

# TIAA-CREF Institute: Research Summary

## *Plan Investment Options and Participant Behavior*

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### Evidence of Investment Choice Overload

Multiple research studies have examined the impact of the number of investment choices upon investor behavior. The question has become more significant as many employers in recent years have added numerous, sometimes hundreds, of options to their retirement plan investment menu. Researchers have attempted to determine whether a greater selection of options tends to increase or decrease participation and contribution rates. In sum, the findings indicate that too many investment options can cause information overload, resulting in greater use of the default option and even declines in participation rates.

Relevant research includes the following:

- A broad-based study of 638 401(k) plans reported in the April 2006 issue of the *Journal of Finance* found that:
  - Participants generally choose to invest their retirement savings in a small number of funds—usually no more than three or four—regardless of the number of funds offered. In the study, both the median and mode of participants' choices were three funds. More than 95% of participants used no more than seven funds, even though 96% of the participants had access to seven or more funds.
  - A sizable percentage of investors choose to invest their money equally among their selected funds. This finding differs from the  $1/n$  hypothesis proposed by Benartzi and Thaler in 2001 that suggested that participants allocate their funds equally across all that are offered. Instead, the recent study finds that individuals generally do not use a large number of funds (regardless of how many available), but that they do tend to allocate contributions somewhat equally among the smaller subset that they have selected to use.
  - The distribution of dollars in plans remains fairly concentrated in a subset of the investment options, and, when there are numerous choices available, the size of the subset does not increase proportionately with the increase in total funds offered. For example, the study found that in plans offering 10 investment choices, 75% of the dollars were concentrated in five funds. In plans with 60 choices, 75% of the dollars were concentrated in 11 funds. In

- other words, there was an increase in the number of funds used, but the growth was not commensurate with the increase in funds offered.
- There is little relation between the equity allocation made by participants and the proportion of total options that are equity portfolios. This is particularly the case when there are numerous options. When only a very few funds choices are available, there are indications of “framing” effects since employees are constrained and may not be able to allocate according to their preferences. For example, if the equity options are domestic only and the investor is also interested in international equities, he/she may allocate a smaller percentage to equities than he/she would if an international option were also available.

Reference: Gur Huberman and Wei Jiang, April 2006, *The Journal of Finance*, “Offering versus Choice in 401(k) Plans: Equity Exposure and Number of Funds,”

<http://www0.gsb.columbia.edu/faculty/g Huberman/offering%20versus%20choice.pdf>

- An analysis of about 650 401(k) plans examining the relationship between the number of investment options and participation rates found that participation rates peaked at 75% when only two options were offered. When 12 options were available, participation rates averaged 70%, and they declined steadily to 60% as the number of options approached 60.

Reference: Sheena S. Iyengar, Wei Jiang and Gur Huberman, “How Much Choice is Too Much? Contributions to 401(k) Retirement Plans,” in *Pension Design and Structure*, edited by Olivia Mitchell and Stephen Utkus, Oxford University Press, 2004,

[http://www.columbia.edu/~ss957/articles/How\\_Much\\_Choice\\_Is\\_Too\\_Much.pdf](http://www.columbia.edu/~ss957/articles/How_Much_Choice_Is_Too_Much.pdf).

- A broad-based study of 500 plans covering nearly 740,000 employees focused particularly on the number of equity funds, finding that if the proportion of stock funds rose by 10%, the participation rate of non-highly-compensated employees (NHCEs) fell by 1.62%. The researchers referred to this phenomenon as “equity fund overload.”

Reference: Olivia Mitchell, Stephen Utkus and Tongxuan Yang, October 2005, NBER Working Paper Series, “Turning Workers Into Savers? Incentives, Liquidity, and Choice in 401(k) Plan Design,”

<http://www.nber.org/papers/w11726>.

- A study by researchers at the College of William and Mary examined the interaction between individuals' financial knowledge and their behavior relative to the number of investment options. The study found that the number of funds had a greater impact on individuals with above-average financial knowledge than on those with below-average investment knowledge. In particular, high-knowledge employees reported increased feelings of information overload as the fund choices jumped from six to 60. As a result, more of them opted for the default investment portfolio. Lower-knowledge employees, on the other hand, reported greater overall levels of overload, regardless of the number of funds, and their level of overload did not increase by a statistically significant amount when the number of funds increased. However, when there was a large number of choices and increasing numbers of *similar* funds, both high-knowledge and low-knowledge participants opted increasingly for the default investment option. The researchers noted that this occurs when there are multiple vendors offering funds with similar investment objectives and past performance. Respondents reported greater satisfaction about their decisions when there was more *distinction* between funds.

Reference: Julie R. Agnew and Lisa R. Szykman, May 2004, Center for Retirement Research at Boston College, Working Paper 2004-15, "Asset Allocation and Information Overload: The Influence of Information Display, Asset Choice and Investor Experience,"  
[http://www.bc.edu/centers/crr/papers/wp\\_2004-15.pdf](http://www.bc.edu/centers/crr/papers/wp_2004-15.pdf)

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