The Two-Handed Role of Money

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It is my pleasure to be here today at Washington University to deliver the 1995 Homer Jones Lecture. (A tribute to Homer Jones is on page 19.) My chosen subject, "The Two-Handed Role of Money" is, I believe, fitting to the occasion.

As my talk this afternoon shall indicate, there are probably very good reasons, based on the two-handed role of money, why the monetarist research role in the Federal Reserve System developed here in St. Louis rather than in Washington, D.C. As I shall hope to show today, it is illusions about the supposed role of money that are being sorely tested, and hopefully eroded, by the facts now buffeting our profession from a fast-changing "real world. "

My selection as a topic of the two-handed role of money is a tribute to Missouri's most prominent politician. Harry Truman is renowned for saying that he longed for a onehanded economist. Truman was wrong about this. Ambidexterity is a virtue among economists, not a vice. Economics is a study of tradeoffs, and our reliance on two-handed analysis is nothing more than a recognition that tradeoffs exist.

Lawrence B. Lindsey is a Governor of the Federal Reserve Board. This paper is adapted from Goverror Lindsey's presentation at the Ninth Annual Homer Jones Memorial Lecture at Washington University in St. Louis. The event was sponsored by the Washington University Department of Economics, Southern Illinois University at Edwardsville, Saint Louis University, University of Missouri-St. Louis, and the Federal Reserve Bank of St. Louis.

As I shall hope to demonstrate today, the economics profession has been getting itself, not to mention its clients, into some trouble lately by prescribing one-handed advice about money. When we do this, we may avoid Truman's complaint, but we end up being tagged with the charge of another president Richard Nixon. Nixon alleged that economists, one-handed no doubt, were seldom right but never in doubt.

Finally, I believe that my chosen topic is fitting because it is in the headlines. The headlines I am speaking of are inescapable. "Dollar Hits New Lows. " "Peso Devaluation. " "Trouble in the European Monetary System. " "Is the Yen Too Strong?" On every continent, in virtually every language, the problem of money is now a centerpiece of popular attention.

Of course, money, or the lack thereof, has been a topic of breakfast table conversation for generations. What is different now is that public concern is not about money in a direct personal sense. In America, at least, jobs are relatively abundant. Inflation - the value of money in terms of goods and services - is relatively tame, Instead, the headlines focus on only a very narrow concept of monetary value - the value of one type of money in terms of another type of money. That is, the foreign currency value of a given national currency.

To the overwhelming majority of readers of newspapers or viewers of the nightly news, the foreign currency value of the dollar is of total irrelevance from a personal point of view. If last year is any indication, the vast majority of Americans - some 86 percent - will not travel abroad this year. Of those relatively few who do, the great majority will travel exclusively to countries in which either the dollar is the effective medium of exchange as in the Caribbean - or where the dollar is rising in its foreign exchange value - Mexico or Canada. Eight million Americans will visit Europe this year, only one million will visit Japan.

Throughout the world, there is a policy conflict between the two fundamental roles of a currency. Those roles are (1) to be a medium of exchange, and (2) to be a store of value.

Even looking at the direct personal effect in its absolute broadest sense, in which we assume individuals can see through the price tags on their purchases and know that the exchange rate is raising the price of imports, the effect of the dollar decline is relatively limited. If we assume that the dollar has dropped 10 percent on a trade-weighted basis - and we also assume that the full effect of the devaluation is passed on to consumers - which we also know to be an exaggeration - then we would expect to find, when all of the exchange rate change had been passed through, a 1 percent rise in the domestic price level. Note that this is not a 1 percent rise in the inflation rate. For that to occur we would need a similar currency decline and similar price pass-throughs in each and every year.

Surely a one time 1 percent rise in prices, carried out over a period of many months, is not of sufficient personal import to the vast majority of consumers of news to say, compete with the 0. J. Simpson trial, or something similarly relevant to our daily lives.

Or is it?

One might make the case that, to the people of this planet, the present exchange market instability is symptomatic of much larger shifts in both politics and economics that are having a profound impact on the lives of hundreds of millions of people. Roughly one-sixth of Gross World Product is now traded internationally. That is truly an unprecedented figure.

Further, to the hundreds of millions of people in Latin America, East Asia, and elsewhere, who are seeing an explosion in their living standards, one which dwarfs the total change in the quality of life for a hundred generations of their ancestors, world trade and the global opening of markets is an important part of their lives. Instability in foreign exchange markets potentially threatens this continued globalization of the world economy. So, it is important that we reflect on why this is occurring.

My thesis today is that, throughout the world, we are in a period of policy conflict between the two fundamental roles of a currency, and therefore of the two fundamental objectives of currency policy management. Those roles, or objectives, are (1) to be a medium of exchange, and (2) to be a store of value. To be consistent, let me put the question into the two-handed world of economics. On the one hand, a currency should exist to facilitate - some might say to help maximize - the exchange of goods and services. On the other hand, a currency should represent a liquid store of value which people can reliably hold as an asset.

While it is not inevitable that there is a conflict between these objectives, it does seem that the markets currently believe that there is no single currency which is both an ideal medium of exchange and an ideal store of value. The result is exchange market instability. This is not helped by policy disagreement within the economics profession. Some professional economists strongly lean toward emphasizing policies which optimize a currency's value as a medium of exchange. Other economists emphasize policies designed to maintain currency values. The resulting apparent intellectual confusion tends to make markets even less stable. To understand the present policy conflict, let us consider the intellectual case on each side of the currency issue.

Currency as a Store of Value

Maintaining a currency as a store of value is a classical prescription of economics, indeed to some extent it was taken for granted. For example, Adam Smith said in *Ae Wealth of Nations:*

In consequence of its being the measure of value, we estimate that of all other commodities by the quantity of money which they will exchange for . . . To grow rich is to get money; and wealth and money, in short, are, in common language, considered as in every respect synonymous.

Maintaining a currency as a store of value has both pragmatic and philosophical bases. The philosophical arguments can take on a great fervor, at times approaching a religious conviction. Some argue, for example, that money represents a covenant between government and people. In this view, destroying the value of a currency takes on a deep significance verging on immorality with respect to government policy. To adherents of this view, inflation is a form of theft.

It is fashionable in some academic and policy circles to ridicule this point of view. To these critics, money is not a moral issue but a pragmatic policy matter. But, these supposedly pragmatic critics may be missing a historical point which underpins this moral judgment about inflation.

To some, destroying the value of a currency takes on a deep significance verging on immorality with respect to government policy.

Let us recall the practice of those first inflationists - the monarchs of old. They would circulate specie-based coins bearing their imprimatur signifying the coin had a certain value in the realm. When the exigencies of the royal purse required funds that taxation would not produce, history tells us the monarchs would shave a bit off the edge of the coins. A coin of less specie value would then be circulated under the same nominal markings. The accumulated shavings could then be cast into new coins giving the monarch additional spending power.

For those who think there is no moral dimension to inflation, this historical tale poses a compelling ethical question. What is the difference between shaving a bit of gold or silver off a coin and recirculating it claiming nothing has changed and, for want of a better term, "theft"? Of course, the practice was not illegal because it was the sovereign who was shaving the coins. But to those who make the purely philosophical case that money should be primarily a store of value, it is the morality, not the legality, of inflation that is being challenged.

Proponents of currency as a store of value also claim pragmatists among their number. Perhaps the classic pragmatic argument derives from the conditions for social welfare maximization. In the case of currency, as with other goods, social welfare is maximized when the marginal social benefit of additional currency equals the marginal social cost of its production. For all intents and purposes, the marginal social cost of currency production is zero. Therefore, the optimal amount of currency in circulation occurs when individuals have as much currency as they could possibly want. But, for this to occur, individuals should be indifferent between holding currency and other riskless forms of wealth. In turn, that would require the return to holding currency to equal the return to holding other forms of wealth, again adjusting for risk.

In short, the return to holding currency should be equal to the riskless return on productive capital. But, that would require the value of currency to rise over time - i.e., for prices of goods to be falling. Under this line of reasoning, social welfare maximization occurs when prices are falling at a rate equal to the riskless return on capital.

In sum, while inflation may be optimal from the point of view of the issuer of the currency, deflation is socially optimal.

A Deflationary Economic Enviromnent

This pragmatic point of view is not without its problems. In the real world, a transition to a deflationary economic environment requires shifts in both the preferred level of consumption and preferred composition of wealth which are likely to prove inimical to the level of economic activity, at least in the short run.

A sudden increase in the preference for cash would be likely to cause both consumption and the prices of other assets to fall. Financial intermediaries are likely to endure a sharp deterioration in **the condition of their balance** sheets as nominal liabilities remain unchanged while the nominal values of assets tend to fall. In America, the prospect of deflation has a bad historical connotation because it is most closely associated with the Great Depression of the 1930s.

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The difficulties of a deflationary economy, as well as the foreign exchange ramifications, are best witnessed today in Japan. Prices of real assets, most notably real estate, have fallen precipitously, and many market participants anticipate further increases in the real value of what the yen can purchase. There have been clear signs of stress among financial intermediaries. Economic growth has been decidedly below historic norms. The very low prevailing level of nominal interest rates may be belying the perceived very high real level of these rates because of anticipations of further deflation. Some have suggested that Japan may be in the classic Keynesian "liquidity trap."

Indeed, the advent of highly efficient international capital flows may be exacerbating this phenomenon. Absent these international markets, currency is limited to domestic wealth holders who may wish to hold additional currency as a hedge against falling domestic prices. International capital markets with low transactions costs make this potential demand global in scope. Furthermore, because foreign currency demand incorporates the potential for a capital gain in terms of foreign currency values, and not just appreciation against domestic goods prices, the practical limits to speculative currency demand become much greater.

In the early 1990s, Japanese monetary policy pursued a controlled disinflation from the bubble economy which had categorized much of the 1980s. That may well have been an appropriate course of action. But it is a difficult policy to pursue without costs. In effect, deflating a speculative bubble requires a policy which emphasizes a currency as a store of value. This one-handed currency policy may have its philosophical and practical advantages, but as we are now seeing, it is not without its risks.

Currency as a Medium of Exchange

Let us then turn to the "other hand" of policy - currency as a medium of exchange. Proponents of this approach do not make any moral claims. Their approach is purely pragmatic - amoral as opposed to immoral. In this world view, the value of a currency is like any other price. After all, a price may be relatively high or relatively low, but it is utterly without moral significance. For instance, economists do not make the claim that 89 cents for a dozen eggs is virtuous while $2 for a pound of hamburger is sinful.

Absent any moral trappings, currency policy becomes a matter of expediency. More precisely, it becomes a "policy variable," one that can be used to influence economic results about which one attaches some value - the levels of output or employment, for example. It should surprise no one that this view, **and not the** moralistic store of value perspective, is the dominant approach favored by economic policyrnakers. In a world in which electorates hire and fire governments based on perceived economic performance, having an extra parameter to manipulate is something which would naturally be viewed positively.

But it should come as no surprise to economists that there is no free lunch. Carrying an extra degree of freedom also entails an extra degree of responsibility. If one frees oneself from the moral precept that zero inflation is the "right" amount of price change, then one has lost a moral anchor. The policy maker is set adrift on what constitutes the right amount of price change. The freedom to set an inflation rate is traded off for the responsibility to set an inflation rate which is at least politically acceptable.

Setting a Degree of Inflation

When this is set in the foreign exchange context, other problems with this extra degree of freedom become manifest. Let us, for the sake of argument, assume that policy makers can actually pick a degree of inflation which is acceptable to the electorates they serve. Two neighboring countries which trade extensively with one another may have electorates with different tastes for inflation. Over any extended period of time these inflation rates make it impossible for the currencies of the two countries to maintain a stable exchange rate. Other things equal, one would expect that over time, the inflation differential between the two countries would be reflected in the exchange rate.

This observation became recognized by the economics profession and subsumed into the theory of Purchasing Power Parity. Two trading partners, one with a 2 percent annual inflation rate and one with a 5 percent annual inflation rate would, so the analysis went, produce an annual exchange rate change in which the low inflation currency appreciated 3 percent per year.

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If only the world were so simple. For example, we all know that inflation rates are not constant but vary with the business cycle. Suppose market players come to recognize that the variance of inflation is a function of the mean inflation rate. Then, holding the high inflation currency is riskier than holding the low inflation currency. Markets would expect some premium for this extra risk. Thus, interest rates between two countries might come to reflect not only mean inflation differentials, but a surcharge for higher inflation variances as well. Being a high inflation currency therefore carries a burden which must be paid for by the policyrnaking process.

One might also assume that varying inflation rates, not to mention varying exchange rates, might have different political constituencies within a country. Exchange rates, which not only reprice goods and services which are traded, but asset values as well, will move on inflation expectations, which in turn might depend on expectations about which political forces are, or soon will be, ascendant. This injects a random element into the exchange rate calculation. Countries which are perceived as having highly variant electoral politics, or in which exchange rate and inflation rate policies are perceived to vary with electoral outcomes, will have less attractive currencies, other things equal, than countries in which exchange and inflation policies are considered invariant to the election cycle.

Political Credibility

Thus, the political credibility of inflation and exchange rate policy soon becomes an important factor. The political economy of this development produces a feedback which exacerbates the problem. The economic price paid for a lack of credibility is, in part, a real interest rate differential on government debt. This will, in turn, exacerbate the nation's fiscal problems making the chances of establishing political credibility even more remote. The perceived likelihood for the political process to engage in a prospective bout of inflation will increase as the fiscal situation gets worse, raising still further the real interest differential.

Of course, the resulting real depreciation in the national currency should increase the exports of the nation's goods and services. Other things equal, this resulting improvement in the trade picture should reverse the process of depreciation. But, two factors may offset this. The first is that, to the extent that the national debt is held by foreigners, the increased interest payments may offset the improvement in trade. I think that a recent example of this phenomenon is Canada. In 1994, Canada ran a net export surplus of 2.3 percent of GDP. However, this was offset by net interest payments to foreigners of -3.8 percent of GDP.

A second potential offset to the improvement in net exports may be a reduced taste for investment, particularly portfolio investment. This could result from an expectation that further real depreciations are likely to occur. Or, it could result from the expectation that the government may, over the intermediate term, attempt to ameliorate its fiscal problems by increased taxes on capital. Either phenomenon would tend to reduce capital inflows from abroad and, particularly in the latter case, tend to increase capital flight.

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impossible to reacquire.

Thus, one cannot understate the long term value of anti-inflationary credibility. But, credibility, like other forms of virtue, once lost, is very difficult if not impossible to reacquire. The drive for monetary credibility is one of the key factors motivating the European efforts at currency integration. It is hoped that the process of reestablishing credibility can be facilitated by linking the fate of one's currency to the fate of a currency which has credibility.

The Deutsche Mark has enjoyed a period of credibility lasting for several decades. It is also widely held that the anti-inflation stance of the Bundesbank has broad political support that derives from two disastrous experiences with hyper-inflation earlier in this century. In short, it is felt that the German electorate, unlike other electorates, is more likely to value the role of a currency as a store of value. Indeed, to many foreign observers, it sounds like much of the rhetoric coming out of Germany on the importance of price stability takes on a tone that verges on the moralistic. Interestingly, that observation brings us back to the other hand of the proper role of a currency.

One can **never know for certain the true** motivations of policyrnakers. But, even if the Bundesbank actually acts with the ultimate in amoral pragmatism and consciously pursues a policy role which optimizes the role of the D-Mark as a medium of exchange, the monetary policy management certainly likes to convey the impression that properly conducted monetary policy resembles a moral crusade.

It is to that apparently moralistic banner that other European countries, with long and wellestablished histories of monetary policy pragmatism now flock. France, after abandoning a disastrous experiment with one-handed medium-of-exchange pragmatism a bit over a decade ago, now endures a macro-economic mix which would seem politically unbearable under the rallying cry of Franc forte. But other large European nations have not demonstrated as much stoicism. After attempting linkage to the virtues of the D-Mark, Britain and Italy ultimately returned to their long running postwar traditions of running their currencies as mediums of exchange.

The currency instability in much of Europe seems to focus on the seeming incongruity of mixing a moralistic store-of-value policy with a policy based on pragmatic medium-of-exchange needs. There is widespread skepticism that monetary policy can be two handed. Indeed, within Germany, monetary union with Europe is deeply unpopular. Many are quite suspicious that the value of their currency can be sustained in a European-wide political process which is decidedly two handed.

Ambidexterity is Messy,
But Inevitable

The lessons of Europe should convince us that ambidexterity in monetary policy is a difficult thing to achieve. Even more important, we should recognize that it is a virtually impossible thing to import. Here, I would turn to the case of Mexico and provide an analysis of what the *Economist* has called a foreign exchange impossibility theorem: "Three policies cannot be sustained simultaneously over the long run. " These three incompatible goals are (1) an independent monetary policy, (2) a fixed exchange rate, and (3) free capital mobility.

Monetary policy credibility must come from a fundamental conviction that the central bank is going to do the right thing and that the political process is going to support that policy.

Mexico attempted to import credibility by pegging its exchange rate to the U.S. dollar. For a long while this succeeded. Indeed, this pegging, coupled with other vital domestic reforms, may have worked too well. Mexico became a suddenly more attractive place to invest and money flowed in, particularly in the form of portfolio investment in Mexican stocks and bonds.

It is now easy to forget, but as recently as late 1993, the Mexican central bank was intervening in the currency market to stop the peso from rising. For a variety of reasons, including political uncertainties and a failure to follow American monetary policy developments rigidly, capital began to flow out of Mexico. The result was ever increasing stress on the peso exchange rate.

Mexico could have averted this problem through capital controls. But this is hardly an attractive solution. Importation of capital into Mexico is probably key to domestic economic development. Furthermore, such controls are rarely effective at actually preventing the flight of capital when investors get scared.

Alternatively, some have suggested that Mexico could have abandoned an independent monetary policy stance by adopting a currency board. This rigid conversion of foreign exchange holdings into domestic currency probably would have successfully pegged an exchange rate for as long as the currency board was in force. But, such a policy would mean that monetary policy conditions in Mexico would be determined, in large part, by the Federal Reserve's perceptions of the U.S. economic situation. It would only be by an extremely fortuitous set of circumstances that appropriate policy for the 50 states north of the Rio Grande would coincide with appropriate policy for the 32 states south of that national boundary. Furthermore, the rigid adherence to a currency board would eliminate the possibility of the central bank acting as a lender of last resort. Given the situation in the Mexican banking system, this would not be a central banking role which should be lightly abandoned.

The third possibility would be to have a floating exchange rate. One can certainly understand the motivation to establish credibility for peso monetary policy by linking the exchange rates. On the other hand, by pegging the peso to an external value rather than an internal one, the authorities could avoid taking appropriate domestic monetary policy measures by intervening in the exchange markets, This policy could work, but only for a limited time.

In short, the Mexican situation, like that in Europe, suggests to me that monetary policy credibility cannot be imported. It must be home grown. It must come from a fundamental conviction, borne out of experience, that the central bank is going to do the right thing and that the political process is going to support, or at least not undermine, that policy.

Until there is convergence on the degree of ambidexterity in monetary policy across countries, instability is likely to continue.

Conclusion

In the context of the two-handedness of monetary policy objectives, I would term "doing the right thing" as ambidexterity with a strong preference for the right - i.e., store of value - hand. I think that this characterizes the kinds of policies the Fed has pursued for the last 14 years. Over this period, the confidence and credibility of our monetary policy has increased dramatically. We are continually, with each business cycle, reducing the underlying rate of inflation. The underlying rate of inflation and resultant peak of interest rates was lower in the late 1980s than in the early 1980s, and I believe will almost certainly be lower in this cycle than it was in the late 1980s.

Should this trend continue, I would imagine that 'we are within one, or at most two, business cycles of attaining effective price stability. And, I believe that pursuing this policy in a gradualist fashion has maintained maximum political support for our position.

But, markets will always be skeptical judges of the long-run capacity for the political process to support the role of a currency as a store of value. As a result, it does seem likely that foreign exchange market instability may be with us for some time to come. The twohanded nature of money and monetary policy will see to that. Until there is convergence on the degree of ambidexterity in monetary policy across countries - and on the degree to which we favor one hand over the other - instability is likely to continue.

The Homer Jones
Memorial Lecture

The Homer Jones Memorial Lecture honors a man who exemplified the highest qualities of leadership in economics with a series of annual lectures given by prominent economists.

Homer Jones, as Director of Research and then Senior Vice President of the Federal Reserve Bank of St. Louis, played a major role in developing the Bank into a leader in monetary research and in the collection of monetary statistics. Homer Jones served previously at Rutgers University, the University of Chicago, the Brookings Institution, and the Federal Deposit Insurance Corporation.

A measure of Homer Jones's stature is the tribute paid to him by a former student, Milton Friedman, who attributes his own career choice in economics to the teachings and encouragement of Homer Jones. Qualities which so impressed this Nobel Laureate in Economics were Homer Jones's "integrity and independence of character, his insatiable curiosity about facts, and his belief in the power of repeated exposure to the facts to erode illusion. "