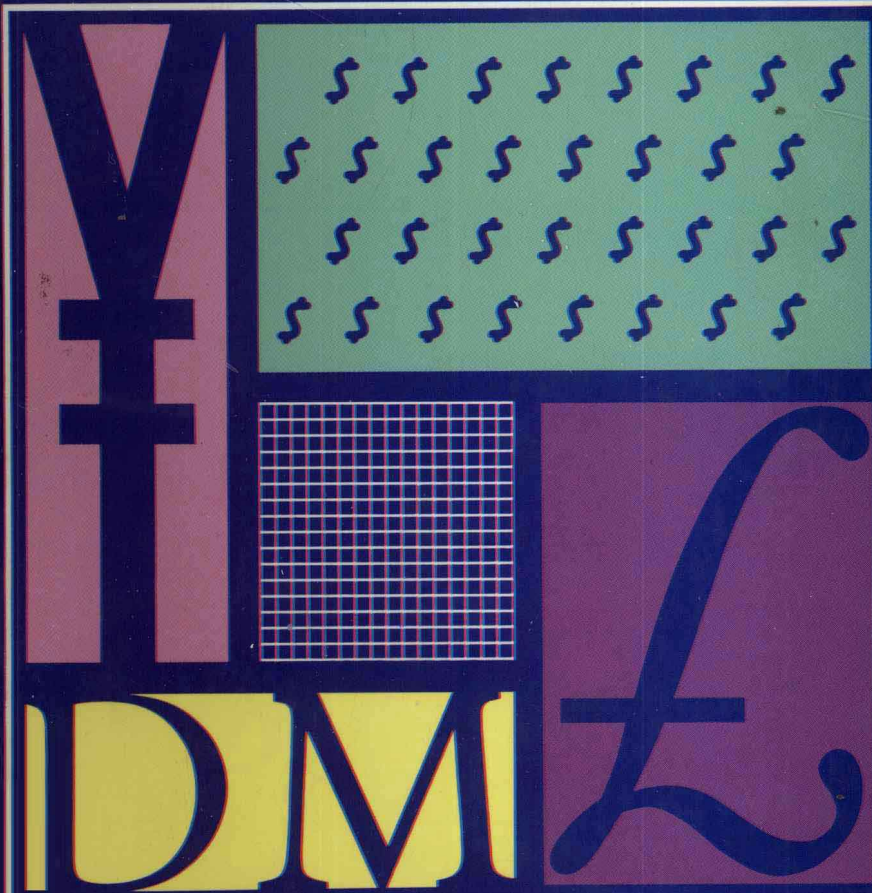


AN INTRODUCTION TO
**MONETARY
ECONOMICS**

P. G. A. Howells and K. Bain



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An introduction to monetary economics

Preface

Money is controversial. How to control the supply of it, what it does, and even what it is are matters of argument and often quite bitter dispute.

Money is also mysterious. People find it difficult to understand how something seemingly as tangible as money can be increased or decreased by strokes of a pen or presses on a computer keyboard. The ease with which banks can so act and the very small costs involved deepen the mystery.

There is mystery, too, in the language of money – a language which (like most technical language) might have been designed to aid precision and to reduce confusion among those who use it. It might have been; but there is room for a sneaking suspicion that a language that needs to refer to the man in the street as part of the 'non-bank private sector' and to cheques as 'negotiable instruments' is intended to close the doors of a prestigious club firmly in the face of non-members. Whether that be so or not, the language of money is discouraging to the beginning student. Money may talk, but what is said about it needs translation.

Finally, money can be confusing. There lingers in the minds of most newcomers to the subject a feeling that some physical commodity **must** ultimately be supporting the vast pyramid of cheque accounts; that somehow the writing of a cheque is just a convenient substitute for 'real' payment (in notes and coin, or even gold) which could ultimately be demanded.

No book, certainly not a brief introductory one, could claim to unravel all the mystery, much less resolve the controversy. As in so many activities, confidence in monetary economics comes with understanding and that, in turn, comes with practice and familiarity. We can, however, hope to reduce the confusion and to encourage rather than deter those who are making a start.

PREFACE

The book is directed towards those studying economics at 'A' level, at first-year undergraduate level and at the intermediate level required by professional examinations such as those of the Institute of Bankers. It assumes, for the most part, that readers have a prior acquaintance with the principal relationships of macroeconomics but is meant to be accessible also to those studying concurrently such relationships for the first time.

P.G.A.H.

K.B.

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In the latter stages of preparing the text we have received particularly helpful comments from Brian Henry, Keith Cuthbertson, Richard Powell and Peter Mottershead. For their generosity we are especially grateful. Like all authors, however, we claim complete originality for the errors.

Our thanks also go to Pat Norris for her help with typing the manuscript.

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Abbreviations

Throughout the text the following abbreviations have been used to identify the examination bodies who have been kind enough to let us use their past examination questions:

- C University of Cambridge Local Examinations Syndicate
- I of B Institute of Bankers
- JMB The Joint Matriculation Board
- L University Entrance and Schools Examination Council of the University of London
- O Oxford Delegacy of Local Examinations
- WJEC Welsh Joint Examination Committee
- ICMA Institute of Cost and Management Accountants

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1

INTRODUCTION

1.1 MONEY AND OTHER VARIABLES

Our interest in money, as students of macroeconomics, stems principally from three important links: with expenditure; with output and employment; and with prices.

We are interested in expenditure decisions because these affect the community's welfare. In particular, more expenditure on new, domestically produced goods or on domestically provided services may lead to increases in output and employment. We are thus interested in the relationship between money and expenditure and, in turn, in the extent to which changes in expenditure influence the community's real income.

1.2 MONEY AND EXPENDITURE

At first sight it seems obvious that if there is more money there will be more spending. This is because our money balances seem to us, as individuals, the major constraint on our expenditure; and since our wants are limitless any addition to our money balances (as notes and coin in pocket or as a deposit in a bank account) is likely to be spent. Or, to look at things the other way round, the reason we would like more money is to enable us to buy more goods or services.

This apparently common-sense view is the basis of one of the oldest and best-known traditions in monetary thinking, i.e. that people hold money only in order to spend it. Money has no value in itself; it is worth only what it will buy. Anyone who receives income or has wealth which he or she does not wish to spend will

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hold it in the form of assets other than money, i.e. assets which have some value in themselves in the sense that they will produce future income (as interest payments, dividends or capital gains).

The rational decision from this perspective is to hold only the minimum amount of money to avoid the inconvenience of barter until the next pay-day replenishes our pockets or bank accounts. On this view, an increase (for example) in the money stock, leaving people with excess money balances, will lead directly to an increase in expenditure on consumption or investment goods.

A little reflection, however, shows that the view that money is only wanted in order to spend (i.e. to undertake **transactions**), and that a change in the quantity of money available will change the level of expenditure, is too simple.

People do not as a rule hold the minimum balances necessary to see them through from one pay-day to the next. If we take Fig. 1.1 to illustrate the money receipts, money payments and money balances of a man paid £100 weekly, we can see that even though his total weekly payments are £100 and may **appear** to be regular and predictable he maintains some surplus – a precautionary balance, of, say, £10 – reflecting some uncertainty about the precise timing of receipts and payments. Assuming that he spends at a constant rate, his average money holdings measured over each week could be as low as £50 (the mid-point between £100 and £0) if he held the minimum balances necessary to finance transactions. But with a precautionary reserve of £10 the actual average balance is £60.

Once we acknowledge the holding of money balances in excess of the quantity strictly required for the purposes of transactions, it becomes at least theoretically possible for an increase or decrease in the money stock to find its way into larger or smaller precautionary balances. Whether a change in the money

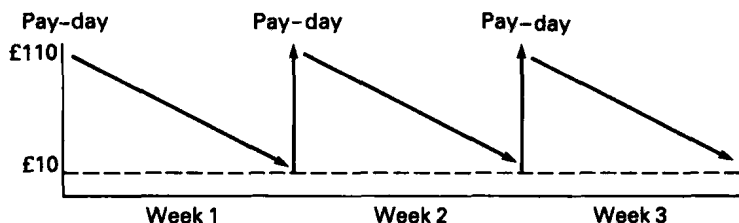


Fig. 1.1

supply does or does not find its way into these residual balances must depend on whether the motives for holding these balances are subject to change. It may be unlikely, but it is possible to imagine some increase in uncertainty about the future causing people to want to have more money at hand for use in emergency. We have, then, opened up the possibility that a change in the money stock does not have to lead to a change in expenditure. It may, rather, lead to a change in the amount of money which people hold in the form of precautionary balances.

Further, it is possible that a change in expenditure, consequent upon a change in the money stock, may not lead to the change in expenditure on goods which we have stressed is our principal concern. When people acquire extra money, the common-sense view tells us that they will seek to exchange it for other assets of various kinds. Some will then go to the purchase of real assets such as consumer durables and investment goods. But how does the purchase of financial assets affect prices and output?

The decision to buy more government stock or Ford Motor Co. shares does not of itself affect the price or output of government services or Ford cars. And yet it is perfectly possible for an increase in the money stock to be spent upon the purchase of such assets for at least two reasons. Firstly, such assets yield a money income in the form of interest or a dividend; secondly, their prices fluctuate and buying at the right time might produce for the buyer a subsequent capital gain. In the reverse way, a decrease in the money stock may be accommodated by a sale of such assets. Once again, a change in the money stock may not be immediately reflected in a change in expenditure on real goods.

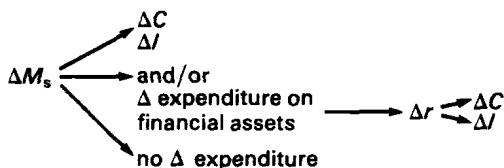
However, we may regard this as an intermediate position since the purchase and sale of financial assets may not be the end of the process. The buying (or selling) of financial assets will affect the general level of interest rates and this may, in turn, influence some types of expenditure.

Consider the case of the government stock called 'Treasury 13 per cent 2000'. This is a promise to pay £13 per annum on every unit of stock held (actually in two six-monthly instalments of £6.50) and to pay to the holder of the unit £100 by way of 'redemption' in the year 2000. If the current holder of the stock paid £100 for its purchase he is receiving an annual payment which is effectively 13 per cent. Since such stock can be bought and sold, however, it is plainly possible that its price may fluctuate. In March 1984, for example, a buyer of our 'Treasury 13 per cent 2000'

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would have had to pay around £118 for it. Now, £13 paid on an outlay of £118 is less than 13 per cent; $13 \div 118 \times 100$ is equal to only 11 per cent.

If we generalise, now, from an individual government stock to financial assets as a whole, and from the individual purchaser to buyers as a whole, we can see that if an increase in people's money balances does find its way into financial assets, their price will rise and the effective rate of interest or yield will fall. This will make it cheaper for firms wishing to borrow by issuing new shares. Equally, if banks and other financial institutions are to retain their customers, they too will have to consider a reduction in the rates of interest charged. An increase in the money supply will cause downward pressure on interest rates; a reduction in the money stock will push them up. The implication for expenditure is that this will change if some expenditure decisions are sensitive to interest rates. In particular, expenditure upon 'real' assets which yield a future stream of earnings is likely to be affected. Any (given) expected level of future earnings from a machine or building, for example, now compares less favourably with the cost of borrowing to finance the project. If the intention was to plough back past profit, the same thing applies. The projected earnings from the real asset(s) are lower in comparison with the earnings from financial assets which might be purchased instead. In more formal terms, the net present value of all assets has fallen; we have moved up the 'marginal efficiency of capital' curve. By how much it will change will depend upon the pro-



Key: C = consumption expenditure
 I = investment expenditure
 Δ = change in
 M_s = money stock
 r = interest rate

Fig. 1.2

portion of total expenditure which is affected by changes in interest rates and the sensitivity (or 'interest-elasticity') of that proportion. If we use conventional macroeconomic symbols we can summarise the possible money-expenditure links as in Fig. 1.2.

1.3 MONEY, OUTPUT AND EMPLOYMENT

Let us now concentrate on those cases where a change in the money supply does lead (along whichever channel) to a change in expenditure on goods and services. What is important is that such a change need not necessarily lead to a change in domestic output. One obvious possibility is that people or firms will change their expenditure on imported goods. This will not, of course, be the end of things. The change in expenditure on imports may affect the balance of payments and this, in turn, may lead (depending on the exchange-rate system in existence) to changes in the exchange rate. These changes may influence future expenditure decisions as well as influencing the attractiveness to foreigners of British exports. It is possible, then, that an increase in the domestic money supply will, in effect, flow out of the country, having no effect on domestic output.

Another possibility is that people will change their expenditure on domestically produced goods and services but shops will not (for some time at least) respond by changing their orders. They will just run down or build up stocks. Again, the expenditure - output link is broken.

Let us suppose they do change their orders and that output is changed accordingly. This does not necessarily lead to any immediate or even ultimate change in numbers of jobs. Firms, instead of creating new jobs, may increase levels of overtime worked or may attempt to increase the productivity of the existing workforce in a variety of ways. It is likely that falling orders will lead to fewer jobs, but this may take time. Changes in the number of jobs are always likely to lag behind changes in output.

We have, of course, one other important complication to consider: that is, a change in expenditure on domestic goods and services leads not to a change in output but to a change in the level of prices.

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1.4 MONEY AND PRICES

Let us consider the way in which an increase in expenditure may present itself to a local shopkeeper. Our shopkeeper has been used to selling a known quantity of goods per period of time, at known prices, supported by a known quantity of stock which would meet customer's demands, with a small excess for unforeseen contingencies between the wholesalers' deliveries. There is now an increase in money balances which induces his customers to think of buying more. Suddenly, trade improves and the shopkeeper is faced with the prospect that his stock will run out and some customers will be disappointed.

If he has the facilities to handle the extra trade he could, however, phone the wholesaler and request emergency deliveries. These will be forthcoming if the wholesaler has the stocks, staff and transport to spare. By the same token, the wholesaler, finding the retailers that he supplies increasing their purchases from him, will seek to replenish his stocks from the manufacturers and the response that he gets will likewise depend upon their current operating position. If they have the capacity to do so, they will supply more.

The circumstances could, however, be quite different. The shopkeeper might already have all the trade he can handle without moving to larger premises and taking on more staff. The wholesaler may already be struggling to meet delivery dates with his existing vans and drivers. The producers may already be paying for overtime working. In this case the shopkeeper cannot meet the increased demand by increasing the quantity of goods for sale. Once he has sold his existing stock, customers will have to wait for the next deliveries. There is now a problem of allocation.

If he does nothing, the shopkeeper will be confronted on delivery day by crowds of customers all trying to be served before stocks run out. The goods may be rationed, perhaps on a first-come-first-served basis. The likelihood is, however, that the shopkeeper will see a short-run advantage at least in raising the prices he charges. Some customers may immediately go elsewhere but that does not matter since he would not have been able to supply everyone anyway. Initially he benefits by selling the existing quantity of goods at a higher price while his costs remain as they were.

We must remember, though, that this increase in demand re-