

Household Wealth in Freefall

Americans' Private Safety Net in Tatters

Christian E. Weller and Jessica Lynch April 2009

Center for American Progress



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Introduction

Family wealth in the United States continues to take a beating as its housing market and financial markets suffer from the 16-month-and-running Bush recession. Household assets in our country dropped sharply after reaching an \$81 trillion peak in June 2007. By the end of December 2008—the last full quarter for which data are available and one full year into the current recession—about \$15 trillion in private family assets and wealth had evaporated.

This is the sharpest relative wealth decline in more than 50 years. Between June 2007 and December 2008, inflation-adjusted personal wealth fell by 22.8 percent—the fastest decline since the Federal Reserve began collecting this information in 1952. And what a drop it was. The previous record for an 18-month decline in wealth—between March 1973 and September 1974 amid the first oil price crisis—was only 12 percent.

Our financial markets and the U.S. housing market continue to plummet since the end of last year, which suggests that family wealth continues to decrease as well. This is an extremely serious crisis that deserves public policy attention. Private wealth serves critical functions in a free-market economy that relies heavily on individual initiative. Private wealth is the primary insurance against a range of economic risks.

The more private wealth a typical family possesses, the less a family has to worry about the basic life necessities and can focus more on long-term economic growth. A family that has the basic necessities covered is better situated to send kids to college and to let them choose a degree that suits their abilities. With a store of private wealth, family members also can more easily switch jobs to match their particular skills. And a family with enough wealth is in a better position to let their creative spirits take hold and start a new business.

In short, everyone in society wins when families have enough stored wealth to enable their members to gain more skills and apply those skills most effectively in their job or by starting a business.

So how did we as a society allow such massive losses of wealth? And how can government policy help ensure that it doesn't happen again? Let's first consider some of the microeconomic causes of today's private wealth crisis. First and foremost, price declines in housing and financial assets wreaked havoc on family wealth, but the losses might not have been so severe if the personal saving rate in the United States had not fallen to historic lows. Families simply did not prepare for the eventuality of bear markets by saving more.

Second, the growth of wealth slowed after 2001 due to an unprecedented debt boom. Sharply higher debt levels meant that wealth rose more slowly than assets, leaving families with even less of a buffer if anything went wrong. This rising leverage—measured by the ratio of debts to assets—was driven by the upswing in asset prices, mainly housing prices, though the stock market also saw healthy gains during most of this period. While leverage during an upswing in asset prices means that families can invest in an asset with little of their own money at stake, the opposite is true for a downturn in assets. When asset prices fall, what little equity stake a family has in an investment—primarily its home—is quickly wiped out. This was especially true during the past boom, when leverage increased rapidly just before the crisis.

The lack of financial diversification became a third factor that contributed to the massive loss of family wealth, accompanied by increasing leverage. Families went deeper into debt to afford ever more costly homes, leaving little or no money saved outside of their home. A drop in housing prices thus took a much bigger hit on total family wealth because homes had become a much larger share of total family wealth than was the case in the past.

Lack of diversification also left those families with investments outside their homes more exposed to a crash in the stock market. Since the stock market bull run started in 1983, individual investors in equities have not rebalanced their portfolios appreciably into other financial assets besides houses as stock prices rose and fell before rising higher again amid the next stock market bull run. As a result, the share of families' financial assets, especially those held in retirement account, was increasingly invested in stocks, either directly in brokerage accounts or indirectly through mutual funds. When the crisis struck, families stood to lose more of their total assets as a share of a fall in the stock market than was the case before, when families were better diversified.¹

Policymakers need to address these problems facing average American families trying to accumulate enough private wealth to invest in their futures. The first order of business is to help families reverse their very low levels of savings by investing in more assets. Families also should be encouraged to diversify their assets to avoid losing too much in a market downturn. And finally, public policy should help families avoid excessive leveraging. Borrowing to get ahead in life can be a useful tool to build wealth. After all, you are buying assets with somebody else's money. But the debt levels prior to the Bush recession were clearly unsustainable. Public policy should put the mechanisms in place now to prevent a similar situation from recurring.

In the following pages, we will examine in detail the free fall in household wealth since the beginning of this current crisis to understand how that \$15 trillion in lost wealth since June 2007 came about. In the end, we believe you'll agree that increased savings, more asset diversification, and more prudent borrowing will enable American families to create more private wealth. We also believe you'll agree government policymakers have a role to play making these things happen.

Household wealth in freefall

Putting economic data in context is especially important when dealing with unfathomably large figures, such as the trillions of dollars of private family wealth lost since mid-2007. The most relevant context for household wealth is a comparison to after-tax income. Wealth is, after all, primarily meant as a store of future income.

The ratio of wealth to after-tax income has trended up over time since the United States has experienced a number of asset bubbles—the emerging markets boom of the early 1990s, the dotcom boom of the late 1990s, the housing boom earlier this decade, and the commodities bubble early last year even as the recession began to bite. That is, many of the increases in household wealth were simply not sustainable and many gains were likely to disappear as market inevitably corrected.

Interestingly, however, after-tax income growth has gradually slowed over time since the early 1980s. This means family wealth has had to grow slower than in the past just to keep up with income growth. Put differently, even if wealth had just increased at its historical rate, the ratio of wealth to after-tax income would have increased over time.

There are, however, economic reasons, why wealth relative to after-tax income should be rising to higher levels than in the past, although the newly reached wealth levels need to be sustainable, unlike the recently reached wealth peaks. That is, families are in need of more wealth than in the past but these gains should not come at the expense of increased risk exposure, as was the case in the past few years. Private wealth is an individual's income insurance mechanism, capable of filling the gaps that other insurance mechanisms leave behind, such as employer-provided health and retirement benefits or publicly provided support such as unemployment insurance. The value of all of these other insurance mechanisms for households, however, has decreased over time. That means personal wealth has become more important over time.

Because of this growing proportion of private wealth the large losses that families experienced in 2007 and 2008 contributed to a sharp increase in economic insecurity. Recent data released by the Federal Reserve shows a record drop in household wealth between June 2007 and December 2008, the last quarter for which complete data are available.² As seen in Figure 1 on page 4, total net worth as a percent of after-tax income was substantially lower in December 2008 than at the start of the current business cycle, which started in December

2007, due to the onset of the Bush recession. In fact, by the end of 2008, total wealth relative to after-tax income was at its lowest level since March 1995. It is as if the stock market boom of the late 1990s and the housing boom of the early 2000s had never happened.

This sharp downturn in household wealth reflected a sharp decline in both real estate wealth and financial assets. Housing wealth fell from being twice the value of after-tax income during the last business cycle to about 20 percentage points less relative to after-tax income in 2008. At the same time, the ratio of financial assets to after-tax income decreased by about 10 percentage points. Given that the importance of accumulating wealth has increased over time, this sharp decline is magnified in its loss of economic security for families.

More dramatically, Figure 2 shows that during the first year of the current business cycle, which began in December 2007, the value of assets fell by more than 120 percentage points relative to after-tax income. This decrease was vastly greater than any previous change during the first year of the past nine business cycles.

People stopped saving before the crisis hit

Why such a free fall in household wealth? The last business cycle, from March 2001 through December 2007, was accompanied by historically low personal saving rates. For the entire business cycle, personal saving as a share of personal after-tax income averaged 1.4 percent, or less than one-third of the 1990s as Figure 3 shows on page 5. Put differently, families built wealth at an alarmingly low rate. The flipside of this was that families had less of a buffer, when things went wrong, than they otherwise would have had.

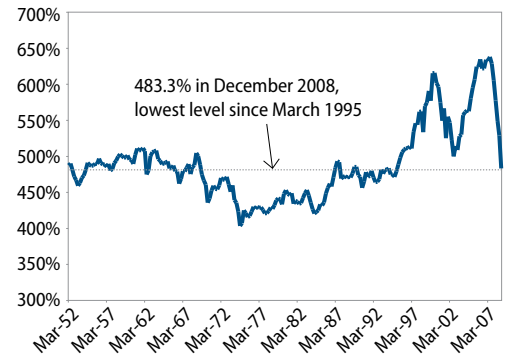
Economists generally struggle to explain why personal saving in the United States declined after the 1980s and remained low for so long. One partial explanation may be the so-called wealth effect.³ The asset market booms of the 1990s and 2000s propelled people's wealth beyond what they had expected and thus they saved less since their overall wealth goals were met. This may also explain the increase in the saving rate after 2007 (Figure 3), which coincided with a bursting housing bubble and a declining stock market.

Another explanation is simply that family incomes grew much more slowly than in the past, while prices for important consumption

Economic security at lowest level since March 1995

Wealth and assets to after-tax income from 1982 to 2008

Share of after tax income



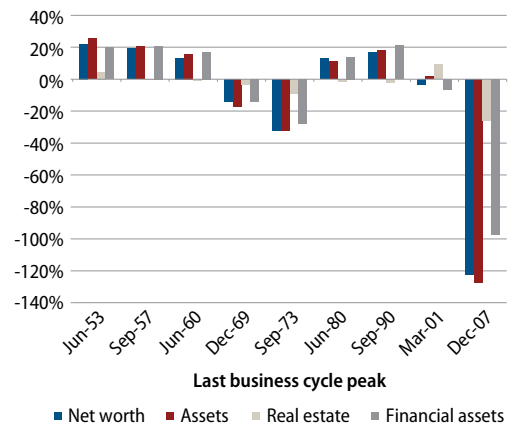
Notes: Authors' calculations based on Board of Governors, Federal Reserve System, Release Z.1, "Flow of Funds Accounts of the United States" (Washington, DC: BOG, 2009).

FIGURE 1

Household wealth plunges in 2008

Change in wealth and assets relative to after-tax income during the first year of the business cycle over the past nine business cycles

Percentage point change during first year of business cycle



Notes: Authors' calculations based on Board of Governors, Federal Reserve System, Release Z.1, "Flow of Funds Accounts of the United States" (Washington, DC: BOG, 2009).

FIGURE 2

items—health care, energy, and housing—quickly increased. This put families in a bind in the 2000s. Families thus cut back further in personal saving in the 2000s.

An unprecedented debt boom preceded an unprecedented wealth decline

The companion to the low saving rate was a debt boom. In 2007, more than 77 percent of families owed some type of debt.⁴ The two most common types of debts households owed are mortgage debt and consumer credit such as credit cards and consumer loans such as car loans.⁵

Over the past decade, demand for credit and the rising levels of debt to meet that demand was the result of multiple factors. Harvard law professor Elizabeth Warren, now the chair of the Congressional Oversight Panel that keeps tabs on the federal government’s Troubled Asset Relief Program, argues that household debt grew because income did not kept up with consumption.⁶ In addition, subprime lending and securitized debt became more popular,⁷ increasing the ability of lenders to take more risks when offering credit. Ultimately, the increase in supply and demand led to an unprecedented expansion of debt among low-income and middle-income families.⁸

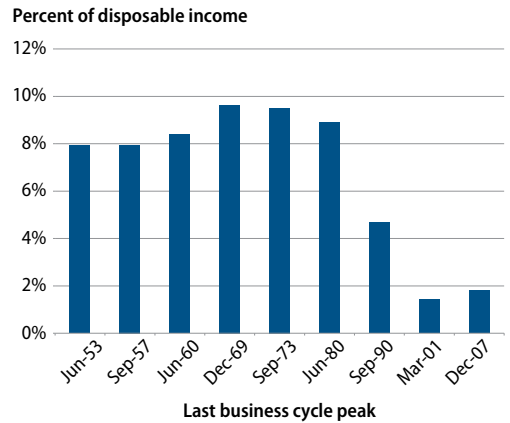
Debt continued to break previous record high numbers because more Americans began borrowing money against their homes to finance other expenditures. This leveraging of housing assets magnified changes in property values. Until the bursting of the housing bubble, most families assumed that housing prices would appreciate and thus could fuel a rapid increase in household debt.⁹ Based on data collected by the Federal Reserve, in 2001 total credit became greater than disposable income for the first time in the collection of the data—and this happened as the economy was coming out of recession.¹⁰

These data also suggest that debt was greater than it has ever been during a business cycle. On average, debt amounted to more than 130 percent of after-tax income in 2008 as Figure 4 shows. This was 12 percentage points higher than during the previous business cycle, from March 2001 to December 2007. In short, families carried high levels of debt into the Bush recession that they had built up during the boom years.

This was primarily a result of more mortgage borrowing. Total debt grew alongside mortgages, while other consumer debt, although higher

Low savings exacerbate declines in household wealth

Average savings rate over the past nine business cycles

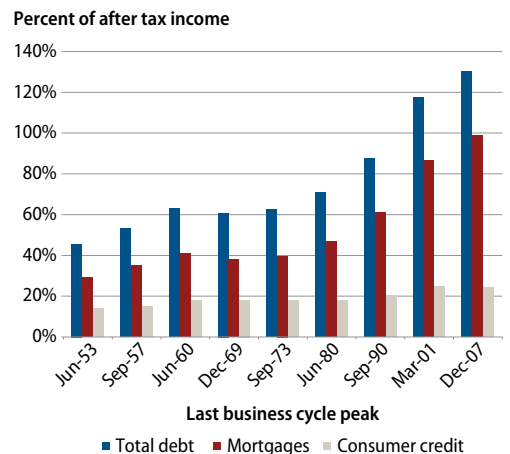


Notes: Authors’ calculations based on Bureau of Economic Analysis, “Personal Income and Its Disposition” (Washington: BEA, 2009).

FIGURE 3

Debt levels soar before the Bush recession

Average debt to after-tax income over the past nine business cycles



Notes: Authors’ calculations based on Board of Governors, Federal Reserve System, Release Z.1, “Flow of Funds Accounts of the United States” (Washington, DC: BOG, 2009).

FIGURE 4

than before, only increased moderately. Families in essence used their homes as ATMs and relied less heavily on credit cards and other consumer loans such as car loans.

The data further show that only in the first year of one previous business cycle, 1953, did all forms of household debt—mortgages and other consumer debt—increase during the first year of a new business cycle. Moreover, the increase in debt to after-tax income was substantially larger after the recession started in 2001 than after any previous business cycle peaks as Figure 5 shows. That is, consumers borrowed more heavily to maintain their consumption during the last recession than during prior ones. In fact, this marked the beginning of the fastest debt expansions during any business cycle since World War II.¹¹

Leverage

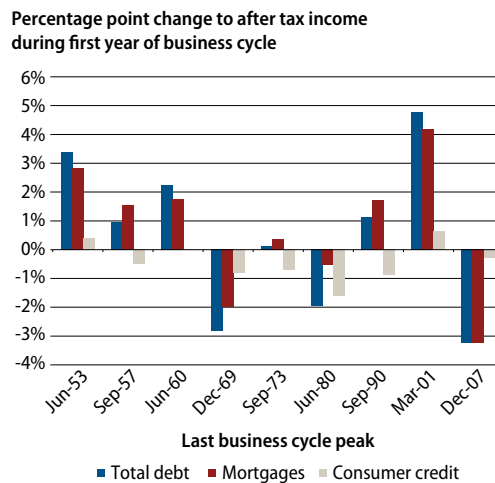
With the rise of housing prices during the early 2000s, many American families increased their debt to own a home or as a way to increase their consumption. Higher home prices meant that first-time homeowners had to take on more debt to own a home, but also that current homeowners had the ability to borrow more against their homes. This increase in total credit happened because many Americans could use leverage to maintain necessary consumption of big ticket items that had become vastly more expensive—energy, housing and health care, in particular—amid falling incomes for the typical family.

Leverage in financial terms usually means using borrowed money to increase the rates of returns on an investment.¹² The Federal Reserve more precisely defines leverage as “the ability to use a small amount of money to attract other funds, including loans, grants and equity investments.”¹³ For families, however, leverage usually means families can acquire assets with other people’s money, opening the door to more homeownership or greater college attendance than otherwise would be the case.

But there is a downside, as we all are very aware of today. Leverage magnifies the effect of changes in price of the original investment. If the changes in prices are positive, leverage can be useful as a way to increase cash flow by tapping the rising value of that asset (usually a home) for cash instead of relying on recurring income from a job to pay for things. If price changes are negative, however, then leverage can eliminate household wealth very quickly. This is especially a problem if household leverage increases sharply during an asset boom—when the chance of a sharp downward correction continuously increases—as was the case over the past few years.

Debt jumps in 2001 as last recession ends

Changes in debt to after-tax income during the first year of the past nine business cycles



Notes: Authors' calculations based on Board of Governors, Federal Reserve System, Release Z.1, "Flow of Funds Accounts of the United States" (Washington, DC: BOG, 2009).

This can have widespread economic ramifications not just for the original borrowers. By definition, leverage is inversely related to home equity. When families are highly leveraged, they own less of their own homes. This means families own smaller shares of their homes while owing more to the banks. As a result, when housing prices fall there is less incentive for homeowners to try to prevent foreclosures. Many homeowners don't feel that it is worth the financial sacrifices to pay their mortgages just so the bank can increase its hold on their homes.

The result: Delinquent mortgages and home foreclosures are becoming more common as the market downturn has spread to all parts of the economy. And this has affected millions of homeowners who did all of the right things but are now losing their jobs and face the consequences of mortgages that are larger than their homes are worth, for instance. According to the Mortgage Bankers Association, in the fourth quarter of 2008 one in nine mortgages was delinquent, 30 days late with payments, or in foreclosure.¹⁴

The rise in leverage is illustrated in Figure 6 by the constant decline in home equity relative to home values after 2002. In the last business cycle, the share of home equity out of the total value of homes was at an all-time low since 1952. By December 2008, home equity was roughly 43 percent of the total value of homes. This shows that homeowners owned smaller and smaller percentages of their homes, and they acquired greater debt relative to the value of their homes.

Then the market downturn hit. In fact, the housing boom came to an end in December 2006, when home equity started to fall—a full year before the recession officially started. From December 2006 to December 2008, real home equity for all families decreased by 37.9 percent. Before the end of the housing boom came to an end in December 2006, the drop in home equity had not fallen more than 10 percent during any two-year period.

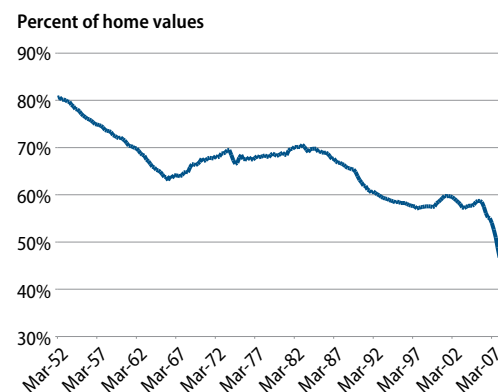
Diversification

Families' risk exposure also grew because of a lack of diversification across assets. But do families understand what diversification means?

Diversification is a technique that can be used to help avoid risks by spreading investments in a variety of assets.¹⁵ In 1952, Harry Markowitz published "Portfolio Selection" in *The Journal of Finance*, which introduced modern portfolio theory. One of the main theories introduced in the piece applied to investment choices and was the theory of diversification among investment choices.¹⁶ Markowitz suggested that diversification across all financial securities and other assets, such as real estate, was key to ultimately minimizing risk.

The shrinking share of household wealth in homes

Share of home equity to home values from 1952 to 2008



Notes: Authors' calculations based on Board of Governors, Federal Reserve System, Release Z.1, "Flow of Funds Accounts of the United States" (Washington, DC: BOG, 2009).

To ensure true diversification, Markowitz said, there should be minimal correlation between types of assets. If market conditions cause rates of returns of one asset category to decline, then uncorrelated asset categories should not decline as well.¹⁷ Historically stocks, bonds, and cash have minimal correlation. If the market conditions cause the returns of one of these asset categories to increase, it generally does not cause returns on another asset to increase.¹⁸ Spreading wealth between assets that are minimally correlated helps to protect family assets from large price declines in one asset class.

Alas, rising home prices during the housing bubble caused individuals to invest more of their wealth in their homes.¹⁹ Families were increasingly less diversified across all of their assets at the time of the financial crisis because of overreliance on homes as a store of wealth, leaving families even more vulnerable to drops in housing prices and the subsequent drop in stock prices.

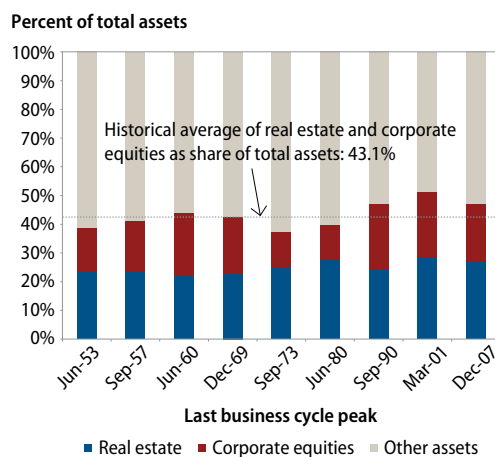
The values of homes, of course, historically account for a large share of a family’s total assets, while stocks make up a large share of retirement accounts as Figure 7 details. In the past real estate and corporate equities made up 43 percent of total assets on average, but by 2001 real estate and corporate equities made up more than 50 percent of total assets on average. This data illustrates that in the latest business cycle, real estate and corporate equities were about 7 percent more of total assets than the historic average—or a relative difference of 16.3 percent. The lack of diversification in asset types made households more susceptible to risk and further exacerbated the decline in household wealth.

Diversification can also apply to the investment choices within a financial portfolio. It is important to note that diversification is often an imperfect protection from financial market risk. In particular, the rates of return on risky assets such as stocks and other assets such as bonds may be correlated. This is because they both reflect—at least in part—the health of the U.S. economy and are linked through innovative financial market products, such as derivatives. This may weaken the protection that diversification can offer, but it does not completely invalidate the protection that diversification can offer to individual savers.

The data in Figure 7 show that over time financial assets became more concentrated in risky assets, specifically corporate equities.²⁰ By March 2007 corporate equities constituted more than 38 percent of financial assets for the first time on record. Through the first year of the current business cycle, from December 2007 to December 2008, the share of corporate equities dropped quickly to 26.2 percent from 36.7 percent, as investors did not rebalance their portfolios during the market downturn.

Homes and stocks are families’ key store of wealth

Real estate and corporate equities to total assets over the last nine business cycles



Notes: Authors’ calculations based on Board of Governors, Federal Reserve System, Release Z.1, “Flow of Funds Accounts of the United States” (Washington, DC: BOG, 2009). Corporate equity holdings are direct and indirect holdings. Indirect holdings are equity investments through pensions and mutual funds. To calculate the indirect holdings, it is assumed that the equity share of mutual funds owned by households does not differ from the overall equity share of mutual funds.

FIGURE 7

Shrinking economic security goes along with rising economic distress

From the middle of 2007 to the end of 2008, American families lost \$15 trillion (in 2008 dollars) due to the crisis in the housing market and the stock market.²¹ This drop is detrimental to families because private wealth serves as insurance against a range of economic risks. When families have more private wealth they worry less about basic necessities and can instead focus on longer-term economic growth.

Beginning in 2005, families started accumulating increasing levels of debt and owning increasingly smaller percentages of their homes, and they consequently watched their home equity as share of total home values decline. Today, the low levels of homeowners' equity make it very easy for even responsible homeowners to owe a lot more on their homes than the homes are worth. Layer massive job losses on top of high leverage and the results are sharply higher homeowner defaults on their mortgages.²² What's more, this decrease in household wealth and decrease in home equity means less consumption as homeowners no longer have the option of using equity in their homes as a source of income, which in terms means less overall economic activity.

Furthermore, families depend heavily on wealth as a means of retirement income. The decline in household wealth creates instability for all Americans. With declines in health insurance coverage, "do-it-yourself" savings, and social programs in general, Americans depend on family wealth for everyday needs. Personal wealth is instrumental for many families as costs of necessities continue to increase. As a result, the loss of trillions of dollars in household wealth has enormous effects on families' financial stability and creates even greater economic risks.

As wealth declines, the financial buffer that is supposed to keep families out of economic troubles vanishes. Not surprisingly, measures of economic distress have risen to near historic highs. At the end of 2008, for example, 11 percent of mortgages were either delinquent or in foreclosure, and the share of credit card debt in default climbed to 6.3 percent of all credit card loans. This credit card default rate is the second-highest level since the Federal Reserve began collecting these data in 1980 and 52.4 percent higher than a year earlier.²³ Finally, the personal bankruptcy rate (cases per 1,000 people) rose to 3.4 percent in the fourth quarter of 2008—an increase of 27 percent since the end of 2007.²⁴

Conclusion

During the financial and economic crisis of 2007 and 2008, families saw their wealth disappear faster than ever before. The sharp losses following the sharp declines in the housing and stock market require action. Importantly, in an era of fewer employer-provided benefits and less long-term government support for income insurance (Social Security, welfare, and unemployment insurance, among others), private wealth plays a more important role than in the past.

Rebuilding these losses to family wealth will require public policy attention. First, it needs to be easier for families to save. This could be accomplished, for instance, by making stronger savings incentives for low-income and moderate-income families. Public policy could promote more automatic enrollment options into retirement savings plans.

Second, public policy should help families avoid potential pitfalls in investing their money, such as putting too many eggs in one basket. For instance, policies could encourage the creation of default investment options in retirement savings plans.

Third, policies should focus on helping families avoid excessive levels of leverage. This could be done by increasing families' access to stable and sustainable credit that is well regulated with transparent and easily understood conditions. Better regulation of deceptive practices and promotion of low-cost, long-term credit options would be a good start.

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Endnotes

- 1 Diversification is not a panacea, especially since some rates of return—for instance on stocks and on bonds—are somewhat related to each other. Individual investors often do not have sufficient access to investment strategies—many of which are loaded with high fees—to achieve optimal diversification. The main point, though, is that individuals typically do not even take the simple steps that are available to them, such as regular rebalancing of their investment portfolios. See, for instance, Mitchell, O., G.R. Mottola, and S. Utkus, “The Inattentive Participant: Portfolio Trading Behavior in 401(k) Behavior,” Pension Research Council Working Paper 2006-5 (Philadelphia, PA: Pension Research Council, Wharton School, University of Pennsylvania, 2005).
- 2 Board of Governors, Federal Reserve System, “Flow of Funds Accounts of the United States,” Release Z.1 (Washington: Federal Reserve, 2009).
- 3 Congressional Budget Office, “Housing Wealth and Consumer Spending” (Washington, DC: CBO, 2007); J.M. Poterba, “Stock Market Wealth and Consumption,” *Journal of Economic Perspectives* 14(2) (2000): 99-118.
- 4 Brian K. Bucks, Arthur B. Kennickell, Traci L Mach, and Kevin B Moore, “Changes in U.S. Family Finances from 2004 to 2007: Evidence from the Survey of Consumer Finances,” *Federal Reserve Bulletin* (Washington: Federal Reserve, 2009).
- 5 Families increasingly switched to adjustable-rate mortgages from fixed-rate mortgages during the boom years. See Christian Weller, “The End of the Great American Housing Boom” (Washington: Center for American Progress, 2006). This increased their risk exposure further, as many adjustable-rate mortgages trade off lower initial mortgage payments against higher payments in the future. That is, families have seen their mortgage payments go up as the value of their homes went down. For more details, see Scott Frame, Andreas Lehnert, and Ned Prescott, “A Snapshot of Mortgage Conditions with an Emphasis on Subprime Mortgage” (Board of Governors of the Federal Reserve System, Federal Reserve Bank of Atlanta, Federal Reserve Bank of Richmond, 2008) and Christopher L. Foote, Kristopher Gerardi, Lorenz Goette, and Paul S. Willen, “Just the Facts: An Initial Analysis of Subprime’s Role in the Housing Crisis,” *Journal of Housing Economics* 17 (4) (2008): 291-305.
- 6 Elizabeth Warren and Amelia Warren Tyagi, *The Two-Income Trap: Why Middle-Class Mothers and Fathers Are Going Broke* (New York: Basic Books, 2002).
- 7 Martin N. Baily, Douglas W. Elmendorf, and Robert E. Litan, “The Great Credit Squeeze: How It Happened, How to Prevent Another” (Washington: Brookings Institution, 2008).
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- 9 Christian Weller, “The End of the Great American Housing Boom” (Washington: Center for American Progress, 2006).
- 10 Ibid.
- 11 Data not shown here. Calculations based on Board of Governors, Federal Reserve System (2009a).
- 12 Petros S. Sivanides, “Mortgage Loans and Real Estate Financing,” Property-Investing.org, available at <http://www.property-investing.org/mortgage.html> (last accessed April 2009).
- 13 U.S. Federal Reserve Education, “Federal Reserve Glossary,” available at <http://www.federalreserveeducation.org/pfed/glossary/glossary.cfm> (last accessed April 2009).
- 14 Mortgage Bankers Association, National Delinquency Survey (Washington: MBAA, 2009).
- 15 U.S. Federal Reserve Education. “Federal Reserve Glossary.”
- 16 Frank J. Fabozzi, Francis Gupta, and Harry M. Markowitz, “The Legacy of Modern Portfolio Theory,” *The Journal of Investing* 11 (3) (2002): 7–22
- 17 Ibid.
- 18 U.S. Securities and Exchange Commission, “Beginners’ Guide to Asset Allocation, Diversification, and Rebalancing” (Washington: Securities and Exchange Commission, 2007).
- 19 Weller, “The End of the Great American Housing Boom.”
- 20 Economists commonly consider corporate equity as risky assets against which other assets, such as real estate and bonds, are compared.
- 21 Board of Governors, Federal Reserve System, “Flow of Funds Accounts of the United States.”
- 22 Weller, “The End of the Great American Housing Boom.”
- 23 Board of Governors, Federal Reserve System, “Charge-off and Delinquency Rates” (Washington, DC: BOG, 2009).
- 24 The national bankruptcy rate includes the Chapter 7 and Chapter 13 bankruptcy rate for the 50 United States, the District of Columbia, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands. Authors’ calculations based on U.S. Courts, “Bankruptcy Statistics: Quarterly Filings: 3 month by Chapter and District” (Washington, 2009) and U.S. Census Bureau, “Annual Estimates of the Population for the United States, Regions and States, and Puerto Rico” (2006). Bankruptcy rates expressed in quarterly terms.

About the authors

Christian E. Weller is Associate Professor in the Department of Public Policy and Public Affairs at the University of Massachusetts Boston and a Senior Fellow at the Center for American Progress.

Jessica Lynch is an Economic Policy Intern at the Center for American Progress.

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