

Meeting the Demand for Cash



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When it comes to using cash, it's like the flip of a coin: Americans still use cash roughly one out of every two times they buy something. And for transactions of less than \$10, physical currency—banknotes and coins—rules. Although less popular for higher-value transactions and rarely used in the fast-growing realm of online commerce, cash remains the most common method of payment for goods and services the world over.

It takes a pretty big infrastructure to keep cash flowing. Behind the scenes, players in the “cash cycle” include the Bureau of Engraving and Printing, armored carriers, cash vaults operated by financial institutions and armored carrier companies, bank branches and ATM networks, retailers—and yes, the Fed.



How Much Cash Are We Talking About?

Most U.S. paper currency by volume (number of notes) is used in the United States, with the \$1, \$5, \$10, and \$20 notes making up the lion's share of all transactions. But because the dollar is widely trusted abroad, most U.S. currency (by value) is held in foreign countries, primarily in \$50 and \$100 denominations. The Federal Reserve Board of Governors reports that the volume of cash in circulation has more than doubled (from 13.5 billion to 31.3 billion) in the past 20 years, and the value of that cash has more than tripled (from \$268.2 billion to \$1.03 trillion).

Cash is used as a medium of exchange in virtually all aspects of the economy. In some minority and low-income communities, whose residents are disproportionately unbanked, cash is used exclusively. In fact, a recent FDIC study shows that 25.6 percent of all U.S. households (30 million) are unbanked or underbanked. So even though cash accounts for only 0.2 percent of the total *value* of transactions in the United States, the *volume* of cash transactions clocks in at 49 percent.



Value and Volume by Payment Type

Payment type	Volume	Percentage of volume	Value	Percentage of value
ACH	19.1 billion	9.0%	\$37.2 trillion	3.3%
Cash	107 billion	49.4%	\$1.8 trillion	0.2%
Checks	24.4 billion	11.3%	\$31.1 trillion	2.8%
Credit and debit cards	65.5 billion	30.2%	\$3.44 trillion	0.3%
Wire transfer	222 million	0.1%	\$1,046 trillion	93.4%

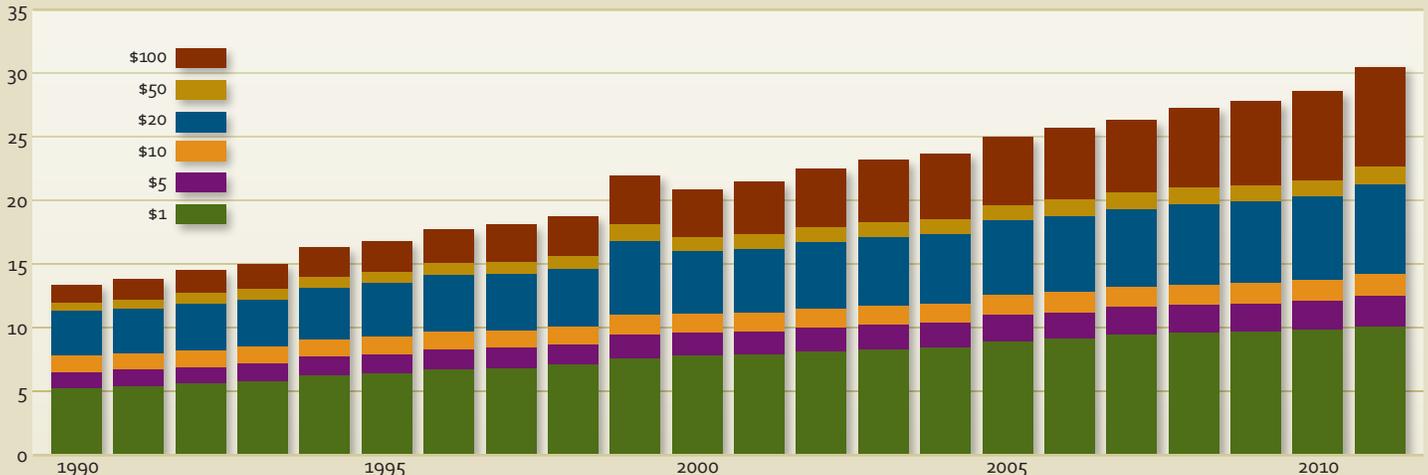
Sources: Federal Reserve Payments Study; McKinsey Payments Map.

How Does the Cash Cycle Work?

With such large-scale demand, the cash cycle—and the Federal Reserve's role in it—continue to be vital to the economy. Although the Fed doesn't actually print money (that is the job of the Bureau of Engraving and Printing, or BEP), it is responsible for maintaining enough notes in circulation to meet public demand. Each year the Federal Reserve negotiates a print order with the BEP to fulfill the next year's anticipated demand for cash, replace worn currency, and accommodate the production demands associated with introducing new currency designs. The Federal Reserve Board's 2011 fiscal year print order was 6.4 billion notes, with a face value of \$165.3 billion. The Fed also ensures the integrity and fitness of notes, destroying those that come into the Fed dirty, torn, limp, worn, or defaced.

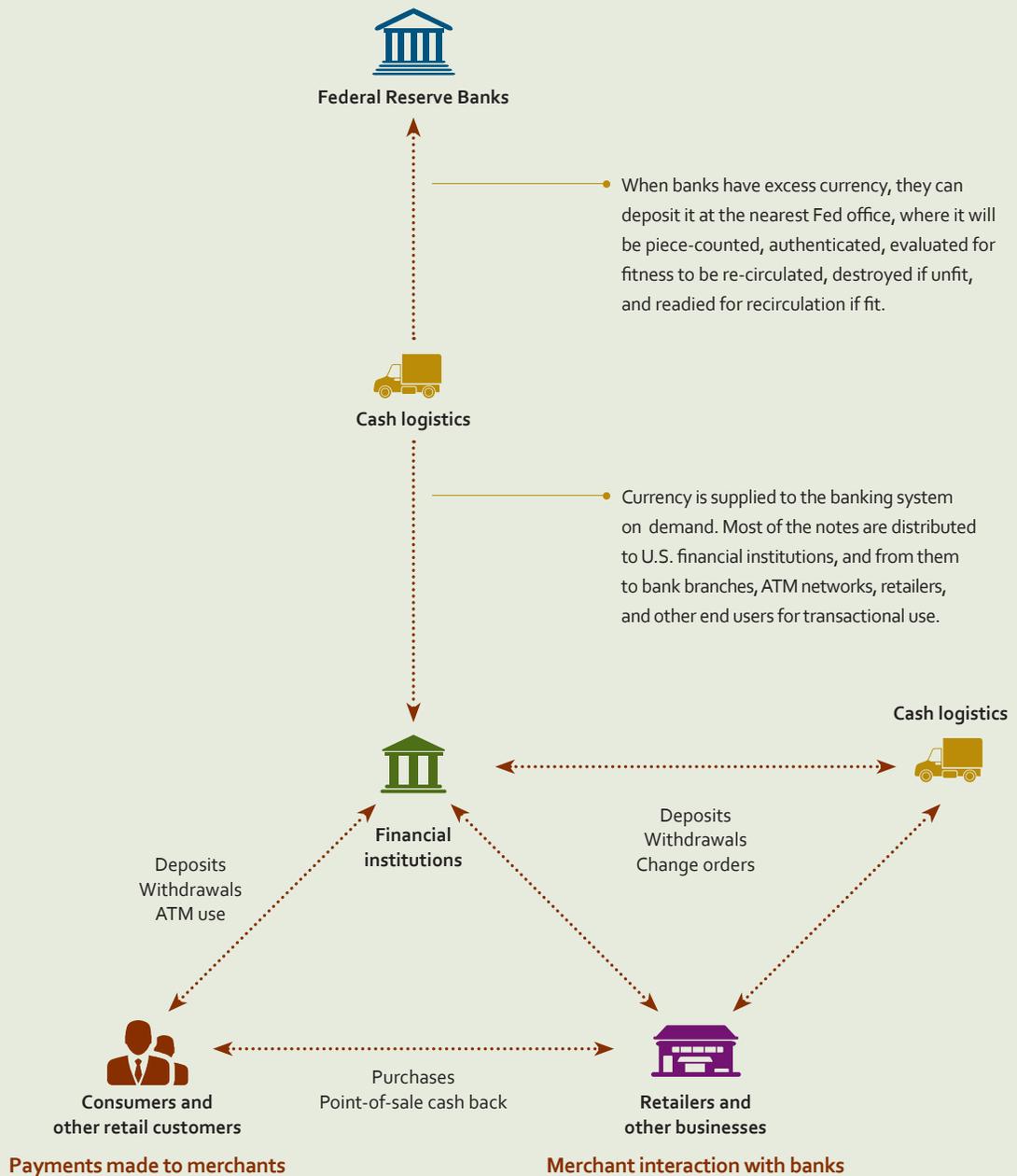
Volume of Cash in Circulation

Billions of notes



Source: Federal Reserve Board.

The Cash Cycle



Five Key Methods the Fed Uses to Distribute Cash

1. The 12 Federal Reserve Banks operate 28 **cash-processing facilities** housed in 11 main offices, 15 branch offices, and two satellite offices.
2. Ten **cash depots** temporarily store cash supplied by the nearest full-service Fed office. This reduces the costs and transit time to depository institutions located far from a full-service Fed cash operation.
3. The Federal Reserve Banks have contractual obligations with 168 **coin terminals** that store, process, and distribute new and used coins to depository institutions.
4. The **Custodial Inventory** program provides an incentive to depository institutions, 92 of which are currently participating, to hold \$10 and \$20 notes in their vaults to meet customers' demand. The higher denominations continue to be filtered through Fed Banks to help reduce the circulation of counterfeit currency.
5. The **Currency Recirculation** policy requires depository institutions to pay a fee for making a deposit of \$10s or \$20s and ordering the same denomination during the same business week (a practice known as cross-shipping).



Since the Fed began operations in 1914, its cash services have provided security and storage, verified deposits from financial institutions, identified suspected counterfeit notes, differentiated fit from unfit notes, and prepared fit and new notes for shipment to banks. For many years, the Federal Reserve Banks provided these services only to their member banks, but the Monetary Control Act of 1980 gave all depository institutions direct access to Fed cash services.

The evolution of cash continues, and the Federal Reserve System must keep pace. It has already implemented operational changes to improve the efficiency and flexibility of cash services. The Fed uses three principal methods to distribute and process currency and coin in the United States—its own network of processing facilities, cash depots in other cities, operated under contract with armored carriers, and coin terminals—and two methods to reduce the unnecessary movement of cash between financial institutions and the Fed (see the five key methods above).

The Future of Cash

In a mixed economy of competing payment methods, we believe that cash will continue to be a vital part of both the U.S. and the global economy in the foreseeable future. But cash is no longer the king it once was. Just 50 years ago, cash was used in 80 percent of domestic payments. Now that number is just 50 percent. From the invention of

credit cards in 1950, ATM and debit cards in 1970, and ACH in 1974, to the emergence of online commerce and online banking in the 1990s, competition in the payments marketplace has eroded the dominance of cash. Debit transactions since 1990 have soared by 2,700 percent, and ACH by 680 percent, while cash volume has grown by only 4 percent annually. Checks have been the hardest hit: Usage has declined by more than 50 percent.

Cash still has one important advantage—a sense of control and anonymity that many other payment forms cannot offer. One of the major aims of central banking is to sustain people's confidence in the overall payments and financial system. Cash, by providing a stable, safe form of physical currency, remains an important component of the Fed's ability to maintain public confidence.

Cash isn't going away anytime soon. Nor is the Fed's role in the cash cycle. ■

Want to learn more?



Check out a blog dedicated entirely to cash, with regular posts from the Cleveland Fed, at www.countingoncurrency.com/wp/cash-per-diem