Are Banks' Speculative Profits at the Expense of Traders? *

In a recent article Schulmeister (1988) studied the use of technical analysis by banks in the pursuit of speculative profits in foreign exchange markets. He noted that such trading has consistently yielded banks large profits. He then poses the question: "Now, if banks... consistently win in this game, who then is the loser?" and continues: "The answer is simple: all those market participants who buy or sell foreign exchange for other reasons than short-term profit maximization from foreign exchange dealing itself, particularly traders of goods and services who... use foreign exchange for international payments rather than as a financial asset" (p. 356).

In this note I analyze critically the view that traders of goods and services "lose" when banks profit from currency speculation. I propose that, instead, these profits should be viewed as a return to a service which the banks as speculators provide to these traders. This service takes the form of more stable exchange rates through time.

Speculative profits and stabilization

Friedman (1953) argued that speculators who consistently earn profits must stabilize the exchange rate. This conclusion is based on a simple idea. Profits can be made only by buying when the price is low and selling when it is high. Since

* A comment on STEPHAN SCHULMEISTER "Currency Speculation and Dollar Fluctuations", in this *Review*, 167, Dec. 1988, pp. 343-366.

purchases drive up prices and sales lower them, such activities reduce the magnitude of exchange rate fluctuations.[1]

The validity of Friedman's proposition has been challenged in a series of papers during the 1950s and 1960s, the most prominent of which were Baumol (1957), Telser (1959) and Stein (1961). The controversy is reviewed and evaluated by Sohmen (1969).

Recently, the subject has been raised again by Dornbusch and Frankel (1988) who claim "The modern theory of rational stochastic speculative bubbles has all but demolished Friedman's claim that investors who bet on destabilizing expectations will lose money. In a rational speculative bubble, investors lose money if they *don't* go along with the trend" (page 165, italics in original). DeLong *et al.* (1987) claim that speculation can be profitable even if trading follows irrelevant noise.

Most economists find appealing the simple logic of the argument made by Friedman and Mill. The more complicated models critical of the basic proposition are logically correct.

However, their intuitive appeal is more limited since they tend to be based on a large set of restrictive assumptions about behaviour and the formation of expectations. Since both propositions are theoretical and logically correct, it is not possible to consider one to be more realistic than the other. Such a choice can be made only after the different models have been subjected to empirical tests. Unfortunately, neither theories have been tested and probably never will be because of both the nature of the models and the absence of relevant data.

In the following analysis I assume that consistent speculative profits are evidence that the speculators have stabilized exchange rates. This assumption of course does not say that speculation always is profitable. The profitability of speculation is an empirical question which will be examined next.

[1] One of the earliest statements of this proposition is found in JOHN STUART MILL (1901) and quoted by SOHMEN (1969) which is worth quoting as an elaboration of Friedman's position:

> «For if often happens that speculative purchases are made in the expectation of some increase of demand, or deficiency of supply, which after all does not occur, or not to the extent which the speculator expected. In that case the speculation, instead of moderating fluctuations, has caused a fluctuation of price which otherwise would not have happened, or aggravated one which would. But in that case the speculation is a losing one, to the speculators collectively, however much some individuals may gain by it... The operations, therefore, of speculative dealers, are useful to the public whenever profitable to themselves; and though they are sometimes injurious to the public, by heightening the fluctuations which their more usual office is to alleviate, yet whenever this happens the speculators are the greatest losers" (Book IV, Chapter ii, section 5).

Do banks make consistent speculative profits?

It is widely known that the demise of the Bretton Woods system in 1972-73 increased the size of the exchange rate fluctuations, which were the norm during the preceding decade. Many banks had failed to adjust their internal control mechanisms to suit the new environment. As a result, foreign exchange departments of many banks were able to speculate and some even engaged in fraudulent schemes, trying to profit from the large exchange rate fluctuations. While much of this speculation was profitable, some of it resulted in large losses. Two major banks, the Herrstatt Bank of Germany and the Franklin Bank of New York became insolvent as a result of very large losses incurred by their foreign exchange departments.

After these experiences, banks installed strict control systems on their foreign exchange departments. In particular, exchange rate exposure was limited to small sums. As a result, overall speculative activities in foreign exchange market were reduced substantially and some commentators like McKinnon (1976) claimed that there was a shortage of speculation in the market.

However, the foreign exchange departments of banks were able to earn high rates of return on the funds which banks had set aside for this purpose. This success eventually resulted in an increased availability of funds used by these departments for speculation. During the 1980s, they have made significant contributions to the overall profits of banks. These facts are documented by Goodhart (1987) and Schulmeister (1988). Through personal contacts I have learned that major Canadian banks have committed substantial sums to currency speculation at both the national headquarters and regional centres engaged in currency trading. Profits from this activity are variable but consistently high. Only few individuals have the personality and acumen to meet the demands of the occupation of currency trading and speculation.

Schulmeister (1988) makes much of the use of technical trading rules by currency speculators of banks. However, successful traders use technical information supplied by chartists as only one of many inputs into their decision making process. The most successful traders appear to have an instinct for the use of information which distinguishes them from the rest and which cannot be modelled.[2] At any rate, for the present purposes of analysis it does not matter whether foreign exchange profits are earned as a result of intuition or of advice from chartists, economists analyzing fundamentals or psychologists studying public opinion. The main point is that the foreign exchange departments of banks appear on to make consistent profits.

[2] Seeing opportunities where others do not appear to characterize successful individuals in all occupations involving complicated intellectual tasks. Thus, the most successful chess players in the world are alleged to have a sense for the game which cannot be modelled and which still permits them to beat the best computer chess systems. The best and most original economists also have such an ability.

Dornbusch and Frankel (1988) note that profits of the foreign exchange departments of banks are due to the spread between buying and selling rates of foreign exchange as well as speculation. Unfortunately, banks do not provide information which permit estimates of the relative size of the two sources of income. Dornbusch and Frankel note that the very large interbank currency trading of recent years are consistent with the view that almost all incomes are due to the brokerage activities and none from speculation. I reject this conjecture on the grounds of direct information from the banks noted by Schulmeister and revealed in personal interviews. If there were no profits, currency trading departments would not have access to substantial balances dedicated to speculation.

Speculators serve traders

Using the preceding analysis for justification I assume that consistently profitable speculation increases exchange rate stability and that the foreign exchange departments of banks consistently earn profits from such speculation. I now turn to an examination of the question whether such speculation occurs "at the expense" of traders.

To analyze this question consider a world in which there are initially only two groups of foreign exchange market participants. The first is made up of banks which operate both as brokers and speculators. The second consists of the importers and exporters of goods, services and long-term assets, hereafter referred to simply as traders. These traders use the foreign exchange market only to convert foreign into domestic currency the proceeds and obligations which result from their economic activities.

Let us consider first conditions under which banks do not speculate and serve only as brokers. As such they match the global demand for and supply of currencies originating with the traders. The spread between the buying and selling rates of foreign exchange produces the banks' income. It can be measured in principle as the ratio of income over the total volume of transactions. Under these conditions, fluctuations in the exchange rate are due to influences exerted by seasonal, cyclical and random forces as well as governments' policies on the competitiveness of industry in different countries.

The exchange rate instability existing under these conditions affects the variance of the returns from foreign trading activities.[3] According to conventional

[3] Forward exchange rate cover eliminates the uncertainty associated with foreign trade, but it cannot eliminate the instability of the earnings from trade. On the other hand, internationally diversified markets can raise the stability of global earnings above those from domestic activities alone. This fact may well be responsible for the observation that the large exchange rate fluctuations during the 1970s and 1980s have had not measurable detrimental effect on the level of international trade. In this note I stay with the traditional model which does not consider systematically the concepts of risk and diversification in trade.

theory, welfare is a decreasing function of instability in exchange rates and returns from trading. In a sense, exchange rate fluctuations represent a tax on international trade and therefore decrease the levels of international trade and specialization.

Next consider a world in which banks continue to act as brokers but in addition engage in consistently profitable currency speculation. Under these conditions, the sum of banks' income from brokerage and speculation divided by the total volume of trade represents the average spread between the buying and selling prices of currency. This spread of necessity is larger than it is in the absence of profitable speculation. In our model the banks' extra income comes from traders, reflecting Schulmeister's view that the speculative profits are "at the expense" of the traders.

However, this view neglects the fact that the speculation results in greater stability of the exchange rate through time. In a fundamental sense, the speculative profits of banks are traders' payment in return for the benefits of providing more stable exchange rates. Traders purchase this service from banks rather than produce it themselves through their own speculation presumably because there are economies of specialization and scale enjoyed by banks. Pareto optimality in an uncertain world is attained when there is equality between the risk-adjusted marginal productivity of traders' capital on the one hand and of resources in the banks' speculative activity on the other.

The preceding model may be extended to cover the possibility that there are foreign exchange speculators other than banks. These speculators might be private wealthholders, central banks and some traders. It is useful to assume that a certain proportion of these speculators are like the banks and consistently earn profits. For the present purposes of analysis it is useful to subsume them in the category of banks and to focus the analysis on those in the group who lose consistently.

It is clear that such speculators cannot stay in the business for long. If they are private individuals, they have only a finite net worth. Individuals who work for traders or financial intermediaries tend to be replaced quickly or they bankrupt the firms for which they work. The exception to this rule are central banks, though they too are subject to financial controls by their own management, treasury departments and politicians.[4] It has been argued that, in spite of this self-limiting tendency of losing speculation, the activity remains sub-

[4] It is difficult to obtain empirical information on the profitability of central bank speculation in the foreign exchange market. This is due to the fact that most central banks have very large stocks of open positions, including holdings of gold. Estimates of returns from speculation are influenced greatly by assumptions made about the future value of these large stocks. The annual gains and losses from actual transactions are relatively small in comparison with those from the stocks. In practice, these problems make estimates of returns extremely sensitive to the period under consideration.

stantial because losers are constantly replaced by new entrants into the activity. It is impossible to assess the empirical merit of this argument and the following analysis considers the implications of the existence of such money-losing and destabilizing speculation.

Banks which earn consistent speculative profits make gains at the expense of that group. It is possible that the group's losses are more or less than the banks' profits from speculation. Under either of these conditions, banks still provide a stabilizing service to traders since they counteract the destabilizing effects of the losing speculators. In the absence of the banks' activities, exchange rate variance would be greater. All of the arguments made above about the benefits of the profitable speculation remain valid.

Summary and conclusions

In a recent study Schulmeister noted that banks which follow technical trading rules have consistently made profits from currency speculation. He suggested that these profits occurred at the expense of exporters and importers of goods and services. This conclusion is misleading. Under the assumption that the consistent profits of banks result in more stable exchange rates, the speculative earnings of the banks in fact represent a payment by traders for increased exchange and earnings stability. Under these conditions, the speculative activities of banks increase overall economic efficiency and welfare since they raise the risk-adjusted returns to and create higher levels of international trade and specialization. These welfare gains exist even if some or all of the banks' gains are at the expense of a floating population of speculators that lose consistently. In the absence of the stabilizing activities of the banks, exchange rate fluctuations would be even larger.

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