PAGE ONE Economics®

Making Sense of Private Debt

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> "Everything in excess is opposed to nature."
> —Hippocrates

What Is Private Debt?

If you or your parents have ever borrowed money from a bank or other **financial institution** to pay for a good or service, then you have participated in a credit market. Such markets exist so that individuals can borrow funds from lenders to make a purchase (such as a television), invest in themselves (such as through training or a college education), or invest in a business. Credit markets play an integral role in matching savers with borrowers. Without credit markets, only those with existing wealth could invest.

When individuals and businesses borrow funds, they accumulate **debt**. The three most common forms of debt are bonds, loans, and other securitized debt.

- **Bonds:** A company or government agency can borrow money by selling bonds in a bond market. For example, when the federal government sells a U.S. savings bond, the government receives the money (the price of the bond) immediately and promises to pay the bond holder later, in months or years. That is, the government is borrowing money and the individual or entity who purchases the bond is lending money to the U.S. government. The bond purchaser (lender) then holds the bond as an **asset** until the debt is paid back with **interest** by the bond seller.[1]
- **Loans:** When a bank or other financial institution lends money to an individual or business, the borrower promises to pay back the amount of the loan with interest.
- **Other Securitized Debt:** When financial institutions own loans and bonds, they can sell these to others in credit markets. They can even combine various loans and bonds together and sell them as "securitized debt" funds. For example, banks that make **mortgage** loans often sell the rights to collect the mortgage payments to the government housing agencies, and those agencies[2] in turn create bonds with payments guaranteed by the payments on the underlying mortgages. Such securities are called mortgage-backed securities, or MBS.

GLOSSARY

Asset: A resource with economic value that an individual, corporation, or country owns with the expectation that it will provide future benefits.

Debt: Money owed in exchange for loans or for goods or services purchased with credit.

Expansion: A period when real gross domestic product (GDP) increases; a period of economic growth.

Financial crisis: An event characterized by a sudden, widespread demand for safe liquid assets (assets that can be quickly converted into cash) that prevents the financial system, including banks and other financial institutions, from operating normally.

Financial institution: A business that provides services to make deposits to or withdrawals from an account, take out a loan, invest, or exchange currency.

Financial system: The set of institutions, such as banks, insurance companies, and stock exchanges, that permit the exchange of funds.

Interest: The price of using someone else's money. When people place their money in a bank, the bank uses the money to make loans to others. In return, the bank pays interest to the account holder. Those who borrow from banks or other organizations pay interest for the use of the money borrowed.

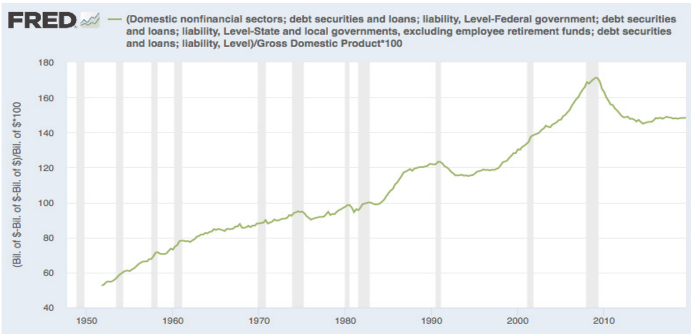
Liability: 1. Money owed; debt. 2. Legal responsibility.

Mortgage: A loan for the purchase of a home or real estate.

Recession: A period of declining real income and rising unemployment; significant decline in general economic activity extending over a period of time.

Solvency: The ability of a company to meet its long-term debts and financial obligations and ultimately stay in business.

Figure 1
Outstanding Debt in Nonfinancial Sectors, Percentage of GDP



NOTE: Includes households, nonprofits, and nonfinancial businesses. Quarterly, seasonally adjusted data. Gray bars indicate **recessions** as determined by the National Bureau of Economic Research.

SOURCE: Bureau of Economic Analysis and Board of Governors of the Federal Reserve System. FRED®, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/graph/?g=pGPd, accessed January 2020.

Debt is generally categorized into two types: public debt and private debt. Public debt is the debt owed by national, state, and local governments. Private debt is the debt owed by households, businesses, and nonprofits,[3] which are also called private nonfinancial entities. Private nonfinancial debt excludes borrowing by the government or financial firms, such as banks.

Measuring Trends in Private Debt

Figure 1 shows private debt over time as a percentage of U.S. gross domestic product (GDP). GDP measures the value of all new and final goods and services produced in a country in a particular year and is an indicator of the income of that country. Therefore, Figure 1 measures U.S. private debt divided by the U.S. income that generates the ability to pay off that debt.

Since the 1950s, total private debt as a percentage of GDP has grown consistently: It passed 100 percent in the early 1980s; accelerated leading up to the **financial crisis** that started in 2007, when it peaked at over 170 percent; and then decreased to just below 150 percent by 2019. Why has private debt increased as a percentage of GDP? A big factor has been information technology. Computers have made it steadily easier to track people's use of credit and evaluate the likelihood that they will pay off loans.[4]

Table 1
Public and Private Loans and Debt Securities, Nonfinancial Sectors, 2019:Q1

	Billions of dollars	Percent of GDP
Public loans and debt securities		
Federal government	18,136	86
State and local governments	3,055	14
Total	21,191	100
Private loans and debt securities		
Businesses	15,588	74
Households	15,612	74
Home mortgages	10,356	49
Consumer credit	4,000	19
Other loans and credit	1,257	6
Total	31,200	148
Total public and private debt	52,391	248
GDP	21,099	100

NOTE: Does not include noncredit market liabilities. Based on quarterly, seasonally adjusted data.

SOURCE: Z-1 Financial Accounts of the United States, First Quarter 2019, Board of Governors of the Federal Reserve System: government debt, Table L.106 and Table L.107; non-financial business, Table L.102; households and non-profits, Table L.101; accessed November 2019.

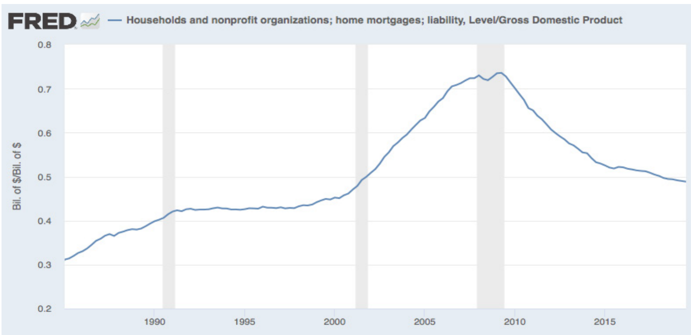
Private vs. Public Debt

The media often discuss the mounting U.S. national debt,[5] with the national debt of the United States being defined as the public debt and other **liabilities** of the federal government.[6] To pay back the public debt, government must raise revenue by taxing citizens. To pay back private debts, households and businesses can either pay lenders out of their incomes or sell existing assets. It's generally undesirable to sell assets, however, especially those needed to generate income, such as a car to get to work or a building to house a business.

At the end of the first quarter of 2019, public loans and debt securities totaled 100 percent of GDP, with federal debt totaling over $18 trillion and contributing 86 percent of the public debt (Table 1).[7] States and local governments contributed the remaining 14 percent. In that same quarter, private loans and debt securities totaled

Figure 2

Home Mortgage Debt as a Percentage of GDP

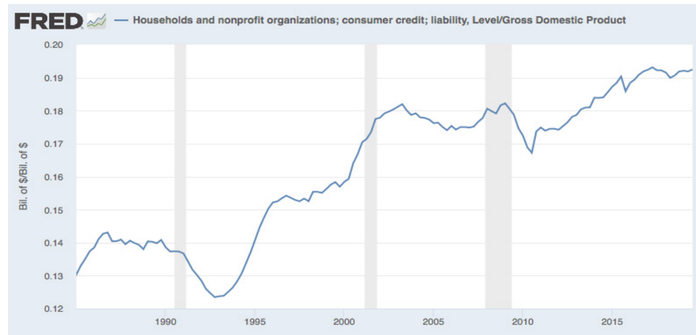


NOTE: Quarterly, seasonally adjusted data. Gray bars indicate recessions as determined by the National Bureau of Economic Research.

SOURCE: Bureau of Economic Analysis and Board of Governors of the Federal Reserve System. FRED®, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/graph/?g=pD5t, accessed January 2020.

Figure 3

Consumer Credit as a Percentage of GDP



NOTE: Quarterly, seasonally adjusted data. Gray bars indicate recessions as determined by the National Bureau of Economic Research.

SOURCE: Bureau of Economic Analysis and Board of Governors of the Federal Reserve System. FRED®, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/graph/?g=pD5s, accessed January 2020.

148 percent of GDP, with businesses and households each contributing half of the private debt burden.

When discussing the public debt, the media often ask whether it is too large and when and how it might negatively affect the economy. Less media attention is given to private debt—even though it is at a higher level and can be just as damaging to the economy. Take, for example, mortgage debt, which was an underlying cause of the Great Recession.[8] In the lead up to the Great Recession, a rapidly growing number of homeowners stopped making mortgage payments and many others defaulted on their loans and lost their homes (discussed more below). Trouble in the mortgage market spread to other markets: Many banks failed, and the ones that survived viewed lending as a riskier proposition in general and were hesitant to offer loans. Therefore, policymakers decided to take action. When the Great Recession began, the Federal Reserve (the central bank of the United States) "acted decisively"[9] to lend money to banks on a short-term basis at low interest rates in order to provide emergency funds to failing banks and insurance companies, encourage lending, and ensure the proper functioning of the **financial system**.[10]

Private Debt Sectors

Home Mortgages

From the early 2000s to 2008, mortgage debt dramatically increased from 45 percent to over 70 percent of GDP (Figure 2) as more and more individuals and families became homeowners. At the time, lending standards had been lowered, allowing for riskier loans—loans to people less likely to have the income or ability to repay their debt. As it turned out, many of these people were ultimately unable to afford their homes, leading to defaults and foreclosures. A widespread decline in house prices also left many people unable or unwilling to make payments on their mortgages, which put the debt securities backed by these mortgages at risk. As many financial firms held MBS, the **solvency** of these firms was also put at risk and they often declined to make loans to each other or nonfinancial firms. This behavior sparked the Great Recession of 2007-09.

Regarding mortgage risk going forward, there is less concern about a housing market crisis than before the Great Recession: Mortgage credit has steadily decreased since 2009, dropping below 50 percent of GDP as of the third quarter of 2019 (Figure 2). For a discussion of private debt risks that researchers believe could lead to a crisis, see the boxed insert.

Consumer Credit

Consumer credit includes many forms of nonmortgage debt such as credit cards, car loans, student loans, and other credit for the purchase of consumer goods and services. Since the early 1980s, consumer credit has increased from 13 percent of GDP to over 19 percent of GDP (Figure 3). While this is small compared with the overall level of private debt (148 percent in the first

Private Debt Warning Signs?

Individual Private Debt Sectors: One of the major causes of the Great Recession was the excessive amount of risky debt in home mortgage markets and the resulting financial crisis. Currently, there has been significant growth in the auto and student loan markets, which could put the economy at risk if the delinquency rate continues to grow.

Total Private Debt: The National Bureau of Economic Research issued a report in 2012 claiming that private debt levels were more predictive of a "crisis" level recession than monetary levels, trade imbalances, or public debt levels.[*] While private debt is high compared with its historical average, it decreased significantly from its elevated level during the Great Recession and has remained flat since (see Figure 1).

Sudden Increases in Total Private Debt: In the five-year period 2002-07, private debt increased by 18 percentage points as a percentage of GDP, with research suggesting that sudden increases of at least 15 percent of GDP within a five-year period is highly predictive of a financial crisis.[†] Currently, business debt has increased to an all-time high (see Figure 4), but total private debt has not increased as it did before the Great Recession (see Figure 1).

Private and Public Debt Combined: One study[‡] suggests that large amounts of public and private debt combined can have a negative impact on economic growth.[§] Specifically, it suggests that if public debt is above 100 percent of GDP and private debt is above 137 percent, there is a high likelihood of stunted economic growth. Currently, public debt is 100 percent of GDP and private debt is 148 percent (see Table 1).

[*]Taylor, Alan M. "The Great Leveraging." NBER Working Paper 18290. National Bureau of Economic Research, August 2012.

[†]Vague, Richard. *The Next Economic Crisis: Why It's Coming and How to Avoid It*. University of Pennsylvania Press, 2014.

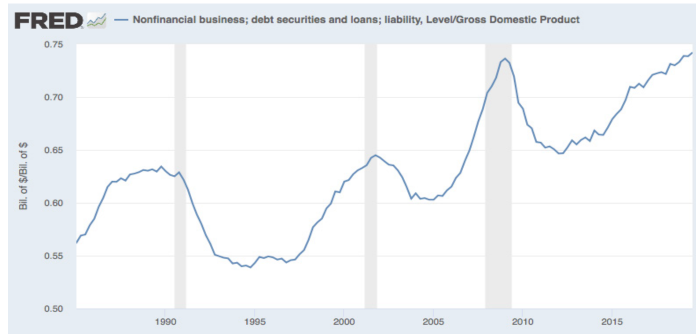
[‡]Caner, Mehmet; Fan, Qingliang and Grennes, Thomas J. "Partners in Debt: An Endogenous Nonlinear Analysis of the Effects of Public and Private Debt on Growth." February 24, 2019; http://dx.doi.org/10.2139/ssrn.3186077, accessed December 2019.

[§]For a summary of the study, see the following: Grabmeier, Jeff. "How the United States Landed in a Debt 'Danger Zone.'" *Ohio State News*, August 21, 2018.

quarter of 2019), the failure of any credit market can potentially have a domino effect on other parts of the economy—as was the case for the mortgage market.

Much of the surge in consumer credit in the mid-1990s (Figure 3) can be attributed to the increased use of credit cards for everyday transactions. Two potential areas for concern, however, are the auto and school loan markets.[11] In the past 10 years, student loan debt has more than doubled,[12] while the delinquency rate (the percentage of loans with missed or late payments) of auto loans has risen to its highest level since 2012.[13]

Figure 4
Nonfinancial Business Debt Securities and Loans as a Percentage of GDP



NOTE: Quarterly, seasonally adjusted data. Gray bars indicate recessions as determined by the National Bureau of Economic Research.

SOURCE: Bureau of Economic Analysis and Board of Governors of the Federal Reserve System. FRED®, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/graph/?g=pD5g, accessed January 2020.

Business Debt

Companies and businesses borrow funds to invest in the buildings and equipment used to produce goods and services. In general, businesses tend to increase their debts during economic **expansions** to help the businesses grow (Figure 4). Then, when a recession hits they tend to decrease their debt and cut back on investment or in some cases default (not pay what they owe). Currently, business debt is at an all-time high of 74 percent of GDP (Figure 4), with corporations alone nearing $10 trillion in debt by late 2019.[14]

Conclusions

The media pays much attention to public debt and whether it negatively affects the economy but much less attention to private debt—debt incurred by households and businesses. Private debt, however, is currently larger than public debt and typically at greater risk for nonpayment. Although all debt levels are relatively high historically, total private debt is currently lower than during the Great Recession. That is, private debt has not increased dramatically as it did in the lead-up to the

Great Recession. Debt from auto and student loans has been on the rise in recent years, however, which could be interpreted as a warning sign for our economy. ■

Notes

[1] For a more detailed discussion of bonds, see the following: Flowers, Barbara. "Financing Businesses and Public Projects with Stocks and Bonds." Federal Reserve Bank of St. Louis *Page One Economics*®, October 2016.

[2] For example, the U.S. Department of Housing and Urban Development is a government housing agency created to encourage home ownership, including for populations for whom home ownership may not otherwise be financially possible. Within this agency, a government corporation called Ginnie Mae guarantees payments on mortgages and MBS created by approved lenders.

[3] Nonprofits organizations include charities, churches, and other organizations that are not permitted to earn a profit from their activities or services.

[4] Yoo, Peter S. "Still Charging: The Growth of Credit Card Debt between 1992 and 1995." Federal Reserve Bank of St. Louis *Review*, January/February 1998, *80*(1), pp. 19-27.

[5] For a more detailed discussion of the national debt, see the following: Wolla, Scott A. and Frerking, Kaitlyn. "Making Sense of the National Debt." Federal Reserve Bank of St. Louis *Page One Economics*®, November 2019.

[6] The "national debt" of the United States (or any other nation) includes all liabilities, both debt and nondebt. Whereas debts signify a promise to pay back borrowed funds, a nondebt liability signifies a promise to provide future payments or assets in instances where funds were not borrowed. For example, when a business promises to pay its workers for hours already worked, that pending payment is a nondebt liability.

[7] While federal debt totaled over $18 trillion, the "national debt," which includes nondebt liabilities, was $20.6 trillion in the first quarter of 2019 (Table L.106 Federal Government, Line 16, Z.1 Financial Accounts of the United States, First Quarter 2019, Federal Reserve Statistical Release).

[8] The Great Recession is the U.S. recession that lasted from December 2007 to June 2009. It also refers to the global decline in economic activity that occurred around the same time.

[9] Lopez, David A. "Then and Now: Fed Policy Actions During the Great Depression and Great Recession." Federal Reserve Bank of St. Louis *Liber8 Economic Information Newsletter*, November 2011.

[10] Krugman, Paul. "The 2008 Financial Crisis as Seen from the Top." *New York Times*, April 16, 2019.

[11] Weller, Christian. "In Next Recession, Household Debt Will Feature Big Again." *Forbes*, July 15, 2019.

[12] Tatham, Matt. "Student Loan Debt Climbs to $1.4 Trillion in 2019." *Experian*, July 24, 2019.

[13] Coppola, Gabrielle. "Auto-Loan Delinquencies Are the Highest Since 2012." *Bloomberg*, February 12, 2019.

[14] Lynch, David J. "Corporate Debt Nears a Record $10 Trillion, and Borrowing Binge Poses New Risks." *Washington Post*, November 29, 2019.

Name______________________________ **Period**________

Federal Reserve Bank of St. Louis *Page One Economics*®:

"Making Sense of Private Debt"

After reading the article, answer the following questions:

1. Which of the following does not represent a form of debt?
   a. A home mortgage
   b. A student loan
   c. A company stock certificate
   d. A corporate bond

2. Which of the following is typically not associated with borrowing?
   a. You wish to buy a car.
   b. You would like to open a checking account.
   c. You need to pay your tuition bill at the university you attend.
   d. You are shopping for your first house.

3. All of the following are forms of private debt except
   a. a car loan.
   b. a mortgage debt security.
   c. a business investment loan.
   d. a U.S. savings bond.

4. As of 2019, in what period was total private debt the highest as a percentage of GDP?
   a. The late 1950s when the United States was still paying off debts from World War II
   b. The late 1970s, because of high interest rates
   c. The late 2000s when consumers increased their borrowing levels for home purchases
   d. In 2019, since total private debt has consistently increased over time

5. As of the first quarter of 2019, what is the total private debt level for households as a percentage of GDP?
   a. About 150 percent
   b. About three quarters
   c. About half
   d. About 20 percent

6. According to the article, all of the following were significant contributors to the Great Recession except
   a. the Federal Reserve's measures to lend money to banks on a short-term basis.
   b. the sudden decline in home prices in markets across the United States.
   c. risky lending practices where banks lent money to home buyers with very little income.
   d. homeowners not being able to make payments on their mortgages.

7. As of the first quarter of 2019, what percentage of nonfinancial private debt is owed by businesses?
   a. About 150 percent
   b. About three quarters
   c. About half
   d. About 20 percent

8. According to the National Bureau of Economic Research, which of the following is most predictive of a crisis-level recession?
   a. Private debt levels
   b. Public debt levels
   c. Trade deficits
   d. Monetary levels