

Why We Need Sound Money

The recent surge of the dollar on foreign-exchange markets represents yet another turn in the volatile currency markets. How long this current trend will continue is unclear. However, one consequence of marked swings in the foreign-exchange value of the dollar is that over the short-term international investors can either reap windfall returns or lose their shirts if their timing differs by only a few months. Beyond this, the unpredictability of the relative values of different units of account confounds investment based on economic fundamentals and so distorts the allocation of capital resources worldwide. Despite the attempts of central bankers and other supranational agencies to stabilize exchange rates at the "right levels," such uncertainty seems bound to persist until sound money conditions are restored—i.e., until an international gold standard is reintroduced.

Volatility in the foreign-exchange value of the dollar continues to make the return on even the "safest" international investments uncertain. Since last November, the value of the dollar against the currencies of Europe and Japan has increased markedly, enhancing the return earned by foreigners on their investments in the United States but reducing the return earned by American investors on investments abroad. Now in its sixth month, this latest movement follows a 3-month period last Autumn when the dollar fell sharply. These two opposite movements have largely offset each other, and their net effect has been that the dollar now is valued at about the same price it was last August.

The accompanying chart shows the value of the dollar measured against the Japanese yen, the Swiss franc, the British pound, the French franc, and the German mark. Since November, the value of the dollar has increased 17 percent against the Swiss franc and 11 percent against the yen. Measured since last August, however, the dollar's increase against the Swiss franc has been much smaller, 7 percent, and it actually has fallen slightly (by one percent) against the yen. (These comparisons are based on monthly averages of daily rates. One might note that at their G7 meeting this time last year, the Western monetary authorities were celebrating "one of the longest periods of stability for the dollar" in recent memory, and were confidently predicting no further exchange-rate shocks for the foreseeable future.)

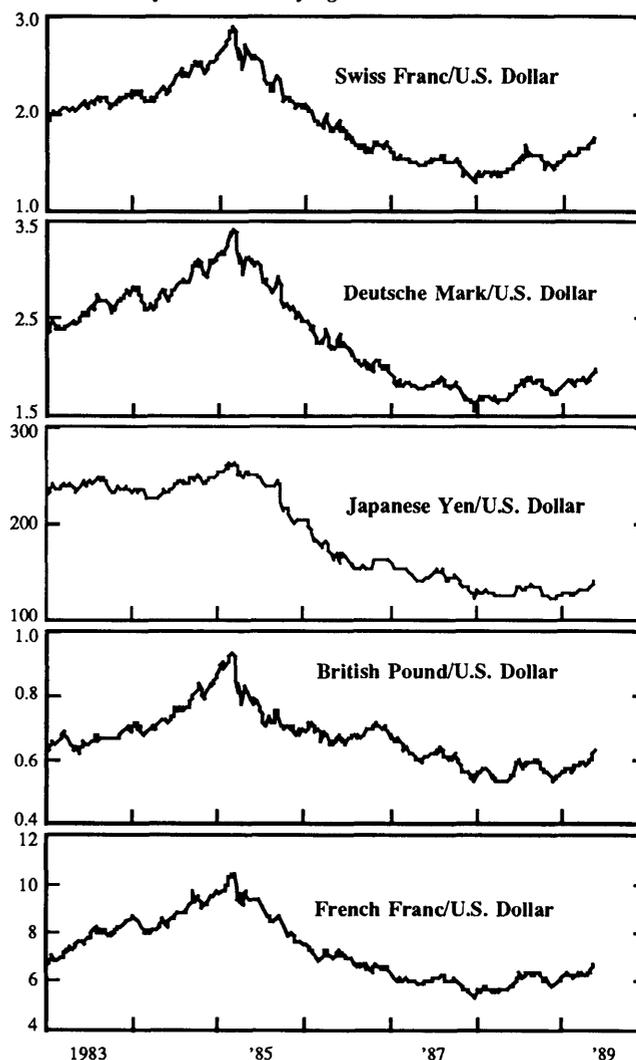
While the broad swings in the dollar since last August have resulted in little net change in its foreign-exchange value, they have greatly affected the returns earned by international investors during this period. In times of exchange-rate volatility, small differences in the nominal returns earned on investments across countries can be greatly magnified, and large differences can be more than offset by currency fluctuations.

The effect of exchange-rate swings on investment yields is illustrated in the table on page 54, which shows the annualized returns earned on various investments during the periods August 1988-May 1989 and November 1988-May 1989. (Again, the value of the dollar changed little over the

longer period, but has risen since November.) For example, a Japanese investing in U.S. money-market funds last August would have earned a nominal return of 8.4 percent by May 1989, but only a 6.6 percent return after converting dollars back into yen. In contrast, if the investment had been made in November, the return in yen would have been much higher, 33.7 percent, even though the nominal money-market rate increased only slightly to 8.8 percent.

DOLLAR EXCHANGE RATES FOR SELECTED CURRENCIES

Despite the efforts of the G7 monetary authorities to stabilize exchange rates via public and "secret" agreements, the relative values of the major Western currencies have continued to fluctuate wildly against the dollar.



**RECENT RETURNS
TO AMERICAN AND FOREIGN INVESTORS**

	Annual Percentage —Rate of Return—	
	8/88—5/89	11/88—5/89
<i>Money Market</i>		
U.S. rate*	+8.4	+8.8
Japanese rate*	+4.0	+4.2
Swiss rate	+3.5	+4.5
American in Japan	+5.8	-15.3
American in Switzerland	-5.4	-23.6
Japanese in United States	+6.6	+33.7
Swiss in United States	+18.6	+48.9
<i>Stock Market**</i>		
S & P 500***	+33.0	+41.9
Japanese Stock Index†	+29.1	+32.0
Swiss Stock Index††	+29.6	+43.7
American in Japan	+31.3	+7.3
American in Switzerland	+18.5	+5.0
Japanese in United States	+30.8	+74.4
Swiss in United States	+45.5	+94.2

* Reported by *The Economist* for August 2, 1988 and November 22, 1988.

** Index changes only; exclude dividend yields.

*** Index for August 23, 1988 = 257.09; index for November 22, 1988 = 267.21; index for May 23, 1989 = 318.32.

† Index for August 23, 1988 = 27920.0; index for November 22, 1988 = 29430.1; index for May 23, 1989 = 33816.6. Source: *The Economist*.

†† Index for August 23, 1988 = 553.8; index for November 22, 1988 = 561.1; index for May 23, 1989 = 672.6. Source: *The Economist*.

Note: Dollars per yen exchange rate: August 1988 = .00733, November 1988 = .00823, May 1989 = .00742. Dollars per Swiss franc exchange rate: August 1988 = .631, November 1988 = .690, May 1989 = .590. Monthly averages of daily rates; May figure through May 30 only.

On the other hand, an American investing in the Japanese stock market would have earned a higher return had the investment been made in August rather than November. The rate of increase in Japanese stock prices was very similar during each period. However, as a result of exchange-rate fluctuations, the return in dollars would have been 31.3 percent since August (very close to the 29.1 percent earned by a Japanese investor in Japan), but only 7.3 percent since November (far less than the nominal increase in Japanese stocks of 32 percent).

The data for Swiss investments and investors show similar volatility. The increase in the dollar versus the Swiss franc since November was relatively sharp, reducing even further the returns on U.S. funds invested in Switzerland. An American investment in the Swiss money market in November would have lost 23.6 of its dollar value by May, despite a nominal return in Swiss francs of 4.5 percent. By the same token, Swiss funds invested in the U.S. benefited greatly from the rise of the dollar. A Swiss investor in the U.S. stock market in November would have realized a return of 94.2 percent, far higher than the 41.9 percent nominal increase in U.S. stock prices.

These comparisons cover only a very short period, of course. Over different or longer periods, exchange-rate fluctuations would have had very different consequences for effective investment returns. (For example, over the long run, the Swiss franc has continued to appreciate against the dollar.) In addition, few investors are likely to convert their funds precisely at the times when "turning points" in exchange rates occur, *i.e.*, when the gains and losses brought about by currency fluctuations are largest.

Indeed, the data suggest the hazards of trying to time

one's international investments to match the short-term peaks and troughs in currency values. While such a "system" would pay off handsomely, experience suggests that it is all but impossible to forecast such turning points.

The failure of the "experts" to do so in the past, however, does not keep them from trying. For example, when the dollar was falling last November, a number of analysts predicted (in a *Wall Street Journal* article entitled "Dollar Falls Sharply, As Pessimism Grows Over Economic Trends") that the dollar would continue to drop against the other major currencies well into 1989. As events turned, the dollar began its ascent a few weeks later. Investors who listened to those analysts short-term predictions obviously have been disappointed — so far, at least.

The difficulty is that a host of factors, political as well as economic, influence the long- and short-term trends of exchange rates. It is not always clear how any particular factor — such as concern over political instability abroad, or "inflation fears" — will affect exchange rates in a given period, let alone what the net effect of all these forces combined will be.

Currently, much attention is being given to the use of official exchange-rate interventions by the Group of Seven (the United States, Japan, West Germany, Britain, France, Canada, and Italy) to keep the international exchange value of the dollar within a range "secretly agreed to" by these countries' policymakers. But so far during the current episode such interventions have failed to achieve their supposed purpose — just as they have in previous attempts to strengthen or weaken one or another of the major currencies contrary to market pressures.

In the wake of their seeming powerlessness to direct events as they wish, the monetary authorities may invoke other measures. Recent reports have speculated that the G7 authorities may now be seeking a way to "surprise" the markets, in order to bring the dollar down from its current level. Whether such speculation is warranted, we have no idea. It is worth remembering, however, that other Government attempts to control a different target — domestic price inflation — by "fooling" the people and attempting to confound their expectations were a marked failure. It is hard to see how their result would be much different if applied to counteract underlying foreign-currency market trends.

Of course, in the short-term official interventions *can* influence popular perceptions — and in this respect their effect on both international investors and prospects for the efficient worldwide allocation of capital resources is pernicious. Uncertainty over what policymakers have in mind — no one knows what the "secret agreements" may entail or whether the various governments will support them at any given time — adds to the volatility of the market. Granting the usefulness of currency speculation as a buffer against even greater market volatility, when currency concerns override fundamental economic considerations as a yardstick for investment, the misallocation of resources seems bound to result.

The United States today is a striking case in point. In the face of international monetary uncertainty, foreign investors for whatever reasons apparently have viewed the U.S. dollar as a "safe haven" (ironically, in view of its plummeting domestic purchasing power). However, the resulting capital inflows have not necessarily financed sound economic growth, but rather what many perceive to be reckless consumption and Government fiscal irresponsibility. Until sound international money and credit conditions are restored, in our view most usefully via a return to convertible currencies, such misallocation of resources likely will continue — at great eventual cost to us all.

YET ANOTHER BANKING RISK?

We have observed for many years, and others now are beginning to share our view,¹ that current banking practices in the United States pose great risks not only to depositors and investors, but also to the general public. Recent media attention has focused primarily on the costs of bank and S & L "bailouts" resulting from imprudent lending to fast-lane promoters and Third World countries. However, as discussed below, in today's computer age (aided and abetted by misguided Federal Reserve policy) even the routine practices of financial institutions may threaten the stability of the money and credit system.

Most consumers would associate the word *overdraft* with insufficient funds, or "bad" checks. This association is accurate — and more widely applicable than many might believe. Consumers are not the only ones having difficulty keeping track of their checking account balances. Their depository financial institutions — thrifts and banks — have similar problems. The major difference is that the amounts involved are much larger.

Consider these little-known facts. "Daylight" (within the business day) overdrafts of depository financial institutions averaged \$130 billion *daily* in 1988, up 18 percent from 1985. In the first quarter of 1989, bank and thrift daylight overdraft amounts averaged \$137 billion, a 33 percent increase from the same period in 1985 and roughly double their combined deposit balances with the Federal Reserve and correspondent banks.

What does this mean? It means that during the course of the business day in the first quarter of this year, banks and thrifts routinely have authorized payments from their deposits with the Federal Reserve and correspondent banks in excess of their balances. In short, they now habitually "write" bad checks. This practice, which has the potential for creating new banking difficulties, has been enabled primarily by large-dollar electronic fund transfer (EFT) networks and stimulated by Federal Reserve policy that encourages abuse of the EFT system.

The U.S. Wholesale Payments System

Large corporations and financial institutions in the past relied on a paper-based payment system, comprising checks and drafts, to handle large-denomination transfers of funds. Since the 1950's, however, this mechanical method has been gradually replaced by an electronically operated system — one that uses a computerized, telephone-like communications device to allow virtually immediate (intraday) transfer of payment data. The U.S. payments system currently relies on two principal EFT networks to handle almost all of wholesale, or large-dollar, wire transactions — Fedwire and CHIPS. Fedwire is a service of the Federal Reserve System while CHIPS (Clearing House Interbank Payments System), established in 1970, is operated by the privately owned New York Clearinghouse Association. Some 140 domestic and foreign depository institutions with offices in New York City are served by this private-sector association.

The table shows the average daily volume of payment transactions conducted through Fedwire and CHIPS for 1987 and for March of 1988. The two networks combined transfer more than a trillion dollars of payments *per business day*. Although the total dollar volume of transactions processed by Fedwire is larger than that of CHIPS, on average the amount per transfer is larger for the latter (an average of \$4.6 million vs. \$2.9 million per transfer). Note

that "book-entry" security transfers constitute over half of Fedwire transactions. These are U.S. Treasury, Federal, and Federally sponsored agency securities exchanged between depository institutions. Since ownership records of such securities remain with Federal Reserve banks, the exchange process is totally computerized.

Depository financial institutions holding reserve or clearing accounts with the local reserve bank enjoy direct access to Fedwire. Such institutions transmit and receive payment messages regarded as irrevocable and "final." Finality requires immediate settlement. When the reserve bank notifies a receiving bank of a fund transfer, it (the reserve bank) immediately credits the receiving bank's clearing account at the same time that it debits the sending institution's account. If, *at the time of transfer*, funds in the sending institution's reserve account are insufficient to cover the payment, a daylight overdraft occurs.

Unlike the Fedwire system, settlement through the CHIPS network, which is on a *net* basis, does not take place until after the close of business even though payment messages are exchanged throughout the day.² CHIPS payment messages are thus not immediately final. While they are irrevocable payment instructions, there is no actual transfer of funds (debiting or crediting of each institution's account) until settlement at the end of the day. As a result, participating institutions end up making only one payment or receipt each day.³

Overdraft Risks

Whether through Fedwire or CHIPS, daylight overdrafts create risks in the payments system. Credit risk is an obvious banking risk of long standing — releasing funds against an insufficient or uncollected balance. If a sending bank wires an irrevocable payment transfer to another bank on behalf of a customer before "good funds" are received in the customer's account to cover the payment, the sending institution in effect is extending a short-term credit.⁴ It assumes what is known as *sender risk*. The bank could suffer

² Net settlement under the CHIPS system involves the "net-net" type of settlement procedure, in which all transactions of participating institutions are consolidated in central accounts, thereby reducing greatly the need for multiple payments.

³ By the end of the day, information on each participating institution's account position with the CHIPS system is made available. Those with a net debit position transfer funds to the CHIPS account at the New York Fed via Fedwire. Technically, daylight overdrafts cannot occur under the CHIPS system, since its central account returns to a zero balance when all settlements are completed at the end of the day. However, most analysts and policymakers view any recorded intraday net debit position as a daylight overdraft, regardless of the CHIPS participant's account balance with the Reserve bank or its correspondents.

⁴ Banks often send funds via wire transfers on the behalf of major corporate customers who have temporarily uncovered positions.

AVERAGE PAYMENTS VOLUME PER BUSINESS DAY (Dollar Billions)

	1987	March 1988
Fedwire	605	638 (2.9)
CHIPS	555	622 (4.6)
Total	1,160	1,260
Book-Entry Security Transfers	312	350 (8.7)

Note: Figures in parentheses indicate the average size for a single payment transaction in millions.

Sources: David L. Mengle, "Legal and regulatory reform in electronic payments: An evaluation of finality of payment rules," Federal Reserve Bank of Richmond Working Paper 88-2, May 1988; R. Alton Gilbert, "Payments system risk: What is it and what will happen if we reduce it?," *Federal Reserve Bank of St. Louis Review*, Jan./Feb. 1989.

¹ See, for example, "The junkification of American T-bonds," *The Economist*, May 27, 1989, pp. 77-78.

a loss if, for some reason, the customer eventually failed to cover the amount transferred. Oppositely, *receiver risk* is borne by a receiving bank that releases funds to a customer before final settlement. This can happen in a private network such as CHIPS when, at the end of the business day, a sending institution fails to settle its net debit position with a receiving institution.

While the CHIPS system involves both sender and receiver risks, there can be no receiver risks under Fedwire. The reserve bank involved in the transaction assures the receiving institution of an immediate and final fund transfer. As a result, however, the receiver risk that otherwise would obtain is shifted to the Federal Reserve as insurer of payment finality over Fedwire. In case of settlement failure by the sending institution, the Fed absorbs the losses associated with a fund transfer from an overdrawn reserve bank account. *In such instances, the taxpaying public pays — since losses that cut the Fed's net revenues also reduce funds available for transfer to the U.S. Treasury.*

A potentially greater related risk, and one that currently most concerns the regulators, is the *systemic risk* inherent in private settlement networks such as CHIPS — that is, the risk that a number of depository institutions will fail to settle and so deprive other institutions of expected payments by day's end. A crisis of unknown dimensions presumably could ensue if these latter institutions in turn created losses and liquidity problems for others in the network via a chain of unfulfilled obligations, consequently resulting in widespread failures. To date, no systemwide failure in the financial system has occurred as a result of such a payments network collapse — but there is no guarantee that it might not occur in the future.

Most disturbing is that the Federal Reserve, and eventually the taxpaying public, would bear the cost of such a series of events. A CHIPS participant who fails to settle at the end of the day puts enormous pressure on the other member institutions to complete the settlement process without disrupting domestic and international payment systems. Under the present arrangement, payments initiated by a nonsettling participant and logged by the system are “unwound.” This unwinding process requires cancellation of all debit and credit messages by the failed participant and computation of new net settlement positions.⁵ The revised positions, however, expose banks that initially settled (based on the messages of the defaulting bank) to unanticipated losses.

It is widely perceived that the Fed is unlikely to allow such a disruption in the payments system. One line of reasoning allows that the Fed, as a lender of last resort, would take steps to prevent any catastrophic, systemwide fallout arising from settlement failures. According to this view, the Fed would open wide its familiar discount window to provide temporary credit to receiving banks — thereby allowing settlement to proceed and eliminating systemic risk.

As appealing as such reasoning may be, it misses the underlying problem, namely, that such *implicit* “insurance” may itself have reduced the receiving institutions' incentives to monitor the creditworthiness of those sending payments. Even if the Fed eventually recovered a payment loan (plus interest) from the receiving institution, discount window loans are not priced competitively.⁶ In short, why

⁵ A loss-sharing solution for CHIPS members is under study and could be implemented this year. A formula would determine which CHIPS participant(s) would bear the failure or loss of one who fails to settle at the end of the day.

⁶ If the Fed extended credit to a receiving bank that became insolvent because it did not receive its expected funds from the sending bank (the latter having failed without warning before final settlement), then it is the FDIC that bears the cost.

should the receiving institution worry that a sending bank may not settle (or that funds made available to borrowers and depositors may not be covered) if the Fed is always there to make good on any transfer?

The Fed, in turn, is anxious to reduce its own risk in the wholesale payments system — by shifting more of the risk to the private sector or increasing the cost of users of Fedwire transfers.⁷ Currently, the Fed does not charge institutions that incur daylight overdrafts over Fedwire. It is hardly surprising that such free intraday credit has invited its overuse or abuse. Why would users take the trouble to carefully match their transfers over Fedwire when intraday credit, the result of mismatching, is free? The disincentives created in this situation are similar to those that have resulted in the mispricing of deposit insurance provided by the FDIC to banks and thrifts. Both produce a distortionary effect on the behavior of depository financial institutions that eventually shifts the cost of failures to the public.

It should be noted that the Federal Reserve recognized some time ago that its policies may encourage abuses in bank payments procedures, and has taken some steps to reduce payments system risk. In 1984, CHIPS participants were required to establish bilateral net debit limits when dealing with each other over the private network. In March 1986, limits on daylight overdrafts over Fedwire and CHIPS were put into effect by the Fed. These measures may have succeeded somewhat in slowing the rapid growth of daylight overdrafts. However, the problem persists, and the Fed reportedly is contemplating further “corrective” measures. For example, proposals for pricing daylight overdrafts of reserve accounts according to some predetermined procedure are currently being developed.⁸ According to this approach, institutions frequently overdrawing their reserve accounts with the Fed during the day would be required to increase their reserve balances.

Depending on how accurately the policymakers were able to predict actual market conditions, such a requirement might or might not effect the hoped-for change in payments practices (if the “reserve penalty” were too little, the abusive practices would continue; if too high, it would inhibit the institution's ability to compete in the financial markets). A more useful approach would be to privatize completely the pricing of daylight overdrafts, the usefulness of which would then depend on market considerations. Until that happens, the risks discussed above are not likely to just “go away.”

⁷ Computer malfunction is perhaps a minor problem but could prove catastrophic. On November 20, 1985, the Bank of New York, a clearing agent for brokers and traders of U.S. Government securities, suffered a drop in its reserve account at the New York Fed as a result of computer malfunction. By day's end, it had an overdraft of around \$24 billion, some 2,300 percent of its capital. The Federal Reserve extended an overnight discount window loan to cover the shortfall, but it cost the Bank of New York \$5 million in unanticipated interest expense.

⁸ Details of these proposals are found in two studies on large-dollar payments risks, commissioned by the Federal Reserve's Payments System Policy Committee, that were completed by two task force groups in August of last year. The studies are titled *Controlling Risks in the Payments System* and *A Strategic Plan for Managing Risk in the Payments System*.

PRICE OF GOLD

	1988	1989	
	Jun. 2	May 25	Jun. 1
Final fixing in London	\$453.70	\$363.60	\$361.40

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