THE IMPACT OF INFLATION ON CORPORATE EARNING RATES

Thesis for the Degree of M. A.
MICHIGAN STATE UNIVERSITY
Howard L. Wright
1956

THE IMPACT OF INFLATION ON CORPORATE EARNING RATES

By

Howard L. Wright

AN ABSTRACT

Submitted to the College of Business & Public Service (School for Advanced Graduate Studies) of Michigan State University of Agriculture and Applied Science in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

Department of Accounting

Year 1956

Approved Edward A. Lee

Howard L. Wright

This study consists of both a theoretical and practical analysis of earning rates during inflation. The hypothesis is that during periods of inflation the conventional accounting procedures will cause an overstatement of earning rates.

A factor in the calculation of earning rates is the net income of the enterprise. It is measured as a percentage of either the average total assets or the average stockholders equity. When there is a rise in the price level, the net income of corporations will be overstated because accounting matches current revenues with costs which are, in part, stated in dollars of a higher purchasing power. The Balance Sheet relationships are also distorted by inflation. Since accounting assumes that the dollar is a constant unit of value, items such as plant and equipment are carried forward in the balance sheets at their historical cost. This results in an understatement of the total assets and the stockholders equity in terms of the price level.

Nine hypothetical cases were developed in an attempt to prove the hypothesis. The difference between the cases was in the make-up of the Balance Sheets. The assets were assumed to have varying proportions of monetary or money value items such as cash and accounts receivable. The cases had complementary proportions of non-monetary items such as plant, property, and equipment. The relationships between the stockholders equity and the liabilities were also

assumed to be in varying proportions.

The net income in each case was assumed to be the same. The statements were then converted for an assumed increase in the price level. It was found that the earning rates based on the converted statements were materially different from those based on the conventional statements. The conventional earning rates were overstated except in the cases which assumed a large proportion of liabilities, which are money value items. The cases which assumed a high proportion of monetary assets proved to have the largest overstatement of the conventional earning rates. This is essentially due to the fact that losses are suffered in terms of purchasing power on the monetary assets during times of inflation. However, there is an offsetting gain on the monetary liabilities. From the cases developed, it appears that the only way that a business can benefit by inflation is to go into debt and purchase non-monetary assets with the money borrowed.

A manufacturing company was studied as additional evidence. Upon adjusting the conventional statements by the Consumers' Price Index, it was found that the earning rates had been overstated for the ten year period studied, which was from 1946 to 1955.

In view of the cases developed, it certainly seems that

accountants should measure the impact of inflation upon accounting data. This is essential if the accounting information is to be valid and significant to all interested parties.

THE IMPACT OF INFLATION ON CORPORATE EARNING RATES

By

Howard L. Wright

A THESIS

Submitted to the (College of Business & Public Service / School for Advanced Graduate Studies) of Michigan State University of Agriculture and Applied Science in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

Department of Accounting

1956

THESIS

ACKNOWLEDGMENTS

The author wishes to express his sincere thanks to Professor E. A. Gee for his invaluable suggestions and unfailing interest in this study.

Grateful acknowledgment is also due to Dr. W. A. Paton Jr., under whose constant supervision, this investigation was undertaken. The writer is also indebted to Dr. J. D. Edwards for opening the door to the broad area of accounting theory in his theory seminars.

Sincere appreciation is extended to all of the readers of this manuscript for their helpful suggestions and their invaluable assistance in one way or another.

This work is dedicated to my wife, Audrey, without whose encouragement, constant suggestions, and perseverance, it would never have been completed.

TABLE OF CONTENTS

CHAPTER I

Introduction - Statement Of Hypothesis And Objectives

The Problem of Inflation

During the past fifteen years, the United States has been faced with the problem of inflation. This inflation has had a broad impact upon economic relationships throughout the country. The effect upon the people has been varied in its breadth as well as its depth.

When attempting to define inflation, it is necessary to understand some basic economic relationships such as the determinants of price. The economists have explained the determination of price in the formula $P=\frac{MV}{Q}$.[1] In this formula, P is the price level, M is the average amount of money in circulation, and V is the velocity at which the money is spent or the number of times the money is spent within a certain period of time. Q in the equation represents the physical volume of goods and services produced during the period. Thus, the formula explains the price level as being determined by the total money supply times the velocity at which it is spent divided by the goods and services which are produced during the period.

---

1. Paul A. Samuelson, Economics An Introductory Analysis, McGraw-Hill Book Company, Inc., New York, 1951, p.350.

Inflation exists when the supply of money in circulation increases while the velocity of spending and the volume of goods and services remain constant. Inflation may likewise result when the velocity of spending increases or the volume of goods and services decreases. Any of these circumstances will cause more dollars to seek the same or fewer goods and services.[2] Thus, the dollar price of goods increases to the point where the demand diminishes and the supply and demand factors are again equal.

As it has been explained by the layman, inflation exists because there are more dollars chasing fewer goods and services. Hence, the price of the available goods and services increases. The effect of inflation upon the dollar is to make it worth less in terms of what it can buy. Thus, the expression that "we now have a fifty cent dollar," arises when we compare the purchasing power of the dollar after inflation with the same dollar before inflation. To determine the effect of inflation, it is necessary to think of the dollar for what it is, namely, a medium of exchange for goods and services. The true value of the dollar is, then, its value in terms of what it will buy.

The fact that inflation is serious and significant in

---

2. Paul A. Samuelson, Op. Cit., p. 346

the economy cannot be overemphasized. It results in a highly significant change in the relative positions of debtors and creditors.[3] The liabilities of debtors, which are expressed in terms of the dollar, decline in real terms during a period of inflation. This is true because the debts are incurred at a time when the purchasing power of the dollar is high. They are subsequently paid off in dollars of a lower purchasing power because of the inflation. The effect upon creditors is just the reverse. They lose during inflation because they lend dollars of high purchasing power and are repaid in cheaper dollars.

Inflation is a serious economic blow to the people who have fixed dollar incomes. Such individuals find that while their dollar income remains constant, their purchasing power declines.[4] Probably the people that benefit the most from inflation, other than debtors, are those people who have assets in the form of property rather than in the form of dollar claims. Their advantage is that the property will tend to increase in dollar value as inflation progresses. As evidence of this, it is not uncommon to find an individual who purchased a home in 1940 for $5,000 and sold it in 1956 for $10,000.

---

3. "Inflation Race - Who's Ahead, Who's Behind," U. S. News & World Report, August 3, 1956, p. 97.

4. "It Now Costs More Than Ever To Live," U. S. News & World Report, August 31, 1956, p. 45.

The layman may think that he has made a nice "profit" on such a deal. Actually, the whole "profit" may be fictitious when the relative purchasing power of the 1940 dollar is compared to the 1955 dollar.

The measurement of inflation presents a difficult but not insurmountable problem. Since the inflation must be measured in terms of the relative purchasing power of the dollar during a period of time, the problem of selecting an adequate yardstick is very important. Probably the best procedure is to select a number of items whose use is relatively constant and whose aggregate change in price can be considered to be representative of the change in price level.[5] Several such computations are made continuously by various bureaus of the government and other private enterprises. Probably the most widely known of these devices are the Consumer's Price Index and the Wholesale Price Index. Both of these measurements are compiled by taking the prices of a number of selected items and weighting them by formula and then computing a weighted average which is the price level at the particular point of time.

To illustrate the measurement of inflation by these price level indexes, it is necessary to assume a base period,

---

5. Perry Mason, Price Level Changes and Fianancial Statements American Accounting Association, 1956, p.1.

and then calculate the index in terms of the base period. The table below shows the change in the Consumers' Price Index for the period from 1935 to 1955 using the 1955 index as a base.

Consumers' Price Index[6]

Yearly Average

1955 = 100[7]

Year	Index	Year	Index
1935	41.1	1946	72.8
1936	41.8	1947	83.4
1937	43.0	1948	89.8
1938	42.7	1949	88.9
1939	41.9	1950	89.8
1940	42.3	1951	96.9
1941	44.9	1952	99.1
1942	48.9	1953	99.9
1943	49.6	1954	100.3
1944	49.7	1955	100.0
1945	51.2		

The fact that there is a certain amount of error entering into the calculation of price indexes is without question. However, as a tool for measuring inflation, it is very doubtful if the percentage of error in the price index is significant. When an attempt to measure inflation is made, it is a relative measurement and cannot be considered to be absolute in terms of pennies which many people believe

---

6. U.S. Bureau of Labor Statistics, Monthly Labor Review, Table D-1, years 1940 thru 1956.

7. Converted by author by multiplying the average index of the years by 100/ the 1955 average index (114.5), the multiplier was .87336.

is the purpose of conventional accounting procedures.

The significance of inflation to the businessman should be quite evident. As the businessman purchases and sells his goods and invests in his physical plant, he would notice changes in the price level. The businessman really comes face to face with inflation when dealing with his employees. Certainly no segment of organized labor has talked about wage increases in recent years without viewing with alarm inflation and the resulting erosion it has caused upon the wages paid to labor. The erosion is not in question, rather, it is how many labor leaders have viewed the income of corporations during inflationary period with anything in mind except absolute dollar terms. They have ignored completely the impact of inflation upon corporate income while using the inflation as a bargaining issue for their own benefit.[8]

The concern of the accountant with inflation seems to revolve around one of the basic accounting assumptions. This is that the dollar is of a constant value and can be used as a common yardstick of value. In a period of inflation such is not the case since the dollar changes in value and thus becomes a "rubber yardstick". Thus, the accountant has not fulfilled his responsibility to interested parties

---

8. Charles E. Headlee, "Price Level Changes - Challenge To Accounting," NACA Bulletin, Vol. 29, No. 21, Section 1, p. 1327.

because he has maintained his accounting records and submits his accounting reports based on information which is measured with a yardstick of inconsistant length.[9] There has been some awakening to this problem. One only has to review the accounting literature of the past ten years to find that accountants are giving considerable thought to the matter. However, such thinking has received little support from professional organizations such as the American Institute of Accountants. In their research bulletin concerning "Depreciation and High Costs", the American Institute of Accountants Research Committee went to some length to state that the inflation up to that time had been relatively insignificant.[10] The American Accounting Accociation has taken the view that the use of supplementary information concerning the impact of inflation upon business would be of some value and might be incorporated into the accountant's reports.[11]

Earning Rates and Inflation

The measurement of management's efficiency in the utilization of the assets of the business enterprise may be

---

9. Alden P. Well, "Fantasy of Figures - Responsibility of Accountants", The Commercial and Financial Chronicle, Vol. 171, April 20, 1950, p. 1627.

10. American Institute of Accountants, Restatement and Revision of Accounting Research Bulletins, American Institute of Accountants, New York, 1953, p. 69.

expressed in the form of an earning rate.[12] While more attention will be given to this matter later, it is significant at this point to briefly describe the calculation of earning rates. Basically, all earning rates measure the income of the business over a period of time as a percentage of certain balance sheet items. Earning rates differ in the emphasis they place upon certain income statement and balance sheet items. In interpretation of these earning rates, interested parties may make an appraisal of the success or failure of the business during a certain period. From such an interpretation, management, stockholders, and other interested parties may arrive at significant decisions with regard to the future of the business enterprise.

Since they are mathematical expressions of the relationship of the income statement and the balance sheet, earning rates may not be considered to reflect all of the facts regarding the success or failure of a business enterprise. Indeed, to do so, would place undue emphasis upon financial relationships. Before a decision regarding the success or future success of a business enterprise can be made, it is necessary to evaluate such things as the capabilities of

---

11. Committee on Concepts and Standards Underlying Corporate Financial Statements-American Accounting Association, "Price Level Changes and Financial Statements Supplementary Statement Number 2", The Accounting Review, Vol. 26, October 1951, p. 472.

12. John N. Myer, Financial Statement Analysis, Prentice-Hall, Inc., New York, 1952, p. 169.

management, the product development policies of the firm, the size of the firm within its industry, and the significance of the firm and industry in the national economy. However, in defense of earning rates, it is necessary to state that they do express important financial relationships and when properly computed and used they can provide significant information to interested parties.

The Hypothesis

The hypothesis concerning the impact of inflation upon the calculation of earning rates may be briefly stated. It is contended that in a period of inflation, the rising prices bring on a considerable overstatement of earnings as expressed by conventional accounting principles. This is due to the charging of certain costs expressed in terms of dollars of a high purchasing power against revenues which are expressed in terms of dollars of a lower purchasing power. Thus, the effect of the overstatement of earnings is to overstate the earning rate calculated using the exaggerated earnings. A further observation is that in periods of inflation, the assets of a business as well as its stockholders equity are understated. The reason for the understatement of the assets of the business is that they are maintained on the books based on historical cost. This procedure fails to recognize that the dollars which paid for the assets and the dollars which are in use after a period of inflation, are not

expressing the same purchasing power. The understatement of the stockholders' equity results from the failure to recognize the assets of the business in terms of the purchasing power given up to procure the assets. The understatement of the assets and the stockholder's equity results in the employment of balance sheet figures in the calculation of earning rates which are also understated. The effect of using such figures will overstate the earning rate so calculated. When both overstated earnings and understated assets or stockholder's equity are used in the calculation of an earning rate, the obvious result is a double-barrelled overstatement of the earning rate.[13] The earning rate may thus prove to be highly misleading to interested parties.

The Objectives

The objective of this thesis, in accordance with the above hypothesis, is to discuss and analyse theoretically the significance and impact of inflation on corporate earning rates. This discussion will include an analysis of the nature of earning rates and the procedures concerning the measurement of accounting data to reflect the change in the price level. Earning rates will then be calculated based upon hypothetical companies in order to compare the results

---

13. William A. Paton Sr., "Measuring Profits Under Inflation Conditions: A Serious Problem for Accountants", The Journal of Accountancy, Vol. 89, January 1950, p. 21.

obtained by using conventional acccunting information, and accounting data which has been adjusted to reflect inflation. A further attempt will be made to measure the same results upon an actual business during a period of inflation. Evidence of the validity of the hypothetical examples will be sought by comparison of the examples with earning rates based upon certain studies undertaken by the American Accounting Association and the contributions to the price level question made by other prominent individuals.

CHAPTER II

The Nature Of Earning Rates

The Reasons for Computing Earning Rates

The calculation and interpretation of earning rates is an attempt to measure the earning power of the business enterprise. The earning rate calculation ties together significant figures from the Balance Sheet and the Income Statement. It is necessary to consider both of these statements in order to evaluate the performance of a business enterprise. If the Balance Sheet is analysed as to its content, the analysis will have some significance. The same may be said for the Income Statement. However, in order to measure the success of management in the employment of the firm's assets and the owners' investment, it necessary to measure the earnings as related either to the corporate assets or stockholders' equity. The calculation of an earning rate places emphasis on the fact that the real value of assets is in the production of earnings.[1] This is a fundamental truth in our capitalistic way of life where the motive of business is to make a profit.

There are two general methods of computing earning rates.

---

1. A. C. Littleton, Structure of Accounting Theory, American Accounting Association, 1953, p. 20.

The significance of these methods depends upon the view taken of the corporation. The corporate enterprise may be viewed in two ways. The first is that the corporation is an entity in itself. The other view is that the corporation is in operation only in the interest of the common stockholders.

The Entity Concept

The entity view holds that the corporation is an end in itself. It considers the net income of the business to be the income of the business entity. The entity view regards the distribution of a cash dividend to the stockholders as a payment for the use of capital. The entity concept does have a distinct legal justification. The laws governing corporate activity essentially regard the corporation as a "legal person" with the right to carry out specified activities and with the provisions for limited liability for the stockholders. The entity theory hence places emphasis upon the utilization of the corporate assets without regard to the source of the invested capital.[2] If it is desirable to express the earnings of a company in terms of the entity view, it seems that the earnings expressed in terms of the enterprise assets would constitute a significant earning rate.

The next problem to be solved if we assume the entity concept is:"What asset base should be used in calculating the

---

2. W. A. Paton, and A. C. Littleton, An Introduction to Corporate Accounting Standards, American Accounting Association, 1940, p. 8.

earning rate?" Theoretically, it seems that the asset base should consist of all the assets employed in the production of the enterprise income. This would exclude from the total enterprise assets any idle or abandoned property. The total assets employed during a particular period will vary from time to time as the assets increase and decrease. Therefore, it seems that the best method to determine the total assets employed is to calculate the assets employed at different points during the accounting period and then average them to determine the average assets employed in the production of revenue. There is a further possibility that an asset base consisting of the investment in plant, property, and equipment may provide a significant earning rate when comparing companies in the same or closely related industries. However, for the overall comparison of companies in unrelated industries and for general reporting purposes, it seems that the asset base should include all the assets employed in the production of revenue.

The income figure to be used in calculating an earning rate under the entity concept presents still another problem. It seems best to take a broad view of income in this respect. The net income figure used should reflect all extraordinary gains and losses realized during the accounting period. If this is not done, the analysis of the earning rates over a period of time will tend to lose its significance. However, it would be permissible to calculate two earning rates using

net income before and after extraordinary gains and losses if the gains and losses would materially misstate the earning rate as otherwise calculated. From the entity point of view, it is desirable to calculate the earning rate based on the income excluding payments made to the suppliers of capital. It is necessary to add back to the net income interest payments to the holders of the corporate securities. The reason for adding back these amounts is that the amount of income which the entity earns is considered to result from the efficiency with which management utilizes the assets of the business entity.[3]

In summary, the entity view is a managerial concept of the business enterprise. An earning rate based on this concept will point up the efficiency of management in utilizing the assets of the business. To differentiate this earning rate from the one developed under the proprietary concept, it will be referred to as the earning rate on average total assets.

The Proprietary Concept

The proprietary concept of the corporate enterprise stresses the position of the common stockholders. It essentially views the corporate structure as a type of partnership association with the main purpose of maximizing the earnings

3. George R. Husband, "The Entity Concept in Accounting", The Accounting Review, Vol. 29, October, 1954, p. 562.

of the stockholders. To state the proprietary concept in another way, it views the corporation as having an agency relationship with its stockholders.[4] While there has been a great deal of discussion in accounting literature concerning the relative merits of the proprietary and entity concepts of the business enterprise, it is not significant here in terms of the calculation of earning rates except as an explanation of why the earning rates are calculated. An earning rate based on the proprietary concept of the business enterprise will stress the earnings of the stockholders in comparison to the stockholders' investment.

It is now necessary to determine what should constitute the component factors in the earning rate. The base of the proprietary concept of an earning rate is the common stockholders' investment in the business.[5] The use of the common stockholders' equity seems to have merit even though preferred stock is present. However, if it is desired, little objection can be had to the calculation of two earning rates. One, to point out the effectiveness with which the total stockholders' equity is being employed (including Preferred Stock). The second earning rate would then be based on the equity of the common stockholders.

---

4. Nelson B. Seidman, "The Determination of Stockholder Income", The Accounting Review, Vol. 31, Jan. 1956, p. 64.

5. Harry G. Guthmann, Analysis of Financial Statements, Prentice - Hall Inc., New York, 1953, p. 236.

The figure to be used as common stockholder's equity in the calculation deserves some attention. The use of the original investment by the owners has little merit. It is interesting to note that the original investment is used in earning rate calculation in some European countries. This procedure will not recognize the actual stockholder's equity which is composed essentially of the invested or paid-in capital and the income retained for use in the corporation. It is necessary to recognize as stockholder's equity this original investment and the retained income. As in the case of the asset base used in the calculation of the return on average total assets, it is desirable to average the stockholder's equity at the beginning and end of the accounting period. This is done to determine the proper figure for the calculation of the earning rate. The averaging will recognize the increase in stockholder's equity during the accounting period due to the earnings of the period. It will also recognize additional investment by the stockholders and/or the retirement of any of the capital stock. If treasury stock is present, it must be treated as a reduction of the stockholder's equity since it is inconceivable that a corporation can own stock in itself. Therefore, in the final analysis, the stockholder's equity base used in calculating earning rates should consist of the average paid-in capital and retained income for the accounting period involved.

The income figure to be used in calculating earning rates based on the proprietary concept differs from that used in the entity concept. Since the proprietary concept stresses the position of the common stockholder, it is only logical that the income figure used should be the income accruing to the common stockholders. This should be broadly conceived to include extraordinary gains and losses. The income figure should also be the net income after the deduction of payments to the suppliers of other sources of capital. When the extraordinary gains and losses might materially misstate the earning rate, two earning rates may be calculated.[6] The second would exclude such gains and losses.

In brief, the proprietary view stresses the position of the common stockholder. An earning rate based on this concept will stress the efficiency of management in the employment of the corporate assets for the benefit of the common stockholders. The earning rate calculated under this view will be referred to hereafter as the earning rate on average stockholders' equity.

Miscellaneous Earning Rates

Earning rates other than the two already discussed do not seem to be significant measures of the efficiency of

---

6. Harry G. Guthmann, Op. Cit., p. 253.

management in carrying out its task of maximizing earnings One such earning rate is calculated by measuring the income of the business enterprise as a percent of the net sales. This essentially shows the percentage of the sales dollar which is profit. One difficulty with this calculation is that it considers only income statement items. It fails to regard the earnings in their proper perspective to the capital employed by the business. A similar conclusion can be reached concerning any other attempt to calculate earnings rates based solely on relationships found in the income statement.

Evaluation of the Proposed Earning Rates

Before the earning rates may be evaluated, it is necessary to determine what they are attempting to reflect. It is also necessary to consider the purposes for which they are calculated. The previous discussion has pointed out the concepts underlying the calculation of returns on assets and returns on stockholder's equity. However, the reason for calculating the earning rates does deserve some attention. Essentially, all financial statement analysis attempts to express in terms of ratios and percentages the significant relationships between certain figures. The reason for the analysis is to provide information for comparing the financial statements from one period to the next.[7] Ratio analysis

7. W. A. Paton and A. C. Littleton, Op. Cit., p. 142.

also attempts to point up weaknesses in the business enterprise. Such analysis also may be used to compare different corporations within the same industry or different industries.

The use of the information provided by financial statement analysis does not end with the corporation itself. Investors, bankers, suppliers, workers, government, and the general public are all concerned to some extent with the information disclosed by ratio analysis. Possibly there has been an over emphasis placed on ratio analysis in the past. Any mathematical analysis of accounting information tells only a part of the story of a business. Other significant factors such as the capabilities of management, the position of the company in the industry, the prospects for the future of the enterprise and the economy as a whole must be considered before an intelligent decision concerning the success or failure of the business enterprise may be reached. However, since financial statement analysis is one of the important factors involved in the evaluation of business, it is the duty of the accountant to provide significant and reliable information for the analysis.

The relationship between earnings and average total assets is significant and useful if it is properly calculated. It may be used to compare the efficiency of management in the employment of the assets from one period to the next. It is also significant in comparing the business with other businesses. The calculation of earning rates on average

stockholder's equity is limited in its usefulness. This earning rate is significant as a measure of performance when compared to the results of previous periods. However, it is of limited value for comparing two different corporations. Differences in the capital structure of corporations is the cause of this limitation. Two businesses may be performing in the same way with different earning rates based on stockholders' equity. The leverage effect of the use of debt financing usually causes the difference.[8] A large amount of debt financing at a low rate will provide more earnings available to the common stockholders than will the exclusive use of common stock financing. This will be true as long as the debt capital is employed to produce a higher rate of earnings than the interest requirements on the debt. It is the concept of borrowing money at four percent and putting it to work to earn six percent, thus realizing a profit of two percent.

Economic Concepts of Earning Rates

The first concept to be discussed is highly significant to industries whose rates or prices are fixed by governmental bodies. This includes the question of what may be considered as a "reasonable return" on investment. In the determination of this "reasonable return" on investment, the financial

---

8. Harry G. Guthmann and Herbert E. Dougall, Corporate Financial Policy, Prentice-Hall Inc., New York, 1955, p. 103.

statements are very significant. The idea of "reasonable return" evolves from the economic concept of monopoly profits. Economists believe that it is improper for a monopoly such as a public utility to earn more than a "reasonable return" on its investment.[9] The problem is then the determination of what is "reasonable". The calculation of an earning rate is one attempt to determine what is reasonable. The problem of how the earning rate is to be calculated is the real point of controversy, especially during periods of inflation. In such cases, it seems that the investors in the enterprise should be entitled to a rate of earning which will provide for something over and above the maintenance of the real capital in terms of purchasing power.

The second economic concept of earning rates concerns the alternative use of capital. This involves the comparison of the earning rate of one business with that of other businesses and industries to determine if the capital is being employed in the most efficient manner. The concept may be illustrated by a simple example. If a man is both a good accountant and the best cook in town, which capacity should he utilize? The correct answer is his accounting knowledge. He certainly can find someone to do his cooking. The concept as applied to business means that if the capital

---

9. Arthur Stone Dewing, The Financial Policy of Corporations, The Ronald Press Company, New York, 1953, p. 332.

employed in the business could be better employed elsewhere, it should be shifted to the alternative use. The fault with this concept is that capital has a certain amount of inertia. Once it is employed profitably, there tends to be little investigation of alternatives which may be more attractive.

Earning Rates and the Investor

The investor interested in corporate securities is in a position where he can shift his investments from one company to another. Investors may employ the earning rates proposed or they may use an alternative earning rate which relates the earnings of a company to the market price of its stock.[10] Probably one reason for the widespread use of such price earnings ratios in recent years is the fact that investors have tended to place less and less value on the corporate balance sheet. This may be due in part to the fact that the corporate balance sheet reflects historical cost rather than cost in terms of dollars of equivalent purchasing power.

Summary

This chapter has attempted to discuss the reasons for the calculation of earning rates and the types of earning rates in use. The particular choice of an acceptable earning rate must depend upon the purpose for which it is

---

10. Harry G. Guthmann and Herbert E. Dougall, Op. Cit., p.168.

calculated. It should be remembered that any ratio analysis is significant only if supplemented by a thorough analysis of all the factors that contribute to a success of a business. Earning rates should, of course, be based on meaningful figures. Conventional accounting data may or may not supply meaningful figures, depending upon how it is assimilated.

CHAPTER III

The Measurement Of Accounting Data To Reflect The Impact Of Inflation

The Reasons for Adjustment

A basic assumption of conventional accounting procedures is that the dollar is a constant unit of value. It is only necessary to recall the change in prices that has occurred during the past fifteen years to see that this assumption has great weaknesses. As evidenced by the Consumer's Price Index, which may be considered to measure the change in the cost of living, the dollar that we are using today in 1956 is worth only slightly more than fifty cents when compared on purchasing power terms to the dollar of 1940. If we do not recognize this indisputable fact in the accounting records, we can at best expect to have a summation of apples, oranges, and grapefruit in the accounts. Or at best, a summation of different kinds of apples such as spies, snow, wolf river and delicious. The decisions based upon such facts without consideration of inflation will be just as valid as the addition of apples, oranges, and grapefruit is in the accounts.

As a result of our assumption that the dollar is of constant value, the accounts do not reflect the extent to which capital is being used up and restored, or the

deterioration in the purchasing power of monetary resources which have been previously set aside. In failing to recognize this accountants defeat the purpose of financial accounting, which is to show that the original real capital of the business has been preserved before a profit is shown.[1] Therefore, if the dollars decline faster in value than they increase in number, the business has not earned a profit but rather it has suffered a loss.[2] In periods of inflation, because of using the dollar as a constant unit of value, we have illusions of profit rather than actual profit.

The fact that the dollar is not a constant unit of value is very evident when income is measured in economic terms. Certainly no one who was earning $5,000 per year in 1940 would find himself in the same economic position if he were still earning $5,000 per year in 1956. Even though their dollar income had remained constant, people would find it impossible to maintain their standard of living at the same level as in 1940. It is this change in economic position that is significant to businesses as well as individuals. A new business with assets of $100,000 in 1940 would undoubtedly be in a more favorable position than a new business with assets of $100,000 in 1956.

---

1. G. R. Lees, Stabilized Accounting, The Northern Publishing Co. Ltd., Liverpool, England, 1950, p. 1.

2. E. Stewart Freeman, "Capital Price Adjustment Method for Deflating Inflated Profits," NACA Bulletin, Vol.29, No.11, Sec. 1, p. 635.

The impact of inflation upon the investor in a fixed dollar obligation clearly shows that the dollar is not a constant unit of value. If, for example, an investor invested $1,000 at 3 1/2% compound interest in 1940, he would find that he would have $1,675 in 1955. However, the $1,675 in 1955 would only be worth about $850 in terms of the 1940 dollars invested. Thus, the investor has lost $150 of the purchasing power ($1,000 - $850) of his original investment. As pointed out by Francis Pick, when discussing the plight of the investor during inflation, "we have gone through an era of negative interest rates".[3] Perhaps one of the most unfortunate results of the inflation has concerned the people who purchased government savings bonds in the 1940's. Called "the safest investment in the world", at the time, they have proved to be at best a poor speculation when the purchasing power loss in terms of real dollars is computed at maturity.

Accountants throughout the period of inflation have insisted on maintaining the original or historical cost of assets in their records. Indeed, when the dollar cost of a plant built in 1940 is added to the dollar cost of a plant built in 1950, the result is like adding two apples and three oranges and calling the result five apples. The results obtained from such a summation could conservatively be called

---

3. Francis Pick, "How Good Are Paper-Dollar Company Reports?", The Commercial and Financial Chronicle, Vol. 176, November 6, 1952, p. 1729.

misleading. Such procedure is just as inconsistent as adding the values expressed in foreign currency to dollars when preparing a consolidated statement for a company with foreign operations.[4] Accountants would unanimously agree that the foreign currency should be converted at the exchange rate before it is added to the dollars in the accounts. Their justification for the conversion would be that the foreign currency is not of the same value as the dollars. The same situation exists when we add historical dollar costs in a period when the value of the dollar has fluctuated. This is a further reason why accounting data should be converted into dollars of a constant purchasing power before the summations in the accounts can be considered as valid representations of the fact.

It is an underlying principle of accounting that the accounting records should reflect the assets of the business on the basis of cost. Whether this principle is sound and desirable is not the question. The problem is in maintaining the historical cost in the records. This procedure reflects as the cost of the asset the number of dollars expended for it at the time of purchase. This concept of cost has meaning only so long as the purchasing power of the dollar remains

---

4. William T. Baxter, "To Overcome Inflationary Distortion Treat Ordinary Accounts Like Those of a Foreign Branch", The Journal of Accountancy, Vol. 90, November 1950, p. 436-7.

stable.[5] During periods of inflation or deflation this historical cost is invalidated by the rise or fall in the purchasing power of the dollar. Therefore, in order to maintain the cost basis of the assets, it is imperative that the dollars of original cost be stated in units of the same purchasing power.

The reflection of the real cost of the assets in the above manner provides the proper basis for the matching of costs and revenues in the determination of income. The revenues of a particular period are stated in terms of the purchasing power of the dollar for that period. However, in the determination of the costs to be matched against the revenue, a different situation exists if there has been a change in the purchasing power of the dollar since the costs were incurred. Generally the current costs of wages, salaries, materials, and expenses incurred in selling the goods produced will be stated in dollars of the same purchasing power as the revenue of the period. The allocation of depreciation against current revenues will result in a mis-matching of cost and revenue if the purchasing power of the dollar has declined since the asset being depreciated was purchased. The historical cost of the depreciated asset should be stated in terms of dollars of

---

5. Willard J. Graham, "The Effect of Changing Price Levels Upon the Determination, Reporting, and Interpretation of Income", The Accounting Review, Vol. 24, Jan. 1949, p16.

equivalent value to the dollars of revenue in order to properly match the expiration of cost and the revenue produced.

The use of historical cost during periods of inflation will cause earnings to be highly overstated in terms of real dollars. During the year 1946, it has been estimated that the reported profits of all corporations were about twice as large as they were in terms of real dollars. During 1947, the overstatement has been estimated at 51% and in 1948, at about 25%.[6] Such overstatement can lead to erroneous decisions regarding dividend policy, capital expansion and the overall success of the business. Indeed, we might go to sleep during a period of inflation only to wake up and find a company which had been operating profitably in terms of conventional accounting with the same dollar capital and only half of its original productive capacity.[7] Since accounting has responsibility to society, it certainly seems that it would be desirable to change the accounting concept of historical cost to a realistic concept of current cost. This would certainly prove easier than to attempt to change the habits of society as a whole which could cause changes in the purchasing power of the dollar.[8]

---

6. Summner, Slichter, "Business Profits Exaggerated," The Commercial and Financial Chronicle, Vol. 168, Dec. 1948, p. 2381.

7. Samuel J. Broad, "Development of Accounting Standards to Meet Changing Economic Conditions," The Journal of Accountancy, Vol. 87, May 1949, p. 389.

Problems of Adjusting the Accounting Records To Reflect Inflation

The first, and a very important, problem which is encountered when adjusting accounting records to reflect inflation is the determination of the method to use for measuring inflation. Once this problem is settled, there is relatively little difficulty in converting the accounts to reflect the inflation. The method proposed by H. W. Sweeney in his basic work on the subject has been to use a price level index.[9] This seems to be a sound method.

The alternative to the use of a price level index would be to use the replacement cost of the assets. The replacement cost idea can be dealt with rather briefly because it would violate the going concern concept of the business enterprise. It is not the purpose of the purchasing power adjustments to reflect replacement cost.[10] Rather, it is to properly measure the historical cost expressed in terms of current dollars. To determine replacement cost would be impossible because of technological advances and changes in the methods of production. It would also be inconceivable that a business enterprise would want to replace its existing

---

8. E. Stewart Freeman, "How to Show Effects of Change in Value of the Dollar and Yet Preserve Cost Basis in Accounts," The Journal of Accountancy, Vol. 85, Feb. 1948, p. 116.

9. Henry W. Sweeney, Stabilized Accounting, Harper & Bros. Publishers, New York, 1936, p. 24.

10. Perry Mason, Op. Cit., P. 12.

assets in like kind and quality.

The adjustment by the use of a price level index presents the problem of the type of index to be used. There are two choices possible. A general price level index such as the Consumers' Price Index, the Wholesale Price Index, or the Gross National Product Deflator is one possibility. The other is to use a specific price index such as the Construction Cost Index. The use of a general price index does not depart from the original cost principle. Instead, it merely restates the original costs in terms of the current purchasing power of the dollar.[11] If this method is adopted, the comparability of the current cost and the replacement cost of an asset would be only a coincidence. Thus, it is not an attempt to reflect replacement cost, but rather, an attempt to reflect historical cost in current dollars. It is for this reason that a general price level index seems to fill the bill as a yardstick of inflation.

The specific price index essentially reverts to the replacement cost concept. Its adoption would be a violation of the going concern concept of the business enterprise. Net Income determined by using a specific price index would

---

11. Business Executives' Research Council of Greater Chicago, Business Profits -- Fact or Fable? -- The Study in Detail, Two pamphlets published in 1951, p. 12.

amount to a matching of current revenue and current costs which would be partly composed of the current cost of replacing capital items. The use of a specific cost index for the measurement of changes in the price level may have some merit if we are trying to approximate replacement cost. However, it seems that it is not a valid yardstick for measuring the impact of inflation upon all of the accounts for the purposes of income determination and balance sheet presentation.

The limitations of using any sort of index number to adjust the accounts is that the index number may not be a valid measure of purchasing power. As discussed previously, the general index number seems to be the most valid. However, the decision remains as to which general index number should be used. Each of the three most readily available, the Consumers' Price Index, the Wholesale Price Index, and the Gross National Product Deflator, is determined in a different way. However, over a twenty-five year period from 1930 to 1955 the behavior of the three indexes is relatively comparable. The Consumers' Price Index seems to be the most stable and conservative of the three. The Wholesale Price Index and the Gross National Product Deflator have slightly wider swings than the Consumers' Price Index.[12]

---

12. Perry Mason, Op. Cit., P. 4-6.

It seems in light of their comparability that it makes little difference which of the general indexes is used for conversion. To the degree that the indexes are not true reflections of the price level, the results obtained by converting accounting information by the indexes will be an approximation. Even with the inherent approximations, it must be admitted that the accounting information will be closer to showing in real terms the results of operations and the financial condition of a business, than will the statements prepared assuming that the dollar is a unit of constant unchanging value.

Conversion of the Balance Sheet

In adjusting the accounts to reflect price level change, it is necessary to ascertain how the dollars in the accounts are stated in terms of purchasing power. The assets may be divided into categories: Monetary Assets and Non-Monetary Assets.

The Monetary Assets are composed of those assets which are always stated in terms of current purchasing power. They may also be referred to as money-value items. Such items as Cash, Accounts Receivable, Notes Receivable, and Government Bonds may be properly classified as Monetary Assets. Each of these items represents purchasing power in terms of current dollars. When the value of the dollar increases or decreases, the value of the Monetary Assets

also increases or decreases. Since they fluctuate with the value of the dollar, during times of inflation when the value of the dollar is failing, the purchasing power of the Monetary Assets also declines

A further problem concerns the realization of the gain or loss because of the change in the price level. Accounting traditionally only recognizes gains and losses when a transaction is completed with someone outside of the business entity. If this view is strictly held, it seems that the gains and losses are not realized.[13] This point is not too significant when measuring the effect of changing prices. The real point involved, when even those who hold the traditional concept of realization must admit, is that even if we do not regard the gains or losses as realized, the company certainly benefits from an "economic windfall" or suffers an "economic blow" when such gains or losses exist.

The Non-Monetary Assets are the assets whose value rises in terms of dollars during inflation and whose value falls in terms of dollars druing deflation. Into this category fall such items as inventories, fixed assets, intangibles, and short term payments. Traditionally, all items which are classified as Non-Monetary Assets are recorded in the accounts at their historical cost. It is necessary to

---

13. American Institute of Accountants, Changing Concepts of Business Income, Macmillan Co., New York, 1952, p. 23

convert these historical costs from the dollars in which they are stated to the current value of the dollar in order to properly reflect all of the assets in terms of dollars of the same purchasing power.[14] This procedure can be quite involved. The conversion requires that the date of historical purchase be determined for each of the assets as well as their historical costs. For example, assume that we have Non-Monetary Assets stated at a historical cost of $100,000. It is determined that these assets were purchased when the price level was 100. If we wish to state them in terms of the current price level, which is 200, it is necessary to multiply the historical cost by the present price level and divide the result by the price level at the time the assets were purchased. This calculation may be presented as $\$100,000 \times \frac{200}{100} = \$200,000$. The resulting figure of $200,000 is then the historical cost of the Non-Monetary Asset stated in terms of current dollars.

Consideration of the Liability and Stockholder's Equity side of the Balance Sheet reveals that there is a distinct division in terms of current dollars between the Liabilities and the Stockholder's Equity. The liabilities are nearly all expressed in monetary terms. The possible exception to this would be advances by customers. These advances could

---

14. William Blackie, "What is Accounting for Now?", NACA Bulletin, Vol. 29, July 1, 1948, p. 1352.

not be considered Monetary Liabilities because they are obligations to render services rather than to pay out money. All of the other liabilities are monetary since they represent obligations to pay money in terms of current value of the dollar. The Monetary Liabilities like the Monetary Assets are automatically stated in current dollars by their very nature. As the value of the dollar declines during inflation, the liabilities are discharged in "cheaper dollars" than those in which they were incurred. The existence of liabilities during an inflationary period will thus tend to offset the losses of purchasing power caused by investments in Monetary Assets.

The problem of realization of the gains or losses resulting from Monetary Liabilities is much the same as it was for Monetary Assets. The gains or losses are not realized traditionally, but they are very real in terms of purchasing power. The existence of Bonds Payable of other long-terms liabilities is of particular interest. It may be argued that since they will not discharged until sometime in the future, there is no gain or loss involved. However, the long-term liabilities are monetary in nature. They are promises to pay a certain number of dollars, and, as such, a change in the purchasing power of the dollar will make the debt a lighter or heavier load for

the business to bear.[15]

The Stockholders' Equity presents little real problem of adjustment if there is no preferred stock outstanding. The common stock account, which represents the original investment by the stockholders, is stated in terms of the original dollar invested. It must be adjusted forward to the current value of the dollar in order for it to be stated in the same terms as the assets and liabilities.

The Retained Income is a summation of the earnings retained by the business since its inception. To properly adjust the retained income account, it would be necessary to restate all of the factors which entered into the determination of income since the beginning of the business into current dollars. While this could be accomplished with the expenditure of considerable effort, it is actually not necessary to undertake such a calculation. By its nature, the balance sheet must balance. This holds true with balance sheets converted to current dollars just like it does with conventional balance sheets. Since we can determine all the items except the converted retained income, it is only necessary to "plug" the converted retained income figure. This "plug" can be proven by converting the conventional income statements and adding to the converted net income the

---

15. Ralph C. Jones, Price Level Changes and Financial Statements --- Case Studies of Four Companies, American Accounting Association, 1955, p. 178.

the gains and/or losses on the Monetary Assets and Monetary Liabilities. This mechanical operation can be seen in any of the cases in Chapter IV.

The conversion of the Stockholders' Equity is complicated by the existence of preferred stock. The type of preferred stock outstanding is highly significant. If it is an ordinary preferred stock which has preference only to assets and dividends without any call or redemption provision, it should be treated in the same manner as the common stock. However, if the preferred stock is callable, or has a redemption date, it should be classified as a Monetary Liability. The reason for this treatment is that a callable preferred or one which may be redeemed is, except for certain legal restrictions, the same as a long-term bond.[16] This characteristic is even more evident if the preferred stock is cumulative as to dividends.

The treatment of the asset valuation accounts such as allowance for bad debts and allowances for depreciation should be the same as their related asset accounts. The allowance for bad debts should be treated as a reduction of a Monetary Asset. The allowance for depreciation will have to be converted in the same manner as the related asset account. This means that the allowance for depreciation

---

16. Samuel J. Broad, "Effects of Price Level Changes on Financial Statements", NACA Bulletin, Vol. 29, No. 21, Section 1, p. 1333.

must be recalculated on the historical cost of the assets converted to current purchasing power. It of course, should be deducted from the related asset account in the Balance Sheet.

Conversion of the Income Statement

In order to convert the Income Statement into dollars of the same purchasing power, it is first necessary to analyze the nature of its components. The revenues are stated in terms of the price level when they are earned. Thus, to convert the revenues, it would be theoretically necessary to convert them each day by the daily price level.[17] This procedure is not feasible since it would be virtually impossible to calculate the price level each day. Hence, it is necessary to determine the average price level over a period of time and then convert the revenues of the period by the average price level. If it is desired to convert the revenues of a particular year, it would be possible to take the average of the price level at the beginning of the year and at the end of the year and use it to convert the revenues. Although the yearly average would approximate the revenues in terms of current dollars, it would more desirable to convert the revenues by the monthly averages which would tend to show less error, especially if there was a wide fluctuation

---

17. Perry Mason, Op. Cit., p. 16.

in the price level during the year.

The costs of goods sold during the period may be converted by determining the historical cost basis of the beginning inventory and then converting it into current dollars. The purchases of goods may be converted in the same manner as the revenues. The ending inventory must be calculated to determine its historical cost which then should be converted into current dollars. The expenses of the period may reasonably be considered to have occurred at the average price index for the period. They should be converted in the same manner as described for the revenues.

The remaining account which must be dealt with concerns the expiration of the cost of the Non-Monetary fixed assets which is charged against revenue in the form of depreciation. Here, it is necessary to return to the asset accounts and determine the historical cost in terms of current dollars and then calculate the expiration of the cost in the current period. This amount should, of course, be the same as the addition to the asset valuation account expressed in current dollars during the period.

The net income stated in terms of current dollars must be reduced by the dividends paid in terms of current dollars. The dividends may be converted to current dollars by the use of the price index at the date of payment. Here it should be noted that if the price level falls after the date of dividend declaration, the gain on the dividend liability

will be offset exactly by a loss on the Monetary Assets at the time of payment. The remainder of the converted net income, after the dividends are deducted, represents the converted addition to Stockholders' Equity. This must be adjusted by the gain and/or loss on the Monetary Assets and Monetary Liabilities in order to determine the net increase in Stockholders' Equity for the period in terms of real dollars.

In summary, the process of adjusting accounting data to reflect changes in purchasing power is not overly complicated. The results obtained should not be regarded as completely without bias because of the use of index numbers and averaging of certain factors in the calculations. However, the converted statements will be a much closer approximation of the actual economic position of the firm than statements prepared under the assumption that the dollar is a constant, unchanging, unit of value.

CHAPTER IV

The Application Of Price Level Changes In The Calculation Of Corporate Earning Rates - Hypothetical Cases

The Methods Used and the Assumptions Made

The cases presented in this chapter have been developed assuming that the corporate Balance Sheet may be divided into four categories. These categories are Monetary Assets, Non-Monetary Assets, Monetary Liabilities, and Stockholders' Equity. The specific accounts which are considered to be in these categories were discussed in Chapter III. The cases have been developed in an attempt to discover the change in the earning rates due to inflation caused by relative changes in the structure of the assets, liabilities and stockholders' equity of the business. All of the cases have comparable Income Statements except that the other expenses and taxes are adjusted depending upon the expiration of the Non-Monetary Assets to reflect a conventional net income of $200,000 in each case.

Each case is treated as a separate company beginning its operation on January 1 when the price level index is 100. It is assumed that the price level index doubles to equal 200 at the end of the year. The original relationship between the Monetary and Non-Monetary Assets and between the

Monetary Liabilities and the Stockholders' Equity is assumed to remain constant throughout the year. It is further assumed that the price level changes evenly throughout the year so that the current Income Statement items are assumed to have occurred at an average price level of 150. It is also assumed for purposes of simplicity that the assets on January 1 and December 31 do not include any goods held for sale. Hence, all of the goods sold during the period were purchased during the period and all of the goods so purchased were sold.

The summary journal entries which give rise to the changes between the beginning and the end of the year are as follows for Case I. The entire process of conversion will be illustrated for Case I. The same procedures have been applied in developing the other cases.

Date	Account & Explanation	Debit	Credit
January 1	Monetary Assets	500,000	
	Non-Monetary Assets	500,000	
	Monetary Liabilities		500,000
	Capital Stock		500,000
	To record the formation of the Corporation Price Level Index 100		
January 1 to December 31	Monetary Assets	200,000	
	Non-Monetary Assets	157,895	
	Merchandise Cost of Sales	900,000	
	Other Expenses and Taxes	342,105	
	Revenue		1,500,000
	Monetary Liabilities		100,000
	To record in summary the income, expenses and the increases in the asset and liability accounts occurring throughout the year average Price Level Index 150		

Date	Account & Explanation	Debit	Credit
December 31	Dividends	100,000	
	Monetary Assets		100,000
	To record the payment of dividends, Price Level 200		
December 31	Expiration of Non-Monetary Assets	57,895	
	Asset Valuation Accounts		57,895
	To record the depreciation at a rate of 10% per annum calculated as follows:		

Historical Cost of the Assets	$500,000	$157,895
Depreciation Period	1 year	½ year
Depreciation Rate Per Annum	10%	10%
Depreciation	$ 50,000	$ 7,895

December 31 The necessary closing entries to close the income, expense, and dividend accounts and to transfer the balance to retained income

The Trial Balance (before the closing entries) would appear as follows on December 31.

Trial Balance
December 31

	Debit	Credit
Monetary Assets	$ 600,000	
Non-Monetary Assets	657,895	
Asset Valuation Accounts		$ 57,895
Monetary Liabilities		600,000
Capital Stock		500,000
Revenue		1,500,000
Merchandise Cost of Sales	900,000	
Other Expense and Taxes	342,105	
Expiration of Non-Monetary Assets	57,895	
Dividends	100,000	
Total	$2,657,895	$2,657,895

The process of converting the Income Statement was then undertaken as follows:

Account	Conventional Accounting Balance	Price Index Conversion Factor	Balance Converted To December 31 Price Level
Revenue	$1,500,000	200/150	$2,000,000
Merchandise Cost of Sales	900,000	200/150	1,200,000
Other Expenses & Taxes	342,105	200/150	456,140
Expiration of	50,000	200/100	100,000
Non-Monetary Assets	7,895	200/150	10,526
Dividends	100,000	200/200	100,000

The conversion of the Balance Sheets to December 31 dollars was the next step. The January 1 Balance Sheet was converted as follows:

Account	Conventional Accounting Balance	Price Index Conversion Factor	Balance Converted To December 31 Price Level
Monetary Assets	$ 500,000	200/100	$1,000,000
Non-Monetary Assets	500,000	200/100	1,000,000
Monetary Liabilities	500,000	200/100	1,000,000
Non-Monetary Liabilities	500,000	200/100	1,000,000

The conversion of the December 31 Balance Sheet was relatively simple since the Monetary Assets and Monetary Liabilities are by their nature stated in terms of December 31 dollars. The calculations as follows were made to convert the December 31 Balance Sheet to December 31 dollars.

Account	Conventional Accounting Balance	Price Index Conversion Factor	Balance Converted To December 31 Price Level
Monetary Assets	$ 600,000	200/200	$ 600,000
Non-Monetary Assets	500,000	200/100	1,000,000
	157,895	200/150	210,526
Asset Valuation Accounts	50,000	200/100	100,000
	7,895	200/150	10,526
Monetary Liabilities	600,000	200/200	600,000
Capital Stock	500,000	200/100	1,000,000

In the converted December 31 Balance Sheet, the Purchasing Power Adjustment Account takes the place of the conventional Retained Income Account. To reconcile the balance of this account, it is necessary to calculate the gains and/or losses on the Monetary Assets and Monetary Liabilities. To calculate these gains and losses, it is necessary to analyze the transactions in those accounts and convert them by the applicable index. The gains or losses are then determined by comparing the balance in the account in terms of conventional dollars with the balance determined by the conversion of the transactions.

The loss on the Monetary Assets was determined as follows. (The transactions in the Monetary Assets Accounts are taken from the journal entries previously illustrated.)

Date	Price Index	Amount	Price Index Conversion Factor	Amount Converted To Dec. 31 Dollars
Conversion of the Debits:				
January 1	100	$500,000	200/100	$1,000,000
Jan. 1 to Dec. 31	150	200,000	200/150	266,667
Converted Debit Total				$1,266,667
Conversion of the Credits:				
December 31	200	$100,000	200/200	$ 100,000
Converted Balance (Debit minus Credits)				$1,166,667
Less Actual Balance, December 31				600,000
Loss on Monetary Assets				$ 566,667

The Gain on the Monetary Liabilities was then calculated as follows:

Date	Price Index	Amount	Price Index Conversion Factor	Amount Converted To Dec. 31 Dollars
Conversion of the Credits:		(No Debits made)		
January 1	100	$500,000	200/100	$1,000,000
Jan. 1 to Dec. 31	150	100,000	200/150	133,333
Converted Balance				$1,133,333
Less Actual Balance, Dec. 31				600,000
Gain on Monetary Liabilities				$ 533,333

The purchasing power adjustment to Stockholder's Equity on December 31 was calculated by adding to the converted net income, Gain on the Monetary Liabilities, and deducting the Loss on the Monetary Assets.

The earning rates based on the conventional and converted statements were then calculated. The following analysis indicates that two sets of earning rates were calculated for the converted statements. The first earning rate uses as the earnings figure the converted net income. The second set uses the net income adjusted by the gains and losses on the monetary accounts. The second calculation

is more significant than the first because it measures the real impact of inflation upon the business. It may be argued that the monetary losses and gains are not realized, but they certainly have an economic impact on the corporate enterprise.

In calculating the earning rate on average total assets, the average total assets were determined as follows:

	Conventional Balance Sheet	Converted Balance Sheet
Total Assets January 1	$1,000,000	$2,000,000
Total Assets December 31	1,200,000	1,700,000
Dividends Paid December 31	100,000	100,000
Total	$2,300,000	$3,800,000
Average Assets Employed ($\frac{1}{2}$)	$1,150,000	$1,900,000

It should be noted that the dividends are added to the asset figures. The reason for this is because the dividends were paid on December 31, and the assets relinquished by the dividend payment were actually in use throughout the year.

The average Stockholders' Equity was calculated as follows for use in calculating the earning rate on stockholders investment.

	Conventional Balance Sheet	Converted Balance Sheet
Stockholders' Equity January 1	$ 500,000	$1,000,000
Stockholders' Equity December 31	600,000	1,100,000
Dividends Paid December 31	100,000	100,000
Total	$1,200,000	$2,200,000
Average Stockholders' Equity ($\frac{1}{2}$)	$ 600,000	$1,100,000

Here again the dividends have been added back since the stockholders investment included the dividends until December 31.

The net income figure of $200,000 was used in the calculation of the earning rates based on the conventional statements. For the calculations based on the converted statements, the converted net income of $233,334 was used for one series. The second series was calculated by adding to the converted net income of $233,334 the gain on the Monetary Liabilities of $533,333 and deducting the loss on the Monetary Assets of $566,667.

After determining the various factors to be used, the actual earning rates were computed as follows:

Based on the Conventional Statements:

The return on Average Total Assets

$$= \frac{\text{Net Income } \$\ 200,000}{\text{Average Total Assets } \$1,150,000} = 17.4\%$$

The Return on Average Stockholders' Equity

$$= \frac{\text{Net Income } \$200,000}{\text{Average Stockholders' Equity } \$600,000} = 33.3\%$$

Based on the Converted Statements:

The return on Average Total Assets not considering gains and losses on the monetary accounts

$$= \frac{\text{Net Income } \$\ 233,333}{\text{Average Total Assets } \$1,900,000} = 12.3\%$$

The return on Average Total Assets including gains and losses on the monetary accounts

$$= \frac{\text{Purchasing Power Income } \$\ 200,000}{\text{Average Total Assets } \$1,900,000} = 10.5\%$$

The return on Average Stockholders' Equity not considering gains and losses on the monetary accounts

$$= \frac{\text{Net Income } \$\ 233,333}{\text{Average Stockholders' Equity } \$1,100,000} = 21.2\%$$

The return on Average Stockholders' Equity including the gains and losses on the monetary accounts

$$= \frac{\text{Purchasing Power Income}}{\text{Average Stockholders' Equity}} \quad \frac{\$\ 200,000}{\$1,100,000} = 18.2\%$$

The calculation of the earning rates completes the discussion of the assumptions made in the cases and the procedures used in converting the statements. It is now proper to discuss the cases to determine if any conclusions may be drawn from the analysis of the earning rates.

Case I

This case was developed assuming equality of the Monetary Assets and Non-Monetary Assets. Equality was also assumed to exist between the Monetary Liabilities and Stockholders' Equity. An attempt to relate this Balance Sheet structure to a real business might prove to be difficult. However, it is possible to conceive a wholesale business which grants liberal credit to be in such a situation. A significant fact brought out in the analysis of this case, is that the gains on the Monetary Liabilities nearly offset the losses on the Monetary Assets. The conventional earning rates have been overstated because of the historical basis used in recording the Non-Monetary Assets. The amount of overstatement of the conventional earning rates is quite significant. The conventional return on assets is 17.4% or about 166% of the converted return on assets including the monetary gains and losses which is 10.5%. The converted

Case I

Equality Of Monetary And Non-Monetary Assets
Equality Of Monetary Liabilities And Stockholders' Equity

Balance Sheets

Conventional Accounting

	Price Level Index 100 January 1	Price Level Index 200 December 31
Monetary Assets	$ 500,000	$ 600,000
Non-Monetary Assets	500,000	657,895
Asset Valuation Accounts	-0-	(57,895)
Total	$1,000,000	$1,200,000
Monetary Liabilities	$ 500,000	$ 600,000
Capital Stock	500,000	500,000
Retained Income	-0-	100,000
Total	$1,000,000	$1,200,000

Converted to December 31, Dollars

	January 1	December 31
Monetary Assets	$1,000,000	$ 600,000
Non-Monetary Assets	1,000,000	1,210,526
Asset Valuation Accounts	-0-	(110,526)
Total	$2,000,000	$1,700,000
Monetary Liabilities	$1,000,000	$ 600,000
Capital Stock	1,000,000	1,000,000
Purchasing Power Adjustment	-0-	100,000
Total	$2,000,000	$1,700,000

Note: Items in Parenthesis ( ) Are Deductions

Case I

Equality of Monetary and Non-Monetary Assets
Equality of Monetary Liabilities and Stockholders' Equity

Income Statements

	Conventional Accounting	Converted To December 31 Dollars
Total Revenue	$1,500,000	$2,000,000
Less: Merchandise Cost of Sales	(900,000)	(1,200,000)
Other Expenses & Taxes	(342,105)	(456,140)
Expiration of Non-Monetary Assets	(57,895)	(110,526)
Net Income	$ 200,000	$ 233,334
Less Dividends (Paid Dec. 31)	(100,000)	(100,000)
Addition to Retained Income	$ 100,000	
Balance		$ 133,334
Gain on Monetary Liabilities		533,333
Total		$ 666,667
Loss on Monetary Assets		(566,667)
Purchasing Power Adjustment		$ 100,000

Earning Rates

	Conventional	Converted Monetary Gains and Losses Excluded	Converted Monetary Gains and Losses Included
On Average Total Assets	17.1%	12.3%	10.5%
On Average Stockholders Equity	33.3%	21.2%	16.2%

Note: Items in Parenthesis ( ) Are Deductions or Red Figures

return on Stockholders' Equity is about 133% of the real return. Such an overstatement is certainly misleading, although when compared to some of the other cases developed, it proves to be rather small.

Case II

In this case the assets were assumed to be largely (80%) of a monetary nature. This situation would tend to approximate that of a finance company. The Stockholders' Equity and the Monetary Liabilities were again assumed to be equal. The earning rates based on the conventional statements are the same as in Case 1. However, a very real difference exists when the earning rates are calculated on the converted figures. Rather nice returns on Total Assets and Stockholders' Equity are determined to be, in reality, negative. The gross overstatement of the conventional earning rates is explained by their failure to recognize the losses in purchasing power suffered on the Monetary Assets. What appears to be an increase in Total Assets and Stockholders' Equity, turns out to be a real decrease in terms of purchasing power. The business has, thus, failed to keep pace with the increase in the price level. The conventional earning rates certainly present a misleading view of this enterprise which is actually worse than not making any earning rate analysis at all.

Case II

Heavy Investment In Monetary Assets
Equality Of Monetary Liabilities And Stockholders' Equity

Balance Sheets

Conventional Accounting

	Price Level Index 100 January 1	Price Level Index 200 December 31
Monetary Assets	$ 800,000	$ 960,000
Non-Monetary Assets	200,000	263,158
Asset Valuation Accounts	-0-	(23,158)
Total	$1,000,000	$1,200,000
Monetary Liabilities	$ 500,000	$ 600,000
Capital Stock	500,000	500,000
Retained Income	-0-	100,000
Total	$1,000,000	$1,200,000

Converted to December 31, Dollars

	January 1	December 31
Monetary Assets	$1,600,000	$ 960,000
Non-Monetary Assets	400,000	484,211
Asset Valuation Accounts	-0-	(44,211)
Total	$2,000,000	$1,400,000
Monetary Liabilities	$1,000,000	$ 600,000
Capital Stock	1,000,000	1,000,000
Purchasing Power Adjustment	-0-	(200,000)
Total	$2,000,000	$1,400,000

Note: Items in Parenthesis ( ) Are Deductions

Case II

Heavy Investment in Monetary Assets
Equality of Monetary Liabilities and Stockholders' Equity

Income Statements

	Conventional Accounting	Converted To December 31 Dollars
Total Revenue	$1,500,000	$2,000,000
Less: Merchandise Cost of Sales	(900,000)	(1,200,000)
Other Expenses & Taxes	(377,842)	(402,456)
Expiration of Non-Monetary Assets	(23,158)	(61,211)
Net Income	$ 200,000	$ 253,333
Less Dividends (Paid Dec. 31)	(100,000)	(100,000)
Addition to Retained Income	$ 100,000	
Balance		$ 153,333
Gain on Monetary Liabilities		533,333
Total		$ 686,666
Loss on Monetary Assets		(886,666)
Purchasing Power Adjustment		$ 200,000

Earning Rates

	Conventional	Converted Monetary Gains and Losses Excluded	Included
On Average Total Assets	17.1%	11.5%	(5.7%)
On Average Stockholders Equity	33.3%	26.7%	(10.5%)

Note: Items in Parenthesis ( ) Are Deductions or Red Figures

Case III

The business is assumed to have a large investment in Non-Monetary Assets. This is probably typical of a manufacturing company, although it could certainly be in the retail or service trade. The excess of Monetary Liabilities over Monetary Assets may be explained if the Monetary Liabilities are considered to long-term.

The conventional earning rates in this case are the same as in the two preceding cases. This is due to the similarity in capital structure. The converted earning rates present quite a different picture. Because of the excess of Monetary Liabilities over the Monetary Assets, the converted earning rates are actually higher than the conventional earning rates. The value of the Non-Monetary Assets has been maintained because of their nature. This fact is not reflected in the conventional statements. Indeed, this is a situation where a business is actually better off by going in debt and purchasing assets of a Non-Monetary nature. A comparison of this case with the two previous cases indicates that the heavy investment in Non-Monetary Assets is to be desired during inflation.

Case IV

This company would traditionally be considered to be in rather poor financial position. The high proportion of Monetary Liabilities to the Stockholders' Equity would cause

Case III

Heavy Investment In Non-Monetary Assets
Equality Of Monetary Liabilities And Stockholders' Equity

Balance Sheets

Conventional Accounting

	Price Level Index 100 January 1	Price Level Index 200 December 31
Monetary Assets	$ 200,000	$ 240,000
Non-Monetary Assets	800,000	1,052,632
Asset Valuation Accounts	-0-	(92,632)
Total	$1,000,000	$1,200,000
Monetary Liabilities	$ 500,000	$ 600,000
Capital Stock	500,000	500,000
Retained Income	-0-	100,000
Total	$1,000,000	$1,200,000

Converted to December 31, Dollars

	January 1	December 31
Monetary Assets	$ 400,000	$ 240,000
Non-Monetary Assets	1,600,000	1,936,813
Asset Valuation Accounts	-0-	(176,813)
Total	$2,000,000	$2,000,000
Monetary Liabilities	$1,000,000	$ 600,000
Capital Stock	1,000,000	1,000,000
Purchasing Power Adjustment	-0-	400,000
Total	$2,000,000	$2,000,000

Note: Items in Parenthesis ( ) Are Deductions

Case III

Heavy Investment In Non-Monetary Assets
Equality of Monetary Liabilities and Stockholders' Equity

Income Statements

	Conventional Accounting	Converted To December 31 Dollars
Total Revenue	$1,500,000	$2,000,000
Less: Merchandise Cost of Sales	(900,000)	(1,200,000)
Other Expenses & Taxes	(307,368)	(409,824)
Expiration of Non-Monetary Assets	(92,632)	(176,843)
Net Income	$ 200,000	$ 213,333
Less Dividends (Paid Dec. 31)	(100,000)	(100,000)
Addition to Retained Income	$ 100,000	
Balance		$ 113,333
Gain on Monetary Liabilities		533,333
Total		$ 646,666
Loss on Monetary Assets		(246,666)
Purchasing Power Adjustment		$ 400,000

Earning Rates

	Conventional	Converted Monetary Gains and Losses Excluded	Converted Monetary Gains and Losses Included
On Average Total Assets	17.4%	10.4%	24.4%
On Average Stock-holders Equity	33.3%	17.1%	40.0%

Note: Items in Parenthesis ( ) Are Deductions or Red Figures

Case IV

Heavy Monetary Liabilities
Equality Of Monetary Assets And Non-Monetary Assets

Balance Sheets

Conventional Accounting

	Price Level Index 100 January 1	Price Level Index 200 December 31
Monetary Assets	$ 500,000	$ 750,000
Non-Monetary Assets	500,000	815,789
Asset Valuation Accounts	-0-	(65,789)
Total	$1,000,000	$1,500,000
Monetary Liabilities	$ 800,000	$1,200,000
Capital Stock	200,000	200,000
Retained Income	-0-	100,000
Total	$1,000,000	$1,500,000

Converted to December 31, Dollars

	January 1	December 31
Monetary Assets	$1,000,000	$ 750,000
Non-Monetary Assets	1,000,000	1,421,052
Asset Valuation Accounts	-0-	(121,052)
Total	$2,000,000	$2,050,000
Monetary Liabilities	$1,600,000	$1,200,000
Capital Stock	400,000	400,000
Purchasing Power Adjustment	-0-	450,000
Total	$2,000,000	$2,050,000

Note: Items in Parenthesis ( ) Are Deductions

Case IV

Heavy Monetary Liabilities
Equality of Monetary Assets and Non-Monetary Assets

Income Statements

	Conventional Accounting	Converted To December 31 Dollars
Total Revenue	$1,500,000	$2,000,000
Less: Merchandise Cost of Sales	(900,000)	(1,200,000)
Other Expenses & Taxes	(334,211)	(445,615)
Expiration of Non-Monetary Assets	(65,789)	(121,052)
Net Income	$ 200,000	$ 233,333
Less Dividends (Paid Dec. 31)	(100,000)	(100,000)
Addition to Retained Income	$ 100,000	
Balance		$ 133,333
Gain on Monetary Liabilities		933,333
Total		$1,066,666
Loss on Monetary Assets		(616,666)
Purchasing Power Adjustment		$ 450,000

Earning Rates

	Conventional	Converted Monetary Gains and Losses Excluded	Converted Monetary Gains and Losses Included
On Average Total Assets	15.4%	11.2%	26.5%
On Average Stockholders Equity	66.7%	34.6%	81.5%

Note: Items in Parenthesis ( ) Are Deductions or Red Figures

concern, especially if the liabilities were of a short term nature. As the earning rates indicate, much of this fear is unfounded during periods of inflation. The conventional earning rate on Total Assets of 15.4% indicates rather satisfactory performance. However, when the gains are calculated on the Monetary Accounts, in the conversion process, the earning rate on Total Assets nearly doubles. The earning rate on the Stockholders' Equity is high both on conventional and converted basis. The high rate on the conventional basis is caused by the leverage provided by the Monetary Liabilities. The leverage also keeps the converted earning rate on Stockholders' Equity high. This case again points out the fact that liabilities are desirable in a period of inflation since they are paid back in cheaper dollars than the money borrowed. Again the earning rates calculated on the conventional statements prove to be misleading in terms of economic realities. In two of the following cases, the earning rates based on the conventional statements will be the same as in this case. It will be seen that these cases provide converted earning rates which are far from similar.

Case V

The assumption in this case is that the business is financed primarily by the stockholders investment. This is a common occurrence in nearly every line of business. In many

Case V

Heavy Stockholders' Equity
Equality Of Monetary Assets And Non-Monetary Assets

Balance Sheets

Conventional Accounting

	Price Level Index 100 January 1	200 December 31
Monetary Assets	$ 500,000	$ 562,500
Non-Monetary Assets	500,000	618,421
Asset Valuation Accounts	-0-	(55,921)
Total	$1,000,000	$1,125,000
Monetary Liabilities	$ 200,000	$ 225,000
Capital Stock	800,000	800,000
Retained Income	-0-	100,000
Total	$1,000,000	$1,125,000

Converted to December 31, Dollars

	January 1	December 31
Monetary Assets	$1,000,000	$ 562,500
Non-Monetary Assets	1,000,000	1,157,895
Asset Valuation Accounts	-0-	(107,895)
Total	$2,000,000	$1,612,500
Monetary Liabilities	$ 400,000	$ 225,000
Capital Stock	1,600,000	1,600,000
Purchasing Power Adjustment	-0-	(212,500)
Total	$2,000,000	$1,612,500

Note: Items in Parenthesis ( ) Are Deductions

Case V

Heavy Stockholders' Equity
Equality of Monetary Assets and Non-Monetary Assets

Income Statements

	Conventional Accounting	Converted To December 31 Dollars
Total Revenue	$1,500,000	$2,000,000
Less: Merchandise Cost of Sales	(900,000)	(1,200,000)
Other Expenses & Taxes	(344,079)	(458,772)
Expiration of Non-Monetary Assets	(55,921)	(107,895)
Net Income	$ 200,000	$ 233,333
Less Dividends (Paid Dec. 31)	(100,000)	(100,000)
Addition to Retained Income	$ 100,000	
Balance		$ 133,333
Gain on Monetary Liabilities		208,333
Total		$ 341,666
Loss on Monetary Assets		(554,166)
Purchasing Power Adjustment		$ (212,500)

Earning Rates

	Conventional	Converted Monetary Gains and Losses Excluded	Converted Monetary Gains and Losses Included
On Average Total Assets	18.0%	12.6%	(6.1%)
On Average Stockholders Equity	22.2%	15.1%	(7.3%)

Note: Items in Parenthesis ( ) Are Deductions or Red Figures

cases this situation may exist because the owners of the business regard debt as undesirable. While no quarrel can be had with this philosophy, it has its limitations during periods of inflation.

The earning rates calculated on the conventional statements appear to be quite adequate. Many businessmen would be very happy to earn 22.2% on the stockholders investment. However, when the earning rates are calculated on the converted statements, the business is less profitable because of the deficiency in the depreciation charges. Considering the economic impact on the Monetary Assets, there has actually been a depletion of the Stockholders' Equity. This poses an interesting problem of taxation. The business would be taxed on its conventional profit when in reality the enterprise has suffered a loss. Thus, any income taxes paid by the business will amount to the confiscation of capital. The business is thus effectively caught between the iron jaws of inflation and taxation with both extracting a measure of the real investment of the stockholders.

Case VI

A business with a large investment in Monetary Assets and a high proportion of Monetary Laibilities is the subject of this case. The large monetary position makes the business extremely vulnerable to inflation. However, in this case, the Monetary Liabilties act as an effective hedge against

Case VI

Heavy Monetary Assets And Heavy Monetary Liabilities

Balance Sheets

Conventional Accounting

	Price Level Index 100 January 1	200 December 31
Monetary Assets	$ 800,000	$1,200,000
Non-Monetary Assets	200,000	326,316
Asset Valuation Accounts	-0-	(26,316)
Total	$1,000,000	$1,500,000
Monetary Liabilities	$ 800,000	$1,200,000
Capital Stock	200,000	200,000
Retained Income	-0-	100,000
Total	$1,000,000	$1,500,000

Converted to December 31, Dollars

	January 1	December 31
Monetary Assets	$1,600,000	$1,200,000
Non-Monetary Assets	400,000	568,421
Asset Valuation Accounts	-0-	(48,421)
Total	$2,000,000	$1,720,000
Monetary Liabilities	$1,600,000	$1,200,000
Capital Stock	400,000	400,000
Purchasing Power Adjustment	-0-	120,000
Total	$2,000,000	$1,720,000

Note: Items in Parenthesis ( ) Are Deductions

Case VI

Heavy Monetary Assets and Heavy Monetary Liabilities

Income Statements

	Conventional Accounting	Converted To December 31 Dollars
Total Revenue	$1,500,000	$2,000,000
Less: Merchandise Cost of Sales	(900,000)	(1,200,000)
Other Expenses & Taxes	(373,684)	(498,245)
Expiration of Non-Monetary Assets	(26,316)	(48,421)
Net Income	$ 200,000	$ 253,334
Less Dividends (Paid Dec. 31)	(100,000)	(100,000)
Addition to Retained Income	$ 100,000	
Balance		$ 153,334
Gain on Monetary Liabilities		933,333
Total		$1,086,667
Loss on Monetary Assets		(966,667)
Purchasing Power Adjustment		$ 120,000

Earning Rates

	Conventional	Converted Monetary Gains and Losses Excluded	Included
On Average Total Assets	15.4%	13.3%	11.5%
On Average Stockholders Equity	66.7%	49.7%	43.1%

Note: Items in Parenthesis ( ) Are Deductions or Red Figures

the Monetary Assets. The earning rates as conventionally calculated are the same as those in Case IV. With the small Stockholders' Equity, the earning rate is quite high. However when the converted earning rates are calculated, the picture is not quite so rosy. The 66.7% return on stockholders investment drops to 43.1% when the gains and losses are considered on the Monetary Accounts. The understatement of the Non-Monetary Assets, with the resulting understatement of depreciation, caused a portion of the misstatement in the earning rate. The Monetary Accounts tend to offset each other. Thus, the conclusion is that the understatement of the Non-Monetary Assets and corresponding understatement of the Stockholders' Equity has caused a great deal of misstatement of corporate earning rates.

Case VII

This company has a large proportion of Monetary Assets and a large proportion of Stockholders' Equity. Essentially, it is in a situation where the stockholders have invested cash in the corporation and the corporation has held the investment in the form of cash. The conventional earning rates in this case are the same as in Case V. When the statements are expressed in terms of year-end dollars, a similar situation also exists between this case and Case V. The loss on the Monetary Assets of $866,667 is only partially offset by the gains in the Monetary Liabilities. Hence, the

Case VII

Heavy Monetary Assets And Heavy Stockholders' Equity

Balance Sheets

Conventional Accounting

	Price Level Index 100 January 1	Price Level Index 200 December 31
Monetary Assets	$ 800,000	$ 900,000
Non-Monetary Assets	200,000	267,368
Asset Valuation Accounts	-0-	(22,368)
Total	$1,000,000	$1,125,000
Monetary Liabilities	$ 200,000	$ 225,000
Capital Stock	800,000	800,000
Retained Income	-0-	100,000
Total	$1,000,000	$1,125,000

Converted to December 31 Dollars

	January 1	December 31
Monetary Assets	$1,600,000	$ 900,000
Non-Monetary Assets	400,000	463,157
Asset Valuation Accounts	-0-	(43,157)
Total	$2,000,000	$1,320,000
Monetary Liabilities	$ 400,000	$ 225,000
Capital Stock	1,600,000	1,600,000
Purchasing Power Adjustment	-0-	(505,000)
Total	$2,000,000	$1,320,000

Note: Items in Parenthesis ( ) Are Deductions

Case VII

Heavy Monetary Assets and Heavy Stockholders' Equity

Income Statements

	Conventional Accounting	Converted To December 31 Dollars
Total Revenue	$1,500,000	$2,000,000
Less: Merchandise Cost of Sales	(900,000)	(1,200,000)
Other Expenses & Taxes	(377,632)	(503,509)
Expiration of Non-Monetary Assets	(22,368)	(43,157)
Net Income	$ 200,000	$ 253,333
Less Dividends (Paid Dec. 31)	(100,000)	(100,000)
Addition to Retained Income	$ 100,000	
Balance		$ 153,334
Gain on Monetary Liabilities		208,333
Total		$ 361,667
Loss on Monetary Assets		(866,667
Purchasing Power Adjustment		$ (505,000)

Earning Rates

	Conventional	Converted Monetary Gains and Losses Excluded	Converted Monetary Gains and Losses Included
On Average Total Assets	18.0%	10.9%	(23.7%)
On Average Stock-holders Equity	22.2%	18.1%	(29.0%)

Note: Items in Parenthesis ( ) Are Deductions or Red Figures

business reports conventional net income of $200,000 which is actually a loss of $405,000 in terms of economic value. This difference is unavoidable when conventional accounting procedures are used. Certainly such a deviation is material and should be pointed out by the use of converted statements. This situation, if carried to an extreme, could result in the business reporting a favorable net income and a high earning rate over a period of inflation, only to find itself in a vastly impaired position in terms of economic value. In such a situation, the businessman may find himself forced to pay higher taxes, higher wages, and generally higher costs because his business appears profitable while the real capital of the business is being dissipated by the inflation.

Case VIII

This case presents a rather happy extreme to the cases previously discussed. Here it is assumed that the assets are primarily of a Non-Monetary nature while the business has a large proportion of Monetary Liabilities. The really unfortunate thing about this business is that it would be considered as in extremely poor financial condition by most businessmen. In actuality, it is impossible to conceive of a business in this position. The public utilities would probably approximate this situation because they generally lean toward fixed dollar obligations when financing increased plant and equipment.

Case VIII

Heavy Non-Monetary Assets And Heavy Monetary Liabilities

Balance Sheets

Conventional Accounting

	Price Level Index 100 January 1	200 December 31
Monetary Assets	$ 200,000	$ 300,000
Non-Monetary Assets	800,000	1,305,263
Asset Valuation Accounts	-0-	(105,263)
Total	$1,000,000	$1,500,000
Monetary Liabilities	$ 800,000	$1,200,000
Capital Stock	200,000	200,000
Retained Income	-0-	100,000
Total	$1,000,000	$1,500,000

Converted to December 31 Dollars

	January 1	December 31
Monetary Assets	$ 400,000	$ 300,000
Non-Monetary Assets	1,600,000	2,273,684
Asset Valuation Accounts	-0-	(183,684)
Total	$2,000,000	$2,390,000
Monetary Liabilities	$1,600,000	$1,200,000
Capital Stock	400,000	400,000
Purchasing Power Adjustment	-0-	780,000
Total	$2,000,000	$2,380,000

Note: Items in Parenthesis ( ) Are Deductions

Case VIII

Heavy Non-Monetary Assets and Heavy Monetary Liabilities

Income Statements

	Conventional Accounting	Converted To December 31 Dollars
Total Revenue	$1,500,000	$2,000,000
Less: Merchandise Cost of Sales	(900,000)	(1,200,000)
Other Expenses & Taxes	(294,737)	(392,983)
Expiration of Non-Monetary Assets	(105,263)	(193,684)
Net Income	$ 200,000	$ 213,333
Less Dividends (Paid Dec. 31)	(100,000)	(100,000)
Addition to Retained Income	$ 100,000	
Balance		$ 113,333
Gain on Monetary Liabilities		933,333
Total		$1,046,666
Loss on Monetary Assets		(266,666)
Purchasing Power Adjustment		$ 780,000

Earning Rates

	Conventional	Converted Monetary Gains and Losses Excluded	Converted Monetary Gains and Losses Included
On Average Total Assets	15.4%	9.5%	39.3%
On Average Stockholders Equity	66.7%	25.4%	104.8%

Note: Items in Parenthesis ( ) Are Deductions or Red Figures

In this example, the conventional earning rates are the same as in Cases IV and VI. However, unlike the others, this company has had a significant understatement of its real earning rate. The company has maintained the value of its assets because they are primarily of a Non-Monetary nature. The Monetary Liabilities have proved to be extremely desirable in times of inflation because of their fixed dollar nature. The company has, thus, increased its real capital as a result of the inflation. The conventional earning rate of 15.4% on the assets is in reality 39.3% when the net gain on the Monetary Accounts is considered. A similar situation likewise exists with respect to the earning rates on Stockholders' Equity.

It may be concluded from this case that in order to benefit from inflation, a company must go into debt and invest the funds in assets which will increase in dollar value along with the inflation. The real problem involved in carrying out such a decision is that of finding people willing to lend money to the business. Traditionally, such a business would be considered as a poor credit risk.

Case IX

The large proportion of Non-Monetary Assets and the heavy financing by the stockholders in this company would seem to be typical of a small manufacturing company. The conventional earning rates in this case are the same as in

Case IX

Heavy Non-Monetary Assets And Heavy Stockholders' Equity

Balance Sheets

Conventional Accounting

	Price Level Index 100 January 1	200 December 31
Monetary Assets	$ 200,000	$ 225,000
Non-Monetary Assets	800,000	989,472
Asset Valuation Accounts	-0-	(89,472)
Total	$1,000,000	$1,125,000
Monetary Liabilities	$ 200,000	$ 225,000
Capital Stock	800,000	800,000
Retained Income	-0-	100,000
Total	$1,000,000	$1,125,000

Converted to December 31 Dollars

	January 1	December 31
Monetary Assets	$ 400,000	$ 225,000
Non-Monetary Assets	1,600,000	1,852,632
Asset Valuation Accounts	-0-	(172,632)
Total	$2,000,000	$1,905,000
Monetary Liabilities	$ 400,000	$ 225,000
Capital Stock	1,600,000	1,600,000
Purchasing Power Adjustment	-0-	80,000
Total	$2,000,000	$1,905,000

Note: Items in Parenthesis ( ) Are Deductions

Case IX

Heavy Non-Monetary Assets and Heavy Stockholders' Equity

Income Statements

	Conventional Accounting	Converted To December 31 Dollars
Total Revenue	$1,500,000	$2,000,000
Less: Merchandise Cost of Sales	(900,000)	(1,200,000)
Other Expenses & Taxes	(310,526)	(614,035)
Expiration of Non-Monetary Assets	(89,474)	(172,632)
Net Income	$ 200,000	$ 213,333
Less Dividends (Paid Dec. 31)	(100,000)	(100,000)
Addition to Retained Income	$ 100,000	
Balance		$ 113,333
Gain on Monetary Liabilities		208,333
Total		$ 321,666
Loss on Monetary Assets		(241,666)
Purchasing Power Adjustment		$ 80,000

Earning Rates

	Conventional	Converted Monetary Gains and Losses Excluded	Converted Monetary Gains and Losses Included
On Average Total Assets	18.0%	10.7%	9.0%
On Average Stockholders Equity	22.2%	12.6%	10.7%

Note: Items in Parenthesis ( ) Are Deductions or Red Figures

Cases V and VII. The earning rates based on the converted statements, as in each of the previous cases, differs materially from the conventional earning rates. The return on total assets is cut in half. The conventional 18% is but 9% when the statements are converted. The earning rate on Stockholders' Equity behaves in a similar manner. The change in these earning rates is caused primarily by the gross understatement of the Non-Monetary Assets, the corresponding understatements of the Stockholders' Equity, and depreciation charges. The Monetary Accounts are of relatively little significance. They tend to offset each other with the brunt of the error caused by the historical cost basis of conventional accounting. The conclusion may then be drawn that the historical cost basis of accounting will provide an overstatement of the earning rates during periods of inflation.

Summary and General Conclusions Reached From the Analysis of the Hypothetical Companies

To illustrate the comparative effect on earning rates, the conventional and converted earning rates for each company are tabulated in the tables on the following page.

Return on Average Total Assets

Case Number	Conventional	Converted Excluding Monetary Gains and Losses	Converted Including Monetary Gains and Losses
I	17.4%	12.3%	10.5%
II	17.4%	14.5%	(5.7%)
III	17.4%	10.4%	24.4%
IV	15.4%	11.2%	26.5%
V	18.0%	12.6%	(6.1%)
VI	15.4%	13.3%	11.5%
VII	18.0%	14.8%	(23.7%)
VIII	15.4%	9.5%	39.3%
IX	18.0%	10.7%	9.0%

Return on Average Stockholders' Equity

Case Number	Conventional	Converted Excluding Monetary Gains and Losses	Converted Including Monetary Gains and Losses
I	33.3%	21.2%	18.2%
II	33.3%	26.7%	(10.5%)
III	33.3%	17.1%	40.0
IV	66.7%	34.6%	81.5%
V	22.2%	15.1%	(7.3%)
VI	66.7%	49.7%	43.1%
VII	22.2%	18.1%	(29.0%)
VIII	66.7%	25.4%	104.8%
IX	22.2%	12.6%	10.7%

Note: Items in Parenthesis ( ) Are Negative Figures

It is obvious from these tables that conventional accounting provides highly misleading earning rates during a period of inflation. It may be concluded from these cases presented that the nature of the assets and the capital essentially account for these changes.

During a period of inflation, the business which does the best job of maintaining its position will have its assets in the form of real goods and property rather than

in the form of cash or other Monetary Assets. The capitalization of the business should include a generous proportion of Monetary Liabilities since it will be easier to discharge them as the inflation progresses. The business which suffers the most from an inflation is the one which holds Monetary Assets and is capitalized by the use of stockholders investment.

The most striking fact about the earning rates presented is that they vary so greatly from the conventional rates. Thus, any use of the conventional rates during a period of inflation may cause highly misleading conclusions with respect to the efficiency of the business enterprise. Certainly the demands on the business in the form of higher taxes by the government and higher wages by the workers may constitute a threat to the existence of the business during periods of inflation. The business is in reality being subjected to pressures brought on by the failure of accounting to recognize that the dollar is not a constant unit of value.

CHAPTER V

The Impact Of Inflation On The Earning Rates Of An Actual Business

Case Study of a Manufacturing Company

The chapter attempts to determine the effect of inflation on the earning rates of an actual business enterprise. The selection of the company to be studied was undertaken without any bias. However, the following reservations were made when selecting the company. In order to make the conversion to common dollars as simple and meaningful as possible, the company should have only one class of stock outstanding. It was likewise decided to eliminate all companies having subsidiaries. The company selected was a manufacturing company located in the middle west.[1]

The company appears in Fortune's Directory of the 500 largest industrial corporations in the United States for 1956. The company has two principal lines of activity. It produces parts for the automobile industry and small motors for use on power equipment such as air compressors, lawn mowers, and water systems. Nearly all of the company's products are sold to other manufacturing companies. The company has all

---

1. Because of the nature of this study, it was decided that the name of the company studied should not be disclosed.

of its manufacturing plants in and around a major midwestern city.

The company's financial statements as reported for 1945 through 1955 appear in Exhibit "A" at the end of this chapter. In converting these statements to reflect inflation, the Consumers' Price Index was used. The following tables show the Consumers' Price Index and the purchasing power factors which were used in the adjustment.

Consumers' Price Index[2]

Year	1947-1949=100 Average Index	1947-1949=100 December Index	1947-1949=100 Last Quarter Index
1945	70.9	78.4	78.4
1946	83.4	92.5	90.1
1947	95.5	100.9	98.8
1948	102.8	102.9	103.1
1949	101.8	100.9	100.8
1950	102.8	106.9	105.8
1951	111.0	113.1	112.7
1952	113.5	114.1	114.2
1953	114.5	114.9	115.1
1954	114.8	114.3	114.5
1955	114.5	114.7	114.9

Consumers' Price Index
Purchasing Power Factors

Index for December 1955 (114.7)
Index to be converted

Year	Average Index	December Index	Last Quarter Index
1945	149.2%	146.3%	146.3%
1946	137.5	124.0	127.3
1947	120.1	113.7	116.1
1948	111.6	111.5	111.3
1949	112.7	113.7	113.8
1950	111.6	107.3	108.4
1951	103.3	101.4	101.8
1952	101.1	100.5	100.4
1953	100.3	99.8	99.7
1954	99.9	100.3	100.2
1955	100.2	100.0	99.8

The procedures used in the conversion were essentially the same as those used in the cases in Chapter IV. It was assumed that the Balance Sheet at December 31, 1945 was stated in terms of common dollars. To the extent that this assumption is invalid, the results obtained are biased.

In converting the inventory, each year it was assumed that it was composed of purchases made in the last quarter of each year. This seems reasonable since the company uses the first-in first-out method to value its inventories. They also apply the "cost or market" concept to value their inventories, but it was impossible to determine if any departure from cost was actually made. However, since the price level showed a general increase throughout the period, the cost or market rule would generally reflect cost.

The conversion of the fixed asset accounts was accomplished by aging the accounts to determine the year in which the additions were made. An analysis of the gross book value of the accounts for each year was obtained. The assets were then converted by the index for the year in which the additions were made. The converted depreciation was then calculated using the same rates as were used conventionally. The disposals of the fixed assets were assumed to be on a first-in first-out basis. The conversion of the accounts

---

2. U.S. Bureau of Labor Statistics, Monthly Labor Review, Table D-1, Years 1940 thru 1956.

was undertaken as follows:

Monetary Assets	By the year end index
Non-Monetary Assets	By the index of the year of acquisition
Monetary Liabilities	By the year end index
Sales	By the average index for the year
Cost of Goods Sold	By the average index for the year with the discussed adjustment for the inventories
Other Expenses & Taxes	By the average index for the year
Dividends	By the average index for the year

The converted Balance Sheets and Income Statements appear as Exhibit "B" at the end of this chapter. The earning rates based upon conventional and converted statements were calculated in the same way as in the cases in the previous chapter. The following table presents the conventional and converted earning rates. The converted earning rates include the gains and losses on the monetary accounts. As discussed previously, they should be included in order to properly reflect the real success or failure of the business.

X Manufacturing Company
Earning Rates

	Return On Average Total Assets		Return On Average Stockholder's Equity	
Year	As Reported	Converted	As Reported	Converted
1946	32.6%	24.0%	41.4%	30.2%
1947	38.6	30.8	49.6	39.2
1948	39.8	34.4	48.6	42.7
1949	29.8	29.6	35.8	35.6
1950	22.9	19.0	28.3	23.4
1951	21.1	16.7	27.0	21.8
1952	20.0	18.1	25.6	23.1
1953	19.8	17.6	23.9	21.3
1954	25.4	24.7	31.3	30.6
1955	26.7	25.9	33.2	32.4

The converted earning rates in every single year are lower than the conventional earning rates. This is due to two factors. The first being the historical basis of the fixed assets in the conventional statements. The second reason is the failure of the conventional statements to take into account the gains and losses on the monetary accounts.

As can be seen in the Balance Sheets, the structure of the company is similar to Case IX in the preceding chapter.

The company has a rather large investment in Non-Monetary Assets and the capital is predominately in the form of Stockholder's Equity. Although the proportions of the Non-Monetary Assets and Stockholder's Equity are not quite as large as in Case IX, nor the price level change as great, the results are essentially the same. It might be argued that the variation between the conventional and converted earning rates for this company are rather small. However, when talking in terms of a misstatement of net income of several million dollars over a period of years, the error becomes quite significant. Especially since the error may cause many invalid decisions on the part of interested parties.

Earning Rates and Other Case Studies

In connection with their conversion of actual financial statements to reflect the impact of inflation, a few authors

have attempted to compare the conventional and converted earning rates of the companies. Donald A. Corbin, while measuring the impact of changing prices on a department store found the following results.[3]

Year	Earning Rates On Total Assets		Earning Rates On Common Stock Equity	
	Conventional	Converted	Conventional	Converted
1946	13.7%	11.8%	16.5%	14.1%
1947	22.1	15.4	27.3	18.6
1948	16.9	9.5	19.8	11.0
1949	13.7	10.4	16.9	12.5
1950	10.5	10.1	12.9	12.3
1951	10.5	6.6	13.3	8.0
1952	9.2	3.9	9.3	4.7
1953	6.6	4.8	8.3	5.9

His results seem to follow the same trend as the results for the manufacturing company. The converted earning rates in every case are lower than the conventional earning rates.

Similar results were also found by Ralph C. Jones in his analysis of nine steel companies.[4] He found that the earning rates on the average equity of all bondholders and stockholders were as follows:

	1941-1945 Average Per Year	1946	1947
Conventional	5.25%	6.21%	8.7%
Converted	3.38	(3.23)	1.63

---

3. Donald A. Corbin, "The Impact of Changing Prices on a Department Store," The Journal of Accountancy, Vol.97, April, 1954, p. 435-6.

4. Ralph C. Jones, "Effect of Inflation on Capital and Profits: The Record of Nine Steel Companies," The Journal of Accountancy, Vol.87, January, 1949, p.18&23.

The study of four companies by Mr. Jones for the American Accounting Association revealed the following earning rates for the New York Telephone Company.[5] These earning rates were calculated on the average equity of all investors.

Year	Conventional	Converted
1946	7.7	4.8
1947	6.2	2.9
1948	5.1	2.1
1949	4.5	2.0
1950	5.9	3.3
1951	6.2	3.0
1952	6.4	3.3

The other companies in the case study of four companies showed similar results.

With respect to the results obtained by the conversion of the manufacturing company and in view of the similarity to the results of other case studies, the assumption that earning rates are overstated during an inflation seems to be valid. It is not proposed that statements reflecting the change in the price level should completely supplant the conventional accounting statements, nor should the converted earning rates completely supplant the conventional earning rates. However, it certainly seems desirable that such information should be presented as a part of the annual report to the stockholders. The use of the purchasing power information would certainly be valuable to all interested parties.

---

5. Ralph C. Jones, Price Level Changes and Financial State- Op. Cit., p. 18.

EXHIBIT A
X Manufacturing Company
Reported Balance Sheets Reclassified Into
Purchasing Power Components
(000's Omitted)

	Dec. 31 1945 $	Dec. 31 1946 $	Dec. 31 1947 $	Dec. 31 1948 $
Assets				
Monetary Assets				
Cash	390	1,181	1,681	2,074
U.S. Treasury Notes	-0-	-0-	-0-	32
Accts. Receivable (Net)	833	889	1,086	1,256
Cash Value of Life Ins.	131	139	143	149
Total Monetary	1,359	2,207	2,910	3,511
Non-Monetary Assets				
Marketable Securities	278	11	11	11
Inventories	2,356	2,614	2,926	3,468
Plant, Property, & Equip.	3,139	3,284	3,736	4,449
Allow. for Deprec.	1,955	1,969	2,063	2,157
Net Property	1,184	1,315	1,673	2,292
Patterns, Tools, etc.	50	50	50	50
Prepaid Expenses	17	19	30	23
Total	3,886	4,009	4,691	5,843
Total Assets	5,245	6,216	7,601	9,354
Liabilities & Stock Equity				
Monetary Liabilities				
Accounts Payable	540	620	848	825
Accrued Payroll	136	223	369	435
Accrued Taxes	310	581	441	496
Total Monetary Liab.	986	1,424	1,658	1,756
Stock Equity				
Capital Stock	300	300	300	300
Retained Income	4,029	4,562	5,713	7,368
Total	4,329	4,862	6,013	7,668
Less Treasury Stock	70	70	70	70
Stock Equity	4,259	4,792	5,943	7,598
Total Liabilities & Stock Equity	5,245	6,216	7,601	9,354

Dec. 31 1949 $	Dec. 31 1950 $	Dec. 31 1951 $	Dec. 31 1952 $	Dec. 31 1953 $	Dec. 31 1954 $	Dec. 31 1955 $
3,360	2,367	2,447	3,138	3,034	4,949	1,908
204	-0-	-0-	599	1,121	1,376	112
1,193	1,440	2,229	1,730	1,513	2,133	2,365
155	160	166	171	177	-0-	-0-
4,913	3,967	4,842	5,638	5,845	8,458	4,385
11	11	11	11	-0-	-0-	-0-
2,965	5,067	6,229	5,763	6,539	6,046	8,867
4,872	6,088	6,657	6,920	8,010	11,307	17,924
2,318	2,461	2,689	2,971	3,241	3,579	4,310
2,554	3,627	3,968	3,949	4,769	7,728	13,614
50	50	50	50	50	50	50
30	41	49	52	61	71	63
5,609	8,796	10,306	9,827	11,417	13,896	22,593
10,522	12,763	15,148	15,465	17,262	22,354	26,978
671	1,674	937	1,191	1,122	2,128	2,448
421	496	466	605	717	1,011	1,038
498	618	2,467	960	1,037	1,439	1,514
1,590	2,788	3,870	2,756	2,876	4,578	5,000
300	300	300	300	300	300	300
8,702	9,745	11,048	12,479	14,086	17,476	21,678
9,002	10,045	11,348	12,779	14,386	17,776	21,978
70	70	70	70	-0-	-0-	-0-
8,932	9,975	11,278	12,709	14,386	17,776	21,978
10,522	12,763	15,148	15,465	17,262	22,354	26,978

EXHIBIT A
X Manufacturing Company
Reported Income Statements
(000's Omitted)

Calendar Year	1946	1947	1948
	$	$	$
Net Sales	15,676	21,776	24,046
Cost of Goods Sold	11,393	15,380	16,445
Selling & General Expense	1,061	1,764	1,872
Depreciation	114	129	158
Net Operating Income	3,108	4,503	5,571
Other Income	72	74	98
Total	3,180	4,577	5,669
Other Expenses & Taxes	1,310	1,940	2,380
Net Income	1,870	2,637	3,289
Retained Income 1/1	4,029	4,562	5,713
Total	5,899	7,199	9,002
Dividends	1,337	1,486	1,634
Retained Income 12/31	4,562	5,713	7,368

EXHIBIT B
X Manufacturing Comapny
Income Statements
Converted To December 31, 1955 Dollars
(000's Omitted)

	1946	1947	1948
	$	$	$
Net Sales	21,555	26,152	26,836
Cost of Goods Sold	16,137	18,777	18,494
Selling General Expense	1,459	2,119	2,089
Depreciation	225	267	306
Net Operating Income	3,734	4,989	5,947
Other Income	99	77	114
Total	3,833	5,066	6,061
Other Expenses & Taxes	1,801	2,330	2,656
Net Income	2,032	2,736	3,405
Retained Income 1/1	5,894	5,946	6,787
Total	7,926	8,682	10,192
Dividends	1,838	1,785	1,824
Loss on Monetary Items (Gain)	142	110	28
Retained Income 12/31	5,946	6,787	8,340

1949	1950	1951	1952	1953	1954	1955
$	$	$	$	$	$	$
23,531	27,040	38,494	40,613	40,534	49,099	58,136
16,318	18,776	27,046	27,240	28,341	34,932	40,129
1,949	1,984	2,305	2,598	2,904	2,840	2,722
193	216	278	297	314	369	814
5,071	6,074	8,865	10,478	8,975	10,958	14,471
87	128	152	187	316	302	271
5,158	6,202	9,017	10,665	9,291	11,260	14,742
2,190	3,525	6,080	7,600	6,050	6,220	8,140
2,968	2,677	2,937	3,065	3,241	5,040	6,602
7,368	8,702	9,745	11,048	12,479	14,086	17,476
10,336	11,379	12,682	14,113	15,720	19,126	24,078
1,634	1,634	1,634	1,634	1,634	1,650	2,400
8,702	9,745	11,048	12,479	14,086	17,476	21,678

1949	1950	1951	1952	1953	1954	1955
$	$	$	$	$	$	$
26,518	30,177	39,764	41,060	40,655	49,050	58,252
18,310	21,181	28,291	27,624	28,471	34,866	40,245
2,197	2,214	2,381	2,627	2,913	2,837	2,727
341	413	457	482	643	670	1,220
5,670	6,369	8,635	10,327	8,628	10,677	14,060
98	143	157	189	317	302	271
5,768	6,512	8,792	10,516	8,945	10,979	14,331
2,468	3,934	6,281	7,684	6,068	6,214	8,156
3,300	2,578	2,511	2,832	2,877	4,765	6,175
8,340	9,850	10,486	11,244	12,403	13,621	16,756
11,640	12,428	12,997	14,076	15,280	18,386	22,931
1,842	1,824	1,688	1,652	1,639	1,648	2,405
(52)	118	65	21	20	(18)	2
9,850	10,486	11,244	12,403	13,621	16,756	20,524

EXHIBIT B
X Manufacturing Company
Balance Sheets
Converted to December 31, 1955 Dollars
(000's Omitted)

Assets	Dec. 31 1945 $	Dec. 31 1946 $	Dec. 31 1947 $	Dec. 31 1948 $
Monetary Assets				
Cash	571	1,465	1,911	2,313
U.S. Treasury Notes	-0-	-0-	-0-	36
Accts. Receivable (Net)	1,225	1,102	1,235	1,400
Cash Value of Life Ins.	192	170	163	166
Total Monetary	1,988	2,737	3,309	3,915
Non-Monetary Assets				
Marketable Securities	407	16	16	16
Inventories	3,447	3,328	3,397	3,860
Plant, Property, & Equip.	4,592	4,783	5,315	6,088
Allow. for Deprec.	2,862	2,916	3,142	3,348
Net Property	1,730	1,867	2,173	2,740
Patterns, Tools, Etc.	73	73	73	73
Prepaid Expenses	25	28	41	31
Total Non-Monetary	5,682	5,312	5,700	6,720
Total Assets	7,670	8,049	9,009	10,635
Liabilities & Stock Equity				
Monetary Liabilities				
Accounts Payable	790	768	963	920
Accrued Payroll	199	277	420	485
Accrued Taxes	450	721	502	553
Total Monetary Liab.	1,439	1,766	1,885	1,958
Stock Equity				
Capital Stock	439	439	439	439
Retained Income	5,894	5,946	6,787	8,340
Total	6,333	6,385	7,226	8,779
Less Treasury Stock	102	102	102	102
Stock Equity	6,231	6,283	7,124	8,677
Total Liabilities & Stock Equity	7,670	8,049	9,009	10,635

Dec. 31 1949 $	Dec. 31 1950 $	Dec. 31 1951 $	Dec. 31 1952 $	Dec. 31 1953 $	Dec. 31 1954 $	Dec. 31 1955 $
3,820	2,540	2,482	3,153	3,028	4,964	1,908
232	-0-	-0-	602	1,119	1,380	112
1,356	1,545	2,260	1,739	1,510	2,139	2,365
176	172	168	172	176	-0-	-0-
5,584	4,257	4,910	5,666	5,833	8,483	4,385
16	16	16	16	-0-	-0-	-0-
3,374	5,493	6,341	5,786	6,519	6,058	8,849
6,552	7,881	8,445	8,700	9,764	13,040	19,603
3,643	3,966	4,349	4,803	5,340	5,958	7,026
2,909	3,915	4,096	3,897	4,424	7,082	12,577
73	73	73	73	73	73	73
39	61	69	72	81	91	79
6,411	9,558	10,595	9,844	11,097	13,304	21,578
11,995	13,815	15,505	15,510	16,930	21,787	25,963
763	1,797	950	1,197	1,119	2,135	2,448
479	532	473	608	716	1,014	1,038
566	663	2,501	965	1,035	1,443	1,514
1,808	2,992	3,924	2,770	2,870	4,592	5,000
439	439	439	439	439	439	439
9,850	10,486	11,244	12,403	13,621	16,756	20,524
10,289	10,925	11,683	12,842	14,060	17,195	20,963
102	102	102	102	-0-	-0-	-0-
10,187	10,823	11,581	12,740	14,060	17,195	20,963
11,995	13,815	15,505	15,510	16,930	21,787	25,963

EXHIBIT B
X Manufacturing Company
Reconciliation Of Purchasing Power
Gains And Losses On Net Monetary Assets

	1946	1947	1948
	$	$	$
Conventional Net Monetary Assets			
Balance December 31	783	1,252	1,755
Less Balance January 1	373	783	1,252
Increase During the Year	410	469	503
Average Purchasing Power Factor%	137.5%	120.1%	111.6%
Increases Converted by Average Purchasing Power Factor	564	563	561
Converted Balance January 1	549	971	1,424
Total	1,113	1,534	1,985
Converted Balance December 31	971	1,424	1,957
Loss on Net Monetary Assets (Gain)	142	110	28

1949	1950	1951	1952	1953	1954	1955
$	$	$	$	$	$	$
3,323	1,179	972	2,882	2,969	3,880	(615)
1,755	3,323	1,179	972	2,882	2,969	3,880
1,568	(2,144)	(207)	1,910	87	911	(4,495)
112.7%	111.6%	103.3%	101.1%	100.3%	99.9%	100.2%
1,767	(2,393)	(214)	1,931	87	910	(4,504)
1,957	3,776	1,265	986	2,896	2,963	3,891
3,724	1,383	1,051	2,917	2,983	3,873	(613)
3,776	1,265	986	2,896	2,963	3,891	(615)
(52)	118	65	21	20	(18)	2

CHAPTER VI

Summary And Conclusions

Validity of the Original Hypothesis

The hypothesis as expressed in Chapter I is that in a period of inflation the earning rates calculated on conventional accounting statements are overstated in terms of the real income and assets of the business. The cases developed in Chapter IV bear out this hypothesis in part. From the analysis of the hypothetical companies, it was determined that the earning rates developed from conventional accounting data are misleading during periods of inflation. However, the degree to which they are misleading varies according to the nature of the assets and equities of the business.

It should be noted that the conventional earning rates of some of the hypothetical companies were actually understated. This situation existed when there was a large gain on the monetary accounts. When this gain, caused by the existence of large proportion of Monetary Liabilties, greatly exceeded the overstatement of net income due to insufficient depreciation charged on the historical cost of the Non-Monetary Assets the earning rates were understated. however, in actuality this situation would be unusual because businessmen generally like to avoid excessive use of the Monetary

Liabilities.

The businesses which were hurt by the inflation were those who had large proportions of Monetary Assets. There is a striking example of an actual business which found itself in such a situation. The Montgomery Ward Company under the direction of Mr. Avery built up a large reserve of cash immediately following World War II. The philosophy of Mr. Avery was that the costs of expansion were too high and that it would be wise to wait for a drop in the price level. Thus, the company suffered a large loss of purchasing power during the period of inflation following the war.

The analysis of the manufacturing company also supported the original hypothesis. The earning rates of the company were overstated throughout the period from 1946 thru 1956. The overstatement in this case was not as great as in the hypothetical cases because the change in the price level was not as great. While the assumptions mentioned in the discussion of the cases might invalidate the results to some extent, it is certainly doubtful if they would materially offset the conclusions reached.

The earning rates developed from the study of the American Accounting Association and by other prominent accountants also tend to support the hypothesis. In all of the companies investigated by these authorities, the earning rates based upon the conventional accounting statements were materially overstated. The converted earning rates in some

cases actually reflect a loss of capital. As a result of this and other facts brought out by the conversion of the statements to reflect inflation, one of the companies studied included in its annual report statements converted to reflect the effect of inflation.

The Significance of the Results

The evidence presented in this thesis should certainly be of interest to accountants. The use of historical cost by accountants may certainly be challenged. The assumption that the dollar is a constant unit of value may cause a very real hardship on business during a period of inflation. A business enterprise may be subjected to undue pressure because of its indicated high earning rates when in reality the earning rates are materially in error.

The accountant and the accounting profession should strive to present real and meaningful statements and reports. Indeed, this is the true responsibility of the accountant. This would not require a complete departure from the traditional principles of accounting. It would be necessary to keep the accounting records in the traditional way in order to have a basis for adjustment. However, it seems imperative that supplementary statements to reflect the impact of inflation should be included in the accountant's records. Since it is only logical to regard the business enterprise as an economic unit, the accountant should report to the

interested parties the successes or failures of the business as an economic unit. If the real earning rate of a business on its Stockholder's Equity is 5%, let it not be said that the accountant was at fault by reporting it as 10%. If the accountant cannot make his records reveal the true facts in financial terms, it is certainly doubtful if the accounting information is of any real value. In fact to the extent that it is misleading, it may be worse than no information at all. This is a rather broad indictment of accounting, but to the extent that the accountant adds together apples, oranges, and bananas and calls the total apples, it is true.

The information provided by the calculation of the converted earning rates would certainly be of value to the stockholders of a corporate enterprise. It would provide them with additional information which they could use in evaluating the stock and in comparing it to stocks of other companies. As pointed out in Chapter IV, it is certainly better to invest in a business having a large proportion of Non-Monetary Assets during a period of inflation. Since the stockholders are interested in the business enterprise as an economic unit, it seems that they would more than welcome information based on economic reality.

Management would also be served by the calculation of converted earning rates. While it is to be expected that management would realize that inflation is in existence, the converted earning rates would provide a means of

determining the impact of the inflation upon their business. For example, it would be helpful in decisions concerning the method of financing proposed expansion, in matters concerning wage increases, and in determining the full burden of taxes on the business.

Other interested parties such as the government might well view the real earning rates with great interest. Certainly the corporate income taxes have caused an inequitable burden upon some business during the past few years. The excess profits tax in existence a few years ago was certainly a burden upon corporations whose reported profits were materially overstated in real terms. Of course, it has to be admitted that the government must raise enough revenue to carry out its activities. However, in a period of inflation it seems that many businesses and individuals bear an unfair share of the burden of taxes because of the accounting procedures which are used. It must be admitted that the accelerated depreciation and the adoption of LIFO for tax purposes has helped avoid some of the inequities. But, irrespective of these methods, many businesses have still borne an inequitable burden of taxes.

The labor groups would also do well to consider the real earning rate of the business when making demands for higher wages. As pointed out earlier, a business might report conventional earnings for a period of years only to find that its real capital has been dissipated. Indeed, the

demands of labor might effectively work against them in the long run.

Although this thesis has discussed only the impact of inflation on corporate earning rates, some mention must be made concerning the possible effect of deflation. It is the firm belief of the author that if the adoption of the converted earning rates and financial statements is made, it must be made during times of deflation as well as inflation. In such times the effect on earning rates would no doubt be the reverse of the situation during inflation.

While this study of earning rates and inflation has discussed many important aspects of the problem, there certainly is room for further work in this area. It would be desirable to undertake a broad study to determine the effect of inflation upon the whole area of ratio analysis of financial statements. Such a project would take a great deal of time and effort. However, if the results were as startling as those uncovered concerning earning rates, the information would certainly add to the knowledge of the significance and shortcomings of accounting information.

BIBLIOGRAPHY

1. American Accounting Association Committee on Concepts and Standards Underlying Corporate Financial Statements, "Price Level Changes and Financial Statements Supplementary Statement # 2," The Accounting Review, Vol. 26, October, 1951, pp 468-474.

2. American Institute of Accountants, Restatement and Revision of Accounting Research Bulletins, Accounting Research Bulletin No. 43, American Institute of Accountants, New York, 1953, 159 pp.

3. American Institute of Accountants, Changing Concepts of Business Income, The Macmillan Company, New York, 1952, 160 pp.

4. American Institute of Accountants Research Department, "Inquiring into the Reliability of Index Numbers," The Journal of Accountancy, Vol. 87, April, 1949, pp 312-319.

5. Bailey, George D., "Relationship of Accounting to Other Factors in Accurate Reporting of Inflationary Income," The Journal of Accountancy, Vol. 86, November, 1948, pp 361-369.

6. Bailey, George D., "Economic Restriction on Earnings Determined Under Present Accounting Conventions," The Journal of Accountancy, Vol. 87, January, 1949, pp 77-80.

7. Baxter, William T., "To Overcome Inflationary Distortion, Treat Ordinary Accounts Like Those of a Foreign Branch," The Journal of Accountancy, Vol. 90, November, 1950, pp 436-438.

8. Blackie, William, "What is Accounting for Now,", NACA Bulletin, Vol. 29, July, 1948, pp 1352-1378.

9. Bowers, Russell, "Business Profit and the Price Level," The Accounting Review, Vol. 26, April, 1951, pp 167-178.

10. Broad, Samuel J., "Development of Accounting Standards to Meet Changing Economic Conditions," The Journal of Accountancy, Vol. 87, May, 1949, pp 378-389.

11. Broad, Samuel J., "Impact of Rising Prices Upon Accounting Procedures," The Journal of Accountancy, Vol. 86, July, 1948, pp 10-21.

12. Broad, Samuel J., "Effects of Price Level Changes on Financial Statements," NACA Bulletin, Vol. 29, no 21, pp 1329-1348.

13. Business Executives' Research Council of Greater Chicago, Business Profits ----- Fact or Fable? The Study in Detail, A Pamphlet published in 1952, 46pp.

14. Corbin, Donald A., "The Impact of Changing Prices on a Department Store," The Journal of Accountancy, April, 1954, pp 430-440.

15. Dean, Joel, "Measurement of Profits for Executive Decisions," The Accounting Review, Vol. 26, April, 1951, pp 185-196.

16. "Depreciation and Inflation," (Editorial), The Journal of Accountancy, Vol. 84, October 1947, pp 265-266.

17. Dohr, James L., William A. Paton, Maurice E. Peloubet, William H. Bell, Howard C. Greer, and Eric L. Kohler, "Depreciation and the Price Level - A Symposium," The Accounting Review, Vol. 23, April, 1948, pp 115-136.

18. Dewing, Arthur S., The Financial Policy of Corporations, The Ronald Press Company, New York, 1953, 1084pp.

19. DuBois, Henry, "What's Happening to the Dollar?" The Magazine of Wall Street, Vol. 96, August 20, 1955, pp 632-634.

20. Freeman, E. Stewart, "Capital Price Adjustment Method for Deflating Inflated Profits," NACA Bulletin, Vol. 29, no 11, pp 635-658.

21. Freeman, E. Stewart, "How to Show Effects of Change in Value of the Dollar Yet Preserve Cost Basis in the Accounts," The Journal of Accountancy, Vol. 85, February, 1948, pp 113-117.

22. Gladden A. C., "Let an Independent Economist Convert Financial Statements to Present Day Dollars," (Correspondence), The Journal of Accountancy, Vol. 88, August, 1949, pp A-8.

23. Graham, Willard J., "The Effect of Changing Price Levels Upon the Determination, Reporting, and Interpretation of Income," The Accounting Review, Vol. 24, January, 1949, pp 15-26.

24. Grady, Paul, "Proposal for Adoption of Standards of Disclosure for Changing Price Levels," The Journal of Accountancy, Vol. 94, November 1952, pp 565-572.

25. Guthmann, Harry G., Analysis of Financial Statements, Prentice-Hall, Inc., New York, 1953, 703 pp.

26. Guthmann, Harry T., and Herbert E. Dougall, Corporate Financial Policy, Prentice-Hall, Inc., New York, 1955 706pp.

27. Headlee, Charles E., "Price Level Changes - Challenge to Accounting," NACA Bulletin, Vol. 29, no 21, pp 1327-1328.

28. Husband, George R., "The Entity Concept in Accounting," The Accounting Review, Vol. 29, October, 1954, pp 552-564.

29. "Inflation Race-Who's Ahead, Who's Behind," Unsigned Article, U. S. News & World Report, August 3, 1956, pp 95-97.

30. "It Now Costs More Than Ever To Live," Unsigned Article, U. S. News & World Report, August 31, 1956, pp 44-45.

31. Jones, Ralph C., "Effect of Inflation on Capital and Profits: The Record of Nine Steel Companies," The Journal of Accountancy, Vol. 87, January 1949, pp 9-27.

32. Jones, Ralph C., Price Level Changes and Financial Statements, Case Studies of Four Companies, American Accounting Association, 1955, 179pp.

33. Kennerly, John, "Revaluation of Fixed Assets in France," The Accountant,(England), December 11, 1948, pp 469-470.

34. Lees, G. R., Stabilized Accounting, The Northern Publishing Co., Ltd., Liverpool, England, 1950, 24pp.

35. Littleton, A. C., Structure of Accounting Theory, American Accounting Association, 1955, 179pp.

36. Mason, Perry, Price-Level Changes and Financial Statements, Basic Concepts and Methods, American Accounting Association, 1956, 28pp.

37. May, George O., "A Restudy of the Concepts and Terminology of Business Income," The New York Certified Public Accountant, January, 1948, pp 12-16.

38. Moody's Industrials, John F. Moody Co., New York, Vols. 1946-1956.

39. Moonitz, Maurice, "The Case Against LIFO," The Journal of Accountancy, Vol. 95, June 1953, pp 682-690.

40. Moonitz, Maurice, "Adaptations to Price Level Changes," The Accounting Review, Vol. 23, April 1948, pp 139-147.

41. Myer, John N., Financial Statement Analysis, Prentice-Hall, Inc., 1952, 272pp.

42. Niswonger, C. R., "Interpretation of Income in a Period of Inflated Prices," The Accounting Review, Vol. 24, January 1949, pp 27-32.

43. Paton, William A. Sr., "Measuring Profits Under Inflation Conditions: A Serious Problem for Accountants," The Journal of Accountancy, Vol. 89, January, 1950, pp 16-27.

44. Paton, W. A. Sr., and A. C. Littleton, An Introduction to Corporate Accounting Standards, American Accounting Association, 1940, 156pp.

45. Peloubet, Maurice E., "An Indictment of the Accounting Profession for Failure to Deal with the Effects of Inflation," The Journal of Accountancy, Vol. 96, December, 1953, pp 714-722.

46. Pick, Francis, "How Good are Paper-Dollar Company Reports?" The Commercial and Financial Chronicle, Vol. 176, November 6, 1952, pp 1729.

47. Seidman, Nelson B.; "The Determination of Stockholder Income," The Accounting Review, January, 1956, pp 64-70.

48. Slichter, Summner, "Business Profits Exaggerated," The Commercial and Financial Chronicle, Vol. 168, December 9, 1948, pp 2381+.

49. Slichter, Summner, "Integrity of the Dollar," The Commercial and Financial Chronicle, Vol. 173, April 12, 1951, pp 1532.

50. Spear, Harvey M., "Dividend Policies Under Changing Price Levels," The Harvard Business Review, Vol. 27, September, 1949, pp 612-621.

51. Samuelson, Paul A., Economics - An Introductory Analysis, McGraw-Hill Book Company, Inc., New York, 1951, 762pp.

52. Sweeney, Henry W., Stabilized Accounting, Harper & Brothers Publishers, New York, 1936, 219pp.

53. "Taxation of Imaginary Profits," (Editorial), The Accountant, (England), Vol. 119, December, 1948, pp 465.

54. "The Accounting Implications of Changing Money Values," Statement by the Council of the Society of Incorporated Accountants and Auditors, London, England, January 2, 1954, Reprinted in The Journal of Accountancy, February, 1954, pp 248-253.

55. Terborgh, George, Realistic Depreciation Policy, Machin- and Allied Products Institute, 1954, 197pp.

56. U. S. Bureau of Labor Statistics, Monthly Labor Review, Table D-1, Years 1940 thru 1956.

57. "Wage-Price Inflation Ahead?" Unsigned Article, U. S. News & World Report, May 11, 1956, pp 25-28.

58. Wells, Alden P., "Fantasy of Figures - Responsibility of Accountants," The Commercial and Financial Chronicle, Vol. 171, April 20, 1950, pp 11+.

59. Weston, J. Frederick, "Consistency and Changing Price Levels," The Accounting Review, Vol. 24, October, 1949, pp 379-386.

ROOM USE ONLY

Date Due

[illegible] 3 '58			
Jul 3 '58			
[illegible] 65			
Nov 5 '58			
[illegible]			

Demco-293

MICHIGAN STATE UNIVERSITY LIBRARIES
3 1293 03178 5219