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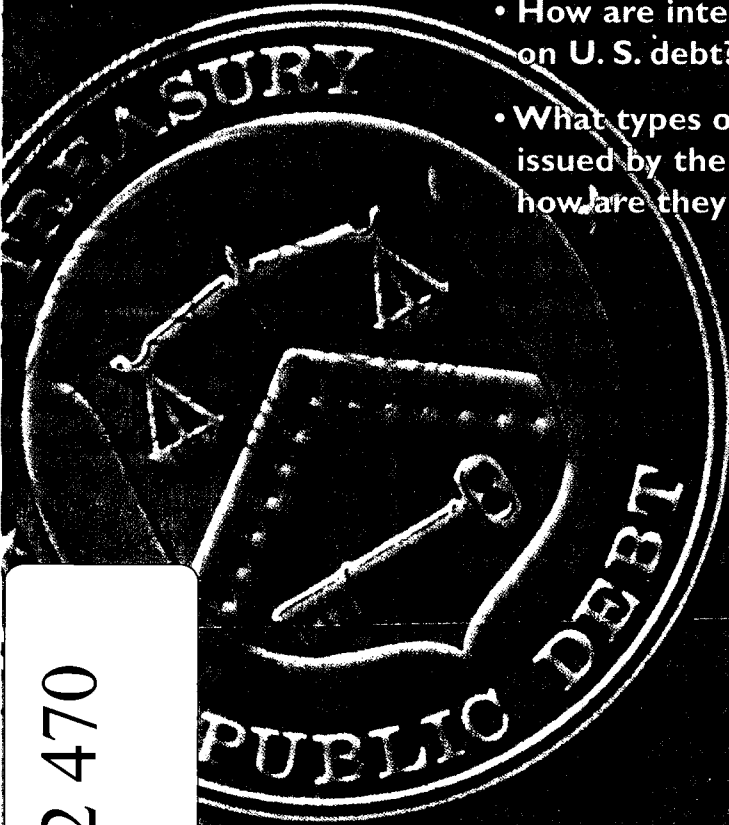
ABSTRACT

In 1981, the United States reached a dubious economic milestone--the federal debt surpassed one trillion dollars for the first time. It took more than 200 years to build up that much debt. The federal debt doubled to two trillion by 1986, hit the three trillion level in 1990, and stands at an estimated five-and-a-half trillion for 1998. Just as individuals might be concerned if their personal indebtedness was growing faster than their incomes, some economic pundits and policymakers are concerned about the size of the public debt, notwithstanding the recent surplus achieved by the federal government. While some feel that federal debt is not necessarily bad, others argue that it can place substantial burdens on the economy. This booklet aims to help the public understand these concerns and the burdens of large deficits. The booklet contains the following sections: "Debt as an Asset"; "Government Debt Instruments"; "The Government in the Market"; "The Auction"; "The Burdens of Deficits and the Benefits of Surpluses"; and "Strength of the Dollar." Contains a list of additional readings. Included with the booklet is a teaching guide that contains content questions and answers and activity suggestions. (BT)

Public Debt: Private Asset

Government Debt and Its Role in the Economy

- Is government borrowing always bad?
- Are savings bonds debt or assets?
- How are interest rates established on U. S. debt?
- What types of debt instruments are issued by the United States, and how are they sold?



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Public Debt: Private Asset is one of a series of essays adapted from articles in *On Reserve*, a newsletter for economic educators published by the Federal Reserve Bank of Chicago. The original article was written by Keith Feiler and this revision was prepared by Tim Schilling.

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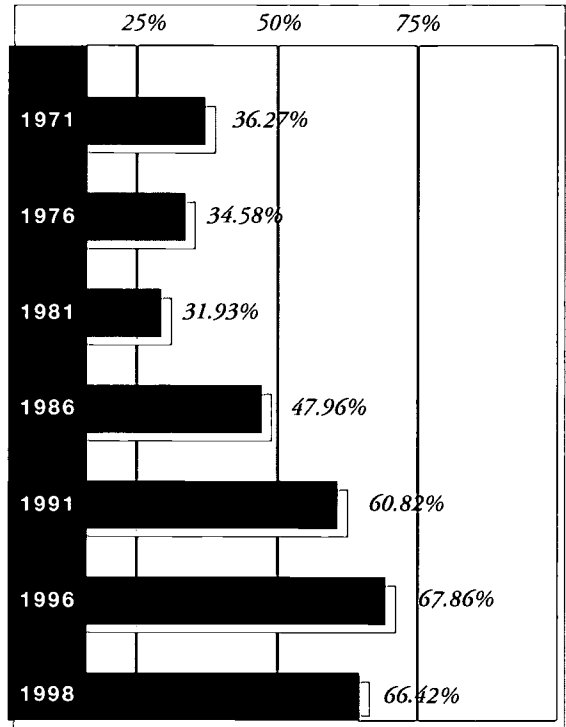
In 1981, the United States reached a dubious economic milestone—our federal debt surpassed the \$1 trillion mark for the first time. It took us more than 200 years to build up that much debt. The federal debt doubled to \$2 trillion by 1986, hit the \$3 trillion level in 1990, and stands at an estimated \$5.5 trillion for 1998.

Looking at the growth of our federal debt another way, it is estimated that 1998 outstanding federal debt amounted to about two-thirds of our national income, as measured by Gross Domestic Product (GDP). Seventeen years earlier, in 1981, federal debt was only about 35 percent of GDP. However, on the plus side, the percentage in 1998 should remain only slightly higher than it was in 1991.

Just as we might be concerned if our personal indebtedness was growing faster than our income, some economists, pundits and policy-makers are concerned about the size of the public debt, notwithstanding the recent surplus achieved by the Federal government. While some feel that federal debt is not necessarily bad, others argue that it can place substantial burdens on the economy.

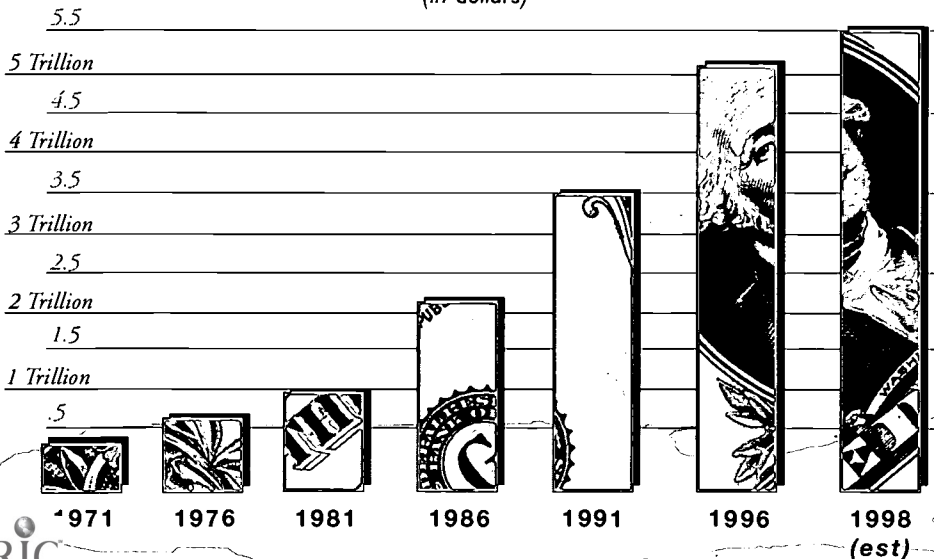
To understand these concerns and the burdens of large deficits, we need first to understand the nature of debt itself and how the government borrows money.

Total U.S. Debt as a Percentage of GDP



* Data from The Economic Report to the President, February, 1998

Government Debt (in dollars)



* Data from The Economic Report to the President, February, 1998

Debt as an Asset

We all know what debt is when it is our own—we owe money to someone else. On the other hand, it may not be so easy to understand that many of our financial assets are someone else's debts. For example, to a consumer a savings account at a bank is an asset. However, to the bank it is a debt.

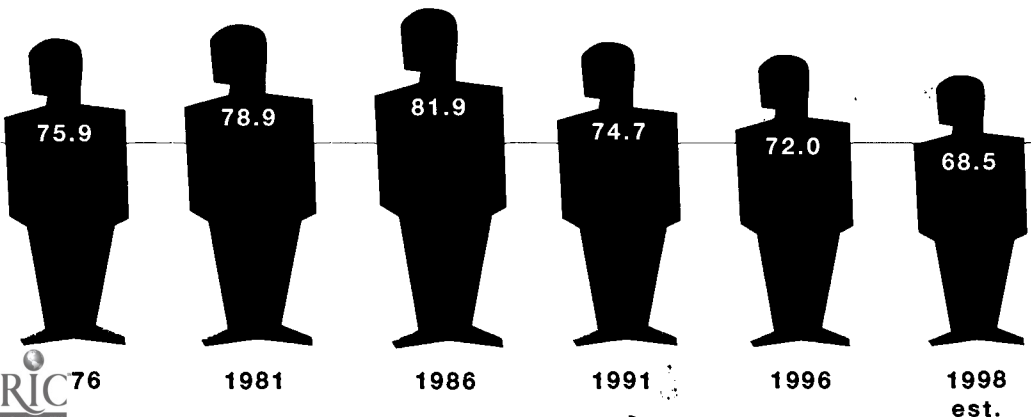
The bank owes us the money that is in our account. We let the bank hold the money for us because it promises to pay us back with interest. The bank then uses our money to make loans and to invest in other debt, including the government's.

Like the savings account, most of us think of the \$25 savings bond we received from grandma as a financial asset. However, it is also a debt our government owes us.

Just as there must be a buyer for every seller in a sales transaction, for every debt incurred someone acquires a financial asset of equal value. Debt, then, is considered an asset of the creditor, and a claim against the assets and earnings of the debtor.

In terms of the national debt, every dollar of the government's debt is someone's asset. Corporations, brokerage houses, bond-trading firms, foreign nationals, and U.S. citizens, both here and abroad, are all willing to loan money to the U.S. government. They view the loan as an investment, an asset that increases their wealth.

Percentage of Federal Debt Held by the Public



Government Debt Instruments

When the federal government spends more than its revenues, it finances its deficit by selling debt instruments that compete for investors' money with instruments of other issuers of debt. The instruments the government sells are called Treasury securities. For many people, the most familiar of these securities are savings bonds, like the one from grandma. They are nonmarketable, meaning that the owner cannot sell them to anyone. Of course, savings bonds can be liquidated before maturity by redeeming them at a prescribed price.

Despite their familiarity, however, savings bonds do not account for most of the government's debt. That distinction goes to marketable Treasury securities: Treasury bills (T-bills), Treasury notes (T-notes), and Treasury bonds (T-bonds, not to be confused with savings bonds).

These marketable securities are distinguished from each other by their length of maturity and denomination. T-bills are issued with 3-, 6-, or 12-month maturities. T-notes have maturities from two to ten year. T-bonds mature in more than ten years. As of 1998, all Treasury securities have a minimum denomination of \$1,000.

The Government in the Market

Although the U.S. government is only one of many debt issuers, it plays a significant role in our financial markets for several reasons.

First, it is significant simply because it issues so much debt. For example, in fiscal 1997, the Treasury issued more than \$867 billion in bonds, bills and notes, not only to finance the deficit but also to redeem close to \$647.3 billion in maturing debt. Principally because of such volume, it can structure the maturities, denominations, and interest payments on its debt instruments to provide something for everyone.

Second, most Treasury securities, unlike savings bonds, are marketable. Marketable means that after the government originally issues the securities, investors can turn around and sell them quickly and easily in the open market even before they mature. In fact, Treasury securities can be converted into money so easily that they are called "near money." Since people do not know when they may need cash, marketability is a desirable feature.

Third, because the United States government has never defaulted on its debt and because it has the power to tax, people are confident that the government will repay the loan with interest. In fact, public confidence in the government's ability and willingness to repay is so high that loans to the government are considered to be virtually free from default risk, and as such carry a lower rate of return than securities of other issuers.

The Auction

In seeking to pay the lowest possible interest rate, the government sells its marketable securities at auctions conducted through Federal Reserve Banks and their branches. Since auctions of T-bills, T-notes, and T-bonds are similar, let's look at the most frequent Treasury borrowing—the weekly auctions of 3- and 6-month T-bills.

Buyers of T-bills (lenders to the government) range from large financial institutions and government securities dealers to individuals seeking a safe investment. To accommodate these different types of buyers, the Treasury permits two kinds of bids, or offers to purchase, called competitive and non-competitive tenders.

Some buyers/investors want T-bills only if the investment produces a certain yield (interest rate) because at a different yield, they prefer to invest in some other security. These bidders, usually the professional dealers, submit competitive bids stating the interest rate they wish to receive. Just like any smart consumer shopping for a loan, the Treasury seeks to obtain credit at the lowest possible cost. Therefore, it first accepts bids from those willing to buy securities at a lower interest rate. Competitive bidders who seek too high a rate will be underbid and will not receive a T-bill.

Other investors who would rather be sure of receiving a T-bill regardless of the rate, can submit noncompetitive bids. These people are almost always nonprofessional investors.

The rate they receive is the average determined by the competitive bidders. In terms of the total dollar amount, noncompetitive bidders account for only about 5 percent of the average auction, but in terms of the numbers of bidders who will receive a debt instrument, they make up a large majority. All noncompetitive bids are accepted

first. Then the competitive bids with the lowest interest rate are accepted, followed by the next lowest, and so on until the Treasury has sold the amount of bills it wants to issue that week.

T-bills are sold on a discount basis, meaning that they are purchased for less than face value, the amount the investor will receive at maturity. When submitting their bids, individual investors submit payment to the government for the full face value of the T-bill. Once the auction has been held and an interest rate established through the bidding process, the Treasury then mails refund checks, called discount checks, to the successful bidders on the issue date. The amount of the checks, determined by the auction process, represents interest on the bill. (In contrast, buyers of T-notes and T-bonds receive semi-annual interest payments.)

All T-bills, notes, and bonds are held in book-entry form, meaning ownership is recorded on a computerized ledger, with the buyers receiving a receipt rather than a certificate as evidence of the purchase. This method protects buyers against loss, theft, and counterfeiting. Securities can be electronically maintained in a book-entry account at commercial banks or other financial institutions, or in TREASURY DIRECT, the Treasury's book-entry system. TREASURY DIRECT is offered through Federal Reserve Banks and their branches.

The Burdens of Deficits and the Benefits of Surpluses



The government's method of financing its debt through these auctions is clearly a smooth and efficient process. Nevertheless, many economists feel that a large government debt in relation to GDP may place severe burdens on the economy, particularly if the economy were to slide into a recession.

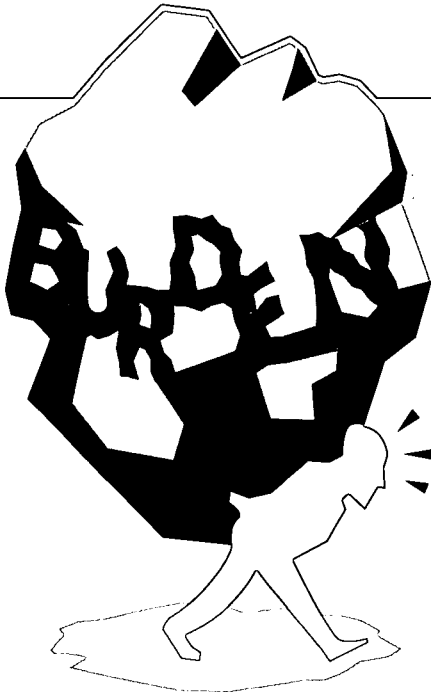
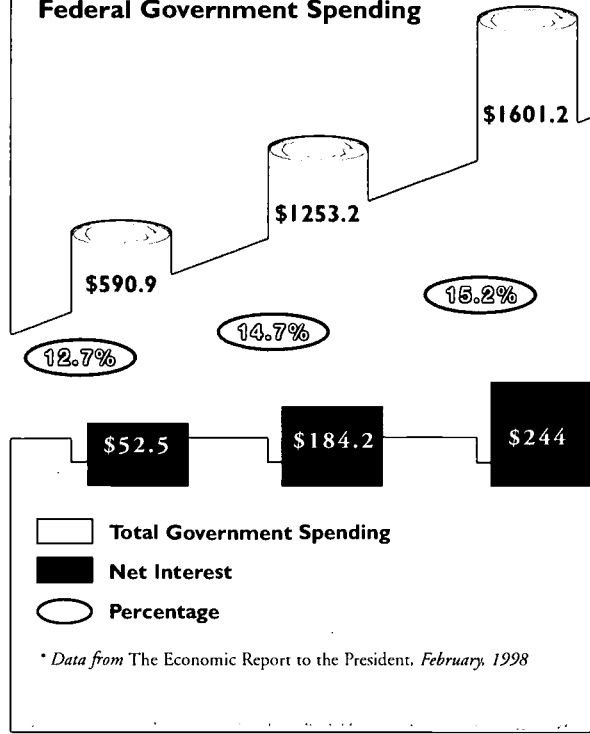
One of the burdens they cite is that government debt tends to "crowd out" private investment. When it borrows, the federal government is competing for funds with private industries, state and local governments, and other borrowers. Despite this competition, the federal government has no difficulty borrowing as much as it needs, partially because it offers securities free from default risk, but principally because it is not constrained by interest rates. If Congress chooses to spend more than its revenues, the Treasury must make up the difference regardless of cost.

Therefore, when the government needs to borrow more, it can push up interest rates, while taking a larger and larger portion of available investment funds, everything else being equal. When the government is borrowing heavily, private industries are forced to offer securities at a higher rate of interest in order to attract investors. This means higher costs to build new plants, buy new equipment, and develop new technologies. Because of these higher costs, some companies may decide to delay improvements or not make them at all. In effect, by raising interest rates the federal government "crowds out" private borrowing, a result that, in the long run, tends to restrict economic growth.

However, when the government is running a surplus, as it did in 1998, crowding out is less of a factor. Crowding out is also less of a factor in years when private investment markets provide higher than usual returns relative to Treasury securities.

Another concern with the debt is that the government's heavy demand on available funds can create pressures on the Federal Reserve to reduce interest rates by increasing the money supply. Because the Federal Reserve expands the money supply by purchasing government debt securities in the open or secondary market, the process is referred to as "monetizing the debt."

Interest Payments as a Percent of Federal Government Spending



If the Fed monetizes the debt, the result would be another burden—inflation. When the rate of money growth is greater than the economy's ability to produce additional goods and services, the result is inflation, too much money chasing too few goods. In the short term more rapid rates of money growth may reduce interest rates, but the net long-term effect would be to foster higher rather than lower rates.

Another burden imposed by the debt is the government's interest payments. When the government borrows, it is obligated to pay interest. These interest payments have become a significant percentage of total government spending, which in turn becomes harder to reduce. In 1980, for example, total interest payment amounted to 12.7 percent of government spending. In 1997, it amounted to 15.2 percent. In dollar terms, that is an increase of just under \$60 billion.

Strength of the Dollar

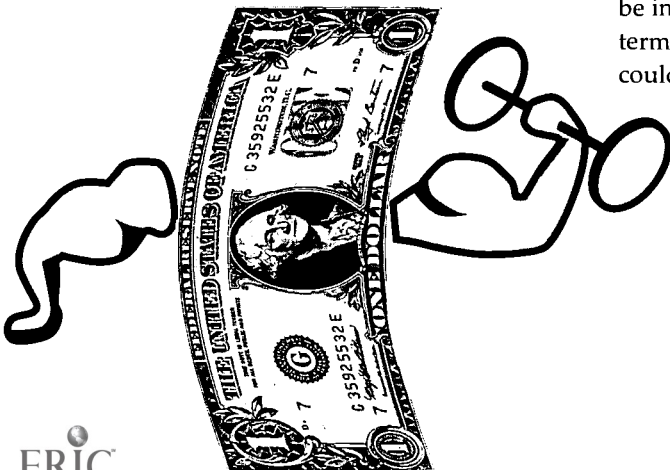
Another issue of concern to many is the role that foreign investors play in financing the debt. Many foreign investors are attracted to U.S. investments, including Treasury securities.

On the positive side, this foreign investment helped finance the huge U.S. federal budget deficits of the 1980s and 1990s and kept interest rates lower than they otherwise would have been. However, servicing the debt financed by foreign savings can have negative implications for our economy. When we send principal and interest payments to foreign holders of our debt, we are temporarily transferring wealth away from this country. The net result is a reduction in our standard of living.

In addition, an inflow of foreign savings tends to affect the strength of the dollar. Since Treasury securities can be purchased only with U.S. dollars, foreign demand for these securities increases the demand for dollars, raising the value of the dollar in foreign exchange markets. This more highly valued dollar, by raising the price of U.S. goods in international terms, places further burdens on the economy, particularly for domestic producers who compete with foreign producers for sales both here and abroad.

In recent years, foreign investment has had a mixed impact. Foreign interest in U.S. securities has remained high, contributing to the strength of the dollar in foreign markets. The safety of U.S. Treasury securities offers a safe haven in times of political and economic turmoil in other parts of the world. The "flight to safety" that often accompanies such turmoil means foreign investors are willing to take lower rates of returns to place dollars in the United States. This, in turn, drives down the cost of financing for a wide variety of purchases that are sensitive to changes in interest rates, such as housing purchases. At the same time that foreign investment in U.S. securities can help reduce interest rates and stimulate domestic spending, the strength of the dollar overseas puts downward pressure on prices, helping to keep inflation low.

While the burdens imposed by a large federal debt remain a concern among some economists, the trend toward reduced deficits and even surpluses may help reduce the size of the debt. While economists do not totally agree on the need for a balanced federal budget, many feel that an increase in the debt is not desirable. In fact, most economists agree that we would be in a better position to sustain long-term expansion if the federal debt could be further reduced.



Additional Readings

For more information about how to order these materials, consult the Federal Reserve Public Information Materials catalog, or contact the Federal Reserve Bank of Chicago's Public Information Center, P.O. Box 834, Chicago, IL 60690-0834, 312-322-5111.

ABCs of Figuring Interest

Federal Reserve Bank of Chicago, 1992, 14 pp.
<http://www.frbchi.org>

Controlling Interest

Federal Reserve Bank of Chicago, 1992, 14 pp.
<http://www.frbchi.org>

Playing by the Rules: A Proposal for Federal Budget Reform

Federal Reserve Bank of Minneapolis, 1991, 21 pp.
<http://woodrow.mpls.frb.fed.us>

Points of Interest

Federal Reserve Bank of Chicago, 1992, 17 pp.
<http://www.frbchi.org>

Understanding the Federal Debt and Deficits

Federal Reserve Bank of New York, 1994, 20 pp.
<http://www.cny.frb.org>


Information on U.S. Treasury Securities can also be found at:

<http://www.savingsbonds.gov>

<http://www.publicdebt.treas.gov/sec/sec.htm>

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13

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Public Debt: Private Asset

Classroom Questions for Public Debt: Private Asset

- Government debt and its role in the economy questions & activities
- Answers to content questions
- Public Debt: Private Asset Booklet (on-line version)
http://www.frbchi.org/pubs-speech/publications/booklets/public_debt/public_debt.html
- Ordering Information

Government Debt and Its Role in the Economy

Content Questions & Activities

1. How can the financial assets belonging to one person be the liabilities of someone else? (page 2)
2. What happens to the money that you put into a savings account? (page 2)
3. What does the federal government do when it spends more than it takes in? (page 3)
4. Discuss the differences between the three kinds of marketable Treasury securities. (page 3)
5. What is the term "near money" used to describe and why? (page 4)
6. Why do the people of America have confidence in a government that is more than 5 trillion dollars in debt? (page 4)
7. What is meant by the discount basis used on T-bills? (page 5)
8. What does it mean to hold T-bills, notes, and bonds in book-entry form? (page 5)
9. Discuss what is meant by "crowding out" investment and explain the

impact this has on the economy? (page 6)

Application Questions & Activities

1. Instruct interested students to do some research on the Internet to find out what the U.S. national debt is currently at? Bring your findings to class. (There are several debt clocks that can be referenced for this)
2. Invite a local government representative or your town financial officer to come to class and discuss how the town funds new development for things like schools, roads, hospitals, etc.
3. Assign students to log onto www.ustreas.gov/opc/opc0037.html for a complete description of what the Department of Treasury does and how it funds the government. This is a good complement to the material already covered in the "Public Debt: Private Asset" publication.

Answers to content questions

1. Debt is considered an asset of the lender because it is viewed as money owed to the lender. Debt is also a claim against the assets and earnings of the borrower.
2. The savings account earns us interest, because the bank uses the money to make loans and in turn create "more money" in the economy.
3. The government borrows the money by selling debt instruments called Treasury securities to investors.
4. The difference between marketable securities is in the length of maturity and denomination (securities have a minimum denomination of \$1,000).
 - T-bills are issued with 3-, 6-, or 12-month maturities.
 - T-notes have maturities from two to ten years.
 - T-bonds mature in more than ten years.
5. Treasury securities can very easily be converted into money for investors because they are marketable. This means that investors can sell them quickly and easily in the open market even before they mature.
6. The government has never defaulted on its debt; therefore the public can have trust in securities. Also, the government has the power to tax.
7. Treasury bills are purchased for less than face value, the amount the

- investor will receive at maturity.
8. This means that ownership is recorded on a computerized ledger, with the buyers receiving a receipt rather than a certificate as evidence of the purchase.
 9. When interest rates are raised by government borrowing it makes private borrowing more difficult and as a result restricts or slows economic growth. This is because many investors would rather hold government debt because of the lower risk.

Ordering Information

Public Debt: Private Asset - Government Debt and Its Role in the Economy is available free from the Federal Reserve Bank of Chicago. It can be ordered on-line using our on-line order form, or by contacting our Publications Department at

on-line order form:

http://www.frbchi.org/pubs-speech/publications/print_order_script.html

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