Americans experienced unprecedented capital gains in real estate and equity holdings over the past two decades. The 2008 bursting of the housing bubble and implosion of the sub-prime mortgage market, however, triggered a financial crisis that destroyed large portions of this newfound wealth. This study explores the consequences of the rising in housing prices and the subsequent collapse for the wealth of older households. Using longitudinal data from the Panel Study of Income Dynamics (PSID) and cross-sectional data from the Surveys of Consumer Finances (SCF), we follow the rise in home values over the past decade, observing which households enjoyed large home price appreciation and how they responded. We then use the distribution of wealth components in these surveys with national measures of average asset price changes to simulate the likely magnitude and distribution of losses among major socio-economic groups in the financial crisis of 2008-9.

We first show that the run-up of home prices and the changes in housing finance and mortgage market options are captured in the micro-survey data. We then explore the determinants of mortgage refinancings and home equity extractions at the level of individual households. By chaining the change in self-reported home price for households who did not move between two consecutive survey waves, we construct price indexes for the HRS and PSID. For the SCF, we approximate a housing price index from the change in the mean home price between successive waves. We compare these estimates to the Federal Housing Finance Agency (FHFA) national home price measure and the S&P Case-Shiller index. All three micro-surveys capture the pattern of price change over a period extending from 1983 to 2007.

We also show that the micro-survey data reflect the aggregate trends in mortgage refinancing and the increased tendency to withdraw homeowner equity. Based on responses in the SCF, refinancing and equity withdrawal are more common among younger households; but, older households have also been active in withdrawing accumulated equity to finance other activities. Older households are slightly less likely to withdraw equity when measured as a percent of their housing wealth, but there is no consistent difference in the purposes for which the funds are withdrawn. The PSID shows similar results, indicating a substantial rise in the probability of refinancing and equity withdrawal after 2001 for both older and younger households.

Hurst and Stafford (2004) and Munnell and Soto (2008) show that micro-survey evidence on refinancing can supplement the aggregate analysis by informing us on why households withdraw equity from the home. We extend their analysis of the PSID and SCF to show the importance of home price appreciation
and interest rates in decisions to refinance existing mortgages and withdraw home equity. Much of refinancing activity was a rational response to opportunities to reduce mortgage interest costs.

While home values account for a large portion of the recent increase in the household net worth, it is only part of total household wealth, and the collapse of the secondary market for sub-prime mortgages triggered a financial crisis that extended far beyond housing. Thus, an analysis of the full effects to the run-up of asset prices and their collapse must incorporate a broader measure of wealth. Using data from eight waves of the 1983-2007 SCF, we document the gains in household wealth, and show that the gains of older households exceeded those of younger families. The differences have steadily widened since the early 1980s because older households own more valuable homes and a larger proportion of their financial assets was invested in assets subject to capital gains, and they have greater progress in paying off their mortgages.

Using reconciliation tables of the Flow of Funds Accounts from 2007 to the first quarter of 2009, we can adjust the latest individual SCF estimates of net worth to show how the collapse in housing and equity prices affected total wealth holdings. Our projections show that, on average, U.S. households have lost a fourth of their wealth over this period. The losses are larger for younger households since older households benefited from having a higher share of their net worth in fixed-value assets. We also find the losses are similar across households of differing levels of educational attainment or income.

However, these calculations overstate the degree of wealth loss because they exclude the wealth equivalent of employer-provided defined benefit plans and Social Security pensions, which were not directly affected by the asset-price meltdown. We construct estimates of these two wealth components and find that their inclusion reduces the percentage wealth losses for all groups, narrows the differences by age, and changes the relative magnitudes of loss by education and income. Social security is a large component of retirement wealth for low- and moderate-income households. Defined-benefit pensions are most significant for middle-income households because low-income households are unlikely to be enrolled in a pension plan, and higher income households have shifted to defined-contribution plans. Thus, including these programs buffers the wealth losses of low- and mid-income households.

Finally, our calculations still may overstate the significance of the wealth decline because some researchers point out that homeownership should be viewed as a hedge against future rent increases, rather than an element of total wealth.¹ Thus, we re-compute the wealth change excluding home values. Since homeownership is a very large proportion of the wealth of younger households and the percentage loss in their home equity between 2007 and 2009 is large, its exclusion greatly reduces their wealth loss, whereas the percentage loss for older households remains similar. Similarly, because the wealth of lower-income households is largely composed of equity in their home and accrued Social Security wealth, their non-housing wealth is largely unaffected by the financial crisis.

However, some households will lose their homes as a result of foreclosure, and for these households, there is a wealth loss is real. Our calculations imply a fifteen-fold increase in the percent of homeowners with a negative home-equity position in March of 2009 compared to 2007. This proxy for the risk of foreclosure is much higher for households with a head under age 50 and those in the middle income category. In summary, while older households buffered their real estate and equity losses with relatively stable fixed-value assets, no age, education, or income group was left unscathed by the collapse of asset prices. Also, older households lost much of their presumed gains relative to earlier cohorts and they will have less time to recover.

¹ Examples are provided by Ortalo-Magne and Rady (2002), Sinai and Souleles (2005), and Buiter (2008).
In summary, while older households buffered their real estate and equity losses with relatively stable fixed-value assets, no age, education, or income group was left unscathed by the collapse of asset prices. Also, older households lost much of their presumed gains relative to earlier cohorts and they will have less time to recover.