Older Americans' Economic Security

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How Will the Stock Market Collapse Affect Retirement Incomes?

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Between December 2007 and December 2008, the S&P 500 index fell by over one-third. As a result, retirement accounts lost about $2.8 trillion, or 32 percent of their value (Soto 2008). Individual investors also lost substantial wealth in equities outside of retirement accounts. Urban Institute simulations show that the long-term effects of the 2008 stock market crash on retirement incomes will depend on the stock market's future performance, as well as investors' market exposure at the time of the crash, the amount and composition of their future contributions, the proportion of their retirement income coming from assets, and how many years they have to rebuild their assets.

Scenarios to Assess the Long-Term Effects of the Stock Market Collapse

This brief assesses the impact of the current financial crisis on individuals' retirement resources using projections from the Urban Institute's Dynamic Simulation of Income Model (DYNASIM3). DYNASIM3 is a dynamic microsimulation model that projects retirement income, including Social Security, private pensions, and financial assets, accounting for many of the demographic and economic changes expected to impact the aged population. (See Favreault and Smith [2004] for a more complete discussion of DYNASIM3.)

The analysis uses DYNASIM3 to compare outcomes under a scenario in which the stock market did not crash with outcomes under alternative recovery scenarios. The no-crash scenario assumes the stock market had not collapsed in 2008 but instead continued to increase at its long-term historical rate.[1] The three alternative scenarios capture the market decline in 2008 and then consider different patterns of recovery.

1. Under the no-recovery scenario, the stock market does not rebound but instead resumes its long-term historical rate after 2008.
2. Under the full-recovery scenario, the stock market fully rebounds over 10 years to its projected no-crash level.
3. Under the partial-recovery scenario, the stock market rebounds to halfway between the 2017 levels projected under the no-recovery and full-recovery scenarios.

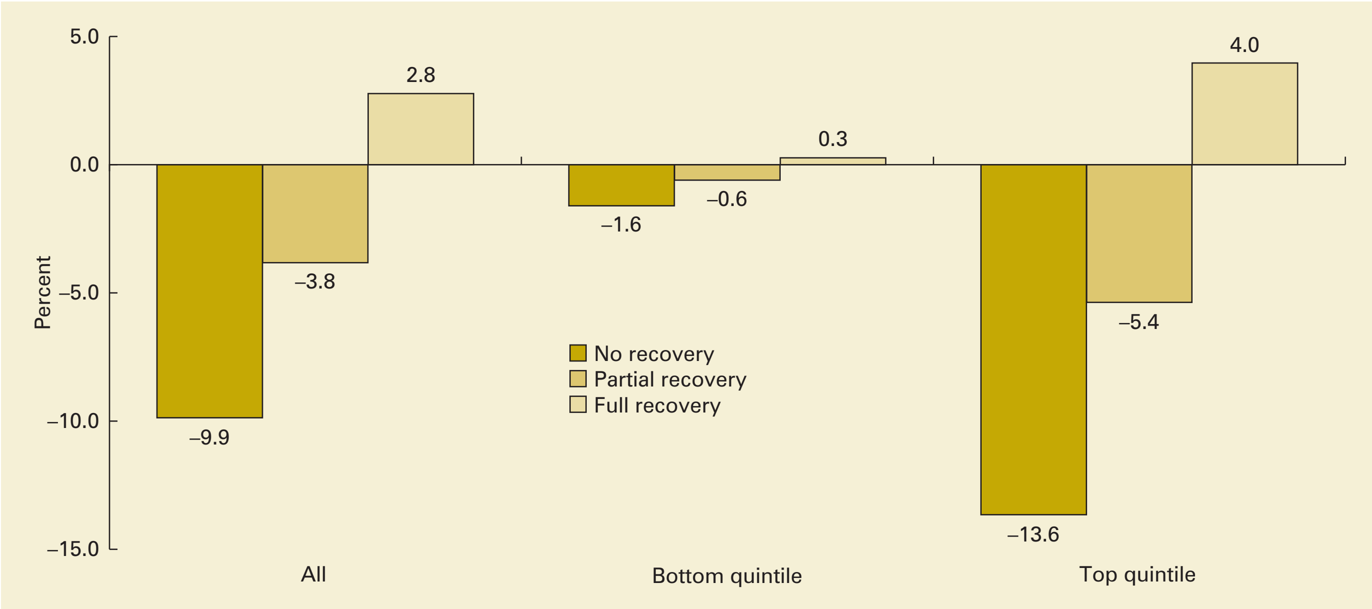
The simulations assume that investors rebalance their portfolios to maintain the target allocation for their ages, and that they therefore purchase more equities as prices fall. But the simulations also assume that people will continue making the same contributions to retirement accounts, working at the same jobs for the same pay, and retiring at the same ages predicted under the no-crash scenario. The alternative simulations only change retirement accounts and financial assets. They assume that other income sources are unaffected by the stock market collapse. Further, they do not account for the effects of recent declines in bond and housing values or the effects of the current recession on employment, earnings, or employer-sponsored pension benefits.[2] Therefore, the simulations only partly reveal the potential impact of recent economic events on total retirement income.

The brief describes what household incomes will be when individuals born between 1941 and 1965 reach age 67.[3] It reports results separately for those born from 1941 to 1945 (pre-boomers), 1951 to 1955 (middle boomers), and 1961 to 1965 (late boomers). When the stock market crashed in 2008, the pre-boomers were 63 to 67, the middle boomers were 53 to 57, and the late boomers were 43 to 47.[4]

Retirement Outcomes Will Depend on Future Stock Market Performance

The effect of the stock market decline on future retirement income will depend largely on whether the stock market recovers some or all of its 2008 losses. Compared with a no-crash scenario, middle boomers will on average lose 9.9 percent of their retirement income if the stock market does not recover and 3.8 percent if the stock market partially recovers (figure 1). Assuming the stock market fully recovers over 10 years, middle boomers will on average receive 2.8 percent more income at age 67 than they would have, had the stock market not crashed. Some people will come out ahead if the market rebounds because higher returns on their new stock investments will more than make up for the 2008 loss in market value. Even those who do nothing other than

FIGURE 1. Change in Mean Per Capita Income at Age 67 Relative to a No-Crash Scenario for Middle Boomers, by Recovery Scenario and Income Quintile



Source: Authors' computations of DYNASIM3 (see text for details).

Notes: The no-crash scenario assumes the stock market had not collapsed in 2008 but instead had increased at its long-term historical rate of 5.5 percent (6.5 percent less a 1 percent administrative fee) from the 2007 level. The no-recovery scenario assumes the stock market does not rebound but instead resumes its long-term real growth rate of 5.5 percent after 2008. The full-recovery scenario assumes the stock market fully rebounds over 10 years to its projected no-crash level in 2017. The partial-recovery scenario assumes the stock market rebounds over 10 years to halfway between the no-recovery and full-recovery scenarios. After 2017, both recovery scenarios assume that stocks will grow at the historic rate of 5.5 percent.

hold their existing stocks until the market recovers will see no change in their projected retirement incomes from the no-crash scenario. But those who sell their stocks before the market can recover will lose on their initial investments and will lose retirement income between the no-crash and full-recovery scenarios.

High-Income Groups Are the Hardest Hit, but also the Most Likely to Gain

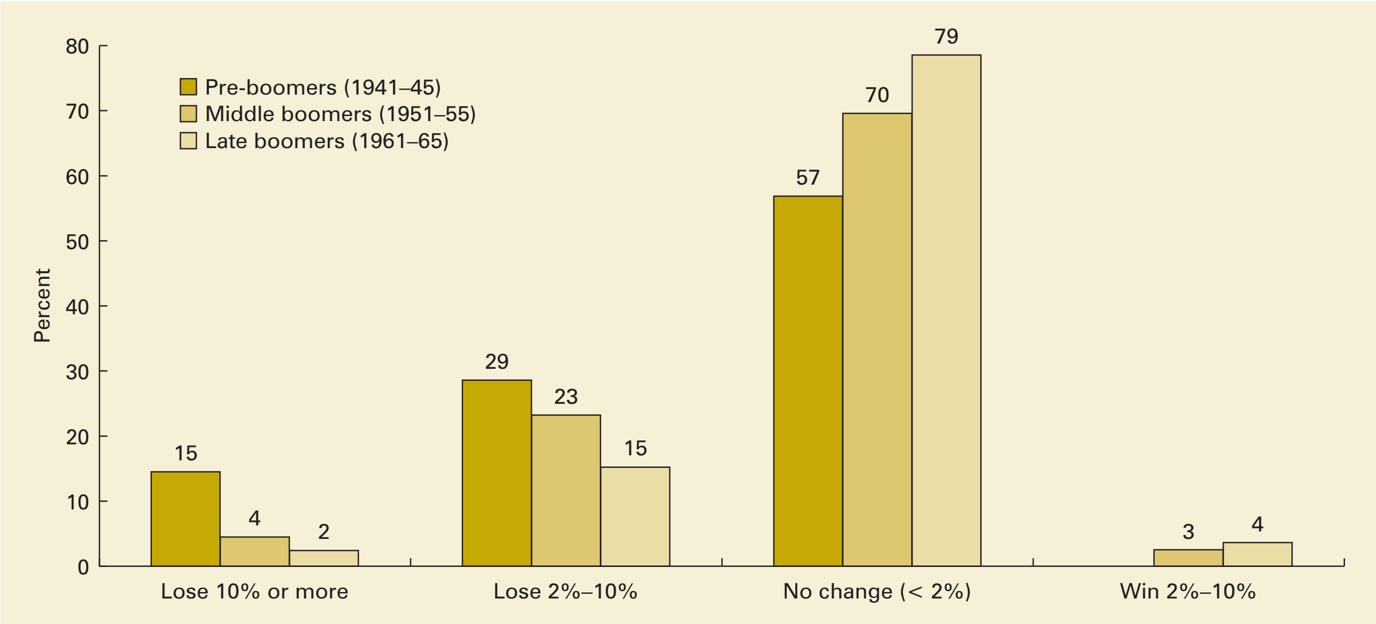
High socioeconomic groups will be most affected by the stock market collapse because they are more likely than low socioeconomic groups to have retirement accounts and financial assets invested in the stock market. Under the no-recovery scenario, middle boomers in the top income quintile lose 13.6 percent of their income at 67, compared with only 1.6 percent for the bottom income quintile (figure 1). The pattern is similar but the differences are smaller under the partial-recovery scenario. Under the full-recovery scenario, where the average middle boomer gains retirement income relative to the no-crash scenario, those with the highest incomes gain more than others. Retirement income at age 67 is 4.0 percent higher than the no-crash value for middle boomers in the highest income quintile but is virtually unchanged for those in the lowest income quintile. Thus, high socioeconomic groups will have both the biggest losses and the biggest gains relative to others in their cohort, depending on the future path of the stock market.

Those Furthest from Retirement Fare the Best

Under all the scenarios, late boomers experience smaller income losses at age 67 than other birth cohorts. Because late boomers had fewer years to accrue wealth, they had less wealth (and fewer equities) to lose in 2008 when the market crashed—even though they were more likely than earlier cohorts to have retirement accounts and to be invested in equities. They will also have more years before retirement to restore their lost wealth from both new stock purchases and future appreciation.

As a result, nearly 8 in 10 late boomers see their income at age 67 change by less than 2 percent between the partial-recovery and no-crash scenarios (figure 2). In contrast, only about 6 in 10 pre-boomers see virtually no difference in their retirement income if the stock market partially recovers.[5] Instead, under the partial-recovery scenario, 29 percent of pre-boomers lose between 2 and 10 percent of their income and 15 percent lose 10 percent or more. In contrast, only 15 percent of late boomers lose between 2 and 10 percent of their income and only 2 percent lose 10 percent or more.

FIGURE 2. Distribution of Change in Household Income at Age 67 between the No-Crash and Parital-Recovery Scenarios, by Birth Cohort



Source: Authors' computations of DYNASIM3 (see text for details).

Notes: The no-crash scenario assumes the stock market had not collapsed in 2008 but instead had increased at its long-term historical rate of 5.5 percent (6.5 percent less a 1 percent administrative fee) from the 2007 level. The no-recovery scenario assumes the stock market does not rebound but instead resumes its long-term real growth rate of 5.5 percent after 2008. The full-recovery scenario assumes the stock market fully rebounds over 10 years to its projected no-crash level in 2017. The partial-recovery scenario assumes the stock market rebounds over 10 years to halfway between the no-recovery and full-recovery scenarios. After 2017, both recovery scenarios assume that stocks will grow at the historic rate of 5.5 percent. Winners and losers are defined as having at least a 2 percent change in per person household income between the no-crash and alternative scenarios.

Some middle and late boomers gain under the partial-recovery scenario. With more time to recover, their equity holdings will approach their no-crash value, and they will gain from buying low-priced stocks that subsequently grow at above-average market rates of return. Very few gain much on balance, however. Only 3 percent of middle boomers and 4 percent of late boomers will realize income gains of 2 percent or more at retirement age.

These results depend on assumptions that investors continue making the same contributions to retirement accounts, continue investing in the stock market after the collapse, and rebalance their portfolios to maintain an age-appropriate mix of equities and bonds. Boomers who behave differently will experience different changes in retirement income than shown in these projections.

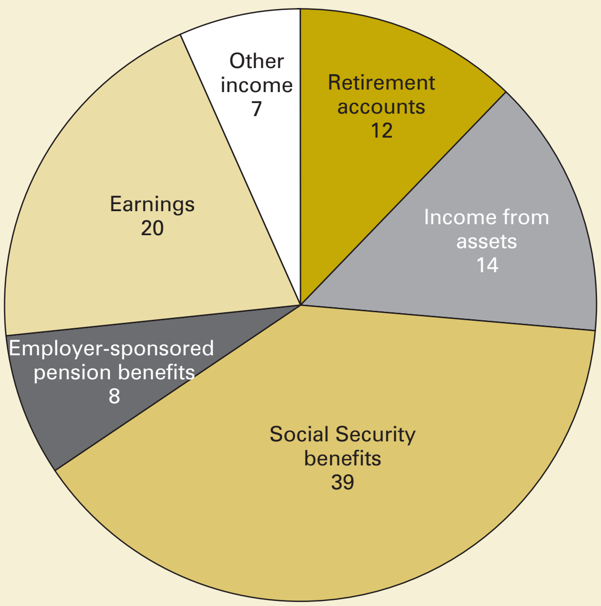
Discussion

The projected changes in retirement income are smaller than those produced by asset-value changes alone. DYNASIM3 estimates that 37 percent of Americans born between 1941 and 1965 owned no stocks when the market crashed in 2008 and that income from assets will account for a small share of retirement income, even for those with stocks. Under a scenario in which the stock market had not crashed, financial assets (inside and outside of retirement accounts) were projected to average only 26 percent of retirement income for typical middle boomers (see box). In contrast, Social Security benefits, which are not directly affected by the stock market, were projected to account for 39 percent of retirement income.

Although the stock market collapse is likely to have small effects on most Americans' retirement incomes, the negative impact of the economic recession on retirement incomes may be larger and further reaching. Job layoffs, wage reductions, and wage freezes brought on by the current recession will affect future retirement incomes through Social Security and pension benefits. These labor-market outcomes will also influence people's ability to save for retirement and may force some to dip into their retirement savings to make ends meet. Further, some employers are reducing their pension contributions or freezing pension benefits to stay in business. Thus, the economic recession could have long-term repercussions on asset accumulation, Social Security benefits, and pension wealth, which will affect retirement incomes beyond the impacts captured here.

The recent stock market crash underscores how important Social Security benefits are for most retirees. Had Social Security been invested in private accounts with equities, the impact of the stock market crash would have been much larger—positive or negative, Typical middle boomers receive on average 12 percent of their household income at age 67 from retirement accounts and 14 percent from asset income. Social Security benefits make up another 39 percent. Other major income sources include earnings (20 percent) and employer-sponsored pension benefits (8 percent). Supplemental Security Income benefits and imputed rent on housing account for the remaining 7 percent. Given the small share of household income coming from assets (and the smaller share of these assets invested in stocks), even major stock market downturns will have a minor effect on typical boomers' retirement incomes.

FIGURE 3. Source of Mean Household Income Per Person at Age 67 for Typical Middle Boomers, under the No-Crash Scenario (percent)



Source: Authors' computations of DYNASIM3 (see text for details).

Notes: Income from retirement accounts includes the annuity value of 80 percent of investment assets in defined-contribution pensions, IRAs, and Keogh accounts. Income from assets includes the annuity value of 80 percent of nonretirement accounts, including stocks; bonds; saving, checking, and money market accounts; nonresidential real estate; business assets; and vehicles (all less debt). Other income includes Supplemental Security Income benefits and imputed rent (computed as 3 percent of housing equity).

depending on one's birth cohort and on future market performance.

Acknowledgments

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Notes

This brief is adapted from *What the 2008 Stock Market Crash Means for Retirement Security* by Barbara A. Butrica, Karen E. Smith, and Eric J. Toder (2009, The Urban Institute).

1. Based on historical data, DYNASIM3 projects a long-term real return on equities of 6.5 percent less a 1 percent administrative fee.
2. People may be less affected by declines in housing and bond prices than by declines in stock prices if they are not at risk of mortgage default, if they plan to continue living in their homes, and if they plan to live off the interest from their bonds instead of cashing them in.
3. This brief assumes that people annuitize 80 percent of their retirement account balances and financial assets at age 67.
4. These individuals turn age 67 over a range of years: 2008 to 2012 for pre-boomers, 2018 to 2022 for middle boomers, and 2028 to 2032 for late boomers.
5. The no-change group includes those who hold no equities (inside or outside of retirement accounts) and those with some equities whose total retirement income would change by less than 2 percent.

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