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NEWSLETTER

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Money and Inflation: A Functional Relationship

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Economists like to argue that money belongs in the same class as the wheel and inclined plane among ancient inventions of great social utility. Price stability allows that invention to work with minimal friction.

—Federal Reserve Chairman Ben S. Bernanke, February 24, 2006

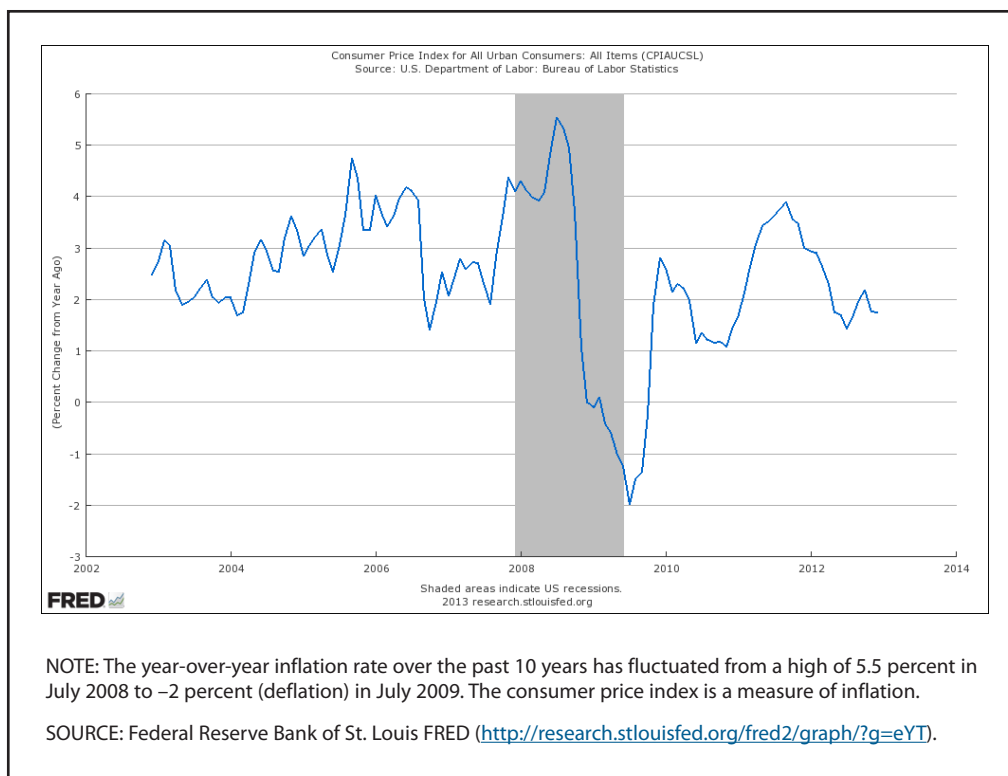
In its broadest sense, **money** is anything generally accepted in exchange for goods and services. In other words, money is defined by the functions it serves in the economy. In fact, while money has taken many forms over the ages—cowry shells, furs, beads, even large stone wheels—useful forms of money share three basic functions.

First, money is a **store of value**, which means that it holds its value over time. You can put money in a drawer today and spend it next year, when it will buy approximately the same amount of goods and services (minus inflation). Second, money is a **unit of account**, which means it is a standard measure of value. Listen to a conversation between two people about a recent purchase and you are sure to hear prices quoted in terms of money, not as hours worked or the equivalent value of the purchase in corn (or some other commodity). Third, money is a **medium of exchange**, which means it is generally accepted as a method of payment. I accept my paycheck in U.S. dollars because I know dollars are readily accepted for payment at the grocery store, gas station, and nearly anywhere I want to buy goods and services.

Money Versus Barter

You might not think of it often, but money facilitates transactions in amazing ways. Think of conducting an economic transaction without money—a situation called **barter**. For barter to work properly, you would need to find someone with the good or service you want; in turn, that person would need to want to trade for what you have to offer. A difficult task to be sure. The situation in which two people want to barter with each other is known as the **double coincidence of wants**. Imagine an accountant who needs her car fixed. Under a barter system she would need to find someone who needed some tax advice in exchange for car repairs. She might find it difficult, and time consuming, to make such a transaction. Such searches for barter partners are inefficient and wasteful.

So, how does money solve the double coincidence of wants problem? In an economy based on money, the accountant provides her accounting services to whoever is willing and able to pay money for them. She then uses the money she earned to pay for car repair services from a mechanic, who is more than willing to accept cash for car repairs. Both parties to the transaction are willing to exchange goods or services for money. In the end, everyone involved is more



readily satisfied. Using money allows a more efficient outcome because it cuts down on **search costs**, and it allows workers to specialize in what they do best.

Money and Inflation

Even when you have money available to purchase goods and services, as in the accountant/mechanic example, money's ability to serve its functions has limits. High rates of **inflation**, for example, make money less useful in many ways. First, when inflation rates are very high, the longer you hold money as cash, the more value it loses, so you attempt to spend it immediately rather than hold it. In this situation, money does not function as an effective store of value. In fact, if people expect high rates of inflation and the rate of their transactions increases as a result, inflation will increase even further. Second, if inflation rises to very high rates, money's usefulness as a unit of account diminishes. If prices are changing rapidly, communication between buyers and sellers becomes complicated. Comparing prices becomes complex if all prices are rising rapidly. Third, inflation reduces the usefulness of money as a medium of exchange. In the case of extreme inflation (hyperinflation), people may abandon the use of one currency for a more stable one. In Zimbabwe, for example, the inflation rate rose from 24,411 percent in 2007 to an estimated 89.7 sextillion (89,700,000,000,000,000,000) percent in November 2008 (Waller, 2011). Hyperinflation was so problematic that people abandoned the Zimbabwean dollar, preferring to conduct transactions in U.S. dollars or South African rand. The Zimbabwean currency became nearly useless as money and was removed from circulation in 2009 (Central Intelligence Agency, 2013). However, a market in Zimbabwean dollars has since developed for currency collectors and souvenir seekers—you can buy a Zimbabwean \$100 trillion dollar bill for approximately 5 U.S. dollars (McGroarty and Mutsaka, 2011).

So, if high inflation is bad, is an inflation rate of zero best? What is the optimal inflation rate? The Federal Reserve has determined that a 2 percent rate of inflation is most consistent with its **dual mandate** (the goals created for it by Congress) of maximum employment and **price stability**. Two percent is considered a low rate of inflation, which only slightly distorts the functions of money discussed previously. And, if the inflation rate is stable, people come to build 2 percent into their expectations of future prices, and wages and interest rates can adjust accordingly.

If the low inflation rate of 2 percent is good, why not have an even lower rate of zero? When the inflation rate is less than 2 percent, the danger of **deflation** exists. Falling prices might sound appealing, but falling prices would likely lead to falling wages as well—and deflation is associated with very weak economic conditions (Board of Governors of the Federal Reserve System, 2013).

An inflation rate greater than zero maintains an “inflation buffer,” which reduces the chances of deflation should the economy start to weaken (Bernanke, 2010). On the other side of the Fed’s dual mandate (maximum employment), it is generally agreed that economic growth and employment are enhanced when inflation is low and stable (Bernanke, 2006).

Conclusion

Money facilitates transactions in ways that keep the economy functioning well, but not so well when inflation is high and volatile. In contrast, a low and stable rate of inflation helps ensure that money performs its functions efficiently. ■

REFERENCES

Bernanke, Ben S. “The Benefits of Price Stability.” Speech presented at The Center for Economic Policy Studies and on the occasion of the Seventy-Fifth Anniversary of the Woodrow Wilson School of Public and International Affairs, Princeton University, Princeton, New Jersey, February, 24; 2006; <http://www.federalreserve.gov/newsevents/speech/bernanke20060224a.htm>.

Bernanke, Ben S. “Monetary Policy Objectives and Tools in a Low-Inflation Environment.” Speech presented at the Revisiting Monetary Policy in a Low-Inflation Environment Conference, Federal Reserve Bank of Boston, Boston, Massachusetts, October 15, 2010; <http://www.federalreserve.gov/newsevents/speech/bernanke20101015a.htm>.

Board of Governors of the Federal Reserve System. “Why Does the Federal Reserve Aim for 2 Percent Inflation Over Time?” *Current FAQs*, January 3, 2013; http://www.federalreserve.gov/faqs/economy_14400.htm.

Central Intelligence Agency. “Zimbabwe.” *The World Factbook*, January 22, 2013; <https://www.cia.gov/library/publications/the-world-factbook/geos/zi.html>.

McGroarty, Patrick and Mutsaka, Farai. “How to Turn 100 Trillion Dollars Into Five and Feel Good About It.” *Wall Street Journal*, May 11, 2011; <http://online.wsj.com/article/SB10001424052748703730804576314953091790360.html>.

Waller, Christopher J. “Independence + Accountability: Why the Fed Is a Well-Designed Central Bank.” *Federal Reserve Bank of St. Louis Review*, September/October 2011, 93(5), pp. 293-301; <http://research.stlouisfed.org/publications/review/11/09/293-302Waller.pdf>.

GLOSSARY

Barter: Trading goods and services for other goods and services without using money.

Dual mandate: The Federal Reserve's responsibility to use monetary policy to promote maximum employment and stable prices.

Double coincidence of wants: Each participant in an exchange is willing to trade what he or she has in exchange for what the other participant is willing to trade.

Deflation: A general, sustained downward movement of prices for goods and services in an economy.

Inflation: A general, sustained upward movement of prices for goods and services in an economy.

Medium of exchange: Anything generally accepted in exchange for goods and services.

Money: Anything generally accepted in exchange for goods and services. Money serves as a store of value, unit of account, and medium of exchange.

Price stability: A low and stable rate of inflation maintained over an extended period of time.

Search costs: The financial and opportunity costs consumers pay when searching for a counterparty in a transaction.

Store of value: The ability of a currency, commodity, or other type of capital to retain its worth over time.

Unit of account: A common measurement used to compare the value of goods and services.

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