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Participant reaction and the performance of funds offered by 401(k) plans

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Abstract

This is the first study to examine both how well plan administrators select funds for 401(k) plans and how participants react to plan administrator decisions. We find that, on average, administrators select funds that outperform randomly selected funds of the same type although they do not outperform index funds of the same type. When administrators change offerings, they choose funds that did well in the past, but, after the change, added funds do no better than dropped funds. Plan participants in aggregate change their allocation decisions in a way that accentuates the changes in allocation caused by returns. The change in allocation due to the investment of new money and interfund transfers is about the same size, and in the same direction, as the change due to returns. Participant allocations in aggregate do no better than naïve allocation rules, such as equal investment in each offering.

JEL classification: G11; G14; G23; H31

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1. Introduction

In recent years there has been tremendous growth in the significance of defined-contribution pension plans, and particularly in one type of defined-contribution plan: 401(k) plans. More

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than one third of American workers are enrolled in 401(k) plans, and these plans have over one trillion dollars under management. In light of the size and importance of 401(k) plans, it is not surprising that a number of studies have examined certain aspects of these plans. Almost all of these studies examine the behavior of individuals given the characteristics of the plan they are offered. Examples of results of these studies include:

(1) Individual participants tend to hold three to four funds independent of the number offered (Huberman and Jiang, 2006).
(2) In contrast to the above result, some researchers have presented evidence that suggests that investors tend to spread their investment evenly across the funds offered. This is referred to as the "$1/N$ Rule" (see Benartzi and Thaler, 2001; Liang and Weisbenner, 2002).
(3) Investors over-invest in stock of the company for which they work (see Huberman and Jiang, 2006; Huberman and Sengmuller, 2004; Agnew and Balduzzi, 2002; Benartzi, 2001).
(4) Investors infrequently revise their allocations (Ameriks and Zeldes, 2001; Madrian and Shea, 2001; Agnew and Balduzzi, 2002; Agnew et al., 2003; Mitchell et al., 2005a).
(5) Equity allocations are related to cohort and age (Ameriks and Zeldes, 2001; Agnew and Balduzzi, 2002).
(6) Investor choices are influenced by the default choice they are offered (Madrian and Shea, 2001).

All of these studies involved investor decisions given the choices that the plan administrator made with respect to the design of the plan.

Surprisingly, there has been very little research on the appropriateness of the choices offered by 401(k) plans. This is a key issue, for the plan participant can only choose from among a set of investment choices which he or she is offered, and for over 60% of the participants, the 401(k) offerings are their sole financial assets outside of a bank account.[1] In an earlier paper, Elton et al. (2006) examined whether the choices offered to participants included the right categories of investments. The authors show that approximately one half of the pension funds they examine do not offer sufficient categories of investments. That paper left largely unexplored whether, given the categories of investments offered, the individual choices offered by plan administrators in each category were good investments per se, and how plan participants reacted to the choices.

The purpose of this article is twofold. First, to examine the performance of the individual investments selected by 401(k) plan administrators compared to the population of choices that were available. We examine this both from the set of choices available at any point in time for the plan as a whole and for the choices that are added and dropped. Second, given the choices offered, to explore aspects of aggregate participant reactions not previously studied. As discussed in later sections of this paper, participant behavior has implications for plan design, investor education and where the administrator should allocate resources.

The remainder of this paper is divided into four sections. In the next section (Section 2), we discuss the data used in this study. In the third section we compare for the plan as a whole the performance of choices offered to participants in 401(k) plans with a carefully matched sample of similar investments, the performance of funds added and dropped, and whether there are plan administrators who consistently offer their participants funds with superior performance. In

[1] Investment Company Institute (2000). This study reports that more than 60% of 401(k) plan participants have no other security investments (stocks, bonds, etc.) other than a bank account.