The Asset Price Meltdown and the Wealth of the Middle Class

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Abstract: I find that median wealth plummeted over the years 2007 to 2010, and by 2010 was at its lowest level since 1969. The inequality of net worth, after almost two decades of little movement, was up sharply from 2007 to 2010. Relative indebtedness continued to expand from 2007 to 2010, particularly for the middle class, though the proximate causes were declining net worth and income rather than an increase in absolute indebtedness. In fact, the average debt of the middle class actually fell in real terms by 25 percent. The sharp fall in median wealth and the rise in inequality in the late 2000s are traceable to the high leverage of middle class families in 2007 and the high share of homes in their portfolio. The racial and ethnic disparity in wealth holdings, after remaining more or less stable from 1983 to 2007, widened considerably between 2007 and 2010. Hispanics, in particular, got hammered by the Great Recession in terms of net worth and net equity in their homes. Households under age 45 also got pummeled by the Great Recession, as their relative and absolute wealth declined sharply from 2007 to 2010.

1. Introduction

The last two decades have witnessed some remarkable events. Perhaps, most notable is the housing value cycle which first led to an explosion in home prices and then a collapse, affecting net worth and helping to precipitate the Great Recession. The housing bubble, in turn, was based on questionable mortgage practices and then speculative over-building.

The median house price remained virtually the same in 2001 as in 1989 in real terms.[1] However, the home ownership rate shot up from 62.8 percent in 1989 to 67.7 percent in 2001 according to data from the Survey of Consumer Finances (SCF). Then, 2001 saw a recession (albeit a short one). Despite this, house prices suddenly took off. The median sales price of existing one-family homes rose by 17.9 percent in real terms nationwide. However, from 2004 to 2007 housing prices slowed, with the median sales price of existing one-family nationwide advancing only 1.7 percent over these years in real terms. Over the years 2001 to 2007 real housing prices gained 18.8 percent. The home ownership rate continued to expand, though at a somewhat slower rate, from 67.7 to 68.6 percent.

Then, the Great Recession and the associated financial crisis hit at the end of 2007 and asset prices plummeted. From 2007 to 2010, in particular, the median price of existing homes nose-dived by

[1] The source for housing price data, unless otherwise indicated, is Table 935 of the *2009 Statistical Abstract*, US Bureau of the Census, available at [http://www.census.gov/compendia/statab/].

21 percent in nominal terms and 24 percent in real terms.[2] Moreover, for the first time in 30 years, the share of households owning their own home fell, from 68.6 to 67.2 percent.

The housing price bubble was fueled in large part by a generous expansion of credit available for home purchases and re-financing. This took a number of forms. First, many home owners re-financed their primary mortgage. However, because of the rise in housing prices, these home owners increased the outstanding mortgage principal and thereby extracted equity from their homes. Second, many home owners took out second mortgages and home equity loans or increased the outstanding balances on these instruments. Third, among new home owners, credit requirements were softened, and so-called "no-doc" loans were issued requiring none or little in the way of income documentation. Many of these loans, in turn, were so-called "sub-prime" mortgages, characterized by excessively high interest rates and "balloon payments" at the expiration of the loan (that is, a non-zero amount due when the term of the loan was up). All told, average mortgage debt per household expanded by 59 percent in real terms between 2001 and 2007 according to the SCF data, and outstanding mortgage loans as a share of house value rose from 0.334 to 0.349, despite the 19 percent gain in real housing prices (see Table 4 below).

In contrast to the housing market, the stock market boomed during the 1990s. On the basis of the Standard & Poor (S&P) 500 index, stock prices surged 171 percent between 1989 and 2001.[3] Stock ownership spread and by 2001 over half of U.S. households owned stock either directly or indirectly. However, the stock market peaked in 2000 and dropped steeply from 2000 to 2003, recovered somewhat in 2004, and then rebounded from 2004 to 2007. Over the period from 2001 to 2007, the S&P 500 was up 6 percent in real terms. However, the share of households who owned stock either directly or indirectly fell somewhat to 49 percent from 52 percent in 2001. Then came the Great Recession. Stock prices, based on the S&P 500 index, crashed from 2007 to 2009 and then partially recovered in 2010 for a net decline of 26 percent in real terms. The stock ownership rate also once again declined, to 47 percent.

Real wages, after stagnating for many years, finally grew in the late 1990s. According to BLS figures, real mean hourly earnings gained 8.3 percent between 1995 and 2001. From 1989 to 2001,

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[2] The source is National Association of Realtors, "Median Sales Price of Existing Single-Family Homes for Metropolitan Areas," available at: http://www.realtor.org/sites/default/files/reports/2012/embargoes/2012-q1-metro-home-prices-49bc10b1efdc1b8cc3eb66dbcdad55f7/metro-home-prices-q1-single-family-2012-05-09.pdf.

[3] The source for stock price data is Table B-96 of the *Economic Report of the President, 2012,* available at http://www.gpoaccess.gov/eop/tables12.html.

real wages rose by 4.9 percent (in total), and median household income in constant dollars inched up by 2.3 percent. 2001.[4] Employment also surged over these years, growing by 16.7 percent.[5] The (civilian) unemployment rate remained relatively low over these years, at 5.3 percent in 1989, 4.7 percent in 2001, with a low point of 4.0 percent in 2000, and averaging 5.5 percent over these years.[6] Real wages then rose very slowly from 2001 to 2007, with the BLS real mean hourly earnings up by only 2.6 percent, while median household income gained only 1.6 percent. Employment also grew more slowly over these years, gaining 6.7 percent. The unemployment rate remained low again, at 4.7 percent in 2001 and 4.6 percent in 2007 and an average value of 5.2 percent.

Real wages, on the other hand, picked up from 2007 to 2010, with the BLS real mean hourly earnings increasing by 3.6 percent. In contrast, median household income in real terms declined sharply over this period, by 6.4 percent . Moreover, employment contracted over these years, by 4.8 percent, and the unemployment rate surged from 4.6 percent in 2007 to 10.5 percent in 2010, though it did come down a bit to 8.9 percent in 2011.

There was also an explosion of consumer debt leading up to the Great Recession. Between 1989 and 2001, total consumer credit outstanding in 2007 dollars surged by 70 percent and then from 2001 to 2007 it rose by another 17 percent.[7] There were a number of factors responsible for this. First credit cards became more generally available for consumers. Second, credit standards were relaxed considerably, making more households eligible for credit cards. Third, credit limits were generously increased by banks hoping to make profits out of increased fees from late payments and from higher interest rates.

Another source of new household indebtedness was from a huge increase in student loans. According to the SCF data, the share of households reporting an educational loan rose from 13.4 percent in 2004 to 15.2 percent in 2007 and then surged to 19.1 percent in 2010.[8] The mean value of educational loans in 2010 dollars among loan holders only increased by 17 percent from $19,410 in 2004 to $22,367 in 2007 and then by another 14 percent to $25,865 in 2010. The median value of such

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[4] The wage figures are based on the Bureau of Labor Statistics (BLS) hourly wage series. The source is Table B-47 of the *Economic Report of the President, 2012*, available at *op. cit.* The source for the income data is Table B-33 of the *Economic Report of the President, 2012*, available at *op. cit.*

[5] The figure is for civilian employment. The source is Table B-36 of the *Economic Report of the President, 2012*, available at *op. cit.*

[6] The source is Table B-42 of the *Economic Report of the President, 2012*, available at *op. cit.*

[7] These figures are based on the Federal Reserve Board's Flow of Funds data, Table B.100, available at: http://www.federalreserve.gov/releases/Z1/.

[8] Unfortunately, no data on educational loans are available in the 2001 SCF.

loans first went up by 19 percent from $10,620 in 2007 to $12,620 in 2007 and then by another 3 percent to $13,000 in 2010. These loans were heavily concentrated among younger households and, as we shall see below, was one of the factors (though not the principal one) which led to a precipitous decline in their net worth between 2007 to 2010.

Another important change over the last three decades affecting household wealth was a major overhaul of the private pension system in the United States. As documented in Wolff (2011b), in 1989, 46 percent of all households reported holding a defined benefit (DB) pension plan. DB plans are traditional pensions, such as provided by many large corporations, the federal government, and state and local governments, which guarantee a steady flow of income upon retirement. By 2007, that figure was down to 34 percent. The decline was more pronounced among younger households, under the age of 46, from 38 to 23 percent, as well as among middle-aged households, ages 47 to 64, from 57 to 39 percent.

Many of these plans were replaced by so-called defined contribution (DC) pension accounts, most notably 401(k) plans and Individual Retirement accounts (IRAs). These plans allow household to accumulate savings for retirement purposes directly. The share of all household with a DC plan skyrocketed from 24 percent in 1989 to 53 percent in 2007. Among younger households, the share rose from 31 to 50 percent, and among middle-aged households it went from 28 to 64 percent.

This transformation is even more notable in terms of actual dollar values. While the average value of DB pension wealth among all households crept up by 8 percent from $56,500 in 1989 to $61,200 in 2007, the average value of DC plans shot up more than 7-fold from $10,600 to $76,800 (all figures are in 2007 dollars).[9] Among younger households, average DB wealth actually fell in absolute terms, while DC wealth rose by a factor of 3.3. Among middle-aged households, the value of DB pensions also fell in absolute terms while the value of DC plans mushroomed by a factor of 6.5.

These changes are important for understanding trends in household wealth because DB pension wealth is *not* included in the measure of marketable household wealth whereas DC wealth *is* included (see Section 3 below). Thus, the substitution of DC wealth for DB wealth is likely to lead to an overstatement in the “true” gains in household wealth, since the displacement in DB wealth is not captured (see Wolff, 2011b, for more discussion).

The other big story was household debt, particularly that of the middle class, which skyrocketed during these years, as we shall see below. Despite the recession, the relative indebtedness

[9] The computation of DB pension wealth is based on the present value of expected pension benefits upon retirement. See Wolff (2011b) for details.

of American families continued to rise from 2007 to 2010.

What have all these major transformations wrought in terms of the distribution of household wealth, particularly over the Great Recession? How have these changes impacted different demographic groups, particularly as defined by race, ethnicity, and age? This is the subject of the remainder of the paper.

2. Plan of the Paper

The paper focuses mainly on how the middle class fared in terms of wealth over the years 2007 to 2010 during one of the sharpest declines in stock and real estate prices. As discussed below, the debt of the middle class exploded from 1983 to 2007, already creating a very fragile middle class in the United States. The main interest here is whether their position deteriorated even more over the Great Recession. The paper also investigates trends in wealth inequality, changes in the racial wealth gap and wealth differences by age, and trends in homeownership rates, stock ownership, and mortgage debt. The period covered spans the years from 1962 to 2010. The choice of years is dictated by the availability of survey data on household wealth. By 2010, we are able to see what the fall-out was from the financial crisis and associated recession and, in particular, which groups were impacted the most.

There are six specific issues addressed in the paper. (1) Did the inequality of household wealth rise over time, particularly during the Great Recession? (2) Did median household wealth continue to advance over time or did it fall? (3) Did the debt of the middle class increase over time, especially over the Great Recession? (4) What are the time trends in home ownership and home equity? (5) What happened to stock ownership? (6) How did time trends in average wealth, household debt, the home ownership rate, home equity, and stock ownership vary among different racial and ethnic groups and by age group?

The paper is organized as follows. The next section, Section 3, discusses the measurement of household wealth and describes the data sources used for this study. Section 4 presents results on time trends in median and average wealth holdings, Section 5 on changes in the concentration of household wealth, and Section 6 on the composition of household wealth. In Section 7, I provide an analysis of the effects of leverage on wealth movements over time, particularly over the Great Recession. Section 8 investigates changes in wealth holdings by race and ethnicity; and Section 9 reports on changes in the age-wealth profile. A summary and concluding remarks are provided in Section 10.

Previous work of mine (see Wolff, 1994, 1998, 2002a, and 2011a), using SCF data from 1983 to 2007, presented evidence of sharply increasing household wealth inequality between 1983 and 1989 followed by little change between 1989 and 2007. Both mean and median wealth holdings climbed briskly during the 1983-1989 period as well as from 1989 to 2007. However, most of the wealth gains from 1983 to 2007 were concentrated among the richest 20 percent of households. Moreover, despite the buoyant economy over the 1990s and 2000s, overall indebtedness continued to rise among American families.

The ratio of mean wealth between African-American and white families was very low in 1983, at 0.19 and about the same in 2007. In 1983, the richest households were those headed by persons between 45 and 74 years of age, and the relative wealth holdings of both younger and older families fell between 1983 and 2007, particularly those of the former.

In this study, I look at wealth trends from 1962 to 2010. The most telling finding is that median wealth plummeted over the years 2007 to 2010, and by 2010 was at its lowest level since 1969. The inequality of net worth, after almost two decades of little movement, was up sharply between 2007 and 2010. Relative indebtedness continued to expand during the late 2000s, particularly for the middle class, though the proximate causes were declining net worth and income rather than an increase in absolute indebtedness. In fact, the average debt of the middle class in real terms was down by 25 percent. The sharp fall in median net worth and the rise in its inequality in the late 2000s are traceable to the high leverage of middle class families in 2007 and the high share of homes in their portfolio. The racial and ethnic disparity in wealth holdings widened considerably in the years between 2007 and 2010. Hispanics, in particular, got hammered by the Great Recession in terms of net worth and net equity in their homes. Finally, young households (under age 45) also got pummeled by the Great Recession, as their relative and absolute wealth declined sharply from 2007 to 2010.

3. Data sources and methods

The primary data sources used for this study are the 1983, 1989, 1992, 1995, 1998, 2001, 2004, 2007, and 2010 SCF conducted by the Federal Reserve Board. Each survey consists of a core representative sample combined with a high-income supplement. The high income supplement was selected as a list sample derived from tax data from the IRS Statistics of Income. This second sample was designed to disproportionately select families that were likely to be relatively wealthy (see, for example, Kennickell, 2001, for a diiscussion of the design of the list sample in the 2001 SCF). The advantage of the high-income supplement is that it provides a much "richer" sample of high income and therefore potentially very wealthy families. Typically, about two thirds of the cases come from the representative sample and one third from the high-income supplement. In the 2007 SCF the standard multi-stage area-probability sample contributed 2,915 cases while the high-income supplement contributed another 1,507 cases.

The principal wealth concept used here is marketable wealth (or net worth), which is defined as the current value of all marketable or fungible assets less the current value of debts. Net worth is thus the difference in value between total assets and total liabilities or debt. Total assets are defined as the sum of: (1) owner-occupied housing; (2) other real estate; (3) demand deposits; (4) time and savings deposits, certificates of deposit, and money market accounts; (5) government, corporate, and foreign bonds and other financial securities; (6) the cash surrender value of life insurance plans; (7) the cash surrender value of pension plans, including IRAs, Keogh, and 401(k) plans; (8) corporate stock and mutual funds; (9) net equity in unincorporated businesses; and (10) equity in trust funds. Total liabilities are the sum of: (1) mortgage debt, (2) consumer debt, including auto loans, and (3) other debt such as educational loans.

This measure reflects wealth as a store of value and therefore a source of potential consumption. I believe that this is the concept that best reflects the level of well-being associated with a family's holdings. Thus, only assets that can be readily converted to cash (that is, "fungible" ones) are included. As a result, consumer durables such as automobiles, televisions, and furniture, are excluded here, since these items are not easily marketed, with the possible exception of vehicles, or their resale value typically far understates the value of their consumption services to the household. Another justification for their exclusion is that this treatment is consistent with the national accounts, where purchase of vehicles is counted as expenditures, not savings.[10] As a result, my estimates of household wealth will *differ* from those provided by the Federal Reserve Board, which includes the value of vehicles in their standard definition of household wealth (see, for example, Kennickell and Woodburn, 1999).

Also excluded is the value of future Social Security benefits the family may receive upon retirement (usually referred to as "Social Security wealth"), as well as the value of retirement benefits from private pension plans ("pension wealth"). Even though these funds are a source of future income to families, they are not in their direct control and cannot be marketed.[11]

Two other data sources are used in the study. The first of these is the 1962 Survey of Financial Characteristics of Consumers (SFCC), also conducted by the Federal Reserve Board (see Projector and

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[10] Another rationale is that if cars are included in the household portfolio, their “rate of return” would be substantially negative since cars depreciate very rapidly over time (see Section 8 for calculations of the overall rate of return on the household portfolio).

[11] See Wolff (2011b) for estimates of Social Security and pension wealth.

Weiss, 1966). This is also a stratified sample which over-samples high income households. Though the sample design and questionnaire are different from the SCF, the methodology is sufficiently similar to allow comparisons with the SCF data (see Wolff, 1987, for details on the adjustments). The second is a synthetic dataset, the 1969 MESP database. A statistical matching technique was employed to assign income tax returns for 1969 to households in the 1970 Census of Population. Property income flows (such as dividends) in the tax data were then capitalized into corresponding asset values (such as stocks) to obtain estimates of household wealth (see Wolff, 1980, for details).

4. Median wealth plummets over the late 2000s

Table 1 documents a robust growth in wealth from 1983 to 2007, even back to 1962. From 1962 to 1983, median wealth in real terms increased at an annual rate of 1.63 percent. Median wealth then grew slightly faster between 1989 and 2001, 1.32 percent per year, than between 1983 and 1989, at 1.13 percent per year. Over the 2001-2007 period it increased by 19 percent or an annual rate of 2.91 percent, even faster than during the 1970s, 1980s, and 1990s, though comparable to the 1960s. Then between 2007 and 2010, median wealth plunged by a staggering 47 percent! Indeed, median wealth was actually lower in 2010 than in 1969 (in real terms). The primary reasons, as we shall see below, were the collapse in the housing market and the high leverage of middle class families.[12]

Mean net worth also grew vigorously from 1962 to 1983, at an annual rate of 1.82 percent. Mean wealth grew quite a bit faster between 1989 and 2001, at 3.02 percent per year, than from 1983 to 1989, at 2.27 percent per year. There was then a slight increase in wealth growth from 2001 to 2007 to 3.10 percent per year. This modest acceleration was due largely to the rapid increase in housing prices counterbalanced by the reduced growth in stock prices between 2001 and 2007 in comparison to 1989 to 2001, and to the fact that housing comprised 28 percent and (total) stocks made up 25 percent of total assets in 2001. Another point of note is that mean wealth grew more about twice as fast as the median between 1983 and 2007, indicating widening inequality of wealth over these years.

The great Recession also saw an absolute decline in mean household wealth. However, whereas median wealth plunged by 47 percent, mean wealth fell by (only) 18 percent.[13] In this case, both falling housing and stock prices were the main causes (see below). However, here, too, the relatively faster growth in mean wealth than median wealth (that is, the latter's more moderate decline) was coincident with rising wealth inequality.

[12] The percentage decline in net worth from 2007 to 2010 is lower when vehicles are included in the measure of wealth – "only" 39 percent. The reason is that automobiles comprise a substantial portion of middle class wealth.

[13] The decline in mean net worth is 15 percent when vehicles are included in net worth.

Median household income in real terms, based on the Current Population Survey (CPS), advanced at a fairly solid pace from 1962 to 1983, at 0.85 percent per year. Then, after gaining 11 percent between 1983 and 1989, it grew by only 2.3 percent from 1989 to 2001 and another 1.6 percent from 2001 to 2007. From 2007 to 2010, it fell off by 6.4 percent. This reduction was not nearly as great as that in median wealth. Mean income, after advancing at an annual rate of 1.2 percent from 1962 to 1983, surged by 2.4 percent per year from 1983 to 1989, advanced by 0.9 percent per year from 1989 to 2001, and then dipped by -0.1 percent per year from 2001 to 2007. Mean income also dropped in real terms from 2007 to 2010, by 5.0 percent, slightly less than that of median income.

In sum, while median household income virtually stagnated for the average American household over the 1990s and 2000s, median net worth grew strongly over this period. From 2001 to 2007, mean and median income changed very little while mean and median net worth grew strongly. The Great Recession, on the other hand, saw a massive reduction in median net worth but much more modest declines in mean wealth and both median and mean income.

5. Wealth inequality jumps in the late 2000s

The figures in Table 2 also show that wealth inequality in 1983 was quite close to its level in 1962. Then, after rising steeply between 1983 and 1989, it remained virtually unchanged from 1989 to 2007. The share of wealth held by the top 1 percent rose by 3.6 percentage points from 1983 to 1989 and the Gini coefficient increased from 0.80 to 0.83. What was behind the sharp rise in wealth inequality? There are two principal factors accounting for changes in wealth concentration (also see Section 8). The first is the change in income inequality and the second is the change in the ratio of stock prices to housing prices. As we shall see below, there was a huge increase in income inequality between 1983 and 1989, with the Gini coefficient rising by 0.041 points. Second, stock prices increased much faster than housing prices. The stock market boomed and the S&P 50 Index in real terms was up by 62 percent, whereas median home prices increased by a mere two percent in real terms. As a result, the ratio between the two climbed by 58 percent.

Between 1989 and 2007, the share of the top percentile actually declined sharply, from 37.4 to 34.6 percent, though this was more than compensated for by an increase in the share of the next four percentiles. As a result, the share of the top five percent increased from 58.9 percent in 1989 to 61.8 percent in 2007, and the share of the top quintile rose from 83.5 to 85.0 percent.[14] The share of the

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[14] Actually, the big slippage in the share of the top one percent occurred between 1998 and 2001. The main reason appears to be a sizeable drop in the share of households in the top one percent owning their own business, from 72 to 66 percent. Whereas the mean net worth of the top one percent increased by 13.5 percent in real terms, the mean value of

fourth and middle quintiles each declined by about a percentage point from 1989 to 2007, while that of the bottom 40 percent increased by almost one percentage point. Overall, the Gini coefficient was virtually unchanged -- 0.832 in 1989 and 0.834 in 2007. [15]

In contrast, the years of the Great Recession saw a very sharp elevation in wealth inequality, with the Gini coefficient rising from 0.83 to 0.87. Interestingly, the share of the top percentile showed less than a one percentage point gain.[16] Most of the rise in wealth share took place in the remainder of the top quintile, and overall the share of wealth held by the top quintile climbed by almost four percentage points. The shares of the other quintiles, correspondingly, dropped, with the share of the bottom 20 percent falling from 0.2 percent to -0.9 percent.

The top 1 percent of families (as ranked by income on the basis of the SCF data) earned 17 percent of total household income in 2009 and the top 20 percent accounted for 59 percent -- large figures but lower than the corresponding wealth shares.[17] The time trend for income inequality also contrasts with that for wealth inequality. Income inequality showed a sharp rise from 1961 to 1982, with the Gini coefficient expanding from 0.428 to 0.480 and the share of the top one percent from 8.4 to 12.8 percent.[18] Income inequality increased sharply again between 1982 and 1988, with the Gini coefficient rising from 0.48 to 0.52 and the share of the top one percent from 12.8 to 16.6 percent. There was then very little change between 1988 and 1997. However, between 1997 and 2000, income inequality again surged, with the share of the top percentile rising by 3.4 percentage points, the shares of the other quintiles falling again, and the Gini index advancing from 0.53 to 0.56.[19] This was

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unincorporated business equity and other real estate grew by only 6.2 percent.

[15] It might seem somewhat surprising that wealth inequality remained relatively unchanged during the latter part of the George Bush administration, the Clinton administration, and the George W. Bush administration. However, as we shall see in Section 8, stability in wealth inequality over these years was due largely to the sharp increase in the relative indebtedness of the middle class.

[16] Once again, the main culprit explaining the rather meager increase in the share of the top one percent is unincorporated business equity, whose mean value fell by 26 percent in real terms from 2007 to 2010, compared to a 16 percent overall decline in their mean net worth.

[17] It should be noted that the income in each survey year (say 2007) is for the preceding year (2006 in this case).

[18] The 1969 MESP data suggest a huge expansion in income inequality from 1962 to 1969 but it is likely that the income data in the MESP file are flawed.

[19] It should be noted that the SCF data show a much higher level of income inequality than the CPS data. In the year 2000, for example, the CPS data show a share of the top *five* percent of 22.1 percent and a Gini coefficient of 0.462. The difference is primarily due to three factors. First, the SCF oversamples the rich (as noted above), while the CPS is a representative sample. Second, the CPS data are top-coded (that is, there is an open-ended interval at the top, typically at $75,000 or $100,000), whereas the SCF data are not. Third, SCF income definition includes realized capital gains whereas the CPS definition does not. However, the CPS data also show a large increase of inequality between 1989 and 2000, with

followed by a modest uptick in income inequality, with the Gini coefficient advancing from 0.562 in 2000 to 0.574 in 2006. All in all, years 2001 to 2007 witnessed moderate rises in both wealth and income inequality.

Perhaps, somewhat surprisingly, the Great Recession witnessed a rather sharp contraction in income inequality. The Gini coefficient fell from 0.574 to 0.549 and the share of the top one percent dropped sharply from 21.3 to 17.2 percent. Property income and realized capital gains (which is included in the SCF definition of income), as well as corporate bonuses and the value of stock options, plummeted over these years, a process which explains the steep decline in the share of the top percentile. Real wages, as noted above, actually rose over these years, though the unemployment rate also increased. As a result, the income of the middle class was down but not nearly as much in percentage terms as that of the high income groups. In contrast, transfer income such as unemployment insurance rose, so that the bottom also did better in relative terms than the top. As a result, overall income inequality fell over the years 2006 to 2009.[20] One of the puzzles we have to contend with is the fact wealth inequality rose sharply over the Great Recession while income inequality fell sharply. I will return to this question in Section 8 below.

5.1 The share of overall wealth gains, 1983 to 2010

Over the years 1983 to 2010, is period, the largest gains in wealth and income in relative terms were made by the wealthiest households (see Table 3). The top one percent saw their average wealth (in 2010 dollars) rise by 71 percent. The remaining part of the top quintile experienced increases from 52 to 101 percent and the fourth quintile by 21 percent, while the middle quintile lost 18 percent and the poorest 40 percent lost 270 percent!

Another way of viewing this phenomenon is afforded by calculating the proportion of the total increase in real household wealth between 1983 and 2010 accruing to different wealth groups. This is computed by dividing the increase in total wealth of each percentile group by the total increase in household wealth, while holding constant the number of households in that group. If a group's wealth share remains constant over time, then the percentage of the total wealth growth received by that group

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the share of the top five percent rising from 18.9 to 22.1 percent and the Gini coefficient from 0.431 to 0.462. .

[20] The CPS data, in contrast, shows little change in household income inequality, with the Gini coefficient falling slightly from 0.470 in 2006 to 0.468 in 2009. The source for the CPS data is: http://www.census.gov/hhes/www/income/data/historical/household/2010/H04_2010.xls. However, the work of Emmanuel Saez and Thomas Piketty, based on IRS tax data, reveals a sizeable decline in income inequality from 2007 to 2010. In particular, incomes at the 99.99th, 99.9th, and 99th percentile drop sharply over these years (the source is: *New York Times*, October 24, 2012, page A14).

will equal its share of total wealth. If a group's share of total wealth increases (decreases) over time, then it will receive a percentage of the total wealth gain greater (less) than its share in either year. However, it should be noted that in these calculations, the households found in a given group may be different in the two years.

The results indicate that the richest one percent received over 38 percent of the total gain in marketable wealth over the period from 1983 to 2010. This proportion was greater than the share of wealth held by the top one percent in any of the 9 years. The next 4 percent received 36 percent of the total gain and the next 15 percent 27 percent, so that the top quintile collectively accounted for a little over 100 percent of the total growth in wealth.

A similar calculation using the SCF income data reveals that the greatest gains in real income over the period from 1982 to 2009 were made by households in the top one percent of the income distribution, who saw their incomes grow by 59 percent. Mean incomes increased by almost half for the next 4 percent, over a quarter for the next highest 5 percent and by 13 percent for the next highest ten percent. The fourth quintile of the income distribution experienced only a 3 percent growth in income, while the middle quintile and the bottom 40 percent had absolute declines in mean income. Of the total growth in real income between 1982 and 2009, 39 percent accrued to the top one percent and over 100 percent to the top quintile. These figures are very close to those for wealth.

These results indicate rather dramatically that the growth in the economy during the period from 1983 to 2010 was concentrated in a surprisingly small part of the population -- the top 20 percent and particularly the top one percent.

6. Household debt continues to remain high

In 2010, owner-occupied housing accounted for 31 percent of total assets (see Table 4). However, net home equity -- the value of the house minus any outstanding mortgage -- amounted to only 18 percent of total assets. Real estate, other than owner-occupied housing, comprised 12 percent, and business equity another 18 percent. Liquid assets (demand and time deposits, money market funds, CDs, and the cash surrender value of life insurance) made up 6 percent and pension accounts 15 percent. Bonds and other financial securities amounted to 2 percent; corporate stock, including mutual funds, to 11 percent; and trust equity to 2 percent. Debt as a proportion of gross assets was 17 percent, and the debt-equity ratio (the ratio of household debt to net worth) was 0.21.

There were some significant changes in the composition of household wealth over the years 1983 to 2010. First, the share of gross housing wealth in total assets, after fluctuating between 28.2 and 30.4 percent from 1983 to 2001, increased to 32.8 percent in 2007 and then fell to 31.3 percent in

2010. There are two main factors behind this – the homeownership rate and housing prices. According to the SCF, the homeownership rate, after falling from 63.4 percent in 1983 to 62.8 percent in 1989, picked up to 67.7 percent in 2001 and 68.6 percent in 2007 but then fell to 67.2 percent in 2010. Median house prices for existing homes rose by 19 percent in real terms between 2001 and 2007 but then plunged by 26 percent from 2007 to 2010. A substantial share of the movement of the proportion of housing in gross assets can be traced to these two time trends.[21]

Second, net equity in owner-occupied housing as a share of total assets, after falling from 24 percent in 1983 to 19 percent in 2001, rose to 21 percent in 2007 but then fell sharply to 18 percent in 2010. The difference between gross and net housing as a share of total assets can be traced to the changing magnitude of mortgage debt on homeowner's property, which increased from 21 percent in 1983 to 33 percent in 2001, 35 percent in 2007 and then 41 percent in 2010. Moreover, mortgage debt on principal residence climbed from 9.4 to 11.4 percent of total assets between 2001 and 2007 and then to 12.9 percent in 2010. The sharp decline in net home equity as a proportion of from 2007 to 2010 is attributable to the sharp decline in housing prices.

Third, relative indebtedness increased, with the debt-equity (net worth) ratio climbing from 15 percent in 1983 to 18 percent in 2007 and then to 21 percent in 2010. Likewise, the ratio of debt to total income surged from 68 percent in 1983 to 119 percent in 2007 and then to 127 percent in 2010, its high for this period. If mortgage debt on principal residence is excluded, the ratio of other debt to total assets actually fell off from 6.8 percent in 1983 to 3.9 percent in 2007 but then rose slightly to 4.5 percent in 2010. The large rise in *relative* indebtedness between 2007 and 2010 could be due to a rise in the absolute level of debt and/or a fall off in net worth and income. As shown in Table 1, both mean net worth and mean income fell over the three years. There was also a slight contraction of debt in constant dollars, with mortgage debt declining by 5.0 percent, other debt by 2.6 percent, and total debt by 4.4 percent. Thus, the steep rise in the debt to equity and the debt to income ratio over the three years was entirely due to the reduction in wealth and income.

A fourth change is a dramatic increase in pension accounts, which rose from 1.5 percent of total assets in 1983 to 12 percent in 2007 and then to 15 percent in 2010. There was a huge increase in the share of households holding these accounts between 1983 and 2001, from 11 to 52 percent. The mean value of these plans in real terms climbed dramatically. It almost tripled among account holders

[21] It may seem surprising that the share of housing in gross assets declined very little between 2007 and 2010, given the steep drop in housing prices, but the price of other assets also fell over this period, particularly those of stocks and business equity.

and skyrocketed by a factor of 13.6 among all households. These time trends partially reflect the history of DC plans. IRAs were first established in 1974. This was followed by 401(k) plans in 1978 for profit-making companies (403(b) plans for non-profits are much older). However, 401(k) plans the like did not become widely available in the workplace until about 1989.

From 2001 to 2007 the share of households with a DC plan leveled off and then from 2007 to 2010 the share fell modestly, from 52.6 to 50.4 percent. The average value of DC plans in constant dollars continued to grow after 2001. Overall, it advanced by 21 percent from 2001 to 2007 and then by 11 percent from 2007 to 2010 among account holders and by 22 percent and 7 percent, respectively, among all households. Thus, despite the stock market collapse of 2007-2010 and the 18 percent decline of overall mean net worth, the average value of DC accounts continued to grow after 2007. The reason is that households shifted their portfolio out of other assets and into DC accounts.

Fifth, the share of corporate stock and mutual funds in total assets rose rather briskly from 9 percent in 1983 to 15 percent in 2001, and then plummeted to 12 percent in 2007 and even further to 11 percent in 2010. If we include the value of stocks indirectly owned through mutual funds, trusts, IRAs, 401(k) plans, and other retirement accounts, then the value of total stocks owned as a share of total assets more than doubled from 11 percent in 1983 to 25 percent in 2001, tumbled to 17 percent in 2007, and then rose slightly to 18 percent in 2010. The rise during the 1990s reflected the bull market in corporate equities as well as increased stock ownership, while the decline in the 2000s was a result of the sluggish stock market as well as a drop in stock ownership.

6.1 Portfolio composition by wealth class

The tabulation in Table 4 provides a picture of the average holdings of all families in the economy, but there are marked class differences in how middle-class families and the rich invest their wealth. As shown in Table 5, the richest one percent of households (as ranked by wealth) invested over three quarters of their savings in investment real estate, businesses, corporate stock, and financial securities in 2010. Corporate stocks, either directly or indirectly owned, comprised 21 percent. Housing accounted for only 9 percent of their wealth, liquid assets 5 percent, and pension accounts 8 percent. The debt-equity ratio was only 3 percent, the ratio of debt to income was 61 percent, and the ratio of mortgage debt to house value was 19 percent.

Among the next richest 19 percent of U.S. households, housing comprised 30 percent of their total assets, liquid assets 7 percent, and pension assets 21 percent. Investment assets – non-home real estate, business equity, stocks, and bonds – made up 41 percent and 20 percent was in the form of stocks directly or indirectly owned. Debt amounted to 14 percent of their net worth and 118 percent of their income, and the ratio of mortgage debt to house value was 30 percent.

In contrast, almost exactly two thirds of the wealth of the middle three quintiles of households was invested in their own home in 2010. However, home equity amounted to only 32 percent of total assets, a reflection of their large mortgage debt. Another 20 percent went into monetary savings of one form or another and pension accounts. Together housing, liquid assets, and pension assets accounted for 87 percent of total assets, with the remainder in investment assets. Stocks directly or indirectly owned amounted to only 8 percent of their total assets. The debt-equity ratio was 0.72, substantially higher than that for the richest 20 percent, and their ratio of debt to income was 135 percent, also much higher than that of the top quintile. Finally, their mortgage debt amounted to a little more than half the value of their principal residences.

Almost all households among the top 20 percent of wealth holders owned their own home, in comparison to 68 percent of households in the middle three quintiles. Three-quarters of very rich households (in the top percentile) owned some other form of real estate, compared to 49 percent of rich households (those in the next 19 percent of the distribution) and only 12 percent of households in the middle 60 percent. Eighty-nine percent of the very rich owned some form of pension asset, compared to 83 percent of the rich and 46 percent of the middle. A somewhat startling 74 percent of the very rich reported owning their own business. The comparable figures are 30 percent among the rich and only 8 percent of the middle class.

Among the very rich, 89 percent held corporate stock, mutual funds, financial securities or a trust fund, in comparison to 61 percent of the rich and only 15 percent of the middle. Ninety-five percent of the very rich reported owning stock either directly or indirectly, compared to 84 percent of the rich and 41 percent of the middle. If we exclude small holdings of stock, then the ownership rates drop off sharply among the middle three quintiles, from 41 percent to 29 percent for stocks worth $5,000 or more and to 24 percent for stocks worth $10,000 or more.

The rather staggering debt level of the middle class in 2010 raises the question of whether this is a recent phenomenon or whether it has been going on for some time. Table 6 shows the wealth composition for the middle three wealth quintiles from 1983 to 2010. Houses as a share of assets remained virtually unchanged from 1983 to 2001 but then increased from 2001 to 2010. It might seem surprising that despite the steep drop in home prices from 2007 to 2010, housing as a share of total assets actually increased slightly. The reason is that the other components of wealth fell even more than housing. While housing fell by 30 percent in real terms, other real estate was down by 39 percent, liquid assets by 48 percent, and stocks and mutual funds by 47 percent.

Pension accounts rose as a share of total assets by almost 13 percentage points from 1983 to 2010 while liquid assets declined as a share by 16 percentage points. This set of changes paralleled that of all households. The share of all stocks in total assets mushroomed from 2.4 percent in 1983 to 12.6 percent in 2001 and then fell off to 8.2 percent in 2010 as stock prices stagnated and then collapsed and middle class households divested themselves of stock holdings. The proportion of middle class households with a pension account surged by 41 percentage points between 1983 and 2007 but then fell off sharply by almost 8 percentage points in 2010.

Changes in debt, however, represent the most dramatic movements. There was a sharp rise in the debt-equity ratio of the middle class from 0.37 in 1983 to 0.61 in 2007, with all of the increase occurring between 2001 and 2004, a reflections mainly of a steep rise in mortgage debt. The debt to income ratio more than doubled from 1983 to 2007. Once, again, much of the increase happened between 2001 and 2004. The rise in the debt-equity ratio and the debt to income ratio was much steeper than for all households. In 1983, for example, the debt to income ratio was about the same for middle class as for all households but by 2007 the ratio was much larger for the middle class.

Then, the Great Recession hit. The debt-equity ratio continued to rise, reaching 0.72 in 2010 but there was actually a retrenchment in the *debt to income* ratio, falling to 1.35 in 2010. The reason is that from 2007 to 2010, the mean debt of the middle class in constant dollars actually contracted by 25 percent. There was, in fact, a 23 percent reduction in mortgage debt as families paid down their outstanding balances, and an even larger drop in other debt of 32 percent as families paid off credit card balances and other forms of consumer debt. The steep rise in the debt-equity ratio of the middle class between 2007 and 2010 was due to the sharp drop in net worth, while the decline in the debt to income ratio was almost exclusively due to the sharp contraction of overall debt.

As for all households, the ratio of net home equity to assets fell for the middle class from 1983 to 2010 and mortgage debt as a proportion of house value rose. The decline in the ratio of net home equity to total assets between 2007 and 2010 was relatively small despite the steep decrease in home prices, a reflection of the sharp reduction in mortgage debt. On the other hand, the rise in the ratio of mortgage debt to house values was relatively large over these years because of the fall off in home prices.

6.2 The "middle class squeeze"

Nowhere is the middle class squeeze more vividly demonstrated than in their rising debt. As noted above, the ratio of debt to net worth of the middle three wealth quintiles rose from 0.37 in 1983 to 0.46 in 2001 and then jumped to 0.61 in 2007. Correspondingly, their debt to income rose from 0.67 in

1983 to 1.00 in 2001 and then zoomed up to 1.57 in 2007 This new debt took two major forms. First, because housing prices went up over these years, families were able to borrow against the now enhanced value of their homes by refinancing their mortgages and by taking out home equity loans. In fact, mortgage debt on owner-occupied housing (principal residence only) as a proportion of total assets climbed from 29 percent in 1983 to 47 percent in 2007, and home equity as a share of total assets fell from 44 to 35 percent over these years. Second, because of their increased availability, families ran up huge debt on their credit cards.

Where did the borrowing go? Some have asserted that it went to invest in stocks. However, if this were the case, then stocks as a share of total assets would have increased over this period, which it did not (it fell from 13 to 7 percent between 2001 and 2007). Moreover, they did not go into other assets. In fact, the rise in housing prices almost fully explains the increase in the net worth of the middle class from 2001 to 2007. Of the $16,400 rise in median wealth, gains in housing prices alone accounted for $14,000 or 86 percent of the growth in wealth. Instead, it appears that middle class households, experiencing stagnating incomes, expanded their debt in order to finance normal consumption expenditures.

The large build-up of debt set the stage for the financial crisis of 2007 and the ensuing Great Recession. When the housing market collapsed in 2007, many households found themselves "underwater," with larger mortgage debt than the value of their home. This factor, coupled with the loss of income emanating from the recession, led many home owners to stop paying off their mortgage debt. The resulting foreclosures led, in turn, to steep reductions in the value of mortgage-backed securities. Banks and other financial institutions holding such assets experienced a large decline in their equity, which touched off the financial crisis.

7. The role of leverage in explaining the steep fall in median wealth and the sharp rise in wealth inequality over the Great Recession

Two major puzzles emerge from the preceding analysis. The first is the steep plunge in median net worth between 2007 and 2010 of 47 percent. This happened despite a moderate drop in median income of 6.4 percent in real terms and steep but less steep declines in housing and stock prices of 24 and 26 percent in real terms, respectively.

The second is the steep increase of wealth inequality of 0.035 Gini points. It is surprising that wealth inequality rose so sharply, given that income inequality dropped by 0.025 Gini points (at least according to the SCF data) and the ratio of stock prices to housing prices was essentially unchanged. In fact, as shown in Wolff (2002), wealth inequality is positively related to the ratio of stock to house prices, since the former is heavily concentrated among the rich and the latter is the chief asset of the middle class. A regression run of the share of wealth held by the top one percent of households (WLTH) on the share of income received by the top five percent of families (INC), and the ratio of the Standard and Poor 500 index to housing prices (RATIO), with 21 data points between 1922 and 1998, yields:

$$(1) \quad \underset{}{WLTH} = \underset{(0.9)}{5.10} + \underset{(4.2)}{1.27}\ INC + \underset{(2.5)}{0.26}\ RATIO, \quad R2 = 0.64, \quad N = 21$$

with t-ratios shown in parentheses. Both variables are statistically significant (INC at the 1 percent level and RATIO at the 5 percent level) and with the expected (positive) sign. Also, the fit is quite good, even for this simple model.

Changes in median wealth and wealth inequality from 2007 to 2010 can be explained to a large extent by leverage (the ratio of debt to net worth). The steep fall in median wealth was due in large measure to the high leverage of middle class households. The spike in wealth inequality was largely due to *differential leverage* between the rich and the middle class.

7.1 Two arithmetic examples

A simple arithmetical example might illustrate the effects of leverage. Suppose average assets are 50 and average debt is zero. Also, suppose that asset prices rise by 20 percent. Then average net worth also rises by 20 percent. However, now suppose that average debt is 40 and asset prices once again rise by 20 percent. Then average net worth increases from a base of 10 (50 minus 40) to 20 (60 minus 40) or by *100 percent*, Thus, leverage amplifies the effects of asset price changes. However, the converse is also true. Suppose that asset prices decline by 20 percent. In the first case, net worth falls from 50 to 40 or by 20 percent. In the second case, net worth falls from 10 to 0 (40 minus 40) or by 100 percent. Thus, leverage can also magnify the effects of an asset price bust.

Another arithmetical example can illustrate the effects of differential leverage. Suppose the total assets of the very rich in a given year is 100, consisting of 50 in stocks and 50 in other assets, and its debt is zero, for a net worth of 100. For the “middle class”, suppose total assets are 70, consisting of 60 in housing and 10 in other assets, and their debt is 30, for a net worth of 40. The ratio of net worth between the very rich and the middle is then 2.5 (100/40).

Suppose the value of both stocks and housing falls by 20 percent but the value of “other assets” remains unchanged. Then, the total assets of the rich fall to 90 (40 in stocks and 50 in other), for a net worth of 90. The total assets of the middle falls to 58 (48 in housing and 10 in other) but its debt remains unchanged at 30, for a net worth of 28. As a result, the ratio of net worth between the two groups *rises* to 3.21 (90/28). Here it is apparent that even though housing and stock prices fall at the *same rate*, wealth inequality goes up. The reason is differential leverage between the two groups. If asset prices decline at the same rate, net worth decreases at an even greater rate for the middle than the rich, since the debt-equity ratio is higher for the former than the latter. The converse is also true. A proportionate increase in house and stock prices will result in a decrease in wealth inequality.

7.2 Rates of return

Table 7 shows estimated average annual rates of return for both gross assets and net worth over the period from 1983 to 2010. Results are based on the average portfolio composition over the period. It is first of interest to look at the results for all households . The overall average annual rate of return on gross assets rose from 2.20 percent in the 1983-1989 period to 3.25 percent in the 1989-2001 period and then to 3.34 percent in the 2001-2007 period before plummeting to -6.95 percent over the Great Recession. The largest declines in asset prices over the years 2007 to 2010 occurred for residential real estate and the category businesses and non-home real estate. The value of financial assets, including stocks, bonds, and other securities, registered an annual rate of return of “only” -2.23 percent because interest rates on corporate and foreign bonds continued to remain strong over these years. The value of pension accounts had a -2.46 percent annual rate of return, reflecting the mixture of bonds and stocks held in pension accounts.

The average annual rate of return on net worth among all households also increased from 3.17 percent in the first period to 4.25 percent in the second and then to 4.31 percent in the third but then fell off sharply to -7.98 percent in the last period. It is first of note that the annual rates of return on net worth are uniformly higher – by about one percentage point – than those of gross assets over the first three periods, when asset prices were generally rising. However, in the 2007-2010 period, the opposite was the case, with the annual return on net worth 0.44 percent lower than that on gross assets. These results illustrate the effect of leverage, raising the return when asset prices rise and lowering the return when asset prices fall. Over the full 1983-2010 period, the annual return on net worth was 0.87 percentage points higher than that on gross assets.[22]

There are striking differences in returns by wealth class. The highest returns on gross assets were registered by the top one percent of wealth holders, followed by the next 19 percent and then by the middle three wealth quintiles. The one exception was the 2007-2010 period when the next 19 percent was first, followed by the top one percent and then the middle three quintiles. The differences

[22] An earlier analysis was conducted by the author for the 1969-1975 period in the U.S. See Wolff (1979) for details.

are quite substantial. Over the full 1983-2010 period, the average annual rate of return on gross assets for the top one percent was 0.55 percentage points greater than that of the next 19 percent and 1.39 percentage points greater than that of the middle quintiles. The differences reflect the greater share of high yield investment assets like stocks in the portfolios of the rich and the greater share of housing in the portfolio of the middle class (see Table 5 for details on portfolio composition).

This pattern is almost exactly reversed for rates of return for net worth. In this case, in the first three periods when asset prices were generally rising, the highest return was recorded by the middle three wealth quintiles but in the 2007-2010 period, when asset prices were declining, the middle three quintiles registered the lowest (that is, most negative) return. The exception was the first period when the top one percent had the highest return. The reason was the substantial spread in returns on gross assets between the top one percent and the middle three quintiles – 1.79 percentage points. Interestingly, returns for the top one percent were greater than that of the next 19 percent and for the same reason.

Differences in returns between the top one percent and the middle three quintiles were quite substantial in some years. In the 2001-2007 period, the return on net worth was 5.95 percent per year for the latter and 4.03 percent per year for the former – a difference of 1.92 percentage points. Over the Great Recession the rate of return on net worth was -7.10 percent for the top one percent and, astonishingly, -11.39 percent for the middle three quintiles – a differential of 4.27 percentage points. The spread in rates of return between the top one percent and the middle three quintiles reflects the much higher leverage of the middle class. In 2010, for example, the debt-equity ratio of the middle three quintiles was 0.72 while that of the top one percent was 0.04. The debt-equity ratio of the next 19 percent was also relatively low, at 0.14. Indeed, except for years 2007 to 2010, the rate of return on net worth for the middle quintiles was *more than double* its return on gross assets.

The huge negative rate of return on net worth of the middle three wealth quintiles was largely responsible for the precipitous drop in median net worth between 2007 and 2010. This factor, in turn, was due to the steep drop in asset prices, particularly housing, and the very high leverage of the middle wealth quintiles. Likewise, the very high rate of return on net worth of the middle three quintiles over the 2001-2007 period (5.95 percent per year) played a big role in explaining the robust advance of median net worth, despite the sluggish growth in median income. This in turn, was a result of their high leverage coupled with the boom in housing prices.

The substantial differential in rates of return on net worth between the middle three wealth quintiles and the top quintile (over four percentage points) helps explain why wealth inequality rose sharply between 2007 and 2010 despite the decline in income inequality. Likewise this differential over the 2001-2007 period (a spread of about two percentage points in favor of the middle quintiles) helps account for the stasis in wealth inequality over these years despite the increase in income inequality.

8. The racial divide widens over the Great Recession

Striking differences are found in the wealth holdings of different racial and ethnic groups. In Tables 10 and 11, households are divided into three groups: (i) non-Hispanic whites ("whites" for short), (ii) non-Hispanic African-Americans ("blacks" for short), and (iii) Hispanics.[23] In 2007, while the ratio of mean incomes between white and black households was an already low 0.48 and the ratio of median incomes was 0.60, the ratios of mean and median wealth holdings were even lower, at 0.19 and 0.06, respectively.[24] The homeownership rate for black households was 49% in 2007, a little less than two thirds that among whites, and the percentage of black households with zero or negative net worth stood at 33, more than double that among whites.

Between 1982 and 2006, while the average real income of white households increased by 42 percent and the median by 10 percent, the former rose by only 28 percent for black households but the latter by 18 percent. As a result, the ratio of mean income slipped from 0.54 in 1982 to 0.48 in 2006, while the ratio of median income rose from 0.56 to 0.60.[25] The contrast in time trends between the ratio of means and that of medians reflects the huge increase in income for a relatively small number of white households – a result of rising income inequality among whites.

Between 1983 and 2001, average net worth in constant dollars climbed by 73 percent for whites but rose by only 31 percent for black households, so that the net worth ratio fell from 0.19 to 0.14. Most of the slippage occurred between 1998 and 2001, when white net worth surged by a spectacular 34 percent and black net worth advanced by only a respectable 5 percent. Indeed, mean net worth growth among black households was slightly higher in the 1998-2001 years, at 1.55 percent per year, than in the preceding 15 years, at 1.47 percent per year. However, between 2001 and 2007, mean net worth among blacks gained an astounding 58 percent while white wealth advanced by 29 percent,

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[23] The residual group, American Indians and Asians, is excluded here because of its small sample size.

[24] It should be noted that the unit of observation is the household, which includes both families (two or more related individuals living together), as well as single adults. As is widely known, the share of female-headed households among African-Americans is much higher than that among whites. This difference partly accounts for the relatively lower income and wealth among African-American households.

[25] The 1988 income figure for black households appears to be an outlier. The low income for blacks in that year probably reflects the small sample size for blacks (and Hispanics as well) and the survey-to-survey sample variability.

so that by 2007 the net worth ratio was back to 0.19, the same level as in 1983.

It is not clear how much of the sharp drop in the racial wealth gap between 1998 and 2001 and the turnaround between 2001 and 2007 are due to actual wealth changes in the African-American community and how much is due to sampling variability (since the sample sizes of African Americans are relatively small in all years). However, one salient difference between the two groups is the much higher share of stocks in the white portfolio and the much higher share of homes in the portfolio of black households. In 2001, the gross value of principal residences formed 46 percent of the total assets of black households, compared to 27 percent among whites, while (total) stocks were 25 percent of the total assets of whites and only 15 percent that of black households. In the case of median wealth, the black-white ratio fluctuated over time but was almost exactly the same in 2007 as in 1983, 0.06 compared to 0.07.

The homeownership rate of black households grew from 44 to 47 percent between 1983 and 2001 but relative to white households, the homeownership rate slipped slightly from 0.65 in 1983 to 0.64 in 2001. From 2001 to 2007, the black homeownership rate rose slightly from 74.1 to 74.8 percent, and the ratio of homeownership rates advanced slightly, to 0.65. The percentage of black households with zero or negative net worth fell from 34 percent in 1983 to 31 percent in 2001 (and also declined relative to the corresponding rate for whites). However, in the ensuing six years the share rose back to 33 percent in 2007 (though relative to white households remained largely unchanged).

The picture is rather different for Hispanics (see Table 9). The ratio of mean income between Hispanics and non-Hispanic whites in 2007 was 0.50, almost the same as that between black and white households. However, the ratio of median income was 0.70, much higher than the ratio between black and white households. The ratio of mean net worth was 0.26 compared to a ratio of 0.19 between blacks and whites. However, the ratio of medians was 0.06, almost identical to that between blacks and whites. The Hispanic homeownership rate was 49 percent, almost identical to that of black households, and 34 percent of Hispanic households reported zero or negative wealth, almost the same as African-Americans.

Hispanic households made considerable progress over the years1983 to 2007. Mean income grew by 18 percent and median income by 16 percent, so that while the ratio of mean income slid from 60 to 50 percent, that of median income advanced from 66 to 70 percent. Between 1983 and 2001, mean wealth doubled for Hispanic households and the ratio of mean net worth increased slightly from 16 to 17 percent. Mean net worth among Hispanics then climbed by another 82 percent between 2001 and 2007, and the corresponding ratio advanced to 26 percent, quite a bit higher than that between black and white households. The surge in Hispanic wealth from 2001 to 2007 can be traced to a five percentage point jump in the Hispanic home ownership rate (see below).

From 1983 to 2007, median wealth among Hispanics remained largely unchanged, so that the ratio of median wealth between Hispanics and whites stayed virtually the same. In contrast, the homeownership rate among Hispanic households surged from 33 to 44 percent between 1983 and 2001, and the ratio of homeownership rates between the two groups grew from 0.48 in 1983 to 0.60 in 2001. Between 2001 and 2007, the Hispanic homeownership rose once again, to 49 percent, about the same as black households, and the homeownership ratio rose sharply to 0.66. The percentage of Hispanic households with zero or negative net worth fell rather steadily over time, from 40 percent in 1983 to 34 percent in 2007 (about the same as black households), and the share relative to white household tumbled from a ratio of 3.0 to 2.3.

Despite some progress from 2001 to 2007, the respective wealth gaps between minorities and whites were still much greater than the corresponding income gaps in 2007. While mean income ratios were of the order of 50 percent, mean wealth ratios were of the order of 20-25 percent and the share with zero or negative net worth was around a third, in contrast to 15 percent among non-Hispanic white households (a difference that appears to mirror the gap in poverty rates). While blacks and Hispanics were left out of the wealth surge of the years 1998 to 2001 because of relatively low stock ownership, they actually benefited from this (and the relatively high share of houses in their portfolio) in the 2001-2007 period. However, all three racial/ethnic groups saw an increase in their debt to asset ratio from 2001 to 2007.

The racial picture really changed radically by 2010. While the ratio of both mean and median income between black and white households changed very little between 2007 and 2010 (mean income, in particular, declined for both groups), the ratio of mean net worth dropped from 0.19 to 0.14. The proximate causes were the higher leverage of black households and their higher share of housing wealth in gross assets (see Table 10). In 2007, the debt-equity ratio among blacks was an astounding 0.55, compared to 0.15 among whites, while housing as a share of gross assets was 0.54 for the former as against 0.31 for the latter. The ratio of mortgage debt to home value was also much higher for blacks, 0.49, than for whites, 0.32. The sharp drop in home prices from 2007 to 2010 thus led to a relatively steeper loss in home equity for the former, 25 percent, than the latter, 21 percent, and this factor, in turn, led to a much steeper fall in mean net worth for black households than white households.[26] Indeed, in terms of rates of return, while the overall annual rate of return on net worth among white households plummeted from 4.1% in 2001-2007 to -7.7% in 2007-2010, it collapsed from 6.4% to -10.9% among black households. It is of note that black households had a much higher return on net worth than white households in the 2001-2007 period but a much lower return in 2007-2010.

The Great Recession actually hit Hispanic households much harder than blacks in terms of wealth. Mean income among Hispanic households rose a bit from 2007 to 2010 and the ratio with respect to white households increased from 0.50 to 0.57. On the other hand, the median income of Hispanics fell, as did the ratio of median income between Hispanics and whites. However, the mean net worth in 2010 dollars of Hispanics fell almost *in half*, and the ratio of this to the mean wealth of whites plummeted from 0.26 to 0.15. The same factors were responsible as in the case of black households. In 2007, the debt-equity ratio for Hispanics was 0.51, compared to 0.15 among whites, while housing as a share of gross assets was 0.53 for the former as against 0.31 for the latter (see Table 10). The ratio of mortgage debt to home value was also higher for Hispanics, 0.45, than for whites, 0.32. As a result, net home equity dropped by 48 percent among Hispanic home owners, compared to 21 percent among white home owners, and this factor, in turn, was largely responsible for the huge decline in Hispanic net worth both in absolute and relative terms. In terms of the annual return on net worth, it nosedived from 6.7% in 2001-2007 to -11.8% in 2007-2010. The drop was even steeper than that for black households. In fact, while Hispanic households had a higher return than white or black households in 2001-2007, it had the lowest return in 2007-2010.

There are two reasons that might explain the extreme drop in Hispanic net worth. First, a large proportion of Hispanic home owners bought their home in the interval from 2001 to 2007, when home prices were peaking. This is reflected in the sharp increase in their home ownership rate over this period. As a result, they suffered a disproportionately large percentage drop in their home equity. Second, it is likely that Hispanic home owners were more heavily concentrated than whites in parts of the country like Arizona, California, Arizona, and Nevada (the "sand states") and Florida, where home prices plummeted the most.

There was also a steep drop in the home ownership rate among Hispanic households of 1.9 percentage points from 2007 to 2010. Indeed, after catching up on white households in this dimension

[26] There was almost no change in the relative home ownership rates of the two groups – both experienced moderate losses – while the share of households with non-positive net worth actually increased more in relative terms for white households than black ones. Unfortunately, there are no data available to separate out actual declines in house prices for white, black, and Hispanic homeowners.

from 1983 to 2007, Hispanic households fell back in 2010 to the same level as in 2004.

9. Wealth shifts from the young to the old

As shown in Table 11, the cross-sectional age-wealth profiles generally follow the predicted hump-shaped pattern of the life-cycle model. Mean wealth increases with age up through age 65 or so and then falls off. Home ownership rates have a similar profile, though the fall-off after the peak age is much more attenuated than for the wealth numbers (and in 2004 they actually show a steady rise with age). In 2010, the wealth of elderly households (age 65 and over) was 2.1 times as high as that of the non-elderly and their homeownership rate was 19 percentage points higher. Despite the apparent similarity in the profiles, there were notable shifts in the relative wealth holdings by age group from 1983 to 2007. The relative wealth of the youngest age group, under 35 years of age, declined from 21 percent of the overall mean in 1983 to 17 percent in 2007. In 2007, the mean wealth of the youngest age group was $95,900 (in 2010 dollars), which was only slightly more than the mean wealth of this age group in 1989 ($93,100). Though as noted in Section 1, educational loans expanded markedly over the 2000s and by 2007 one third of households in this age group reported a student loan outstanding, still 74 percent of the total debt of this age group was mortgage debt and only 9.5 percent took the form of student loans.

The mean net worth of the next youngest age group, 35-44, relative to the overall mean, collapsed from 0.71 in 1983 to 0.58 in 2007. The relative wealth of the next youngest age group, 45-54, also declined, from 1.53 in 1983 to 1.19 in 2007. The relative wealth of age group 55-64 was about the same in 2007, 1.69, as in 1983,1.67. The relative net worth of age group 65-74 plummeted from 1.93 in 1983 to 1.61 in 1989 but recovered to 1.86 in 2007. The wealth of the oldest age group, age 75 and over, gained ground, from only 5 percent above the mean in 1983 to 16 percent in 2007.

Changes in homeownership rates tend to mirror these trends. While the overall ownership rate increased by 5.2 percentage points from 63.4 to 68.6 percent between 1983 and 2007, the share of households in the youngest age group owning their own home increased by only 2.1 percentage points. The homeownership rate of households between 35 and 44 of age actually fell by 2.3 percentage points, and that of age group 45 to 54 years of age declined by 0.9 percentage points. Big gains in homeownership were recorded by the older age groups: 3.9 percentage points for age group 55-64, 7.1 percentage points for age group 65-74, and 7.6 percentage points for the oldest age group.[27] By 2007, homeownership rates rose monotonically with age up to age group 65-74 and then dropped for the

[27] As with racial minorities, the sample size is relatively small for the oldest age group, so that the 9 percentage point increase in their homeownership rate from 2001 to 2004 may be due to sampling variation.

oldest age group. The statistics point to a relative shifting of home ownership away from younger towards older households between 1983 and 2007.

Changes in relative wealth were even more dramatic from 2007 to 2010. The relative wealth of the under 35 age group plummeted from 0.17 to 0.10 and that of age group 35-44 from 0.58 to 0.41, while that of age group 45-54 fell somewhat from 1.19 to 1.14. In actual (2010) dollar terms, the average wealth of the youngest age group collapsed from $95,500 in 2007 to $48,400 in 2010, is second lowest point over the 27 year period (the lowest occurred in 1995),[28] while the relative wealth of age group 35-44 shrank from $325,00 to $190,000 its lowest point over the whole 1983 to 2010 period. One possible reason for these steep declines in wealth is that younger households were more likely to have bought homes near the peak of the housing cycle.

In contrast, the relative net worth of age group 55-64 increased sharply from 1.69 to 1.81 (though it shrank in actual 2010 dollar terms from $950,400 to $841,000) and that of the oldest age group from 1.16 to 1.36 (though once again it was down in absolute terms from $653,700 to $629,100), though the relative wealth of age group 65 to 74 declined from 1.86 to 1.74 (and fell in absolute dollars as well, from $1,048,600 to $808,500). Home ownership rates fell for all age groups from 2007 to 2010 (except the very oldest) but the percentage point decline (3.3 percentage points) was greatest for the youngest age group.

Changes in the relative wealth position of different age groups depend in large measure on relative asset price movements and differences in asset composition. The latter are highlighted in Table 12 for the year 2007. Homes comprised over half the value of total assets for age group 35 and under, and the share fell off with age to about a quarter for age group 55-64 and then rose to 30 percent for the oldest age group. Liquid assets as a share of total assets remained relatively flat with age group at around 6 percent except for the oldest group for whom it was 11 percent, perhaps reflecting the relative financial conservativeness of older people. Pension accounts as a share of total assets rose from 4 percent for the youngest group to 16 percent for age group 55 to 64 and then fell off to 5 percent for the oldest age group. This pattern reflects the build-up of retirement assets until retirement age and then a decline as these retirement assets are liquidated.[29] Corporate stock and financial securities

[28] As in 2007, the principal source of debt was mortgage debt, which comprised 70 percent of the total debt for the youngest age group in 2010. However, educational loans now amounted to 15 percent of their total liabilities, up from 10 percent in 2007, and 40 percent of households in this age group had an outstanding student loan in 2010.

[29] This pattern may also be partly a cohort effect since 401(k) plans and other defined contribution plans were not widely introduced into the workplace until after 1989.

showed a steady rise with age, from a 4 percent share for the youngest group to a 26 percent share for the oldest. A similar pattern was evident for total stocks as a percentage of all assets. Unincorporated business equity and non-home real estate were relatively flat as a share of total assets with age, about 30 percent. There was a pronounced fall off of the debt-equity ratio with age, declining from 0.93 for the youngest group to 0.02 for the oldest, as well as the debt to income ratio from 1.68 to 0.30 and mortgage debt as a share of house value from 0.65 to 0.05. As a result of the latter, net home equity as a proportion of total assets rose from 19 to 29 percent from the youngest to oldest age group.

Younger households were thus more heavily invested in homes and more heavily in debt whereas the portfolio of older households was more heavily skewed to financial assets, particularly corporate stock. As a result, younger households benefit relatively when housing prices rise and inflation is strong while older households benefit relatively from rising stock prices. Changes in the relative net worth position of age groups over the 1983 to 2007 period were thus largely due to these relative asset price movements. In particular, as with minority households, the higher leverage of younger age groups made them vulnerable when asset prices, particularly housing prices, declined. The steep decline in house prices from 2007 to 2010 thus led to a relatively steeper loss in home equity for the youngest age group, 59 percent, than overall, 26 percent, and this factor, in turn, led to a much steeper fall in net worth . Indeed, the annual return on the net worth of this age group nosedived from a considerable 8.1% in 2001-2007, the highest of any age group, to -15.0% (!) in 2007-2010, the lowest of any age group.

The story is very similar for age group 35 to 44. Their debt-equity ratio was 0.41 in 2007, their ratio of mortgage debt to house value was 0.51, and their share of housing in gross assets was 0.44, all much higher than overall. As with the youngest age group, the drop in home prices from 2007 to 2010 caused a large fall in home equity of 49 percent, which in turn caused a steep fall off in their relative net worth. The annual rate of return on net worth for this group tumbled from 5.9% in 2001-2007, the second highest of any age group, to -10.5% in 2007-2010, the second lowest of any age group.

10. Summary and concluding remarks

Median wealth showed robust growth during the 1980s and 1990s and an even faster advance from 2007 to 2010. Then the Great Recession hit. From 2007 to 2010, house prices fell by 24 percent in real terms, stock prices by 26 percent, and median wealth by a staggering 47 percent. Median income also dropped but by a relatively modest 6.4 percent. The percent of households with non-positive net worth rose sharply from 18.6 to 22.5.

Wealth inequality after remaining relatively stable from 1989 to 2007 showed a steep increase over the Great Recession. The Gini coefficient climbed from 0.834 to 0.870 and the share of the top 20 percent from 85 to 89 percent. The share of the bottom 40 percent experienced a precipitous drop from 0.2 to -0.9 percent. In contrast, income inequality, after rising moderately from 2000 to 2007 (an increase of 0.12 Gini points), dropped substantially from 2006 to 2009 (a decrease of 0.25 Gini points).

The percentage increase in net worth (also income) from 1983 to 2010 was much greater for the top wealth (and income) groups than for those lower in the distribution. The greatest gains were enjoyed by the upper 20 percent, particularly the top one percent, of the respective distributions. Between 1983 and 2010, the top one percent received 38 percent of the total growth in net worth and 39 percent of the total increase in income. The figures for the top 20 percent are 101 percent and 104 percent, respectively – that is to say, the upper quintile got it all!.

The years 2001 to 2007 also saw a sharply rising debt to income ratio, reaching its highest level in almost 25 years, at 1.19 among all households in 2007. The debt-equity ratio was also way up, from 0.14 to 0.18. Most of the rising debt was from increased mortgages on homes. From 2007 to 2010 both ratios rose, the former moderately from 1.19 to 1.27 and the latter more steeply from 0.18 to 0.21. This was true despite a moderate retrenchment of overall average debt of 4.4 percent and reflected the drop in both mean wealth and income.

Home values as a share of total assets among all households remained relatively unchanged from 1983 to 2010 (around 30 percent). However, net home equity as a share of total assets fell from 0.24 in 1983 to 0.18 in 2010, reflecting rising mortgage debt on homeowner's property, which grew from 21 percent in 1983 to 35 percent in 2007 and then jumped to 41 percent in 2010. The large increase in the ratio from 2007 to 2010 was a result of falling home values (average mortgage debt actually declined by 5.0 percent in absolute terms).

Trends are more pronounced for the middle class. Among the middle three wealth quintiles, there was a huge increase in the debt-income ratio from 1.00 in 2001 to 1.57 in 2007 and an almost doubling of the debt-equity ratio from 0.32 to 0.61 percent. The debt-equity ratio was also much higher among the middle 60 percent of households in 2007, at 0.61, than among the top one percent (0.028) or the next 19 percent (0.121). However, from 2007 to 2010, while the debt-equity ratio continued to advance to 0.72, the debt to income ratio actually fell off to 1.35. The reason is the substantial retrenchment of average debt among the middle class over these years. Overall debt fell by 25 percent in real terms, mortgage debt by 23 percent, and other debt by 32 percent. The fact that the debt-equity ratio rose over these years was a reflection of the steep drop in median net worth.

Despite the 24 percent plunge in house prices (in real terms) from 2007 to 2010, the share of home owners who were underwater" was "only" 8.2 percent in 2010. However, average home equity among home owners did decline by 26 percent. This reduction would have been higher except for the contraction of mortgage debt noted above. Hispanics, younger households, and middle income households were hit particularly hard in terms of the loss of home equity.

One piece of mainly positive news is that among all households there was no deterioration in pension accumulations in DC-type pension plans over the Great Recession. The share of households with a DC account, after rising from 11 percent in 1983 to 53 percent in 2007, did fall off a bit to 50 percent in 2010. However, average DC pension wealth continued to grow from 2007 to 2010. The main reason was a shifting of household portfolios. Pension accounts as a share of total assets, after rising from 1.5 percent in 1983 to 12 percent in 2007, jumped to 15 percent in 2010. However, among middle class families, the share with a DC plan, after growing robustly from 12 percent in 1983 to 53 percent in 2007, fell off sharply to 46 percent in 2010, and the change in dollar terms from 2007 to 2010 was -24 percent. Thus, in terms of retirement preparedness from DC accounts, there was generally an improvement from 2007 to 2010 except for middle class households.

The key to understanding the plight of the middle class over the Great Recession was their high degree of leverage and the high concentration of assets in their home. The steep decline in median net worth between 2007 and 2010 was primarily due to the very high negative annual rate of return on net worth of the middle three wealth quintiles (-8.9 percent). This, in turn, was attributable to the precipitous fall in home prices and their very high degree of leverage. High leverage, moreover, helps explain why median wealth fell more than house (and stock) prices over these years and declined much more than median household income.

The large spread in rates of return on net worth between the middle three wealth quintiles and the top quintile (over a point and a half lower) also largely explained why wealth inequality increased steeply from 2007 to 2010 despite the decline in income inequality. Indeed, the middle class took a bigger relative hit on their net worth from the decline in home prices than the top 20 percent did from the stock market plunge. This factor is also reflected in the fact that median wealth dropped much more in percentage terms than mean wealth over the Great Recession. The evidence, moreover, suggests that middle class households went into debt partly in order to increase their leverage and to raise their rate of return, at least when asset prices were rising. Of course, the increased leverage also made them very vulnerable when asset prices collapsed.

The racial disparity in wealth holdings, after fluctuating over the years from 1983 to 2007, was almost exactly the same in 2007 as in 1983. However, the Great Recession hit black households much harder than whites and the ratio of mean wealth between the two groups plunged from 0.19 in 2007 to 0.14 in 2010, mainly due to a 34 percent decline (in real terms) in African-American wealth. The relative (and absolute) losses suffered by black households from 2007 to 2010 are ascribable to the fact that blacks had a higher share of homes in their portfolio than did whites and much higher debt-equity ratios (0.55 and 0.15, respectively).

Hispanic households made sizeable gains on (non-Hispanic) white households from 1983 to 2007. The ratio of mean net worth grew from 0.16 to 0.26, the homeownership rate among Hispanic households climbed from 33 to 49 percent, and the ratio of homeownership rates with white households advanced from 48 percent in 1983 to 66 percent in 2007. However, in a reversal of fortunes, Hispanic households got hammered by the Great Recession. Their mean net worth plunged in half, the ratio of mean net worth with white households fell from 0.26 to 0.15, their home ownership rate fell by 1.9 percentage points, and their net home equity plummeted by 48 percent. The relative (and absolute) losses suffered by Hispanic households over these three years are also mainly due to the much larger share of homes in their wealth portfolio and their much higher debt-equity ratio (0.51 versus 0.15). Another likely factor is that a high percentage of Hispanics bought their homes close to the housing cycle peak.

Young households also got pummeled by the Great Recession. The ratio of net worth between households under age 35 and all households fell from 0.21 in 1983 to 0.17 in 2007 and then plunged to 0.10 in 2010. In (real) dollar terms, their mean net worth declined by 49 percent from 2007 to 2010. Among age group 35-44, the ratio of their net worth to the overall figure fell from 0.71 in 1983 to 0.58 in 2007 and then declined precipitously to 0.41 in 2010. In dollar terms, their wealth fell by 42 percent over the latter three years. The same two factors explain the losses suffered by young households – the higher share of homes in their wealth portfolio and their much higher leverage ratios.

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Table 1: Mean and Median Wealth and Income, 1962-2010
(In thousands, 2010 dollars)

Variable	1962	1969	1983	1989	1992	1995	1998	2001	2004	2007	2010
I. Values (1000s, 2010 dollars)											
A. Net Worth											
1. Median	51.9	63.6	73.0	78.2	66.7	65.3	81.2	90.5	89.9	107.8	57.0
2. Mean	194.1	232.5	284.4	325.8	316.8	292.6	361.5	468.1	496.9	563.8	463.8
B. Income (CPS)[a]											
1. Median	38.2	49.8	45.7	50.8	47.6	48.8	52.0	52.0	51.2	52.8	49.4
2. Mean	43.5	56.7	55.6	64.2	60.4	64.3	69.4	71.7	69.8	71.1	67.5

	1962-1969	1969-1983	1983-1989	1989-2001	2001-2007	2007-2010	1962-2010
II Annual Growth Rates (percent)							
A. Net Worth							
1. Median	2.91	0.98	1.13	1.22	2.91	-15.19	0.19
2. Mean	2.58	1.44	2.27	3.02	3.10	-2.29	1.81
B. Income (CPS)[b]							
1. Median	3.78	-0.62	1.76	0.19	0.27	-1.15	0.54
2. Mean	3.80	-0.14	2.40	0.91	-0.13	-1.10	0.92

Source: own computations from the 1983, 1989, 1992, 1995, 1998, 2001, 2004, 2007, and 2010 SCF
Additional sources are the 1962 Survey of Financial Characteristics of Consumers (SFCC) and the 1969 MESP file.
Wealth figures are deflated using the Consumer Price Index (CPI-U).

a. Source for household income data: U.S. Census of the Bureau, Current Populations Surveys, available at: http://www.census.gov/hhes/www/income/data/historical/household/
The 1962 figures are based on family income and the rate of change of family income between 1962 and 1969.

Table 2. The Size Distribution of Wealth and Income, 1962-2010

		Percentage Share of Wealth or Income held by:								
Year	Gini Coefficient	Top 1.0%	Next 4.0%	Next 5.0%	Next 10.0%	Top 20.0%	4th 20.0%	3rd 20.0%	Bottom 40.0%	All
A. Net Worth										
1962	0.803	33.4	21.2	12.4	14.0	81.0	13.4	5.4	0.2	100.0
1969	0.811	34.4	20.3	14.0	12.0	80.7	12.8	4.9	1.5	100.0
1983	0.799	33.8	22.3	12.1	13.1	81.3	12.6	5.2	0.9	100.0
1989	0.832	37.4	21.6	11.6	13.0	83.5	12.3	4.8	-0.7	100.0
1992	0.823	37.2	22.8	11.8	12.0	83.8	11.5	4.4	0.4	100.0
1995	0.828	38.5	21.8	11.5	12.1	83.9	11.4	4.5	0.2	100.0
1998	0.822	38.1	21.3	11.5	12.5	83.4	11.9	4.5	0.2	100.0
2001	0.826	33.4	25.8	12.3	12.9	84.4	11.3	3.9	0.3	100.0
2004	0.829	34.3	24.6	12.3	13.4	84.7	11.3	3.8	0.2	100.0
2007	0.834	34.6	27.3	11.2	12.0	85.0	10.9	4.0	0.2	100.0
2010	0.870	35.4	27.7	13.6	12.2	88.9	9.4	2.6	-0.9	100.0
B. Income										
1962	0.428	8.4	11.4	10.2	16.1	46.0	24.0	16.6	13.4	100.0
1969	0.533	18.3	11.5	9.5	14.7	54.0	21.7	15.2	9.1	100.0
1982	0.480	12.8	13.3	10.3	15.5	51.9	21.6	14.2	12.3	100.0
1988	0.521	16.6	13.3	10.4	15.2	55.6	20.6	13.2	10.7	100.0
1991	0.528	15.7	14.8	10.6	15.3	56.4	20.4	12.8	10.5	100.0
1994	0.518	14.4	14.5	10.4	15.9	55.1	20.6	13.6	10.7	100.0
1997	0.531	16.6	14.4	10.2	15.0	56.2	20.5	12.8	10.5	100.0
2000	0.562	20.0	15.2	10.0	13.5	58.6	19.0	12.3	10.1	100.0
2003	0.540	17.0	15.0	10.9	14.9	57.9	19.9	12.1	10.2	100.0
2006	0.574	21.3	15.9	9.9	14.3	61.4	17.8	11.1	9.6	100.0
2009	0.549	17.2	16.5	10.7	14.7	59.1	18.7	14.9	7.3	100.0

Source: own computations from the 1983, 1989, 1992, 1995, 1998, 2001, 2004, 2007, and 2010 SCF.
Additional sources are the 1962 SFCC and the 1969 MESP file. Income data are from these files.
For the computation of percentile shares of net worth, households are ranked according to their net worth;
and for percentile shares of income, households are ranked according to their income.

Table 3. Mean Wealth Holdings and Income by Wealth or Income Class, 1983-2010
(In thousands, 2010 dollars)

Variable	Top 1.0%	Next 4.0%	Next 5.0%	Next 10.0%	Top 20.0%	4th 20.0%	3rd 20.0%	Bottom 40.0%	All
A. Net Worth									
1983	9,599	1,588	690.5	372.9	1,156.5	178.7	74.2	6.3	284.4
2010	16,439.4	3,192.5	1,263.4	567.0	2,061.6	216.9	61.0	(10.6)	463.8
% change	71.3	101.1	83.0	52.1	78.3	21.4	-17.9	-269.7	63.1
% of gain[a]	38.1	35.8	16.0	10.8	100.7	4.3	-1.5	-3.8	100.0
B. Income									
1982	827.1	213.7	132.7	99.6	167.1	69.7	45.6	19.9	64.4
2009	1,318.2	317.2	164.0	112.0	226.2	72.0	41.7	17.3	76.9
% change	59.4	48.4	23.6	12.5	35.4	3.3	-8.4	-12.9	19.3
% of gain[a]	39.4	41.6	12.7	10.1	103.7	3.6	-3.1	-4.1	100.0

Source: own computations from the 1983 and 2010 Survey of Consumer Finances.
For the computation of percentile shares of net worth, households are ranked according to their net worth;
And for percentile shares of income, households are ranked according to their income.

a. The computation is performed by dividing the total increase in wealth of a given group by the total increase of wealth for all households over the period, under the assumption that the number of households in each group remains unchanged over the period. It should be noted that the households found in a given group (such as the top quintile) may be different in each year.

Table 4. Composition of Total Household Wealth, 1983 – 2010
(Percent of gross assets)

Wealth component	1983	1989	1992	1995	1998	2001	2004	2007	2010
Principal residence	30.1	30.2	29.8	30.4	29.0	28.2	33.5	32.8	31.3
Other real estate	14.9	14.0	14.7	11.0	10.0	9.8	11.5	11.3	11.8
Unincorporated business equity	18.8	17.2	17.7	17.9	17.7	17.2	17.1	20.1	18.0
Liquid assets[a]	17.4	17.5	12.2	10.0	9.6	8.8	7.3	6.6	6.2
Pension accounts	1.5	2.9	7.2	9.0	11.6	12.3	11.8	12.1	15.3
Financial securities	4.2	3.4	5.1	3.8	1.8	2.3	2.1	1.5	1.8
Corporate stock & mutual funds	9.0	6.9	8.1	11.9	14.8	14.8	11.9	11.8	11.4
Net equity in personal trusts	2.6	3.1	2.7	3.2	3.8	4.8	2.9	2.3	2.4
Miscellaneous assets	1.3	4.9	2.5	2.8	1.8	1.8	1.8	1.7	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Debt on principal residence	6.3	8.6	9.8	11.0	10.7	9.4	11.6	11.4	12.9
All other debt	6.8	6.4	6.0	5.3	4.2	3.1	3.9	3.9	4.5
Total debt	13.1	15.0	15.7	16.3	15.0	12.5	15.5	15.3	17.4
Selected ratios in percent:									
Debt / equity ratio	15.1	17.6	18.7	19.4	17.6	14.3	18.4	18.1	21.0
Debt / income ratio	68.4	87.6	88.8	91.3	90.9	81.1	115.0	118.7	127.0
Net home equity / total assets	23.8	21.6	20.1	19.5	18.2	18.8	21.8	21.4	18.4
Principal residence debt as ratio to house value	20.9	28.6	32.7	36.0	37.0	33.4	34.8	34.9	41.2
Stocks, directly or indirectly owned as a ratio to total assets[b]	11.3	10.2	13.7	16.8	22.6	24.5	17.5	16.8	17.8

Source: own computations from the 1983, 1989, 1992, 1995, 1998, 2001, 2004, 2007, and 2010 SCF.

a. Checking accounts, savings accounts, time deposits, money market funds, certificates of deposits, and the cash surrender value of life insurance.

b. Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts

Table 5. Composition of Household Wealth by Wealth Class, 2010

(Percent of gross assets)

Asset	All Households	Top One Percent	Next 19 Percent	Middle 3 Quintiles
Principal residence	31.3	9.4	30.1	66.6
Liquid assets (bank deposits, money market funds, and cash surrender value of life insurance)	6.2	5.5	6.8	5.9
Pension accounts	15.3	7.8	20.6	14.2
Corporate stock, financial securities, mutual funds, and personal trusts	15.7	25.4	14.9	3.1
Unincorporated business equity other real estate	29.8	50.3	25.6	8.9
Miscellaneous assets	1.7	1.6	2.0	1.3
Total assets	100.0	100.0	100.0	100.0
Memo (selected ratios in percent):				
Debt / equity ratio	21.0	3.5	13.7	71.5
Debt / income ratio	127.0	60.6	117.9	134.5
Net home equity / total assets[a]	18.4	7.7	21.0	32.4
Principal residence debt / house value	41.2	18.9	30.1	51.3
All stocks / total assets[b]	17.8	20.6	20.1	8.2
Ownership Rates (Percent)				
Principal residence	67.2	98.1	96.3	68.4
Other real estate	18.6	75.1	48.9	12.4
Pension assets	50.4	90.2	82.7	45.8
Unincorporated business	12.1	74.1	30.3	8.1
Corporate stock, financial securities[c], mutual funds, and personal trusts	22.9	88.8	61.2	15.4
Stocks, directly or indirectly owned[b]	46.9	94.9	84.4	41.4
(1) $5,000 or more	35.5	94.3	79.7	29.4
(2) $10,000 or more	31.1	93.1	77.2	24.0

Source: own computations from the 2010 SCF. Households are classified into wealth class according to their net worth. Brackets for 2010 are:

Top one percent: Net worth of $6,616,000 or more.
Next 19 percent: Net worth between $373,000 and $6,616,000.
Quintiles 2 through 4: Net worth between $0 and $373,000.

Also, see Notes to Table 4.

a. Ratio of gross value of principal residence less mortgage debt on principal residence to total assets.

b. Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts

c. Financial securities exclude U.S. government savings bonds in this entry.

Table 6. Composition of Household Wealth of the Middle Three Wealth Quintiles, 1983-2010

(Percent of gross assets)

Asset	1983	1989	1998	2001	2004	2007	2010
Principal residence	61.6	61.7	59.8	59.2	66.1	65.1	66.6
Liquid assets (bank deposits, money market funds, and cash surrender value of life insurance)	21.4	18.6	11.8	12.1	8.5	7.8	5.9
Pension accounts	1.2	3.8	12.3	12.7	12.0	12.9	14.2
Corporate stock, financial securities, mutual funds, and personal trusts	3.1	3.5	5.5	6.2	4.2	3.6	3.1
Unincorporated business equity other real estate	11.4	9.4	8.8	8.5	7.9	9.3	8.9
Miscellaneous assets	1.3	2.9	1.8	1.2	1.4	1.3	1.3
Total assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memo (selected ratios in percent):							
Debt / equity ratio	37.4	41.7	51.3	46.4	61.6	61.1	71.5
Debt / income ratio	66.9	83.0	101.6	100.3	141.2	156.7	134.5
Net home equity / total assets[a]	43.8	39.2	33.3	33.8	34.7	34.8	32.4
Principal residence debt / house value	28.8	36.5	44.4	42.9	47.6	46.6	51.3
All stocks / total assets[b]	2.4	3.3	11.2	12.6	7.5	7.0	8.2
Ownership Rates (Percent)							
Principal residence	71.6	71.5	73.3	75.9	78.2	76.9	68.4
Other real estate	15.4	15.5	13.7	13.2	13.6	14.7	12.4
Pension assets	12.2	27.3	48.5	52.9	51.4	53.4	45.8
Unincorporated business	8.5	8.4	8.5	7.9	8.1	8.8	8.1
Corporate stock, financial securities[c], mutual funds, and personal trusts	21.6	24.2	26.7	27.5	27.1	23.1	15.4

Source: own computations from the Survey of Consumer Finances. Households are classified into wealth class according to their net worth. Also, see Notes to Table 5.

a. Ratio of gross value of principal residence less mortgage debt on principal residence to total assets.
b. Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts
c. Financial securities exclude U.S. government savings bonds in this tabulation.

Table 7. Average Annual Rates of Return by Period and Wealth Class, 1983 - 2010
(percent)

	1983-1989	1989-2001	2001-2007	2007-2010	1983-2010
A. Gross Assets					
1. All Households	2.20	3.25	3.34	-6.95	1.90
2. Top 1 Percent	3.00	3.88	3.86	-6.94	2.48
3. Next 19 Percent	2.17	3.33	3.19	-6.70	1.93
4. Middle 3 Quintiles	1.21	2.23	2.95	-7.52	1.08
B. Net Worth					
1. All Households	3.17	4.25	4.31	-7.98	2.67
2. Top 1 Percent	3.38	4.15	4.03	-7.10	2.70
3. Next 19 Percent	2.82	3.97	3.80	-7.35	2.42
4. Middle 3 Quintiles	3.15	4.55	5.95	-11.37	2.78

Source: own computations from the 1983, 1989, 2991, 2007, and 2010 SCF.
Rates of return by asset type are provided in Appendix 1.
Households are classified into wealth class according to their net worth.
Calculations are based on household portfolios averaged over the period.
Miscellaneous assets are excluded from the calculation.

Table 8. Household Income and Wealth by Race, 1983-2010

(In thousands, 2010 dollars)

	Means			Medians		
Year	Whites	African-Americans	Ratio	Whites	African-Americans	Ratio
A. Income						
1982	68.2	36.7	0.54	48.0	26.7	0.56
1988	74.7	33.2	0.45	49.7	18.9	0.38
1991	74.2	37.2	0.50	45.7	25.9	0.57
1994	68.2	32.9	0.48	45.8	24.3	0.53
1997	77.4	38.0	0.49	49.5	26.8	0.54
2000	93.4	45.3	0.48	54.2	30.8	0.57
2003	89.8	44.0	0.49	55.4	32.3	0.58
2006	97.1	46.9	0.48	52.6	31.6	0.60
2009	86.8	41.4	0.48	51.0	30.0	0.59
B. Net Worth						
1983	332.3	62.5	0.19	95.7	6.4	0.07
1989	393.2	65.9	0.17	113.6	2.9	0.03
1992	380.5	70.7	0.19	95.3	16.0	0.17
1995	346.8	58.3	0.17	87.3	10.5	0.12
1998	429.3	78.0	0.18	109.3	13.4	0.12
2001	573.5	81.7	0.14	131.0	13.1	0.10
2004	616.4	117.1	0.19	136.6	13.7	0.10
2007	685.8	129.0	0.19	151.1	9.7	0.06
2010	593.3	84.5	0.14	97.0	4.9	0.05
C. Homeownership Rate (in Percent)						
1983	68.1	44.3	0.65			
1989	69.3	41.7	0.60			
1992	69.0	48.5	0.70			
1995	69.4	46.8	0.67			
1998	71.8	46.3	0.64			
2001	74.1	47.4	0.64			
2004	75.8	50.1	0.66			
2007	74.8	48.6	0.65			
2010	74.6	47.7	0.64			
D. Percent of Households with zero or negative net worth						
1983	11.3	34.1	3.01			
1989	12.1	40.7	3.38			
1992	13.8	31.5	2.28			
1995	15.0	31.3	2.09			
1998	14.8	27.4	1.85			
2001	13.1	30.9	2.35			
2004	13.0	29.4	2.27			
2007	14.5	33.4	2.30			
2010	18.6	33.9	1.83			

Source: own computations from the 1983, 1989 1992, 1995, 1998, 2001, 2004, 2007, and 2010 SCF. Households are divided into four racial/ethnic groups: (I) non-Hispanic whites; (ii) non-Hispanic blacks; (iii) Hispanics; and (iv) American Indians, Asians, and others. For 1995, 1998, and 2001, the classification scheme does not explicitly indicate non-Hispanic whites and non-Hispanic blacks for the first two categories so that some Hispanics may have classified themselves as either whites or blacks.

Table 9. Family Income and Wealth for Non-Hispanic Whites and Hispanics, 1983-2010
(In thousands, 2010 dollars)

	Means			Medians		
Year	Non-Hispanic Whites	Hispanics	Ratio	Non-Hispanic Whites	Hispanics	Ratio
A. Income						
1982	68.2	41.2	0.60	48.0	31.8	0.66
1988	74.7	34.0	0.46	49.7	23.8	0.48
1991	74.2	35.0	0.47	45.7	24.4	0.53
1994	68.2	44.2	0.65	45.8	31.5	0.69
1997	77.4	41.6	0.54	49.5	30.8	0.62
2000	93.4	46.3	0.50	54.2	29.6	0.55
2003	89.8	44.4	0.49	55.4	30.0	0.54
2006	97.1	48.8	0.50	52.6	36.8	0.70
2009	86.8	49.1	0.57	51.0	34.0	0.67
B. Net Worth						
1983	332.3	54.0	0.16	95.7	3.7	0.04
1989	393.2	64.7	0.16	113.6	2.4	0.02
1992	380.5	84.6	0.22	95.3	5.7	0.06
1995	346.8	73.4	0.21	87.3	7.2	0.08
1998	429.3	106.0	0.25	109.3	4.0	0.04
2001	573.5	98.6	0.17	131.0	3.6	0.03
2004	616.4	132.1	0.21	136.6	6.4	0.05
2007	685.8	179.2	0.26	151.1	9.6	0.06
2010	593.3	90.3	0.15	97.0	1.3	0.01
C. Homeownership Rate (in Percent)						
1983	68.1	32.6	0.48			
1989	69.3	39.8	0.57			
1992	69.0	43.1	0.62			
1995	69.4	44.4	0.64			
1998	71.8	44.2	0.61			
2001	74.1	44.3	0.60			
2004	75.8	47.7	0.63			
2007	74.8	49.2	0.66			
2010	74.6	47.3	0.63			
D. Percent of Households with zero or negative net worth						
1983	11.3	40.3	3.01			
1989	12.1	39.9	3.38			
1992	13.8	41.2	2.28			
1995	15.0	38.3	2.09			
1998	14.8	36.2	2.09			
2001	13.1	35.3	2.69			
2004	13.0	31.3	2.41			
2007	14.5	33.5	2.30			
2010	18.6	35.8	1.93			

Source: own computations from the 1983, 1989 1992, 1995, 1998, 2001, 2004, 2007, and 2010 SCF.
See footnote to Table 8 for details on racial/ethnic categories.

Table 10. Composition of Household Wealth by Race and Ethnicity, 2007
(Percent of gross assets)

Asset	Non-Hispanic Whites	African-Americans	Hispanics
Principal residence	30.8	54.0	52.5
Liquid assets (bank deposits, money market funds, and cash surrender value of life insurance)	6.6	7.6	3.9
Pension accounts	12.5	12.3	7.7
Corporate stock, financial securities, mutual funds, and personal trusts	17.1	3.4	2.5
Unincorporated business equity other real estate	31.3	20.9	32.9
Miscellaneous assets	1.7	1.8	0.4
Total assets	100.0	100.0	100.0
<u>Memo (selected ratios in percent):</u>			
Debt / equity ratio	15.4	55.3	51.1
Debt / income ratio	109.0	152.2	187.9
Net home equity / total assets[a]	20.8	27.3	28.8
Principal residence debt / house value	32.4	49.4	45.2
All stocks / total assets[b]	18.3	5.0	5.1
<u>Annual Rate of Return on Net Worth (in percent)</u>			
2001-2007	4.14	6.35	6.74
2007-2010	-7.74	-10.90	-11.82

Source: own computations from the 2007 SCF.

a. Ratio of gross value of principal residence less mortgage debt on principal residence to total assets
b. Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts

Table 11. Age-Wealth Profiles and Homeownership Rates by Age, 1983-2010

Age	1983	1989	1992	1995	1998	2001	2004	2007	2010
A. Mean Net Worth (Ratio to Overall Mean)									
Under 35	0.21	0.29	0.20	0.16	0.22	0.19	0.14	0.17	0.10
35-44	0.71	0.72	0.71	0.65	0.68	0.64	0.65	0.58	0.41
45-54	1.53	1.50	1.42	1.39	1.27	1.25	1.21	1.19	1.14
55-64	1.67	1.58	1.82	1.81	1.91	1.86	1.91	1.69	1.81
65-74	1.93	1.61	1.59	1.71	1.68	1.72	1.57	1.86	1.74
75 & over	1.05	1.26	1.20	1.32	1.12	1.20	1.19	1.16	1.36
B. Homeownership Rate (in Percent)									
Overall	63.4	62.8	64.1	64.7	66.3	67.7	69.1	68.6	67.2
Under 35	38.7	36.3	36.8	37.9	39.2	40.2	41.5	40.8	37.5
35-44	68.4	64.1	64.4	64.7	66.7	67.6	68.6	66.1	63.8
45-54	78.2	75.1	75.5	75.4	74.5	76.1	77.3	77.3	75.2
55-64	77.0	79.2	77.9	82.3	80.6	83.2	79.1	80.9	78.1
65-74	78.3	78.1	78.8	79.4	81.7	82.5	81.2	85.5	82.5
75 & over	69.4	70.2	78.1	72.5	76.9	76.2	85.1	77.0	81.3

Source: own computations from the 1983, 1989 1992, 1995, 1998, 2001, 2004, 2007, and 2010 SCF. Households are classified according to the age of the householder.

Table 12. Composition of Household Wealth by Age Class, 2007
(Percent of gross assets)

Asset	All	Under 35	35-44	45-54	55-64	65-74	75 & over
Principal residence	32.8	54.3	43.7	33.8	25.6	28.2	30.2
Liquid assets (bank deposits, money market funds, and cash surrender value of life insurance)	6.6	5.7	5.4	6.4	6.3	6.1	10.5
Pension accounts	12.1	6.0	10.7	13.0	15.8	12.9	5.0
Corporate stock, financial securities, mutual funds, and personal trusts	15.5	4.2	8.6	13.1	16.4	20.5	25.6
Unincorporated business equity other real estate	31.3	28.7	30.1	32.0	34.4	30.2	27.1
Miscellaneous assets	1.7	1.2	1.5	1.7	1.5	2.1	1.6
Total assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Memo (selected ratios in percent):</u>							
Debt / equity ratio	18.1	92.7	41.3	20.2	11.9	7.1	2.1
Debt / income ratio	118.7	167.5	156.5	118.2	100.0	79.7	29.9
Net home equity / total assets[a]	21.4	18.8	21.3	20.9	18.1	23.4	28.7
Principal residence debt / house value	34.9	65.4	51.4	38.3	29.2	16.9	4.9
All stocks / total assets[b]	16.8	5.9	11.2	15.1	19.4	21.5	20.0
<u>Annual Rate of Return on Net Worth (in percent)</u>							
2001-2007	4.31	8.12	5.92	4.56	4.00	3.62	2.64
2007-2010	-7.98	-15.00	-10.53	-8.36	-7.38	-7.07	-6.72

Source: own computations from the 2007 Surveys of Consumer Finances. Households are classified into age class according to the age of the household head.

a. Ratio of gross value of principal residence less mortgage debt on principal residence to total assets.
b. Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts
c. Financial securities exclude U.S. government savings bonds in this tabulation.