

## The Decline of Defined Benefit Retirement Plans and Asset Flows

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Many analysts have suggested that population aging will adversely affect the assets of baby boomers when they retire. They argue that when a large population cohort is working and accumulating resources for retirement, their demand for wealth is high, and this raises the price of financial assets and other stores of wealth. Conversely, when a large cohort retires, the argument suggests that cohort members are likely to sell their assets to finance consumption and thereby to drive down asset prices. This argument suggests that the rapidly increasing population of older people in the United States and around the world might lead to lower returns in financial markets in the decades ahead.

A key stepping stone in understanding the effect of population age structure on asset returns is forecasting the effect of demographic trends on the flow of assets into and out of retirement-related asset holdings. In this study, we focus on the flow of funds into and out of “traditional” defined benefit pension (DB) plans. A companion study (completed recently) focused on the flow of funds into and out of the 401(k)-type plans. Thus an important part of the current work is comparing and aggregating the asset flows in both forms of retirement program. A third companion study (forthcoming) will focus on asset flows into and out of the housing market. Together, these studies incorporate the three most significant categories of retirement-related assets.

The historical context of the analysis is the fundamental change in saving for retirement that has occurred in the United States over the past two and half decades. There has been a rapid shift from saving through employer-managed defined benefit (DB) pensions to defined contribution (DC) retirement saving plans that are largely controlled by employees. Thus to understand the effect of demographic trends on the demand for retirement assets in the coming decades it is important to evaluate the likely flows into and out of both 401(k)-type plans and DB plans.

Focusing first on DB plans, our projections suggest that the average (over all people) of the present value of real DB benefits at age 65 attained an historical maximum in 2003, when the value was \$72,637. The present value declines after 2003, as the proportion of new retirees covered by DB plans declines. Our projections also suggest that the average value of 401(k) assets at age 65 surpasses the average present value of DB benefits at age 65 in about 2010. Thereafter the value of 401(k) assets grows rapidly, attaining levels much greater than the maximum present value of DB benefits. If equity returns between 2006 and 2040 are comparable to those observed historically, by 2040 average projected 401(k) assets will be over six times larger than the historical maximum level of DB benefits at age 65, attained in 2003. Even if equity returns average 300 basis points below their historical value, we project that average 401(k) assets in 2040 would be 3.7 times as large as the value of DB benefits in 2003.

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The offsetting and dominating influence of 401(k)-type saving, compared with flows in DB assets, is the central conclusion of the analysis. Focusing on DB assets alone suggests that an aging population, in conjunction with a shift away from DB plans, will lead to a decline in the real value of pension assets averaged across all retirees in future cohorts. When we combine projected 401(k) assets with projected DB assets, however, we find that real pension assets not only increase, but increase substantially, in future decades.

Our findings underscore the need for further analysis of the factors that determine the diffusion of 401(k) plans across corporations, especially small companies with low-wage workers, as well as the contribution behavior and withdrawal behavior of 401(k) participants. The growing role of 401(k)-type plans in the retirement landscape suggests that understanding asset accumulation and draw-down in these plans is a critical component of any analysis of the effect of demographic change on financial markets.

The full working paper is available on our website, [www.nber.org/programs/ag/rrc/books&papers.html](http://www.nber.org/programs/ag/rrc/books&papers.html) as paper NB06-01 and as NBER Working Paper #12834.

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