

# The Impact of the Housing Crash on Family Wealth

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July 2008

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#### **About the Authors**

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# **Executive Summary**

This paper extrapolates from data from the 2004 Survey of Consumer Finance to project household wealth, by age cohort and wealth quintile, in 2009 under three alternative scenarios. The first scenario assumes that real house prices fall no further than their level as of March 2008. The second scenario assumes that real house prices fall an additional 10 percent for a 2009 average. The third scenario assumes that real house prices fall an additional 20 percent for a 2009 average. (Real house prices are currently falling at the rate of almost 2.0 percent a month.)

The projections show that as a result of the collapse of the housing bubble, families in all age cohorts will see a substantial reduction in their wealth compared to the levels for the same age cohort in 2001 or 2004, the years in which the last two surveys were fielded.

In percentage terms, the sharpest falloffs are projected to occur for the youngest families. In the second scenario, the median family in the age cohort from 18-34 will have 67.6 percent less in net worth in 2009 than in 2004. The median family in the 35-44 age cohort will have 56.8 percent less in 2009 than in 2004. This corresponds to a decline of \$41,000 in median wealth.

The typical family in the age cohort from 45 to 54 will have 34.6 percent less in 2009 than did families in the same age group in 2004. The median family in the 55-64 age cohort will have \$121,000 less wealth than their counterparts in this age group in 2004, a decline of 43.9 percent.

The projections show that the crash of the housing bubble is likely to eliminate most, if not all, of the gains that families had made in accumulating wealth over the last two decades. The median family in the cohorts from age 35-44 is actually projected to have less wealth in 2009 than their counterpart in this age group in 1989. The median family in the cohort from ages 45-54 is projected to have 31.2 percent less wealth in 2009 than the median family in this age cohort in 1989.

The sharp projected reduction in wealth compared to the prior two years in which the survey was fielded stems from the collapse of the housing bubble. Homes are the major financial asset held by the bulk of the population. It was inevitable that the sharp downturn in the housing market that we have seen over the last two years would have a substantial impact on the wealth of most families.

As these projections should demonstrate, homeownership is not everywhere and always an effective way to accumulate wealth. For those who owned a home in the last few years, the collapse of the housing bubble led to the destruction of much or all of their wealth.

### Introduction

The U.S. economy has experienced two extraordinary asset bubbles in the last decade: a stock bubble that began in the mid-nineties and crashed over the years from 2000-2002, and a housing bubble that grew up alongside the stock bubble and has been in the process of deflating since the middle of 2006.

These bubbles made it extremely difficult for families to plan their savings, since they would have no simple way to distinguish bubble-generated wealth, which would prove ephemeral, from real wealth which could be expected to endure. As a result, tens of millions of families likely ended up saving less than they would have considered prudent, had they recognized that their wealth was temporarily inflated by bubbles in the stock or housing market.

This problem is far more serious in the case of the housing bubble than the stock bubble. While stock ownership has become far more widespread over the last two decades, it is still the case that the vast majority of families own little or no stock, even when including holdings of mutual funds through defined contribution retirement plans.

By contrast, most families do own homes, especially once they reach middle age. In 2004, the homeownership rate for families between the ages of 35 and 44 was 67.0 percent. It was 76.4 percent for families between the ages of 45 and 54, and 78.3 percent for families between the ages of 55 and 64. The vast majority of middle-aged families do own their home, and for most of them, it is by far their largest financial asset.

The importance of housing in family wealth is amplified by the fact that it is usually a highly leveraged investment. Families typically rely on mortgages for the overwhelming majority of the purchase price, and even after they have been in a home for several years, the value of the home can easily be five times their equity or more. As a result of this leverage, even small changes in housing values can have a large impact on family wealth.

The huge increases in house prices seen during the boom years, followed by the bust of the last two years, effectively took homeowners on a gigantic roller coaster ride. While many homeowners were far wealthier than they could have anticipated at the peak of the bubble, now that the bubble has largely deflated, they find themselves with much less wealth than they expected at this point in their careers.

Unfortunately, they do not have the option to reverse the saving and consumption decisions made in prior years. Older homeowners in particular will have little opportunity to make up for years in which they saved little, or not at all, under the assumption that the wealth in their home would be enduring and possibly increase further as house prices rose even higher.

The decline in house prices since the middle of 2006 has lead to the loss of more than \$4 trillion in real housing wealth, more than \$50,000 for every homeowner in the country. Real house prices are now dropping at close to a 2.0 percent monthly rate, which translates into a loss of almost \$350 billion every month. This paper produces a set of projections derived from the 2004 Survey of Consumer Finance (SCF), the most recent survey currently available, to determine how these losses will affect families in different wealth quintiles within each age cohort.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> The SCF is conducted every three years. Data from the 2007 survey will not be available until 2009.

# The Construction of Projections for 2009

The central scenario in the projections shown in this paper assumes that real year-round house prices in 2009 are on average 10 percent below the level shown by the Case-Shiller 20-City Index for March 2008. (The Appendix shows projections assuming alternatively no real price decline and a 20 percent real price decline.) While the assumption of a 10 percent price decline may seem extreme, it is important to note that house prices are currently falling at a real rate of close to 2.0 percent a month. Given the current rate of price decline, even if prices began to stabilize in the next few months, it is likely that real house prices would average at least 10 percent less in 2009 than their March 2008 level. For this reason, the assumption of a 10 percent further real decline in prices is a plausible middle scenario.

For simplicity, the calculations assume zero net savings over this period. This is a simplification, but savings out of disposable income has averaged less than 1.0 percent since the third quarter of 2004, when the last SCF was fielded, so an assumption of zero savings is not far from the average for the population as a whole over this period.<sup>2</sup> There are likely to be substantial differences in savings rates by age group, but the impact of extraordinary run-up in housing wealth may make the variations less predictable than would ordinarily be the case. The calculations assume that any stock holdings in 2004 rose in step with the S&P 500 over this period (through March of 2008), with a further real rise of 3 percent assumed for 2009.

There was also no effort made to incorporate defined benefit pensions. The appendix tables show the percentage of families within each quintile and age cohort who report having a defined benefit pension. There is a sharp decline in the percentage of workers who report having defined benefit pensions over this twenty year period. Therefore, an analysis that included the wealth in defined benefit pensions would show the situation of families in 2009 to be somewhat worse relative to families in earlier years than is indicated in this paper.

#### Wealth for Families Between Ages 35-44

**Figure 1** shows median family wealth for families with a respondent between the ages of 35-44 for every SCF since 1989, with a projected wealth level shown for 2009. The projection for 2009 assumes that real house prices in 2009 are on average 10 percent lower than they were in March of 2008, using the Case-Shiller 20-City Index as the measure of prices.<sup>3</sup> (See the Appendix for a full discussion of the methodology.)

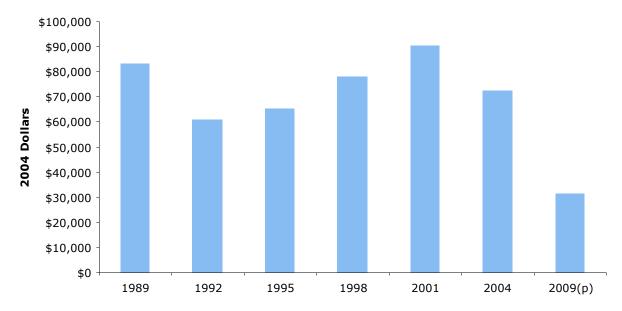
Figure 1 shows that median family wealth for this cohort was lower in 1992, 1995, and 1998 than it had been in 1989. By 1998, the net wealth of the median family in this age cohort had risen substantially from its 1992 and 1995 levels, but still was 6.2 percent less than the net wealth of the median family in 1989. In 2001, a point at which the stock bubble had only partially deflated, the wealth of the median family in this age cohort was only 9.1 percent higher than it had been in 1989. 2001 was the only

<sup>&</sup>lt;sup>2</sup> Savings data can be found in the Bureau of Economic Analysis' National Income and Product Accounts, Table 2.1, Line 34.

Note that this would imply a nominal price increase of roughly 5 percent between March of 2008 and the average for 2009, if the inflation rate averages 4.0 percent over this period. Nominal house prices are currently dropping at the rate of 1.5 percent a month.

survey year in which the net wealth of the median family in this age cohort was higher than what it was in 1989.

FIGURE 1 Median Wealth for Households, Age 35-44



Source: Survey of Consumer Finances and authors' calculations, see text.

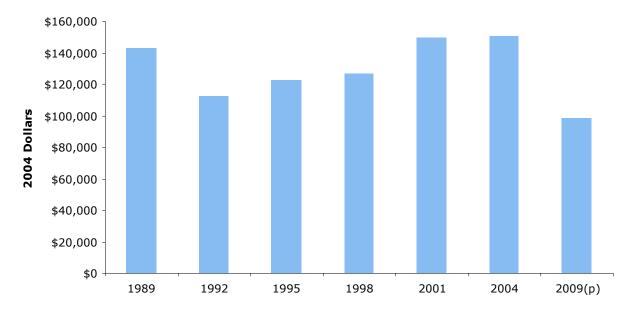
Note: All values in 2004 dollars.

The collapse of both the stock and housing bubbles, combined with weak wage growth, has led to a sharp decline in wealth for this age cohort. The projection for 2009 shows the median family in this age cohort with just \$31,300 in wealth. This is 65.5 percent less than the wealth held by the median family in 2001 and 62.3 percent less than the wealth of the median family in 1989, twenty years earlier.

#### Wealth for Families Between Ages 45–54

**Figure 2** shows median family wealth for families with a respondent between the ages of 45-54 for every SCF since 1989, with the wealth level shown for 2009 projected in the same manner as for Figure 1.

FIGURE 2 Median Wealth for Households, Age 45-54



Source: Survey of Consumer Finances and authors' calculations, see text.

Note: All values in 2004 dollars.

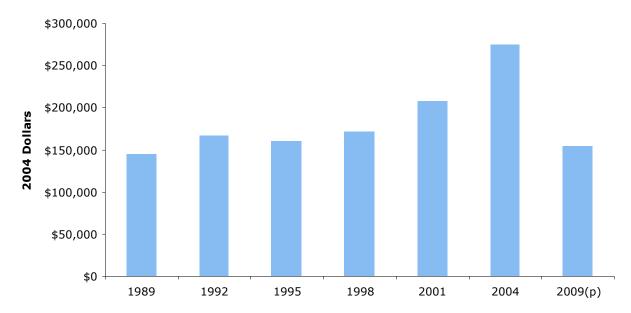
Figure 2 shows that the median family in this age cohort also experienced a decline in wealth from 1989 to 1998. Median wealth finally surpassed its 1989 level in 2001, and held steady in 2004. At that point, median wealth was 5.2 percent above its 1989 level. However, the fall in housing prices is projected to lead to a reduction in wealth of 34.6 percent in 2009 compared to the 2004 level for the median family in this age group. In this scenario, the median family will have 31.2 percent less wealth in 2009 than did the median family in this age group in 1989.

It is important to note that this comparison substantially overstates the wealth of families in 2009 relative to prior years because it does not include defined benefit pensions. In 1989, 55 percent of the families in this age group reported having a defined benefit pension. The number had fallen to 35 percent in 2004 and will almost certainly be lower in 2009. If the sharp decline in defined benefit pensions were to be included in the analysis, it would show that the median family in this age group had an even sharper drop in wealth in 2009 compared with 1989.

#### Wealth for Families Between Ages 55–64

**Figure 3** shows median family wealth for families with a respondent between the ages of 55-64 for every SCF since 1989, with the wealth level shown for 2009 projected in the same manner as for Figure 1.

FIGURE 3 Median Wealth for Households, Age 55-64



Source: Survey of Consumer Finances and authors' calculations, see text.

Note: All values in 2004 dollars.

Figure 3 shows that the median family in the 55 to 64 age cohort saw an increase in wealth in each of the surveys from 1989 to 2004, with the exception of 1995 when it decreased slightly. The increases were sharpest in 2001 and 2004, no doubt driven by the run-up in stock prices and then the run-up in housing prices. By 2004, the wealth of the median household in this age group was 90.6 percent higher than the median wealth for this age group in 1989.

The plunge in house prices since 2006 is projected to eliminate most of this gain. Median wealth is projected to drop from \$275,400 in 2004 to 154,400 in 2009, a decline of 43.9 percent. While this is 6.9 percent above its 1989 level, this gain would likely be eliminated if the decline in defined benefit pensions was included in the analysis. In 1989, 54.2 percent of the people in this age group reported having a defined benefit pension. In 2004, 43.8 percent of the people in this age group reported having a defined benefit pension.

# **Implications for Policy**

The sharp plunge in wealth projected for 2009 for families in each age cohort should point out the dangers of allowing financial bubbles, and especially a housing bubble, to grow unchecked. Families will behave as though the bubble-generated wealth is real and adjust their consumption and savings behavior accordingly. As a result, tens of millions of families are likely to make wrong decisions, saving far less than they would have if they recognized the transitory nature of the bubble wealth.

Inadequate saving is likely to be an especially serious problem for workers who are approaching retirement. These workers will have little opportunity to make up for the wealth lost in the collapse of the housing bubble. Many retirees will find themselves far more dependent on Social Security and Medicare than would have been the case if their savings behavior had not been affected by the stock and housing bubbles. The financial situation of older workers must be an important factor in any plans to reduce the benefits provided by these programs.

Given the hardships created by the collapse of a financial bubble, it is important that the Federal Reserve Board views the prevention of bubbles as an important part of its mandate. It would be difficult to imagine an economic policy that has produced more damage than that which allowed the housing bubble to grow unchecked. The Federal Reserve Board could have prevented much of this pain if it had acted to burst the bubble before it had grown to such dangerous dimensions.

# Appendix: Estimates and Projections Based on the SCF

#### **Description of Method**

Estimates of assets and debts by households from 1989-2004 come from each year's Survey of Consumer Finances based the SAS program provided by the Federal Reserve.<sup>4</sup> The only significant change to the original program was to split net equity in nonresidential real estate into corresponding asset and debt.

Projections of assets and debts by household in 2009 were made by adjusted equity and real estate values. Equity values were adjusted by the inflation-adjusted S&P 500 from September 2004 to March 2008 (7.33 percent), plus 3 percent for 2008 to 2009 (10.55 percent total.) Real estate prices were adjusted by the Case-Shiller 20-City Composite Index over the same period (-10.3 percent), but with 2009 adjustment based on three scenarios (0, -10, and -20 percent from 2008 to 2009).

All figures were inflated to 2004 dollars using the CPI-U-RS from September of each survey year to September 2004.

#### **Appendix Tables**

These tables below show wealth by age cohort based on the data from SCF for each year from 1989 through 2004. The projections for 2009 assume three alternative scenarios: no real change in house prices from March of 2008 through 2009, a 10 percent decline in the year-round average price for 2009 relative to March of 2008, and a 20 percent real price decline for the year-round average price for 2009 relative to March of 2008.

The first line for each year's survey shows the average income for each quintile in each year. The second line indicates whether someone in the family reports having a defined benefit pension. The third line indicates whether they own their primary residence. The fourth line shows the percentage of families in each quintile who have negative net worth.

 $<sup>4\</sup> Available\ online\ at\ http://www.federalreserve.gov/PUBS/oss/oss2/bulletin.macro.txt.$ 

Appendix Table 1 All Respondents Age 18-34

	Respondents Age 18-34			Mean By Quintile of Net Worth				
		Median	Mean	Bottom	Second	Middle	Fourth	Тор
	1988 Income	30,576	41,045	22,957	23,471	34,983	43,628	80,530
1989	Has Defined Benefit Pension		22.8%	11.5%	11.1%	26.6%	24.7%	40.6%
	Owns Primary Residence		36.4%	4.4%	3.4%	30.1%	59.7%	85.2%
	Net Worth	11,477	69,065	(5,147)	1,697	11,106	40,007	298,775
	Note: With Negative Net Worth		14.6%	69.4%	0.0%	0.0%	0.0%	0.0%
92	1991 Income	32,415	40,632	23,756	22,873	36,033	48,073	72,361
	Has Defined Benefit Pension		23.2%	15.2%	16.1%	19.7%	32.3%	33.1%
1992	Owns Primary Residence		34.5%	4.5%	5.2%	21.8%	60.9%	80.0%
	Net Worth	11,858	58,061	(6,956)	2,215	13,000	44,875	238,233
	Note: With Negative Net Worth		16.7%	75.7%	0.0%	0.0%	0.0%	0.0%
	1994 Income	34,042	39,542	24,296	23,505	35,881	47,849	66,295
w	Has Defined Benefit Pension		20.4%	15.5%	11.8%	21.4%	25.6%	27.6%
1995	Owns Primary Residence		35.9%	5.7%	9.8%	33.3%	56.9%	74.1%
_	Net Worth	14,882	54,122	(9,769)	3,557	16,464	49,318	211,461
	Note: With Negative Net Worth		15.9%	79.4%	0.0%	0.0%	0.0%	0.0%
	1997 Income	32,916	43,045	24,735	24,213	31,442	44,662	90,150
1998	Has Defined Benefit Pension		17.3%	10.7%	10.9%	14.7%	23.7%	26.4%
	Owns Primary Residence		35.9%	12.5%	8.3%	20.7%	61.4%	75.9%
	Net Worth	10,445	81,773	(10,932)	1,970	11,772	44,087	364,965
	Note: With Negative Net Worth		19.8%	82.4%	0.0%	0.0%	0.0%	0.0%
1	2000 Income	36,124	47,970	24,636	27,525	36,147	54,905	97,455
	Has Defined Benefit Pension		13.3%	9.2%	8.1%	13.1%	18.7%	17.0%
2001	Owns Primary Residence		37.5%	9.6%	9.8%	23.0%	62.2%	83.0%
•	Net Worth	12,039	91,655	(8,384)	2,579	12,736	51,044	404,470
	Note: With Negative Net Worth		18.3%	76.6%	0.0%	0.0%	0.0%	0.0%
	2003 Income	34,914	46,524	28,214	22,617	37,422	51,495	92,755
4	Has Defined Benefit Pension		13.6%	8.2%	5.4%	11.5%	17.1%	25.9%
2004	Owns Primary Residence		40.0%	11.5%	5.3%	29.6%	66.6%	86.8%
•	Net Worth	14,500	76,087	(13,700)	2,863	15,747	55,432	320,880
	Note: With Negative Net Worth		17.1%	82.8%	0.0%	0.0%	0.0%	0.0%
	Scenario 1							
	Net Worth	6,000	42,076	(19,917)	537	7,381	23,253	199,243
	Percent Change	-58.6%	-44.7%		-81.2%	-53.1%	-58.1%	-37.9%
	Note: With Negative Net Worth		24.2%	100.0%	16.1%	1.1%	3.6%	0.0%
$\overline{\mathbf{c}}$	Scenario 2							
2009(p)	Net Worth	4,700	36,674	(20,903)	203	6,991	18,847	178,345
8	Percent Change	-67.6%	-51.8%		-92.9%	-55.6%	-66.0%	-44.4%
20	Note: With Negative Net Worth		26.0%	100.0%	16.1%	3.3%	10.4%	0.0%
	Scenario 3							
	Net Worth	3,930	31,273	(21,889)	(131)	6,601	14,441	157,448
	Percent Change	-72.9%	-58.9%		-104.6%	-58.1%	-73.9%	-50.9%
	Note: With Negative Net Worth		29.4%	100.0%	16.1%	4.4%	22.7%	3.7%

Source: Survey of Consumer Finance and authors' calculations. Note: All values in 2004 dollars.

Appendix Table 2 All Respondents Age 35-44

	Kespondents Age 55-44			Mean By Quintile of Net Worth				
		Median	Mean	Bottom	Second	Middle	Fourth	Top
	1988 Income	55,036	74,794	26,454	49,925	63,726	81,453	152,631
6	Has Defined Benefit Pension		47.8%	30.0%	35.6%	64.3%	57.8%	51.3%
1989	Owns Primary Residence		65.4%	7.4%	45.9%	91.6%	92.0%	90.5%
_	Net Worth	83,068	215,493	(3,097)	28,607	84,211	178,558	790,634
	Note: With Negative Net Worth		8.5%	42.7%	0.0%	0.0%	0.0%	0.0%
	1991 Income	47,272	62,719	25,863	40,992	49,856	66,751	130,418
2	Has Defined Benefit Pension		39.2%	17.9%	37.7%	46.0%	49.9%	44.5%
1992	Owns Primary Residence		64.5%	8.3%	50.5%	81.7%	90.6%	91.8%
7	Net Worth	61,043	177,248	(3,668)	19,040	62,249	136,152	674,487
	Note: With Negative Net Worth		6.7%	33.7%	0.0%	0.0%	0.0%	0.0%
	1994 Income	49,171	61,578	24,142	40,527	56,307	67,199	119,822
w	Has Defined Benefit Pension		32.1%	19.5%	24.4%	38.7%	45.6%	32.3%
1995	Owns Primary Residence		63.9%	9.1%	44.0%	83.3%	92.4%	90.7%
,	Net Worth	65,521	179,371	(2,283)	20,973	66,751	134,115	677,804
	Note: With Negative Net Worth		8.0%	40.1%	0.0%	0.0%	0.0%	0.0%
	1997 Income	50,550	72,118	25,829	41,535	57,029	75,552	161,051
œ	Has Defined Benefit Pension		28.2%	18.3%	26.4%	29.8%	35.0%	31.3%
1998	Owns Primary Residence		65.8%	13.1%	48.6%	79.3%	92.1%	95.9%
	Net Worth	77,902	240,022	(2,451)	22,464	77,079	180,554	925,921
	Note: With Negative Net Worth		7.6%	37.9%	0.0%	0.0%	0.0%	0.0%
	2000 Income	55,828	84,294	27,677	44,700	65,896	79,953	203,449
Ξ	Has Defined Benefit Pension		26.7%	13.8%	17.7%	32.5%	38.3%	31.1%
2001	Owns Primary Residence		66.4%	11.7%	50.5%	85.2%	90.0%	94.8%
	Net Worth	90,626	291,752	(4,049)	27,312	89,670	211,842	1,135,106
	Note: With Negative Net Worth		6.3%	31.5%	0.0%	0.0%	0.0%	0.0%
	2003 Income	51,344	76,610	28,670	39,303	57,799	78,722	178,771
4	Has Defined Benefit Pension		22.8%	9.3%	18.5%	25.9%	28.0%	32.4%
2004	Owns Primary Residence		67.0%	10.3%	51.5%	87.2%	94.4%	92.3%
	Net Worth	72,451	314,149	(4,688)	22,526	77,051	197,063	1,279,517
	Note: With Negative Net Worth		7.7%	38.5%	0.0%	0.0%	0.0%	0.0%
	Scenario 1	27.001	167 414	(0.220)	0.205	20.200	07.710	700 501
	Net Worth	37,891	167,414	(8,239)	8,205	39,380	97,719	700,591
	Percent Change	-47.7%	-46.7%	47.70	-63.6%	-48.9%	-50.4%	-45.2%
	Note: With Negative Net Worth		12.4%	47.7%	14.1%	0.0%	0.0%	0.0%
<b>a</b>	Scenario 2	21 202	150 740	(0.409)	2 000	20.026	02 141	656 705
2009(p)	Net Worth	31,292	152,742	(9,498)	3,900	30,926	82,141	656,785
20	Percent Change	-56.8%	-51.4%	47 701	-82.7%	-59.9%	-58.3%	-48.7%
	Note: With Negative Net Worth		15.9%	47.7%	25.3%	5.7%	0.9%	0.0%
	Scenario 3	21.602	120.071	(10.757)	(405)	22 471	(( 5 ( )	(10.000
	Net Worth	21,693	138,071	(10,757)	(405)	22,471	66,564	612,980
	Percent Change	-70.1%	-56.0%	45.50	-101.8%	-70.8%	-66.2%	-52.1%
	Note: With Negative Net Worth		19.7%	47.7%	32.5%	15.9%	2.3%	0.0%

Appendix Table 3 All Respondents Age 45-54

	Kespondents Age 45-54				Mean By	Quintile o	f Net Worth	
		Median	Mean	Bottom	Second	Middle	Fourth	Top
	1988 Income	56,565	90,603	25,939	45,457	61,069	78,294	242,609
6	Has Defined Benefit Pension		55.0%	34.0%	52.7%	69.2%	60.3%	59.1%
1989	Owns Primary Residence		75.2%	13.2%	76.4%	95.3%	97.3%	94.0%
_	Net Worth	143,065	400,945	3,709	53,580	143,048	286,493	1,519,921
	Note: With Negative Net Worth		2.9%	14.3%	0.0%	0.0%	0.0%	0.0%
	1991 Income	56,726	77,088	29,269	47,903	59,745	77,476	171,413
7	Has Defined Benefit Pension		51.7%	26.5%	52.4%	59.5%	63.8%	56.8%
1992	Owns Primary Residence		75.7%	24.5%	78.4%	87.3%	93.4%	95.4%
	Net Worth	112,126	366,588	4,724	46,762	114,646	241,859	1,426,951
	Note: With Negative Net Worth		3.7%	18.2%	0.0%	0.0%	0.0%	0.0%
	1994 Income	50,432	83,245	27,135	45,866	62,237	82,466	198,755
w	Has Defined Benefit Pension		45.2%	28.9%	46.1%	51.3%	53.0%	46.5%
1995	Owns Primary Residence		75.2%	19.2%	79.8%	89.2%	94.5%	93.2%
	Net Worth	122,229	372,927	5,782	54,532	123,497	243,851	1,438,427
	Note: With Negative Net Worth		3.1%	15.7%	0.0%	0.0%	0.0%	0.0%
	1997 Income	59,954	81,828	25,173	48,607	62,363	88,429	184,679
∞	Has Defined Benefit Pension		38.1%	29.6%	33.0%	39.4%	47.4%	40.9%
1998	Owns Primary Residence		73.4%	13.4%	79.4%	89.1%	92.0%	93.3%
	Net Worth	126,822	420,014	(4,295)	53,224	129,952	294,591	1,627,415
	Note: With Negative Net Worth		5.4%	26.9%	0.0%	0.0%	0.0%	0.0%
	2000 Income	60,206	106,302	26,350	48,910	69,779	96,873	289,946
_	Has Defined Benefit Pension		38.4%	22.7%	35.2%	46.5%	46.9%	40.7%
2001	Owns Primary Residence		75.4%	16.4%	74.0%	95.6%	94.5%	96.6%
(4	Net Worth	149,559	537,883	3,640	52,410	152,795	344,303	2,138,872
	Note: With Negative Net Worth		4.3%	21.6%	0.0%	0.0%	0.0%	0.0%
	2003 Income	62,639	97,224	29,354	50,201	66,684	88,725	251,452
4	Has Defined Benefit Pension		35.0%	25.6%	35.6%	40.0%	44.7%	29.1%
2004	Owns Primary Residence		76.4%	19.1%	77.7%	93.5%	94.9%	96.9%
•	Net Worth	150,520	555,003	3,061	57,153	153,967	357,487	2,206,378
	Note: With Negative Net Worth		4.2%	21.0%	0.0%	0.0%	0.0%	0.0%
	Scenario 1							
	Net Worth	113,268	407,468	(782)	35,442	113,577	275,645	1,615,026
	Percent Change	-24.7%	-26.6%	-125.6%	-38.0%	-26.2%	-22.9%	-26.8%
	Note: With Negative Net Worth		6.5%	32.2%	0.3%	0.0%	0.0%	0.0%
<u> </u>	Scenario 2							
1)6	Net Worth	98,400	383,219	(1,643)	29,060	97,561	250,160	1,542,451
2009(p)	Percent Change	-34.6%	-31.0%	-153.7%	-49.2%	-36.6%	-30.0%	-30.1%
	Note: With Negative Net Worth		8.1%	35.0%	5.3%	0.2%	0.0%	0.0%
	Scenario 3							
	Net Worth	81,931	358,970	(2,503)	22,678	81,544	224,675	1,469,876
	Percent Change	-45.6%	-35.3%	-181.8%	-60.3%	-47.0%	-37.2%	-33.4%
	Note: With Negative Net Worth		10.0%	35.1%	11.1%	3.6%	0.2%	0.0%

Appendix Table 4 All Respondents Age 55-64

	Kespondents Age 55-04			Mean By Quintile of Net Worth				
		Median	Mean	Bottom	Second	Middle	Fourth	Top
	1988 Income	41,277	72,699	13,946	33,657	44,081	66,998	205,066
1989	Has Defined Benefit Pension		54.2%	30.0%	59.6%	59.6%	69.0%	52.8%
	Owns Primary Residence		79.6%	22.1%	84.7%	99.7%	93.4%	98.7%
_	Net Worth	144,457	464,225	5,210	64,634	145,284	290,276	1,817,709
	Note: With Negative Net Worth		2.7%	13.6%	0.0%	0.0%	0.0%	0.0%
	1991 Income	43,220	69,692	16,255	30,633	53,462	71,827	176,385
1992	Has Defined Benefit Pension		52.6%	27.5%	53.1%	65.3%	68.5%	48.7%
	Owns Primary Residence		77.2%	28.5%	79.9%	82.5%	97.9%	97.3%
	Net Worth	167,583	484,187	5,957	71,532	166,978	320,687	1,856,644
	Note: With Negative Net Worth		3.0%	15.1%	0.0%	0.0%	0.0%	0.0%
	1994 Income	44,128	71,081	22,703	40,590	50,533	64,428	177,482
ŵ	Has Defined Benefit Pension		53.4%	18.2%	62.1%	58.8%	64.8%	63.3%
199	Owns Primary Residence		80.9%	33.9%	88.3%	91.8%	98.5%	92.2%
_	Net Worth	159,895	499,473	7,071	68,243	157,155	305,417	1,963,392
	Note: With Negative Net Worth		3.2%	15.7%	0.0%	0.0%	0.0%	0.0%
	1997 Income	47,023	86,982	23,439	41,052	52,743	67,501	250,662
∞	Has Defined Benefit Pension		47.3%	36.8%	44.3%	56.4%	54.1%	44.8%
1998	Owns Primary Residence		79.6%	21.2%	90.0%	94.0%	94.2%	98.8%
	Net Worth	171,627	643,033	7,771	74,106	171,134	349,569	2,618,415
	Note: With Negative Net Worth		2.4%	12.2%	0.0%	0.0%	0.0%	0.0%
	2000 Income	49,260	100,606	26,104	34,407	54,119	81,380	307,501
_	Has Defined Benefit Pension		49.6%	31.8%	41.0%	63.0%	62.3%	49.6%
2001	Owns Primary Residence		82.0%	32.6%	82.7%	96.7%	98.9%	99.4%
71	Net Worth	208,035	831,107	10,899	77,928	202,043	449,647	3,420,919
	Note: With Negative Net Worth		1.9%	9.6%	0.0%	0.0%	0.0%	0.0%
	2003 Income	59,559	103,814	24,529	48,484	73,262	94,342	279,242
4	Has Defined Benefit Pension		43.8%	22.1%	46.7%	49.5%	54.0%	46.6%
2004	Owns Primary Residence		78.3%	21.1%	77.4%	95.1%	99.8%	98.3%
71	Net Worth	275,360	867,170	7,229	105,360	285,200	631,645	3,317,434
	Note: With Negative Net Worth		3.6%	17.9%	0.0%	0.0%	0.0%	0.0%
	Scenario 1							
	Net Worth	172,783	692,768	4,080	65,313	182,754	459,468	2,755,844
	Percent Change	-37.3%	-20.1%	-43.6%	-38.0%	-35.9%	-27.3%	-16.9%
	Note: With Negative Net Worth		5.2%	25.1%	0.8%	0.0%	0.0%	0.0%
	Scenario 2							
2009(p)	Net Worth	154,373	662,788	1,782	56,639	164,975	430,485	2,663,562
8	Percent Change	-43.9%	-23.6%	-75.3%	-46.2%	-42.2%	-31.8%	-19.7%
71	Note: With Negative Net Worth		7.1%	33.7%	1.7%	0.0%	0.0%	0.0%
	Scenario 3							
	Net Worth	138,657	632,808	(515)	47,965	147,196	401,502	2,571,280
	Percent Change	-49.6%	-27.0%	-107.1%	-54.5%	-48.4%	-36.4%	-22.5%
	Note: With Negative Net Worth		8.2%	37.7%	3.4%	0.0%	0.0%	0.0%

Appendix Table 5 All Respondents Age 65-75

	Kespondents Age 05-75			Mean By Quintile of Net Worth				
		Median	Mean	Bottom	Second	Middle	Fourth	Тор
	1988 Income	22,932	52,146	13,563	23,410	26,072	37,086	161,084
1989	Has Defined Benefit Pension		56.3%	37.9%	48.1%	57.3%	71.1%	67.4%
	Owns Primary Residence		75.8%	13.0%	81.7%	92.9%	98.4%	93.7%
	Net Worth	112,693	425,243	3,854	47,277	115,803	251,137	1,713,674
	Note: With Negative Net Worth		2.9%	14.2%	0.0%	0.0%	0.0%	0.0%
	1991 Income	24,311	38,574	13,019	19,159	27,768	36,449	96,765
7	Has Defined Benefit Pension		55.1%	29.3%	50.3%	62.7%	71.7%	61.8%
1992	Owns Primary Residence		78.9%	20.5%	87.7%	94.0%	96.0%	96.5%
	Net Worth	134,657	379,935	8,074	60,100	132,089	258,210	1,445,027
	Note: With Negative Net Worth		1.2%	6.1%	0.0%	0.0%	0.0%	0.0%
	1994 Income	23,955	47,442	14,102	25,195	23,270	43,092	132,147
w	Has Defined Benefit Pension		48.1%	28.7%	46.2%	40.1%	69.1%	56.7%
1995	Owns Primary Residence		77.7%	13.0%	87.3%	94.2%	96.4%	97.9%
,	Net Worth	139,215	439,322	5,716	60,753	141,311	279,194	1,717,827
	Note: With Negative Net Worth		1.9%	9.3%	0.0%	0.0%	0.0%	0.0%
	1997 Income	28,214	55,074	15,808	30,889	34,440	46,590	147,736
œ	Has Defined Benefit Pension		50.1%	24.8%	47.8%	53.0%	63.9%	60.8%
1998	Owns Primary Residence		80.4%	23.6%	92.5%	93.6%	96.7%	95.7%
	Net Worth	171,963	547,127	11,211	87,791	175,791	335,861	2,126,594
	Note: With Negative Net Worth		1.4%	7.2%	0.0%	0.0%	0.0%	0.0%
	2000 Income	32,840	65,079	18,200	29,494	45,604	58,027	174,195
Ξ	Has Defined Benefit Pension		49.9%	29.4%	48.2%	50.2%	61.8%	59.8%
2001	Owns Primary Residence		81.2%	34.5%	92.5%	88.9%	96.3%	93.8%
	Net Worth	209,952	748,569	16,284	96,415	223,456	474,108	2,934,153
	Note: With Negative Net Worth		1.7%	8.3%	0.0%	0.0%	0.0%	0.0%
	2003 Income	36,968	62,895	19,316	29,911	44,012	56,777	164,638
4	Has Defined Benefit Pension		52.5%	30.9%	47.1%	65.2%	60.8%	58.6%
2004	Owns Primary Residence		80.0%	15.7%	91.1%	96.5%	99.0%	98.4%
	Net Worth	213,730	748,097	6,403	83,708	222,997	501,957	2,927,307
	Note: With Negative Net Worth		2.7%	13.5%	0.0%	0.0%	0.0%	0.0%
	Scenario 1		0.40.4					
	Net Worth	223,133	840,452	3,494	84,483	240,734	583,713	3,295,045
	Percent Change	4.4%	12.3%	-45.4%	0.9%	8.0%	16.3%	12.6%
	Note: With Negative Net Worth		3.8%	18.8%	0.0%	0.0%	0.0%	0.0%
$\mathbf{p}$	Scenario 2  Net Worth	210,740	807,853	2.052	76 212	224,159	551 220	2 190 427
2009(p)				3,052	76,313		551,320	3,189,437
70	Percent Change	-1.4%	8.0%	-52.3%	-8.8%	0.5%	9.8%	9.0%
	Note: With Negative Net Worth Scenario 3		4.2%	19.5%	1.4%	0.0%	0.0%	0.0%
	Net Worth	194,603	775 255	2 611	60 142	207 594	518 029	2 002 020
		-8.9%	775,255 3.6%	2,611 -59.2%	68,143 -18.6%	207,584 -6.9%	518,928 3.4%	3,083,828 5.3%
	Percent Change	-8.9%						
	Note: With Negative Net Worth		4.8%	20.0%	4.1%	0.0%	0.0%	0.0%

Source: Survey of Consumer Finance and authors' calculations. Note: All values in 2004 dollars.

Appendix Table 6 All Respondents Age 75+

	Respondents Age 15+			Mean By Quintile of Net Worth				
		Median	Mean	Bottom	Second	Middle	Fourth	Тор
	1988 Income	19,874	39,263	11,295	16,648	21,363	31,631	118,169
1989	Has Defined Benefit Pension		44.5%	26.6%	42.3%	55.1%	53.0%	45.9%
	Owns Primary Residence		68.5%	12.6%	65.7%	82.8%	90.3%	93.6%
	Net Worth	105,686	347,754	3,682	43,923	106,749	234,688	1,385,274
	Note: With Negative Net Worth		1.3%	6.1%	0.0%	0.0%	0.0%	0.0%
	1991 Income	18,909	31,128	11,517	16,307	22,159	30,438	75,461
7	Has Defined Benefit Pension		41.3%	25.7%	28.4%	39.9%	55.7%	56.8%
1992	Owns Primary Residence		76.3%	20.9%	83.4%	90.7%	93.0%	94.1%
Ħ	Net Worth	114,629	278,701	6,428	57,256	119,061	227,764	986,566
	Note: With Negative Net Worth		0.9%	4.7%	0.0%	0.0%	0.0%	0.0%
	1994 Income	20,173	34,342	13,907	15,711	20,979	34,057	87,188
w	Has Defined Benefit Pension		44.5%	36.3%	27.0%	46.1%	50.7%	62.5%
1995	Owns Primary Residence		70.9%	14.2%	73.0%	88.7%	90.2%	89.0%
	Net Worth	120,875	340,616	6,883	59,891	126,631	236,406	1,275,177
	Note: With Negative Net Worth		2.5%	12.5%	0.0%	0.0%	0.0%	0.0%
	1997 Income	19,985	34,592	11,966	16,210	26,033	42,384	76,920
<b>∞</b>	Has Defined Benefit Pension		43.6%	26.3%	35.8%	46.7%	55.1%	54.0%
1998	Owns Primary Residence		75.9%	21.9%	81.0%	91.5%	93.1%	92.2%
	Net Worth	148,500	371,722	8,638	75,400	150,094	275,312	1,362,898
	Note: With Negative Net Worth		1.5%	7.6%	0.0%	0.0%	0.0%	0.0%
	2000 Income	24,082	38,962	13,558	19,266	23,143	37,528	101,723
<u> </u>	Has Defined Benefit Pension		48.7%	31.4%	49.9%	50.4%	61.2%	50.5%
2001	Owns Primary Residence		74.8%	10.9%	78.2%	91.5%	95.9%	97.8%
	Net Worth	166,503	505,507	7,726	75,073	174,470	366,290	1,912,341
	Note: With Negative Net Worth		2.0%	10.0%	0.0%	0.0%	0.0%	0.0%
	2003 Income	24,645	42,060	14,235	20,828	28,504	37,491	109,630
4	Has Defined Benefit Pension		56.7%	45.7%	46.6%	64.1%	67.2%	59.9%
2004	Owns Primary Residence		83.9%	40.3%	91.2%	91.1%	98.6%	98.6%
	Net Worth	167,700	528,465	11,280	93,306	174,256	382,627	1,988,880
	Note: With Negative Net Worth		1.9%	9.2%	0.0%	0.0%	0.0%	0.0%
	Scenario 1	165.070	<b>500.600</b>	0.722	05.260	176 110	202.205	2 224 002
	Net Worth	165,872	598,609	9,733	85,268	176,113	393,205	2,334,893
	Percent Change	-1.1%	13.3%	-13.7%	-8.6%	1.1%	2.8%	17.4%
	Note: With Negative Net Worth		2.0%	9.8%	0.0%	0.0%	0.0%	0.0%
$\mathbf{p}$	Scenario 2	155 075	574 400	0.103	77 (20	162 554	271 514	2 257 162
2009(p)	Net Worth	155,275	574,420	8,182	77,628	163,554	371,514	2,257,163
20	Percent Change	-7.4%	8.7%	-27.5%	-16.8%	-6.1%	-2.9%	13.5%
	Note: With Negative Net Worth		2.0%	9.8%	0.0%	0.0%	0.0%	0.0%
	Scenario 3	140 640	550 220	6.620	60.007	150.005	240.922	2 170 422
	Net Worth	142,642	550,230	6,630	69,987	150,995	349,822	2,179,433
	Percent Change	-14.9%	4.1%	-41.2%	-25.0%	-13.3%	-8.6%	9.6%
	Note: With Negative Net Worth		2.0%	9.8%	0.0%	0.0%	0.1%	0.0%