

Rebuilding Retirement System Resiliency in the Wake of the Financial Crisis

By Raimond Maurer, Olivia S. Mitchell & Mark Warshawsky

The global financial meltdown has had important repercussions for capital market returns, labor market earnings, household retirement and consumption patterns, old-age Social Security systems, and pension plan resilience. Both defined benefit (DB) and defined contribution (DC) plans have been shaken by the recent economic shocks. Stakeholders have gained a new appreciation of the need to identify, mitigate, and finance risk faced by beneficiaries, plan sponsors, and other players in the retirement finance field, including government. In the future, improved understanding of risk is essential – and as the financial and economic collapse now confirms, risk will always play a part in retirement planning. Our new conference volume entitled *Reshaping Retirement Security: Lessons from the Global Financial Crisis* summarizes the lessons learned by practitioners, academics, and policy analysts who explore how retirement planning and long-term financial security have changed following the crisis.¹

How the crisis affected different groups

The financial and economic crisis of 2008-9 wiped out about a quarter of U.S. household net worth, an outcome that will have long-term impacts on retirement saving and economic behavior. One group heavily hit was the Baby Boomers, who, on the verge of retirement, must now alter their consumption and retirement plans as a result of these unpleasant developments. Their behavior will have substantial macroeconomic repercussions, inasmuch as this group holds a dominant share of assets. Despite the fact that persons age 55-64 represent only 17 percent of the total US population, according to the US Census Bureau, this group commands one-third of stock market assets and one-quarter of the nation's housing stock. So when household net worth as a percentage of disposable income fell back to where it was in the early 1990s, this group experienced the brunt of the shock.

Accordingly, it is hardly surprising that this age group also cut spending aggressively. Following the 2000 recession, the age 55-64 cohort had the highest increase in spending, up almost 7 percent. But during the crisis, this group also had the sharpest drop in spending: 8 percent. Further, after-tax income for persons age 55-64 rose 7 percent after the 2000 downturn, but it fell 4 percent more recently. These declines were even more pronounced for the age 65+ group which experienced a 14 percent increase in after-tax income following the prior recession, but a 4 percent drop in 2007-09. What people are consuming has also changed: younger persons cut spending on credit-related items, particularly vehicles, whereas the 55-64-year-olds made drastic cuts across-the-board. Most notably, they cut food expenditures almost 7 percent compared to the prior economic cycle,



whereas all other age groups (except those age 25-34) increased food spending, even during the crisis. Expenditures for apparel for persons age 55-64 also declined 21 percent, the most for any age group during the crisis. Continuing to work has also been a form of adjustment for those who lost significant savings during the crisis and could not afford to wait for an economic rebound to recoup those losses before retirement.

Meanwhile, saving rates rose from 1-2 percent in the years leading up to the crisis, to 6 percent in 2010 – similar to saving rates prior to the stock market run-up of the 1990s. Moreover, households along the age continuum are also borrowing less; cash-in mortgage refinancing is now outpacing cash-out transactions, whereas heading into the crisis in 2007, cash-out deals made up nearly 90 percent of refinancing transactions. Households are also taking a more conservative approach to financial investments.

Moreover, almost nine million jobs were lost between December 2007-February 2010, sending U.S. unemployment to its highest level since World War II. Of those who lost jobs, 43 percent were out of work for more than six months, making it difficult for them to get new jobs as skills depreciated and job networks grew cold. Men, youth, and African Americans were more likely than others to become unemployed, and three-quarters of those unemployed in 2010 believe that joblessness will have a major impact on their lives. Of those out of work more than seven months, 70 percent dipped into savings, 56 percent borrowed from family or friends, and 24 percent skipped mortgage or rent payments. Meanwhile, wages stagnated, wealth declined for three-fifths of Americans,

and overall poverty increased 17 percent.

The book examines what the long-term impacts of the recession will be on retirement, compared to what would have been expected before the downturn. Projections show that incomes at age 70 will shrink by 4 percent, for persons age 55-64 by about 1 percent, and for the younger workers (age 25-34 in 2008) by about 5 percent. Social Security benefits depend on labor market earnings, and these benefits too are projected to decline by about 5 percent for persons age 25-34. Overall, wealthier people will suffer greater losses to their expected retirement income in absolute terms, because they have more to lose.

Another concern is that older people with less time to make up for lost savings will need to alter spending and consumption. Comparing the less volatile 2001-2007 period with the 2007-9 period, they show that, post-crisis, spending dropped dramatically for older people. Spending falls anyway with age, but the effect was eight times larger for persons age 51-64; for persons age 65+, the spending decline was about half again as large, post-crisis. These data are underscored by responses to an Internet survey where 85 percent of respondents who cut spending said they are worried about the economic future.

In the current environment, even those who were not directly hurt by housing value or stock market declines remain worried about the economy. One reason is that people remain pessimistic about housing values: only one-third of the respondents expect their home to be worth more in a year. Stock market expectations are also dismal: pre-crisis, more than half the respondents said markets would improve the following year, but a year later, in 2009, the figure dropped to just 20 percent. While this is not rational based on 20-year historical returns, it indicates that people have momentum expectations influenced strongly by what has happened recently. Even those with income and assets sufficient to insulate them are still concerned about how their children will fare, and mean anticipated bequests dropped substantially. Even though the National Bureau of Economic Research has determined that the 2009-2010 recession is over, it is clear that it is not over in consumers' minds.

One way in which people have responded to the crisis is to claim Social Security at younger ages, as compared to the past. In 2007, 34 percent of men eligible for Social Security payments claimed their benefits at the earliest possible age. In fact, at the peak of the crisis in 2008, the percentage rose to 35 percent; a year later it was up again, to 36 percent.

Defined contribution plans during the downturn

The economic downturn also challenged defined contribution (DC) plan participants. Prior to the crisis, DC plans had been growing rapidly, in the wake of 2006 legislation clearing the way for auto-enrollment, which greatly enhanced participation rates in the workforce. Over the 2006-10 period, no DC plans were terminated except at companies that went out of business. Moreover, three-quarters of all plans maintained employer contribution levels; only 15 percent suspended contributions, while 4 percent reduced and 5 percent boosted payments in 2009. The

following year, these figures shifted to 78 percent, 9, 4, and 9 percent, respectively. The number of plans offering immediate eligibility to new hires and automatic enrollment also rose steadily throughout the crisis, and many plans added investment allocation support. The share of plans offering target-date funds (TDFs) rose from 43 percent to 79 percent over 2006-10, representing extremely rapid change in the normally slow-to-evolve pension world. Additionally, DC participation remained on track. While plan assets fell by about one-third during the worst period, they recovered by 2009. This showed that there was no massive participant flight from the system. Nonetheless, the market volatility did have an impact on asset allocation. DC participants had 73 percent of their investments in equities and 27 percent in fixed income investment in 2006, which shifted to 68 and 32 percent, respectively, in 2010.

An analysis of trading patterns in DC plans showed that only 2.5 percent of plan participants traded between January 2006 and March 2009, suggesting little panic in the ranks. Those who did trade tended to leave equities: flows to stock declined almost 4 percent, down 1 percent from the pre-crisis phase, and 11 percent after the shock hit. The average plan trader before the crisis was a middle-aged male with about \$115,000 in assets in the plan; during the crisis, more women with lower total wealth and trading experience began to trade. Moreover, market volatility did raise investor awareness of the risk associated with equities. Overall, inertia dominated trading behavior in 401(k) plans.

Since the long-term impacts of the financial and economic crisis on DC plan participants will take time to unfold, it is useful to simulate how people of different ages are likely respond to the shocks they have experienced in consumption, employment, and retirement over their remaining lifetimes. Results show that most workers are likely to remain employed longer: for those currently in their 20s and in their 50s, the average retirement age is predicted to rise by more than a year. Additionally, there will be changes in both short- and long-term changes in asset allocation. For those currently in their 20s, equity investments are predicted to fall by nearly 20 percent initially and return to normal levels by age 30; later, equity holdings will rise another 5-10%. For those now in their 50s, the model predicts that the equity fraction will decline by around 10 percent in the short run and then rise by age 60 and beyond. Finally, the young will compensate for consumption declines by enjoying more leisure, but the older population is likely to consume less and work more.

How defined benefit plans managed during the crisis

The downturn had a dramatic impact on corporate single-employer defined benefit (DB) pension funding levels, contributions, and asset allocations, focusing plan sponsors and regulators on the question of who should bear pension plan risk. Aggregate funding ratios stood at 106 percent in 2007, fell to 77 percent in 2008, and then edged slightly up to 83 percent in 2010. The improvement can be attributed to improvements in asset values, tempered by declines in the discount rate and the effect of these on pension liabilities. Pension asset allocation



patterns also changed over the period: in 2006, both DB and DC plan types held about 70 percent of assets in equities. From 2007 on, however, the paths diverged. Equity holdings rose to over 70 percent of DC assets, while the fraction in stock dropped steadily for DB plans to under 50 percent by 2009. DC equity holdings rose thereafter, along with share prices, illustrating that the decline for DB plans was a conscious choice by plan sponsors to de-risk their plans. Additionally, DB plan contributions will need to be boosted in the future, and reform proposals include new types of plans that split the difference between the employer and employee, regarding where risks are borne.

In addition to single employer traditional DB plans, there are also multi-employer and hybrid plans. Of the multi-employer plans, 9 percent were deemed in the 'red zone' in 2008, or likely to be deficient or insolvent in 4-5 years, rising to 29 percent in 2010. Nonetheless, of these plans in critical condition, the majority was progressing to recovery. Of those still facing insolvency, most were in dying industries or overwhelmed by large numbers of retirees. In order to move forward, many plans reduced benefits and asked employees to pay a greater share of contributions. Turning to plans which blend characteristics of both DB and DC pensions, regulatory developments in 2006 gave hybrid plans safe harbor from age discrimination claims. They began to be adopted by companies with a smaller market capitalization but with large pension obligations and assets relative to capitalization.

Public sector pensions also faltered in the wake of the crisis, with large declines in funding levels. Nevertheless, their asset mix changed less than in the private sector. In 2007, public plan portfolios held a median target of 57 percent in equities; U.S. bonds made up 26 percent of assets; and alternative investments were about 8 percent. By 2010, equities had declined to 52 percent, bond holdings were stable, and alternative investments rose significantly to 15 percent. Mean returns changed relatively little.


There's an increasing need for financial education as global retirement systems move toward individual responsibility and personal account pensions.

International experience

A very interesting case is that of the Netherlands, where the crisis prompted a profound reassessment of risk and guarantees in the country's occupational retirement plans. The Dutch have a first-tier government safety net pension, on top of which occupational pension funds provide a second tier of retirement income linked to earnings. Occupational DB pensions historically enjoyed high levels of funding with assets amounting to 130 percent of liabilities in 2000. During the crisis, however, pension-funding ratios fell due, in part, to a drop in asset prices and also to a fall in nominal interest rates. As a result, occupational retirement pension funds reduced nominal benefits that many beneficiaries had thought were 'guaranteed.'

The financial crisis triggered several reforms in the Dutch DB-style plans. Many of their pensions have asset buffers that enable risk-sharing across generations and smooth out fluctuations in financial markets. Nonetheless, these mechanisms also have problems in that they lack transparency and do not make clear who bears the burden of funding shortfalls. Reforms implemented in 2010 allowed the restricted raising premiums as a way to absorb risk. This shows that participants will have to share the shocks to the system, and it confirms that they are the ultimate risk-bearers.

Conclusion

The financial and economic crisis and its continuing fallout profoundly shook the foundations of retirement security, in the US and around the world. In the wake of the crisis, many reforms have been recommended, including enhancing financial advice for plan participants, emphasizing flexibility and the positive effect of working another longer to make up for investment losses in the downturn. Moreover, there is an increasing need for financial education as global retirement systems move toward individual responsibility and personal account pensions. But most important is the need for greater understanding of risk throughout the retirement security system, along with new approaches to reengineering retirement pensions. This includes revisiting pension asset allocation patterns and embedding pension rebalancing efforts, so pensions become more resilient to shocks such as those experienced over the last half-decade. 

About the Authors

Raimond Maurer holds the Chair for Economics at Goethe University where he specializes in investment portfolio management and retirement insurance. He is a member of the German Society for insurance and financial mathematics. He is the author of several articles and four books, including *Investment-Und Risikomanagement* and *Investment-Und Risikomanagement. Modelle, Methoden, Anwendungen*.

Olivia S. Mitchell is a Professor of Business Management, Professor of Insurance Risk Management, and Executive Director on the Pension Research Council at Wharton University. The recipient of a number of awards and honours, she is on the list of *Investment Advisor Magazine's* top 25 most influential people in 2011 and has received numerous awards for her work in the retirement income industry.

Mark J. Warshawsky is Director of Retirement Research at Towers Watson. He is a coauthor of the *Fundamentals of Private Pensions* and *Retirement Income*. A member of the Social Security Advisory Board for a term through 2012, he is also on the Advisory Board of the Pension Research Council of the Wharton School.

Reference

1. *Reshaping Retirement Security: Lessons from the Global Financial Crisis*. Oxford University Press. Editors: Raimond Maurer, Olivia S. Mitchell, & Mark Warshawsky. November 2012. This article draws on the introductory chapter of this volume. Available at <http://www.pensionresearchcouncil.org/publications/0-19-966069-7.php>