

Where Are Households in the Deleveraging Cycle?

By R. Andrew Bauer and Betty Joyce Nash

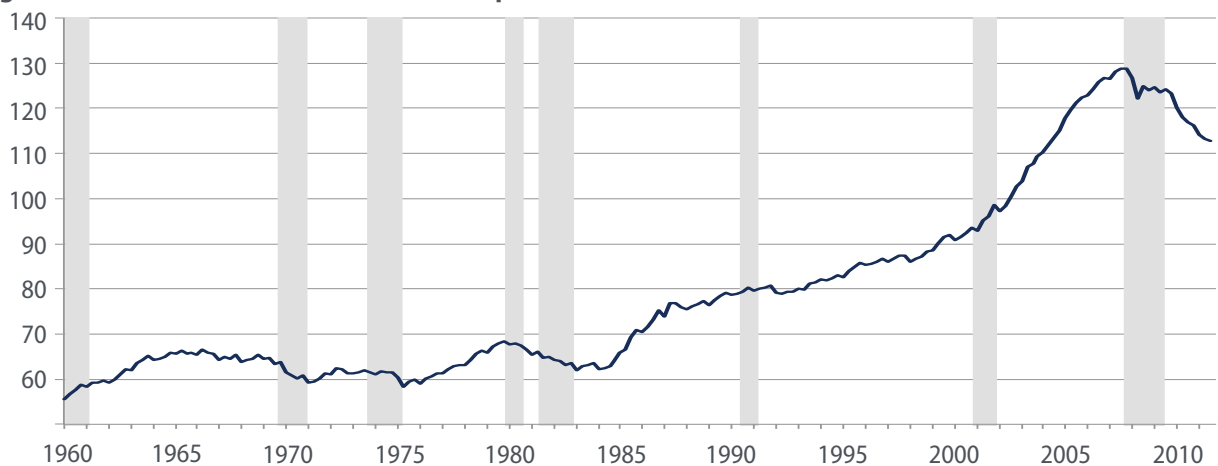
The ratio of household debt to disposable personal income fell rapidly during the recession of 2007–09 as consumers defaulted on loans, paid down debt, and took out fewer loans. According to some economists, this household debt reduction—“deleveraging”—has constrained consumer spending, contributing to a longer, deeper recession and a slower recovery. As households strengthen their balance sheets, their ability to take on new debt to finance consumption is improving. But household debt remains elevated by historical standards, and other determinants of consumer spending remain weak.

The great leveraging of America began in the mid-1980s with the wider use of credit cards and the introduction of home equity lines of credit. By 2000, household debt had grown to more than 90 percent of disposable personal income, and by the end of 2007, it had peaked at 129 percent. (See Figure 1.)

Much of the growth in household debt came from increases in mortgage liability. Rising house prices and attractive mortgage financ-

ing encouraged more people to buy starter homes, bigger homes, better homes, and second homes. Credit innovation and expansion also enabled formerly nonqualifying households to obtain mortgages. All of these factors contributed to an increase in mortgage liability in the household sector of about 85 percent in real terms from 2000 to 2007. Although mortgage debt surged during that period, household net worth also increased, due to stock market gains and rising home values. This increase in house-

Figure 1: Household Debt as a Percent of Disposable Personal Income



Source: Federal Reserve Board of Governors, Flow of Funds Accounts of the United States

hold net worth produced a wealth effect that helped fuel strong growth in consumer spending.

In a 2011 paper, Karl E. Case of Wellesley College, John M. Quigley of the University of California at Berkeley, and Robert J. Shiller of Yale find a large wealth effect on consumption from rising house prices and an equally significant effect from falling house prices.¹ Other studies caution that housing wealth has only a small effect on consumption,² but as housing prices surged in the late 1990s and early 2000s, consumers clearly boosted spending faster than their incomes rose. That trend was reflected in the personal saving rate, which fell from 5.3 percent of disposable income in 1995 to 1.5 percent in 2005.

The rise and subsequent fall in real estate equity over the period was remarkable: equity in household real estate peaked at \$13.3 trillion in the first quarter of 2006 before plummeting to \$5.5 trillion in the third quarter of 2011 in 2005 dollars. (See Figure 2.)

During that time, household debt fell to 113 percent of disposable personal income, a level not seen since 2004. Net borrowing fell as consumers defaulted on loans, paid down debt, and took out fewer loans. Newly originated installment loan balances for cars and mortgages fell sharply. There was a wave of mortgage defaults as well as a sharp increase in defaults on credit card debt and consumer loans. The personal saving rate rose from 1.5 percent

in 2005 to 5.4 percent in 2008 and remained above 5 percent through 2010. This deleveraging has improved households' balance sheets and their capacity to spend, but growth in consumer spending during the recovery has remained near 2 percent, considerably weaker than during previous recoveries following severe recessions.³

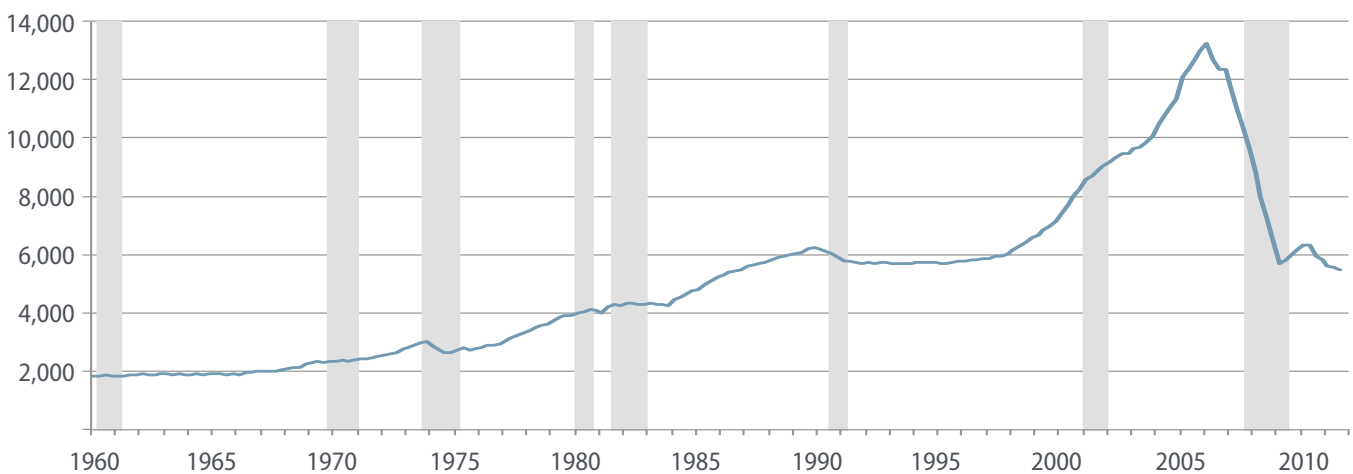
The Liquidity Hypothesis

Consumers make spending decisions based on their net worth, current income, and expectations of future income. Expectations of future income are particularly important because durable goods spending usually requires borrowing and repayment of loans in the future. In fact, the GDP components that first declined in 2007 and early 2008 were fixed residential investment and durable goods consumption, which households usually finance with debt.

As home prices fell during the recession of 2007–09 and in the subsequent recovery, spending was very likely affected by the decline in household wealth and the uncertainty about when home prices would stabilize. Consumer spending also may have been affected by the level of indebtedness among households and by households' concerns regarding their financial situations.

One theory that links household indebtedness to consumer spending was advanced in the 1970s by Frederic S. Mishkin, an economist at the Uni-

Figure 2: Equity in Household Real Estate (In Billions of 2005 Dollars)



Source: Federal Reserve Board of Governors, Flow of Funds Accounts of the United States

versity of Chicago at the time who later served on the Federal Reserve Board of Governors. Under the liquidity hypothesis, consumers who face financial distress prefer liquid assets (cash) rather than illiquid assets, such as cars and homes. When consumers have high debt levels, they also face higher debt-service payments as well as other obligations that exacerbate financial distress. As the likelihood of further financial trouble increases, they purchase fewer tangible assets, such as consumer durables. To support this hypothesis, Mishkin studied household balance sheets and consumer spending during the Great Depression and the recession of 1973–75. He found that “balance sheet effects” strongly affected both economic downturns. He estimated that during the Great Depression, rising debt caused consumer durables spending to drop more than 20 percent and housing expenditures to fall 40 percent.⁴ Mishkin’s model found that “the liquidity balance-sheet channels were potent enough to explain fully the drop in these two sectors.”

Similarly, he found that “a substantial proportion of the decline in aggregate demand [during the 1973–75 recession] can be attributed to shifts in the aggregate household balance sheet and the depressive effect of the stock market on investment.” He estimated that the sharp decline in the stock market and subsequent deterioration of household balance sheets and investment were responsible for roughly half of the decrease in aggregate demand in the 1973–75 recession.⁵

While the liquidity hypothesis has an intuitive appeal, it should be noted that many factors affect household balance sheets. Mishkin notes that household balance sheets are endogenous—that they are influenced by other developments in the economy. His research attempts to identify transmission mechanisms that affect the severity and duration of recessions, but he does not argue that changes in balance sheets cause recessions. Indeed, changes in balance sheets also likely reflect changes in consumer expectations of future income and, as a consequence, other developments in the economy that affect those expectations affect consumer decisions to spend, take on more debt, or save.

More recently, economists Atif R. Mian of the University of California at Berkeley and Amir Sufi of the University of Chicago examined household leverage and spending across the United States at the county level during the recession of 2007–09. They noted that U.S. counties with large increases in household borrowing from 2002 to 2006 showed sharp relative declines in durable goods consumption that began a year before the recession’s official start. They estimated the impact of growth in household leverage and credit card usage on auto sales, unemployment, home appreciation, residential building permits, and mortgage default rates. They found that an increase in household leverage was a powerful statistical predictor of the severity and timing of the economic downturn across counties. In addition, counties with greater credit card borrowing consumed significantly fewer durable goods after the 2008 financial crisis. They concluded that their findings lent “support to the hypothesis that the initial economic slowdown was a result of a highly-leveraged household sector unable to keep pace with its debt obligations.”⁶

Whether the sharp decline in durable goods purchases resulted from higher levels of indebtedness and concerns regarding financial distress or from lower expectations of future income, or some combination of both factors, is difficult to discern. But light-vehicle sales fell 35 percent from 2007 to 2009, while existing home sales dropped 42 percent from 2005 to 2008, and the current level of sales for both remain well below pre-recession levels. Some argue that the high level of indebtedness remains a significant factor weighing on households and, as a result, consumer spending will remain moderate as households continue to deleverage. However, if expectations regarding future income are more important and consumer debt levels are less of a factor, then a return to stronger consumer spending in the near term would be more likely.

Improving Credit Conditions

Recent indicators suggest that credit conditions are improving, and there are early signs of consumer willingness to take on new debt. Delinquency rates on mortgages and other loans continue to decline. Consumer credit outstanding has increased by 2.7

percent through October 2011 after decreasing 5 percent from July 2008 to September 2010. Revolving credit (credit cards and other unsecured loans) fell 18.7 percent from its peak in September 2008 through April 2011. Since then, revolving credit has shown signs of stabilization, increasing in four of the past six months. Nonrevolving credit, however, has been improving for more than a year, increasing 5.4 percent from May 2010 through October 2011.⁷ Greater demand for loans to purchase automobiles and light trucks has accounted for a portion of the improvement. Those sales have increased 13 percent since May 2010.

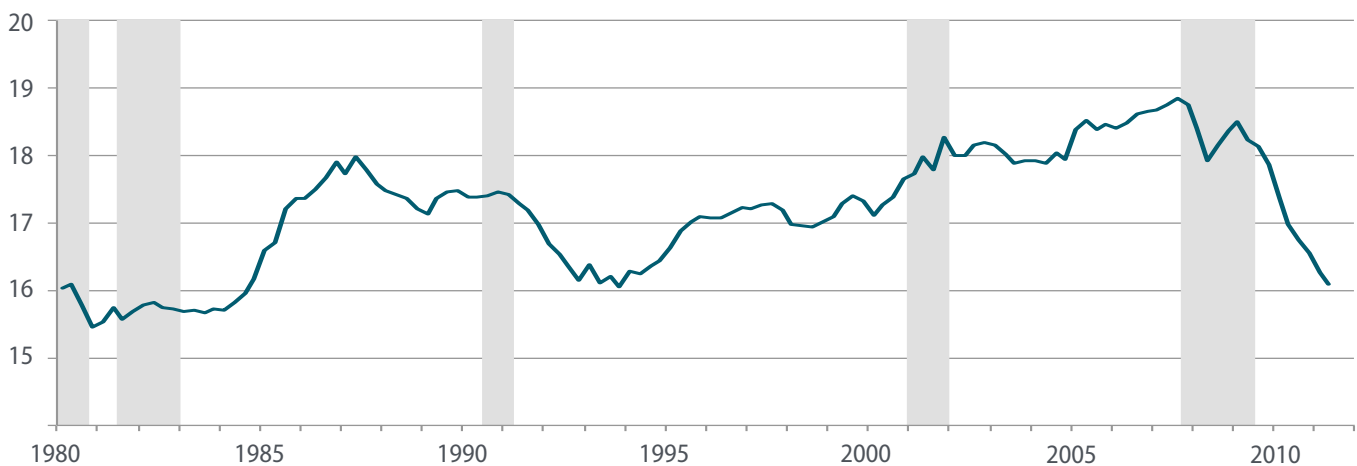
In addition, the latest Federal Reserve Board's Senior Loan Officer Opinion Survey, released in October 2011, reported increased consumer demand for loans to purchase homes. The survey is a sample selected from the largest banks in each Federal Reserve district. Demand for home equity loans declined, and consumer-loan demand changed very little. But nearly 24 percent of the survey respondents reported eased spreads of auto-loan rates over the banks' cost of funds. Twenty-one percent of respondents reported moderately stronger demand from individuals or households for auto loans.

Perhaps the most significant indication of improved credit conditions has been the sharp decline in household financial obligations, as indicated by the

household financial obligations ratio constructed by the Federal Reserve Board of Governors. (See Figure 3.) The household financial obligations ratio indicates the percentage of household disposable income that is required to service debts and other obligations such as apartment rents, automobile leases, homeowners' insurance, and property taxes. During the housing boom, the financial obligations ratio rose from nearly 17 percent in early 1995 to almost 19 percent in 2007. Since then, the combination of household deleveraging and lower interest rates has produced a sharp decline in the financial obligations ratio. Deleveraging has reduced the overall level of household debt. At the same time, substantially lower interest rates have enabled many homeowners to refinance outstanding liabilities and reduce debt-service payments. Over the course of the recession and recovery, the financial obligations ratio has dropped sharply to nearly 16 percent in the third quarter of 2011—its lowest level since 1993.

Homeowners accounted for all of the decline in the financial obligations ratio during the recession. Early in the downturn and during the recovery, renting households deleveraged slightly, but their financial obligations ratio has hovered between 26 percent and 24 percent for the past seven years. The period of rapid deleveraging for renters followed the 2001 recession as their financial obligations ratio fell from 31 percent to 25 percent by 2005.

Figure 3: Household Financial Obligations as a Percent of Disposable Personal Income



Note: In addition to debt payments, household financial obligations include such things as payments for apartment rents, automobile leases, homeowners' insurance and property taxes.

Source: Federal Reserve Board of Governors

Balance-sheet behavior also varies considerably among different types of homeowners. For example, those who bought homes in late 2005 to 2007—at peak prices with small down payments—may hold mortgages that exceed the market values of their homes. Underwater mortgages are particularly prevalent in states that experienced dramatic spikes in home prices. It is likely that these homeowners have been unable to refinance and take advantage of lower mortgage rates. According to CoreLogic, about 22 percent of homeowners with mortgages are underwater. These households' loss of equity and weaker financial position is likely to depress spending. Given the sluggish transition in the housing market, it may take significantly more time for these households to fully recover.

More Deleveraging to Come?

Household deleveraging appears to have played a significant role in the recession of 2007–09 and the anemic recovery, but the degree to which deleveraging will continue to dampen consumer spending and the broader economy is unclear.

While household debt relative to disposable personal income remains elevated by historical standards, lower interest rates have significantly reduced the cost of servicing that debt. Many households have improved their balance sheets in recent years and reduced their financial obligations as a percent of their incomes; others remain constrained by liabilities accrued during the housing boom and the recession. The household sector as a whole, however, has made progress in repairing balance sheets, as suggested by modest improvements in credit conditions.

Other factors also have constrained spending significantly during the recovery. Continuing declines in home prices have diminished household net worth, and further home price weakness is expected. Weak employment growth and persistently high unemployment have curtailed income growth and created

uncertainty about future income. Consequently, consumers may remain cautious about spending and taking on more debt until there is greater clarity regarding labor markets and the housing sector. ■

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Endnotes

- ¹ Karl E. Case, John M. Quigley, and Robert J. Shiller, "Wealth Effects Revisited 1978–2009," NBER Working Paper No. 16848, March 2011.
- ² For example, see Charles Calomiris, Stanley D. Longhofer, and William Miles, "The (Mythical?) Housing Wealth Effect," NBER Working Paper No. 15075, June 2009.
- ³ Annualized quarterly growth in real consumer spending averaged more than 6 percent over the four quarters following the end of the 1973–75 and 1981–82 recessions and nearly 5.5 percent over the subsequent eight quarters.
- ⁴ Frederic S. Mishkin, "The Household Balance Sheet and the Great Depression," *Journal of Economic History*, December 1978, vol. 38, issue 4, pp. 918–937.
- ⁵ Mishkin, "What Depressed the Consumer? The Household Balance Sheet and the 1973–75 Recession," *Brookings Papers on Economic Activity*, 1977, vol. 1, pp. 123–164.
- ⁶ Atif R. Mian and Amir Sufi, "Household Leverage and the Recession of 2007 to 2009," NBER Working Paper No. 15896, April 2010.
- ⁷ Nonrevolving credit includes secured and unsecured loans for automobiles, durable goods, vacations, and other purposes.

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