MONEY & The Balance Of Payments

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Rand McNally & Company · Chicago

Second Printing, 1970

Library of Congress Catalog Number 69:10582

Preface

This book was originally designed to assemble and present as a unified whole the many scattered theories and arguments that together add up to a theory of balance-of-payments adjustment. Much of this theory, however, is a mere extension of the theory of money to the international sphere; and I found myself constantly having to refer to or assume as known parts of the theory of money that were just as hard to find in the literature as the theories of payments adjustment I was summarising. It soon became evident that the theory of money was also in great need of having *its* bits and pieces assembled into an integrated whole. The result is this book, which now consists of two almost equal parts, the first dealing with the theory of money, the second with balance-of-payments adjustment. It is aimed at the student of economics who has a general knowledge of economics and economic institutions but no specialized knowledge of the topics of this book. I pride myself on its shortness, achieved by omitting everything not needed to answer the questions posed.

What, then, are the questions posed? They are, in the first part, what determines the demand and supply of money in relation to total assets, of total assets in relation to the level of income, and how discrepancies between demand and supply affect economic behavior and the level of income. The second part is concerned with the sole question of how market forces and policy restore equilibrium in the balance of payments and how, at the same time, they affect the level of income. Physical and other administrative controls as tools of policy are not dealt with at all, because to treat them exhaustively would require a book many times longer and they are too important to be treated summarily. The main stress throughout is on the operation of market forces, not because I specially favor relying on them, but because to understand them thoroughly is the first prerequisite of sound policy.

Professors Richard D. Caves, William Fellner and Ronald I. McKinnon have read parts of the manuscript and I am grateful for their helpful criticism; Harry G. Johnson has read the entire manuscript and his comments, though not as blunt as usual, were nevertheless most helpful; and I owe the greatest debt to Walter S. Salant, without whose detailed comments and suggestions this would have been a different and less good book.

Tibor Scitovsky

Les Issambres
July 1967

Table of Contents

Part B The Balance of Payments

Chapter 1

The functions of money

Money is a difficult concept to define, partly because it fulfils not one but three functions, each of them providing a criterion of moneyness, and partly because these criteria are fulfilled to different degrees by different assets. At best, moneyness is a matter of degree, with an arbitrary dividing line between money and non-money; at worst, one might get conflicting orderings of degrees of moneyness, depending on the criterion used. In any case, our first task is to discuss the three functions of money, which are those of a unit of account, a medium of exchange, and a store of value.

A. THE UNIT OF ACCOUNT

The introduction of a unit of account in which to express and compare the values of different goods and services was as important for economic life as the invention of the wheel was for technology. A common unit of account is the *sine qua non* of the emergence of prices—market prices as well as the central planner's shadow prices —and these are essential both for rational economic calculation and

choice by the individual, and for transmitting economic information between individuals.

A common unit of account, and prices expressed in such a unit, render comparable goods and services not otherwise comparable; and such comparability is apparently necessary if the individual's choice is to be rational, in the sense of implying a transitive (i.e., non-contradictory) ordering of preferences. There is little information on this subject so far but some experimental evidence indicates that human choice often becomes intransitive in areas where it is not facilitated by a common unit of account.[1] To value things in money terms is man's way of formulating and ordering his preferences; without its help even the consumer's simple decisions can easily become irrational.

A common unit of account, and prices expressed in its terms, also serves to transmit economic information between people and so make possible specialization and division of labor beyond the confines of the family. The prices facing the individual inform him of society's relative demands and availabilities and enable him to behave in best conformity with these. They help him to decide what to specialize on as a seller, in what proportions to buy and combine different things as a buyer. Most people become fully aware of their dependence on money prices as means of communication only at times when these cease, for some reason, to fulfil this function. Witness a novelist's description of the German hyperinflation: "Money was rapidly ebbing away from between men, leaving them desperately incommunicado like men rendered voiceless by an intervening vacuum; millions, still heaped on top of each other in human cities yet forced to live separate, each like some solitary predatory beast."[2]

Producers no less than householders are dependent on money to provide the lines of communication, and on money prices to furnish the information on whose basis to make the production decisions that will maximize profits. When money is absent, or ceases to fulfil its function, it becomes much more difficult and costly to obtain this information. This, too, was well illustrated by the German hyperinflation of 1923. In an environment where money prices and money

[1]Cf. Kenneth O. May, "Intransitivity, Utility, and the Aggregations of Preference Patterns," *Econometrica* Vol. 22 (1954) pp. 1–13.

[2]Cf. Richard Hughes, *The Fox in the Attic,* p. 114 of the Penguin paperback edition.

values had become virtually meaningless, business firms were forced to expand their office staffs in order to deal with the greatly expanded task of obtaining and interpreting market information. The ratio of office ("non-productive") to production workers in the Siemens-Schuckert firm (Germany's equivalent to General Electric) increased by 43 per cent; and much the same happened in other firms.[3]

All this shows the need for money, and for the public to think and be able to think in terms of money, as conditions of efficient economic organization and development. A person must know money prices to decide in which of his possible activities he would be the most useful to society, and the most highly paid by it. He again needs to know prices to determine how best to perform this activity and how best to mix his own labor and know-how with other factors of production, and he needs prices if he is to choose the best form in which to consume his income and enjoy the fruits of his labor.

B. THE MEDIUM OF EXCHANGE

The advantage of having a medium of exchange is that it avoids barter; and the clumsiness, inconvenience, and inefficiency that barter entails. To appreciate therefore the advantages of money as a medium of exchange, one must first become aware of the disadvantages of barter.

In his idealized and oversimplified picture of the economy, the economist often visualizes all market transactions as basically barter. People sell goods and perform services in order to obtain other goods and services in exchange. If so, actual barter best symbolizes the underlying realities of economic life; why then is the use of money preferable? There are three reasons for this.

First, as everyone who has lived with it knows, barter is a much more complex transaction than either buying or selling for money. One need not go to the Trobriand Islands to find this out, every economy reverts to barter in hyperinflationary times. In such times, the flow of food from farms to cities is interrupted; because barter is too complex, too costly, and too risky for middlemen to handle.

[3]Cf. C. Bresciani-Turroni, *The Economics of Inflation* (Allen & Unwin, London, 1931) p. 217.

Housewives must go to the country for their weekly shopping, taking along not only a shopping list but also a well-assorted bundle of goods to pay with, which may have to contain anything from china and bed-linen to a grand piano. The problem is one not only of transportation but also of ingenuity in guessing what farmers and their wives want. Moreover, each housewife must find the particular farmer who (or whose wife) wants the particular consumers' durables she can pay with. In short, the complexity of barter stems from its being both a sale and a purchase and so involving *two* economic decisions: what, how much, and on what terms to sell; and what, how much, and on what terms to buy. Merging these two decisions into one complicates the decision maker's problem by doubling the number of variables that enter into it: thus, given the limitations of man's brain, it diminishes the degree of rationality he can bring to the solution of his problem. Therefore the use of money as a medium of exchange, and the consequent breaking down of every barter transaction into separate sales and purchases, make possible a division of labor in the decision-making process that yields returns in terms of increased rationality. I can deal more effectively with the problem of how best to sell my services while free from the worry over how best to spend the proceeds; at the same time, however, I need to know generally how valuable, in terms of spending power, the proceeds will be. Money is helpful in both respects. The money economy enables one to deal with the separate problems of buying and selling one at a time; the value one attributes to money provides the general background information needed to deal with each. This combination of having one's mind freed from too much detail and yet being provided with background information is worth stressing, because our economic decisions benefit from it, while the economist's analysis of these decisions often does not.[4]

Second, the use of money reduces the number of transactions needed to achieve a given degree of specialization. Although a single barter equals a sale *and* a purchase, trading partners who would be satisfied by a single barter can seldom be found, because only in the

[4]The analysis of spending behavior suffers, for example, from the assumption usually made that the household's income is given and uninfluenced by its spending decisions. There is increasing evidence that hours worked, number of family members working, and hence family income earned also depend on spending habits.

rarest cases would the goods and services one person has to offer match exactly the particular goods and services another person wants to obtain. As a rule, to make possible a mutually satisfactory barter transaction, one party would have to engage in a whole chain of complementary barter transactions and so acquire the collection of goods and services most acceptable to the other party as means of payment. Such chains of complementary barter transactions would often be long and complex, costly in terms of time and effort, and risky unless conditional on the basic transaction being concluded. They can be short-circuited, their risk eliminated, and the total number of transactions greatly reduced, by splitting every barter into the monetary transactions of a sale and a purchase. The use of money therefore saves time and effort by enabling people to sell to one person and buy from another, or to sell in one place and buy in another; and the wider the acceptability of money as a means of payment, the greater is the saving. In short, money makes possible multilateral trade. The same exchange of goods and services could be achieved through the bilateralism of barter; but it would be more clumsy, require many more transactions, and the careful coordination of these transactions.

The time and effort saved by the use of money as a medium of exchange is very substantial. Since hyperinflations are the occasions when money ceases to fulfil this function, their study provides the basis for a quantitative estimate of the worth (welfare gain) to the users of money, both firms and households, of having it as a medium of exchange and so avoiding the clumsiness and complexity of barter. Bailey made estimates of this gain, or "the cost to society of abandoning money entirely," for seven different hyperinflations; and they range from 14 to 48 per cent of the national product.[5] These estimates are very rough and likely to err on the high side, since they show the cost of abandoning money to people accustomed to its use. Habituation to doing without money would probably lower this cost; indeed the lowest estimate, 14 per cent of the national product, relates to the Hungarian hyperinflation of 1946, the second within the lifetime of the same generation. Such an estimate does not mean that the national product would be that much smaller in the absence of a

[5]Cf. M. J. Bailey, "The Welfare Cost of Inflationary Finance," *Journal of Political Economy*, Vol. 64 (1956) pp. 93–110.

medium of exchange, part of the loss would probably take the form of less leisure.

Third, the use of money as a medium of exchange increases the number of similar transactions and so enhances competition and the similarity of terms of contract. If a thousand people want to buy bread in a money economy, they make similar transactions, constitute and belong to the same market, and by sheer numbers create a highly competitive situation on the buying side of that market. In a barter economy, the same thousand people would form dozens of smaller, separate and non-competing groups, according to whether they wished to pay for their bread with wine, shoes, haircuts, or some other commodity, and competition would be reduced accordingly.

This last argument, admittedly, is somewhat overstated, because it is not really true that the market where haircuts are given for bread and that where wine is would be non-competing. They would be linked, directly by the market in which haircuts are given for wine, indirectly by the many markets in which haircuts are given for a third commodity, and this, in turn, is exchanged for wine; and arbitrage through these between wine and haircuts would add competitiveness to both the haircuts-for-bread and the wine-for-bread markets. A well-organized barter economy would develop up to $\frac{n(n\text{-}1)}{2}$ markets in n commodities, and part of their business would be arbitrage. However, arbitrage is costly in terms of effort, it could yield only small gains in a barter economy; and to imagine speculators stepping in to seize every opportunity of making a profit is to ignore the costs of speculation and the need to weigh them against the gains to be had. Indirect competition through arbitrage in a barter economy would be a poor substitute for direct competition in a money economy; and it must also be remembered that any improvement, any simplification of the complexities of the barter economy would be tantamount to the introduction of money.

The above advantages of money are the greater the larger the number of people who accept it as a means of payment, and the larger the geographical area in which it is so accepted. Indeed, the extent of the area in which money is accepted as a means of payment and the universality of its acceptance within this area are important features and measures of its liquidity. Ease and readiness of acceptance are

another. The seemingly nonsensical promise on Federal Reserve Notes: "Will pay the bearer on demand *X* dollars" makes sense when interpreted to mean that that particular piece of money, being freely convertible into all other pieces of money, should be accepted in payment as widely as they are. Banks hold reserves against their customers' deposits with the same aim: they try to make their checks as widely and universally accepted as is the cash they hold as reserves.

The advantages of having a medium of exchange explain why all societies sooner or later single out a commodity particularly suitable for this purpose and use it as money in addition to its other uses. These other uses are not necessary for the moneyness of money; but they facilitate its gradual adoption as a medium of exchange.

The value of money, its acceptance as a medium of exchange, is a matter of social convention. Each person accepts payment in money only because he expects others to accept it in payment from him. I value money only because I know that others do; and everybody is in this same position. The circularity involved means that to elevate something to the status of money, a social convention must be established; and it is not easy to establish this. One way would be for all members of a group formally to pledge themselves to accept a certain object as a medium of exchange among themselves. This is the way in which the Western World is now trying to establish an international reserve currency; and the difficulties of establishing the necessary social convention through formal agreement are strikingly and painfully apparent.

Another way of establishing such a social convention is for authority to enforce acceptance of a money as payment. This is the basis of legal tender. The courts of every country enforce the acceptance of its national currency in discharge of legal obligations to pay.

A third way is for an important member of the group unilaterally to accept in payment a certain form of money; if he is important enough, and his money convenient enough, other members of the group are likely to follow suit. The use of a currency reserve—one country's currency used as external reserve by other countries—is an example.

A fourth way is for a commodity valuable in consumption and especially suitable as a medium of exchange gradually to acquire the status of money. Once the social convention is established, its use as

money can persist quite independently of its value or continued use in consumption. The acceptance of gold, first as national money and still today as international money, is the obvious example.

One more way of establishing the moneyness of something is to guarantee its convertibility into something else whose status as money is already established. This is the historical explanation of paper money, bank deposits, travelers' checks, etc., as so many forms of money.

In every case, the value and usefulness of money, as money, derives solely from the social convention; but to establish the social convention, it helps for the money-to-be to have value for some other reason.

C. THE STORE OF VALUE

While money as a medium of exchange enables a person to buy elsewhere than where he sells, or from someone else than to whom he sells, its store-of-value function enables him to buy later than he sells. Most people want to delay consuming at least part of their earnings; and once consumption is postponed, there are many reasons for also postponing the buying of the goods to be consumed. The greater cost and inconvenience of storing goods instead of money, the deterioration and obsolescence of goods stored, the advantage in an uncertain world of storing general purchasing power instead of specific commodities, the desire to wait and be prepared for later opportunities of making a good buy, are some of the reasons. Money, however, is not the only store of value; most financial assets and some real assets as well serve the same function.

The function of money as a store of value has been the least stressed and least well understood by earlier writers on money. Keynes was the first to realize fully and draw attention to its significance for economic analysis and policy. This consists mainly in the fact that only this function creates a demand for holding money that can be analyzed in terms similar to those used in analyzing the demand for commodities. As a store of value, money has good substitutes in other assets and best fulfils this function held jointly with them. The proportions in which money is held with other assets depend on their differential advantages (such as yield) over money. The demand for holding money therefore is a continuous and elastic function of the

yield of other assets; and this fact both provides a demand curve for money and renders its supply a policy tool with which to influence the yield on other assets. By contrast, money cannot share with other goods the unit-of-account and medium-of-exchange functions without serious loss in the efficiency with which these functions are performed. Also, the use of money as a unit of account is virtually independent of its supply; its use as a medium of exchange is not, but a shortage of money for this purpose causes merely inconvenience but not the ordinary market reactions to an excess of demand over supply.

Having enumerated the functions of money, we can say something about the degree of moneyness, or rather about how one might draw the dividing line between money and assets that are not, or not quite, considered money. However, we shall do this mainly out of respect for tradition, because to know where money ends and other assets begin may satisfy a love for classification, but is not essential, nor even particularly helpful for economic analysis. It is needed neither for the practice nor for the understanding of monetary policy; it is not necessary for analyzing the balance of payments or adjustment in the balance of payments.

It is customary to define money and differentiate it from other assets negatively. Unlike bills, bonds, and debentures, money yields no interest; unlike equities, it promises no dividends, capital gains, or insurance against inflation; and it offers none of the services that make real assets (e.g., consumers' or producers' durables) worth holding. If money is held nevertheless, it must be for the sake of advantages other assets lack. Collectively these are called liquidity.

The main aspect of liquidity is the medium-of-exchange function: the ready and immediate acceptance of an asset as a means of payment by as many people and in as large a geographical area as possible. A second aspect is the predictability of the value of an asset at that future and usually unspecified moment of time when it will be used in payment. Shares, whose value fluctuates on the stock exchange, are not liquid in this sense; but predictability, too, is a matter of degree, e.g., the market value of short-term bills varies within quite narrow limits. A third aspect of liquidity is reversibility: a value in payment that is no smaller than it was on receipt. Real assets lack reversibility the most; and for obvious reasons. The extreme example is consumers' durables: a car that loses hundreds of dollars in value the moment it is driven out of the dealer's showroom.