Inflation and Financial Accounts

The Treatment of Loan Capital

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IN his article entitled 'The Effects of Currency Debasement as Illustrated by Gas Industry Accounts' (*The Accountant*, May 7th, 1970), Mr D. R. Myddelton demonstrated the adjustment of profit and loss accounts and balance sheets for changes in the general purchasing power of money.

Although not concerned primarily with the special financial arrangements of nationalized industries, Myddelton takes as his example the accounts of the gas industry for the period 1950–69. His calculations suggest that conventional profits, over 20 years, of £535 million before interest, or £27 million after interest, are transformed into adjusted figures of £263 million and −£244 million (losses) in 1962 money, or £342 million and −£317 million in 1969 money.

Treatment of debt

Myddelton's contribution is devoted largely to a discussion of the treatment of fixed assets, and this item is responsible for most of his adjustment of figures of profit before interest. This adjustment is accepted for the purposes of the present article, which deals only with the treatment of loan capital and its effect on the calculation of adjusted profits after charging the cost of such capital. This cost is particularly significant in the case of public corporations whose long-term external capital consists entirely of debt, but arguments analogous to those presented here apply also to the loans of ordinary companies.

The procedure with which I shall take issue is described in the following passage from Myddelton's article:

'In the gas industry adjustments, Government debt capital has been treated as if it were equity (i.e., not as a monetary liability), and interest as equivalent to ordinary dividends paid. Thus a nationalized industry's profit after interest on this

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basis is equivalent to a private company's "retained earnings" for a period. Interest charged to nationalized industries is generally low, because of exceptionally low interest rates just after the last war at the time of nationalization. This need not much affect the difference made by currency debasement adjustments, but it does indicate that even the large adjusted losses after interest shown in the appendices may be too low.'

This approach seems to me to be unsatisfactory: if accounts are to be adjusted to real terms at all, one should either take as the measure of profit only the adjusted profit before interest, or one should consider the adjusted profit after charging the real cost of debt, i.e., adjusted profit after interest with credit taken for the falling real value of debt. The following arguments support this position:

(i) The terms on which debt is issued and redeemed and the interest to be paid are related parts of a single agreement between debtor and creditor. A concept of profit which takes account of one aspect but not the other is, therefore, difficult to defend. In particular, inflation has recently come to be generally expected, and this has pushed up rates of interest. The interest paid is, to some extent, compensation for the anticipated depreciation in the real value of debt, and any calculation of profit after interest should take credit for this factor.

It is true that this argument does not apply fully to the early years after nationalization, when most investors did not anticipate the inflation which actually occurred; but it has been important in recent years, and will no doubt be more important in the future.

(ii) It is a primary object of financial accounts to trace the rights and obligations arising out of the legal and commercial arrangements which actually exist. Indeed this factual, historical approach, constitutes the distinctive and indispensable contribution of financial accounts to commercial life. (No doubt these accounts also convey information of economic relevance – concerning, for

example, the returns to investment in alternative uses, or the maintenance of capital intact; but it goes without saying that other forms of information, and other techniques, are more appropriate for the essentially forward-looking and speculative business of economic evaluation. And there would, of course, be no need to write articles to argue that economic evaluation should take account of changes in the value of money.)

From the primary standpoint of financial accounting, the use of debt capital rather than equity, and the low rates of interest charged to the gas industry in the years following nationalization, are simply *facts* whose financial consequences must be accurately recorded. If the accounts are to be adjusted for inflation, and a correct picture given of real obligations, the value of both interest and debts must be adjusted also. Speculation about the possible economic consequences of alternative arrangements which might have been made in the past are irrelevant.

Adjusted losses cannot be 'too low' because they might have been greater if prices had risen more slowly or if interest rates had been higher; a correct account is an account of what actually happened. It is no answer to say that debt capital can be treated as if it were equity because it is put up (wholly or in part) by the owners of the industry (the community or the government). Indeed, every debt is owed in a certain sense 'to the community'; but it cannot on that account be ignored, because it affects the distribution of wealth among members of the community – in this case, the consumers of gas, the Boards, the holders of Gas and Treasury Stock, and the taxpayers. For similar reasons, it would also be irrelevant to say that the depreciation of loan stock represents no real change in the allocation of economic resources; and in any case the same is true of other accounting items, such as the sums written off specialized assets acquired in the past.

(iii) Finally, it is inconsistent to write down the gas industry's monetary assets for inflation, while leaving its loan liabilities untouched; bank notes, after all, are just a special kind of interest-free loan. This item is not negligible – real losses on monetary assets account in Myddelton's calculations for £65 million in 1962 money over the 20 years.

Incidentally, it is also incorrect to treat stocks simply as monetary assets; increases in selling prices generate (nominal) profits on stocks, so that stocks do not necessarily depreciate as if they were cash. A correction of Myddelton's calculations on this score would, no doubt, somewhat reduce the figure of £65 million.

Real value of debt

Whatever the merits of the preceding arguments, it is interesting to consider how Myddelton's figures of adjusted profits for the gas industry would be affected by taking credit for the falling real value of debt. Some estimates are presented in the table opposite. To perform the calculations accurately would require knowledge of the timing of all new loans and repayments over a long period; but approximate figures can be obtained by using the fact that the gas industry's total loan liabilities are always close to the figure of total net assets.

If one assumes that loans are obtained (or repaid) at the same time as assets are acquired (or depreciated), one can use Myddelton's figures for total net assets at 1962 prices as if they were loan liabilities at 1962 prices. More precisely,

the estimates of loan liabilities shown in column (1) of the table are the simple averages in each year of the opening and closing figures of net total assets at 1962 prices given by Myddelton, except that in 1950 the opening figure of net monetary assets is assumed to be equal to the closing figure. These figures of loan liabilities are then used to obtain the real gains to the industry due to rising prices, in the same way as Myddelton calculated real losses due to rising prices from figures of net monetary assets ('net monetary losses' in his terminology).

In fact, loans are normally not repaid gradually in line with depreciation, but in full after the total period of the loan; on average, loan capital will be older than net total assets and so will be larger when measured in 1962 money, and gains due to rising prices will tend to be understated.

Losses or profits?

As the table shows, the real profits on debt were large enough in most years to convert the losses calculated by Myddelton into profits. The total profit over the period of £279 million in 1962 money is close to Myddelton's figure of total profit before interest of £263 million; in other words, the total cost of debt in real terms to the gas industry over 20 years was approximately zero. This result will hardly surprise those familiar with post-war movements of prices and rates of interest.

(Constant 1962 £s)

	(1)	(2)	(3)	(4)	(5)
	Average loan liability	Increase of price index Per cent	Fall in real value of debt= (1)×(2)	Profit (loss) after interest (Myddelton)	Profit (loss) after cost of debt= (4)+(3)
	£m	p.a.	£m	£m	£m
1950 ..	366	3·5	13	(1)	12
1951 ..	383	5·1	20	2	22
1952 ..	436	10·4	45	(4)	41
1953 ..	489	5·1	25	(3)	22
1954 ..	535	0·6	3	(5)	(2)
1955 ..	575	3·6	21	(4)	17
1956 ..	623	5·6	35	(7)	28
1957 ..	688	2·8	19	(4)	15
1958 ..	714	3·7	26	(6)	20
1959 ..	734	1·8	13	(12)	1
1960 ..	748	0·0	0	(12)	(12)
1961 ..	760	2·7	21	(11)	10
1962 ..	763	4·3	33	(17)	16
1963 ..	765	3·1	24	(13)	11
1964 ..	797	1·4	11	(10)	1
1965 ..	840	4·3	36	(14)	22
1966 ..	874	4·1	36	(17)	19
1967 ..	947	3·4	32	(24)	8
1968 ..	1,091	3·3	36	(48)	(12)
1969 ..	1,245	5·9	74	(34)	40

Total profit (loss) 1962 £s (244) £279m

Total profit (loss) 1969 £s (317) £338m