

Individual Account Investment Options and Portfolio Choice: Behavioral Lessons from 401(k) Plans

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Over the past decade, numerous proposals have been made to reform the U.S. Social Security program to include individual investment accounts. A key issue in designing such a program is determining what investment choices to offer individual participants. In general, the architects of alternative individual account proposals are attempting to balance a desire to allow portfolio choice with a desire to keep administrative costs low and to ensure some minimum level of portfolio diversification.

At one end of the spectrum are plans that provide very limited choice. For example, Rep. Shaw's "Social Security Guarantee Plus Act of 2003" requires individuals to hold all account assets in a single fund with either a 60-40, 65-35, or 70-30 allocation between an indexed portfolio of stocks and an indexed portfolio of bonds. Other reform plans offer a broader range of choices. For example, the models put forth by the President's Commission to Strengthen Social Security would allow any allocation among several broad index funds (equity, government bonds, and corporate bonds) plus several balanced funds. And at the extreme of investment flexibility are some older plans, such as the Personal Security Account option (commonly referred to as the Schieber/Weaver plan) from the 1994-96 Social Security Advisory Council, which would have allowed virtually unfettered access to a broad universe of private sector investments.

This study considers how the menu of investment options offered in an individual accounts system is likely to influence the investment decisions people make. We do this by using data on private sector 401(k) plans, which like proposed individual accounts in Social Security, are defined contribution retirement plans that provide participants with a limited set of investment options. Using a rich panel data set on fund options and fund contributions to 401(k) plans during the 1990s, we examine how the structure of investment options in 401(k) plans affects investment decisions in those plans.

We first focus on how the set of investment alternatives available in a 401(k) plan affects the allocation of investments under the plan. We find evidence that the amount workers invest in different asset classes (i.e., company stock, equities, bonds, etc.) is influenced by the number of investment options offered in each class. By offering more equity options in a 401(k) program, for example, more gets invested in equities. Specifically, our estimates suggest that by increasing the share of equity funds from 1/3 to 1/2 (such as by adding an additional equity fund option to a 401(k) program that already offers company stock, one equity fund, and one fixed income fund), overall participant allocations to equity funds increase by about 6 percentage points. We find similar effects when the available options change for company stock, fixed income funds, and balanced funds. A key policy implication is that, if individual accounts are implemented as part of a reformed Social Security system, the number and mix of investment options will have an important effect on overall asset allocation within these individual accounts. In short, it appears to be possible to influence the portfolio allocation of individual participants by altering the mix of equity and bond options in the plan.

A second issue that we address is the effect of investment restrictions. This issue is particularly relevant to those individual account proposals that restrict an individual to hold a minimum fraction of one's portfolio in a particular asset class, such as bonds. In our 401(k) data, we observe investment restrictions of two types. First some companies require that individuals hold employer contributions in the form of company stock. Second, some firms impose ceilings on the fraction of an individual's portfolio that can be invested in company stock. In each case, we find evidence that these restrictions influence behavior well beyond the requirements of the plan. For example, we provide evidence that when individuals are required to invest employer contributions in company stock, they react by investing even more of their employee portfolio in company stock, and that these funds are primarily being redirected from safer asset categories, such as fixed income funds, rather than from other equity funds. We also show that when a company places a ceiling on company stock investment, it results in an overall reallocation away from all equities, not just company stock, and towards safer assets. In each case, these results are consistent with a view that participants view the employer restrictions as an implicit form of investment advice.

Third, we study the sensitivity of portfolio allocations to past asset returns. We show, for example, that if returns in equity markets are higher than average over the past five years, then subsequent contributions are directed more heavily towards stocks. This effect is not limited to equities, as past returns on company stock, government bonds, and money market funds influences future contributions in these asset classes as well. Such behavior can have important consequences for the risk and return characteristics of individual portfolios, particularly following long periods of bull or bear markets.

Finally, we explore the role of investor inertia by examining participant responses over time to a change in the menu of investment options. We find a change in investment options has a gradual effect on future contributions, and that it takes 3-4 years for the effect to fully manifest itself. This suggests that individual portfolio allocations will be particularly sensitive to the initial selection of funds, a point which is particularly relevant for those individual account plans that begin with a limited number of investment options but envision an eventual increase in the array of investment choices.

In future research, we plan several extensions to the results in this paper. First, we will merge our sample with data on mutual fund performance to investigate the relationship between the number of investment options that people are offered, and the subsequent investment performance of their portfolios. Second, we will investigate individual behavior when investors are faced with a choice between actively and passively managed funds, and its effect on portfolio balances.

The full working paper is available on our website, www.nber.org/programs/ag/rrc/books&papers.html as paper NB04-04.

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