

# Household Debt and Saving during the 2007 Recession<sup>1</sup>

Rajashri Chakrabarti, Donghoon Lee, Wilbert van der Klaauw and Basit Zafar  
Federal Reserve Bank of New York  
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## **Abstract**

Using detailed administrative credit report records and data collected through several special household surveys we analyze changes in household debt and savings during the 2007 recession. We find that while different segments of the population were affected in distinct ways, depending on whether they owned a home, whether they owned stocks and whether they had secure jobs, the crisis' impact appears to have been widespread, affecting large shares of households across all age, income and education groups. In response to their deteriorated financial situation, households reduced their average spending and increased saving. The latter increase – at least in 2009 – did not materialize itself through an increase in contributions to retirement and savings accounts. If anything, such contributions actually declined on average during that year. Instead, the higher saving rate appears to reflect a considerable decline in household debt, mortgage debt in particular. At the end of 2009 individuals expected to continue to increase saving and pay down debt, which is consistent with what we have in fact observed so far in 2010. In contrast, consumers were pessimistic about the availability of credit, with access to credit expected to become even more difficult during 2010.

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<sup>1</sup> The views expressed are those of the authors and do not necessarily reflect those of the Federal Reserve Bank of New York. We have benefitted from helpful comments from Andrew Haughwout, Meta Brown and Joseph Tracy.

## **1. Introduction**

During the 2007 recession many households saw their wealth decline sharply and their income and employment opportunities deteriorate. In this paper we use microeconomic data to analyze changes in household financial decisions during this period and in particular changes in household saving and debt. More specifically, we focus on the following three questions: What is the nature and prevalence of financial distress and how does it vary across households? How have households responded to these new economic conditions? What are consumers' expectations about future economic outcomes and their future financial behaviors?

Our analysis in this paper is based on several unique data sources. First, the FRBNY Consumer Credit Panel, which is based on credit report records, provides detailed insights into developments at the liability side of household balance sheets over the past 10 years. Second, we use information on household financial decisions and expectations, such as on spending and saving, from several recent household surveys. We analyze survey evidence collected between November 2008 and February 2009 by RAND.<sup>2</sup> In addition, and of particular importance for this study, we analyze data we collected ourselves through a special survey on saving, administered between the end of October 2009 and January 2010 as part of the Household Inflation Expectations Project.<sup>3</sup> Both the RAND and NYFed surveys were administered as part of the RAND American Life Panel (ALP), an internet-based survey. Brief descriptions of the ALP and the FRBNY Consumer Credit Panel are provided in the Appendix. We also verified some of our findings using data from the Consumer Finance Monthly (CFM), a monthly telephone survey conducted by Ohio State University since 2005.

We begin in section 2 with an analysis of the extent and nature of the impact of the financial and economic crisis on households. We focus on four main channels, distinguishing between changes in the housing market, stock market, labor market and credit market. In section 3 we evaluate the different ways in which households have responded to these changes in their economic environment. We then assess individuals' expectations regarding future conditions and behavior in section 4, and we provide a brief summary in section 5.

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<sup>2</sup> The RAND survey module was designed by Mike Hurd and Susann Rohwedder. Detailed discussions of related and additional findings from this survey, as well as a number of follow-up surveys, are provided in Hurd and Rohwedder's *Effects of the Financial Crisis and Great Recession on American Households* (NBER working paper 16407, 2010).

<sup>3</sup> For further information about the Household Inflation Expectations Project, see *Rethinking the measurement of household inflation expectations: preliminary findings* (van der Klaauw, Bruine de Bruin, Topa, Potter and Bryan, 2008, Staff Report 359, Federal Reserve Bank of New York).

## **2. The Nature and Prevalence of Financial Distress during the Recession**

### a. The housing market

Perhaps the most defining aspect of the 2007 recession has been the decline in the housing market. As shown in Chart 1, since reaching a peak in April 2007, by the end of 2009 US house prices as measured by the FHFA home price index had fallen 13% nationwide.<sup>4</sup> This overall decrease masks considerable variation across states and metropolitan areas. For example, average prices dropped by respectively 39% and 38% from their peaks in California and Florida, while average home prices fell by 4% in Colorado and increased by 1% in Texas.

The large increase in home prices up to 2007 (an increase of 44% from 2002 levels) and the decline since then implies that home value losses experienced by consumers depend greatly on when a home was purchased. Overall in nominal terms only for those who bought their homes in 2005 or later is the average value of their home currently lower than what they paid for it. As shown in chart 2, those who experienced the greatest losses in nominal terms were those who bought their homes in 2007. The average loss by the beginning of 2010 as measured by the FHFA home price index was a little over 10% for this group. Interestingly, the average self-reported change in house value for this group was only about 6% in the NYFed survey. This is consistent with earlier findings in the literature suggesting that individual perceptions of home price changes generally are more optimistic or less negative than suggested by official numbers.<sup>5</sup>

An important consequence of the initial increase and subsequent fall in average housing prices for households, not conveyed in Chart 2, is the dramatic fall in home equity. As shown in Chart 3, with the rise in home prices total equity of homeowners rose. However, it did so at a much lower rate with homeowner's equity share in their homes actually staying relatively constant until the end of 2006. On average for each 1% increase in home prices, homeowners increased their mortgage debt by 1% (through higher balances on first mortgages, cash-out refinances, second mortgages and home equity lines of credit), so that proportionally their equity share in their homes actually remained constant. When home prices began to fall in 2007, owners' equity in household real estate began to fall rapidly from almost \$13.5 trillion in 1Q 2006 to a little under \$5.3 trillion in 1Q 2009, a decline in total home equity of over 60%. At the end of 2009 owner's equity was estimated at \$6.3 trillion, still more than half below its 2006 peak.

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<sup>4</sup> Other indices, such as the CoreLogic HPI and S&P/Case-Shiller HPIs showed even larger declines of up to 30% during this period.

<sup>5</sup> Note that those individuals who bought their homes in 2009 perceive on average that their homes have since increased in value by 6.5% (although the *median* reported change was 0%).

With the loss in home equity, a growing proportion of homeowners in fact lost all equity in their homes, finding the mortgage debt on their property exceeding its current market value. While the decline in housing prices was accompanied by a small decline in the overall home ownership rate<sup>6</sup>, the “effective homeownership rate” as defined in Haughwout et. al (2009) as the proportion of individuals with a positive amount of home equity, fell since 2007 by more than 7 percentage points (chart 4).

The exposure to the decline in housing values varied not only geographically, but also across different age and income groups. As shown in Table 1, ownership rates during the survey period (November 2009-January 2010) varied from 58% for those under 40, to 78% among those aged 40 to 55, and 84% for those older than 55.<sup>7</sup> Homeownership rates also increased monotonically with household income, with 50% of those with incomes under \$30K owning a home, while 91% did so among those earning more than \$75K. The home ownership rate among college graduates was 80%, while in what we refer to as the “bubble states”, the five states that experienced the largest housing boom and bust, the rate was slightly below the overall sample mean of 68%.<sup>8</sup>

As shown in Table 1, the average and median perceived price declines over the past year varied little by age, education and income, but were considerably larger in the bubble states, in which prices during the past year fell on average by almost 10 percent. Similarly, the proportion of people who perceived the current value of their home to be lower than what they paid for it, was 35% in the bubble states, whereas for the country as a whole it was 24%. The rate was also higher among homeowners under age 40 and those with incomes under \$30,000, of whom a much higher proportion bought their homes after 2005.

Reflecting a greater share of homeowners who have paid off their mortgages, the proportion of owners who have an outstanding balance on their mortgage is much lower amongst older individuals. Among homeowners with mortgages, at the end of 2009, 21% reported to be “underwater” at the time of the survey, with the fraction being the highest among those under age 40 (31%) and those living in the bubble states (29%).<sup>9</sup> As shown

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<sup>6</sup> After reaching a peak in 2004, by early 2010 the home ownership rate in the US had declined by almost 2 percentage points from around 69% to 67%. The decline was greatest among younger age groups, varying from 3% for those younger than 35, 4% for those aged 35-45, 3% for those ages 45-55, and a little over 1% for those over 65 (Census Bureau, Homeownership by age of householder, NSA).

<sup>7</sup> All survey statistics (for NYFed and RAND samples) presented in this paper are calculated using sample weights based on population statistics calculated from the 2009 CPS March Supplement survey.

<sup>8</sup> The ‘bubble states’ include Arizona, California, Florida, Michigan and Nevada.

<sup>9</sup> A homeowner is defined to be underwater if they answered no to the question “If you sold your home today, would the proceeds be sufficient to pay off all mortgage loans and any costs of completing the sale?” The overall rate of 21% is comparable to that computed by First American CoreLogic, who report that

in Table 2, these higher proportions of individuals who are under water partly reflect a greater share of homeowners who bought their homes after 2005. However, it also reflects how much equity was taken out by owners during the housing boom, with the proportion with negative equity being much larger among those with higher mortgage debt. Finally, the share of mortgage holders who are under water is much higher among investors, defined here as those with 3 or more first mortgages. This is consistent with our findings based on the FRBNY Consumer Credit Panel, showing that while historically lower, delinquency rates among this group has recently been considerably higher relative to that for non-investors (Haughwout et al. 2010)

In summary, the direct impact of the housing crisis has been confined to home owners, who are on average somewhat older and have higher incomes than renters. Among owners, many saw considerable gains in housing wealth evaporate during the recession, with those who bought their homes after 2005 (on average younger and with lower incomes) and those living in one of the bubble states experiencing the largest nominal losses and with the highest proportion of mortgages that are currently under water. Ultimately, the impact of the decline in house values on a specific household's financial situation and behavior will depend on many factors, including where the house is located, when the house was bought, how it was financed, how much equity was extracted during the housing boom, the ability to make mortgage payments and how long the household plans to live in the home.

b. The stock market

In addition to significant losses in housing wealth during the 2007 recession, many households experienced considerable losses in their retirement wealth following the stock market crash in October 2008. As shown in Chart 5, after falling more than 45% between the end of 2007 and the beginning of 2009, the stock market has rebounded somewhat but stocks at the end of 2009 remained about 27% below their peak values.

Not all households were directly affected by this drop in stock values, with exposure varying considerably across households. Based on the 2007 Survey of Consumer Finances, stock market participation rates as measured by the proportion of families holding stocks directly or indirectly (through mutual funds in pension accounts) increases monotonically with income from less than 14% for those in the bottom income quintile to 91% in the top decile (Table 3). A similar positive relationship with income is found for the average/median stock value held by stock market participants. The

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more than 11.3 million, or 24 percent, of all residential properties with mortgages, were in negative equity at the end of the fourth quarter of 2009.

participation rate, as well as the median stock value held among participants has a bell-shaped relationship with respect to the age of the household head. Reflecting a lower average income, stock market exposure was also much lower on average for renters.

The same patterns exhibited by the 2007 Survey of Consumer Finances also show up in responses to the 2008 RAND survey shown in Table 4. In November 2008, 58% of households reported to directly or indirectly own stocks at a median value of \$40,000. Approximately 90% of stockholders reported a loss in the overall value of their stocks since October 1, 2008, with 38% reporting losses over 30 percent. Both rates show very little variation across demographic groups. During a period in which on average the S&P 500 index fell by 24 percent, those reporting positive stock holdings reported a median 25% decline in stock value between Oct 1 2008 and the interview date in November 2008, corresponding to a median loss in value of \$12,000.<sup>10</sup> Some 38% of stockholders reported losses of over 30 percent. While there was little variation in percentage losses across demographic groups, a percentage loss of 25% translates into very different dollar values, varying between \$4,000 for stockholders under age 40 and those with lower incomes (incomes under \$30,000), and \$25,000 for stockholders over 55 and with high incomes (incomes over \$75,000).

The patterns for stock ownership found in the RAND survey are consistent with those for pension plan participation in the NYFed survey. Older individuals and higher income individuals are twice as likely (about 50% versus 25%) to report that they or their spouse currently are, or ever have been enrolled in a Defined Benefit pension plan. Similarly, 86 percent of individuals with household incomes over \$75,000 report that they or their spouse currently are or ever have been enrolled in a Defined Contribution plan (such as a 401K, individual retirement account (IRA), tax deferred annuity or 403(b), 457 thrift savings plan), while only 38 percent reported so for individuals with incomes under \$30,000. Across age groups we find an inverted-U pattern, with 56% of individuals under age 40 having such a pension plan, 78% of individuals between ages 40 and 55, and 65% of individuals older than 55 ever or currently participating in such a plan. Thus the decline in the stock market is most likely to have affected middle and older age individuals and those with higher household incomes.

c. The labor market

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<sup>10</sup> Averaged over all the daily closings during November 2008, the S&P500 had fallen on average by 24% since October 1 2008.

Since the recession began, the unemployment rate increased by more than 5 percentage points to 10% at the end of 2009, while the proportion of those marginally attached to the labor force (which includes the unemployed as well as those involuntarily working part-time) increased from about 8% in 2007 to 17% at the end of 2009. As shown in Chart 6, during the past two years there also was a considerable fall in the average work week, which fell by a little more than an hour per week.

Not surprisingly, these patterns are reflected in the trends for personal income, calculated by the National Income and Product Accounts. As shown in Chart 7, between the end of 2007 and the end of 2009 per-capita real personal income fell by 3.8% with total compensation and wages falling respectively by 5.8% and 6.7% during this period. However, as also shown in the chart, per-capita disposable income remained relatively constant during this period, due to a drop in personal taxes.

Not all households were equally affected by the decline in the labor market. As shown in Table 5, unemployment rates as reported in the NYFed survey at the end of 2009 varied considerably by age and geography with younger individuals and those living in the bubble states more likely to be unemployed at the time of the survey.<sup>11</sup> Not surprisingly, unemployment was also more prevalent in (and a cause of) lower income households. The same patterns are found for spousal unemployment -- 8% of respondents report a job loss by a spouse during the past 12 months. During the survey period, in 14% of households either the respondent was currently unemployed and/or had a spouse who had been laid off during the past year. In addition to losing jobs, significant proportions of respondents reported incurring a pay cut (15%), having to take unpaid furlough days off (7%), losing 401K matching (8%) and reductions in health benefits (14%) during the last 12 months, with home owners, individuals over age 55 and those with household incomes over \$75,000 less likely to report pay cuts or reductions in health benefits.

As reported in Table 5, the combined impact of employment losses and lower wage growth led to an overall average decrease in pre-tax household income of about 3.9% during 2009, with 19% of individuals reporting losses of 10% of income or higher. While all demographic groups suffered income losses during the past year, the losses were greatest among the 40-55 age group (average decline of 5.8%) and among individuals living in bubble states (4.7%).

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<sup>11</sup> The lower overall unemployment rate of 7% in the NYFed sample compared to a national rate of closer to 10% at the end of 2009, may be due to a difference between what individuals believe constitutes being unemployed and how unemployment is officially measured. It may also reflect a lower survey response rate among the unemployed.

#### d. Credit markets

During a recession in which most interest rates on personal loans fell, the most significant change in the credit markets was an overall decline in demand for and a tightening of supply of credit.<sup>12</sup> As shown in Chart 8, reflecting an overall sharp decline in the average loan-to-price ratio of new mortgage loans, the proportion with loan/price ratios over 90% dropped steadily from 31% of all mortgages originations in the middle of 2007 to about 7% of new mortgages at the end of 2009.<sup>13</sup> At the same time the proportion of refinances involving a cash-out (as opposed to rate-term refinances) dropped dramatically from over 70% of refinances in early 2006 to 35% of refinances at the end of 2009.<sup>14</sup>

Another striking change during the past year has been a decline in the number of loan accounts opened and a sharp increase in the number of accounts closed. As shown in Chart 9, credit report data from the FRBNY Consumer Credit Panel indicate that about 319 million accounts were closed during 2009, while just 166 million were opened. Credit cards have been the primary source of these reductions: the number of open credit card accounts fell to 394 million by the end of December 2009, a decrease of 78 million (16.5%) from a year ago and 20.5% from the peak in 2008Q2.

Additional insight into the apparent tightening of credit and closing of accounts is provided in Table 6. During the survey period at the end of 2009, 57% of respondents perceived that it had become more difficult to obtain credit compared to a year earlier, while only 12% thought it had become easier. Little differences show up in these responses across age and income groups. While 36% of respondents reported to have closed a credit card account during the past year at their own request, 13% reported to have had one of their credit card accounts closed by the bank or credit card company, with the proportion being highest among younger and lower-income respondents and among those living in one of the bubble states.<sup>15</sup>

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<sup>12</sup> At the end of 2009, while average rates on credit card plans were comparable to those at the end of 2007, interest rates on fixed rate 30-yr mortgage loans, 48-month new car loans, 24-month personal loans on average all had fallen by a little over one percentage points since the end of 2007.

<sup>13</sup> After a gradual increase in the average loan-to-price ratio on all mortgage loans, which ended at the end of 2007, by the end of 2009 it had fallen back to 73.9%, a level not seen since early 2004 (FHFA).

<sup>14</sup> During the same period, total cash-out dollars as a proportion of aggregate refinanced originations dropped from about 30% to 6% (FHFA).

<sup>15</sup> Additional survey data collected by the FRBNY between December 2009 and January 2010 indicates that twice as many credit card accounts were closed at the customer's request than were closed at the banks' initiative. Of all cards closed (at own request or not), 43% had a zero balance at the time of closing.



Finally, approximately equal proportions of respondents reported increases and decreases in the combined total credit limit on their combined credit cards. Decreases were more prevalent for the highest income group and those living in bubble states, while they were less prevalent among the lowest income group (for whom credit limits are likely to have been low to begin with). Increases in credit limits were instead more likely to be reported by those under 40 and with incomes in the \$30,000-\$75,000 range.

f. Measures of Overall Distress

The reported microeconomic evidence of considerable declines in housing and retirement wealth is consistent with the large drop in per-capita net worth calculated by the Flow of Funds Accounts and shown in Chart 10. Given the decline in net worth as well as the weak labor market, it is not surprising that since the middle of 2008 a majority of respondents in the Reuters/University of Michigan Survey of Consumers considered themselves worse off financially than a year ago. During the past year only about 20% report that they (and their family) are better off financially than they were a year ago (chart 11). When differentiating by age (not shown), we find these trends to apply equally to all age groups, except that overall ratings of changes in personal financial situation are persistently somewhat higher (less negative) for younger and lower (more negative) for older individuals.

As shown in Table 7, about 68% of consumers in the RAND survey reported in November 2008 that they had been affected “somewhat” or “a lot” by the crisis. The proportion of individuals who reported to have been affected a lot, was greatest among the 40 to 55 age group and among individuals living in one of the housing crisis states. In the November 2008 survey, a little under half of the respondents reported to be worse off financially relative to a year ago, with older and lower-income individuals more likely to report to be worse off than younger and higher income individuals.

An alternative and arguably more objective measure of financial stress can be derived based on some of the RAND survey findings discussed earlier. In November 2008, about one third of all individuals reported at least one of three indicators of financial distress: self or spouse unemployed, have negative equity in their home, lost more than 30% of their retirement savings. While unemployment and negative home equity were more concentrated among younger individuals, large retirement savings losses were more common among those 40 years of age or older, and especially among the 40-55 age group. Comparing across income groups, we find that while unemployment was more frequently experienced by individuals in low-income families, negative equity and large retirement savings losses were instead much more common in higher-income households. The same is true when comparing those with and without college degrees.

Finally, while individuals living in the bubble states were equally likely to report large retirement savings losses as those in other states, they were much more likely to be unemployed and under water at the end of 2008.

During the November 2009-January 2010 interview period, a large proportion of respondents in the NYFed survey continued to report deteriorating personal financial conditions, with 36% reporting being worse off and only 13% reporting being better off than a year earlier. Like a year earlier, a larger fraction of individuals in the 40 to 55 age range reported worsening conditions. About a third of respondents reported to have experienced one of three types of financial distress: currently unemployed or have a spouse who lost his/her job during the past year, experienced a drop in household income over 10% compared to the previous year, or currently being underwater on their mortgage. The proportion reporting at least one of these types of distress is somewhat higher among those younger than 40 (39%) and with incomes in the \$30,000 to \$75,000 range (37%), and lowest among individuals over age 55 (23%) and with incomes above \$75,000 (28%).

All in all, the survey evidence indicates that while different segments of the population were affected in distinct ways, depending on whether they owned a home (and when they bought it and where it was located), whether they owned stocks and whether they had secure jobs, the crisis' impact appears to have been widespread, affecting large shares of households across all age, income and education groups.

### **3. How did households respond to the changes in economic conditions?**

After investigating the nature and prevalence of deteriorating economic conditions during the 2007 recession, we focus next on how households responded to these changing conditions in their financial decision making. We first discuss changes in consumer spending behavior, followed by an analysis of changes in saving behavior. In examining how, at the individual household level, saving behavior may have changed, we consider the extent to which households changed their allocations to retirement accounts and added or withdrew funds from other savings accounts. We also analyze in detail whether and how households reduced or increased their outstanding mortgage and non-mortgage debt.

#### a. Consumer Spending

After reaching a peak in the fourth quarter of 2007, following a long period of steady growth, real personal consumption expenditures were down 3.1% by the second quarter of 2009 and remained 2.4% below the peak in the fourth quarter of 2009 (Chart 12). Between the end of 2007 and the second quarter of 2009, real personal expenditures on goods fell by 7.2% (with durable goods expenditures falling 9.9%), expenditures on services fell by only 1.0%, and expenditures on food and beverages purchased for off-premises consumption fell by 3.1%.<sup>16</sup>

Chart 13 provides additional information regarding the sharp drop in spending that occurred during the last quarter of 2008 and the first quarter of 2009. Daily discretionary consumer spending as measured by the Gallup Daily poll dropped 40% during this period.<sup>17</sup> While consumer spending rebounded somewhat after the first quarter of 2009, at the end of 2009 it remained about 28% below 3Q 2008 levels. Over the past two-year period the average percentage change in daily discretionary spending has been very similar for lower and middle income individuals (defined by Gallup as incomes below \$90,000) and high income individuals (incomes above \$90,000).

Evidence from the RAND and NYFed surveys is consistent with these findings. As shown in Table 8, as stock prices fell sharply, 75 percent of households reduced their monthly spending between October 1 2008 and the interview date in November 2008, with a median cut reported of 20% or about \$200. Spending cuts across demographic groups were similar, except that among individuals 55 years of age or older a somewhat smaller share reported reductions in spending, and on average reported smaller spending cuts. Percentage wise, cuts fell with household income, with those with incomes below \$30,000 cutting spending by 25%, while those with incomes above \$75,000 cutting spending by 15%.

At the time of the NYFed survey (fielded between November 2009 and January 2010) a slightly higher proportion of individuals reported their current spending to be lower compared to a year ago (27%) than the proportion for whom it was higher (22%). On average households reported spending to be 2.2% lower at the end of 2009 than it was a year earlier, with those aged 40-55, with incomes under \$30,000, and living in a bubble state reporting larger percentage cuts, while older and higher income individuals making smaller or no spending cuts (see Table 8). The median change in spending was 0%, which is broadly consistent with the relatively flat trend in personal consumer

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<sup>16</sup> Expenditures on goods, services and food at the end of 2009 remained, respectively 5.4%, 0.8% and 1.6% below their levels at the end of 2007 (Bureau of Economic Analysis, NIPA).

<sup>17</sup> Discretionary spending in the Gallup poll is defined as the money spent or charged during the previous day on all types of purchases, such as at a store, restaurant, gas station, online or elsewhere, excluding purchases of a home, motor vehicle, or normal household bills.

expenditures that followed the large drop in spending at the end of 2008 shown earlier in Chart 12.

Not surprisingly, spending cuts are strongly related to measures of financial distress. As shown in Table 9, the large majority of those unemployed at the end of 2009 reported cuts in spending during the year, with spending falling on average by more than 18% for this group. Similarly, those who reported household income losses of over 10% during 2009 and those who reported to be under water on their mortgage reported spending close to 10% and 6% less on average compared to a year earlier, cuts much higher than the 2.2% average decline in spending during this period in our sample.

## b. Saving

A relatively stable level of per-capita disposable income shown earlier in Chart 7 combined with what appears to be a persistent drop in personal consumption expenditures has resulted in a significant and widely reported increase in personal saving and in the personal saving rate. As shown in Chart 14, the National Income and Products Accounts (NIPA) Personal Saving Rate as computed by the Bureau of Economic Analysis increased from historically low levels of around 1 percent in the first quarter of 2008 to recent levels over 6 percent. While the personal saving rate does not directly map into actual household saving<sup>18</sup>, at the microeconomic level, an increase in household saving could manifest itself as an increase in allocations to retirement and savings accounts. Alternatively, it could exhibit itself as an increase in allocations used to reduce or pay off debt, where this could be mortgage debt or debt on other consumer loans, such as auto loans, student loans and credit card accounts. In what follows we first review survey evidence on recent changes in allocations to retirement and other savings accounts. This is followed by an analysis of survey and administrative data on changes in consumer debt.

### b1. Consumer Allocations to Retirement and Other Savings Accounts

In the NYFed survey conducted during the November 2009-January 2010 period, we asked individuals whether they had made any changes to their retirement account contributions over the past year. As reported in Table 10, while 11% of all individuals increased their contributions and 3% started contributing to a retirement account (including defined contribution and IRAs) for the first time, 12% decreased their

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<sup>18</sup> For example, the NIPA measure includes income and outlays of non-profit organizations.

contributions, 16% stopped contributing all together and 11% prematurely withdrew funds from their accounts. Those who increased their allocations did so by a median amount of \$100 per month, while those who decreased their allocations did so by a median amount of \$150 per month.<sup>19</sup>

Not only do more individuals appear to have reduced their contributions to retirement accounts than increased contributions, more individuals also seem to have withdrawn funds from other savings accounts (including checking, savings and money market accounts) than to have added funds to them. The proportions of individuals who reported that they in total withdrew funds during the past year from their checking, savings and money market accounts exceeded the proportions of respondents who reported that on net they had added funds to each of these accounts. In contrast approximately equal proportions reported that they in total had added funds to their stock market accounts, as had withdrawn funds from stock market accounts. All together 25% of individuals said they had added more than they used up of their total other (non-retirement) savings during the past year, with a median net annual increase of \$5,000. However, 38% reported that actually used up more than they added, with a median reduction of \$3,500. Our survey evidence therefore provides little support for the conjecture that households overall increased their saving by contributing more to their retirement and savings accounts.

Some of the observed changes in allocations to retirement and savings accounts undoubtedly reflect normal life cycle patterns in saving behavior, with retired individuals stopping to contribute and beginning to draw down their savings and younger individuals starting to save or to increase their saving as they advance in their careers. Some of the differences in reported behaviors across age groups in Table 10 indeed seem to reflect such life cycle effects. However the changes reported in Table 10, and especially the large proportions of respondents who stopped contributing or who prematurely withdrew funds during 2009 are much higher than one would expect to see in a more typical year.

The impact of the crisis is clearly reflected in the much higher proportion of **lower- income** households who stopped contributing or prematurely withdrew funds from their retirement accounts and the much lower proportion of households that increased contributions. These households were also much more likely to have used up

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<sup>19</sup> We also asked individuals for the overall percentage change in the total amount of money in their retirement and other savings accounts over the past year, after including all contributions and withdrawals during the year as well as changes in the value of funds already in their accounts. Overall respondents reported an average 3.2% decline in their total retirement account balances and an average 5.1% decline in balances of their other savings accounts. Given the slight overall increase in stock and bond values during the period considered, this is consistent with an overall net withdrawal of funds from those accounts.

more than added to their other savings accounts. A higher proportion of higher-income households instead increased their contributions to their retirement account and reported net additions to their other savings account. Unlike lower-income households their response to the crisis appears to reflect an increase in precautionary saving and an effort to rebuild their retirement savings.

More insight into this issue is provided in Table 11, which shows changes in allocations to retirement and other savings accounts for those unemployed at the end of 2009 and for those who experienced income losses over 10% during the past year. Between 90% and 100% of individuals belonging to these groups report decreasing or stopping their contributions or report prematurely withdrawing funds from their retirement account. A much higher share of these groups than in the rest of the sample also report to have used up funds from their other savings accounts.

Among reasons provided, many respondents mentioned job, salary and household income changes as playing a role in their decisions to increase or decrease their net contributions to their retirement and other savings accounts (Table 12). Perhaps not surprisingly, among the reasons for increasing allocations, a desire to increase savings for retirement was the most important factor, with “good time to invest” also often listed as motivation. Precautionary savings motives were listed as significant factors as well, while bequest motives and a desire to make up losses in home and stock values were less frequently mentioned. Among those who decreased net contributions to their retirement accounts or who used up funds from other savings accounts, a need or desire to pay for general living expenses, pay bills and reduce debt were most frequently provided as reasons.

In our survey we also asked respondents to rate the importance to their household of a set of alternative reasons for savings in general. The findings, reported in Table 13, show saving for retirement, precautionary savings motives and saving to pay for a child or grandchild’s education as the reasons most frequently listed as “very important”. Saving for retirement is more frequently mentioned by those in the middle and older age groups and those with household incomes over \$75,000. Precautionary savings motives are generally more frequently mentioned by the 40-55 age groups and those with household incomes under \$30,000. Saving to pay for the education of children or grand children or to buy a house or car is more frequently mentioned as an important reason for saving by younger individuals.

Finally, in addition to measuring changes in net contributions, it is interesting to analyze whether individuals made changes to how new funds or existing funds in their retirement and savings accounts were allocated. As shown in Table 14, while approximately equal proportions increased and decreased the amount of new allocations

used to buy stocks, a larger proportion of people rebalanced their stockholding to reduce their exposure to stocks in the first two months immediately following the stock market crash in October 2008, with about 3% pulling all funds out of the stock market. Similarly, 18% of respondents in our survey at the end of 2009 indicated that they moved some of their retirement savings to less risky investments. While admittedly incomplete, this survey evidence suggests that a non-negligible number of households appear to have shifted their allocations away from stocks, implying that not all consumers may have fully benefited from the recent rebound in the stock market.

## b2. Recent Changes in Consumer Debt

Before discussing our survey-based evidence on changes in consumer debt, we first describe recent findings based the FRBNY Consumer Credit Panel, a unique and comprehensive administrative database of credit report records for a large random sample of US individuals and households. As shown in Chart 15, after reaching a peak at the end of the third quarter of 2008, overall household debt has fallen steadily, declining by about \$567 billion (4.5%) up to the end of December 2009.

In order to relate the observed change in total consumer debt to the NIPA measure of savings, we first distinguish between mortgage debt (on first mortgages, second mortgages and home equity lines of credit (HELOCs)) and non-mortgage debt (on credit card loans, auto loans, student loans and other personal loans). Second, we exclude from the observed quarter-to-quarter changes in overall mortgage debt all changes in debt associated with home transactions. Third, in computing changes in mortgage and non-mortgage debt, we exclude amounts charged-off by banks. The resulting measure describes how much individuals on average are paying down or adding to their mortgage debts.<sup>20</sup>

The trends in net changes in mortgage and non-mortgage debt, shown in Chart 16, reveal that until 2008 net pay-down on mortgage debt was actually negative: the increases in debt associated with cash-out refinances, second mortgages and HELOCs exceeded the total mortgage payments consumers were making to reduce mortgage principals. Since then, consumers have been paying down mortgage debt at a rate of X \$billion each quarter (representing an X % reduction). Similarly, while changes in non-mortgage debt were positive before 2009, it turned slightly negative in 2009. So overall, during 2009 consumers on average stopped increasing their outstanding non-mortgage debt but made little headway in actually paying it down. Differentiating by loan type, we

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<sup>20</sup> For further explanation and details of this analysis see Brown et al (2010).

find that while consumers were paying down auto loan debt, student loan debt instead has been growing rapidly.

The evidence from the NYFed survey shown in Table 15 is broadly consistent with recent trends in the FRBNY Consumer Credit Panel. A considerably larger proportion of respondents report decreasing rather than increasing their mortgage debt, with declines in mortgage debt reported most frequently among the 40-55 age and high-income groups. While most individuals who reduced mortgage debt reported doing so by making their scheduled mortgage payments, about 17% mention doing so in part by prepaying principal and 11% did so in part through a refinance. Prepaying and refinancing were more frequently reported by higher-income individuals and college graduates. These findings suggest that at least a substantial share of households who reduced their outstanding mortgage debt did so voluntarily.

Interestingly, our survey results provide little evidence that households also reduced non-mortgage debt during the past year. While overall a slightly larger share of households reduced than increased such debt, on average debt increased by about \$400 during the past year. Declines in non-mortgage debt were more likely to be reported by older individuals and those with household incomes above \$75,000. The latter group of respondents actually reported reducing their non-mortgage debt on average by \$2,000 during the past year. Overall this survey evidence is consistent with the findings presented earlier in Chart 16 of households paying down mortgage debt, but slightly increasing or leaving unchanged their outstanding non-mortgage debt.

Not surprisingly, individuals who were unemployed at the end of 2009 were less likely to report reductions in their mortgage debt and more likely to report increases (Table 16). They were also more likely to report increases in their non-mortgage debt, but a greater share of such individuals also reported decreases in non-mortgage debt.<sup>21</sup> Overall unemployed individuals reported adding to their non-mortgage debt by \$2,300 on average. Similarly, respondents from households which experienced an income drop of more than 10% during the year, also are more likely to report increases in their mortgage and non-mortgage debt.

### b3. Responses in Spending and Savings to Hypothetical Income Shocks

To get an alternative view of household preferences and intentions for saving and spending, we asked respondents about their intended responses to a shock in their income

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<sup>21</sup> Unfortunately, we cannot evaluate with our data the extent to which the observed declines in mortgage and non-mortgage debt of individuals were due to lenders tightening standards and reducing limits on revolving credit lines during this period.



during the next year. More specifically, we asked “*Suppose next year you were to find your household with 10% more income than normal, what would you do with the extra income?*”, with as mutually exclusive answer options: (1) Save or invest all of it, (2) Spend or donate all of it, (3) Use all of it to pay down debts, (4) Spend and save some, (5) Spend some and use part of it to pay down debts, (6) Save some and use part of it to pay down debts, and (7) Spend some, save some and use some to pay down debts. For those choosing options (4) and higher, we then asked what share of the extra income they would use for each activity.

We also asked about their expected behavior when faced with an unexpected income drop: *Now imagine that next year you were to find yourself with 10% less household income. What would you do?*, with as answer options (1) Cut spending by the whole amount, (2) Not cut spending at all, but cut my savings by the whole amount, (3) Not cut spending at all, but increase my debt by borrowing the whole amount, (4) Cut spending by some and cut savings by some, (5) Cut spending by some and increase debt by some, (6) Cut savings by some and increase debt by some, and (7) Cut spending by some, cut savings by some and increase debt some. For those choosing options (4) and higher, we again asked what share of the lost income they would cover by each activity.

Responses to both questions are shown in Table 17. Overall 99% of respondents say they would at least use part of the extra income to save, invest or pay down debt, with 61% of all respondents saying that they would in fact use all the extra income for saving and/or for paying down debt. Only 1% of individuals say that they will spend or donate it all, with another 39% saying they would spend only some of the extra income. Aggregated across all individuals, on average 41% of the extra income would be used for saving/investing, 44% for debt payoff and only 15% for spending. Comparing across demographic groups, we find surprisingly little differences in the expected share of income to be used for consumption. Younger individuals expect to use a slightly higher fraction to pay down debt, while older individuals instead expect to use somewhat more for saving/investing.

Faced with an unexpected income drop, respondents instead expect to respond mainly by reducing their spending. Overall, 53% of respondents expect to reduce spending by the full amount of the shortfall. Only 13% expect to take on some more debt to cover the shortfall while 41% expect to use some of their savings to cover the lost income. On average, individuals expect to cover about 74% of the income loss by cutting spending, 20% by using some of their savings, and 6% by borrowing.

Care must be taken in interpreting stated intentions as actual future behavioral responses to realized income surprises. However, the findings appear to suggest that consumers will be unlikely to increase spending by much if their incomes were to

increase by more than expected, while on the other hand they seem likely to cut spending quite drastically in response to an unexpected future income shortfall.

#### **4. Households Expectations of Future Conditions and Behaviors**

In this section we analyze what households are expecting for the future. In our survey conducted between November 2009 and January 2010 we asked a number of questions eliciting individuals' expectations regarding a variety of outcomes and decisions, including their household's income, spending, saving behavior and retirement plans.

We first discuss individuals' expectations reported at the end of 2009 about overall economic conditions during the following 12 months. As shown in Table 18, more respondents expect to see increases than decreases in the unemployment, loan interest and mortgage rate. However, a slightly higher share expect an increase rather than a decrease in the average house price at the national level, but on average expecting an increase of only 0.5% during 2010. On average those younger than 40 and those with incomes in the \$30,000-\$75,000 range are somewhat more optimistic about changes in the unemployment rate and in house prices, while those aged 40-55 and those with household incomes under \$30,000 are more pessimistic. Perhaps not surprisingly, expectations about overall economic conditions are vary with certain measures of financial distress. As shown in Table 19, those who are under water are more likely to expect higher unemployment, interest rates and mortgage rates, relative to the sample. Expectations for those who are unemployed or those who reported household income losses of over 10% during 2009 do not depict the same pessimistic picture. In fact, expectations for this group tend to be more optimistic relative to our sample. It is also notable that those who report to be underwater are more likely to expect higher home prices in the future, and expect a higher mean increase in home prices relative to the entire sample.

Tables 20 and 21 report expectations about a number of personal outcomes and decisions. Considering first year-ahead expectations of household incomes, while there exists considerable heterogeneity in expectations across individuals, overall respondents are reasonably optimistic, expecting an average increase of 4.1% in their household income over the next 12 months. Expected increases are higher on average among younger and lower-income respondents, while older and higher-income respondents instead on average expect a small decline in their household incomes.<sup>22</sup> Expected increases are highest on average for financially distressed respondents, i.e., those who report to be unemployed at the end of 2009 and those who report to have lost over 10% of household income in 2009 (Table 21). This is consistent with them anticipating finding a job or experiencing an income rebound in the next 12 months. A similar pattern is found

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<sup>22</sup> Clearly some of these responses reflect expectations of non-labor income, life cycle behavior (expected retirement) and rebounds in income by unemployed expecting to find work.

for wage expectations (asked of those who were employed at the time of the survey at the end of 2009), with workers expecting an average 3.4% increase in their wages.

When asked whether they expect to make any changes to their retirement contributions over the next year, 13% report that they expect to increase their contributions, 4% expect to decrease contributions and the remainder expect to keep them unchanged. Older individuals, those with low incomes and those currently under water are less likely to expect to increase their retirement account allocations. About 29% expect to add more or to use up less of their other savings accounts during the next year, while 24% instead expect to add less or use up more of their other savings. Overall older and lower-income households plan to add less or use more of their other savings than their younger and more affluent counterparts.

While over 80% of homeowners with a mortgage expect to pay down some of the principal on their mortgage loans, some 24% expect to pre-pay some of the principal. Low income individuals and those unemployed at the end of 2009 are least likely to expect to pay down some of the principle (64%) and least likely to expect to pre-pay some of the principal (15%). On the other hand, 6% of homeowners with mortgages expect to miss payments during the next year, with the rate being as much as 22% for those with incomes under \$30,000 and 30% for those unemployed. Interestingly, the share of households expecting to miss a mortgage payment during the next year is actually smaller (1%) in the bubble states than in the nation as a whole. Finally, another 6% of homeowners with mortgages expect to add an additional mortgage or a home equity line of credit.

Considering non-mortgage debt we find that 66% of respondents expect to decrease their combined debt on credit cards, auto loans and student loans and only 4% expect to increase it. Plans to reduce such debt are slightly more prevalent among younger individuals and higher-income individuals, and are the highest amongst individuals who report to be under water.

A greater share of households expects to increase their monthly spending over the next 12 months than to decrease it. While 29% expect an increase, 16% expect a decrease with the remaining 55% expecting no change. On average household spending is expected to increase by 1.7%. Given an average expected increase in pre-tax household income of 4.1%, and assuming a similar increase in disposable income, this implies an average expected increase of 2.4% in saving or debt reduction. Closely tracking their expectations of household income increases, younger individuals, those with incomes under \$30,000 and those who are under water expect the greatest increases in spending over the next 12 months.

We also elicited individual's expectations about future retirement, bequests and their overall financial situation. As shown in Tables 22 and 23, those working at the time of our survey on average assigned a 62% chance of working full-time after reaching 62, and a 50% chance of working full-time after reaching 65. The average expected retirement age among workers was 67. When we asked whether the age at which they plan to retire had changed since last year, 24% reported that they had postponed retirement, while 5% now plan to retire earlier. Plans to postpone retirement were most prevalent among workers over 55 and workers with higher household incomes.

Perhaps not surprisingly given the loss of wealth experienced during the recession, about 18% of respondents report that the chance that they will leave an inheritance has fallen, while 7% instead believe the chance has increased. As one would expect, the proportion of respondents reporting a decreased chance of leaving a bequest is highest for those who are financially distressed. The proportion reporting a decreased chance of leaving a bequest is nearly double the sample average for those who are unemployed, those who have lost more than 10% of household income during 2009, and those who report to be under water on their mortgage.

Asked whether over the next 12 months they expect that it generally will become easier, harder or equally difficult to obtain credit or loans compared to the past 12 months, about twice as many respondents expect credit conditions to worsen: 39% expect credit to become more difficult to obtain (with the rate being as high as 59% for those under water), while 20% expect it to become easier.

Finally, all respondents were asked whether 12 months from now they expect their household to be better off financially, worse off, or about the same as now. Some 32% expect that they will be better off financially a year from the survey date, while 13% expect to be worse off. Comparing across age and income groups, we find that younger individuals are far more optimistic than older individuals, but find little differences across income groups. Individuals who are most financially distressed report the most optimistic expectations.

This section has documented heterogeneity in household expectations for the future for different demographic groups. Table 24 sheds some light on why households expect to change their future behavior. The table shows the relationship between expectations about saving, debt and spending behavior, and between future credit access. Relative to respondents who expect credit access to be easier, expectations about increasing retirement contributions, adding to other savings, and paying down debt are lower for respondents who expect credit access to become harder. While the proportion of respondents who expect to have higher monthly year-ahead spending is similar regardless of expectations about credit access, a higher proportion of respondents who

believe credit access to become harder report expecting to lower their future monthly spending. Also, respondents who expect credit conditions to get easier expect to increase their year-ahead monthly spending on average by 2.4%, versus 1.7% for the entire sample, and 1.5% for the group of respondents who expect credit conditions to become more difficult. Therefore, it seems that expectations about future credit availability are playing a role in respondents' anticipated saving, spending and debt behavior. This suggests that credit constraints play at least a partial role in explaining the observed change in saving and debt paydown behavior.

## **5. Conclusion**

In this paper we first documented the extent to which households were affected by the declines in the housing, stock and labor markets as well as the heterogeneity in the impact of these declines across age, income, education groups and geographic areas. Next, we analyzed the nature of behavioral responses to the shocks in income and wealth, including changes in spending, contributions to retirement and savings accounts, and changes in household mortgage and non-mortgage debt. Finally, we assessed people's expectations about a large set of behaviors and outcomes going forward, including their expectations about the labor and housing markets, access to credit, their future spending and saving behavior, and expectations for paying down debts.

We find large differences across households in the extent to which they were affected by the recession, especially by income, age and geography. While considerable proportions of households were not directly affected by declines in the housing, stock and labor markets, a large share of households were affected by at least one of these. The proportion of households that suffered large declines in housing wealth and in retirement savings, and which experienced large income drops varied across demographic groups, but the proportion that experienced at least one of these was fairly evenly spread across groups.

In response to their deteriorated financial situation, households reduced their average spending. At the same time, they increased their saving, with the personal saving rate as measured by the National Income and Product Accounts (NIPA) increasing considerably from historically low pre-recession levels. Household level data suggest that if there indeed was a recent increase in household saving, this increase – at least in 2009 – did not materialize itself through an increase in contributions to retirement and savings accounts. If anything, such contributions actually declined on average during the past

year. Instead, the higher saving rate appears to reflect a considerable decline in household debt, mortgage debt in particular. This suggests that rebuilding net wealth was an important driver of household decisions. Unlike the period leading up to the current recession, during which the average mortgage debt pay-down rate was negative (increases in debt associated with second mortgages, cash-out refinances and home equity lines of credit, exceeded regular principal pay-downs on existing mortgages), since 2008 it has turned positive. Interestingly, the net decline in mortgage debt was accompanied by little change or perhaps even a modest increase during 2009 in non-mortgage debt (consumer credit), mostly associated with increased student loan debt.

Regarding individuals' expectations about the future, we find that individuals across all demographic groups had moderately optimistic expectations about income and earnings in 2010. At the end of 2009 consumers expected to increase spending in 2010 by less than perceived increases in earnings and income, and expected to pay down debt and increase savings, suggesting a shift in attitudes regarding saving and consumption. The implied moderate increase in saving during 2010 is in fact consistent with what we have observed so far in 2010. While consumers were moderately optimistic about their income prospects, they were pessimistic about the availability of credit, with access to credit expected to become even more difficult during 2010.

## **Appendix**

### **The RAND American Life Panel**

The survey data used in this paper were collected through two survey modules administered over the internet to participants in RAND's American Life Panel (ALP). The ALP is an Internet panel of respondents 18 and over. Respondents in the panel either use their own computer to log on to the Internet or they were provided a small laptop or a Web TV, which allows them to access the Internet, using their television and a telephone line. The technology allows respondents who did not have previous Internet access or a computer to participate in the panel and furthermore use the Web TVs for browsing the Internet or use email.

The RAND survey designed by Michael Hurd and Susann Rohwedder to evaluate the effects of the financial crisis was fielded from November 2008 to February 2009, with the vast majority of respondents completing the survey in November 2008. The FRBNY survey on saving behavior was fielded between the end of October 2009 and January 2010, with the vast majority again responding in November 2009. Respondents were paid an incentive of about \$20 per thirty minutes of interviewing (and proportionately less/more if an interview is shorter/longer). Although respondents were allowed to skip questions, those who tried to do so received a prompt encouraging them to provide an answer.

Most of the participants in both ALP surveys were randomly selected among participants in the Reuters/University of Michigan Survey of Consumers at the University of Michigan's Survey Research Center. An additional group of respondents were recruited through a snowball sample, through referrals of friends and acquaintances. While all ALP members were invited to participate in the RAND survey on the effects of the financial crisis, the FRBNY survey on saving behavior was restricted to a subset of newer ALP members - those who participated in the Michigan Survey after December 2006.

A total of 900 ALP participants completed the FRBNY survey, while 2057 members completed the RAND survey. Respondents in the FRBNY survey reported an average age of 50.5, with a median of 51. In total, 58% were female, 66% were married or living with a partner, 52% had at least a bachelor's degree, 81% owned a home and 89% were white. 21% lived in one of the five states that experienced the greatest housing bubble and/or bust, which were Arizona, California, Florida, Michigan and Nevada. The median reported income range was \$60-\$75K, with 43% of the respondents reporting incomes over \$75k.

Respondents in the RAND survey reported an average age of 50.0, with a median of 51. In total, 57% were female, 65% were married or living with a partner, 45% had at least a bachelor's degree, 78% owned a home and 90% were white. 22% lived in one of the five states that experienced the greatest housing bubble and/or bust, which were Arizona, California, Florida, Michigan and Nevada. The median reported income range



was \$60-\$75K, with 37% of the respondents reporting incomes over \$75k. For a more detailed description of the sample see Hurd and Rohwedder's *Effects of the Financial Crisis and Great Recession on American Households* (NBER working paper 16407, 2010).

In all the analyses reported in this paper, sample weights were applied to make the two samples representative of the U.S. population. The weights were computed to equate sample proportions to those in the 2009 Current Population Survey, for all population subgroups defined by homeownership, living in a 'bubble state', income under 30K, age under 40, and having a college degree.

### **The FRBNY Consumer Credit Panel**

The analysis in this study is based on credit report data from the FRBNY Consumer Credit Panel. The panel comprises a nationally representative 5% random sample of US individuals with credit files, and all of the household members of those 5%. In all, the data set includes files on more than 15% of the adult population (aged 18 or older), or approximately 37 million individuals in each quarter from 1999 to the present. The underlying sampling approach ensures that the panel is dynamically updated in each quarter to reflect new entries into and exits out of the credit markets, with young individuals and immigrants entering the sample and deceased individuals and emigrants leaving the sample at the same rate as in the population of individuals with credit files. In each quarter, primary individuals' mailing addresses are used to identify and include the records associated with all other household members. The panel therefore allows one to track individuals and households consistently over time. In addition to the computation of nationally representative estimates of individual and household level debt and credit in each quarter, the panel therefore permits a rich analysis of the dynamics of consumer debt and related policy issues at both the individual and household levels.

Since the FRBNY Consumer Credit Panel data are collected at the borrower level, they offer a more comprehensive perspective on mortgage debt than is available in standard loan-level datasets. In addition to detailed data on all debts secured by residential real estate, the panel includes information on individuals' and households' other loans, such as credit cards, auto loans and student loans. More general information available in the panel include the residential location of the borrower at the census block level, the individual's year of birth, the individual's credit experience such as foreclosure, bankruptcy and collection, as well as a consumer credit score that is comparable to the well known FICO score. More details regarding the sample design and data content can be found in Lee and van der Klaauw (2010).<sup>23</sup>

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<sup>23</sup> Lee, D. and W. van der Klaauw, "An Introduction to the FRBNY Consumer Credit Panel", Staff Report 479, November 2010.

**Table 1 Exposure to the housing market decline**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States
Obs (unweighted)	899	244	315	340	171	352	376	466	183
% (unweighted)		27	35	38	10	39	42	52	20
% weighted		40	29	31	29	36	35	27	24
% own home	72	58	78	84	50	71	91	80	68
<b>HOME-OWNERS</b>									
Aver [median] price change past year	-5.3 [-2.4]	-5.2 [-4.0]	-5.6 [0.0]	-5.2 [-2.2]	-5.4 [-4.0]	-6.1 [-2.4]	-4.7 [-2.0]	-4.8 [-2.3]	-9.8 [-7.7]
% home worth less than when bought	24	37	19	17	27	24	23	23	35
% bought home after 2005	18	31	13	12	21	18	18	25	19
% has mortgage+	57	69	60	43	44	56	64	65	53
% under water*	21	31	18	11	21	22	21	16	29
% under water+	13	23	12	5	10	13	14	10	17
% under water - all	9	13	9	4	5	9	13	8	12

Source: NYFed survey. + among home owners \*: among mortgage debt holders

Home ownership based on question: Do you [(or your spouse/partner)] own a home? For the purposes of this survey a home is defined as a house, condo, apartment, mobile home, etc. (with or without a mortgage). 'Under water' is based on following question: If you sold your home today, would the proceeds be sufficient to pay off all mortgage loans and any costs of completing the sale?

For those who own more than one home, data used were for most recently purchased home.

**Table 2 Characteristics of mortgage debt holders**

	% Mortgage holders <i>above</i> water who ..	% Mortgage holders <i>under</i> water who ...
bought home after 2005	16	29
have mortgage debt <100K	58	35
have mortgage debt [100K,200K]	29	34
have mortgage debt >200K	13	31
own 1-2 homes	98	94
own 3+ homes	2	6

Source: NYFed survey.

Mortgage debt based on question: Do you [(or your spouse/partner)] have any outstanding loans against the value of your home(s), including all mortgages, home equity loans and home equity lines of credit? If yes: Which category represents the total amount of current outstanding loans against your home(s)? [Less than \$25,000, \$25,000 to \$49,999, \$50,000 to \$99,999, \$100,000 to \$149,999, \$150,000 to \$199,999, \$200,000 to \$299,999, \$300,000 to \$499,999, \$500,000 to \$799,999, \$800,000 or more]

**Table 3 Stock market participation in 2007**

	Families having stock holdings, direct or indirect	Median value among families with holdings (thousands of 2007 dollars)
All families	51.1	35.0
<i>Percentile of Income</i>		
Less than 20	13.6	6.5
20-39.9	34.0	8.8
40-59.9	49.5	17.7
60-79.9	70.5	34.1
80-89.9	84.4	62.0
90-100	91.0	219.0
<i>Age of Head (years)</i>		
Less than 35	38.6	7.0
35-44	53.5	26.0
45-54	60.4	45.0
55-64	58.9	78.0
65-74	52.1	57.0
75 or more	40.1	41.0
<i>Housing Status</i>		
Owner	62.5	41.2
Renter	26.0	8.6

Source: Survey of Consumer Finances 2007.

**Table 4: Changes in stock values and retirement savings**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States	Home Owner
<b>Nov08</b>										
% self/spouse is stock owner	58	47	66	64	27	59	82	80	57	68
% with stock value loss since Oct 1 08	52	40	59	58	24	50	75	72	51	61
% with more than 30% loss	22	17	28	24	10	20	34	30	24	26
<i>Stock owners</i>										
median current stock value (\$K) *	40	15	50	95	9	20	76	74	36	55
median reported % change in value *	-25	-24	-25	-22	-20	-20	-26	-25	-25	-25
median change in value since Oct 1 08 (\$K) *	-12	-4	-15	-25	-3	-4	-25	-22	-13	-15
<i>Retirement savings</i>										
% with fall in value of retirement savings **	59	48	71	64	37	57	80	79	61	69
Median percentage decline amongst those with decline+	22	20	25	20	20	20	25	20	25	20
Median \$K decline amongst those reporting decline +	9.5	3	15	15	2	5	15	15	10	10
<b>Nov09-Jan10</b>										
% You/spouse currently/ever been enrolled in:										
DB pension plan	37	25	42	49	23	35	52	46	32	46
DC pension plan or IRA	65	56	78	65	38	68	86	79	66	74
Either	74	61	86	78	45	79	92	86	76	82

Source: Nov08 data from RAND survey. Nov09-Jan10 data from NYFed Survey.

\*: among stock holders

\*\* : proportion who answered yes to the question “Have the recent financial problems in the economy reduced the value of [your (and your spouse's partner's)] retirement savings?”

+: based on percentage and absolute amount responses to the question “Thinking of [your (and your [spouse's/partner's])] retirement savings (not including Social Security) how much have they lost in value as a result of the problems in the economy since October 1st, 2008?”

**RAND survey data based on following questions:**

In the next set of questions we will ask you about stock holdings [including those held by you and your spouse/partner jointly, by you only, or by you and your spouse/partner only]. Do [you (or your husband/wife/partner)] have any shares of stock or stock mutual funds? Please include stocks that [you (or your husband/wife/partner)] hold in an employer pension account.

Thinking back to the time immediately before October 1st, 2008, that is, before the large drop in the stock markets, what were [your (and your spouse's/partner's)] stock holdings worth immediately before then?

Please include the value of stocks that you hold directly and the value of stocks that [your (and your spouse's/partner's)] hold in an employer pension account.

And what are [your (and your spouse's/partner's)] stock holdings worth now?

**NYFed survey data based on following questions:**

Please indicate whether you [(or your spouse/partner)] currently are or ever have been enrolled in each of the following types of pension plans:

A Defined Benefit Plan, also known as a traditional employer-provided Pension Plan, which pays a fixed amount when you retire, where the amount typically depends on your final or average salary.

A Defined Contribution Plan (such as a 401K, individual retirement account (IRA), tax deferred annuity or 403(b), 457 thrift savings plan) in which workers and/or their employers make contributions to an account in which money accumulates, and that money can be paid out in a variety of ways depending on the plan or worker's choice.

**Table 5 Labor Market Experiences Reported at End of 2009**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States	Home Owner
% Currently unemployed	7	8	6	5	12	6	2	7	9	5
% spouse lost job	8	10	9	5	8	12	5	7	11	9
% self or spouse unemployed	14	17	14	9	18	17	7	14	18	12
% Incurred pay cut	15	15	23	8	14	15	16	18	16	15
% had to take furlough days	7	9	9	3	7	8	8	8	7	6
% lost 401K matching	8	9	8	7	8	9	8	10	11	8
% lost or had health benefits reduced	14	17	15	10	17	16	11	14	25	11
Know friends/family who lost job	64	65	65	63	59	65	68	69	67	68
Perceived HH pre-tax income change past yr:										
Up	27	32	26	22	22	26	33	33	30	25
Down	32	32	38	27	30	36	29	29	28	34
Same	41	36	36	51	48	38	38	38	43	41
Mean % change	-3.9	-2.5	-5.8	-3.9	-5.7	-5.4	-0.8	-2.6	-4.7	-4.2
% income loss over 10%	19	19	22	15	19	23	13	17	16	19

Source: NYFed survey.

Based on following questions: During the past 12 months have you (for each answer Y/N): (1) Had a spouse/partner who lost a job, (2) Taken a cut in pay, (3) Lost or had your health benefits reduced, (4) Had to take furlough days off from work for which you were not paid, (5) Your employer stopped contributing to your 401(k) plan, (6) Known friends or family who lost their jobs?

Was the total combined income of all members of your household during the last 12 months higher, lower or the same as the combined income during the previous 12 months? In percentage terms, by approximately how much was it higher/lower?

**Table 6 Access to Credit**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States	Home Owner
Credit Access vs. past yr										
% easier	12	11	13	12	12	13	12	9	6	12
% tougher	57	61	58	52	55	57	59	63	55	59
% same	30	28	29	36	33	30	29	27	39	29
Credit card accounts closed										
% closed by self	36	36	34	38	30	37	40	34	42	36
% closed by bank	13	16	12	10	16	12	12	10	15	14
Change in total credit limit										
% increase	20	28	15	15	14	24	21	21	21	19
% decrease	19	20	21	17	15	19	23	18	22	19
% stayed same	60	52	64	67	70	56	56	61	56	61

source: NYFed survey.

Based on following questions:

Do you believe it generally has been easier, harder or equally difficult to obtain credit or loans during the last year when compared to the year before? [Answer options: (1) Easier, (2) Harder, (3) Equally difficult]

During the past 12 months, did you pay off and close any of your credit card accounts? (only include accounts that were closed at your request)

During the past 12 months, were any of your credit card accounts closed by your bank or credit card company? (only include accounts that were not explicitly closed at your request)

During the past 12 months, did the combined total credit limit (the maximum amount you are allowed to borrow on your cards) on all your credit cards that remained open increase, decrease or stay the same?

**Table 7 Measures of Overall Financial Distress**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States	Home Owner
<b>As of Nov 08*</b>										
Affected by crisis?+										
No	32	35	24	35	40	32	25	25	24	31
Yes, little	49	49	52	45	44	49	53	54	51	50
Yes, a lot	19	16	24	19	16	19	22	21	25	19
Personal fin. situation vs. yr ago										
Better	10	16	6	6	7	12	12	14	10	10
Same	45	48	41	45	46	42	47	42	44	45
Worse	45	36	53	49	47	46	42	45	46	46
% self or spouse unemployed	8	13	7	5	13	8	5	4	12	7
<b>OR</b> under water	13	18	12	7	17	13	10	8	18	13
<b>OR</b> lost >30% of retirement savings	32	31	36	27	24	30	39	34	37	35
<b>As of Nov 09**</b>										
Personal fin. situation vs. yr ago										
Better	13	16	13	10	11	12	17	17	10	13
Same	51	51	47	55	46	50	56	48	52	51
Worse	36	32	40	36	43	37	28	35	37	36
% self or spouse unemployed	14	17	14	9	18	17	7	14	18	12
<b>OR</b> drop household income>10%	27	29	29	21	28	33	18	25	29	26
<b>OR</b> under water	33	39	34	23	32	37	28	31	36	35

\*source: RAND survey.

\*\*source: NYFed survey.

Based on following questions: from RAND survey: Over the past months there have been reports about the nation's financial problems including large drops in the stock market and in the housing market and increased rates of foreclosures and joblessness. As this financial crisis unfolds more and more people have been affected in different ways. Have you (or your husband/wife/partner) been affected by these problems?

We are interested in how people are getting along financially these days. Would you say that you [(and your household)] are better off or worse off financially than you were a year ago?



The proportion of respondents with retirement savings losses over 30% is based on answers in the RAND survey to the question “Thinking of [your (and your [spouse's/partner's])] retirement savings (not including Social Security) how much have they lost in value as a result of the problems in the economy since October 1st, 2008?” In the RAND survey, the proportion under water is calculated based on the perceived current value of a house and the total amount owed on the house. In the FRBNY survey the proportion under water represents households with a mortgage who answered no to the question “If you sold your home today, would the proceeds be sufficient to pay off all mortgage loans and any costs of completing the sale?”

Proportion with over 10% income drop represents the proportion of respondents who reported drops of over 10% in the total combined income of all members of your household during the last 12 months.

**Table 8 Changes in Spending Behavior**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States	Home Owner
<b>As of Nov 08+</b>										
% cut spending since Oct 1 08	75	77	79	69	76	77	72	71	75	75
Median amount cut	200	200	200	100	100	200	200	250	200	200
Median % cut	20	20	20	15	25	20	15	15	20	20
<b>As of Nov 09*</b>										
hh spending vs. year ago										
Up	22	20	18	27	24	22	20	25	19	22
Down	27	29	33	16	33	25	22	23	32	27
Same	52	50	49	56	43	53	59	52	49	51
Average % chg	-2.2	-2.0	-6.1	1.1	-4.2	-2.0	-0.8	-0.9	-4.6	-2.0

+source: RAND survey

\*source: NYFed survey

Based on following question: The next questions are about your household's spending. Please include the spending of everyone who lives with you in your household, as well as your own. Consider household interest payments on mortgages, amount spent on rent, homeowner's or renter's insurance, vehicle taxes and repairs, home repairs, property taxes, utilities, food and groceries, clothing, housekeeping supplies and services, garden/yard services, health insurance, drugs, medical supplies and doctor/hospital visits, gasoline, personal care products and services, trips and vacations, hobbies and leisure equipment. Also include child support and alimony payments, gifts to anyone outside your household and losses from a farm, business or professional practice. Exclude money saved or invested, including real estate investments like home purchases.

How does your current monthly household spending compare with your household's monthly spending a year ago? [Answer options: Higher now, About the same, Lower now]

In percentage terms, by how much has your monthly household spending increased [decreased] compared to a year ago?

**Table 9. Spending Behavior and Wealth and Income Losses**

	All	Unemployed	Lost >10% income	Under Water
<b>As of Nov 09*</b>				
hh spending vs. year ago				
Up	22	5	21	18
Down	27	60	48	47
Same	52	35	31	35
Average % chg	-2.2	-18.2	-9.6	-5.9

\*source: NYFed survey. See notes to Table 8.

**Table 10 Changes in Contributions to Retirement and other Savings Accounts Nov08-Nov09**

	All	Age <40	40-55	>55	Income <30K	30-75	>75	College	Bubble States	Home Owner
<b>Change in retirement acct contributions past 12 months</b>										
% Increased contr	11	12	13	9	5	11	14	13	13	12
Median Increase (\$)	100	100	45	300	25	75	150	150	100	100
% decreased contr	12	14	12	8	7	12	13	16	9	12
Median Decrease (\$)	150	150	160	200	150	100	200	200	150	150
% Started contr	3	6	2	1	3	5	2	1	3	3
% Stopped contr	16	12	13	24	25	19	10	16	22	15
% Prematurely withdrew	11	7	13	14	14	17	5	7	12	10
<b>Change in other savings (vs last yr)</b>										
Checking accounts										
% added more – % withdrew more	-8	-7	-15	-3	-15	-10	0	-7	-7	-5
Savings accounts										
% added more – % withdrew more	-5	-1	-9	-5	-14	-11	+10	+4	0	-2
Money Market										
% added more – % withdrew more	-2	1	-2	-5	-5	-2	2	3	0	-2
Stocks										
% added more – % withdrew more	1	1	3	1	-3	2	5	2	0	3
<b>Net change in allocations to other saving accounts</b>										
% added more than used up	25	27	26	22	13	21	41	36	28	29
Median net Addition (\$K)	5	2	5	6	0.6	2.5	5.0	6.5	5.0	5.0
% used up more than added	38	32	40	44	44	46	25	36	35	37
Median net withdrawal (\$K)	3.5	2.0	3.5	6.0	2.0	3.0	6.0	6.0	3.0	5.0

Source: NYFed survey.

Based on questions: During the past 12 months have you: (indicate Y/N for each) ... (1) Started putting less of your money in 401(k), IRA or other retirement accounts?, (2) Started putting more of your money in 401(k), IRA or other retirement accounts?, (3) Stopped putting money in a 401(k), IRA or other retirement accounts?, (4) Started saving (for the first time) in a 401(k), IRA or other retirement account?, (5) Prematurely withdrawn money from your retirement savings?

You indicated that you started putting more[less] of your money into your retirement account(s). By how much did you [(and your spouse/partner)] increase[decrease] your total monthly contribution to your retirement account(s)?

Our next question asks about other savings and investments you may have, excluding those in a retirement account. We first want to know whether you made any contributions and/or withdrawals to your savings and investments over the past year. Please do not consider changes in the market value of the funds in these accounts, only consider the amounts of new money you added and the amounts you took out.

For each of the following would you say that over the past 12 months you [(and your spouse/partner)] have withdrawn more from your investments or savings than you have added to them in new money, that you have added more to savings and investments than you withdrew, or neither? [checking accounts, saving accounts, money market accounts, stocks]

Considering all accounts together, would you say that during the past 12 months you [(and your spouse/partner)] have used up more of your investments or savings than you have added to them in new money, that you have added more to savings and investments than you used up, or neither? Answer options: (1) Have used up more than added, (2) Have added more than used up, (3) Added about the same as used up.

During the past 12 months, about how much more did you [(and your spouse/partner)] use up or withdraw from your investments or savings than you added to it? During the past 12 months, about how much more did you [(and your spouse/partner)] add to your investments or savings than you used or withdrew from it?

**Table 11. Allocations to Savings Accounts and Wealth and Income Losses**

<b>Change in retirement account contributions over past 12 months</b>	All	Unemployed	Lost >10% income	Under Water
% increased contribution	11	0	6	12
Median Increase (\$)	100		150	80
% decreased contribution	12	28	27	5
Median Decrease (\$)	150	150	150	50
% started contributing	3	0	2	2
% stopped contributing	16	41	29	9
% prematurely withdrew	11	16	19	9
<b>Net change in allocations to other saving accounts</b>				
% added more than used up	25	21	14	16
Median net addition (\$K)	5.0	8.0	3.0	3.0
% used up more than added	38	45	55	47
Median net withdrawal (\$K)	3.5	2.0	3.5	3.6

Source: NYFed survey.

Based on questions: During the past 12 months have you: (indicate Y/N for each) ... (1) Started putting less of your money in 401(k), IRA or other retirement accounts?, (2) Started putting more of your money in 401(k), IRA or other retirement accounts?, (3) Stopped putting money in a 401(k), IRA or other retirement accounts?, (4) Started saving (for the first time) in a 401(k), IRA or other retirement account?, (5) Prematurely withdrawn money from your retirement savings?

You indicated that you started putting more[less] of your money into your retirement account(s). By how much did you [(and your spouse/partner)] increase[decrease] your total monthly contribution to your retirement account(s)?

Our next question asks about other savings and investments you may have, excluding those in a retirement account. We first want to know whether you made any contributions and/or withdrawals to your savings and investments over the past year. Please do not consider changes in the market value of the funds in these accounts, only consider the amounts of new money you added and the amounts you took out. Considering all accounts together, would you say that during the past 12 months you [(and your spouse/partner)] have used up more of your investments or savings than you have added to them in new money, that you have added more to savings and investments than you used up, or neither? Answer options: (1) Have used up more than added, (2) Have added more than used up, (3) Added about the same as used up.

During the past 12 months, about how much more did you [(and your spouse/partner)] use up or withdraw from your investments or savings than you added to it? During the past 12 months, about how much more did you [(and your spouse/partner)] add to your investments or savings than you used or withdrew from it?

**Table 12 Reasons provided for changing allocations to savings accounts**

(a) Reason for increase in contributions to retirement and other savings accounts – proportion who list option as moderately or very important

	Retirement Accounts	Other Savings Accounts
Job Change	27	29
Salary Change	53	51
Change in other income	29	37
To increase savings for retirement	92	60
Now is a good time to invest	75	40
To be able to leave a bequest	23	19
To make up for decline in value house	19	15
To make up for loss in stocks/ investments	33	23
To build cushion for future job loss	NA	51
To build cushion for future health expenses	NA	51

(b) Reason for decrease in contributions to retirement and other savings accounts – proportion who list option as somewhat or very important

	Retirement Accounts	Other Savings Accounts
Job Change	31	26
Salary Change	51	44
Change in other income	39	38
Involuntary job loss	31	22
Voluntarily stopped working	14	13
To pay down/pay debt	43	45
To pay bills	30	41
To pay for general living expenses	48	70

Source: NYFed survey.

Panel (a) applies to those who responded that they reduced contributions or stopped contributing to their retirement account, while panel (b) applies to respondents who indicated that they had started putting money or had increased contributions into a retirement account. The proportions in the table are based on responses to the following questions:

Please indicate how important each of the following was for the increase/decrease in your monthly contribution.... [options: very important, moderately important, not at all important, not applicable].  
 Please indicate how important each of the following was in your decision to withdraw some of your investments or savings [to add more to your investments or savings]... [options: very important, moderately important, not at all important, not applicable].

**Table 13 Saving Motives**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States	Home Owner
<b>% reporting as very important</b>										
Retirement/old age	40	29	50	46	38	34	49	49	35	42
Precautionary reasons										
Job loss	33	35	41	22	34	30	34	33	39	33
Illness	29	24	37	29	38	27	24	24	31	28
General emergencies	33	29	40	31	44	31	26	28	39	32
Bequest/Transfers										
Education of (grand)children	38	52	37	20	35	33	45	42	34	37
gifts to children/family	9	6	12	11	10	11	6	9	10	8
Charitable contr	11	8	12	14	14	10	10	12	6	11
To make large purchase										
house	17	23	19	8	18	16	17	21	21	12
car	15	22	14	7	19	13	13	12	16	12

Source: NYFed survey.

Based on following question: Now we would like to ask you some questions about your household's attitudes towards savings. People have different reasons for saving, even though they may not be saving all the time. For your household, please indicate how important you consider the following reasons for saving to be.



**Table 14 Reallocations of savings**

	<b>Proportion among retirement account holders</b>
<b>Between Oct08 - May 09*</b>	
Allocations of <i>new funds</i>	
% Increased amounts to stocks	4.7%
% Decreased amounts to stocks	5.1%
Allocation of <i>balances</i>	
% Increased amounts to stocks	6.2%
% Decreased amounts to stocks	15.5%
% sold all stocks in retirement accounts	2.7%
<b>Between end 2008 – end 2009+</b>	
Moved retirement savings into less risky investments	18%

\*Source: Effects of the Recession on American Households, by Hurd and Rohwedder, Sept 2009, RAND.

+ Source: NYFed survey.

Based on following question: During the past 12 months have you ... moved your retirement savings into less risky investments? [Y/N]

**Table 15 Changes in Household Debt end2008-end2009**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States	Home Owner
<b>Change over past year in:</b>										
<b>Mortgage debt</b>										
<b>% with increase</b>	<b>5</b>	<b>7</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>7</b>
<i>Reason:</i>										
Missed/Late Payments (%)	31	41	25	10	59	41	8	21	52	31
Added HELOC/ 2 <sup>nd</sup> mortgage (%)	31	32	27	34	5	24	50	35	48	31
Refinance (%)	28	15	45	42	9	28	39	40	0	28
<b>% with decrease</b>	<b>33</b>	<b>31</b>	<b>41</b>	<b>29</b>	<b>13</b>	<b>30</b>	<b>53</b>	<b>39</b>	<b>33</b>	<b>46</b>
<i>Reason:</i>										
Paid down regular schedule	69	79	57	71	82	69	66	60	69	69
Prepaid principal	17	12	22	18	6	12	22	25	22	17
Refinance	11	7	16	11	9	13	11	12	6	11
<b>% stayed same+</b>	<b>31</b>	<b>17</b>	<b>30</b>	<b>49</b>	<b>31</b>	<b>33</b>	<b>29</b>	<b>32</b>	<b>31</b>	<b>43</b>
% NA*	31	45	23	19	52	31	12	23	34	3
<b>Non-Mortgage Debt</b>										
% with increase	24	29	22	19	22	30	19	27	26	21
% with decrease	30	28	36	27	24	28	37	33	27	32
% stayed same	46	42	42	53	53	42	43	40	46	46
Average change (\$1000s)	0.4	1.1	0.3	-0.4	1.6	1.7	-2.0	0.7	0.5	-0.4

source: NYFed survey.

\*: includes those not currently owning a home or purchased a home within the past year.

+: includes those who did not have a mortgage over the past 12 months.

Based on following questions:

During the past 12 months has the total amount you [(and your spouse/partner)] owe on these mortgages increased, decreased or stayed the same?

If decreased or increased: What was the reason for this change in your overall mortgage balance? (Check all that apply) ... (1) Paid down some of the principal on the regular schedule, (2) Pre-paid (ahead of schedule) some of the principal, (3) Refinanced, (4) Missed, or made late or incomplete payments and fees were added to the mortgage balance, (5) Added an additional mortgage or borrowed on a home equity line of credit.

Next consider all outstanding debt you [(and your spouse/partner)] have, including balances on credit cards (including retail cards), auto loans, student loans as well as all other personal loans but excluding all mortgage debt. During the past 12 months has the total outstanding balance (that is the total amount you owe) of these loans combined increased, decreased or stayed the same? By how much has the overall combined balance on these debts increased/decreased during the past 12 months?

**Table 16 Changes in Household Debt for Affected Subgroups**

<b>Change over past year in:</b>	All	Unemployed	Lost >10% income	Under Water
<b>Mortgage debt</b>				
% with increase	5	12	10	11
% with decrease	33	19	31	45
% stayed same+	31	19	33	39
% NA*	31	50	26	5
<b>Non-Mortgage Debt</b>				
% with increase	24	30	31	36
% with decrease	30	39	31	34
% stayed same	46	31	38	30
Average change (\$1000s)	0.5	2.3	0.5	2.6

Source: NYF survey.

\*: includes those not currently owning a home or purchased a home within the past year.

+: includes those who did not have a mortgage over the past 12 months.

Based on following questions:

During the past 12 months has the total amount you [(and your spouse/partner)] owe on these mortgages increased, decreased or stayed the same?

Next consider all outstanding debt you [(and your spouse/partner)] have, including balances on credit cards (including retail cards), auto loans, student loans as well as all other personal loans but excluding all mortgage debt. During the past 12 months has the total outstanding balance (that is the total amount you owe) of these loans combined increased, decreased or stayed the same? By how much has the overall combined balance on these debts increased/decreased during the past 12 months?



% cut savings	20	17	19	24	18	18	24	24	21	22
% cut spending	74	73	76	73	74	75	73	70	72	74
% increase debt	6	9	5	3	8	7	3	6	7	4

Source: NYFed survey

Based on questions: Suppose next year you were to find your household with 10% more income than normal, what would you do with the extra income? Answer options: (1) Save or invest all of it, (2) Spend or donate all of it, (3) Use all of it to pay down debts, (4) Spend and save some, (5) Spend some and use part of it to pay down debts, (6) Save some and use part of it to pay down debts, (7) Spend some, save some and use some to pay down debts. For options (4) to (7) follow-up question: Please indicate what share of the extra income you would use to ... (Please note that the three proportions need to add up to 100%)... Save or invest, Spend or donate, Pay down debts.

Now imagine that next year you were to find yourself with 10% less household income. What would you do? Answer options: (1) Cut spending by the whole amount, (2) Not cut spending at all, but cut my savings by the whole amount, (3) Not cut spending at all, but increase my debt by borrowing the whole amount, (4) Cut spending by some and cut savings by some, (5) Cut spending by some and increase debt by some, (6) Cut savings by some and increase debt by some, (7) Cut spending by some, cut savings by some and increase debt some. For options (4) to (7) follow-up question: Please indicate what share of the lost income you would cover by ... (Please note that the three proportions need to add up to 100%) .. Reduce spending, Reduce savings, Increase borrowing.

**Table 18 Expectations of Macro Measures**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States	Home Owner
% expect higher unemployment	37	27	48	41	45	35	33	33	39	37
% expect lower unemployment	16	16	15	18	15	15	18	23	16	14
% expect higher interest rate	52	50	47	61	52	54	50	53	53	54
% expect lower interest rate	8	11	10	5	14	8	5	7	10	6
% expect higher mortgage rate	46	39	45	55	42	49	46	53	38	48
% expect lower mortgage rate	9	12	9	5	11	9	7	7	9	7
% expect higher house prices	31	33	29	32	26	34	34	37	32	32
% expect lower house prices	21	23	26	15	30	19	16	14	21	19
Aver. expected % home price change	0.5	0.8	0.2	0.6	0.2	1.0	0.4	1.0	1.3	0.6

Source: NYFed survey

Based on following questions:

How about people out of work during the coming 12 months -- do you think that there will be more unemployment than now, about the same, or less?

No one can say for sure, but what do you think will happen to interest rates for borrowing money during the next 12 months -- will they go up, stay the same, or go down?

A year from now, do you think interest rates on home mortgages will be higher, lower or about the same as they are now?

One year from now, do you think that the average house price at the national level will be higher, lower or about the same as today?

In percentage terms, how much higher/lower on average do you expect the average house price to be at the national level a year from now?

**Table 19 Expectations of Macro Measures for Affected Subgroups**

	All	Unemployed	Lost >10% income	Under Water
% expect higher unemployment	37	30	30	44
% expect lower unemployment	16	26	18	8
% expect higher interest rate	52	34	49	59
% expect lower interest rate	8	5	10	0
% expect higher mortgage rate	46	28	51	54
% expect lower mortgage rate	9	15	8	5
% expect higher house prices	31	19	38	42
% expect lower house prices	21	20	17	24
Aver. expected % home price change	0.5	-0.7	1.6	1.9

Source: NYFed survey  
See Notes Table 18





<b>Spending</b>										
Higher monthly spending	29	28	24	35	39	25	24	26	28	28
Lower monthly spending	16	16	18	13	15	16	17	16	14	15
Average change in monthly spending	1.7	2.6	0.6	1.7	4.9	0.5	0.2	1.1	1.4	1.4

Source: NYFed survey

+: among those currently working

\*: among home owners with a mortgage or a HELOC.

Based on following questions: During the next 12 months do you expect the total combined income of all members of your household to increase, decrease or stay the same? In percentage terms, by approximately how much do you expect it to increase/decrease?

Suppose that, 12 months from now, you actually are working in the exact same [/main] job - at the same place you currently work, and working the exact same number of hours. Twelve months from now, do you expect your earnings on this job, before taxes and deductions, to have gone up, or gone down, or stayed where they are now? By about what percent do you expect that your earnings on this job, before taxes and other deductions, will have gone up[down], 12 months from now, in that case?

Thinking now about the coming year, do you [(and your spouse/partner)] expect to make any changes to your contributions to your retirement account(s) during the next 12 months? Answer options: (1) Yes, expect to increase total contribution, (2) Yes, expect to decrease total contribution, (3) No, expect to keep total contribution the same.

Thinking now about the coming year, do you [(and your spouse/partner)] expect to use up more, less or about the same amount of your savings and investments during the next 12 months than you did in the last year? OR Thinking now about the coming year, do you [(and your spouse/partner)] expect to add more, less or about the same amount of new money to your savings and investments during the next 12 months than you did in the last year?

Thinking now about the coming year, do you [(and your spouse/partner)] ... (Check all that apply) (1) Expect to pay down some of the principal on the regular schedule, (2) Expect to pre-pay (ahead of schedule) some of the principal, (3) Expect to miss payments, (4) Expect to add an additional mortgage or borrow on a home equity line of credit, or (5) other [Please specify].

Thinking ahead, one year from now: How do you expect your monthly spending one year in the future to compare to your monthly spending today? In percentage terms, by how much do you expect your average monthly spending to increase [decrease]?

**Table 21 Expectations of Income, Saving, Debt and Spending for Affected Subgroups**

	All	Unemployed	Lost >10% income	Under Water
<b>Household income</b>				
% expect HH income higher	32	41	46	27
% expect HH income lower	17	26	21	16
Aver. expected % change in HH income	4.1	11.1	10.5	1.7
Aver. expected % wage change+	3.4	NA	4.5	1.9
<b>Saving</b>				
% expect to incr. retirement contributions	13	11	16	8
% expect to decr. retirement contributions	4	12	8	4
% expect to add more/use less of other savings	29	35	30	32
% expect to add less/use more of other savings	24	30	31	30
<b>Debt</b>				
% expect to pay down principal*	81	65	81	71
% expect to pre-pay principal*	24	15	24	15
% expect to miss mortg payments*	6	30	11	13
% expect to add mortgage/heloc*	6	7	5	8
% expect to decr. non-mortgage debt	66	51	69	76
% expect to incr. non-mortgage debt	4	7	2	10

<b>Spending</b>				
Higher monthly spending	29	30	25	30
Lower monthly spending	16	24	28	16
Average change in monthly spending	1.7	1.9	-1.5	2.3

Source: NYFed survey  
See notes Table 20

**Table 22 Expectations of Retirement, Bequests, Access to Credit and Financial Wellbeing**

	All	Age <40	40-55	>55	Income <30K	30-75	>75K	College	Bubble States	Home Owner
<b>Retirement</b>										
Prob working FT at/after 62**	62	62	65	57	57	63	65	66	52	64
Prob working FT at/after 65**	50	50	52	43	51	49	51	52	44	50
Expected retirement age*	67	66	69	69	70	67	66	67	64	68
Plan to retire later*	24	16	30	32	24	20	27	29	29	25
Plan to retire earlier*	5	6	2	6	5	4	5	2	5	5
<b>Inheritance</b>										
Decreased chance of leaving bequest	18	13	21	24	23	19	14	19	18	19
Increased chance of leaving bequest	7	7	5	8	4	7	8	7	8	7
<b>Credit access</b>										
Credit easier	20	20	18	24	19	20	21	17	14	20
Credit harder	39	41	42	35	43	36	39	37	34	39
<b>Overall financial situation</b>										
Will be better off financially	32	45	29	16	29	35	30	36	31	29
Will be worse off financially	13	6	15	21	16	12	11	13	17	14

Source: NYFed survey

\*: among those currently working

\*\* : among those with age 60 or younger

Based on following questions: Thinking about work in general and not just your present job (if you currently work), what do you think is the percent chance that you will be working full-time after you reach age 62 [65]? Has the age at which you plan to retire changed since last year? [Answer options: (1) I now plan to retire sooner than I did last year, (2) no change in plans, (3) I now plan to retire later than I did last year.] In the past 12 months, have the chances of you [(and your spouse/partner)] leaving an inheritance increased, decreased or stayed the same? During the next 12 months, do you expect that it generally will become easier, harder or equally difficult to obtain credit or loans compared to the past 12 months? Now looking ahead - do you think that a year from now you [(and your household)] will be better off financially, or worse off, or just about the same as now?

**Table 23 Expectations of Retirement, Bequests, Access to Credit and Financial Wellbeing for Affected Subgroups**

	All	Unemployed	Lost >10% income	Under Water
<b>Retirement</b>				
Prob working FT at/after 62**	62	64	69	64
Prob working FT at/after 65**	50	55	54	57
Expected retirement age*	67	NA	69	69
Plan to retire later*	24	NA	25	1
Plan to retire earlier*	5	NA	11	27
<b>Inheritance</b>				
Decreased chance of leaving bequest	18	32	35	31
Increased chance of leaving bequest	7	20	6	3
<b>Credit access</b>				
Credit easier	20	20	18	12
Credit harder	39	33	41	59
<b>Overall financial situation</b>				
Will be better off financially	32	47	43	34
Will be worse off financially	13	15	13	13

Source: NYFed survey  
See notes Table 22

**Table 24 Relationship between Expectations about Future Credit Access and Expectations about Saving, Debt and Spending**

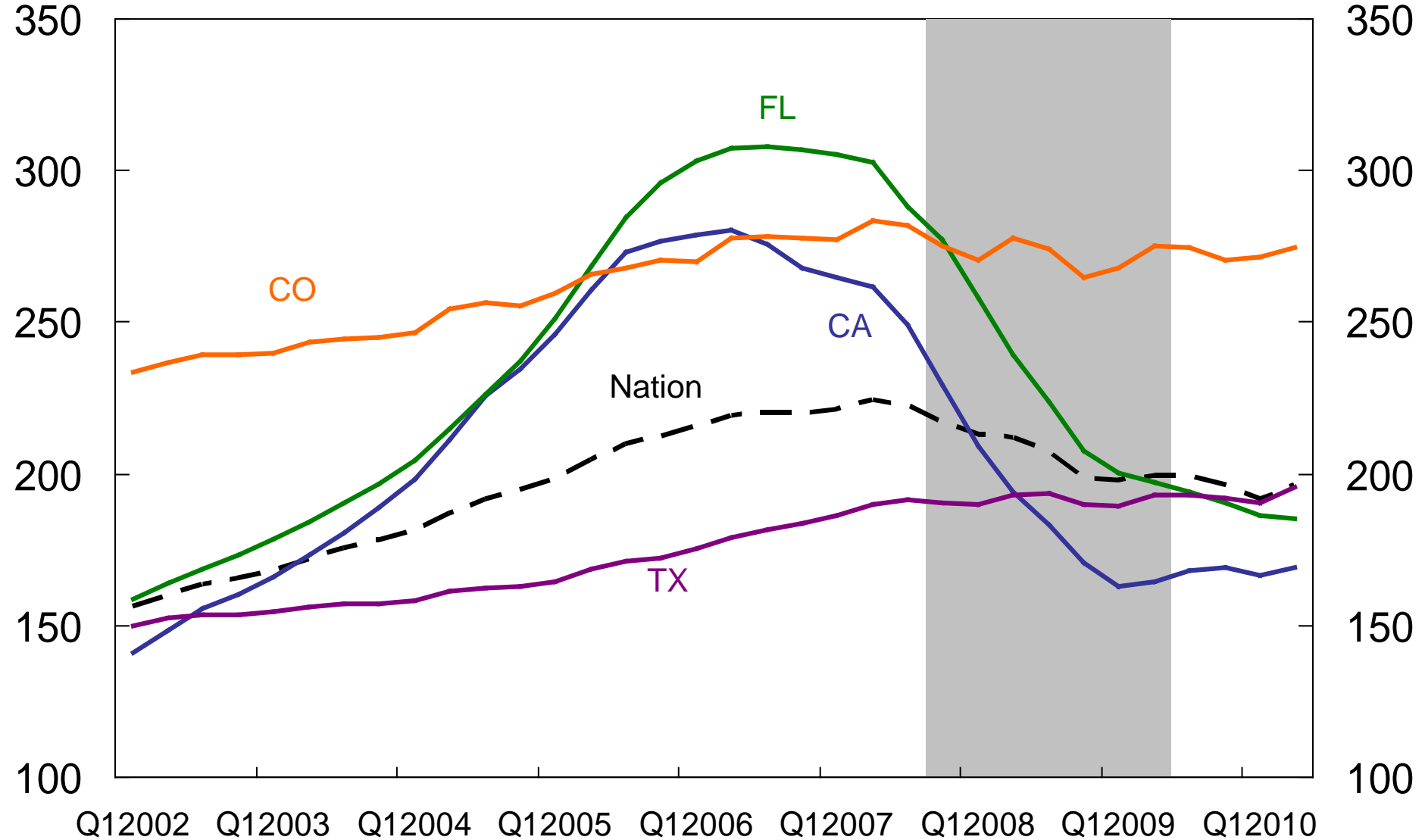
	All	Expect credit access easier	Expect access equally difficult	Expect credit access harder
<b>Saving</b>				
% expect to incr. retirement contributions	13	12	15	9
% expect to decr. retirement contributions	4	5	3	5
% expect to add more/use less of other savings	29	38	28	26
% expect to add less/use more of other savings	24	15	20	32
<b>Debt</b>				
% expect to pay down principal*	81	87	83	76
% expect to pre-pay principal*	24	27	26	21
% expect to miss mortg payments*	6	0	4	11
% expect to add mortgage/heloc*	6	3	7	6
% expect to decr. non-mortgage debt	66	69	61	69
% expect to incr. non-mortgage debt	4	6	5	3
<b>Spending</b>				
Higher monthly spending	29	32	25	34
Lower monthly spending	16	12	11	21
Average change in monthly spending	1.7	2.4	2.0	1.5

Source: NYFed survey

# 1.FHFA Home Price Trends

FHFA Index

FHFA Index



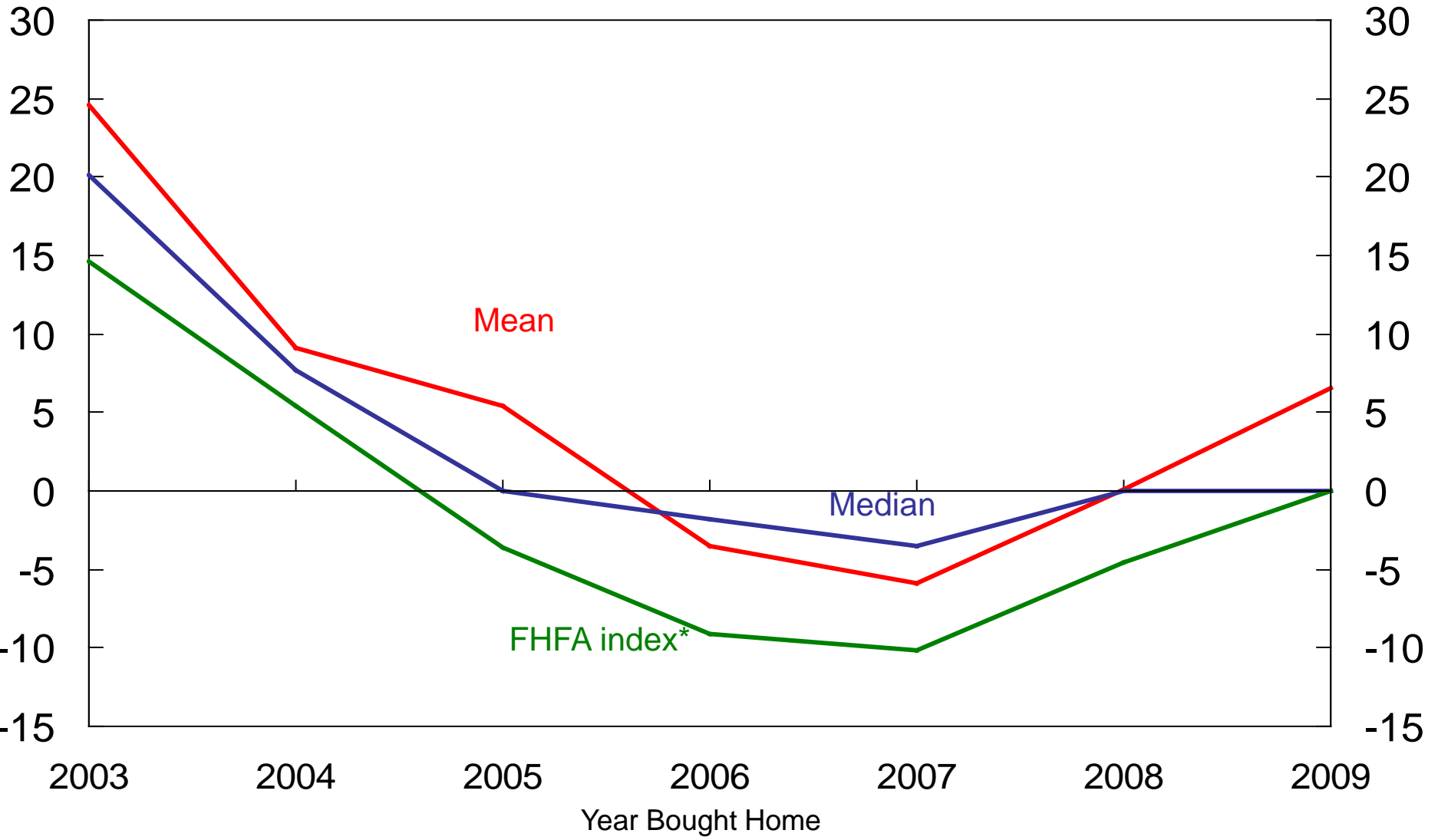
Source: FHFA

Note: FHFA HPI-purchase only (NSA), Quarterly

# 2. Self-Reported Home Value Change Since Time Bought

Total Home Price Change

Total Home Price Change

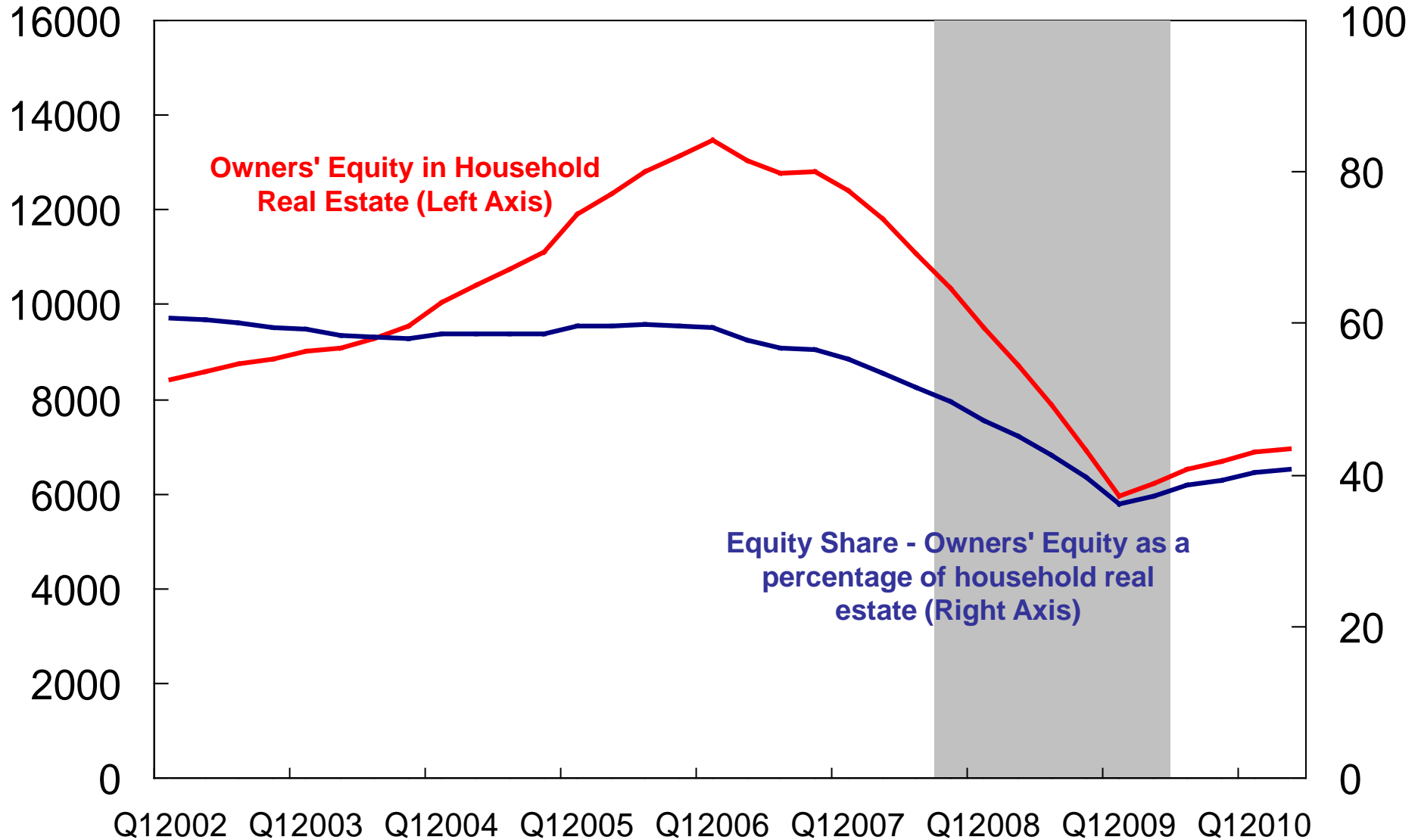


Source: NYFed survey

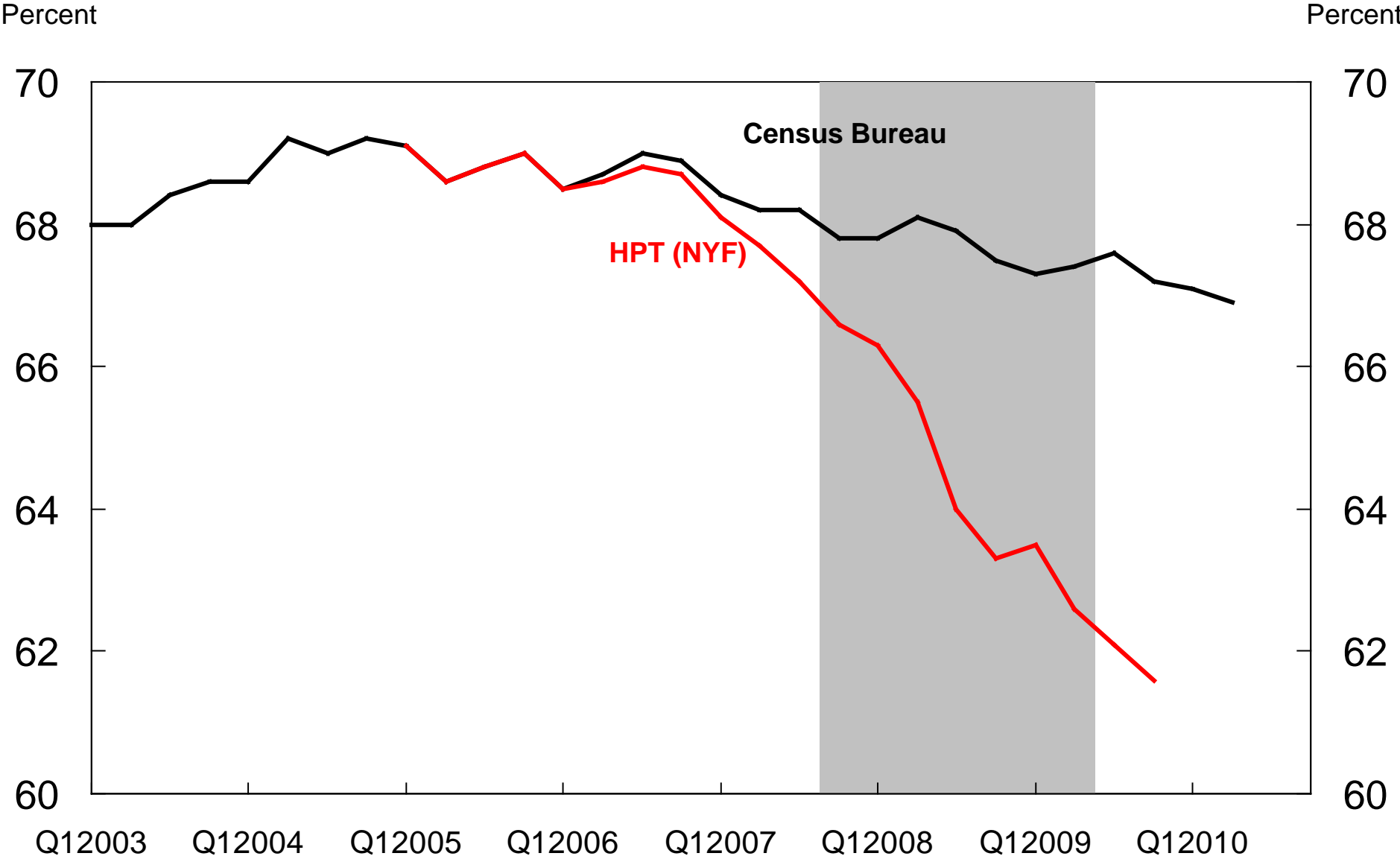
Note: \*FHFA Home Price Index - purchase only (NSA, Annual)



### 3. Trends in Owner's Equity

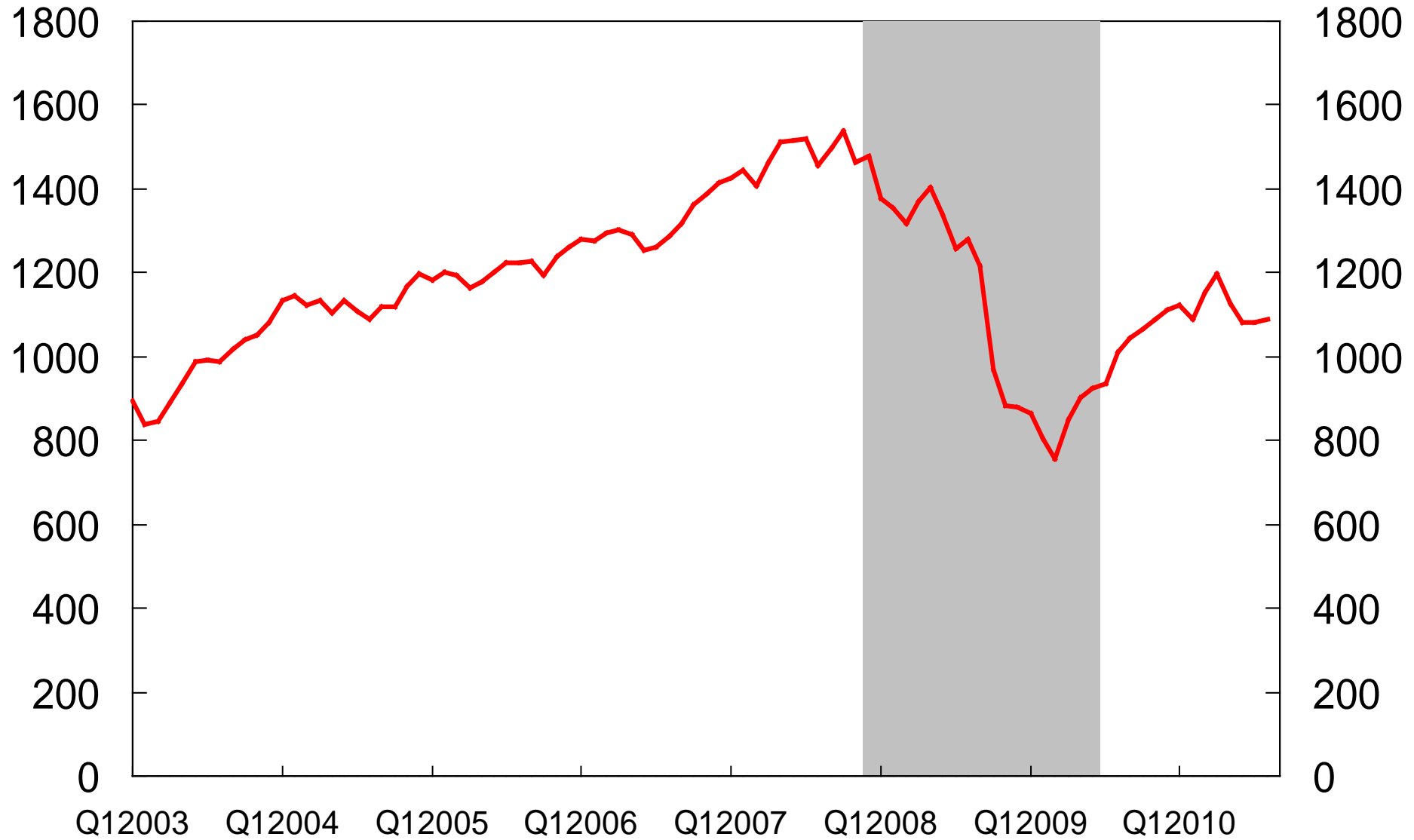


# 4. Homeownership Rates



Source: U.S. Homeownership Rate (NSA), Census Bureau. Effective Homeownership Rate as in Haughwout, Peach and Tracy (2009)

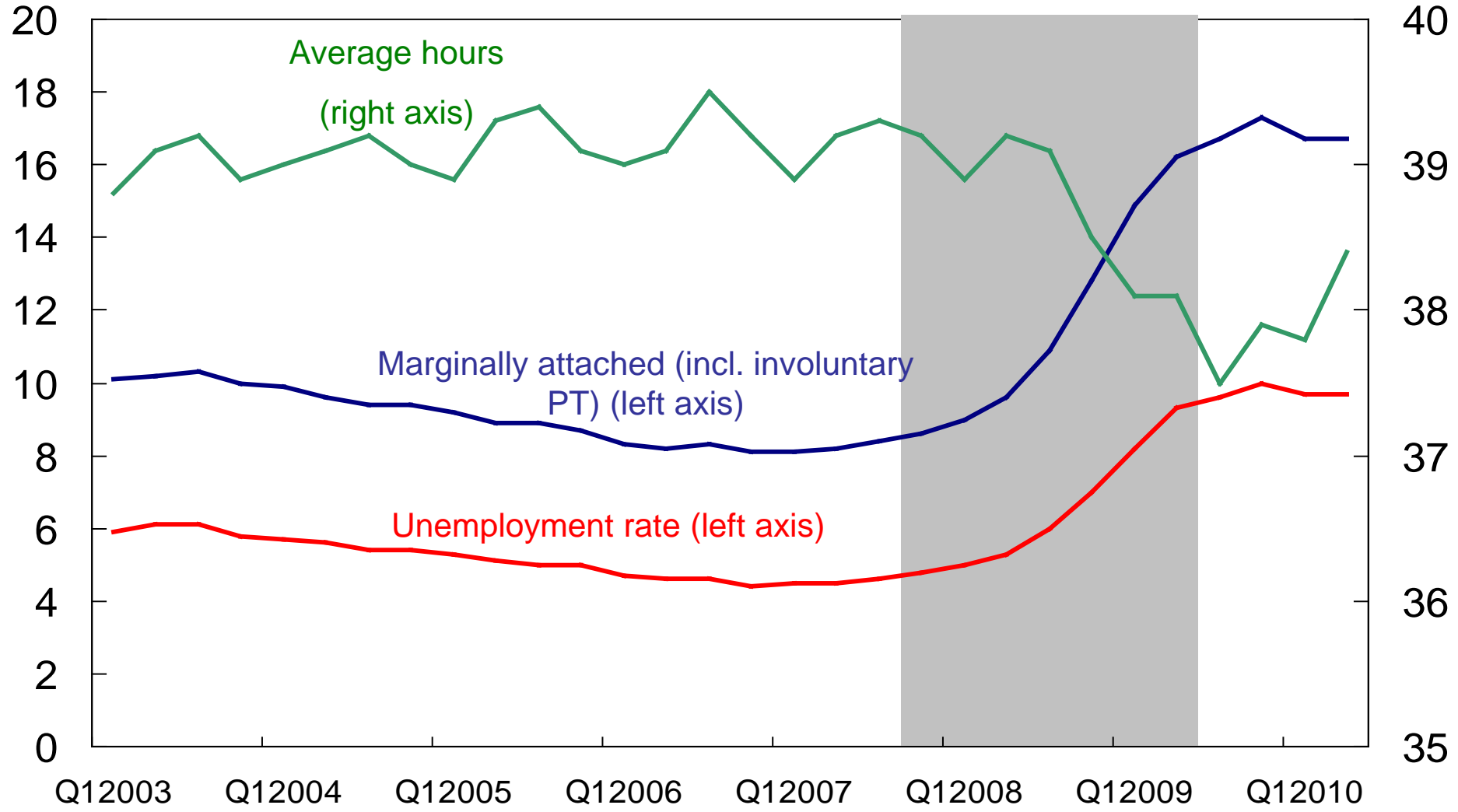
# 5. S&P 500 Stock Market Trend



# 6. Unemployment Rate, Proportion Marginally Attached and Average Weekly Hours

Percent

Hours

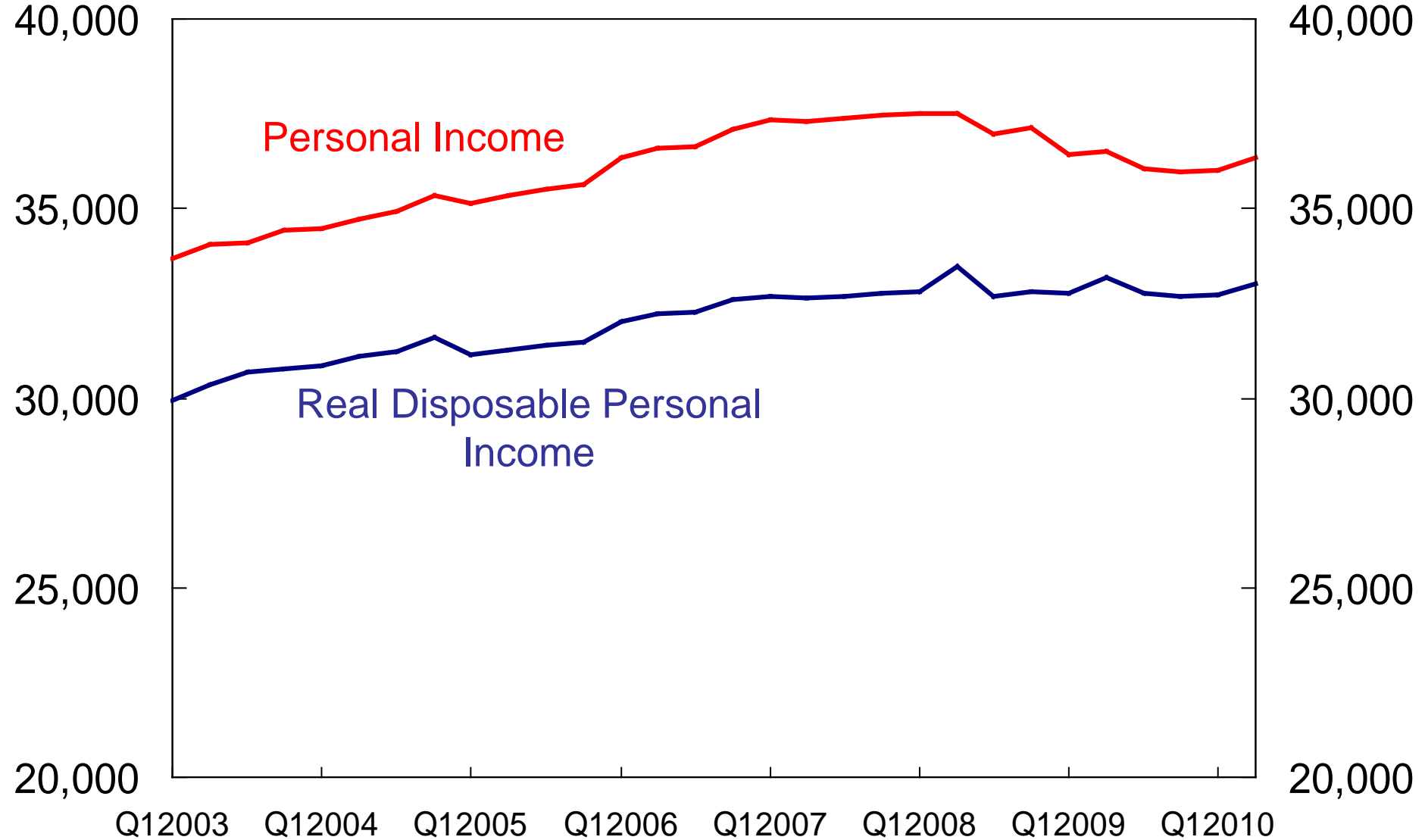


Source: BLS

# 7. Personal Income

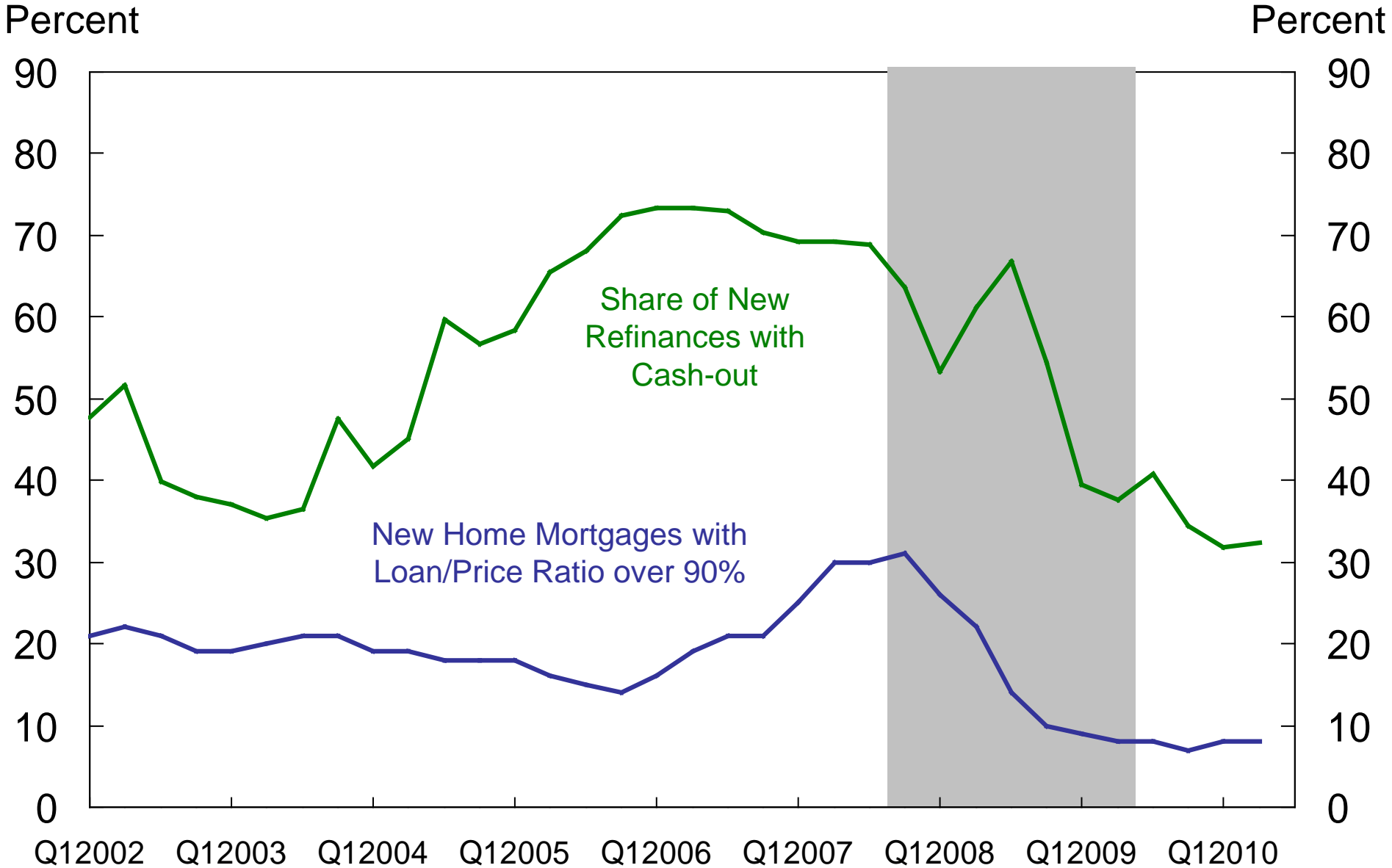
Per Capita (Chained 2005 \$)

Per Capita (Chained 2005 \$)



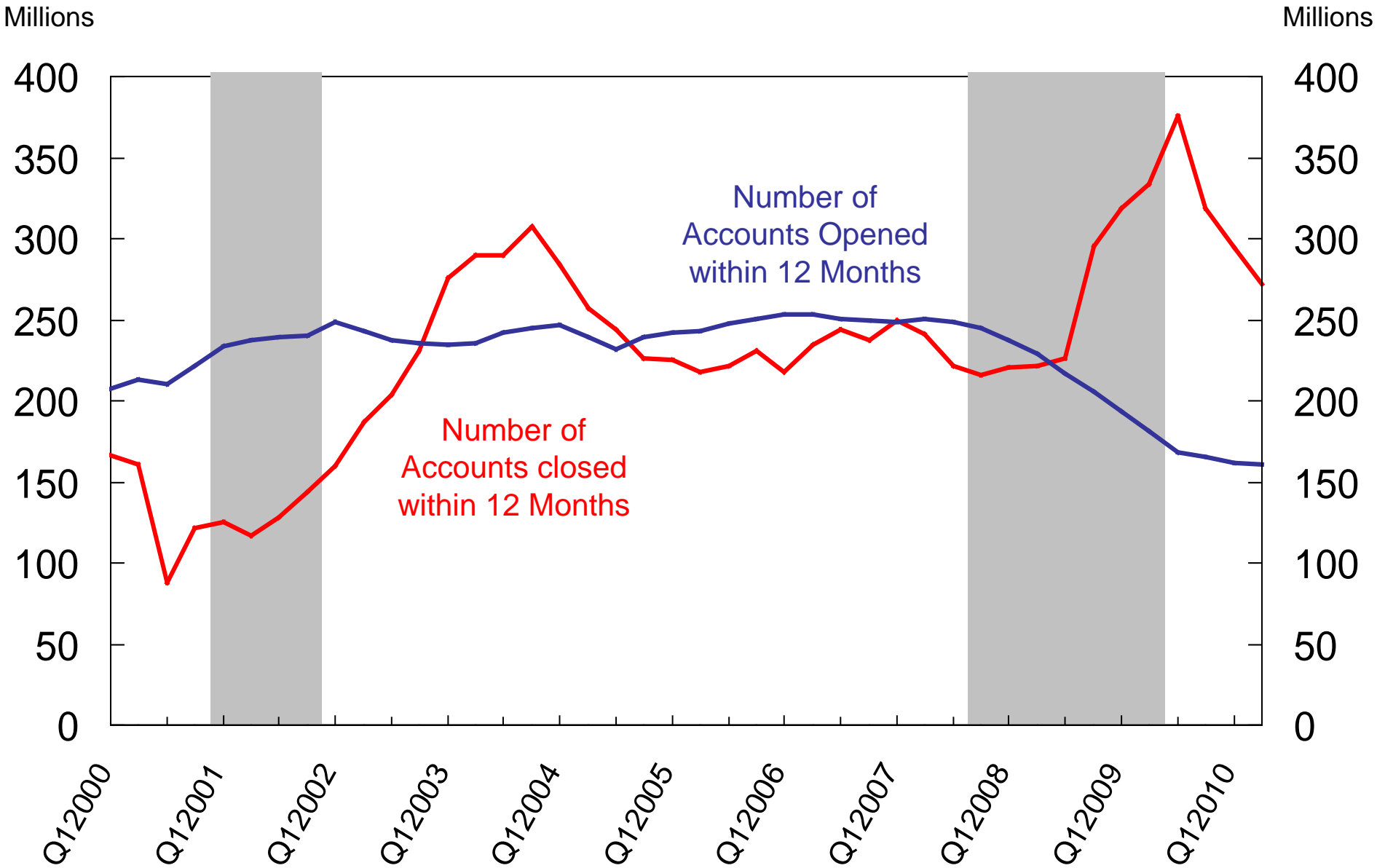
Source: BEA, SAAR, in 2005 dollars.

# 8.Consumer Credit - Mortgage LTVs and Cash-outs



Source: FHFA

# 9. Total Number of New and Closed Accounts

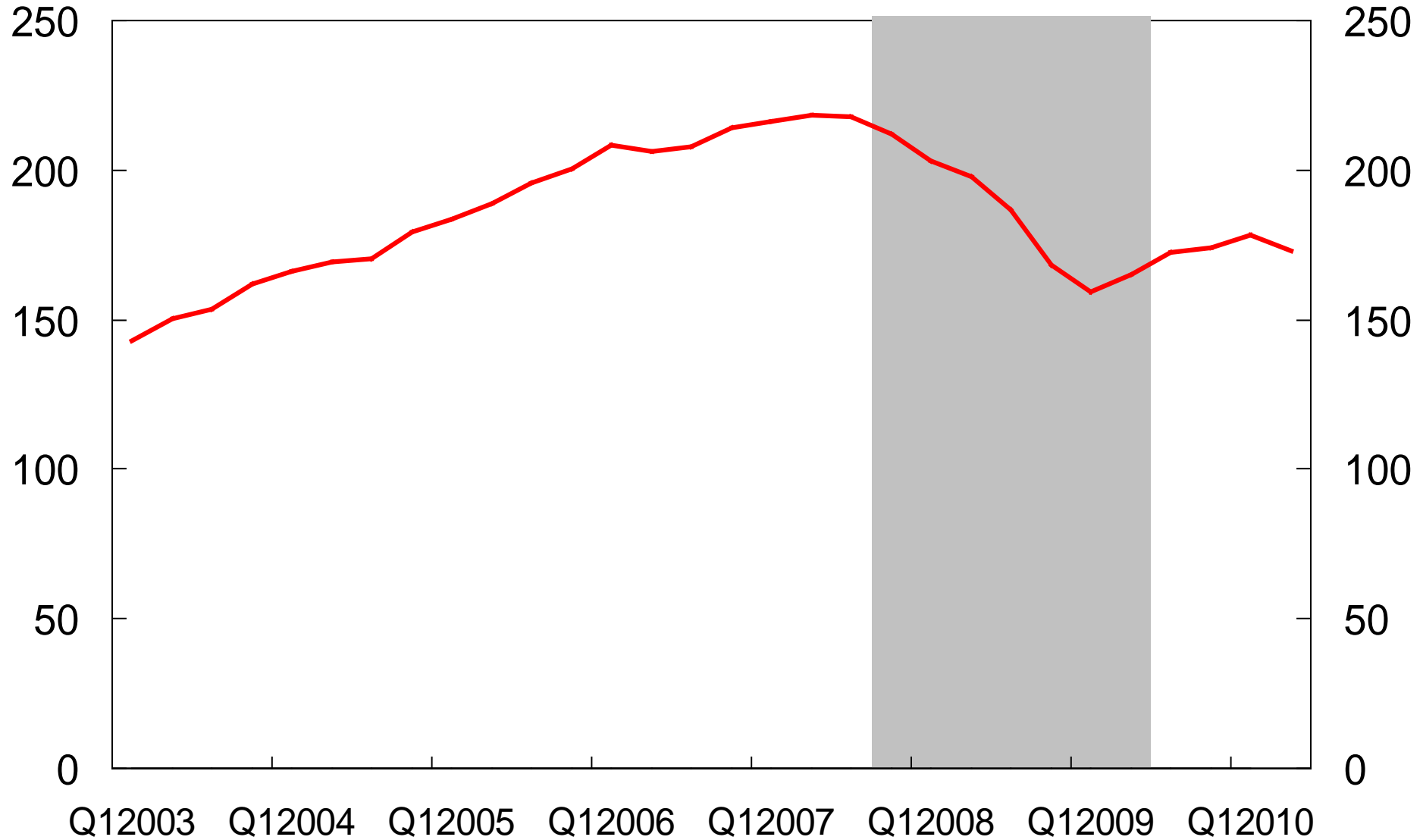


Source: FRBNY Consumer Credit Panel

# 10. Net Worth (Per Capita)

Thousands of \$

Thousands of \$

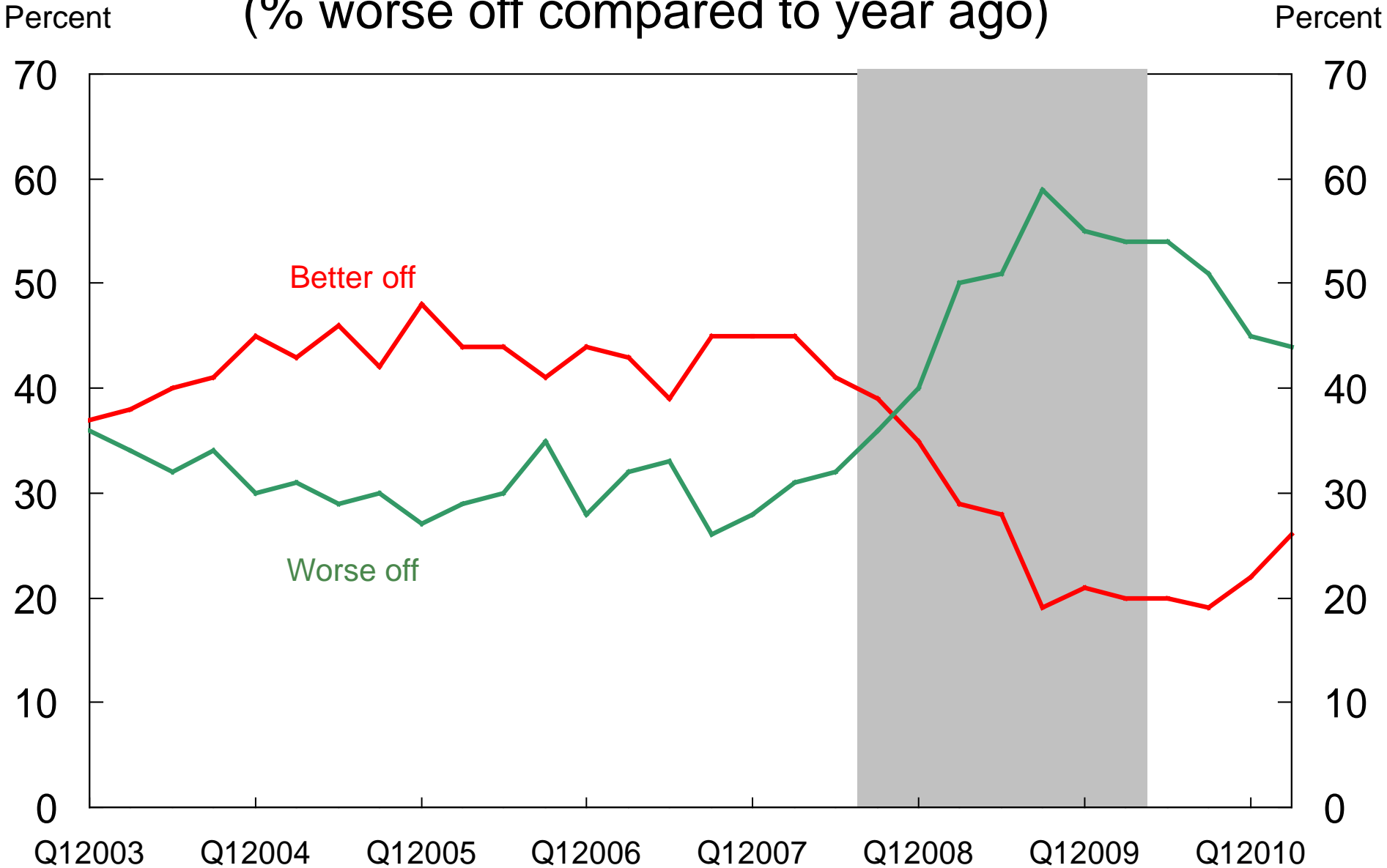


Source: Flow of Funds, NSA, current dollars.



# 11. Perceived decline in financial situation

(% worse off compared to year ago)

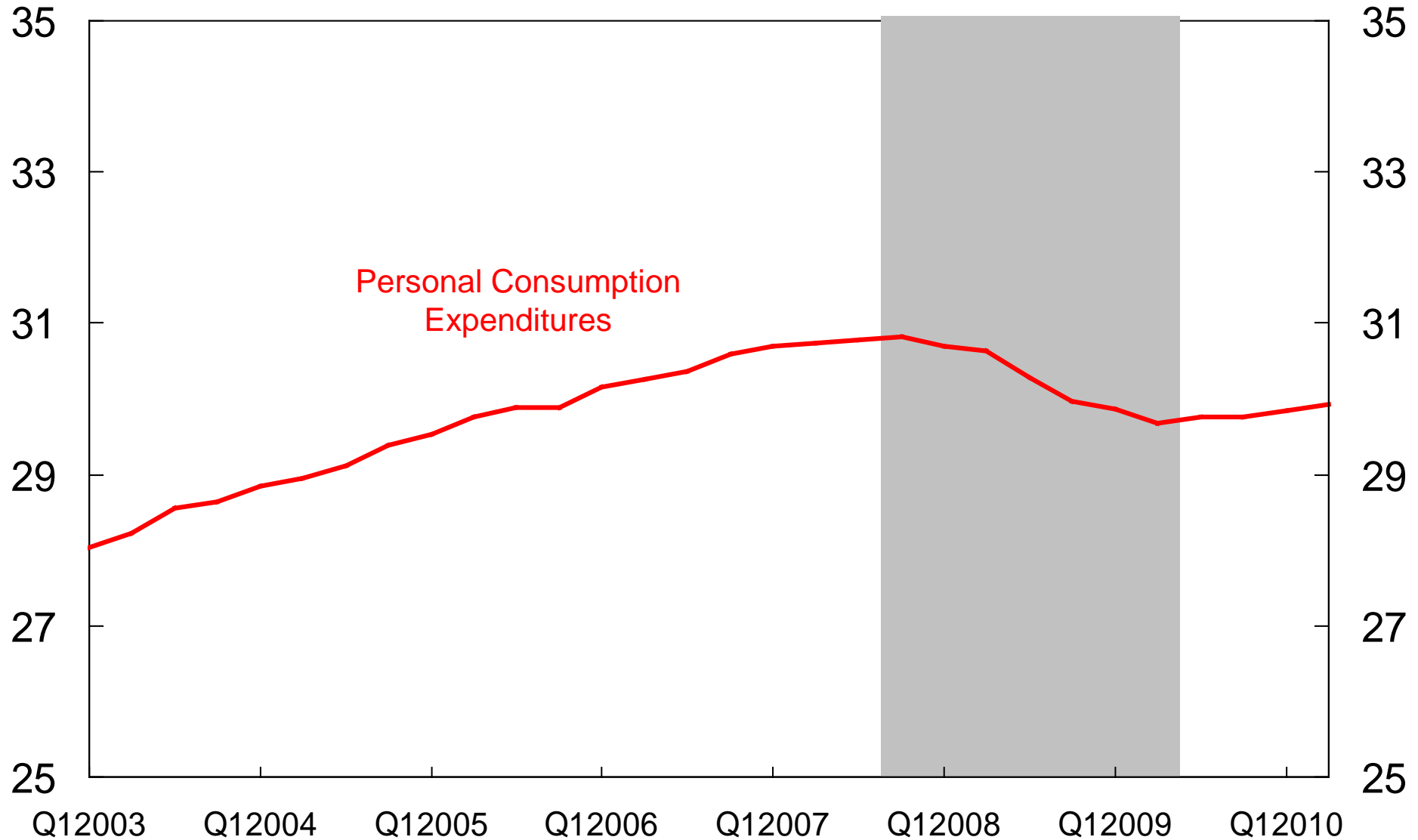


Source: Reuters/University of Michigan Survey of Consumers

# 12. Spending per Capita

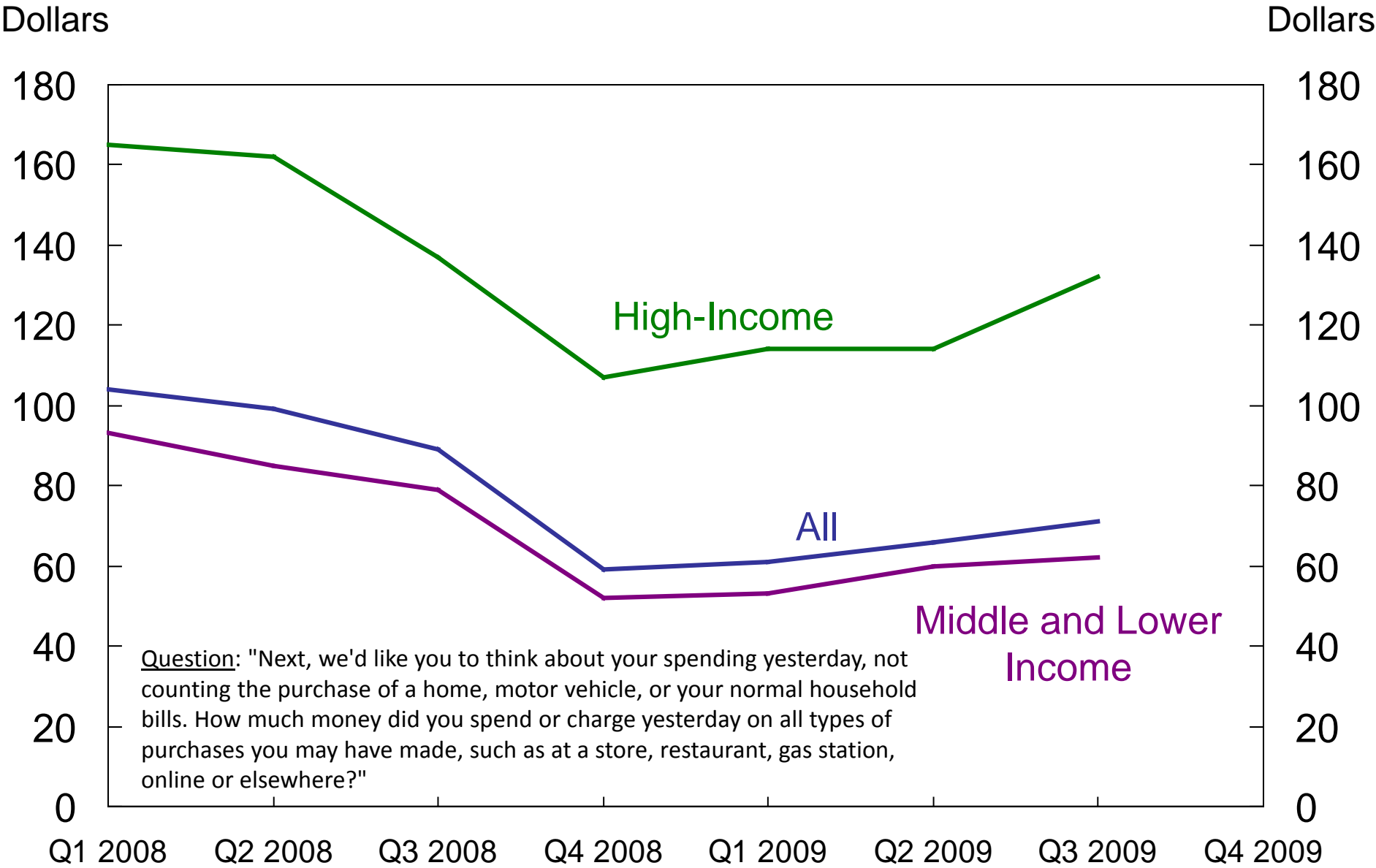
Thousands of Chained Dollars (SA)

Thousands of Chained Dollars (SA)



Source: BEA (NIPA)

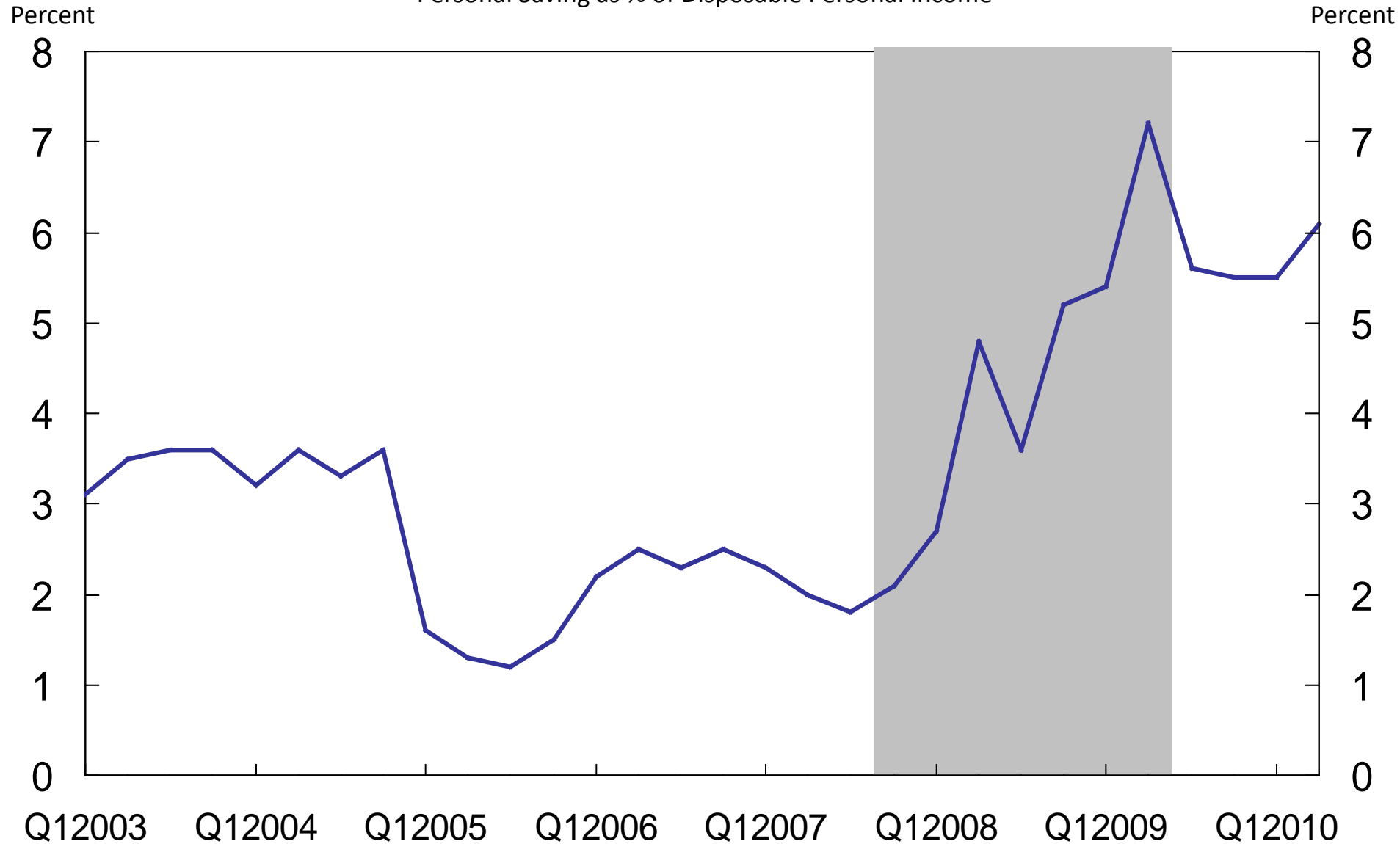
# 13. Daily Discretionary Consumer Spending



Question: "Next, we'd like you to think about your spending yesterday, not counting the purchase of a home, motor vehicle, or your normal household bills. How much money did you spend or charge yesterday on all types of purchases you may have made, such as at a store, restaurant, gas station, online or elsewhere?"

# 14. Personal Saving Rate

Personal Saving as % of Disposable Personal Income



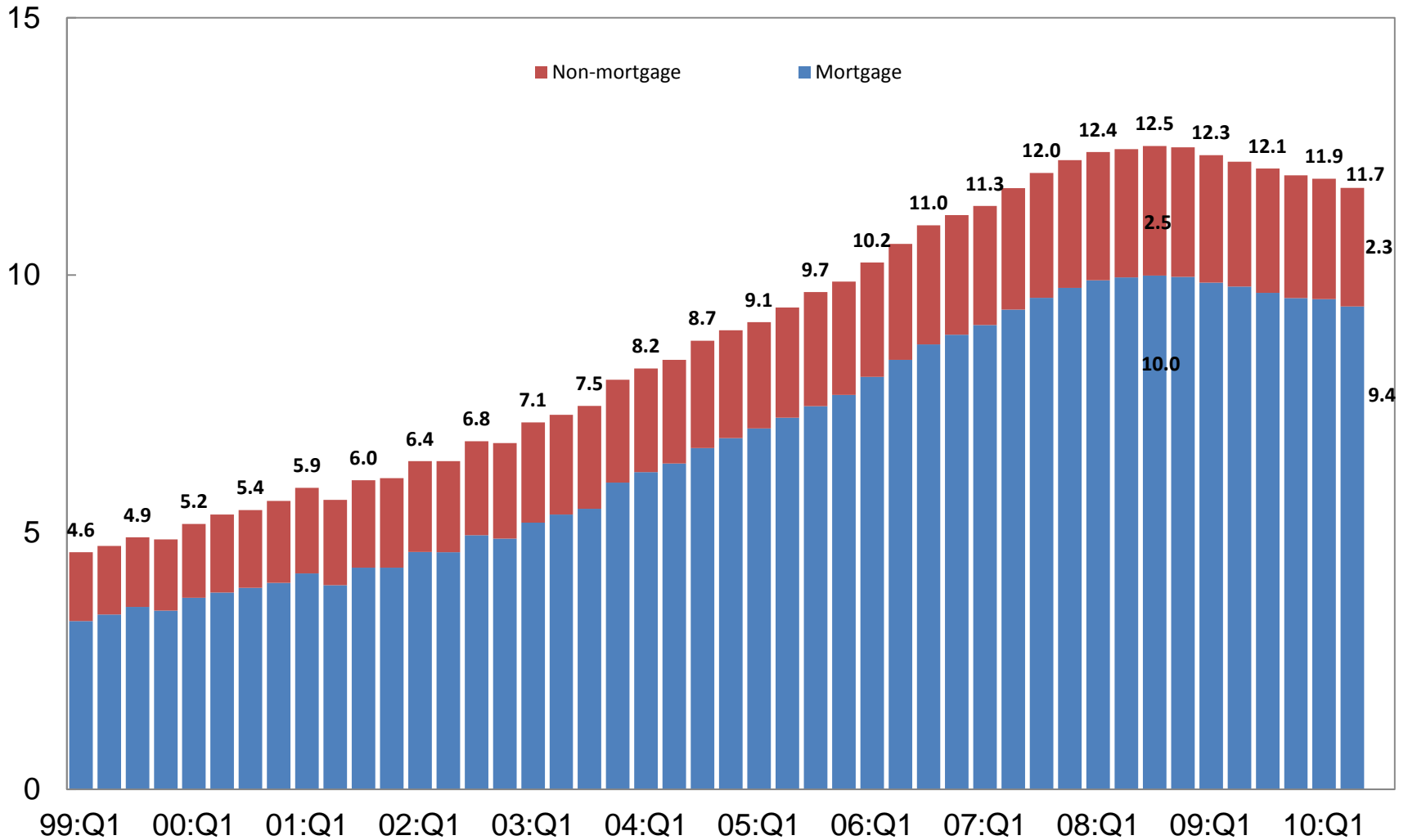
Source: BEA (NIPA)

Note: Personal Savings Rate: Personal Savings/Disposable Personal Income

# 15. Total Debt Balance and its Composition

Trillions of Dollars

Trillions of Dollars

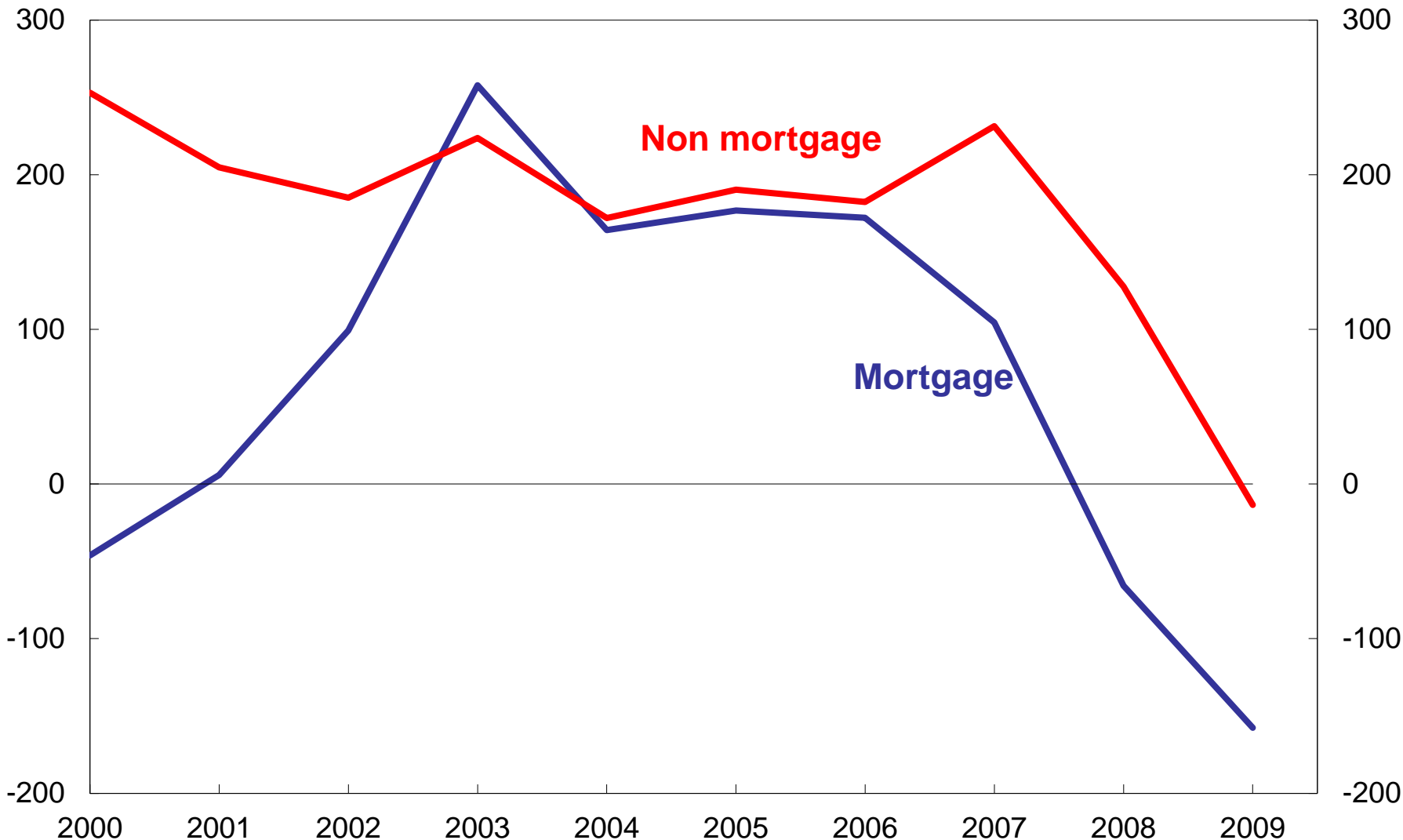


Source: FRBNY Consumer Credit Panel

# 16. Changes in Household Debt Available for Spending (annual)

Billions of Dollars

Billions of Dollars



Source: FRBNY Consumer Credit Panel