

MONETARY ITEMS AND INDICES
(including some comments on the
BRASILIAN SYSTEM OF "MONETARY CORRECTION")

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1. INTRODUCTION

As a non-accountant I am somewhat out of place in this panel which is to consider alternative means of "accounting for inflation". I join the other authors because of my interest in index-linked bonds and the Brazilian system of "monetary correction" as well as my views on the use of market values in the accounts of life assurance companies and superannuation funds.

2. INDEX-LINKED BONDS

In November 1967, at a meeting of the Society of Security Analysts in Sydney I asked the Federal Treasurer, The Honorable Mr. W. McMahon, whether the Government would be prepared to issue securities with a lower rate of interest (say 2½% or 3%) but the capital (or par) value of which increased or decreased each year with the rate of inflation. Thus, interest payable each year would be calculated at, say, 3% on the adjusted par value and upon maturity the adjusted par value would be the redemption value. Mr. McMahon said that much of Australia's inflation was "cost push" rather than inflation caused by excess demand, and that as the Government could not control prices it could not prevent this type of inflation. He also said that the Government would not issue the type of security I suggested because it would not be able to compile a reliable budget as it would not know what its interest payments would be. He did not say that, logically, therefore, the Government would be unable to prepare a budget now because inflation changes its revenue and expenditure anyhow. When he had answered my question the 100 or so people present applauded his answer - why, I wondered? One reason for their applause could have been that most of those present earned their living directly or indirectly from purchases and sales of shares, and perhaps felt that if a price-index security of the type I suggested, did exist, then there might not be so much interest in share investment.

At that time I thought I had come up with an original idea but since then have learnt that the idea is far from original. Some economists made the same suggestions before the end of the 19th Century - the USA Government and commercial enterprises in USA effectively issued such securities for more than 100 years prior to 1933 since these securities had gold clauses which tied the dollar value of securities to the price of gold - J.M. Keynes advocated that the British Government use index bonds before the Colwyn Committee on National Debt and Taxation in 1929 - price-index loans have been issued (or contemplated) by a number of countries since the end of World War 11, including Germany, France, Sweden and Israel - Brasil has had an elaborate and far reaching system of "monetary correction" including index-linked investments for the last decade - and finally Professor Milton Friedman has recently advocated the use of index-linked bonds.

3. BRASILIAN SYSTEM OF MONETARY CORRECTION

In August this year I made a brief (4 day) visit to Brasil to learn something of that country's system of

monetary correction and to study the history of life assurance in Brasil during the last 20 years. I certainly make no claim to be an "expert" on Brasil but I did find the Brazilian system most interesting and became more convinced than ever that a system similar to the Brazilian system of accounting and indexation should be adopted in other countries.

(a) Inflation in Brasil

Inflation has been one of the characteristics of the Brazilian economy for several years and the peak was 1964 when inflation reached about 90%. In 1964, the Brazilian government introduced several measures to control inflation and the result is that the annual inflation rate did not exceed 20% in the last five years to 1973. In 1974, because of world-wide price increases the annual inflation rate was approximately 35%.

One of the most important measures adopted by the Brazilian government in 1964, was the recognition to the fact that distortions caused by inflation should be considered in determining the real profit subject to taxation. In order to enable business enterprises to account for the effects of inflation, a practical system of monetary correction of financial statements was then introduced and subsequently refined to introduce a number of improvements.

This system consists in recording the following adjustments for the effects of inflation:

(i) Annual monetary restatement of the cost of fixed asset and related depreciation accounts. The annual provision for depreciation is computed based on the restated cost of fixed assets.

(ii) A provision for maintenance of stockholders investment is chargeable to income. This provision represents, basically, an allowance for the effects of inflation on assets and liabilities other than fixed assets.

(iii) The net credit resulting from the above adjustments represents the adjustment of the stockholders' investment which is credited to a capital reserve not available for dividends.

(iv) Assets and liabilities which are contractually subject to monetary correction are reported in balance sheet at their corrected amounts. Foreign currency liabilities are adjusted to the exchange rate at balance sheet date.

The government, through changes in the income tax legislation (the last one made effective for fiscal year ending 1974) introduced changes required to eliminate major imperfections. The present Brazilian system of monetary correction of financial statements eliminates the major distortions caused by inflation on a company's financial position and results of operations.

(b) Monetary Restatement of Fixed Assets

Business enterprises in Brasil are required to annually restate their fixed assets based on a table of indices published by the Government. In effect the fixed assets restated based on the percentage of inflation occurred from the year the assets were acquired up to the date of the last balance sheet date.

The first step consists of analysing the historical cost and the corresponding accumulated depreciation of cost by year of acquisition of the asset. The monetary restatement of cost is computed by multiplying the historical cost by the corresponding index. The monetary restatement of accumulated depreciation is computed by multiplying the monetary restatement of cost by the percentage depreciated. The provision for depreciation that enters into the determination of net profit is computed on both historical cost and monetary restatement of cost.

(c) Reserve for Maintenance of Stockholders' Investment

Companies are allowed to record a reserve for maintenance of stockholders' investment (commonly referred to as reserve for maintenance of working capital) by a deductible charge against income. The reserve itself is restricted for use to increase capital. The capital increase helps prevent companies from inadvertently decapitalizing themselves by paying dividends out of fictitious profits.

The amount of reserve is calculated by applying the coefficient published by government to the net worth, excluding fixed assets and investments in other companies, existing at the beginning of the year.

The reserve for maintenance of stockholders investment was originally calculated only on working capital and for this reason continues to be referred to as the reserve for maintenance of working capital.

The purpose of the provision for maintenance of stockholders' investment is to remove from profit that part of the increase in assets that arises from inflation.

The analysis of changes in stockholders investment under conventional accounting generally includes the following items:

Stockholders investment at beginning of the year	x
Add -	
Net profit	x
Capital paid in	x
Deduct -	
Dividends	<u>x</u>
Stockholders' investment at end of the year	<u>x</u>

In Brasil this same statement would also include two adjustments for the effects of inflation (with inflation assumed at 35% for the year):

Stockholders' investment at beginning of the year	1,000
Add - Adjustment for effects of inflation	

Monetary correction of fixed assets		200
Reserve for maintenance of stockholders' investment	1	<u>150</u> 350
Add -		
Net profit		220
Capital paid in		300
Deduct -		
Dividends		<u>(100)</u>
Stockholders' investment at end of the year		<u>Cr\$1,770</u>

If a company has a high level of indebtedness such that liabilities exceed assets (excluding fixed assets) the company may have to increase profit based on its negative exposure to inflation.

(d) Assets and Liabilities which Contractually are subject to adjustment for inflation

Since 1964, it has become common practice to index (monetary correction) long-term transactions. Consequently, companies may have assets (time deposits, treasury bonds and other assets) and liabilities (loans and other liabilities) which are subject to monetary correction based on inflation indices.

For illustration, let's consider a 6% time deposit adjustable for inflation. Assuming 35% inflation we would have the following figures:

Amount of deposit	10,000
Monetary correction 35%	<u>3,500</u>
Adjusted principal	Cr\$ <u>13,500</u>
Interest of 6% on adjusted principal	Cr\$ <u>810</u>

The above monetary correction of Cr\$3,500 is usually credited to income.

Now, looking to the liability side, let's consider a long-term loan bearing 10% interest and adjustable for inflation. Assuming the same 35% inflation we would have the following figures:

Amount of loans	50,000
Monetary correction - 35%	<u>17,500</u>
Adjusted principal	Cr\$ <u>67,500</u>
Interest of 10% on adjusted principal	Cr\$ <u>6,750</u>

The above monetary correction of Cr\$17,500 is chargeable to income, even if the loans are to finance fixed asset items.

The same accounting treatment is allowed for exchange adjustments on foreign currency assets and liabilities.

Assets and liabilities which are subject to adjustment for inflation or exchange adjustment are included as component of "exposure" in the computation of provision for maintenance of stockholders' investment. Consequently, the net effects of inflation in a company's results of operations by holding these types of assets and liabilities would be the effect of

the difference between: (a) the increase in the exchange rate or in the indices applicable to the assets and liabilities subject to adjustment and (b) the increase in the indices published by government to compute the provision for maintenance of stockholders' investment.

(e) Notes to the financial statement of a Brazilian Company

The financial statements of a Brazilian Company, expressed in cruzeiros, mainly those prepared for use outside Brasil, would include the following disclosures relating to accounting for inflation.

1. INFLATION

Under the present inflationary conditions prevailing in Brasil, financial statements expressed in local currency should be considered in the light of distortions caused by such inflation. The accompanying financial statements recognize in part the effects on inflation by: (a) the monetary restatement of property and related depreciation accounts in accordance with official coefficients, and by charge to income for depreciation of the resulting increase in the recorded amount of property, and (b) recording the reserve for maintenance of stockholders' investment.

2. PROPERTY PLANT AND EQUIPMENT

Property, plant and equipment and the related depreciation accounts are stated at cost plus monetary restatement. As required by current legislation the Company recorded the annual monetary restatement based on the official coefficients established for determining changes in price level up to December 31, 1973. The Company is required to record in 1975 the monetary restatement to reflect price level changes up to December 31, 1974, and it is estimated that such net restatement will amount to approximately \$MCr 12,000.

3. RESERVE FOR MAINTENANCE STOCKHOLDERS' INVESTMENT

In accordance with current legislation, companies may deduct for income tax purposes a provision for the maintenance of stockholders' investment against the effects of inflation, provided profits are available to absorb such deduction. The Company recorded the full provision allowed by legislation.

4. TIME DEPOSITS

Time deposits are stated at cost plus monetary restatement accrued up to December 31, 1974. The monetary restatement gain of MCr\$1,200 is included in other income.

(f) Income Tax

Brasil generally taxes all income earned within its borders. Brazilian residents are taxable on income regardless of where it is earned. Corporate or other business entities carrying on a regular trade or business in Brasil are taxed; certain specialized business entities are subject to different taxation, but the income base is generally the same as for other businesses. The basic corporate tax rate (30%) is identical for almost all corporate entities.

(g) Summarising

Since 1974, the government has taken steps which recognize the effects of inflation upon business. These steps include the following:

1. The obligatory annual monetary restatement of fixed assets and corresponding depreciation accounts, which must be recorded in the books. The restatement is made in accordance with stipulated indices published by the government. The restatement increases are depreciable or deductible upon sale.
2. The deductibility for a provision to a reserve for maintenance of working capital. This reserve is computed in accordance with stipulated indices established by the government. The company must have a book profit to get a tax deduction and must utilize the reserve for capital increase. On the other hand, in case the company has a negative working capital, a gain will have to be recognized as a credit to profit and loss accounts, up to the extent the company has exchange losses or monetary indexation recorded as an expense on loans for fixed assets financing.
3. ALL taxes overdue and fines are subject to monetary restatement in accordance with official indices published quarterly.
4. ALL loans contracted in Brasil, besides the normal interest, are subject to a monetary correction clause, to protect the lender against inflation.
5. Inflation's effect is also taken into consideration for purposes of salary increases, once a year.
6. Tax brackets and exemptions for dependants are adjusted annually for inflation.

4. USE OF MARKET VALUES FOR LIFE ASSURANCE COMPANIES AND SUPERANNUATION FUNDS.

Leaving Brasil for the present and returning to Australia, I see it as necessary for realistic accounting purposes and realistic actuarial purposes to adopt a system of showing all assets of life assurance companies and superannuation funds at best estimate of market value on balance date. This would be coupled with the adoption of realistic actuarial assumptions - i.e. assumption for interest, mortality and expenses and, for a benefit promise superannuation fund, of future salary increases - for purpose of the actuarial valuation of liabilities.

Certainly there would be some disagreement about the realism of actuarial assumptions and in some cases a range of assumptions coupled with actuarial project calculations (as a supplement to actuarial present value calculations) would be most desirable - however I feel there would be more realism achieved, and less disagreement about actuarial assumptions, than is the case at present where apparently totally unrealistic book values of assets are coupled with apparently totally unrealistic actuarial assumptions.

5. CONCLUSIONS

From what I have learnt in Brasil and from my own views on indexation and on accounting for inflation both for non-financial companies and for financial institutions, I make a plea not just for index-linked securities but for a taxation system which imposes no tax on a corporation unless shareholders' equity is maintained in real terms, and no tax on a financial institution unless members or policyholders funds have been maintained in real terms. Only the profit in excess of that required to maintain these items should be taxed!

TOWARDS A SECURITIES INSTITUTE VIEWPOINT — ACCOUNTING AND INFLATION

The sections below attempt to summarise the apparent attitudes of members of the Securities Institute to various aspects of the subject. No clear consensus has emerged and it would not be unfair to state that many members have still to direct their full attention to the subject.

A Spread of Views

Nearly all members would prefer a change from traditional historical cost accounting.

C.V.A. has support from a considerable number who take the view that it will assist manufacturing industries; but many of its supporters recognise its limitations in respect of its non-application to financial organisations and because of subjectivity regarding replacement.

C.P.P. is favoured by some who see it as a first step which can be implemented without delay. Most members believe that it has too many drawbacks to be of practical assistance.

Present value has considerable support in theory but serious reservations are held about the manner of its implementation and the profit and taxation implications.

Survival of Business - Matthews Report

All concerned agree that action is required to revive the state of health in the corporate sector. Most support early implementation of the Matthews report recommendations to enable many companies to disclose a lower taxable profit and to prove more readily the need for higher selling prices.

However, the majority recognises that the Matthews proposals were not designed to be the basis of a better accounting system. In addition, the proposals do not deal with the effects of inflation upon monetary items and do not cover the whole range of corporations and their activities.

The Balance Sheet

There is general acceptance among analysts that the balance sheet should show the financial position at a date in the most realistic manner possible. Different viewpoints arise as to how this can be shown. However, some analysts are very critical of any process which might allow some managements to mislead.

In valuing assets it is recognised that difficulties can arise but, subject to a satisfactory valuation being determined, such revaluations would be generally acceptable.

A minority argue that if assets are to be revalued on a regular basis then liabilities should be similarly revalued, and thus restated. Others would prefer the contractual amounts to be shown.

Capital Maintenance

Most members are of the opinion that the main concern of shareholders' is in the maintenance of shareholders'

funds and not in the maintenance of physical operating capacity of the company. It is generally agreed that this would be determined by reference to some suitable index, applied to the residual equity of shareholders' at the beginning of the accounting period. There is no general agreement as to suitable index, but perhaps this is not so important because most suggested indices are relatively similar; the G.D.P. implicit deflator, the C.P.I., or an adjusted version of the C.P.I. are favoured. Generally, specific price indices are rejected.

Profit and Loss

There is a wide divergence of views on the determination of profit which of course reflects the difference in approach to the subject.

Depreciation is regarded by some as being amortisation of a past expense, by others as being a cost of using up resources in current operations, by others an apportionment of the cost of replacing existing assets, and by others the difference between realisable values over two periods of time. Present value/change in net worth advocates are not troubled by depreciation as such. For some of those who propose the notion of a maintenance of shareholders' funds in real terms it would be possible for depreciation to be merely ascertained on a historical cost basis; for others of this school shareholders' funds are assets at realisable or replacement values less liabilities (and thus depreciation cannot be ascertained on a historical basis).

Stock valuation on a LIFO basis for profit determination has considerable support because of the taxation benefits that arise when prices are rising. However, when prices fall, LIFO increases profits and taxes and some see this as an anomaly. Implementation of the shareholders' funds capital maintenance proposal would probably mean that the traditional method of stock valuation would be acceptable.

The treatment of capital gains is the subject of argument and inclusion would depend upon the corresponding shareholders' funds capital maintenance adjustment.

Monetary Items

Many members advocate the indexation of monetary items and they would wish the change in purchasing power to be shown so that the parties would be more aware of the effects of inflation. There is considerable argument as to whether monetary items should be so adjusted in the accounts in isolation. Generally, proponents of the capital maintenance adjustment claim that this method would do away with making such monetary adjustments. Others argue that many corporations have a financial structure and purpose such that monetary assets (and liabilities) are the equivalent of inventories (and shares therein) and should be shown at values realisable (and payable) in the ordinary course of business. If this is so, a capital maintenance adjustment would be applied to shareholders' equity, after adjustment for realisable values of monetary items.