order to obtain acceptance of accounting changes designed to increase earnings. Analysts may also question earnings increments when a firm is known to manage its net income and/or have extra liberal accounting policies.

Cash Flow

The closer a transaction is to cash the more objective is the measurement of the transaction because there is less subjectivity involved in both interpretations and estimates. Higher earnings quality exists when revenue and expenses are recognized near the point of cash inflow and outflow.

Many security analysts believe that quality of earnings can be measured by determining the percent of cash flow to net income, with the higher percent indicating a higher quality of earnings. This ratio, although a proper analytical tool, is not a valid measure of earnings quality. The percentage may be increasing only because of higher non-cash expenses

(e.g., depreciation, amortization). An increase in such charges has no effect on earnings quality.

Taxable Income

Taxable income is not a better measure of operating performance than reported earnings; however, a comparison between taxable income and stockholder income may bear further investigation. An increasing trend in the "Deferred Tax Credit" account may, for example, mean that the firm is changing to more liberal accounting policies (e.g., revenue recognition, expense capitalization).

If a company reports substantial earnings for stockholder purposes at the same time that it reports a substantial tax loss, analysts may wish to evaluate further the quality of reported earnings. But it must be borne in mind that taxable income may be lower merely because of management's desire to take advantage of IRS provisions which work in the company's favor.

Residual Income

The quality of earnings may be evaluated by determining the trend in residual income to reported results. An increasing trend may indicate a stronger degree of profitability for the firm since it is earning enough to cover its imputed cost of capital. A high ratio of residual income to reported earnings is desirable and may indicate a higher probability of the recurrence in earnings. Residual income may easily be determined by deducting the imputed cost of capital (weighted average cost of capital times total assets) from net income.

Balance Sheet Analysis

If the income determination process results in the deferral of outlays and costs which have a high degree of realization risk, the resulting net income is of lower quality than earnings which do not involve the recording of such high risk assets. Therefore, an analysis of the realization risk associated with a company's asset structure would be a measure of earnings quality.

The greater the dollar frequency of a firm's assets in the high-risk category, the lower its earnings quality. This is because high risk assets are uncertain as to realization value, and may require future write-off. For example, start-up costs have a lower probability of realizable value than do Accounts Receivable.

A possible measurement of the realization risk of a company's asset structure is the trend in the ratio of deferred charges and intangible assets to total assets. Deferred expenses depend to a significant extent on estimates of future probabilities and developments that are often overly optimistic. Consequently, the failure to achieve expectations is higher here than with other assets. Deferred costs are very varied in character and validity and require careful evaluation. Intangible assets possess higher realization risk than other assets because they have a higher probability of becoming worthless.

Specific balance sheet accounts will now be discussed.

Receivables

Analysts should examine trends in bad debts as a percent of both accounts receivable and net sales. Unwarranted decreases in bad debt provisions lower the quality of earnings. Such decreases can occur when the provisions have been reduced even though increased sales are being made to slower paying and more marginal customers.

The realization risk of receivables may be evaluated by determining the nature of the receivable balance. Types of receivables that have high realization risk are receivables for claims under government contracts, notes receivable representing renewals of old notes, and notes receivable that originate as an extension of an unpaid balance from a delinquent customer.

A decline in accounts receivable turnover may reflect higher realization risk in accounts receivable. Turnover is an indicator of the age of receivables, especially when it is compared with an expected turnover rate based on credit terms usually granted.

In evaluating the collection period of accounts receivable, analysts should examine the relationship between the level of receivables and that of sales and of profits. The trend in the collection period over time is important in evaluating the quality and liquidity of receivables. Excessively long collection periods may be signs of potential collection problems. However, in some cases, longer collection periods may be justified. For example, credit terms may have been liberalized in order to meet unusual competitive conditions or in connection with the introduction of new products.

An evaluation should be made of the loan receivable account. If loans are advanced against unfilled sales orders or if the collateral value of the loan is below the stated amount or if interest is not being collected on such loans, then the realization risk associated with the account may be high.

Inventory

The realization risk of inventory may be high if the inventory turnover rate is especially low relative to industry norms. A low rate may indicate the existence of inventory items that are obsolete or in weak demand.

Inventory turnover rates should be determined for raw materials, work-in-progress, and finished goods. Departmental turnover rates should also be calculated. Turnover rates for individual components provide useful information for analysts in the evaluation of the quality and realizability of inventory. Unfortunately, financial statements provide this type of information only occasionally.

Rising inventory levels may indicate the possibility of charge-offs some time in the future, or that there has been a deferral of costs in inventory that should have been expensed (e.g., engineering, tooling, administrative expenses). An indication of a more liberal inventory policy is when there has been a sharp decline in the trend of cost of goods sold as a percent of sales.

Overstatements in inventory may arise from errors in

costing and pricing or from errors in the valuation of work-in-progress. The more technical the inventory item and the more reliance placed on internal cost records, the greater the probability that cost estimates may be misstated. Analysts should ascertain the degree to which inventory consists of highly technical products.

Finally, analysts should eliminate inventory profits from reported results. As discussed in Chapter III (pp. 78-79), such profits are illusory because they must be used to replenish a company's stocks at higher current replacement costs.

Intangible Assets

A high ratio of intangible assets to total assets reflects an asset structure of high realization risk. Some intangibles have greater realization risk than others. For example, goodwill probably is more uncertain of future realization than are patents. Analysts should evaluate each component of the intangible asset category.

Analysts should examine the relationship between the change in capitalized intangibles and the change in reported earnings. If a significant portion of the income change is attributable to policies favoring capitalization rather than expensing, the quality of earnings may have declined because income may have been relieved of proper charges against it.

If there is value to purchased goodwill, then it should give rise to superior earnings within a short period after acquisition of another company. If this is not the case, goodwill may have no value regardless of whether or not it is

on the balance sheet. However, if a mismanaged business with solid potential was purchased, earnings may not rise immediately. Analysts should also consider the amount given up in the acquisition of goodwill since this may affect its reported valuation. Payments in promoter stock, for example, should be examined closely.

Internal development of goodwill requires a charge against earnings. To the degree to which a valuable asset has been created, one which can be sold or one which possesses earning power, such a charge understates net income.

Deferred Charges

The deferral of certain costs is subject to many imponderables and estimates, and related amortization periods may be uncertain. Analysts must scrutinize deferred charges closely because companies may be deferring items which have no future benefit. In essence, a company may merely be deferring losses in order not to burden reported results. Examples of deferred charges which have dubious future benefit are moving costs, start-up costs, and promotional costs.

Analysts should determine the trends in deferred costs to both net sales and to net income, and the trends in deferred costs (e.g., deferred promotion costs) to total expenditures (e.g., total promotion expenditures). Increasing trends should be examined closely since the company may be deferring costs which are not in accord with economic reality. For example, Sterling Drugs showed other assets and deferred charges of \$20.3 million in 1976 compared with \$6.5 million in 1975. The increase was

equal to \$0.12 a share. Furthermore, firms which repeatedly make unexpected write-offs of deferred charges may be following questionable deferral policies.

Fixed Assets

Trends in repairs and maintenance to fixed assets and/or sales must be determined. Declining trends may indicate inadequate maintenance of property, plant and equipment. This will have a negative effect on the company's "earning power" because assets will be less productive or even inefficient. Furthermore, net income will have been overstated to the extent that these needed expenses have not been recognized.

Trends in depreciation expense as a percent of both fixed assets and net sales should be examined. Declining trends may indicate inadequate depreciation for obsolescence and deterioration, or that the company has made unrealistic changes in the lives or salvage values of its assets. For example, Avis Incorporated's average depreciation rate on vehicles in 1976 was 17.5% compared with 20.2% in 1975. The reduced rate aided 1976 incremental comparisons by \$0.53 a share. Similarly, from 1974-1976 Getty Oil's depreciation and depletion expense remained fairly constant even though during the same period there was a significant rise in capitalized oil and gas costs. Unwarranted decreases in depreciation and depletion lower the quality of earnings.

A company's failure to have a regular program of upgrading assets indicates poor asset management. Analysts should examine trends in the dollar amount of additions to

fixed assets to gross fixed assets. A significantly lower percentage may mean that older equipment is not being replaced at a proper rate. Analysts should also determine the age and condition of each major asset category as well as the cost to replace assets. Firms with out-dated and low-cost-basis fixed assets may not have maintained capital investment properly. In addition, companies which must invest in risky or specialized fixed assets which are incidental to revenue generating activities are more susceptible to property and equipment obsolescence and deterioration.

A significant decline in sales coupled with a significant increase in capital expenditures may be inconsistent, reflecting possible over-expansion and future write-offs of productive assets.

Investments

Companies with investment portfolios of volatile securities have higher realization risks than those with portfolios diversified by industry and economic sector even though portfolios of the former type may be more profitable in bull markets. Analysts should determine, to the extent possible, the degree of diversification of a firm's portfolio.

Analysts should be alert to decreases in portfolio market values which may not be entirely reflected in the accounts. A clue to the fair value of investments may be the income generated by them. A declining trend in the percentage of earnings derived from such investments to their carrying

value may indicate higher realization risk in assets.

Reserves for Future Costs and Losses

Arbitrary adjustment to reserves for future costs and losses should be eliminated in calculating "earning power." When companies change reserve provisions to manage earnings, analysts should add back those amounts which were charged to earnings, and deduct those credited to earnings.

A low quality of earnings increment may arise when more losses and operating expenses, relative to previous years, are charged to reserve accounts. If earnings increments derived from this source appear to be unrealistic analysts should adjust reported results downward.

Financial Aspects of the Measurement, Description, and Evaluation of the Quality of Earnings

In measuring and describing the quality of earnings, security analysts must consider financial characteristics of the company. These include the stability of earnings, implied corporate growth rate, cost structure, and financial leverage.

Stability of Earnings

Stable earnings are generally more repeatable in nature than are variable earnings. Therefore, recurring performance can be projected with greater degrees of confidence than can random events. Analysts may wish then to evaluate the stability of a company's earnings over a period of years (e.g., 10 years).

Stability of earnings can be measured in a number of ways:

1. Standard deviation: $S.D. = \frac{\sum (y - \bar{y})^2}{n}$

where y = reported earnings for period t ,

\bar{y} = average earnings,

n = number of years.

The higher the standard deviation in earnings, the lower the earnings stability associated with the firm. Therefore, a high standard deviation may indicate lower quality of earnings.

2. Coefficient of variation: $C.V. = \frac{S.D.}{\bar{y}}$

The coefficient of variation can be used to evaluate relative instability in earnings among companies. The higher the coefficient of variation in earnings of a company, the higher the risk associated with its earnings stream.

3. Instability index of earnings: $I = \frac{\sum (y - y^T)^2}{n}$

where y^T = trend earnings for period t , and is calculated by:

$$y^T = a + bt$$

where a = dollar intercept,

b = slope of trend line,

t = time period.

A simple trend equation solved by computer is used to determine trend income. The index reflects the deviation between actual income and trend income. The higher the index, the lower the quality of earnings associated with the firm.

4. Beta: Beta is determined by the following equation:

$$r_{jt} = \alpha_j + B_j r_{Mt} + E_{jt}$$

where r_{jt} = return on security j for period t ,

ϕ_j = constant,

B_j = beta for security j ,

r_{Mt} = return on a market index such as the New York Stock Exchange Index,

E_{jt} = error term.

Beta is a measure of systematic or undiversifiable risk of a stock. A high beta means that the company's stock price has shown more variability than that of the change in the market index, indicating that it is a risky security. High variability in stock price may indicate greater business risk associated with the firm, instability in its past earnings trend, or lower quality of reported results.

(Recent studies in the accounting and finance literature dealing with accounting data and stock prices have found that companies employing liberal accounting policies tend to have high betas. The reason for these findings may be that companies using liberal accounting often have deficient operating and financial characteristics as well. Thus, the volatility of a company's stock price may reflect underlying corporate financial problems as well as the nature of the company's accounting policies).

Analysts should determine the extent to which earnings reflect one-time gains and losses which are not part of the basic business of the firm. Such one-time items should be excluded from reported results in arriving at relevant earnings. One-time items are those which are not part of the firm's long-run income history such as the gain on sale of administrative offices.

Analysts may wish to determine the percent of these items to reported results. A rising trend may indicate lower quality earnings.

In general, lease income and royalty income are of higher quality than are profits from outright sales because they result in a more stable earnings pattern. For example, IBM's lease revenue under long-term contracts is a recurring source of earnings while its sales of computers vary from period to period depending upon the state of the economy. A rising trend in the ratio of lease and/or royalty income to sales may indicate greater earnings stability.

Firms which derive repeat business from original sales, for example firms providing repair services and maintenance parts to their customers, show recurring earnings trends. Analysts should determine a company's replacement and maintenance revenue as a percent of new sales.

Variability in earnings may be indicated when product lines experience wide fluctuations, over time, in volume, price, and costs. Analysts should ascertain the instability associated with these components such as by reviewing changes in the price index for raw material sources. The greater the variability in these components, the less stability associated with a company's earnings stream. For example, products which are highly susceptible to rapid changes in consumer tastes may result in earnings instability (e.g., "gimmick" products such as toys that are susceptible to changing "fads").

Single product companies may have lower earnings

stability than multi-product companies because they are more prone to variability in sales and product obsolescence. Companies having diversified product lines which are negatively correlated with each other have stable earnings streams. This is because earnings derived from one product increases at the same time that earnings derived from the other decreases (air-conditioners and heaters). However, a diversified product mix may still lead to earnings variability in cases where the product lines are positively correlated (e.g., automobiles and tires). It must also be noted that single-product companies may have greater earnings stability than multi-product ones where the product being sold by the former has a highly inelastic product demand (e.g., a unique pharmaceutical) whereas the products being sold by the latter show highly elastic product demands (e.g., luxuries). Analysts should ascertain the degree to which product lines are negatively correlated and possess inelastic demands.

Labor tranquility improves the stability of earnings. Such tranquility can be evaluated by determining the number and duration of previous strikes, degree of union militancy, and employee turnover. This information is sometimes provided by companies in their "Management's Analysis of Results of Operations" sections.

Analysts should also evaluate the extent to which foreign currency gains and losses contribute to variability in the earnings stream. Rapid exchange shifts detract from earnings stability.

Analysts should review debt contracts to determine financing restrictions imposed on the company by its creditors. Such restrictions may indicate that current sources of financing may not be available in the future, thus inhibiting corporate growth.

Companies with high degrees of physical risk have lower earnings stability. Measures of physical risk include the degrees to which the geographic location of the business is affected by the whims of nature (e.g., earthquakes, floods), and the company's inability to obtain adequate insurance. Risk may also be of a political nature. For example, firms relying on government contracts may have lower stability of earnings because government spending in different areas of the economy fluctuates. Fortunes of companies in the defense industry shift in response to the shifting perceived requirements of the Department of Defense. Analysts should ascertain the percentage of earnings derived from government contract work, and the degree to which such work is of a recurring nature.

A firm's insurance program may have a negative effect on its earnings quality. Under-insurance of assets will provide inadequate compensation for losses and will cause the sustenance of the firm's income stream to be less certain. A declining trend in insurance expense to fixed assets may signal inadequate insurance coverage. Analysts may attempt to determine the difference between insurance recoveries and the cost basis of property destroyed. Unusual losses may indicate inadequate coverage.

Firms which are dependent on a small number of unreliable suppliers, evidenced by previous delivery problems, possess operating risk. Information with respect to this problem is occasionally provided in "Management's Analysis of Results of Operations" section.

Implied Growth Rate

In evaluating earnings quality, analysts may wish to determine a company's implied growth rate. This rate is based upon the company's ability to finance growth through new equity issuances, financial leverage, and internally generated funds as well as its ability to employ capital effectively. For a company financing its growth through internally generated funds and leverage, its growth rate may be computed by considering its return on assets and financial policies. The following formula is used:

$$\begin{aligned} \text{Implied Growth Rate (Change in Retained Earnings/Net Worth)} = & \\ & \text{Pretax Return of Assets (Pretax Earnings/Assets) x Tax} \\ & \text{Retention Rate (1 - Tax Rate) x Profit Retention Rate} \\ & (1 - \text{Dividend Payout}) \times \text{Total Leverage Ratio (Assets/Net Worth)}. \end{aligned}$$

The calculation of a company's growth rate can assist in determining its growth potential as well as the likelihood of its future recurrence in earnings.

Cost Structure

High operating leverage magnifies income fluctuations resulting from small changes in revenue. Firms having high operating

Corporate Financial Reporting: Text and
hard Irwin, 1977), pp. 183-186.

³
D. Hawkins, Corporate Financial Reporting: Text and
Cases (Illinois: Richard Irwin, 1977), pp. 183-186.

leverage and highly elastic product demand may experience especially wide fluctuations in earnings. Quality of earnings can be evaluated by examining the trend in the following ratios: (1) fixed costs to total costs, (2) percentage change in operating income to the percentage change in units sold, and (3) earnings to fixed charges. An increase in (1) and (2) or decrease in (3) may indicate lower quality of earnings because higher fixed charges may result in greater earnings instability.

The effect of operating leverage diminishes as revenue increases above the break-even point because the bases to which increases in earnings are compared become progressively larger. Firms operating at or near the break-even point will have relatively larger percentage changes in earnings for a specific change in volume. During periods of decreased demand, this can cause unfavorable results which are significantly worse than those resulting from changes in volume alone. It may be fruitful to analyze the relationship between sales and the break-even point when evaluating a company's earnings stability.

Financial Leverage

A substantial increase in the debt/equity ratio may be an indication of more risky earnings. Such an increase may mean a significant rise in fixed interest expense and therefore greater earnings variability. A significant increase in financial leverage may also have an adverse effect on a company's ability to obtain needed financing.

Effects of the Quality of Earnings

A deterioration in a company's quality of earnings may cause its price-earnings ratio to decline and/or its effective cost of borrowing to increase. Analysts should examine trends in both the P/E multiple and the effective interest rate for a company for a period of time, perhaps five years. Also, company trends should be compared to trends in the industry. These trends are appropriate measurement techniques in the evaluation of the effects of the quality of earnings.

CHAPTER VIII

THE CORRELATION BETWEEN THE VALUE-EARNINGS RATIO
AND QUALITY OF EARNINGS FACTORS

A statistical test is presented based on the premise that, among companies with the same nominal earnings, those with higher quality of earnings will be more highly valued by investors. Statistically, the quality of earnings might be estimated as the ratio of a company's market value of stock to its annual earnings per share. This ratio should be higher for companies with better quality of earnings and lower for companies with poorer quality of earnings. The test was performed by estimating regression equations relating the value-earnings ratio (e.g., price-earnings ratio) to variables, such as financial ratios, beta, instability index of earnings, and growth rate in earnings.

This analysis was carried out by using the Compustat data files stored at the City University of New York computer center tape library. These files contain corporate balance sheet, income statement, and stock price data. Annual data needed for the calculation of the dependent variable and for the explanatory variables were extracted from the 360 General Compustat Tape (Annual Industrial). Quarterly corporate stock price and dividend data needed to obtain the rate of return on a firm's security for the calculation of beta were extracted from the 360 General Tape (Quarterly Industrial). Quarterly average stock price and

dividend data needed to derive the rate of return on the market index for the calculation of beta were obtained from the Standard and Poor's Composite 500 Stock Index. The computations were carried out by computer using the TSP statistical package.*

This chapter consists of the following sections: (1) Review of Empirical Studies, (2) Hypothesis, (3) Framework of Analysis, and (4) Summary and Conclusion.

Review of Empirical Studies

This section summarizes the literature dealing with the correlation between certain financial ratios and stock prices. After reading this summarization, it will be evident to the reader that none of them dealt with quality of earnings factors. After completing my review, I will discuss the ways in which my study is a significant step in determining the relationship between quality of earnings variables and the price-earnings multiple.

In a study conducted by F. Bell,¹ a sample of 904 companies was selected from the Compustat tapes for a 15 year period (1956-1970). His multiple regression consisted of P/E as the dependent variable and the following independent variables: growth in cash earnings over a 3, 10, and 15 year period, the dividend payout ratio, and the stability of index of share prices. His model was a poor predictor ($R^2 < .10$) of P/E. The "best" result was obtained when growth in cash earnings (g)

* This regression package was developed by Robert E. Hall of MIT.

¹ F. Bell, "The Relation of the Structure of Common Stock Prices to Historical, Expectational and Industry Variables," Journal of Finance, (March, 1974), pp. 187-197.

was taken over a 15 year period. The t-value for g increased as the period was lengthened; however, all equations exhibited the hypothesized "positive" sign. Dividend payout exhibited a negative regression coefficient, which was inconsistent with his expectation. He also found, contrary to his hypothesis, a statistically significant inverse relation between P/E and price stability. F. Bell concluded that stock-earnings ratios in cross section are poorly explained by historical variables.

S. Cohen and D. Smyth² performed a linear multiple regression testing data on 203 of the 250 largest industrial firms. The cross-sectional data used (extracted from Moody's Industrial Manual) were based on seven-year averages over the period 1962-1968. The authors regressed the P/E ratio against gross return on assets, variability in the asset return rate, rate of return on equity, the equity growth rate, rate of net profit retention, expected earnings growth, firm size (as represented by the logarithm of assets) and inverse leverage (book value of equity divided by book value of assets). Their findings follow: (1) gross rate of return on assets is the most important determinant of P/E; (2) the market penalizes earnings volatility (such volatility is measured by the variability in the rate of return on assets); (3) the profit retention rate has a positive regression coefficient, and (4) leverage does not have a direct overall effect on P/E.

2

S. Cohen and D. Smyth, "Some Determinants of Price-Earnings Ratios of Industrial Common Stocks," The Quarterly Review of Economics and Business, (Winter, 1973), pp. 49-60.

The main conclusion of their study is that increasing leverage will not affect long-run P/E provided that such increase is not associated with a decrease in asset returns.

A. Martin³ took a sample of 98 companies from the Compustat tapes and performed a cross section analysis for the years 1965-1967. His multiple regression equation consisted of a dependent variable of earnings to price and the following independent variables: (1) stability of sales, (2) rate of growth in earnings plus depreciation and amortization, (3) dividend payout, (4) operating income to sales, (5) net income to book equity, (6) total assets, (7) capital expenditures to sales, and (8) income plus depreciation to debt. The variables were selected based on a questionnaire sent to Chartered Financial Analysts in the Chicago area requesting them to select those accounting data that they consider to be most important in explaining market movements. This study is the only one to use such an approach. The regression results indicated that variables (2), (4), and (8) possessed significant negative regression coefficients while variable (5) showed a significant positive coefficient. He also found that lagged regression did not provide as much explanation of investor anticipations as the nonlagged. He concluded therefore that it is more difficult to explain current market yields with past information than with more current information. High collinearity among variables was not evident in his study.

³
A. Martin, "An Empirical Test of the Relevance of Accounting Information for Investment Decisions," Empirical Research in Accounting: Selected Studies, 1971, Supplement to the Journal of Accounting Research, pp. 1-49.

A. Martin concluded that a definite relationship exists between annual report data and market prices.

In a study by B. Malkiel and J. Cragg⁴ of 178 companies included in the Compustat tape, the ratio of market price to earnings was related to a ten-year growth rate in cash earnings, an instability index of earnings (calculated as the semi-deviation from a regression of earnings over the past ten years), dividend payout (averaged over a 7 year period), leverage (ratio of fixed charges to earnings plus fixed charges), and beta. The study relates to year-end common stock prices from 1961 through 1965. About one-half of the variance in price-earnings multiples was explained by their regression. The growth rate in cash earnings had a significant positive sign. Although beta had a negative sign in all periods (1961-1965), it was insignificant in three of the five years. Dividend payout and the instability index of historic earnings had negative signs, but did not have significant regression coefficients.

J. Van Horne and J. McDonald⁵ took a sample of 86 electric utilities included in the Compustat tapes for the period 1964-1968. Their regression model consisted of price to earnings as the dependent variable and expected growth rate in assets per share, the dividend payout ratio (cash dividends divided by the difference of operating revenues and operating expenses)

⁴
B. Malkiel and J. Cragg, "Expectations and the Structure of Share Prices," American Economic Review, (September, 1970), pp. 601-617.

⁵
J. Van Horne and J. McDonald, "Dividend Policy and New Equity Financing," Journal of Finance, (May, 1971), pp. 507-519.

as independent variables. Their findings follow: (1) the compound growth rate of assets per share was highly correlated to the P/E ratio; (2) financial leverage possessed a statistically significant negative correlation; and (3) dividend payout had a positive sign but was insignificant.

R. Bower and D. Bower⁶ performed a cross-section analysis of 100 companies included in the Compustat tapes for 1960-1964. They used a multiple regression equation consisting of the price-earnings ratio as the dependent variable and the following explanatory variables: growth rate in earnings, market price variability, dividend payout, marketability of stock (the number of shares traded multiplied by the average of the year's high and low price for each year from 1946 up to, but excluding, the cross-section year), and firm effects (such as management resiliency and vulnerability to government action). All variables were stated in logarithms. They found that higher P/E ratios are associated with rapid earnings growth, higher dividend payout, and greater price variability. Less P/E ratios are associated with less marketability of stock.

T. Wipperfurth⁷ studied 350 companies included in the Compustat tapes for 7 industry groupings for the years 1956, 1958, 1961, and 1963. Those years were selected for the cross-section tests in order to determine the stability of the

⁶
R. Bower and D. Bower, "Risk and the Valuation of Common Stock," Journal of Political Economy, (May-June, 1969), pp. 349-362.

⁷
R. Wipperfurth, "Financial Structure and the Value of the Firm," Journal of Finance, (December, 1966), pp. 615-633.

signs and values of the coefficients among periods of differing economic and capital market conditions. His multiple regression equation related the earnings-price ratio to the following variables: growth rate in earnings per share for both a 10 year and 4 year period, dividend payout (over a 4 year period), book value of net plant (as a measure of corporate size), and leverage (ratio of fixed charges to minimum expected income). The first three variables were inversely related to the earnings yield while leverage showed a direct relationship to it.

H. Benishay's study⁸ consisted of a comparison of 56 companies for the four year period 1954-1957, with each firm being an observation in a cross-sectional multiple regression analysis. The principal source of data was Moody's Industrial Manual. Earnings to market value was considered a function of: (1) the trend in earnings; (2) the trend in the market value of the equity (price); (3) the payout ratio; (4) the expected stability of the future income stream; (5) expected stability of the equity value; (6) the size of the firm and the liquidity of its shares, both represented by the market value of the equity; and (7) the debt-equity ratio. Variables (3), (4), (6), and (7) had statistically significant negative coefficients while variable (5) had a significant positive coefficient. The strongest result is in the case of the size variable.

8

H. Benishay, "Variability in Earnings-Price Ratios of Corporate Equities," American Economic Review, (March, 1961), pp. 81-94.

It indicated a negative relation with the rate of return in all four cross-section years, establishing that the market prefers larger to smaller firms. The most interesting result is the emergence of the coefficients for stability of equity value with positive signs in all four cross sections. Contrary to commonly accepted notions that equity stability is preferred, the results lend support to the theory that equity stability is avoided. The coefficient of determination in 1957 approximated .37.

Empirical studies have been undertaken in indirectly related areas to my topic. Some studies explored whether financial ratios were useful in predicting business failures and corporate bond ratings.⁹ A few studies explored whether published accounting data were relevant and timely.¹⁰

9

For this type of study, see E. Altman, "Financial Ratios, Discriminant Analyses, and the Prediction of Corporate Bankruptcy," Journal of Finance, (September, 1968), pp. 589-609; W. Beaver, "Market Prices, Financial Ratios, and the Prediction of Failure," Journal of Accounting Research, (Autumn, 1968), pp. 179-192; E. Deakin, "A Discriminant Analysis of Prediction of Failure," Journal of Accounting Research, (Spring, 1972), pp. 167-179; J. Horrigan, "The Determination of Long-term Credit Standing with Financial Ratios," Empirical Research in Accounting: Selected Studies, 1966, Supplement to the Journal of Accounting Research, pp. 44-62.

10

For this type of study, see R. Ball and P. Brown, "An Empirical Evaluation of Accounting Income Numbers," Journal of Accounting Research, (Autumn, 1968), pp. 159-178; A. Martin, "An Empirical Test of the Relevance of Accounting Information for Investment Decisions," Empirical Research in Accounting: Selected Studies, 1971, Supplement to the Journal of Accounting Research, pp. 1-49.

Other studies dealt with the effect of accounting policies and/or accounting changes on the P/E ratio.¹¹

The aforementioned articles studied the correlation between the P/E ratio or earnings yield and various financial ratios. However, not one study looked solely at the earnings quality concept. My study is the first attempt to use quality of earnings characteristics as all of the independent variables.

11

For this type of study, see T. Archibald, "Stock Market Reaction to the Depreciation Switch-Back," The Accounting Review, (January, 1972), pp. 22-30; R. Ball, "Changes in Accounting Techniques and Stock Prices," Empirical Research in Accounting: Selected Studies, 1972, Supplement to the Journal of Accounting Research, pp. 1-44; E. Baskin, "The Communicative Effectiveness of Consistency Exceptions," The Accounting Review, (January, 1972), pp. 38-51; W. Beaver and R. Dukes, "Interperiod Tax Allocation, Earnings Expectations, and the Behavior of Security Prices," The Accounting Review, (April, 1972), pp. 320-332; E. Comiskey, "Market Response to Changes in Depreciation Accounting," The Accounting Review, (April, 1971), pp. 279-285; R. Eskew, "An Examination of the Association Between Accounting and Share Price Data in the Extractive Petroleum Industry," The Accounting Review, (April, 1975), pp. 316-324; N. Gonedes, "The Significance of Selected Accounting Procedures: A Statistical Test," Empirical Research in Accounting: Selected Studies, 1969, Supplement to the Journal of Accounting Research, pp. 90-113; R. Kaplan and R. Roll, "Investor Evaluation of Accounting Information: Some Empirical Evidence," Journal of Business, (April, 1972), pp. 225-227; F. Mlynarczyk, "An Empirical Study of Accounting Methods and Stock Prices," Empirical Research in Accounting: Selected Studies, 1969, Supplement to the Journal of Accounting Research, pp. 63-89; D. Patz and J. Boatsman, "Accounting Principle Formulation in an Efficient Markets Environment," Journal of Accounting Research, (Autumn, 1972), pp. 392-403; S. Sunder, "Relationship between Accounting Changes and Stock Prices: Problems of Measurement and Some Empirical Evidence," Empirical Research in Accounting: Selected Studies, 1973, Supplement to the Journal of Accounting Research, pp. 1-59.

It introduces a number of earnings quality variables which were never tested in any prior work. These include cash flow as a percentage of net income, realization risk in assets (intangible assets to total assets), extraordinary items as a percentage of net income, net income to fixed charges, depreciation and amortization divided by plant-net, coefficient of variation in earnings, deferred taxes to net income, sales to net income, and liquidity measures (current ratio, inventory turnover, and receivable turnover). Finally, more quality of earnings factors are considered here than in any prior work.

Hypothesis

The hypothesis to be tested in this chapter follows: The value-earnings ratio is affected, to some extent, by quality of earnings factors. Those factors which improve the quality of earnings have positive correlations to the P/E multiple while those factors which detract from earnings quality have negative correlations.

The expected signs identified to the explanatory variables are based on accounting, financial, and economic theory as well as on previous empirical studies. A list of the expected signs for the respective variables is presented below. The variables which have not been previously tested are indicated by a star.

The Complete Structure

<u>Explanatory Variables</u>	<u>Expected Sign</u>
1. Growth rate in earnings per share	
a. For the period 1965-1969	Positive
b. For the period 1970-1974	Positive
c. For the period 1965-1974	Positive
2. <u>*Extraordinary Items</u> Net Income	Negative
3. <u>*Net Income + Depreciation + Amortization</u> Net Income	Positive
4. <u>*Intangible Assets</u> Total Assets	Negative
5. <u>*Net Income</u> Fixed Charges	Positive
6. <u>*Depreciation + Amortization</u> Plant - net	Positive
7. <u>*Cost of Goods Sold</u> Inventory	Positive
8. <u>*Sales</u> Receivables	Positive
9. <u>*Current Assets</u> Current Liabilities	Positive
10. <u>Long-term Debt</u> Invested Capital	Negative
11. <u>*Deferred Taxes</u> Net Income	Negative
12. <u>*Sales</u> Net Income	Positive
13. Instability Index of Earnings	Negative
14. *Coefficient of Variation in Earnings	Negative
15. Beta	Negative
16. Dividends per share	Positive
17. Growth rate in dividends per share	Positive

It is important to recognize that the quality of earnings factors listed as explanatory variables are extremely limited. The reader has noted from previous chapters that there are a great many more factors and characteristics of a company that relate to its quality of earnings. Unfortunately, these factors could not be included in the study for a number of reasons. First, data necessary for the calculation of certain quality of earnings factors were not available in the Compustat tapes. An example is the ratio of discretionary costs to sales. Second, it is impossible to determine from the tapes the nature of a company's accounting policies. Examples are the degree of conservatism of accounting principles and estimates, degree of income manipulation, and degree of certainty in accounting estimates. Third, many corporate characteristics that bear on the quality of earnings are not easily quantifiable. Examples are the degree of maintenance of capital and the quality of management. Non-quantitative quality of earnings factors affect the P/E multiple as well as quantitative factors. Economic factors (e.g., the effect of the business cycle on the company) and political factors (e.g., earnings derived from politically unstable foreign countries) also relate to a company's quality of earnings. These are further examples of non-quantitative factors that bear on a company's P/E ratio.

It must be borne in mind that the value-earnings ratio is greatly affected by corporate, industry, political, social, economic, and psychological factors that do not relate to the quality of earnings. Therefore, many factors -- not falling under the notion "quality of earnings" -- help explain much of

the change in the P/E multiple.

It must also be noted that the P/E ratio is not only affected by historical information (e.g., previous growth rate in earnings) but also to a large extent by investor expectations of future conditions (e.g., expected growth rate in earnings).¹²

As a result of the aforementioned reasons, it is expected that the explanatory variables finally selected in the regression equation will only explain a small part of the change in the P/E ratio. However, they should possess positive regression coefficients if they improve earnings quality and negative regression coefficients if they detract from earnings quality.

Framework of Analysis

Construction of the Model

Three steps were followed in constructing the P/E model: (1) financial theory was utilized to provide a starting point and to conceptualize the problem; (2) the theoretical model was adapted to the features of the real world; and (3) the model was modified for data availability and statistical considerations. The P/E model specified was:

$$(1) P/E_j = f(GR_j, B_j, D_j, V_j, FR_{jk}, U_j) \quad k=1, \dots, K \text{ and } j=1, \dots, N$$

where

P/E_j is the P/E ratio for company j ,

GR_j is the growth rate in earnings for company j ,

¹²

J. Hammel and D. Hodes, "Factors Influencing P/E Multiples," Financial Analysts Journal, (January/February, 1967), pp. 90-92.

B_j is beta representing the systematic risk for company j ,

D_j is a measure of dividend policy for company j consisting of dividends per share (DPS) and the growth rate in dividends (GRD),

V_j are measures of earnings variability for company j consisting of the instability index of earnings and the coefficient of variation in earnings,

FR_{jk} are various financial ratios for company j , and

U_j are unspecified factors.

As is indicated in the model (1), the analysis requires a two-stage estimation procedure which involves the following calculations:

1. Growth rate in earnings (GR):

$$GR = \frac{EPS \text{ (end of period)} - EPS \text{ (beginning of period)}}{EPS \text{ (beginning of period)}}$$

2. Growth rate in dividends (GRD):

$$GRD = \frac{DPS \text{ (end of period)} - DPS \text{ (beginning of period)}}{DPS \text{ (beginning of period)}}$$

3. Beta.*

4. Instability Index of Earnings (INSI).*

5. Coefficient of Variation in Earnings (CVEPS).*

Time Span and Sample

Data were extracted from the annual and quarterly Compustat tapes for the period 1965-1974. The growth rate in earnings per share was calculated for two five year periods (1965-1969 and 1970-1974) and for a ten year period (1965-1974).

* An explanation of how these variables are calculated has already been provided in Chapter VII (pp. 234-235).

Thus, three growth rates were considered in the estimation of the P/E model (1). The instability index of earnings and the coefficient of variation in earnings were both calculated for a ten year period (1965-1974). An average of each financial ratio as well as average dividends per share were calculated for the last 3 years (1972-1974). To compute beta using equation (2), the quarterly Compustat tape covering financial data for companies for a 40 quarter period was used. Since data needed for determining beta were missing from certain quarters, these quarters were excluded from the time period in its calculation. Thus, beta was computed for a 31 quarter period from the second quarter of 1966 to the last quarter of 1973. For computation of rate of return on a market index, data from Standard and Poor's Composite 500 stock index were used. Complete annual and quarterly data needed to compute the dependent variable and all explanatory variables were available for 252 companies, which are listed in Table 1. Table 2 summarizes the financial data used in this study and presents an explanation of how the financial data were computed.

A multiple regression was performed using cross section data for the companies included in the study for the year 1974 (the latest year data were available at the time of this writing).

Estimation of the Model

A number of preliminary estimated equations were obtained using a linear multiple regression. In choosing between models or variables that were equally appealing from the point of view of financial and statistical theory, four

criteria were adopted: (1) variables which are highly correlated with the P/E ratio were initially selected; (2) variables whose coefficients showed correct "signs" in preliminary estimated equations were emphasized; (3) variables that indicated greater statistical significance (higher t-values) were given priority; and (4) models whose R^2 were higher were favored. But in the course of choosing models, "signs" were given more priority than R^2 .

Analysis

Table 3 shows a sample of linear regression results which were selected on the basis of the criteria described above. The results supported the hypothesis that the P/E ratio is affected, to some extent, by quality of earnings factors. Specifically, quality of earnings variables explained about 11% to 14% of the variation in the P/E multiple. The regression results appear to support a variety of findings by Bell and others which stated that stock-earnings ratios in cross section were poorly explained by historical variables such as growth rate in earnings and financial ratios. Inclusion of an instability index of earnings and other quality of earnings indicators did not improve the predictability of the value-earnings ratio. Use of different functional forms such as the log linear form did not improve R^2 either. This finding is not surprising because financial theory and previous empirical studies suggest that other unspecified factors may contribute significantly in explaining the P/E ratio. These factors include accounting policies, changes in accounting

methods, disclosure of new information, economic considerations, political factors, and the like.

The regression results also supported the hypothesis that those factors which improve the quality of earnings have positive correlations to the P/E ratio while those factors which detract from earnings quality have negative correlations.

After analysis of the preliminary equations, it was decided to drop from further investigation the growth rate in earnings for a ten year period (GR), the ratio of net income divided by fixed charges (NIFC), the current ratio (CACL), the ratio of deferred taxes to net income (DTN), and the ratio of sales to net income (SNI). GR, NIFC, and CACL were consistently not statistically significant, although they possessed the theoretically expected positive "signs." DTN showed an unexpected positive "sign" while SNI showed an unexpected negative "sign"; both variables were not significant. GR was dropped because GR1 was statistically significant in preliminary equations and was therefore considered a better measure of earnings growth. NIFC was dropped because it possessed a very low t-value in preliminary equations. The positive "sign" found indicates that a high ratio of net income to fixed charges indicates higher quality of earnings. This arises since a high ratio may reflect lower fixed charges in a company's cost structure, thus resulting in greater earnings stability. CACL was dropped because it is a measure of liquidity rather than of earnings quality. The statistical insignificance of the variable indicates that the liquidity position of a firm does not relate to the quality of earnings.

As noted in Chapter II, a common misconception among security analysts is that a company with a good liquidity position has higher earnings quality. As I pointed out there, liquidity refers to a company's ability to meet its short-term obligations; however, such ability does not bear on the quality of currently reported earnings. The regression results acted to confirm that liquidity measures are not a proper yardstick to use in the evaluation of earnings quality. DTN was dropped because it is an irrelevant factor in the evaluation of earnings quality. As I pointed out in Chapter II, some financial experts erroneously believe that a company with a high net income and a low taxable income, has lower quality of earnings. As I noted there, such a belief is unsound since taxable income may be lower only because of the firm's incentive to pay lower taxes. The regression results confirmed the erroneous nature of this belief. SNI was dropped because it is an improper measure of earnings quality. As I discussed in Chapter II, some financial experts hold the erroneous belief that a high percentage of sales to net income indicates higher quality of earnings. They believe that earnings derived from the selling activities of the firm is of the best quality. As I pointed out there, sales may be a lower quality of earnings source than nonoperating income (e.g., rental income under long-term leases) if it shows more instability. In other words, whether a source of income is of higher or lower quality depends upon its stability over time. This is because repetitiveness in earnings enhances the predictability of future earnings. The regression results bear out that the ratio of sales to net income is a meaningless yardstick to

employ in the evaluation of the quality of earnings.

Table 3 reveals that almost all of the explanatory variables showed signs which were consistent with theoretical expectations. Growth rate in earnings (GR1 and GR2), cash flow as a percentage of net income (NINI), dividends per share (DPS), and growth rate in dividends per share (GRD) are positively related to the P/E ratio. Extraordinary items as a percentage of net income (EINI), instability index of earnings (INSI), coefficient of variation in earnings (CVEPS), beta, realization risk in assets (ICP), and the debt-equity ratio (LDPS) are negatively related to the P/E ratio. However, a majority of these variables were not statistically significant as indicated in Table 3. Those variables which were significant were GR1, NINI, and EINI.

There were three variables which possessed wrong "signs" which were not consistent with the theoretical expectations summarized in the previous section. These variables, which were included in Regression 6, were the inventory turnover (CGI), accounts receivable turnover (SAC), and the ratio of depreciation and amortization to net plant (DANP). Although Regression 6 had the highest R^2 (14%) it was rejected because of its inclusion of these variables.

Relative to Regression 5, Regression 4 showed higher t-values for GR1, INSI, ICP, and LDPS.

In Regressions 3 and 4, two important measures of earnings variability -- instability index of earnings (INSI) and coefficient of variation in earnings (CVEPS) -- are included.

Both measures showed negative "signs" (but were not significant). This supports the theoretical expectation that earnings variability detracts from the quality of earnings. This arises since a fluctuating earnings trend makes it more difficult for analysts to predict future income. Since INSI is considered a better measure of earnings instability than CVEPS from theoretical and statistical (higher t-values) points of view, it was decided to only retain INSI in the final equations. In general, Regression 3 was superior to Regression 4 because it possessed a higher R^2 , and included beta and DPS among its variables.

Although Regressions 2 and 3 are somewhat similar, the former does not include CVEPS among its variables.

Regression 1 was the most satisfactory from financial and statistical standpoints. Relative to Regression 2, it showed a higher R^2 , and included two theoretically important variables (GR2 and LDPS). Regression 1 is restated as follows:

$$\begin{array}{r}
 P/E = 5.772 \text{ (Constant)} + .568 \text{ (GR1)} + .120 \text{ (GR2)} \\
 \quad (2.844) \qquad \qquad \quad (.258) \qquad \qquad \quad (.131) \\
 \quad 2.029 \qquad \qquad \quad 2.199 \qquad \qquad \quad .916 \\
 \\
 - 4.305 \text{ (EINI)} - 1.400 \text{ (INSI)} + 2.017 \text{ (NINI)} \\
 \quad (1.280) \qquad \quad (1.407) \qquad \quad (.423) \\
 - 3.362 \qquad \quad - .995 \qquad \quad 4.760 \\
 \\
 - 2.440 \text{ (Beta)} - 3.015 \text{ (ICP)} - .214 \text{ (LDPS)} + .969 \text{ (DPS)} \\
 \quad (1.511) \qquad \quad (24.007) \qquad \quad (.895) \qquad \quad (1.696) \\
 - 1.615 \qquad \quad - .125 \qquad \quad - .239 \qquad \quad .571
 \end{array}$$

$$R^2 = .123$$

Signs associated with the coefficients in this equation were consistent with theoretical expectations. Quality of earnings factors such as GR1, EINI, and NINI have significant effects on the P/E ratio. Beta, INSI, ICP, and LDPS have

negative "signs" but are not significant while GR2 and DPS have insignificant positive regression coefficients.

GR1 and GR2 are both included in the "best" equation in order to see the isolated effects of each on the P/E multiple. The purpose being to determine whether the P/E ratio is better explained by a recent growth rate or a more distant one.

A detailed analysis of the variables included in Regression 1 follows.

The two most important determinants of P/E ratios are EINI and NINI. EINI has a negative effect on the P/E ratio while NINI has a positive effect on it. Such a conclusion with respect to EINI is not surprising since extraordinary items may distort the meaningfulness of reported earnings for a given period, and they may arise as a result of management's desire to manage earnings (e.g., gain on the early extinguishment of debt prompted by a desire to bolster earnings). The negative relationship between EINI and the P/E ratio indicates that investors view extraordinary items to be unreliable. The results also indicate that the higher NINI is, the better the quality of earnings. This may arise since income statement items involving cash have less subjective interpretations and estimates associated with them than non-cash items. NINI's t-value of 4.760 was especially strong.

Growth rate in earnings bears on P/E ratios, but a more distant rate is more important than the more recent one. Although GR1 (the growth rate in earnings for the period 1965-1969) and GR2 (the growth rate in earnings for the period

1970-1974) showed positive signs, GR1 was the only one statistically significant. The reason why GR1 explained the P/E ratio better than GR2 is because GR2 was calculated during the same time period as the other variables and thus its statistical effect on the quality of earnings was diminished. Another reason is due to the high degree of correlation (.48) between GR2 and EINI, as indicated by the correlation matrix in Table 4. Since investors look unfavorably upon earnings increments arising from extraordinary items, the growth rate in income for the 1970-1974 period, which was improved by such items, was discounted by investors. The regression results indicate that investors consider a company's earnings quality to be higher when it enjoys a high growth rate in earnings. This may arise since an increase in net income may indicate greater future "earning potential" associated with the firm.

Earnings variability (as measured by INSI) lowers the P/E multiple. It may therefore be concluded that variability in income statement components reflects lower quality of earnings. As I discussed in Chapter II, the inclusion in net income of one-time gains and losses may result in reported earnings that are not representative of a company's "earning power."

Beta was found to be negatively related to the P/E ratio. This finding indicates that variability in a company's market price per share indicates greater risk associated with the firm. The higher the risk, the lower the P/E ratio.

High financial leverage (LDPS) indicates lower quality

of earnings. This may arise since high leverage results in greater fixed interest charges which may in turn result in earnings instability.

Realization risk in assets (ICP) is unrelated to the P/E ratio. This infers that the amount of intangible assets in a firm's asset structure has no impact on the quality of earnings.

Dividends per share (DPS) is positively correlated to the P/E ratio. It appears that investors prefer dividend distributions, and view such distributions as an improvement in the quality of earnings.

Summary and Conclusion

The regression results supported the hypothesis that earnings quality variables bear on the P/E ratio, and that those variables which improve earnings quality have positive correlations while those variables which detract from earnings quality have negative correlations. The empirical findings also seem to support conclusions previously drawn by Bell and others, although their studies did not relate the P/E ratio to quality of earnings factors. That is to say that the P/E ratio is poorly explained by historical data. Only about 11% to 14% of the variation in the P/E ratio is explained by quality of earnings factors such as earnings stability, cash flow, and other financial ratios. More specifically, the findings are summarized below:

1. The more important quality of earnings factors are EINI and NINI. The former has a negative relationship to the P/E

multiple while the latter has a positive relationship to it. A high percentage of extraordinary items to net income is considered by investors as indicating lower quality of earnings. This is because such items distort the meaningfulness of net income as a surrogate for a company's "earning power." On the other hand, a high percentage of cash flow to reported earnings is viewed as reflecting higher quality of earnings. Reported results that are backed up by cash can be used for dividend distributions and growth opportunities. It also appears that the market relies on operating cash flow to formulate expectations. No other studies looked at EINI or NINI. However, Bell, Martin, and Malkiel and Cragg did look at other aspects of cash flow such as growth in cash flow (net income plus depreciation) and the ratio of cash flow to debt.

2. A high growth rate in reported results reflects higher quality of earnings. This is because rapid earnings growth indicates a sustainable recurrence in profitability in the future. The results also reveal that a more distant rate in income growth is considered more significant than a recent one. It therefore appears that investors rely more heavily on older growth rates to predict P/E ratios. My findings are consistent with that of Bell, Bower and Bower, and Wipperfurth. They also found positive relationships between earnings growth and P/E multiples. Furthermore, Bell found higher t-values for growth rates as his test period was increased from 3 to 10 to 15 years.

3. Measures of earnings variability -- INSI and CVEPS -- showed

negative regression coefficients. Instability in earnings therefore has a negative effect on the P/E ratio. This indicates that stable elements of net income are considered to be of higher quality than random or temporary ones. This is because recurring performance can be projected with greater certainty than can erratic performance. My findings are consistent with that of Malkiel and Cragg who found that the instability index of earnings had an insignificant negative sign. In the study by Cohen and Smyth, earnings variability (measured by the rate of return on assets) was found to have a negative regression coefficient. However, their measure of earnings variability is probably an inappropriate one. Since the ratio of net income to total assets may show vacillation if there is a high degree of asset turnover, it is probably not an adequate surrogate for variability in net income. Martin's study considered sales stability while Benishay's study considered expected stability of future income. No prior study considered CVEPS as a measure of earnings variability.

4. Beta is inversely related to the P/E multiple. This indicates that a high beta reflects lower quality of earnings. It also indicates that investors are risk adverse. My result is similar to that of Malkiel and Cragg in that they found beta to have an insignificant negative regression coefficient in three of five years tested. Although Bell and Bower and Bower did not concern themselves with beta, they did examine the correlation between the stability index of share prices and

the P/E ratio.

5. Financial leverage (LDPS) lowers the quality of earnings. This indicates that a high debt/equity ratio is undesirable to investors because it indicates high risk. My finding conflicts with that of Benishay who found the debt to equity ratio to have a positive regression coefficient. Leverage was considered in other studies as well (Van Horne and McDonald, Wipfern, and Cohen and Smyth). However, it was defined differently there than the definition offered here.
6. The ratio of net income to fixed charges (NIFC) had an insignificant negative regression coefficient. An increase in the ratio may reflect a reduction in fixed charges, resulting in better earnings stability. This variable was not tested in any prior study.
7. Realization risk in assets (ICP) possessed a negative "sign" (but was statistically insignificant). This indicates that the degree of asset realization risk is not a measure of earnings quality in the view of investors. No prior studies considered the effect of asset quality on the P/E multiple.
8. Dividends per share possessed a positive "sign" (but was not significant). This indicates an investor preference for dividend receipts. This finding is consistent with that of Martin and Malkiel and Cragg who found insignificant regression coefficients. Benishay, Wipfern, Bower and Bower, and Van Horne and McDonald found positive correlations between dividends and the P/E multiple. However, Bell found a negative relationship. His result is surprising since it indicates that dividends-don't-count. It would seem that an increase

in dividends should increase the price-earnings multiple since investors prefer distribution to retention of earnings. However, an explanation for his finding may be that investors view lower dividends as an indication that the firm has numerous profitable investment opportunities available and that a high rate of income growth can be anticipated. In such a case, the regression coefficient will be negatively biased.

9. Measures of liquidity such as CACL, SAC, and CGI had no effect on the P/E ratio, indicating that the liquidity position of a firm does not relate to the quality of earnings. This finding confirms my previous analysis in other chapters in which I pointed out that liquidity measures are not valid tools to evaluate the quality of earnings. No other studies related the liquidity indicators used here to the P/E multiple.

10. The ratio of deferred taxes to reported earnings (DTN) possessed a theoretically unexpected positive "sign" and was not significant. The regression results highlight the erroneous nature of the belief among many financial experts that the percentage of taxable income to book income is a measure of earnings quality. This yardstick is irrelevant. Taxable income may be less than book income only because the firm has taken advantage of IRS provisions in its favor. No prior work related deferred taxes to the P/E ratio.

11. The ratio of sales to net income (SNI) showed a theoretically unexpected negative "sign" and was not significant. As I mentioned in prior chapters, some financial experts are of the erroneous belief that operating income is of higher

quality than nonoperating income. As I pointed out in my analysis, sales may be of lower quality than "other income" if it is more erratic in nature. The regression results support my position that earnings generated from the selling function of a firm is not necessarily a high quality of earnings source. No other study considered this variable.

In conclusion, some factors which improve earnings quality had positive regression coefficients relative to the P/E ratio while other factors which detract from earnings quality had negative coefficients. Examples of the former were NINI and growth rate in earnings. Examples of the latter were EINI, INSI, beta, and LDPS. In addition, the study supported the hypothesis that the value-earnings ratio is affected, to some extent, by quality of earnings factors. Specifically, 11%-14% of the variation in the P/E ratio was explained by certain quality of earnings characteristics. Of course, the quality of earnings factors included as explanatory variables were very limited for previously stated reasons (cited in the Hypothesis section). Finally, the results showed that certain financial ratios thought to be useful in evaluating earnings quality by financial experts were improper yardsticks. Examples are CACL, SAC, DTN, and SNI.

TABLE 2

REGRESSION ANALYSIS - DESCRIPTION OF DATA

<u>Variable Name</u>	<u>Variable Description</u>
GR1	Growth rate in earnings per share (adjusted) for the period 1965-1969
GR2	Growth rate in earnings per share (adjusted) for the period 1970-1974
GR	Growth rate in earnings per share (adjusted) for the period 1965-1974
NIFC	Coverage of Fixed Charges Ratio (Net Income \div Fixed Charges)
CGI	Inventory Turnover (Cost of Goods Sold \div Inventory)
SAC	Receivable Turnover (Sales \div Accounts Receivable)
DANP	Depreciation Rate on Net Plant (Depreciation \div Net Plant)
CACL	Current Ratio (Current Assets \div Current Liabilities)
EINI	Extraordinary Items \div Net Income
NINI	Cash Flow as a percentage of Reported Earnings (Net Income + Depreciation + Amortization \div Net Income)
ICP	Realization Risk in Assets (Intangible Assets \div Current Assets + Plant + Investments + Intangible Assets)
LDPS	Debt to Equity Ratio (Long-term Debt \div Preferred Stock + Common Equity + Intangibles)
DTN	Deferred Taxes \div Net Income
SNI	Sales \div Net Income
DPS	Dividends Per Share
GRD	Growth Rate in Dividends Per Share
INSI	Instability Index of Earnings
CVEPS	Coefficient of Variation in Earnings
PER	Price-Earnings Ratio (Adjusted Average Stock Price \div Adjusted Earnings Per Share)

TABLE 3
A. SAMPLE OF REGRESSION RE

Regression Equation		Constant	GR1	GR2	EINI	INSI	CVEPS	NINI	BETA
(1)	C	5.772	.568	.120	-4.305	-1.400		2.017	-2.440
	SE		(.258)	(.131)	(1.280)	(1.407)		(.423)	(1.511)
	T		2.199*	.916	-3.362*	-.995		4.760*	-1.615
(2)	C	6.003	.559		-3.722	-1.389		1.973	-2.491
	SE		(.257)		(1.116)	(1.388)		(.419)	(1.506)
	T		2.172*		-3.334*	-1.000		4.701*	-1.653
(3)	C	6.194	.563		-3.773	-1.330	-.114	1.979	-2.506
	SE		(.259)		(1.130)	(1.410)	(.423)	(.422)	(1.513)
	T		2.177*		-3.336*	-.943	-.271	4.685*	-1.656
(4)	C	3.827	.570		-3.729	-1.507	-.119	1.980	
	SE		(.260)		(1.135)	(1.406)	(.424)	(.422)	
	T		2.191*		-3.285*	-1.071	-.282	4.686*	
(5)	C	6.107	.561		-3.742	-1.350		1.972	-2.493
	SE		(.258)		(1.123)	(1.405)		(.420)	(1.509)
	T		2.174*		3.332*	-.960		4.687*	-1.651
(6)	C	13.864	.520		-4.079	-1.015	-.080	2.044	-2.880
	SE		(.257)		(1.124)	(1.376)	(.421)	(.419)	(1.518)
	T		2.026*		-3.628*	-.738	-.190	4.873*	-1.897

C = Coefficient
SE = Standard Error
T = T-Statistic

* Indicates the variables that are statistically significant at the 90% level; the

TABLE 3
A. SAMPLE OF REGRESSION RESULTS

<u>CVEPS</u>	<u>NINI</u>	<u>BETA</u>	<u>ICP</u>	<u>LDPS</u>	<u>DPS</u>	<u>GRD</u>	<u>SAC</u>	<u>CGI</u>	<u>DANP</u>	<u>R²</u>
	2.017 (.423) 4.760*	-2.440 (1.511) -1.615	-3.015 (24.007) -.125	-.214 (.895) -.239	.969 (1.696) .571					.123
	1.973 (.419) 4.701*	-2.491 (1.506) -1.653	-4.851 (23.835) -.203		.950 (1.664) .57					.120
-.114 (.423) -.271	1.979 (.422) 4.685*	-2.506 (1.513) -1.656	-5.104 (24.084) -.211	-.192 (.898) -.214	.867 (1.699) .510					.121
-.119 (.424) -.282	1.980 (.422) 4.686*		-5.727 (24.180) -.236	-.280 (.888) -.315		.665 (1.100) .604				.110
	1.972 (.420) 4.687*	-2.493 (1.509) -1.651	-4.521 (23.943) -.188	-.172 (.894) -.193	.893 (1.693) .527					.120
-.080 (.421) -.190	2.044 (.419) 4.873*	-2.880 (1.518) -1.897*					-.358 (.207) -1.721	-.154 (.165) -.933	-29.680 (29.712) -.998	.141

ificant at the 90% level; the critical t-value equals 1.729.

TABLE 4

CORRELATION MATRIX*

	<u>PER</u>	<u>1a</u>	<u>1b</u>	<u>1c</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
PER	1.00	.13	-.02	-.01	-.07	.22	-.02	.02	-.03
1a	.13	1.00	-.02	-.07	.00	.00	.03	-.01	.04
1b	-.02	-.02	1.00	.01	.48	.13	-.07	.03	.02
1c	-.01	-.07	.01	1.00	.01	-.02	.01	.13	.01
2	-.07	.00	.48	.01	1.00	.45	-.02	-.00	.02
3	.22	.00	.13	-.02	.45	1.00	-.07	-.07	.07
4	-.02	.03	-.07	.01	-.02	-.07	1.00	-.08	.15
5	.02	-.01	.03	.13	-.00	-.07	-.08	1.00	-.08
6	-.03	.04	.02	.01	.02	.07	.15	-.08	1.00
7	-.07	-.01	.06	-.07	-.11	.06	.05	.05	.01
8	-.11	-.09	-.05	-.06	-.09	-.04	.14	.11	-.12
9	.01	-.15	-.01	.13	.02	-.01	-.16	.17	.15
10	-.02	.04	-.00	-.02	-.11	-.06	.06	-.11	-.06
11	-.02	.00	-.02	-.02	.01	-.01	-.02	.01	.05

TABLE 4

CORRELATION MATRIX*

<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
.22	-.02	.02	-.03	-.07	-.11	.01	-.02	-.02
.00	.03	-.01	.04	-.01	-.09	-.15	.04	.00
.13	-.07	.03	.02	.06	-.05	-.01	-.00	-.02
-.02	.01	.13	.01	-.07	-.06	.13	-.02	-.02
.45	-.02	-.00	.02	-.11	-.09	.02	-.11	.01
1.00	-.07	-.07	.07	.06	-.04	-.01	-.06	-.01
-.07	1.00	-.08	.15	.05	.14	-.16	.06	-.02
-.07	-.08	1.00	-.08	.05	.11	.17	-.11	.01
.07	.15	-.08	1.00	.01	-.12	.15	-.06	.05
.06	.05	.05	.01	1.00	.30	-.19	.03	.11
-.04	.14	.11	-.12	.30	1.00	-.01	.02	-.08
-.01	-.16	.17	.15	-.19	-.01	1.00	-.15	.04
-.06	.06	-.11	-.06	.03	.02	-.15	1.00	-.04
-.01	-.02	.01	.05	.11	-.08	.04	-.04	1.00

TABLE 4-Continued

	<u>PER</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>
PER	1.00	.01	-.07	.01	-.11	.02	.02
12	.01	1.00	-.03	-.02	-.13	-.04	-.05
13	-.07	.03	1.00	.05	.08	.07	.07
14	.01	-.02	.05	1.00	-.02	-.04	.05
15	-.11	-.13	.08	-.02	1.00	-.11	-.06
16	.02	-.04	.07	-.04	-.11	1.00	.02
17	.02	-.05	.07	.05	-.06	.02	1.00

*The variable numbers tie-in to those numbers and variable descriptions appearing in "The Complete Structure" on page 252. The correlation between variables is expressed to the nearest hundredth.

RECOMMENDATIONS

PART IV

CHAPTER IX

TOWARDS A USEFUL AND OPERATIONAL DEFINITION OF THE CONCEPT
"QUALITY OF EARNINGS"

In this chapter are summarized the most important conclusions, drawn from the foregoing research, with respect to the subject matter of the term "quality of earnings," as well as recommendations for a definition of the term and for additional disclosures which will be useful to security analysts in their evaluation of earnings quality. First, the chapter develops the meaning and boundaries of the concept "quality of earnings" and shows how it can most usefully be applied in practice. An attempt is made to bring order out of the present chaos surrounding the meaning of the term and to build a logical rationale for it. This will be achieved by extracting from the research findings those factors that are relevant and useful in explaining and describing a company's earnings quality. For example, there are numerous factors that a majority of accountants, security analysts, and financial managers agree as constituting quality of earnings characteristics. After formulating a clear and concise definition of the term, the writer will offer specific reasons why certain beliefs held by financial experts about the quality of earnings are erroneous. Finally, disclosures

important to the evaluation of earnings quality, which the research indicates are necessary but not now required, will be recommended.

The above topics will be taken up under the following headings: (1) A Useful and Operational Definition of the Concept "Quality of Earnings"; (2) Confusion Surrounding the "Quality of Earnings" Concept Relative to the Definition; (3) Summary of Findings; (4) Types of Disclosures which would be Useful to Security Analysts in the Evaluation of the "Quality of Earnings" as Defined; (5) Conclusion; and (6) Suggestions for Further Research.

A Useful and Operational Definition of the Concept
"Quality of Earnings"

Although the term "earnings quality" is referred to by various sources such as the accounting and finance literature, the publications of the SEC and FASB, brokerage reports, and Management's Analysis of Results of Operations, there is no uniform or consistent way in which it is applied. An urgent need therefore exists for a concise and meaningful definition of the term.

From the analyses in the preceding chapters it is evident that the major difficulty in developing a definition of the term is that no simple single definition can exist for it. A definition of earnings quality will not allow itself to be compacted into a sentence or even a paragraph, but must rather be formed in terms of favorable and unfavorable characteristics in earnings. Those who use the term in their

analyses must determine for themselves the extent to which the characteristics exist.

The word "quality" is both normative and value-laden; anything that is "better" has quality. However, to make the concept operational some boundaries must be determined. Therefore, the elements which legitimately comprise a useful and operational definition of the concept will be discussed here.

The concept of earnings quality is relative rather than absolute. It refers to comparing the attributes of reported earnings among companies in an industry. The determination of an absolute figure representing a given firm's earnings quality is impossible since analysts will differ as to their adjustments to reported results. Therefore, in appraising the quality of earnings, we are concerned with determining the degree to which a company's net income is of higher or lower quality relative to that of another.

Some points which should be borne in mind are:

First. The "quality of earnings" term encompasses much more than the mere understatement or overstatement of net income; it refers also to such factors as the stability of income statement components, the realization risk of assets, and the maintenance of capital. For example, poor quality of earnings may be indicated when a firm has not properly maintained assets, or when its income statement elements are highly erratic. Although net income has not been manipulated earnings quality is still poor.

Second. The concept "quality of earnings" is basically an analytical tool. It affects the P/E ratio in equity decisions. The marketplace assigns lower multiples to lower quality of earnings. In lending decisions, the quality of earnings bears upon the effective interest rate. When earnings quality deteriorates, lenders request higher interest rates and/or compensating balances. If the deterioration is acute, the more desirable sources of current financing may be unavailable to the firm. A company may find it necessary, for example, to borrow from finance companies because bank loans are suddenly not available. This alternative source of financing will result in higher interest costs. A company's bond rating may also be affected by its quality of earnings. For example, a high degree of earnings instability may result in lower bond ratings being assigned to the firm by such services as Standard and Poors, Moodys, and Value Line. As a result, the market price of its bonds may decline. It should be remembered that changes in P/E ratios, effective financing costs, or bond ratings are outcomes rather than causes of the quality of earnings.

Third. Earnings quality relates to the nature of currently reported results. The term should not be used with reference to intangible characteristics relating to future performance as the ability to introduce new products or adapt to new technologies. These have nothing to do with present earnings.

Fourth. "Quality of earnings" refers to those factors which would preclude investors or their surrogates from attaining

a state of indifference among investments in firms exhibiting the same reported earnings. Specifically, two firms in a given industry may report identical earnings but may be quite dissimilar in terms of operational performance. This is due to the fact that identical earnings may possess different degrees of quality. For example, company A and company B may report the same earnings but company A may have exaggerated its net income by income manipulation and by the arbitrary reduction of discretionary costs. In addition, company A may have very liberal accounting policies compared to company B which uses realistic accounting policies. Under these circumstances, company A has lower quality of earnings relative to company B. The key to evaluating a company's earnings quality is to compare its "earnings profile" (that is, the mixture and the degree of favorable and unfavorable characteristics which are associated with reported results) with the "earnings profile" of other companies in the same industry. Analysts attempt to assess earnings quality in order to render the earnings comparable, and to determine what valuation should be placed upon those earnings.

The purpose of this section is to discuss those factors which are desirable characteristics in earnings and which contribute to their quality as defined. But the reader must bear in mind that predictability, recurrence and other characteristics conducive to "quality" are not necessarily inherent in business life, desirable as they may be.

Given the state of the art and the different analytical

objectives, reported net income is only a starting point for analysts in assessing the quality of reported results. Consideration must be given to positive and negative attributes in earnings. Such attributes may exist in different proportions and intensities in the "earnings profiles" of various companies within an industry.

Although all analysts should be in basic agreement as to the desirable characteristics in earnings, subjective, and therefore varying, weights will be assigned to them by the different analysts. The desirable characteristics in earnings cannot be quantified objectively, and there is no number that all security analysts will agree on as representing the magnitude of a specific "quality of earnings" element. However, there should be a pattern in the ranking process indicating which characteristics are more important leading to a general consensus as to which factors are "strong" or "weak" in a particular "profile of earnings."

The evaluation of reported results is a very complex and time-consuming task. There are no commonly accepted guidelines or measuring yardsticks to follow in rating the relative significance individually or cumulatively of the factors bearing on the quality of earnings. Further, the significance of certain quality of earnings factors (e.g., business risk) to the analyst can change as his preference for risk shifts.

When two competitors report identical earnings, the company which lacks most of the desirable characteristics will generally have lower earnings quality than the company which

has most of them. Analysts must also address the problem of evaluating earnings of competitive companies which report substantially different net incomes. The earnings quality of the firm reporting higher net income may in fact be inferior if the firm is burdened with more undesirable characteristics in earnings than its low income reporting competitor.

The recognition of desirable characteristics is important if the ability to distinguish between high and low quality of reported earnings is to be improved. Much of the research undertaken in this study has been directed toward isolating those factors which should be considered in appraising quality. Although neither perfect perception nor clear-cut answers exist for every case, the discussion herein should assist analysts in making finer distinctions between the earnings qualities of the different business enterprises.

A widely discussed topic in the financial literature is the efficient market hypothesis which holds that stock prices immediately and fully reflect all available information. Advocates of the theory argue, therefore, that any attempt to obtain an advantage by means of security analysis and its special branch, financial statement analysis, will be futile. For example, Professors J. Lorie and M. Hamilton¹ write that

¹J. Lorie and M. Hamilton, The Stock Market: Theories and Evidence (Illinois: Richard Irwin, 1973), p. 100.

"the most general implication of the efficient market hypothesis is that most security analysis is logically incomplete and valueless."

The following tentative conclusions have been offered by the efficient market advocates: (1) In the long-run, the stock market reflects economic reality; (2) The stock market can differentiate between real economic changes and the apparent changes due to the employment of alternative accounting principles; (3) Accounting data are used in portfolio decisions; and (4) Inside information will give the analyst an advantage over others until this information is used.

These findings have an important implication for security analysis. Since conventional statement analysis tools and their results are known to the market the value of these tools is already reflected in stock prices. Consequently, the security analyst should attempt to convert reported financial data to "inside" information by using innovative analytical tools and keeping the results of his efforts secret. However, once the analyst acts on such information, it is immediately reflected in the price of the particular firm's stock.

The writer believes that the efficient market model is in conflict with logic and the observed realities of the stock market.

First, the model fails to take into account the difference between financial data itself and its proper evaluation. Even if a stock price adjusts immediately for

all new information as it is received, that price may still not represent the value of the share. Under- or over-valuation may arise if the data are not evaluated properly. If the proponents of the theory relate "market efficiency" to raw data rather than to the valid interpretation of such data, then they have not succeeded in refuting the importance of fundamental security analysis.

Second, adherents to the hypothesis themselves admit that a "select few" analysts, possessing unusual ability, will be successful. But if this is true, such ability must rest on other than clairvoyance, and the argument that security analysis is valueless must collapse.

Third, proponents of the theory argue that random selection of a security is as good as any other method for making investment decisions. One must then accept also the illogical implication that institutional investors spend huge sums on useless research.

Numerous unanswered questions also still surround the hypothesis. What is relevant information? What constitutes new financial data? How long does it take for the stock market to impound all available information? The validity of the theory rests on such as-yet-unknowns. In short, the rationale behind the efficient market hypothesis is weak. In the writer's opinion financial statement analysis is both logical and extremely useful in the selection of profitable investments. Such analysis includes the evaluation of desirable and undesirable characteristics in earnings

associated with companies' reported net incomes.

A discussion of earnings quality characteristics follows. These are subsumed under the broader topics to which they relate, that is: (1) Nature of Accounting Policies; (2) Discretionary Costs; (3) Degree of Certainty of Accounting Estimates; (4) Cash Flow; (5) Maintenance of Capital; (6) Realization Risk in Assets; (7) Stability of Earnings; and (8) Economic Considerations.

Nature of Accounting Policies

A factor which affects the quality of earnings is the accounting and computational discretion of management and auditors in selecting from among GAAP. Conservatively determined earnings are generally considered to be of higher quality than liberally determined earnings because they are less likely to prove overstated in the future. The use of liberal accounting principles and estimates render a lower quality of earnings. However, ultra-conservatism may result in a lack of reporting integrity over the long-run and cannot be viewed as a desirable factor. Further, the use of the most conservative accounting policy rather than the most realistic one is undesirable in that it results in understated earnings.

Quality of earnings also relates to the extent of conservatism associated with estimates of current and future conditions. This applies to the risk associated with estimates or assumptions being misleading or overoptimistic. Analysts must be on the look-out for clues which will indicate such

improper estimates. An example of an unwarranted estimate is when a company depreciates a given machine over a period which exceeds that used by its competitors and such period materially exceeds the technological life normally expected for that machinery. An indication of whether the firm's assumptions are inappropriate may be when it has continually misjudged the lives of its assets in previous years. If its estimates have been materially different from actual experience, the reliability of its estimates may be in doubt. Significant gains and losses on the sale of assets may be an indication that inaccurate estimates were originally used.

In evaluating the appropriateness of a firm's accounting policies, analysts should compare those policies with the typical accounting policies employed in the industry. If the firm's policies are relatively more liberal, its quality of earnings is relatively lower.

Conformity with GAAP does not necessarily mean high quality earnings. Quality exists when accounting policies reflect economic reality, implying that the measurement standards used reflect accurately the economic substance and financial realities of the company's transactions. For instance, a company should adopt a depreciation method that measures most closely the decline in service potential of its fixed assets. Realistic accounting principles are often cited in AICPA Industry Audit Guides.

Economic reality will impinge upon many financial statement elements, and if the reality is improperly recognized,

the reported data will, of necessity, lead to lower earnings quality, and will make conclusions about a firm's earning power that much more difficult to render.

Analysts should determine what the impact on earnings would have been if a firm used realistic accounting policies (e.g., based on the Audit Guides) instead of the accounting policies followed. If the employment of realistic policies would have resulted in substantially less earnings, the quality of reported results is lower.

Corporate accounting policies must reflect the economic reality of the industry of which the firm is a part. For example, the macro-economics of an industry may be such that the "ebb" of the season is March 31. This should be the fiscal year-end date because it is at this time that the level of inventory is at its minimum. There is less likelihood of inventory estimation error in dollar terms. The use of another year-end date could have a distorting effect on earnings. For instance, an inventory count at the "height" of the season could result in greater estimation error since the level of inventory will be much higher.

If accounting changes are unjustified or unrealistic, they will not reflect appropriately the economic substance of transactions. Reduction of bad debt provision as a percent of sales even though shipments are being made to more marginal customers, and nominal increases in the sales allowance account even though sales and corresponding returns have increased

significantly, are examples of such changes. In 1975, U.S. Steel made an unrealistic accounting change. The company adopted more liberalized pension assumptions (adopting the unit credit method and lengthening the amortization period for past service costs) which reduced pension expense by \$19 million even though at year-end 1975 its liability for vested benefits exceeded the value of trust assets by \$300 million and unfunded past service costs approximated \$1.2 billion. The company also decided to include certain employee benefit costs as part of cost of products sold rather than continuing its previous policy of expensing these costs as incurred. Inconsistency in the application of accounting policies and changes made to bolster earnings will render results less meaningful and will create difficulty in predicting future income.

Corporate disclosure with respect to termination of auditor contracts stemming from a disagreement over a proposed accounting change must be noted by analysts. If the new auditors agree to the desired change, the company must disclose what the effect on net income would have been if the "old" method had been retained. Analysts should evaluate the appropriateness of the new method by referring to the Audit Guides. If reported results are substantially greater as a result of the accounting change, the earnings increment may be suspect.

Overstatement or understatement of net income lowers the quality of earnings because reported results do not accurately reflect operating performance, and as a result reported earnings are misleading to investors. Such misstatements are traceable to

any number of sources, and each possible source must be both recognized and analyzed for its impact on profit distortion. For example, over-accrual or under-accrual of expenses results in earnings misstatement. An over-accrual occurs when a company provides an allowance for sales returns which are unlikely to ensue. An under-accrual occurs when a lessor fails to provide an allowance for typical maintenance services on rented equipment because it is being used by lessees.

Unwarranted deferral of expenditures overstates earnings since reported results have been relieved of appropriate charges. An example is the capitalization of increased fuel costs when it is highly unlikely that the regulatory body will allow such costs to be passed on to consumers. Boeing recently made a questionable deferral of costs. General and administrative expenses relating to long-term U.S. Government contracts capitalized in inventory amounted to \$24.1 million at year-end 1976 compared to \$12.5 million at year-end 1975. The increase amounted to \$0.27 a share. Capitalized G&A expenses increased in spite of a substantial decline in inventories to \$435.1 million at year-end 1976 from \$777.7 million at year-end 1975. Further, a company may include in inventory costs which were accounted for as period expenses in previous years. For example, in 1970 and 1971, Reed Tool made several changes in accounting methods where certain costs previously expensed as incurred were classified as overhead expense, consequently increasing inventory. This had the effect of increasing pretax income by \$1,186,000 and \$777,000 for 1970 and 1971, respectively.

Unjustified reductions in expenses result in lower earnings quality. For example, Combustion Equipment Associates recorded \$800,000 as a claim receivable and reduced its costs for expected recoveries of excess costs resulting from changes in certain government contracts. The effect was to increase per share earnings by \$0.21. Since these expectations were exaggerated, its earnings were overstated.

Companies which provide for expense provisions (e.g., warranties) or losses in the current period because they failed to make adequate provisions in previous years have lower earnings quality. Current year earnings are understated because they include charges belonging more properly to previous years. For example, in 1972, Kennecott Copper recognized a loss on the settlement of customer notes of \$9.8 million. Was it not known in prior years that such notes were likely to become uncollectable?

A company which provides for an "accounting cushion" understates net income, thus lowering the quality of earnings. For example, a company's allowance for bad debts to accounts receivable may substantially increase even though the company's bad debt write-off experience has become much better. In this case, the overstatement of bad debt expense unjustifiably understates earnings.

Any form of income manipulation will result in earnings which reflect not the economic results as they are but rather as the firm wishes them to be. This masks the inherent cyclical irregularities which are part of the reality of the firm's experience and, therefore, lowers earnings quality. Further, a company's taking of a "financial bath" results in lowering

current period net income while relieving future income of these charges. Improper recognition of revenue, either prematurely or belatedly, lowers the quality of earnings. For example, the recognition of revenue before it is reasonably assured to be collectable may result in the reporting of earnings in one year and its reversal, and a resultant loss, in a subsequent year. Net income is improperly stated for both periods. Recognizing revenue without providing for an adequate provision for future losses also lowers earnings quality. For example, in the 1960's bowling equipment manufacturers recognized the entire profit on bowling equipment sales immediately, even though the customers were inexperienced and poorly financed. Further, the bad debt provision significantly understated the special risks involved. Interest should not be accrued on loans which may not be recoverable. For example, Cabot, Cabot and Forbes Land Trust (a REIT) continued to recognize interest and rental income on bankrupt and foreclosed properties where such amounts of revenue were highly unlikely to be collected. Interest should stop being accrued when the first indication of difficulty is evident. This may be the point where the value of the collateral is less than the balance of the loan.

(The reader should be reminded that some financial experts believe that the quality of earnings notion relates solely to income manipulation. While they do relate, they are not the same thing. We cannot cite all deficient and improper accounting and say that it lowers earnings quality. The

boundaries of quality of earnings must be limited in order to make it a useful concept. Income manipulation is just one of the numerous factors detracting from the quality of earnings).

Immediate recognition of income may be undesirable when substantial services are yet to be performed. For example, health spas often recognize as income, the advance cash payment for membership dues when received. It would be more appropriate to apportion these dues over the membership period similar to magazine publishing accounting practices.

In conclusion, the quality of net income depends on the degree to which earnings stand on their own for the current period, as well as on the degree to which they borrow from the future or benefit from the past. Earnings are of higher quality if they accurately portray the economic performance of the business entity for the period.

Discretionary Costs

Unjustified reductions in discretionary costs can have a negative effect on future earning potential. A cutback in training and development costs may reduce employee capability to keep up-to-date. A reduction in advertising may result in the loss of market share. Declining trends in discretionary costs as percent of sales and/or as percent of the assets to which they apply may impair the quality of the earnings increment. However, such reductions may be justified if discretionary costs in prior years were abnormally high.

For example, the reduction may arise in order to eliminate waste and inefficiency. If the trend in discretionary costs is a vacillating one, it may be a sign that the firm is managing income by altering these costs. For example, Geo. A. Hormel's advertising costs declined by 22% in 1973 but increased by 61% in 1974. Reported earnings should be adjusted for any unrealistic changes in discretionary expenses.

Degree of Certainty of Accounting Estimates

A composite of accounting estimates and judgments is inherent in the income measurement process since the calculation of net income will require at a minimum some estimation and subjective valuation. However, if one company has many more subjective estimates than another company in determining revenue and expense items, its resulting earnings figure may be more uncertain. Analysts should, therefore, distinguish between factual and interpretive information entering profit determination. This involves isolation of income statement elements representing cash and near cash transactions from those involving subjective interpretations. For example, estimated expenses have more uncertainty attached to them than do cash expenses.

A firm that has experienced in prior years a significant deviation, in either direction, between estimated reserves and actual losses has greater uncertainty attached to its earnings. Furthermore, if reserves for future costs are

consistently less than actual losses, the firm may be under-accruing for its reserve contingencies. An inadequate provision results in lower quality earnings.

The inherent characteristics of certain companies require that they make numerous subjective accounting estimates. Companies engaged in long-term business activities (e.g., construction companies using the percentage of completion method) must determine the extent of partial completion of contract work. Companies engaged in risky business activities (e.g., manufacturers of explosives) may have difficulty in determining reserve provisions. Insurance companies specializing in medical malpractice coverage may also have difficulty in estimating future costs. Inflation and a changing social atmosphere make it difficult for companies to accurately estimate future malpractice awards.

The problem of subjectivity is itself not a static one. Price levels and technologies change over time, and estimates which are subjective in one accounting period may become more or less so in later periods.

Cash Flow

When subjective evaluations are an important factor in the determination of net income, management has more leeway in revising its estimates in order to influence earnings. Therefore, accounting policies which do not track cash flow have more subjectivity associated with them.

As discussed in Chapter II (pp. 38-40), the recording of revenue or expense which is close to cash recognition

usually has "harder" objective evidence supporting the transaction. On the other hand, revenue or expense recognition which is far removed from cash flow involves more interpretation. This may result in an uncertain earnings figure, i.e., one of lower quality from an analytical point of view. Income statement items recognized close to the point of cash receipt and payment constitute a desirable earnings characteristic. An example of such an item is sales that immediately convert to cash after being recorded.

Many financial experts believe that an increasing trend in cash flow indicates higher quality of earnings. This may not be true since cash flow may be increasing solely because of increases in non-cash expenses (e.g., depreciation). Such items are not sources of funds and will not improve the cash position of the firm. Thus, cash flow as a percent of net income -- although a good analytical tool -- is not an appropriate measure of the quality of earnings.

Maintenance of Capital

Earnings quality depends on the extent to which adequate provision has been made for the maintenance of productive assets. Failure to replace obsolete fixed assets by new and more efficient equipment, and failure to perform necessary repairs on existing equipment, will result ultimately in decreased operational efficiency. This will have a negative effect on corporate "earning power" and results in lower quality of earnings.

Poor capital maintenance is implied when a firm has

no regular program for upgrading assets. It may also be indicated when there has been a decline in the percent of repairs and maintenance to fixed assets. For example, Wheeling Steel reduced repairs expense by \$3.2 million, or \$0.79 per share in 1958. Boeing reduced its maintenance expenditures from \$46.8 million in 1975 to \$44.2 million in 1976.

Analysts should also ascertain the age and condition of each major asset category, as well as the replacement costs of the category's component parts. Further, they should examine the trend in the dollar amount of fixed asset acquisitions to total gross assets. A substantial decline in the trend may indicate that older machinery is not being replaced rapidly enough.

In evaluating the degree of a company's maintenance of capital, we must consider the rate of return being earned on its assets. If the return is acceptable, then the proper investment decision is to maintain and improve production facilities. Similarly, if their return in the industry is high and/or if the industry is in the process of growth, new equipment should be acquired. Under these circumstances, the company's failure to keep its plant and equipment up-to-date will detract from its competitive position. On the other hand, if the rate of return being earned on corporate assets is unsatisfactory, the company would be justified in not maintaining capital. Similarly, if the industry is in a state of decline, equipment replacement and repair should be restricted. Under these circumstances, the rational investment decision is to defer maintaining capital. For example, a

company would be justified in not improving production facilities at branch locations that are being phased out.

Analysts should determine whether a company's policy of not maintaining capital is of a short-term or long-term nature. If it is a temporary policy, it may mean that the firm is presently short of cash and/or wishes to maintain its profit levels. If it is a permanent decision, it has serious implications. It means that management does not want to invest further in the business since it views the company as being in a state of liquidation.

A firm with specialized or risky fixed assets is more vulnerable to asset obsolescence. An example is equipment used to make specialized currently fashionable "fad" products which are highly dependent on changing consumer tastes (e.g., hula hoops, passion rings).

Realization Risk in Assets

A critical analysis and evaluation of the amounts recorded as assets represents a check on the validity of reported results. The overstatement of assets results in the overstatement of earnings.

Quality of assets refers to the degree of certainty associated with the amount and timing of the realization of assets in cash. This quality is affected by a number of factors including changes in industry and economic conditions, and changes in the nature of corporate activities.

Quality of earnings can be measured through an analysis

of a company's asset structure according to risk category. An asset structure with a high realization risk is unfavorable to earnings quality. This is because high risk assets may have uncertain realizable values and may require future write-offs. If the determination of net income involves the capitalization of costs which possess a high degree of risk as to future realization, then reported earnings are of lower quality than similar income which does not result in the recording of such high risk assets.

Different degrees of risk are associated with the future realization of different types of assets. For example, the probability of realization of notes receivable is generally greater than the probability of realization of deferred start-up costs.

The realization risk of each major asset category should be evaluated. For example, certain types of receivables have high realization risk such as notes receivable arising from extensions of unpaid balances from delinquent customers, advances to politically and economically unstable foreign governments, receivables for claims under government contracts, and receivables from large industrial customers that are experiencing severe business problems.

A high ratio of intangible assets and deferred charges to total assets indicates an asset structure of high realization risk. Assets with low realizability may be overstated, and as a result, require future write-off. The failure to reflect write-downs on such assets results in

lower quality earnings. Unamortized balances of intangible assets are often overstated relative to their market value or future income-generating potential. In a recession, for example, a firm's goodwill may be overstated, if not worthless. Since APB Opinion No. 17 provides for a forty-year amortization period for intangibles, some firms tend to ignore economic reality by only making minimum amortization provisions. Further, intangibles acquired prior to the effective date of the Opinion are not even subject to such minimum amortization. However, it should be noted that in some cases intangible assets may contribute in an important way to a business, and may in fact be under-valued. For example, the recorded amount for patents may be understated relative to its intrinsic value. Deferred charges require careful examination because their validity and character are so varied in nature, depending as they do to such a large degree on estimates of future probabilities that are often overly optimistic. There is a higher consequent risk of failure to achieve expectations with these assets as compared with other types of assets. An example of a questionable deferred item is software engineering costs for leased computer systems included in the rental equipment account for computer manufacturers. This account may be overstated because there exists, to a significant degree, the potential exposure to unexpected equipment returns, which may cause surprise write-offs. Similarly, in extractive industries, the full cost method allows companies to defer unsuccessful

exploration and drilling expenses. Under certain circumstances, this policy might result in the overstatement of assets because the total amounts capitalized as cost of reserves could substantially exceed the value of such reserves. In this case, the deferred account is overstated and not in accord with economic reality. Furthermore, some companies continue to retain capitalized costs on their books even though exploration activity has ceased. The failure to write-down such excess costs results in an overstatement of both assets and earnings. It must be noted, however, that in some cases an increase in deferred charges may be proper. For example, the deferral of start-up costs is justified where a company has begun a new operation in order to expand its market share. In this case, the deferred costs have future realizable value in that the new facilities will enhance the firm's future earning potential.

An indication of high realization risk in an investment portfolio is the decline in the trend of income generated by investments to their carrying values. Such a decline may indicate the firm's failure to adequately recognize decreases in security market values. The analyst should also determine the degree to which the investment portfolio consists of stable and volatile securities. The former generally has less realization risk than the latter. Also, securities having negative correlations to each other adds more market price stability to the portfolio than securities with positive correlations. In the case of the former, some securities

will increase in market value at the same time that others decrease. In the case of the latter, the price changes of the securities will move in the same direction. Further, less realization risk is indicated when a portfolio is diversified by industry and economic sector.

In addition to the assets discussed above, high realization risk can lurk almost anywhere in the balance sheet, and consequently affect the quality of earnings. The only certain rule which can be laid down for analysts is that each asset must be analyzed on its own as well as in relation to the body of assets belonging to the company.

Stability of Earnings

By "earnings stability" is meant that reported earnings, along with individual income statement components, have been and are expected to be recurring in nature. This recurrence is a desirable characteristic in reported results and contributes to the quality of earnings. (However, stability should not be gained by artificial smoothing). Analysts consider income arising from recurring transactions related to normal business activity to be of higher quality than income arising from isolated transactions.

As discussed in Chapter VII (pp. 251-252), quality of earnings can be measured to some degree by the standard deviation, coefficient of variation, and instability index of earnings and by beta. The greater the value of each of these measures for a given company, the lower its earnings stability, and thus the lower the quality of its earnings.

The regression results confirm that these measures are negatively related to the quality of earnings.*

Earnings quality is a function of the predictability of future income. A stable earnings trend provides greater accuracy in predicting future profit than does a vacillating earnings trend because recurring performance can be projected with more confidence than can random events. Consequently, analysts often segregate stable from unstable income statement items. Examples of unstable elements of net income include: (1) income derived from a special edition of a newspaper such as one marking the bi-centennial celebration of a municipality; (2) uninsured casualty losses which are not within the normal risk categories of the firm; (3) losses from property destruction resulting from civil disorder; (4) "windfall" gains such as gains on the sale of low-cost basis fixed assets; and (5) voluntary reduction in capital items (e.g., plant).

Analysts should consider nonrecurring, operating gains and losses as part of the results of operations for the year since every business has its own inherent abnormality and lack of recurring annual pattern. However, nonrecurring, nonoperating gains and losses are nonrepetitive and unpredictable, and are not considered a part of normal

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Many references are made here to the regression results appearing in Chapter VIII (The Correlation Between the Value-Earnings Ratio and Quality of Earnings Factors). The reader may wish to refer to the specific regression coefficients and t-values associated with the explanatory variables as they are discussed in this chapter.

operations. In most cases, they are extraneous and unintended. They should, therefore, be excluded from the analysts' evaluation of net income for a single year. However, they should be included in evaluating the longer-term record of profitability. Therefore, they are considered in the determination of average earnings. It is important to look at average earnings for companies which have fluctuating abnormal income statement elements because a single year is too short and too arbitrary a time period within which to evaluate a company's "earning power."

The inclusion of the cumulative effect of a change in accounting principle in the determination of net income for the period of change points out the need to de-emphasize net income of any given year and to emphasize instead on the average earnings for a period of years. The effect of the change on reported results represents a nonrecurring item that should be taken into account in determining earning power but by itself has no impact on the quality of earnings.

When evaluating earnings, some analysts simply exclude nonrecurring items from net income. In so doing, they are ignoring those distorting factors which thwart easy comparison. This treatment avoids the problem and introduces a more serious distortion of its own. It allows attention to be placed on a revised figure which does not reflect any part of the abnormal item. However, the nonrecurring item may be as valid an element of the firm's income history and "earning power" as any other operating item. Therefore, the inclusion in net income of an

unstable or nonrecurring income statement item does not necessarily decrease the quality of earnings. Nonrecurring items are not of poor quality if they relate to the typical and normal business activities of the entity, and are associated with the long-term earnings stream of the business. (The long-run income history of a company is that period of time between significant reinvestment in plant and productive assets. Reinvestment applies to replacing old facilities with new ones in order to sustain present operations and insure future growth. There is no one number of years that defines the long-run. Rather, the long-run refers to a period that varies among companies depending on the length of time elapsed between major replacement decisions). Furthermore, nonrecurring sources of income (e.g., gain on the sale of machinery) are not valueless since the business has the ability to generate such income over the long-run. However, nonrecurring items may be deducted in arriving at a relevant earnings figure which is more representative of a company's "earning power" than net income.

Nonoperating income that is recurring in nature may add to a company's earnings stability. Royalty income under long-term agreements and rental income under long-term leases provide a steady stream of earnings. For example, IBM's lease income is more repetitive in nature than its sales of computers. This occurs since revenue derived from leases is assured to be collected uniformly over the long-run while sales of computers occur more sporadically depending upon

the state of the economy. The former therefore is a more stable revenue source.

The recurring nature of nonoperating expenses should be evaluated. For example, interest expense may show instability because of changes in the prime rate, the level of borrowing, and changes in the borrowing mix. Interest expense on short-term debt varies with changes in the prime rate which in turn varies with the business cycle and government monetary policy. Interest expense on long-term debt shows more stability. A company with substantial interest expense on short-term debt will show vacillation in this expense category, and its earnings may be unstable as a result.

High quality of earnings factors are those that indicate sustainable recurrence of earnings. Such factors enhance corporate growth and lead to greater earning potential. Included here is the replacement of old production facilities with newer and more efficient ones.

In evaluating earnings stability, analysts should consider the following: (1) Temporary Increases in Profits; (2) Recurrence in Revenue; (3) Product Line Characteristics; (4) Raw Material Sources; (5) Availability of Financing; (6) Operating Leverage; (7) Business Risk; and (8) Changes in the Tax Rate. Each of these subjects will now be discussed in terms of their impact on the quality of earnings.

Temporary Increases in Profits. Earnings increments may arise due to an extraordinary combination of unusual

product demand associated with a shortage situation and unusual boosts in sales prices (e.g., copper, coffee, fertilizer). Such increments are of lower quality since such circumstances are unlikely to re-occur. For example, due to a severe shortage of sugar in 1974, Amstar reported EPS of \$14.07 relative to 1973's EPS of \$4.22. In 1975, the company's sugar market returned to normal conditions.

Increases in income arising from short-term "schemes" and special conditions which are of a temporary nature (e.g., fad items and single government contracts) are not sustainable and lack recurrence.

Income arising from an opportunist market cannot be sustained. Such a market therefore represents a low quality of earnings source. For example, in 1973, Brunswick's net income peaked as bowling machinery was installed in Japan to capacity limits. Another example of a short-lived market was the tremendous early growth in the sale of electronic calculators.

Recurrence in Revenue. Earnings may be of lower quality when revenue lacks recurrence. For instance, revenue derived from the sale of franchises may not show recurrence since within certain geographic areas only a few franchise units can succeed because of strong competition. Such revenue may also lack repeatability since many franchisees are inexperienced and under-capitalized, and as a result will fail. However, in cases where franchisees are financially secure and competent, franchise revenue may show

a high degree of stability.

A firm deriving revenue from a few large industrial users having cyclical operations has lower earnings stability. The loss of one or two major customers will have a very serious impact on the company's operations and thus its recurrence in earnings. Revenue derived from numerous customers that are financially sound provides greater earnings recurrence.

If product demand is overly susceptible to outside forces, revenue stability may be adversely affected. For example, export sales may be curtailed if they are being made to a country that will shortly develop its own capacity to manufacture the item in question.

Revenue derived (after initial sale) from replacement parts and supplies or from the provision of regular follow-up services will generally contribute to earnings stability.

Product Line Characteristics. A firm's product line will have three types of variances: volume, price, and cost. If these components are subject to wide variability, earnings quality will be lower. A company showing stability in these components (e.g., Xerox) has higher earnings quality than one showing variability in them (e.g., Texaco). This is because stability in sales volume and price as well as product cost will tend to result in stability in a company's earnings stream. On the other hand, instability in such components may lead to earnings variability. For example, if raw material costs fluctuate rapidly (e.g., copper,

fertilizer), earnings will tend to be less stable. For instance, changes in crude oil prices may result in earnings instability for petroleum refiners. Sugar price changes may result in vacillating earnings for beverage companies.

Earnings stability is less if a product line is dependent on rapidly changing tastes. For example, the novelty goods and the garment industries are very sensitive to fashion trends.

Certain product lines tend to promote earnings stability. The more important of these are: (1) necessity goods and services; (2) retail trade, primarily low-priced items which appeal to a wide market. Such products usually perform well during recessionary periods as well as in times of economic growth. Contributing to fluctuating earnings are the following: (1) novelty and nonessential goods; (2) high prices, which add to variable demand during recessionary periods such as expensive jewelry. However, high priced items that appeal to the affluent (e.g., cadillacs) may still show stable sales during periods of economic decline; (3) production of heavy goods and raw materials. Companies engaged in the production of the latter group, suffer the most severe fluctuations in sales records. The result of curtailment in buying is accentuated as it proceeds from the consumer to the original source of production; and sales may fluctuate as much as 400 per cent. In the case of raw materials, this is due in part to fluctuations in prices which

are so notable in commodity markets and in part to variations in the demand for end-products. The variation in sales of capital goods stems principally from the ability of industry generally to postpone purchases of durable equipment.

Analysts should consider the inclusion of growth, mature, developing, and declining products in the product mix of the firm. Growth and mature products assure greater recurrence in earnings than do either declining or developing ones.

A single-product company may have less earnings stability than a multi-product company. The former is more susceptible to fluctuating net income and has a higher risk of product obsolescence. A diversified product mix consisting of negatively correlated items results in greater earnings stability. This arises since revenue obtained from one product increases at the same time that revenue obtained from the other decreases. Examples of products that are negatively correlated are winter clothing and summer clothing. However, a diversified product mix may result in earnings instability when the products show positive correlations. Examples of such products are automobiles and auto accessories. One should also consider the degree to which a company's product mix consists of goods with inelastic and elastic demand. It is possible for a single product company which sells an item with highly inelastic demand (e.g., cereal) to have greater earnings stability than a multi-product company which sells items with highly elastic demand (e.g., expensive housewares).

Analysts should consider both the type of product demand and the nature of product correlation in evaluating a company's earnings stability.

A firm with a risky product line (e.g., explosives) that may involve product liability suits for which insurance coverage is unavailable has uncertainty associated with its future recurrence in earnings.

Raw Material Sources. Erratic raw material sources or unusual shortages will interrupt smooth production processes, require the use of expensive substitutes, and have a significant negative effect on earnings as well as their stability. Vertical integration may assist in stabilizing earnings by reducing the price and supply risk of raw materials.

Availability of Financing. Unstable sources of financing make the future recurrence in earnings uncertain. If a firm does not have available to it recurring sources of financing at reasonable interest rates, its operations may be severely affected when it needs such funds. Financing restrictions on a company may also prevent management from engaging in necessary corporate activities. Problems in obtaining funds may place a firm at a competitive disadvantage with long-run adverse effects.

Operating Leverage. In evaluating a company's earnings quality, the analyst should consider the degree of its operating leverage. Operating leverage can be measured by determining the percent of fixed costs to total costs and/or the percentage change in operating income to the

percentage change in sales volume. High leverage magnifies changes in earnings resulting from small changes in sales leading to earnings instability. When high degrees of operating leverage are combined with highly elastic product demand conditions, variability of earnings will be at very high levels. Such conditions, though undesirable and leading to lower earnings quality, may be inherent in an entity's operations (e.g., firms in the airline industry).

According to the regression results, the ratio of net income to fixed charges was positively related to the P/E ratio (but was not statistically significant). The implication may be drawn that investors consider relatively lower fixed charges to be a contributing factor to higher quality of earnings.

Business Risk. Uncertainty and risk relate to the abnormal and the unexpected. A frequent occurrence of abnormal or special items indicates greater risk associated with the firm. Thus, corporate and industry uncertainties make the repeatability of earnings uncertain. Risk facing a firm may be of such magnitude that net income has little predictive value. Examples of business risk include the following: (1) inadequate insurance coverage of assets; (2) over-susceptibility to the whims of nature; and (3) the company's most important contract with a very cyclical company must be periodically renewed.

Business risk may also relate to a company's over-reliance on government contract work which is highly vulnerable

to changing political attitudes. Revenue derived from such contracts is unstable and represents a low quality of earnings source.

Earnings possess less stability when it is likely that business operations will be affected by sudden developments. For example, if in the current period a company loses an important advantage (e.g., the expropriation by a foreign power of natural resources such as ore deposits), then its net income is irrelevant in predicting future earnings. In this case, the security analyst is dealing with virtually a new and different entity.

Changes in the Tax Rate. Higher earnings quality exists if the earnings level and growth rate are not dependent on a reduction in the tax rate by means which may be susceptible to future changes in the tax law or place adverse restrictions on the firm's use of its tax deferrals or savings.

In conclusion, stability and recurrence are primary factors affecting the quality of earnings. Stable elements of earnings are of higher quality than random or temporary ones.

Earnings quality depends on the repeatability and growth trend of earnings as well as the predictability of factors which affect their future levels. It also depends on the company's operating and financial characteristics which affect its future growth.

Economic Considerations

Fundamental economic conditions are outside the control of any given company or industry. To the degree, however, that a firm is insulated from the impact of the broader economy, its earnings stability will be higher.

According to the research undertaken for this study, two specific economic conditions were shown to have important implications for the quality of earnings. These are economic cycles and inflation. Each will be reviewed here in terms of their impact on earnings quality.

Economic Cycles

Earnings which are not materially affected by overall economic cyclical activity will have greater stability and thus higher quality than earnings which are influenced by the cycle.

There are three aspects of cyclical influence which analysts should consider. - The first is the elasticity of demand for the product(s) of the firm. The greater the elasticity, the greater the impact of the cycle, the wider the variation of the firm's income over the long-run, and the lower the quality of its earnings.

The second is the diversification of the firm's customer base. A firm which derives revenue from industries which are affected in contrasting ways by cyclical factors has greater protection from the business cycle. The demand factors in these industries will counteract each other. Also, a firm which has non-cyclical or counter-cyclical

lines of business will usually have greater earnings stability. For example, Weyerhaeuser's operations relate to lumber manufacturing, paper manufacturing, and sales of raw materials. The cycles associated with these markets differ, thus providing a degree of overall earnings stability. American Express derives revenue from insurance and travel. Property underwriting profits tend to decline during periods of economic strength, while travel profits increase during such periods.

The third relates to product diversification. A non-diversified or inadequately diversified product mix causes high correlation of income, over the cycle, between the individual products. The higher this correlation, the greater will be the influence of the cycle on the firm's overall earnings and the lower will be the quality of earnings.

Inflation

Inflation affects the reported earnings of companies differently. Companies that are more capital intensive will generally have greater inflationary profits than those that are less capital intensive. The former have a higher percent of fixed assets to total assets and therefore depreciation expense (which is based on the historical cost of assets) is understated to a greater degree during inflationary periods. Also, companies with very old fixed assets will show greater inflationary profits than companies with newer but identically efficient assets because depreciation charges of the former

are understated. If, however, the newer assets are more efficient, which is likely to be the case, they will provide additional profitability because of greater productive capacity and certain cost savings (e.g., less repair expense).

To the degree that net income includes inflationary profits, reported earnings are overstated in an economic sense because such profits result from changes in the price-level rather than from operational performance. Therefore, in order to compare companies within the same industry, analysts should adjust reported earnings for the impact of inflation. Such adjustment would lead to more meaningful earnings figures for purposes of comparison. For example, if one company reports a higher net income than another, the quality of earnings of the first company would be ranked lower than that of the second if the adjustment for inflationary profits for the first company is proportionately greater than for the second company.

One method of determining the impact of inflation on reported results is to compare the amounts of depreciation expense and cost of sales shown in the income statement with the amounts on a replacement cost basis.* If the amounts reported in the income statement are lower, net income should be reduced by the dollar difference to eliminate the impact of inflationary profits on reported earnings.

*ASR No. 190 requires footnote disclosure of replacement cost data for depreciation and cost of sales.

Conclusion

It is evident from the research done for this study that the term "quality of earnings" does not admit to simple definition. One must conclude that "quality of earnings" can be defined only in terms of accounting and financial characteristics which have an impact on the earning power of a firm as shown in its net income figure.

These characteristics are complex and interrelated, and even if understood properly are subject to wide varieties of interpretation by analysts depending upon their own analytical objectives. Furthermore, measurements of some of the characteristics may be extremely difficult, elusive, and perhaps impossible. Nevertheless analysts cannot avoid sorting through the characteristics to determine which of them are favorable in terms of earnings quality and which are unfavorable, and to determine the degree to which they exist. They are then in a position to rank the relative quality of earnings of companies in an industry.

Favorable characteristics include:

1. The degree to which the accounting policies employed reflect the economic reality of a company's transactions.
2. The degree of realism used to develop estimates of current and future conditions, referring here to the degree of risk attached to estimates or assumptions which may ultimately prove overoptimistic or unwarranted.
3. The degree to which sufficient provision has been made for the maintenance of assets and for the maintenance and

enhancement of present and future earning power.

4. The degree of earnings stability associated with a firm.

This refers also to the degree to which income statement components are recurring in nature.

5. The stability and growth trend of earnings as well as the predictability of factors which may affect their future levels.

On the other hand, unfavorable characteristics include:

1. The degree to which accounting changes have been made which are inconsistent with economic reality.

2. The degree to which income manipulation exists.

3. The degree to which unrealistic deferrals of costs exist.

4. The degree to which a company has under-accrued or over-accrued its expenses.

5. The degree to which a company has recognized revenue prematurely or belatedly.

6. The degree to which unjustified reductions in discretionary costs have been made. Such reductions may deprive the business of expenditures needed for future growth.

7. The degree to which highly subjective and uncertain accounting estimates are associated with the recognition of revenue and expense items. In general, the further away the proximity of revenue and expense recognition to the point of cash receipt and payment, the less objective the transaction and the more subjective the interpretations involved.

8. The degree to which assets are overstated and liabilities are understated.

9. The degree of risk attached to the probability of future

realization of different types of assets.

10. The degree of operating leverage associated with the firm.

11. The degree to which a firm is susceptible to the business cycle.

12. The degree to which "inflationary profits" are included in net income.

It is apparent from the foregoing that the quality of the earnings figure of any given company for any particular time period is a matter of the degree to which favorable and unfavorable characteristics exist, and that the significance of the characteristics depends upon their relevance to and the point of view of the individual analyst.

Confusion Surrounding the "Quality of Earnings" Concept Relative to the Definition

Much confusion exists among security analysts, accountants, and financial managers as to the meaning of the term "earnings quality." Chapters II and IV illustrated the wide range of views and lack of discipline in the use of the term among these professional groups. To recapitulate, analysts use the term in connection with determining a company's relevant level of income as a basis to predict future earnings and stock price. They also relate the term to the evaluation of the stability of a company's earnings, considering such qualitative factors as industry, economic, and political considerations as having a bearing on earnings quality. CPAs generally associate earnings quality with

accounting measurement standards used. Financial managers use the term with reference to a firm's ability to realize a high rate of return on investment (ROI) and to sustain a high growth rate. They also consider operating income to be of higher quality than nonoperating income. The chapters further revealed that the term means different things to different members of each professional discipline.

Following are some specific misconceptions which exist among security analysts concerning the "quality of earnings" concept:

1. A company with a poor liquidity position has lower earnings quality. Liquidity, however, is an area of security analysis which is different from the evaluation of earnings quality, referring as it does to a firm's ability to meet short-term obligations. Such ability should have no real bearing on the quality of currently reported results. This is supported by the regression results which reveal that measures of liquidity such as working capital are not useful in the evaluation of earnings quality.

2. Cash flow is a superior measure of performance than net income. This contention is invalid. It is like saying that amortization and depreciation are not genuine expenses. Only properly adjusted reported earnings can be considered as a measure of performance and can be appropriately related to the equity investment as a measure of operating success. If we add back depreciation to reported earnings and calculate the resulting return on investment, we are,

in essence, confusing the return on investment with an element of return of investment in productive assets. Furthermore, not only is depreciation a valid charge but during inflationary periods the depreciation funds recovered from sales may be inadequate to replace the fixed assets because the charges are based on lower historical costs. Emphasis on cash flow rather than reported earnings is not warranted.

3. Because companies generally use more conservative accounting for tax purposes than for book purposes, taxable income is viewed as being more useful for security analysis purposes than book income. This premise is invalid since the use of conservative accounting for tax reporting tends to understate earnings rather than resulting in a more accurate measure of operating performance. Net income based on GAAP is a far better starting point for the analyst from which to adjust income than is the tax return.

Ancillary to this is the misconception that a firm's earnings quality is lower when its book earnings exceed its taxable earnings. For example, in a Quality of Earnings Report dated April 29, 1977, T. O'glove and R. Olstein write that "real earnings are closer to the IRS reported earnings than to those reported to shareholders." However, the regression results reveal that a comparison of book earnings to taxable earnings is not a meaningful means to evaluate earnings quality. Taxable income may be lower than book income only because of the company's desire to pay lower taxes.

4. A substantial backlog of orders indicates higher quality of earnings. A significant backlog means merely that the firm has orders for future sales of merchandise. Such backlog does not relate to the quality of currently reported earnings except when expenses incurred in obtaining the orders are absorbed in the current period.

5. Lower selling and administrative expenses as a percent of sales indicates lower quality of earnings. Reduction in such costs may merely have arisen from the elimination of needless selling and administrative activities.

6. When an increasing percentage of a loan portfolio has stopped paying interest the company has lower earnings quality. Earnings quality has not been adversely affected since net income already reflects the omission of the interest.

The accounting profession has its own misunderstandings:

1. Cost reduction programs improve the quality of earnings. If such programs reduce necessary expenditures for future growth, the quality of earnings will not improve. However, such programs are advantageous when they make a company leaner and more efficient.

2. Reductions in tax payments improve the quality of earnings because the firm has use of the cash generated by such reductions. Tax savings do not relate to the quality of currently reported earnings. The firm has simply saved on taxes, thus having more cash available to it.

Some financial managers believe, incorrectly that:

1. "Other income" is of poor quality because it is not derived from the selling function of the firm. Non-operating

income is in fact of good quality if it is stable and recurring. An example of such "other income" is long-term lease income from financially sound tenants. Further, such revenue is part of the income history of the entity and relates to its customary business activities.

2. A high ROI indicates high quality earnings. A high net income and a low capital investment will result in high ROI. However, higher earnings do not mean that the quality of earnings has improved. For example, higher net income may arise only because the firm is now employing more liberal accounting policies. Further, the amount of assets employed does not relate to earnings quality. Clearly the ROI percentage has no bearing on the quality of earnings.

3. A firm's inability to pass along increased costs in the form of higher prices lowers the quality of earnings. The inability to pass along cost increases is related to supply and demand conditions in the markets for the firm's output, which may result in lower net income. Quality of currently reported earnings is not affected by such ability or lack of it.

4. Operational inefficiency indicates poor quality of earnings. Efficiency is a basis for evaluating managerial ability and not for gauging the quality of net income figures.

5. Overexpansion of plant facilities lowers earnings quality. Overexpansion indicates poor long-range planning, but the quality of currently reported earnings is not affected.

6. Automation improves earnings quality. Automation

only applies to the firm's ability to more scientifically manage its business operations.

7. A firm's inability to cut costs during recessions affects adversely the quality of its earnings. Such a situation indicates simply that the company has a cost control problem.

8. A loss in market share lowers the quality of earnings. A firm's percentage of the market indicates how it stands relative to its competition. However, the competitive position of a firm does not bear on the quality of currently reported results.

In spite of the above misconceptions, the questionnaire results (appearing in Chapter IV) show that most financial experts believe they are familiar with the term "quality of earnings." From the analysis contained herein one must conclude that practitioners in the field do not in fact have a clear and concise understanding of the concept, and that there is neither common understanding nor agreement as to the meaning of the term.

Summary of Findings

The previous sections dealt with the formulation of a definition of the concept "quality of earnings" and a discussion of the misconceptions held by financial experts as to the term's meaning. This section summarizes the major aspects covered in Parts I-III of the dissertation.

PART I (Chapters II, III, and IV) examines the conceptual foundations of the term "quality of earnings."

Chapter II. The chapter points out that there is no such thing as "true earnings" or "real earnings" for a company. Net income cannot serve as a precise measure of operating performance for numerous reasons including the fact that many estimates are required in determining earnings and the existence of alternative accounting principles. It is impossible to distill an entire period's operations into one precise and flawless earnings figure. Furthermore, "one" net income figure cannot be relevant to all analysts. Each one has his own perspective as to what adjustments should be made to earnings to determine what he considers to be relevant or "actual" earnings. To strive for one number that represents a firm's "earnings quality" would prove fruitless.

The chapter contains a discussion of the basis for and theory behind the emergence of the quality of earnings notion. The term was first coined by security analysts because they believed that reported net income did not measure the "earning power" of a firm as they envisaged that concept. Analysts generally look upon net income with skepticism due in part to a number of deficiencies in the accounting measurement process, and in part to the tendency of companies to manage earnings. They find it difficult to predict future earnings based on reported net income and, as a result, adjust earnings to arrive at what they consider a more relevant earnings figure. The plethora of adjustments led, then, to the notion of earnings quality.

Chapter II also discusses why earnings quality is

important: to accountants in terms of the ability of net income to present fairly the results of operations; to analysts because of the importance of earnings stability in predicting future results accurately; and to management because investor and creditor views of net income affect the price-earnings ratio and the cost of borrowing.

Also presented are the elements which comprise the quality of earnings as it is referred to in Accounting and Finance Literature, Wall Street Special "Accounting Reports," Investment Analytical Reports, "Management Analysis of Results of Operations," and Personal Interviews. It was determined that elements making up the definition of the term as used are both quantitative and qualitative. Such elements are categorized as follows: (1) accounting policies in use; (2) risk and variability; (3) economics of industry and company; and (4) financial characteristics.

Accounting policies in use relates to the analysis of a firm's accounting policies to garner information as to the quality of its reported earnings; risk and variability to degrees of certainty and reliability associated with earnings; economics of industry and company to pertinent characteristic factors inherent in certain industries and firms; and financial characteristics to the effect these have on earnings quality.

It was concluded the "quality of earnings" is a notion which embraces many accounting and financial considerations. Because no single element can capture

everything about the notion, all elements must be considered when describing the term.

Chapter III. SEC and FASB authoritative pronouncements which use the earnings quality concept as a rationale for their requirements are presented here. In particular, numerous Accounting Series Releases provide for disclosures which in turn furnish new tools for the evaluation of the quality of earnings. ASR No. 151, "Inventory Profits", states that "disclosures of the amount of inventory profits included in net income is important information for financial readers in evaluating earnings quality." ASR No. 159, "Management's Discussion and Analysis of the Summary of Earnings," states that "a discussion of the reasons for significant changes in revenue and expense items is useful information in assessing the source and probability of recurrence of earnings." Other disclosures required by the SEC which assist in the evaluation of earnings quality relate to unusual items included in net income; risks associated with business operations; receivables and inventories under long-term contracts which may have high realization risk; termination of outside auditors and the resulting effects on net income of changes in accounting policies; reasons for changes in the effective tax rate; and problems of the firm in obtaining suitable financing.

In addition, interviews with members of the SEC revealed their belief that repeatability of earnings, nature of accounting policies, degree of corporate risk, and economic and political factors also bear on the quality

of earnings.

Chapter IV. Results of the questionnaire survey are analyzed in Chapter IV. The major conclusion drawn from the survey are the following:

1. Financial experts are familiar with the term "quality of earnings," and believe it to be a meaningful and useful concept. Most respondents felt, however, that the concept is ambiguous and elusive, and requires tightening of definition.

2. Accountants relate earnings quality to the soundness and consistency of the accounting principles and estimates used by the firm as they affect reported net income. Realistic accounting policies reflect most accurately the economic substance of business transactions and result in the highest quality of earnings. They view earnings quality as relating primarily to accounting factors that affect net income reported for the year.

3. Security analysts believe that conservative accounting policies result in the highest quality of earnings; that changes in accounting policies implemented solely to bolster net income lower earnings quality; that income management detracts from the quality of earnings because it results in an income figure which is not truly representative of the company's earnings; and that earnings quality is higher if replacement cost income closely correlates to reported earnings.

4. Financial managers typically do not regard liberal

accounting policies or the shifting of income from period to period as affecting earnings quality. Nor do they view a reduction in discretionary costs as having an impact on earnings quality because management is then merely responding to declining business volume.

5. Security analysts and financial managers typically view business characteristics (e.g., business risk and employee relations) as relating to the quality of earnings; accountants do not deem such characteristics relevant to the concept.

6. Financial managers consider operating income to be of higher quality than nonoperating income since it relates to the typical activities of the firm. Security analysts, however, believe that nonoperating income may be of higher quality than operating income if it is more stable in nature.

PART II (Chapters V and VI) examines the special factors affecting earnings quality.

Chapter V. This chapter considers how an analysis of the Balance Sheet holds clues to the quality of earnings. Balance sheet accounts must be properly stated as the overstatement of assets results in the overstatement of earnings since they do not include charges necessary to write-down assets to realizable value. The understatement of liabilities results in an overstatement of earnings since they have been relieved of necessary charges required to bring liabilities up to their proper amounts. Under these circumstances, reported results are of lower quality. The analyst also

considers such factors as the maintenance of capital and the realization risk in assets.

A discussion of some balance sheet accounts and some conclusions arrived at in terms of their impact on earnings quality is now in order. In evaluating receivables, the analyst should consider such things as trends in bad debts to receivables and sales, and the adequacy of loss reserves on loan portfolios. The failure of a firm to make adequate expense provisions results in lower quality earnings. In evaluating inventory, the analyst should consider such things as inventory buildups, inventory method used and any change therein, and inventory profits. Excessive inventory accumulations may be a sign of high realization risk. The method used to price inventories - that is, LIFO, FIFO, or average cost - should be examined in relation to the general trend of prices. During inflationary periods, the use of FIFO could result in exaggerated profits. The same is true for LIFO where there has been a liquidation of LIFO layers. For example, during the recent oil crisis, oil refiners showed unusually high earnings arising from inventory profits; about one-half of Texaco's 1973 net income came out of inventories. In evaluating fixed assets, the analyst should consider such things as the nature of a company's fixed assets, depreciation methods used, and the nature of depreciation estimates. Those policies should be employed which reflect most accurately any decline in operational efficiency of the assets involved. Failure to provide

adequately for the decline in service potential of plant and equipment will result in lower quality earnings. In evaluating reserves for future costs and losses, the analyst should consider such things as the establishment of reserves to serve as accounting cushions, write-downs of reserve provisions designed to bolster earnings, and the offsetting of extraordinary or nonrecurring items against reserve provisions. Arbitrary adjustments to reserve accounts result in lower quality earnings.

An analysis of the Statement of Changes in Financial Position can be very useful because it reveals the repeatability of funds and the sources of funds. Specific sources of funds, such as the sale of fixed assets, the issuance of equity and debt securities, and long-term bank loans, are highlighted. An analysis of these sources should be made to ascertain whether they are expected to recur. For example, if a firm's major current sources of funds are bank loans that will not be available in the future, the firm's operations may be affected negatively if such funds are in fact needed. The Statement also provides insight into the variability of the cost of funds. Costs of some forms of financing, as for bank loans tied to the prime rate, may be subject to greater variability than the costs of other forms. Analysis may also indicate the existence of one-time gains and losses, such as those resulting from the sale of land.

In this chapter are examined other accounting considerations, as business combinations and long-term

construction contracts, which relate to the notion of earnings quality. It was pointed out that the pooling method allows for suppression of purchased asset value, resulting usually in an understatement of assets and an overstatement of earnings. Income arising from pooling combinations is therefore considered overstated relative to similar income arising from purchase accounting. It was seen also that the acquisition trends of some firms were designed to bolster their earnings. With respect to long-term contracts, reduction in warranty provisions in the face of increasing revenues and the failure to make sufficient provision for cost overruns will result in lower quality earnings.

Chapter VI. Accounting, financial, economic and political factors associated with specific industries are analyzed in terms of their impact on the quality of earnings of a firm.

Certain industries have been known to use questionable accounting policies. For example, REITs accrue interest income on loans made to land developers which are of doubtful collectibility. Furthermore, REITs record commitment fees on loans on the loan record date rather than amortizing the fee over the period of the loan. Some franchisors record the "full" franchise fee as of the date of the franchise agreement even though the note received from the franchisee has a high probability of not being collected. In numerous cases, franchisees are inexperienced and undercapitalized, and the down payment is not substantial.

Management of earnings levels is also a specific problem in some industries. Broadcasting corporations have complete leeway in the allocation of television program costs; and homebuilders may exchange among themselves plots of low-cost land at inflated prices.

Wide variations in accounting policies among companies within industries are also noted. Life insurance company capitalization and amortization policies applied to acquisition costs vary by as much as thirty years; actuarial earnings rates ranged from three to seven and one-half per cent in 1973. Such differences hinder comparability.

Certain industries, such as airlines, have very volatile earnings arising from the combined effect of high financial and high operating leverage.

Companies in staples industries supply products or services that have steady market demand. Companies are therefore sheltered from most business cycle effects. Examples of staples industries are food and household products. On the other hand, capital intensive companies generally manufacture expensive durable goods and luxury items (e.g., automobiles). Purchases of their output are postponable and the firms are more susceptible to economic fluctuations and therefore to vacillating earnings.

The chapter also discusses that the profit dollar is of higher quality if earned in a healthy, expanding industry relative to an unhealthy, declining one.

Also presented in the chapter is a discussion of the

effect of political factors on earnings stability. Earnings derived from foreign operations as well as governmental regulations are subsumed under the heading "political factors."

Repeatability of earnings is uncertain when the risk exists of nationalization or of restrictions on earnings. The Middle East and Africa particularly are considered politically unstable regions at this time. Profit margins of (American) firms operating in such areas are less indicative of future earnings than are profit margins of firms operating in nations with politically stable governments.

Companies highly susceptible to regulatory control may have lower earnings stability because of the adverse effects on earnings of changing government policies. For example, pollution control and safety requirements may adversely affect the earnings stability of the auto industry. The extent of current and future governmental regulation of a company's affairs may be ascertained by studying existing and pending laws and regulations of governmental bodies as they relate to specific industries.

Stability of earnings are also affected by regulatory price controls. The railroad industry nationally and the real estate rental industry in New York City are classic examples of business operations which are subject to complicated and stringent controls.

PART III (Chapters VII and VIII) presents an evaluation of the quality of earnings notion.

Chapter VII. Although a single "earnings quality" figure cannot be determined, a minimum-maximum range can be developed which will encompass restated earnings figures analysts consider relevant in calculating a firm's "earning power." Within this range each analyst will have his own relevant net income figure. A practical and reasonable methodology which might be employed to find such a range is presented in Chapter VII. Ranking the quality of earnings of different companies is also analyzed in the chapter in terms of evaluating favorable and unfavorable earnings characteristics.

Techniques used to measure, describe, and evaluate earnings quality are also discussed. Among these are the adjustment of reported earnings per share, the measurement of the degree of conservatism in reported earnings, the determination of the degree of realization risk associated with a firm's asset structure, and the coefficient of variation in earnings.

An evaluation is also made of techniques used by The Putnam Advisory Corporation and by The Fourteen Research Corporation to measure the quality of earnings. Putnam Advisory's "Earnings Quality" Checklist contains uniform penalty points for accounting policies which are considered to have an adverse impact on the quality of earnings. Different undesirable accounting policies are assigned different penalty points (e.g., -1 if a company uses the straight-line depreciation method, -3 if a company reports

earnings on signing contracts but before payment). The greater the total penalty points assigned to the firm, the lower its earnings quality. The Checklist is too subjective and mechanical to be reliable. The Fourteen Research Corporation uses a scale of 1-5 (5 being the highest score) to rate corporate and industry characteristics considered to bear upon the quality of a company's earnings. The items studied include the nature of a company's accounting policies, the percentage of earnings available as current assets, cash dividends, degree of maintenance of capital, degree of financial leverage, ratio of net income to stockholders' equity, growth in earnings, and growth in revenue. The approach used by the Corporation is useful but has a number of deficiencies. For example, the number of points assigned to accounting and financial factors of a firm are highly arbitrary. It is also difficult to ascertain what is included in certain categories being rated. For instance, 1 point is assigned to a company having extra liberal accounting policies. Such policies are not spelled out by the authors.

Chapter VIII. A test was undertaken of the correlation between the value-earnings ratio (price-earnings ratio) and factors impinging on the quality of earnings. The technique applied was cross-section regression analysis for 1974 relating value-earnings ratios to growth rates in earnings, instability indices of earnings, beta, and certain financial ratios. Compustat tapes for 1965 through 1974 provided the data base.

The hypothesis was stated that the price-earnings ratio is affected to some degree by quality of earnings factors; and that positive correlation should exist between the P/E ratio and those factors which improve earnings quality while negative correlation should exist between the P/E ratio and those factors which lower earnings quality. The degree of importance of each quality of earnings variable as perceived by investors is measured by the size of the correlation coefficient, with the higher coefficients signifying the more important financial variables in the analysis.

Test results show that 11-14% of the variation in the price-earnings ratio are explained by quality of earnings characteristics. It was found that cash flow as a percent of net income, growth rate of earnings, dividends per share, and the ratio of net income to fixed charges, all of which are assumed from theory to improve earnings quality in fact have positive regression coefficients. Other factors which theoretically detract from earnings quality, such as extraordinary items as a percent of net income, instability index of earnings, coefficient of variation in earnings, beta, realization risk in assets, and financial leverage, in fact have negative regression coefficients. Some of the more important specific results will be reviewed here.

Cash flow as a percentage of earnings is used by investors to evaluate earnings quality. The higher the ratio, the better the quality of earnings. The high t-value (4.760)

supports the hypothesis that investors consider cash flow as an important quality of earnings variable.

Investors consider a company's earnings quality to be higher when it enjoys a high growth rate of earnings. On the other hand, a declining trend in net income indicates lower earnings quality. This may arise because a decline in net income may indicate a lack of future corporate growth. Consequently, a measure of the quality of earnings as perceived by investors is the long-term growth rate in EPS.

Investors consider extraordinary items to be of poor quality. The significant negative correlation of -4.305 supports the theory that investors eliminate such items from reported net income when they determine what are to them "acceptable quality" earnings. This is contrary to the views of the writer who believes that extraordinary items are not in fact of lower quality because they are part of the long-run income history of the firm.

Overall, regression results confirm the hypothesis that quality of earnings factors bear on the price-earnings ratio, and that earnings quality characteristics positively and negatively affect the ratio. Furthermore, by examining the correlation coefficients of each explanatory variable, one is able to ascertain which quality of earnings factors are important to investors.

The results also reveal that certain ratios which are considered to be useful in measuring the quality of earnings

by financial experts were not useful at all, thus highlighting several misconceptions held by accountants, security analysts, and financial managers with respect to the meaning of earnings quality. Liquidity measures, for example, and the comparison of taxable earnings to book earnings, were irrelevant tools in the evaluation of the quality of earnings.

Types of Disclosures which would be Useful to Security Analysts in the Evaluation of the "Quality of Earnings" as Defined

The analysis of the subject matter of the quality of earnings undertaken in the preceding chapters lead one to certain conclusions about additional disclosures which would aid security analysts. Some of the disclosures facilitate an assessment of the source as well as the probability of recurrence of earnings. Financial managers will find this listing useful because they are required to discuss in the "Management's Analysis of Results of Operations" section financial data which have a bearing on the quality of reported earnings. Accountants are concerned with adequate disclosure so that financial statements are meaningful to readers in their appraisal of a company's operating performance. The SEC and FASB will find this listing useful because if the disclosures are promulgated the evaluation of net income by all interested parties will be refined and facilitated.

While it is always easy to ask for more disclosure, one must consider the cost vs. benefit of additional information. There reaches a point where extra disclosure requires a cost to obtain which exceeds its value. It is felt that the recommended

disclosures presented here have significant usefulness in the evaluation of earnings quality that justifies any incremental costs.

The following recommended disclosures should be provided by companies:

1. Corporate policies with respect to the maintenance of capital. Disclosure should be made of the particulars of the firm's program of upgrading assets, along with the age and condition of the components of each major asset category. Furthermore, disclosure should be made of the nature of the company's assets, particularly when they are risky or specialized.

2. The grouping or segregation of assets according to their realization risk. This disclosure would highlight the peculiar nature of such assets with respect to expected benefits, and will enable analysts to evaluate the quality of assets more easily. Receivables which have high realization risk should be disclosed separately, and the source of the risk should be stated. Such risks may arise, for example, from investments in nations with politically unstable governments, or from claims under long-term contracts which are subject to uncertainty. Analysts should be able to determine if bad debt provisions are sufficient for the higher collection risk of the associated receivables.

In addition, information relating to the realization risk of loans receivable should be provided. Banks should disclose, for example: a) the percentage of their portfolios

invested in non-interest-bearing loans; b) the extent of loans made to risky borrowers as REITs and owners of shipping vessels; c) the market value of the collateral standing behind loans; d) the diversification of the domestic loan portfolio; and, e) the categorization of loans by country.

Companies should also disclose the average age, likelihood of sale, and realizable value of each major inventory category so that the realization risk of inventory can be better appraised.

3. Basic underlying assumptions involving matters subject to evaluation, interpretation, prediction, and estimation.

Companies should disclose the extent to which subjective accounting estimates and judgments are involved in the income measurement process. If investors are to evaluate uncertainty they need both factual and interpretive information, identified separately to the extent possible, about transactions and other events. Classifying data by relative risk based upon assessments of uncertainties will enable readers to compare information from many enterprises and make decisions more effectively within the realm of their own risk preferences.

In addition, disclosure should be made of the differences between a firm's estimated reserves and its actual losses for previous years.

And firms should disclose the nature of highly subjective accounting estimates made in connection with long-term contracts and risky operations. A high degree of uncertainty associated with accounting estimates may result in uncertain

earnings figures.

Companies should also disclose what earnings would have been had alternative estimates been used in connection with certain subjective areas of accounting. For example, disclosure should be made of a firm's pension expense under alternative estimates of interest and mortality rates. Such estimates may relate to those used by most companies in the industry, or be based on industry averages. The resulting range of earnings figures will better enable analysts to evaluate the quality of earnings among companies.

4. Highest and lowest figures for each major income statement item. Figures which would have been calculated had the two extreme sets of generally accepted accounting principles been used will improve the evaluation of earnings quality.

5. Financing activities. Disclosure should include: a) restrictive covenants in loan agreements; b) breaches of loan provisions (e.g., failure to meet debt payments); c) ability or inability to obtain financing from customary sources; d) options for renewed financing; e) ability to issue debt and equity securities; f) anticipated trends in the money market and the firm's susceptibility to money market squeezes; g) potential bank lines of credit; h) expected costs of refinancing; and, i) the effect on corporate operations of not having adequate financing.

Such disclosures will aid analysts in determining whether

adequate funds will be available in the future at reasonable interest rates, and the degree to which loan agreements place severe restrictions on management's freedom of action. Inability to obtain suitable financing makes a firm's recurrence of earnings uncertain.

6. Product lines. The evaluation of the stability of earnings will be improved if firms disclosed: a) the degree of diversification and risk associated with the firm's product mix; b) the susceptibility of each product line to changing consumer tastes; c) fluctuations in cost, sales price, and volume of each major product; and, d) the type of consumer demand (e.g., elastic, inelastic) associated with each major product.

7. Raw materials. Disclosure should be made of any problems faced by a company in securing raw materials. An inability to obtain adequate materials on a recurring basis may affect adversely the firm's production schedule and may lead to higher costs for alternative supplies.

8. Geographic diversification. Disclosure should be made of a company's diversification in domestic markets. Risks may be minimized if income elements, particularly those applying to declines in demand, are spread over a number of diverse economic regions.

9. Insurance. Information about difficulties experienced in obtaining insurance coverage, the trend in insurance costs, and differences between insurance recoveries

and the fair market value of the property destroyed will be useful in determining whether the company's insurance coverage is adequate to sustain its earnings stream.

10. Cost structure. Disclosures with respect to the distribution of costs among fixed, variable, and semi-variable elements will enable analysts to evaluate the effect of a firm's operating leverage on its earnings stability.

11. Political factors. Earnings derived from operations in politically and economically unstable foreign countries, expropriations by foreign governments, confiscatory governmental control over an industry, problems with regulatory agencies as delays in obtaining regulatory approval of rate increases, dependency on government contracts, and government actions against the firm such as anti-trust action and the banning of products, should be noted because of their impact on the firm's stability of earnings.

Conclusion

It is hoped that the desirable and undesirable characteristics in earnings cited in this dissertation will be helpful in clarifying the meaning of the quality of earnings concept. The boundaries which have been established here for it should lead to more uniformity in its use within the financial community. It should also provide accountants, security analysts, and financial managers with a greater comprehension of, rationale for, and the meaning of the term "earnings quality" as well as of its function and possible

usefulness in practice.

The recommended disclosures relating to earnings quality, if implemented, will be helpful to security analysts in their unending task of evaluating the quality of earnings of business enterprises.

Suggestions for Further Research

Although the term "quality of earnings" is in fairly popular usage in the fields of accounting, security analysis, and financial management, the rigorous analysis of the concept is still in its infancy. It is the writer's belief that this work has made a contribution toward such analysis.

For those who are interested in furthering the understanding of earnings quality the writer offers the following research paths which might prove fruitful.

First, although the writer has undertaken to search out and analyze those variables which bear upon the quality of earnings, there is still a need to test, in a more formal fashion, for the importance of these factors; and

Second, in conjunction with testing for the importance of the factors, a ranking can be formulated of the relative quality of earnings among companies.

On Testing for the Importance of Variables Relating to the Quality of Earnings

One area important for research is studying the relationship between the capitalization rate and quality of earnings characteristics. The higher a company's capitalization

rate, the more risk associated with the firm, and the lower the quality of its earnings. A multiple regression can be performed using cross section data for companies included in the Compustat tapes. The capitalization rate can be used as the dependent variable and quality of earnings factors can be used as the independent variables. Those explanatory variables which show positive regression coefficients will represent unfavorable earnings quality characteristics while those which show negative coefficients will represent favorable earnings quality characteristics. The degree to which the independent variables have an impact on the dependent variable can be measured by the regression coefficient. (Of course, the statistical significance of each independent variable is indicated by its t-value). The degree to which these variables are favorable or unfavorable can be measured by what is referred to as beta coefficients.² Such coefficients

² Beta coefficients (\hat{B}_j^*) are used to measure the relative importance of the independent variables in a multiple regression model. They are determined as follows:

$$\hat{B}_j^* = \hat{B}_j \frac{Sx_j}{Sy} \quad j = 2, 3, \dots, K$$

where

\hat{B}_j = the estimated regression coefficients,

Sx_j = the standard deviation of the independent variable j , and

Sy = the standard deviation of the dependent variable.

For further discussion of beta coefficients, see R. Pindyok and D. Rubinfeld, Econometric Models and Economic Forecasts (New York: McGraw-Hill, 1976).

enable a ranking scale to be derived indicating the relative importance of quality of earnings factors. The more important the variable, the better it is as an indicator of earnings quality, and thus the more reliance that should be placed upon it by the analyst in his evaluation of a firm's "earnings profile."

Although Compustat tape data are suggested because of their ready availability, information may also be included in the model which is not available in the tapes. Once the companies which are to be included have been identified, additional data might be obtained from SEC filings (for example, Form 10-K). Ratios and other forms of data that would be relevant to the "quality of earnings" analysis can be determined for each firm.

Although some favorable and unfavorable "quality of earnings" characteristics cannot be quantified (e.g., the degree to which a firm has recognized revenue prematurely or belatedly), they can still be included in the regression analysis by using "dummy" variables.

A detailed discussion of this recommended study follows.

The capitalization rate model which may be specified follows:

$$CR_x = f(V_x, GR_x, O_x, B_x, CF_x, R_x, E_x, M_x, AC_x, UA_x, DF_x, I_x, RL_x, IM_x, RE_x, U_x) \quad x = 1, \dots, N$$

where

CR_x is the capitalization rate,

V_x are measures of earnings volatility,

GR_x is the growth rate in earnings,

O_x is the degree of operating leverage,

B_x is beta representing systematic risk,

CF_x is the cash flow position,

R_x is the degree of realization risk in assets,

E_x is the degree to which highly subjective and uncertain accounting estimates are involved in the income measurement process,

M_x is the degree to which sufficient provision has been made for the maintenance of capital,

AC_x is the extent to which the company has made accounting changes which are inconsistent with economic reality,

UA_x is the degree to which the company has under-accrued for expenses,

DF_x is the degree to which unrealistic deferrals of costs have been made,

I_x is the degree to which inflationary profits are included in net income,

RL_x is the degree of realism associated with the firm's accounting policies,

IM_x is the extent to which the company has been involved in income manipulation,

RE_x is the degree to which the company has recognized revenue prematurely or belatedly, and

U_x are unspecified factors.

The dependent variable may be determined by the following formula:

$$CR = \frac{D_1}{P_0} + g$$

where

CR is the capitalization rate,

D_1 is the expected dividend [$D_1 = D_0 (1+g)$], where D_0 is the current dividend,

g = expected rate of growth in dividends (assumed to be constant). g may be based upon an historical growth rate in dividends.

A list of "quantifiable" independent variables along with their expected signs is presented below.

<u>"Quantifiable" Variables*</u>	<u>Expected Sign (P=Positive; N=Negative)</u>
1. Volatility in Earnings (V)	
a. Instability index of earnings	P
b. Coefficient of variation in earnings	P
c. Standard deviation in earnings	P
d. One-time gains and losses ; net income	P
2. Growth rate in earnings (GR)	
a. Growth rate in earnings per share	N
b. Implied growth rate	N
c. Growth rate in residual income	N
3. Operating leverage (O)	
a. Fixed costs to total costs	P
b. Earnings to fixed charges	N

It is not intended that all the variables be included in a regression study. A comprehensive listing has been provided only to illustrate that numerous possibilities are available. The researcher should select those variables which he feels will be most useful to the "quality of earnings" analysis. It should be noted also that, in some cases, certain data may not be readily available.

<u>"Quantifiable" Variables (continued)</u>	<u>Expected Sign</u>
4. Beta (B)	P
5. Cash flow as a percent of reported earnings (CF)	N
6. Realization risk in assets (R)	
a. Intangible assets + deferred charges ÷ total assets	P
b. Change in capitalized intangibles ÷ change in reported earnings	P
c. Receivables with high realization risk ÷ total assets	P
d. Income generated by investments ÷ carrying value of investments	N
e. Accounts receivable turnover	N
f. Inventory turnover	N
7. Degree of certainty of accounting estimates (E)	
a. Estimated expenses ÷ net sales	P
b. Variance between estimated reserves and actual losses	P
c. Assets subject to a large degree of accounting estimates ÷ total assets	P
8. Maintenance of capital (M)	
a. Repairs and maintenance ÷ fixed assets (holding age of plant constant)	N
b. Amount of additions to fixed assets ÷ fixed assets	N
c. Age of plant	P
d. Specialized fixed assets ÷ fixed assets	P
9. Incremental earnings due to accounting changes (after termination of previous auditors) ÷ net income (AC)	P
10. Incremental earnings arising from the under-accrual of expenses ÷ net income (UA)	P
11. Questionable deferral policies (DF)	
a. Deferred costs ÷ sales (or net income)	P
b. Deferred costs (e.g., deferred advertising) ÷ total expenditures (e.g., total advertising expenditures)	P
12. Inflationary profits (I)	
a. Inflationary profits ÷ net income	P
b. Variance between net income and price-level adjusted income	P

In some cases, it may be difficult to draw a line between those "quality of earnings" characteristics which are quantifiable and those which are not. For example, the degree to which a firm's accounting policies are realistic can be measured to some extent by quantifying changes in its deferral policies (see 11 above). However, other indicators of realistic policies are of a non-quantitative nature and their inclusion in a measurement formula will be more problematical. Examples are whether corporate accounting policies conform to recommendations in AICPA Industry Audit Guides and/or to the prevailing accounting practices within an industry.

"Quality of earnings" factors which are difficult, if not impossible, to quantify objectively may still be included in the regression equation by the use of "dummy" variables, with each "dummy" being assigned a value of either 1 or 0; 1 if the characteristic in the view of the researcher is associated with the firm and 0 if it is not. Some "non-quantitative" variables, along with their expected signs, are presented below.

<u>"Dummy" Variables</u>	<u>Expected Sign</u>
1. Degree of realism associated with accounting policies (RL) as indicated by whether the firm's accounting methods generally conform to those practices recommended in AICPA Industry Audit Guides.	N
2. The existence of income manipulation (IM) as evidenced by previous attempts by the firm to manage earnings levels. Such manipulation may be indicated when there are arbitrary adjustments to reserve accounts, sudden write-offs of assets, unjustified cutbacks in expenses, and so forth	P

"Dummy" Variables (continued)Expected Sign

3. The recognition of revenue prematurely or belatedly (RE). This may be indicated when revenue is recognized immediately even though substantial future services are yet to be performed (e.g., health spas), or when there is uncertainty as to future collection (e.g., franchise sales made to inexperienced and poorly financed franchisees).

P

The regression results obtained from this recommended study will provide additional insight into the relative importance of various quality of earnings factors.

Ranking the "Quality of Earnings" Among Companies

As an extension of the previous study (or as a separate one), researchers can rank the earnings quality of various firms. The research methodology should consist of the following steps: (1) determine the percentage of importance of each "quality of earnings" indicator to be used in the study to the aggregate importance of all the indicators; (2) rank each of the "quality of earnings" indicators by decile individually versus each other company in the universe; (3) determine a value for each "quality of earnings" indicator by multiplying the answers to (1) and (2); (4) calculate a score for each firm in terms of its earnings quality by totaling the values for its "quality of earnings" indicators; and (5) rank the quality of earnings among companies based on the total score for each firm, with the high total indicating superior earnings quality. A more detailed description of such an approach follows.

As the reader has noted, the relative importance to investors of various "quality of earnings" variables can be measured by beta coefficients. The percentage importance of each variable to the total importance of all variables can thus be determined. To illustrate this approach, one might assume a "best" regression equation showing the following beta coefficients for those variables which passed the t-test:

<u>Variable Description</u>	<u>Magnitude of Beta Coefficients</u>	<u>Percentage of Importance of Each "Quality of Earnings" Variable</u>
1. Volatility in earnings as measured by the coefficient of variation.	+5.5	.22
2. Growth rate in EPS.	-3.2	.13
3. Earnings to fixed charges.	-1.6	.06
4. Beta.	+3.4	.14
5. Cash flow as a percent of net income.	-4.0	.16
6. Realization risk in assets as measured by the ratio of intangible assets plus deferred charges to total assets.	+3.7	.15
7. Degree of certainty of accounting estimates as measured by the ratio of estimated expenses to net sales	+1.5	.06
8. Maintenance of capital as measured by the ratio of repairs and maintenance to fixed assets.	-1.6	.06
9. Deferral policies as measured by the ratio of deferred costs to sales.	<u>+0.5</u>	<u>.02</u>
Total Magnitude and Importance	<u>25.0</u>	<u>1.00</u>

Using Compustat as the data base, a program can be written to rank each of the nine factors, by decile, among the various companies included in the tapes. If a given variable for a given company ranks in the first decile, a value of 10 might be assigned to that factor while a value of 1 would be assigned if the particular variable ranked in the last decile. Therefore, each factor would be assigned a value anywhere between 1-10. The program can be designed to multiply the value for each factor by the percentage of importance for that factor (as determined above). Because nine factors are considered here, there will be nine calculations. The next step would be to add the answers obtained for the nine factors to arrive at a total score for the given firm - high total is best. This same procedure would be performed for all the companies under analysis. The program can then rank the earnings quality among firms based on their total scores. To illustrate, assume for a given company its "earnings quality" variables are in the following deciles:

<u>Variable</u>	<u>Ranked</u>	<u>Calculated Decile</u>	<u>Value Assigned to Decile</u>
1. Coefficient of variation	low to high	1st	10
2. Growth rate in EPS	high to low	3rd	8
3. Earnings to fixed charges	high to low	7th	4
4. Beta	low to high	5th	6
5. Cash flow as a percent of net income	high to low	2nd	9

<u>Variable (continued)</u>	<u>Ranked</u>	<u>Calculated Decile</u>	<u>Value Assigned to Decile</u>
6. Intangible assets + deferred charges ÷ total assets	low to high	4th	7
7. Estimated expenses ÷ sales	low to high	10th	1
8. Repairs and maintenance ÷ fixed assets	high to low	6th	5
9. Deferred costs ÷ sales	low to high	4th	7

A total score for the firm can now be derived in the following manner:

<u>Variable</u>	<u>Value Assigned to Decile</u>	<u>Percentage of Importance of Each "Quality of Earnings" Variable</u>	<u>Weighted-Average Value</u>
1	10	.22	2.20
2	8	.13	1.04
3	4	.06	.24
4	6	.14	.84
5	9	.16	1.44
6	7	.15	1.05
7	1	.06	.06
8	5	.06	.30
9	7	<u>.02</u>	<u>.14</u>
Total Score		<u>1.00</u>	<u>7.31</u>

This process would be applied to all firms. Companies can then be ranked in terms of earnings quality based on their total scores.

APPENDIXES

APPENDIX I
COVER LETTER
QUESTIONNAIRE

QUEENS COLLEGE

of THE CITY UNIVERSITY OF NEW YORK

FLUSHING • NEW YORK 11367

DEPARTMENT OF ACCOUNTING

TELEPHONE: 212-448-7500

February 1976

Dear

I am writing a doctoral dissertation in Accountancy entitled "The Concept of the Quality of Earnings: An Analysis and Evaluation" as a Ph. D. candidate (at the Bernard M. Baruch College). The purpose of my study is to develop an operational and useful definition of the "quality of earnings". Since you are professionally involved with financial reporting, your opinions concerning this topic would be of great importance to this project.

Enclosed is a questionnaire and a postage-paid, self-addressed envelope. The questionnaire has been pre-tested, and should not require much of your valuable time.

You need not fill-in your name or your affiliation. However, please fill-in the general category of your position so that a statistical summary of respondents can be prepared.

I will be most pleased to send you a summary of the results of the study. In this connection, please fill-out your name and address in the segment below. This segment will be detached by me immediately upon receipt.

Your early reply will be greatly appreciated and should contribute importantly to a clarification in this important area.

Thank you very much.

Sincerely yours,

Joel Siegel, IRS
 Joel Siegel, C.P.A.
 Joel Siegel, C.P.A.
 Instructor

 Name _____

Address _____

QUESTIONNAIRE

The Concept of the "Quality of Earnings"

Security Analysts, Accountants, and Financial Managers

Name _____
Brokerage Firm, CPA Firm, or Company Association _____

University Association (Academics) _____

Security Analyst _____ Industry Specialization _____
General _____

Accountant: Practitioner _____ Industry Specialization _____
General _____
Academician _____

Financial Manager _____ Industry Specialization _____

Please answer all applicable questions.

Where appropriate, include examples of companies and industries.

Assume all situations have a material effect on reported earnings.

I. Are you familiar with what is being referred to as the "quality of earnings"?

II. Does the concept of "quality of earnings" make sense to you; is it a meaningful and useful concept?

III. What elements do, in your opinion, determine "quality of earnings"?

IV. Do you believe that "quality of earnings" can be objectively measured? If so, how can it be accomplished?

V. What industry characteristics do, in your opinion, affect earnings quality (e.g., cyclical, capital intensive, labor intensive)?

12. A company's debt to equity ratio increases from 1:1 to 2:1.
13. A company's reported earnings increased as a result of recognizing tax carryforward losses.
14. A company defers, to a greater extent, overhead and other indirect costs in inventory that were previously expensed.
15. A company deliberately liquidates low-cost LIFO inventories.
16. A company receives a substantial payment on an insurance policy due to the death of its president which increases per share earnings by \$0.15. (EPS are \$0.8
17. A company which sells equipment in cyclical markets increases its level of rental and service income.
18. In the current year, a company incurred nonrecurring costs in connection with a special sales convention and promotion plan.
19. A company incurred uninsured casualty losses which were not within the risk category to which the firm is considered susceptible.
20. A company incurred a \$1 million loss as a result of ransom paid for kidnapped executives.
21. A company derived income from the introduction of a 53rd week year.
22. A company incurred nonrecurring costs associated with power breakdowns and material shortages.
23. A company is susceptible to substantial commodity price changes (copper industry).
24. A company received a "once and for all" extraordinary large order from a customer, resulting in a "one-time" substantial increase in sales.
25. A company changes its depreciation method for new acquisitions from straight-line to accelerated.
26. Even though a company's bad debt write-off experience has worsened its bad debt provision for the current year declined.
27. A company sells assets picked up under a pooling of interests for \$1.5 million which were originally recorded at \$1 million.

28. A company uses the percentage of completion method to account for long-term construction contracts. Without proper justification, it shortens the performance schedules to complete construction projects, thereby increasing reported profits.

29. A bank has an increasing trend of loans in its portfolio which stopped paying interest.

30. A paper manufacturer had a substantial increase in earnings from unusual product demand coupled with sky-rocketing commodity prices.

VII. A number of situations are presented below. For each, please place an "X" in the

Yes

Does this
apply to
"qualit
ings" as
defined

1. A company's reported net income of \$10 million includes cash earnings of \$3 million. The balance represents earnings derived from non-cash sources, primarily from sales on account.

2. A company reports stockholder earnings of \$10 million while reporting a \$1 million loss to the IRS.

3. A company reports net income of \$10 million of which "other income" (primarily interest income) equals \$8 million.

4. A company derives a major source of its earnings from foreign operations which are primarily located in politically unstable countries.

5. The company's property, plant and equipment is very old and will shortly require replacement. The company has been depreciating these assets on the straight-line method. These assets have a book value of \$10 million but their replacement cost is estimated at \$30 million.

6. A company's total costs consists of variable costs of 10% and fixed costs of 90%. The company's product demand is highly elastic.

Yes

7. Inventory profits represent 40% of a company's net income.

8. A company shows reported earnings of \$1 million. On a price-level adjusted basis the earnings would be \$250,000 and on a replacement cost basis the earnings would be \$300,000.

9. A company has made a number of accounting changes which have bolstered earnings. In light of this, the P/E ratio of the company declined.

10. A company with high earnings has undertaken massive research and advertising projects which are reflected in income.

11. A company's major demand for its product comes from two large industrial users that have cyclical operations.

12. A company must borrow money on a 10 year note to buy equipment and build a new store. The company divides the total interest by 10 and charges itself equal amounts each year.

Additional Comments (if any)

<u>Yes</u>

it income.

On a price-level
a replacement cost

which have bolstered
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<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Good</u>	<u>Poor</u>	<u>No Effect</u>	<u>"Remarks"</u>

APPENDIX II**TABULATION OF THE RESULTS OF THE QUESTIONNAIRE SURVEY**

APPENDIX II

TABULATION OF THE RESULTS OF THE QUESTIONNAIRE SURVEY

	<u>Question I</u>	
	<u>Yes</u>	<u>No</u>
Accountants (A)	47	3
Security Analysts (SA)	27	0
Financial Managers (FM)	43	4

	<u>Question II</u>	
	<u>Yes</u>	<u>No</u>
A	37	9
SA	27	0
FM	36	10

	<u>Question VI</u>				<u>Improvement</u>	<u>Deterioration</u>	<u>No Effect</u>
	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>			
<u>Sit. 1</u>							
A	25	8	33	13	3	28	2
SA	16	1	20	2		20	
FM	23	7	33	10		32	1
HBS*	107	15	117	8	3	105	9
<u>Sit. 2</u>							
A	26	4	35	8	2	26	3
SA	21		26			26	
FM	28	5	38	7	5	33	
HBS	115	10	121	8	1	117	3
<u>Sit. 3</u>							
A	25	8	36	9	1	34	1
SA	19		24	1		24	
FM	22	12	32	13	2	30	
HBS	70	49	108	18		116	2
<u>Sit. 4</u>							
A	24	8	34	13	1	32	1
SA	13	6	15	7		13	2
FM	15	17	19	25	5	14	
HBS	59	70	102	30	5	96	1

*HBS = Harvard Business School Students

	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Improvement</u>	<u>Deterioration</u>	<u>No Effect</u>
<u>Sit. 5</u>							
A	29	5	36	8	5	28	2
SA	17	2	21	2		21	
FM	24	7	34	10	1	33	
HBS	88	36	97	34	7	86	4
<u>Sit. 6</u>							
A	27	6	32	14	1	30	1
SA	21		26	1		25	1
FM	21	9	32	13	1	30	1
HBS	118	6	123	7	1	120	2
<u>Sit. 7</u>							
A	26	7	42	6	16	26	
SA	18	1	24	1	13	10	1
FM	26	5	40	8	11	23	1
HBS	112	11	119	12	106	7	6
<u>Sit. 8</u>							
A	25	7	34	11	1	29	4
SA	18	2	26	2		26	
FM	22	7	36	9	8	24	4
HBS	95	25	110	19	20	82	8
<u>Sit. 9</u>							
A	14	14	24	18	19	2	3
SA	8	12	11	16	10		1
FM	13	19	17	26	16	1	
HBS	67	50	77	48	72	2	3
<u>Sit. 10</u>							
A	20	11	25	20	1	24	
SA	13	5	17	6		16	1
FM	21	9	32	12		29	3
HBS	69	50	83	42	4	75	4
<u>Sit. 12</u>							
A	14	18	20	25	5	14	1
SA	9	9	10	12		10	
FM	14	16	20	23	1	18	1
HBS	95	25	103	20	3	97	3
<u>Sit. 13</u>							
A	24	9	34	16	3	28	3
SA	19	2	22	4		22	
FM	20	10	30	15	2	24	4
HBS	101	21	106	22	4	90	12
<u>Sit. 14</u>							
A	30	3	43	2	3	40	
SA	20	1	24	1		24	
FM	28	3	40	5	1	39	
HBS	109	9	122	4		119	3

	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Improvement</u>	<u>Deterioration</u>	<u>No Effect</u>
<u>Sit. 15</u>							
A	29	3	40	7	1	38	1
SA	18	6	21	6		21	
FM	29	3	44	2		44	
HBS	87	27	102	21	7	93	2
<u>Sit. 16</u>							
A	25	8	32	15	2	29	1
SA	20	2	24	1		22	2
FM	22	10	27	19		27	
HBS	105	15	111	17		102	9
<u>Sit. 17</u>							
A	17	19	23	20	19	4	
SA	13	8	16	9	15	1	
FM	16	15	22	23	19	3	
HBS	68	50	84	40	64	16	4
<u>Sit. 18</u>							
A	19	13	21	24	8	9	4
SA	11	11	15	11	8	7	
FM	8	23	15	28	8	6	1
HBS	63	54	67	61	51	6	10
<u>Sit. 19</u>							
A	16	16	19	27	2	14	3
SA	8	8	15	8	2	13	
FM	8	20	13	31	4	8	1
HBS	62	55	63	60	36	16	11
<u>Sit. 20</u>							
A	21	17	19	27	2	14	3
SA	8	10	13	12	1	11	1
FM	9	21	14	29	4	10	
HBS	61	56	60	64	35	11	14
<u>Sit. 21</u>							
A	22	11	29	17	1	25	3
SA	15	7	18	8		18	
FM	13	19	19	26		17	2
HBS	87	30	96	27	2	86	8
<u>Sit. 22</u>							
A	12	19	14	29		13	2
SA	7	15	13	13	1	12	
FM	10	22	15	29	5	8	2
HBS	63	52	70	52	28	29	13
<u>Sit. 23</u>							
A	17	15	26	19		23	3
SA	10	9	18	9		17	1
FM	12	19	16	30		13	3
HBS	63	56	72	53	3	58	11

	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Improvement</u>	<u>Deterioration</u>	<u>No Effect</u>
<u>Sit. 24</u>							
A	25	8	30	15	4	25	1
SA	15	8	17	10		16	1
FM	19	15	26	20	2	22	2
HBS	80	38	88	37	3	73	12
<u>Sit. 25</u>							
A	28	4	37	8	20	15	2
SA	19	2	26		24	2	
FM	26	6	36	9	24	10	2
HBS	101	18	111	16	88	18	5
<u>Sit. 26</u>							
A	25	4	38	4	1	36	1
SA	20	1	26			26	
FM	28	1	39	4	2	37	
HBS	101	12	113	6	3	108	2
<u>Sit. 27</u>							
A	25	8	34	10	1	29	4
SA	15	5	19	6		18	1
FM	15	13	24	17	1	22	1
HBS	93	13	99	15	6	81	12
<u>Sit. 28</u>							
A	34		42	4		42	
SA	21		25			25	
FM	28	4	33	4	1	31	1
HBS	111	6	120	4	2	117	1
<u>Sit. 29</u>							
A	21	10	32	10	1	30	1
SA	16	4	18	6		18	
FM	21	10	29	17		29	
HBS	80	38	96	28		95	1
<u>Sit. 30</u>							
A	22	10	33	11	2	30	1
SA	11	10	14	12		14	
FM	14	14	21	26	3	14	4
HBS	79	39	89	36	10	67	12

Question VII

	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Good</u>	<u>Poor</u>	<u>No Effect</u>
<u>Sit. 1</u>							
A	12	20	18	24	2	15	1
SA	11	8	14	11		14	
FM	14	12	23	21		20	3
HBS	76	48	100	36		93	7
<u>Sit. 2</u>							
A	13	18	16	26		12	4
SA	15	4	18	5		17	1
FM	10	20	16	25	3	13	
HBS	74	47	88	38	7	75	6
<u>Sit. 3</u>							
A	18	13	24	18	1	19	4
SA	13	6	14	11		14	
FM	17	13	26	18	3	22	1
HBS	87	30	100	22	2	97	1
<u>Sit. 4</u>							
A	27	7	35	9		35	
SA	18	4	18	9		17	1
FM	25	7	36	13		36	
HBS	84	40	115	14		114	1
<u>Sit. 5</u>							
A	19	12	24	18		21	3
SA	13	8	14	12		14	
FM	16	13	26	21	1	25	
HBS	68	57	101	29	1	97	3
<u>Sit. 6</u>							
A	20	12	27	17	1	26	
SA	13	7	14	11		14	
FM	16	15	23	24		23	
HBS	67	55	95	32	6	81	8
<u>Sit. 7</u>							
A	28	5	39	4	2	34	3
SA	22	1	23	3		23	
FM	26	7	36	10	1	35	
HBS	111	9	125	1	1	124	
<u>Sit. 8</u>							
A	18	13	31	12	1	29	1
SA	14	8	16	10		16	
FM	16	13	23	21		23	
HBS	86	31	112	12	2	106	4

	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Good</u>	<u>Poor</u>	<u>No Effect</u>
<u>Sit. 9</u>							
A	27	5	38	4	1	36	1
SA	21		23			22	1
FM	28	4	41	5		36	5
HBS	115	3	123	3	2	115	6
<u>Sit. 10</u>							
A	19	13	28	14	18	8	2
SA	17	3	19	6	15	2	2
FM	17	15	27	19	20	4	3
HBS	82	37	104	19	101	2	1
<u>Sit. 11</u>							
A	23	8	32	10		30	2
SA	14	7	16	11		16	
FM	21	10	26	21	1	19	6
HBS	70	46	95	26		93	2

APPENDIX III

LIST OF RESPONDENTS THAT REQUESTED THE RESULTS
OF THE QUESTIONNAIRE SURVEY

APPENDIX III

LIST OF RESPONDENTS THAT REQUESTED THE RESULTS OF THE
QUESTIONNAIRE SURVEY

E. Akresh, financial manager, J.C. Penney Co.
 S. Anreder, financial editor, Barron's Weekly
 G. Aranoff, accounting faculty, Fordham University
 S. Axelrod, security analyst, Paine, Webber, Jackson & Curtis
 O. Barnum, assistant treasurer, U.S. Steel
 G. Benston, accounting faculty, University of Rochester
 M. Block, editorial consultant, CPA Journal
 H. Buirkie, comptroller, Allied Chemical
 R. Burry, security analyst, H.C. Wainwright
 C. Cappacona, financial manager, Electronic Associates, Inc.
 D. Carmichael, director, auditing and reporting division, AICPA
 J. Cashin, accounting faculty, Hofstra University
 J. Castro, former controller, Brown Co.
 T. Cho, accounting faculty, Queens College
 T. Commes, controller, W.T. Grant
 J. Connolly, security analyst, Faulkner, Dawkins, & Sullivan
 T. Eggert, security analyst, Blyth, Eastman & Dillon
 C. Engler, accounting faculty, Iona College
 P. Epperlein, financial manager, International Telephone & Telegraph
 J. Feiner, security analyst, Drexel Burnham
 P. Fertig, accounting faculty, Ohio State University
 A. Fingerhut, accountant, Loeb and Troper, CPAs
 R. Freese, treasurer, Grumman Corp.
 M. Gabelli, security analyst, brokerage firm
 A. Gambino, technical research staff, National Association of Accountants
 N. Gambino, financial manager, RCA Corp.
 P. Garner, accounting faculty, University of Alabama
 J. Gaudet, financial manager, Harnishfeger Corp.
 J. Geer, chief financial officer, CBS, Inc.
 E. Giles, security analyst, F. Eberstadt
 J. Green, controller, Allied Chemical
 J. Gunning, financial manager, Union Carbide
 J. Hagan, comptroller, R.J. Reynolds Ind.
 J. Hardy, assistant treasurer, Warner Communications
 B. Harter, Vice-President of Finance, Becton, Dickinson & Co.
 D. Hawkins, accounting faculty, Harvard University
 W. Hayford, Vice-President of Finance, Continental Can
 G. Horlick, accounting faculty, Queens College
 S. Hunt, director of corporate accounting, General Mills
 L. Jordan, accounting faculty, Fordham University
 T. Jordan, financial manager, Phillips Van Heusen Corp.
 W. Ketner, controller, Owens-Corning Fiberglas
 J. Killian, financial manager, McGraw-Hill
 M. Kirsh, accounting faculty, Queens College
 H. Knortz, controller, International Telephone and Telegraph
 L. Knox, Vice-President of Finance, GATX Corp.

- R. LaBlanc, security analyst, Salomon Bros.
 R. Lacroix, assistant controller, GAF Corp.
 S. Laycock, financial manager, Martin Marietta
 L. Lebensbaum, accounting faculty, Adelphi University
 E. Lewis, manager, Haskins & Sells, CPAs
 D. Londoner, security analyst, Wertheim & Co.
 J. MacNeill, partner, Peat, Marwick & Mitchell, CPAs
 K. Marshall, partner, Coopers & Lybrand, CPAs
 R. Nautz, partner, Ernst & Ernst, CPAs
 G. McGillivray, manager of accounting research department, Mobil Oil
 J. McGinty, security analyst, H.C. Wainwright
 J. McGourty, controller, Coca-Cola
 E. McGowen, technical research staff, FASB
 J. McLean, accounting faculty, Virginia Polytechnic Institute and
 State University
 D. Meade, security analyst, H.C. Wainwright
 J. Meyer, investment analyst, Lionel D. Edie
 H. Miller, partner, Arthur Andersen & Co., CPAs
 R. Morgan, controller, Caterpillar Tractor
 E. Mortan, accountant, Ernst & Ernst, CPAs
 H. Muller, research staff, AICPA
 A. Myer, controller, Borden Inc.
 B. Norr, security analyst, First Manhattan
 J. Olson, treasurer, GAF Corp.
 R. Orben, controller, NCR Corp.
 H. Parr, controller, Diebold Inc.
 R. Polimeni, chairman, department of accounting, Hofstra University
 A. Pustorino, partner, Puglisi and Pustorino, CPAs
 P. Regen, security analyst, Merrill Lynch
 G. Rothstein, security analyst, William D. Witter
 L. Ross, security analyst, Mitchell, Hutchins
 C. Savage, chairman, department of accounting, St. Francis College
 C. Schretzman, director, corporate accounting, International
 Paper
 W. Scott, manager, Price Waterhouse, CPAs
 T. Shen, security analyst, Donaldson, Lufkin & Jenrette Securities
 D. Smith, investment analyst, Bank of New York
 P. Smith, research director, Spencer Trask
 V. Spore, financial manager, Continental Oil
 R. Stevenson, coordinator of accounting research, Exxon Corp.
 F. Stone, security analyst, Merrill Lynch
 R. Sullivan, Vice-President, American Express
 D. Surdoval, controller, Norton Simon
 O. Theurkauf, research director, Scudder, Stevens & Clark
 A. Thomas, accounting faculty, McMaster University
 A. Tietjen, retired partner, Price Waterhouse, CPAs
 B. Ullman, financial manager, Korvettes Department Stores
 R. Vargo, accounting faculty, University of Texas
 H. Vogel, security analyst, Paine, Webber, Jackson & Curtis
 H. Weiss, financial manager, Kennecott Copper
 F. Weston, retired partner, Arthur Young & Co., CPAs
 D. Whalen, assistant comptroller, American Broadcasting Cos.
 J. White, accounting faculty, University of Texas
 J. Workman, director of planning, Warner-Lambert
 A. Wyatt, partner, Arthur Andersen & Co., CPAs
 J. Yang, accounting faculty, Fordham University

BIBLIOGRAPHY

BIBLIOGRAPHY

Reference Works

- Accounting and Reporting Problems of the Accounting Profession. Chicago: Arthur Andersen and Co., 1974.
- Accounting Series Releases. To current number. Washington, D.C.: U.S. Securities and Exchange Commission.
- Accounting Trends and Techniques. New York: American Institute of CPAs, Yearly ed.
- Amling, F. Investments: An Introduction to Analysis and Management. New Jersey: Prentice-Hall, 1974.
- Anderson, C. Corporate Reporting for the Professional Investor. New York: Financial Analysts Federation, 1962.
- Backer, M. Financial Reporting for Security Investment and Credit Decisions. New York: National Association of Accountants, 1970.
- _____. (ed.). Handbook of Modern Accounting Theory. New Jersey: Prentice-Hall, 1966.
- Bellemore, D., and Ritchie, J. Investments. Ohio: South-Western Publishing, 1974.
- Bernstein, L. Accounting for Extraordinary Gains and Losses. New York: Ronald Press, 1967.
- _____. Financial Statement Analysis: Theory, Application, and Interpretation. Illinois: Richard Irwin, 1974.
- Briloff, A. More Debits than Credits. New York: Harper & Row, 1976.
- _____. Unaccountable Accounting. New York: Harper & Row, 1972.
- C.F.A. Readings in Financial Analysis. Illinois: Richard D. Irwin, 1970-1974.
- Davis, C., and Gee, E. Analyzing Financial Statements. New York: American Institute of Banking, 1956.
- Dearden, J., and Shank, J. Financial Accounting and Reporting. New Jersey: Prentice-Hall, 1975.
- DeJong, D.; and Jennings, E.; and Kennelly, J. On the Effectiveness of Income Smoothing (Working Paper Series No. 71-19). Iowa: University of Iowa, 1971.
- FASB Discussion Memorandum - Criteria for Determining Materiality. Connecticut: FASB, March 21, 1975.
- Financial Accounting Standards. Connecticut: FASB, Sept. 1, 1975.
- Foulke, R. Practical Financial Statement Analysis. New York: McGraw-Hill, 1962.

- Gillman, S. Accounting Concepts of Profit. New York: Ronald Press, 1939.
- Graham, B.; Dodd, B.; and Cottle, S. Security Analysis: Principles and Techniques. New York: McGraw-Hill, 1962.
- Grodinsky, J. Investments. New York: Ronald Press, 1953.
- Hayes, D. Appraisal and Management of Securities. New York: Macmillan, 1956.
- Health of Earnings. New York: American Institute of Management, 1955.
- Illustrations of Accounting Policy Disclosure. New York: American Institute of CPAs, 1972.
- Illustrations of Reporting Accounting Changes. New York: American Institute of CPAs, 1974.
- Illustrations of Reporting the Results of Operations. New York: American Institute of CPAs, 1974.
- Keller, T., and Zeff, S. (ed.). Financial Accounting Theory II: Issues and Controversies. New York: McGraw-Hill, 1969.
- Kennedy, R. and McMullen, S. Financial Statements: Form, Analysis, and Interpretation. Illinois: Richard D. Irwin, 1973.
- Mauriello, J. Accounting for the Financial Analyst. Illinois: Richard D. Irwin, 1967.
- Myer, J. Financial Statement Analysis. New Jersey: Prentice-Hall, 1969.
- Philips, G. and Copeland, R. Financial Statements: Problems from Current Practice. New Jersey: Prentice-Hall, 1969.
- Rappaport, L. SEC Accounting Practice and Procedure. New York: Ronald Press, 1972.
- Smith, K., and Eiteman, D. Modern Strategy for Successful Investing. Illinois: Richard D. Irwin, 1974.
- Statements on Auditing Standards Numbers 1 to 7. New York: American Institute of CPAs, 1976.
- U.S. Securities and Exchange Commission. Annual Reports (Section: "Activities of the Commission in Accounting and Auditing"). Washington, D.C.: U.S. Government Printing Office.
- Williams, E., and Findlay, M. Investment Analysis. New Jersey: Prentice-Hall, 1974.

Periodicals

- Amos, W. "New Accounting Rules and Procedures for Fire and Casualty Companies," Financial Analysts Journal (Sept./Oct., 1966), pp. 33-38.
- Ball, R., and Brown, P. "An Empirical Evaluation of Accounting Income Numbers," Journal of Accounting Research (Autumn, 1968), pp. 159-78.
- Barefield, R., and Comiskey, E. "Smoothing Hypothesis: An Alternative Test," Accounting Review (April, 1972), pp. 291-98.
- _____. "Depreciation Policy and the Behavior of Corporate Profits," Journal of Accounting Research (Autumn, 1971), pp. 351-58.
- Beidleman, C. "Income Smoothing: The Role of Management," Accounting Review (October, 1973), pp. 653-67.
- Bernstein, L. "Extraordinary Gains and Losses - Their Significance to the Financial Analyst," Financial Analysts Journal (November-December, 1972), pp. 49-50, 52, 88-90.
- _____. "Reserves for Future Costs and Losses: Threat to the Integrity of the Income Statement," New York Certified Public Accountant (July, 1970), pp. 541-46.
- Blackie, W. "Quality of Earnings," Financial Executive (July, 1972), pp. 24-27.
- Block, F. "A Security Analyst Looks at Accounting," Financial Executive (November, 1971), pp. 22-24.
- Bradish, R. "Corporate Reporting and the Financial Analyst," Accounting Review (October, 1965), pp. 757-66.
- Brigham, E. "The Effects of Alternative Depreciation Policies on Reported Profits," Accounting Review (January, 1968), pp. 46-61.
- Briloff, A. "Corporate Financial Reporting Quagmire," The CPA Journal (March, 1972), pp. 181-85.
- _____. "SLIC GAAP," Financial Analysts Journal (March/April, 1974), pp. 30-36, 81-85.
- Burke, A. "The Investor Looks at Accounting Problems in the Utility Industry," Financial Analysts Journal (Sept./Oct., 1965), pp. 27-30.
- Burton, L., and Lyons, J. "Managing the Numbers: The Accounting Game," Financial World (October 31, 1973), pp. 63-66.
- Cheney, R. "How Dependable is the Bottom Line?" Financial Executive (January, 1971), pp. 10-15.

- Comiskey, E., and Colantoni, C. "Accounting Alternatives and Finance Company Earnings," Financial Analysts Journal (March/April, 1969), pp. 55-59.
- Copeland, R. "Income Smoothing," Empirical Research in Accounting: Selected Studies 1968, Supplement to Journal of Accounting Research (1968), pp. 101-16.
- _____. "Note on Income Smoothing," Accounting Review (July, 1968), pp. 540-45.
- _____, and Moore, M. "The Financial Bath: Is it Common?" MSU Business Topics (Autumn, 1972), pp. 63-69.
- _____, and Wajdak, J. "Income Manipulation and the Purchase-Pooling Choice," Journal of Accounting Research (Autumn, 1969), pp. 188-95.
- Cruikshank, G. "The Elusive Bottom Line," Financial Executive (May, 1974), pp. 60-2, 64, 70, 72.
- Cushing, B. "An Empirical Study of Changes in Accounting Policy," Journal of Accounting Research (Autumn, 1969), pp. 196-203.
- _____, and Deakin, E. "Firms Making Accounting Changes: A Comment," Accounting Review (January, 1974), pp. 104-11.
- Dascher, P., and Malcolm, R. "A Note on Income Smoothing in the Chemical Industry," Journal of Accounting Research (Autumn, 1970), pp. 253-59.
- Dean, J. "Measurement of Real Economic Earnings of a Machinery Manufacturer," Accounting Review (April, 1954), pp. 255-66.
- Defilese, P. "What Makes Profits Look 'Obscene'," Business Week (August 4, 1975), pp. 10-11.
- Dyer, W. "Life Insurance Accounting Under Fire," Financial Analysts Journal (Sept./Oct., 1974), pp. 42-44, 46-50.
- Engel, P. "Implications of GAAP for Financial Reporting by Life Insurance Companies," Financial Analysts Journal (July/August, 1973), pp. 22-26, 70-71.
- Filter, E. "Accounting Practices of Major Computer Companies," Financial Analysts Journal (May/June, 1971), pp. 44-52.
- Flynn, T. "Accounting Principles and Financial Analysts," Financial Analysts Journal (March/April, 1965), pp. 16, 18, 20, 22.
- Fogelberg, G. "Interim Income Determination: An Examination of the Effects of Alternative Measurement Techniques," Journal of Accounting Research (Autumn, 1971), pp. 215-35.
- Frishkoff, P. "Some Recent Trends in Accounting Changes," Journal of Accounting Research (Spring, 1970), pp. 141-44.

- Gosman, M. "Characteristics of Firms Making Accounting Changes," Accounting Review (January, 1973), pp. 1-11.
- Graber, D. "Real and Illusory Earnings Growth," Financial Analysts Journal (March/April, 1969), pp. 52-54.
- Graham, D. "Some Observations on the Nature of Income, Generally Accepted Accounting Principles, and Financial Reporting," Law and Contemporary Problems (Autumn, 1965), pp. 652-73.
- Gunn, J. "Some Thoughts on Financial Analysis and GAAP," Oklahoma CPA (January, 1968), pp. 29-30.
- Guy, D., and Mann, H. "The Resurging Problem of Revenue Recognition," The National Public Accountant (March, 1975), pp. 24-29.
- Hawkins, D. "Accounting Dodos and Red Flags," Financial Executive (May, 1974), pp. 82-103.
- Hepworth, S. "Smoothing Periodic Income," Accounting Review (January, 1953), pp. 32-39.
- Hershman, A. "Accounting: New Numbers, Same Game," Dun's Review (August, 1972), pp. 38-40.
- Kaplan, R., and Roll, R. "Investor Evaluation of Accounting Information: Some Empirical Evidence," Journal of Business (April, 1972), pp. 225-57.
- Klingstedt, J. "Effects of Full Costing in the Petroleum Industry," Financial Analysts Journal (Sept./Oct., 1970), pp. 79-86.
- Kripke, H. "The Objective of Financial Accounting Should be to Provide Information for the Serious Investor," The CPA Journal (May, 1972), pp. 389-97.
- Leisy, H., and Milne, R. "What Are Bank Earnings?" Financial Analysts Journal (March/April, 1968), pp. 89-94.
- Laibstain, S. and Huff, T. "The Financial Reporting of Revised Loss Estimates," Financial Analysts Journal (May/June, 1971), pp. 62-69.
- Mahon, J. "Accounting Principles Debate and Investor Confidence," Financial Executive (December, 1966), pp. 28, 31-32, 34, 36.
- Mark, M., Baris, M., Lytle, R., and Marx, L. "Pitfalls in Real Estate Accounting," Financial Analysts Journal (Jan./Feb., 1972), pp. 29-36.
- Murphy, G. "Quality of Reported Earnings Under Generally Accepted Accounting Alternatives," Journal of Business Finance (Summer, 1971), pp. 43-50.
- Myer, J. "Depreciation Manipulation for Fun and Profit," Financial Analysts Journal (Sept./Oct., 1969), pp. 47-56.

- Norby, W., and Stone, F. "Objectives of Financial Accounting and Reporting from the Viewpoint of the Financial Analyst," Financial Analysts Journal (July/August, 1972), pp. 39-45.
- O'glove, T. "Finance Company Accounting," Financial Analysts Journal (Jan./Feb., 1968), pp. 37-44.
- Pankoff, L., and Virgil, R. "Some Preliminary Findings from a Laboratory Experiment on the Usefulness of Financial Accounting Information to Security Analysts," Empirical Research in Accounting: Selected Studies 1970, Supplement to Journal of Accounting Research (1970), pp. 1-48.
- Paton, W. "Financial Misrepresentation and Mismeasurement," Financial Executive (April, 1973), pp. 14-21.
- "Proper Disclosure Secures Investor Confidence," Financial Executive (January, 1966), p. 46.
- "Quality of Earnings is Under Attack," Business Week (December 23, 1972), pp. 74-76.
- Ross, M. "The Current Crisis in Financial Reporting," Journal of Accountancy (August, 1967), pp. 65-69.
- Schiff, M. "Accounting Tactics and the Theory of the Firm," Journal of Accounting Research (Spring, 1966), pp. 62-67.
- Shank, J. "Smooth Your Earnings Growth Rate," Harvard Business Review (Jan./Feb., 1974), pp. 136-41.
- Simpson, R. "Empirical Study of Feasible Income Manipulation," Accounting Review (October, 1969), pp. 806-17.
- Smith, L. "A Security Analyst Looks at Financial Statements," Journal of Accountancy (August, 1959), pp. 37-41.
- Stern, J. "Earnings Per Share Don't Count," Financial Analysts Journal (July/August, 1974), pp. 39, 40, 42-3, 67-75.
- Summers, E. "Observation of Effects of Using Alternative Reporting Practices," Accounting Review (April, 1968), pp. 257-65.
- Terborgh, G. "Inflation and Profits," Financial Analysts Journal (May/June, 1974), pp. 19-23.
- Tietjen, A. "A Basis for Financial Reporting," The CPA Journal (January, 1973), pp. 37-43.
- Treynor, J. "The Trouble with Earnings," Financial Analysts Journal (Sept./Oct., 1972), pp. 41-43.
- Tucker, M. "Estimate Degree of Conservatism in Your Corporate Earnings," Certified General Accountant (March/April, 1974), pp. 21-3, 26-7, 38.

"What are Earnings? The Growing Credibility Gap," Forbes (May 15, 1967), pp. 28-31, 34, 39, 42, 44.

White, G. "Discretionary Accounting Decisions and Income Normalization," Journal of Accounting Research (Autumn, 1970), pp. 260-73.

_____. "Effects of Discretionary Accounting Policy on Variable and Declining Performance Trends," Journal of Accounting Research (Autumn, 1972), pp. 351-58.

Whittington, G. "Asset Valuation, Income Measurement and Accounting Income," Accounting and Business Research (Eng.) (Spring, 1974), pp. 96-101.

Widmann, E., and Miller, P. "Economic Stability and Profit Cyclicity," Financial Analysts Journal (Jan./Feb., 1965), pp. 46-47.

Williams, W. "A Look Behind Reported Earnings," Financial Analysts Journal (Jan./Feb., 1965), pp. 38-41.

Newspaper Articles

Allan, J. "Do Earnings Matter to Wall Street?" New York Times, April 22, 1973, section 3, pp. 1,6.

_____. "Income Reporting Held Misleading," New York Times, September 4, 1972, pp. 21-22.

Clark, L. "Phantom Earnings," Wall Street Journal, March 12, 1974, p. 1.

Hyatt, J. "Clearing the Books," Wall Street Journal, March 25, 1971, p. 23.

Lamson, N. "A Skeptical Eye for Earnings," New York Times, February 2, 1975, section 3, p. 3.

Other Sources

"Accounting Report Alerts." To current issue. New York: Merrill Lynch, Pierce, Fenner and Smith, Inc.

"Corporate Profits: How Inflation Magnifies the Bottom Line." New York: First National City Bank, April, 1974.

Cushing, B. "The Effects of Accounting Policy Decisions on Trends in Reported Corporate Earnings Per Share." Unpublished Ph.D. dissertation, Michigan State University, 1969.

Hawkins, D. "Accounting Bulletins." To current issue. New York: Drexel Burnham.

- Imhoff, E. "An Empirical Examination of Income Manipulation," Unpublished Ph.D. dissertation, Michigan State University, 1973.
- Norr, D. "Accounting Theory Illustrated." New York: First Manhattan Co., 1974.
- O'glove, T. and Olstein, R. "Quality of Earnings Report." To current issue. New York: Bear Stearns & Co.
- Phadoongsidhi, M. "Normal Income Accounting." Unpublished Ph.D. dissertation, University of Wisconsin, 1972.
- Ratliff, J. "An Investigation into the Use of Alternative Accounting Principles and Procedures to Smooth Reported Earnings Per Share of Corporations." Unpublished Ph.D. dissertation, New York University, 1970.
- Seglund, R. "An Analysis of the Impact of Selected Accounting Procedures on Reported Financial Results." Unpublished D.B.A. dissertation, University of Colorado, 1971.
- Seidler, L. "Accounting Issues." To current issue. New York: Bear Stearns & Co.
- Weinger, N. "Accounting Briefs." To current issue. New York: Oppenheimer & Co.
- White, G. "Alternative Accounting Procedures and Trends in Reported Earnings: An Empirical Investigation of Income Normalization." Unpublished Ph.D. dissertation, University of Washington, 1969.