April 15, 1996

ECONOMIC COMMENTARY
Federal Reserve Bank of Cleveland

Where Is All the U.S. Currency Hiding?

by John B. Carlson and Benjamin D. Keen

A recent Federal Reserve Board study revealed that between 50 and 70 percent of all U.S. currency is held abroad, and that about 80 percent of all currency growth since 1980 is attributable to increased foreign demand. In this *Economic Commentary,* the authors take a look at why the dollar is so popular outside our borders and discuss the implications of rising currency demand for U.S. economic policy.

The total amount of U.S. currency held by the nonbank public equals about $375 billion, or nearly $1,400 for every man, woman, and child in the country. Clearly, few individuals ever hold this much cash at any point in time. On the surface, the sheer volume of currency outstanding seems inconsistent with common sense. Even if one considers currency balances held by businesses involved largely in cash transactions—like retailers—and by participants in the underground economy—like drug dealers—it is hard to reconcile the difference between households' holdings and total currency outstanding. So where is this currency hiding?

Recent evidence suggests that a growing proportion of U.S. currency is held outside the country by individuals who are uncertain about their own currency's future value. To these people, the dollar is a refuge during times of political and economic uncertainty. Knowing precisely how much currency is held outside the United States, however, is no simple matter. Unlike checking accounts, currency flows do not leave a paper trail. However, informal reports to the Federal Reserve and the U.S. Customs Department regarding currency flows abroad do provide a rough indicator of foreign demand.

Having some idea about the magnitude of overseas holdings is important for several reasons. First, if the demand for currency is becoming driven largely by foreign portfolio decisions, then fluctuations in the level of currency outstanding may have little to do with domestic economic activity. Second, movements in the narrow monetary aggregates—of which currency is a sizable component—will not provide the same information as they have historically. Third, to the extent that foreigners demand currency, which is non-interest-bearing debt, the U.S. Treasury's need to issue an interest-bearing alternative is reduced.

To address these issues, we will examine why individuals hold currency and why the U.S. dollar is so popular abroad. We will also discuss some recent research on the share of currency held abroad and look at the implications for policy.

Why Do People Hold Currency?

For most Americans, the answer to this question is simple: to make payments when neither checks nor credit cards are convenient or accepted. The U.S. dollar has the textbook qualities often used to define money. That is, it is both a unit of account and a medium of exchange. Although stories about currency stashed under the mattress occasionally come to light, most Americans choose to hold cash only for transaction purposes. Since it bears no interest, there is little incentive to hold currency when no transactions are anticipated.

Textbooks also identify "store of value" as a quality of money. This characteristic, however, applies to many nonmonetary assets as well. During inflationary

ISSN 0428-1276

periods, houses are often considered good stores of value. Gold, rare art, coins, and stamps can also serve this purpose.

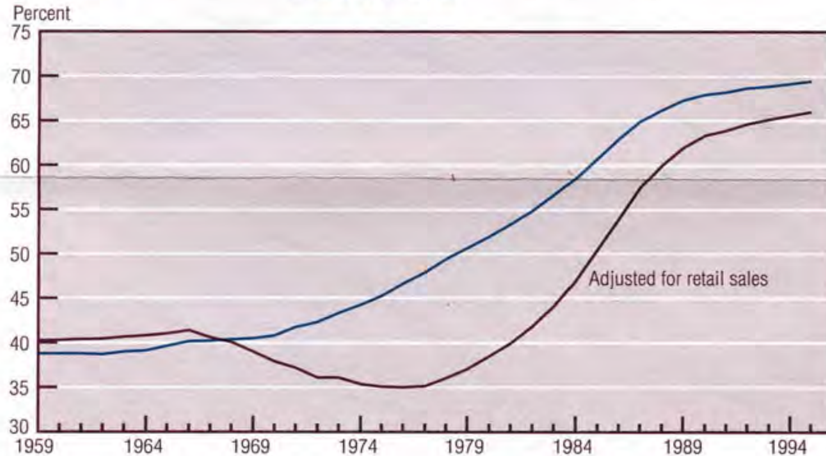
The dollar, on the other hand, has some characteristics that make it preferable to other stores of value. First, it is both compact and portable. One can barely move a house across town, let alone abroad. Even carrying gold can be cumbersome. Second, currency affords anonymity not offered by, say, ownership of a Van Gogh. Third, the U.S. dollar is liquid in many parts of the world. That is, it is easily converted to spendable forms with no (or minimal) transaction costs and little risk of capital loss. And finally, unlike most real property, currency is divisible. If the denomination of a bill is larger than the price of an exchange, then change can be made.

Why Do Foreigners Hold U.S. Currency?

In contrast to domestic demand, foreign demand for the U.S. dollar owes more to the store-of-value quality of money. The dollar is preferred to many other currencies because it is a relatively stable source of purchasing power, widely accepted, and reasonably secure from counterfeiting. Another appealing feature is that unlike some other currencies, which may be recalled with little notice or limited opportunities for exchange, Federal Reserve Notes are ultimately exchangeable at full face value, regardless of when they were issued. Moreover, because shipments of less than $10,000 do not have to be reported, U.S. currency maintains a degree of anonymity for its holder.

These favorable features of the U.S. dollar ultimately reflect the political and economic stability we enjoy. For countries whose political situation is uncertain, the dollar offers a form of wealth that may be put in a suitcase and carried should a resident need to flee. Political instability is often associated with economic turmoil and a debasing of a country's currency. Despite the episodes of double-digit inflation in the 1970s and early 1980s, the United States has never experienced a hyperinflation.

FIGURE 1 ESTIMATED SHARE OF U.S. CURRENCY HELD ABROAD



SOURCE: Richard D. Porter and Ruth A. Judson, "The Location of U.S. Currency" (footnote 1).

Trends in Foreign Holdings of U.S. Currency

Foreign demand for the U.S. dollar is particularly strong in certain parts of the world. In Liberia and Panama, the dollar is the official currency. Large amounts of currency are known to be circulating in Central and South America, especially in Argentina, where it is often used to settle real estate and auto transactions. The dollar is also very popular in Eastern Europe, especially in the former Soviet Union, where inflation, declining exchange rates, and currency recalls have made the ruble a poor store of value. U.S. military personnel stationed overseas and many international travelers likewise rely on the dollar.

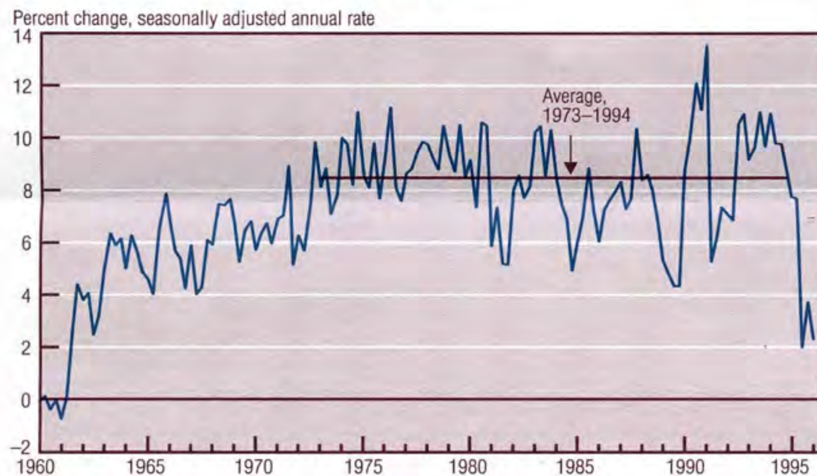
Measuring the *flow* of U.S. currency abroad is extremely difficult. Cash is often sent in the mail, and, as mentioned above, individual shipments of up to $10,000 do not have to be reported to the Customs Department. Customs does keep records of shipments above $10,000, however, and these provide some information on currency flows abroad. Another major source of data is found in the informal reports that commercial banks submit to the Federal Reserve regarding their overseas currency shipments. These reports suggest that since 1988, about half of all U.S. currency sent overseas has gone to Europe (Russia is the most likely destination), 30 percent has gone to the Middle East and Far East, and around 20 percent has gone to Central and South America, with a fair amount of that ending up in Argentina.[1]

Determining the total *stock* of currency held abroad is even more difficult. In fact, the only available data are shipment numbers from informal reports to the Customs Department and the Federal Reserve. Currently, many analysts believe that a substantial portion of all U.S. currency is held overseas.

Researchers at the Federal Reserve Board have examined this issue in depth. A preliminary study conducted in 1993 estimated that more than 70 percent of all U.S. currency is held outside our borders, with most of the outflows occurring since 1970.[2] Recently, a broader examination set that figure at between 50 and 70 percent, with about 80 percent of all currency growth since 1980 tied to increased foreign demand.[3]

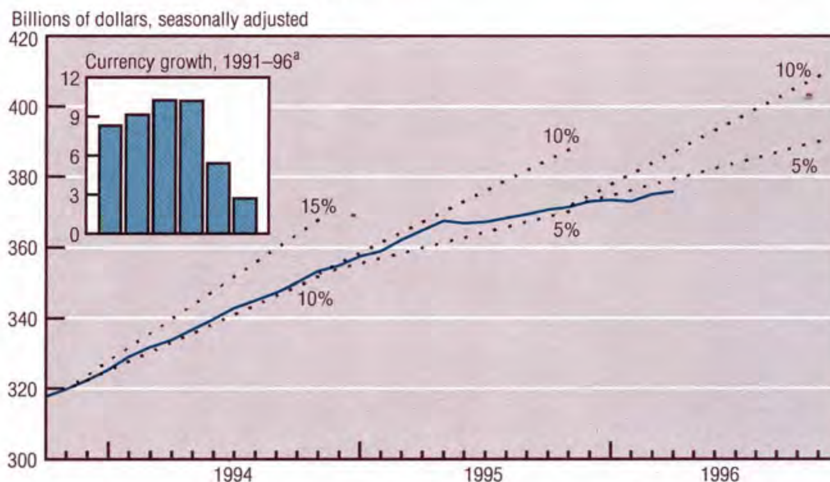
Figure 1 illustrates two estimates of the level of currency held abroad. Both are based on statistical approaches that exploit the similarity between seasonal fluctuations in the domestic demands for U.S. and Canadian currency.[4] Because the seasonal factor in currency for both countries is largely driven by similar seasonal fluctuations in retail sales, one approach adjusts for differences in the seasonality of retail sales between the two countries.

FIGURE 2 U.S. CURRENCY GROWTH



SOURCE: Board of Governors of the Federal Reserve System.

FIGURE 3 U.S. CURRENCY LEVELS



a. Growth rates are percentage rates calculated on a fourth-quarter over fourth-quarter basis. Annualized growth rate for 1996 is calculated on an April over 1995:IVQ basis.

NOTE: Dotted lines represent growth ranges and are for reference only.

SOURCE: Board of Governors of the Federal Reserve System.

Some Recent Issues

The strong international demand for the dollar inevitably makes it a target for would-be counterfeiters. Although the current design of U.S. currency is sufficient to prevent mass counterfeiting, photocopying technology may soon reach the point where nearly perfect copies can be easily produced. The Treasury anticipated this potential problem in 1983 and began working on a plan to redesign the currency. Even though Treasury officials believe that the amount of counterfeit currency in circulation is minimal, recent rumors of an almost-perfect counterfeit produced in the Middle East—the so-called *supernote*—gave added incentive to the redesign effort.[5]

Because most foreigners prefer to hold $100 bills and most counterfeits are found overseas, the Treasury decided to redesign that note first and set a release date of March 1996. To avoid disturbing foreign economies and to protect the special anonymity feature of the dollar, officials announced that the old currency would not be recalled and would always be accepted at 100 percent of face value. To spread the word, the department is spending millions of dollars on advertising and on setting up toll-free hot lines around the world. Nevertheless, promises about cash are often viewed with deep suspicion by foreigners who have watched their own currencies become virtually worthless.

In early 1995, as news of the soon-to-be released $100 bill spread abroad, currency growth plummeted, from about 8.5 percent over the last two decades to about 3 percent in 1995 (see figure 2). Many analysts believe that this slowdown largely reflected foreign holders' concerns about the new currency. Moreover, now that the redesigned note has been released, currency growth is expected to accelerate to near previous levels. Preliminary data since the March introduction reveal no sharp rise in the currency numbers, but it must be stressed that this information is very limited (see figure 3). Only time will tell if the currency growth rate will return to a level more consistent with its previous trend.

Policy Implications

Large swings in overseas holdings of U.S. currency typically have little impact on the current level of domestic economic activity. Rather, such movements distort the historical relationship between currency and the economy, making currency a less reliable indicator. Although the level of currency has never received much attention in policy analysis, it is a substantial component of the monetary base (about seven-eighths currency) and of M1 (about one-third currency), which are watched closely by some analysts.

Events such as the introduction of the new $100 bill can thus create misleading signals in the narrow money measures, making them less reliable for policy purposes. For example, the slowdown in currency growth in early 1995 accentuated the decline in both the monetary base and M1.[6] Because the currency slowdown most likely reflects reduced foreign demand, it seems doubtful that deceleration in the narrow money measures portends a weakening economy, as it might have in years past. Moreover, foreign demand tends to be induced by unpredictable events. To the extent that U.S. currency is becoming increasingly subject to the vagaries of foreign demand, the use of narrow money measures as guides for policy will prove problematic.

Another important implication concerns the federal budget. U.S. currency pays no interest, yet is ultimately a debt of the federal government. Essentially, it is an interest-free loan. The greater the level of currency outstanding, the less the level of interest-bearing debt outstanding and hence the smaller the interest bill of the U.S. Treasury. This implicit yield of currency—known as seigniorage—reduces the annual tax bill by between $15 and $20 billion. To the extent that foreign demand for the dollar increases, the tax burden of U.S. citizens is further lightened.

Footnotes

1. See Richard D. Porter and Ruth A. Judson, "The Location of U.S. Currency: How Much Is Abroad?" Board of Governors of the Federal Reserve System, manuscript, June 1995.

2. See Richard D. Porter, "Estimates of Foreign Holdings of Currency—An Approach Based on Relative Cross-Country Seasonal Variations," Board of Governors of the Federal Reserve System, manuscript, September 1993.

3. See Porter and Judson, "The Location of U.S. Currency" (footnote 1).

4. Essentially, both approaches assume that foreign demand for Canadian currency is negligible and that the foreign-held component of U.S. currency has no seasonal pattern. Hence, the difference between the seasonal factors in total demand for U.S. currency and Canadian currency largely reflects foreign demand for U.S. currency.

5. According to the U.S. General Accounting Office, "the total level of counterfeit-currency detections—$208.7 million in fiscal year 1994—represented less than one one-thousandth of U.S. currency in circulation." See *Counterfeit U.S. Currency Abroad: Issues and U.S. Deterrence Efforts,* Washington, D.C.: GAO, February 1996, p. 2.

6. The implementation of sweep accounts has also tended to dampen the growth of both of these aggregates relative to economic activity.

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The views stated herein are those of the authors and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.

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