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# WHAT PEOPLE KNOW ABOUT TARGET-DATE FUNDS: SURVEY AND FOCUS GROUP EVIDENCE

*Julie R. Agnew, Lisa R. Szykman, Stephen P. Utkus and Jean A. Young*

**Preliminary Results-Comments Welcome**

Julie R. Agnew (Corresponding Author)
The College of William and Mary
Mason School of Business
P.O. Box 8795
Williamsburg, Virginia 23187
E-mail: Julie.agnew@mason.wm.edu
Tel. (757) 221-2672. Fax. (757) 221-2937

Lisa R Szykman
The College of William and Mary
Mason School of Business
P.O. Box 8795
Williamsburg, Virginia 23187

Stephen P. Utkus
Vanguard Center for Retirement Research
100 Vanguard Boulevard, M38
Malvern, PA 19355

Jean A. Young
Vanguard Center for Retirement Research
100 Vanguard Boulevard, M38
Malvern, PA 19355

Financial Security Project at Boston College
Hovey House
140 Commonwealth Avenue
Chestnut Hill, MA 02467
Tel: 617-552-1762 Fax: 617-552-0191
http://fsp.bc.edu

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## I. Introduction

Making portfolio allocation decisions can be a difficult or even overwhelming task for those American households who lack interest or experience in financial matters. Understanding the complexity of these decisions, particularly for retirement investors, 401(k) plan sponsors and service providers have introduced new plan design approaches and investment products intended to simplify savings and investment choices among defined contribution (DC) plan participants. Target-date funds are one example of this new approach, and they are rapidly becoming a common investment offering in 401(k) menus.

To date, there has been relatively limited research into whether DC plan participants understand the essential features of these funds and know how to use them effectively. One important consideration in studying target-date funds is that some participants choose to invest in the funds on their own, while others are defaulted into the fund by plan sponsors through such mechanisms as automatic enrollment. Thus, it is important to understand how knowledge and awareness may differ between an active or passive decision to invest in the fund. Another perplexing issue is that participants often invest in other assets in addition to their target-date holdings within their retirement accounts. This phenomenon, known as "mixed" target-date investing, can also arise either because of participant choice or because of plan sponsor investment direction. At least superficially, the decision for voluntary target-date investor choosing a "mixed" strategy appears to run counter to the "all-in-one" design of the funds.[1] This paper seeks to better understand the determinants of participant portfolio allocations to target-date funds, whether of the "pure" or "mixed" variety. We use focus group discussions and survey evidence linked to 401(k) administrative data drawn from Vanguard, a leading 401(k)

[1] See Ameriks, Hamilton and Ren (2011) for an assessment of investor knowledge and literacy levels, and Pagliaro and Utkus (2010) for an analysis of "mixed" target-date investor behavior.

record-keeper. We explore rational motivations for portfolio choice decisions, as well as psychological elements such as trust. We also examine the relationship between financial knowledge and portfolio choice. The current version of the paper presents a preliminary analysis of the survey data and our focus group findings.

The next section provides an overview of current state of knowledge related to target-date allocations and a summary of how we believe our final paper will make a contribution to this literature. Section III and IV provide a discussion of our early results. Section V concludes with our recommendations based on our preliminary analysis, as well as our plans for future research.

## II. Target-date Research Overview

Although target-date fund strategies have been available in the marketplace for more than a decade, they have only recently surged in prominence. In 2009, an estimated $256 billion was invested in these funds (Brady, Holden and Short, 2010), compared with $15 billion in 2002. Among Vanguard defined contribution plans (the source of our proprietary data), less than one percent of plans offered these investment vehicles in 2003 (just after the launch of Vanguard's own proprietary offering); by 2009, the figure had grown to 75 percent. By 2009, four out of 10 participants chose to invest in these funds when offered in their employer's retirement plan. The rapid growth and popularity of these new funds has been fueled by the transition of many plans to automatic enrollment methods from voluntary schemes, with target-date funds serving as the default investment strategy.[2]

[2] In 2009, 21 percent of Vanguard plans featured automatic enrollment and 43 percent of large plans (greater than 1,000 participants) offered this feature, although it applied overwhelmingly to newly hired employees only. As of 2009, approximately 90 percent of Vanguard automatic enrollment plans designated a target-date fund as the default investment vehicle (Pagliaro and Young, 2010).

Target-date funds are intended to simplify the task of portfolio construction for participants who lack the time or expertise to undertake such tasks. In lieu of making detailed investment allocations, participants are directed to select a target-date fund based on their expected retirement age (or are defaulted by design into a portfolio based on their current age and an assumed retirement age). A portfolio manager makes an age-specific asset allocation decision for the participant, and then gradually rebalances the portfolio over time (following what is known as the funds' "glide path") to a more conservative allocation as the participant ages. The funds are thus intended to implement a very specific model of lifecycle investing in which equity risk-taking falls with age.

Because of the relative newness of target-date investing, there has only been limited research on understanding the factors influencing allocations to target-date funds. Ameriks, Hamilton and Ren (2011), in a study of Individual Retirement Account (IRA) investors and DC plan participants, finds that knowledge of basic target-date characteristics is quite high, while knowledge of post-retirement features is lower. One important question arising from this literature is how well those holding a single target-date fund, whom we refer to as "pure" investors, understand the characteristics of the fund they hold, and whether that understanding is influenced by whether the investment decision was a voluntary or default choice. There have also been several studies on the phenomenon of "mixed" investors combining target-date funds with non-target date investments (Park, 2009; Pagliaro and Utkus, 2010). The latter study, in particular, finds that half of target-date investors appear to pursue a mixed strategy, and their diversification approaches using target-date funds can be classified into five distinct approaches. But these studies, examining mixed behavior using administrative records, shed little light on the motivations behind these choices.

Our current paper seeks to understand the determinants of pure and mixed target-date investing relying on focus group and survey data. Our findings should allow us to identify opportunities to improve participant knowledge related to these products.

## III. Focus Group Findings

To better understand the motivations for different target-date portfolios, we conducted four focus groups in two locations on April 5, 2010 (Washington, D.C.) and April 6, 2010 (Philadelphia). Each focus group was single-sex in order to facilitate a more free-flowing conversation, and we separated focus groups into “aware” sessions (those who knew they were invested in target-date funds) and “unaware” sessions (those who were invested in target-date funds but didn’t know they were). In sum, we conducted four focus groups with the following compositions: aware, male (Philadelphia, PA), aware, female (Washington, D.C.), unaware, male (Washington, D.C.), unaware, female (Philadelphia, PA). A combination of pure and mixed investors was present in all sessions.

In each focus group session, we began with questions designed to assess how participants felt about retirement and investing in general using word association. Participant responses varied from positive words like “excited” and “freedom” to words suggesting anxiety and fear such as “terrified” and “mission impossible.” It was clear that while many participants looked forward to retirement because they anticipated having more time for themselves and family, many were concerned about being financially secure when the actual time to retire came. Some had regrets of not starting to save earlier and concerns that retirement was rapidly approaching when it once seemed far away. For example, one participant remarked:

*"Well, it's like almost coming to a cliff, where, I mean in my mind I should have started saving a whole lot longer, been more diligent. And now the cliff is right there, before I thought it was here (points farther away)...."*

Certain session participants agreed that lack of sufficient funds for retirement was a major concern, while others discussed their feelings and expectations about having to continue to work in retirement.[3]

In another exercise designed to further capture retirement-related feelings, participants were asked to choose two or three pictures that represented how they felt emotionally about retirement. (They were asked to draw them from a sample of several hundred pictures cut out of various magazines and acquired from different sources.) The moderator encouraged them to choose pictures that represented their hopes and dreams, as well as their anxieties. As in the word association, the pictures were varied. Some images depicted idyllic scenes, such as a loving couple relaxing in a hammock or a man peacefully fishing in the glow of a sunset. However, many images were disturbing and chosen because they demonstrated participants' feelings of being stressed and trapped. Several participants chose the picture in Figure 1. To these individuals it represented, among other things, their feelings of lack of control, their confusion related to the investment decision and feelings of being overwhelmed. See Figure 1 for some associated quotes. Of course, these selections occurred just a year following the 2008-2009 financial crisis and one of the worst economic recessions in U.S. history. It is hard to know whether these images are accurate images of respondents long-term retirement prospects, or simply an emotional reaction to recent experience.

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[3] On this theme, one participant remarked "*When I retire, I want to make sure I don't have to work for McDonalds*" while another resigned himself to always needing to work. The participant stated "*I mean I don't think I'll ever be able to fully retire, I think I will always have to do some kind of work*."

After the picture exercise, the focus group discussions continued with a conversation related to investment strategies and feelings of competency related to investing. Several themes emerged, including lack of trust for financial institutions and advisors, lack of confidence in the participants' own abilities to manage investments and save sufficiently, and feelings of information overload and lack of knowledge. Table 1 presents some representative quotes that illustrate each of these themes.

When specifically asked about target-date funds investment strategies, responses from pure investors varied from the responses of mixed investors. Several of the pure investors acknowledged their lack of financial knowledge and viewed target date funds as an easy and secure way to save for retirement.

*"…because I didn't have as much time to play with my… I'm not educated. I'm not a financial advisor you know. This ensures that they know exactly what my goals are. Whereas if I actually had to go in there it would be like playing monopoly. I'll lose."*

*"…because I think it takes all the guesswork out of it. I'm sure that my company wouldn't steer me in the wrong direction by proposing to work with this particular institution. There are a lot of options that folks have and if you're really financially savvy then I'm sure you can choose different funds but this all in one captures me. I'm not financially savvy so it's who I am."*

*"… that's really easy. But when you look at mutual funds and other things like that. It's way beyond my capability. I can follow it and learn about it but I have way too much going on and I have other things going on that I have to learn about like mortgage and rates and other things that I trying to keep up with including my job. So I just don't really know that."*

*"You're letting professionals handle it and you feel comfortable and you don't have to make the decision yourself as well. I mean, they're making the changes for you. As it gets closer to that target it's getting more conservative and you're not taking a risk. And less worrying."*

Alternatively, several mixed investors followed some of the strategies discussed both by Ameriks, Hamilton and Ren (2011) and Pagliaro and Utkus (2010). For instance, consistent with the core/satellite strategy, one participant commented that they used the target-date funds as a benchmark for the level of risk they should be taking and then altered their portfolio from there.

Many mixed investors did not view target-date funds as a standalone solution. When asked why it was not a standalone option, one participant stated *"I'm not comfortable putting all my money in one fund."* Another participant stated *"I don't really know if it's diverse enough or if it's a good idea to have different funds with different dates to be able to adjust the level of risk you want to take."* Others referred to the need to not *"put all your eggs in one basket."* Many in the focus groups appeared to be applying a simplified diversification heuristic ("don't invest all of your savings in a single fund"), demonstrating a fundamental misunderstanding of the inherent diversification offered by one target-date fund.[4]

Lack of trust also appears to motivate some individuals towards a mixed strategy. For example, one participant answered the question of whether he would put all his money in one target-date fund in this way…

*"No, because fundamentally it's just another mutual fund which is managed by a small set of people or maybe even just one person. And, of course, I would not trust all of my money in one person. It just goes against the whole diversification thing."*

When pressed further about the possibility of investing in multiple target-date funds managed by different companies, the participant said:

*Participant: "I mean, yeah, that would be ideal if you could invest in multiple target date funds managed by different people with different underlying assets."*

*Moderator: "Why would it be ideal if you could invest in multiple target-date funds?"*

*Participant: "Again, it goes back to the diversification thing."*

In sum, the discussions from the focus groups provided important insight into the reasons for different portfolio strategies. From the focus group discussions, we conclude that trust, lack

[4] The Vanguard target-date funds held by the participants are "funds of funds," meaning a single target-date fund invests in a series of specific index funds spanning the capital markets. Communications materials describe this inherent diversification among the funds, but these participants were either unaware of this level of diversification or did not consider it adequate.

of financial knowledge, desire for control, information overload and diversification heuristics may all be contributing to portfolio decisions.

## IV. Survey Findings

Using insights generated from the focus groups, we designed a survey instrument to assess how different attitudes, behavioral factors and rational motivations related to target-date portfolio decisions. We randomly surveyed approximately 2,000 participants divided into three groups: pure target-date investors, mixed investors, and non-target-date investors. The goal was to reach approximately 666 participants within each group. The sample for the survey was based on participant actual allocations drawn from administrative records, not self-reported holdings. We drew our sample from a population of one million actively contributing participants from approximately 1,500 401(k) plans offering target-date funds administered by Vanguard. To be considered a target-date holder, the participant needed at least a balance of $100 in target-date funds.

Table 2 provides demographic characteristics for the population of one million and each of the three survey groups. The three survey groups have roughly the same actual sample sizes, ranging from 652 to 679. The populations from which these survey groups are drawn are not of equal size, so future work will need to reweight results to adjust for these differences. As a result, we limit our discussion to a brief description of the demographics of each survey group but refrain from making any claims about significant differences between the groups or statements about the underlying populations based on our data. That said, many demographic patterns observed in our survey are consistent with those observed in other studies using larger, more representative administrative datasets. Across the three groups, approximately 40 percent of the surveyed participants come from plans offering automatic enrollment. This is consistent with the percentage of participants in large company plan designs with automatic enrollment reported in Pagliaro and Young (2010). Twenty-eight percent of the pure investors in our sample were automatically enrolled in contrast to 8 percent of the mixed investors and 3 percent of the non-target date investors, respectively. Our pure investors tend to have lower salaries, savings, and job tenures. In addition, our mixed investors more closely resemble non-target date investors across these same dimensions.

In the survey, we asked participants about their portfolio allocations in order to assess whether they actually knew which of the three categories they fell in. Table 3 displays the total number in each group based on actual allocations and stated allocations. The percentages refer to the percentage each cell represents of the total (n=1,993). Focusing on the sum of the diagonal cells that are highlighted, we observe that only 45 percent of the respondents knew their actual allocation (either pure (11 percent), mixed (16 percent) or non-target (18 percent)), while 10 percent reported that they were not sure of their current allocations. An additional 20 percent reported that they had never heard of target-date funds despite having it as an option in their 401(k) plan.[5] Interestingly, we found that out of the 590 individuals who reported that they <u>did not</u> own target-date funds, 227 were actually target-date investors, either pure (111) or mixed (116).

While at first glance the percentage of individuals that report different allocations may seem large, there are reasonable explanations for why some individual responses may not match the actual data. One reason is that our survey participants were asked to consider all of their savings, not just their 401(k) plan assets. While our "pure or mixed" target date allocation survey

[5] In the survey, the group reporting that they never heard about target-date funds was not asked specific questions about their feelings towards target-date funds.

question did refer specifically to their one 401(k) plan, it is possible that respondents continued to think holistically about their entire savings portfolio and answered accordingly. Employer actions are another valid reason for some of the observed discrepancies. For example, if individuals were defaulted into an employer selected fund when they were automatically enrolled in their plan, it is understandable why they may have difficulty remembering their actual allocations. In addition, individuals who contribute one hundred percent of their employee contributions to one target-date fund might consider themselves pure investors. However, if their employer match is allocated to a different fund, we would consider them a mixed investor no matter how small the match. The role of employer actions in the type of target-date allocations observed is documented by Pagliaro and Utkus (2010).

Beyond the influence of the plan sponsor actions, another reason individuals might be unsure of their allocations or be unaware of target-date funds is that they do not spend sufficient time establishing and periodically reviewing their portfolios. When asked about how much time was spent choosing their allocations when they first began contributing to their retirement accounts, less than half of the respondents reported spending more than a "little bit of time." [6] Figure 2 provides details on the responses. In addition, Table 4 shows 28 percent of participants report only reviewing their portfolios occasionally or not at all.

A related issue is that a large group of participants do not take into account other asset holdings when making retirement allocation decisions. Figure 3 shows that only 51 percent of respondents considered their assets outside their retirement plan (such as home, non-retirement

[6] We did not ask participants to quantify what they meant for a "little bit of time." Therefore, each participant will have a different personal definition of the presented time categories. Further analysis is needed to confirm whether there was a significant difference in responses between automatically enrolled and voluntary enrolled participants' answers to this question.

investments, and savings accounts) when selecting their initial asset allocations.[7] Modern portfolio theory would suggest that individuals should make portfolio decisions considering the entirety of their financial situation. The response by participants suggests that a large number of individuals may be using mental accounting (Thaler, 1999) when making investment decisions within their retirement accounts.

We also explored whether a sense of information overload might affect decision making. Prior research suggests that when individuals become overwhelmed with information, they may avoid making related decisions (Agnew and Szykman 2005). Thus, we might expect a relationship between time spent allocating assets within a 401(k) plan and feelings of information overload. We used a multi-item measure to capture information overload related to retirement decision-making and placed individuals in high and low categories (high above the mean, low below it). While not yet tested for significance, some important patterns emerge. As shown in Table 5, Panel A, it appears that individuals that report spending less than a moderate amount of time setting their initial allocation also tend to fall more often into the high information overload category (56 percent) relative to those who spend more time (43 percent). Similarly, those who do not systematically review their portfolio have a greater percentage of individuals in the high overload category (64 percent) compared to those who review more often (45 percent).

Similarly, we examined individuals who were unsure or their investments or unaware of target-date funds in Panel B of Table 5. Sixty-one percent of those participants were also in a high information overload category—versus 45 percent of participants who knew their

[7] The print educational material produced by Vanguard as recordkeeper does mention the security of income sources but does not mention in detail considering outside assets when making these types of decisions. Online advice tools do take into account these holdings, but are not extensively used. In the future, we will extend this analysis and incorporate self-reported data related to each participants' outside assets collected in the survey.

allocations. Panel B of Table 5 also summarizes results for participants who agree or strongly agrees with the statement "I just wish someone would make my retirement investment decisions for me." Seventy-one percent of those looking for someone else to make decision were in the high overload category, versus 45 percent of other respondents. From these results, it appears that individuals who experience high overload are more likely to be individuals who spend less time on their portfolios, are less sure of their allocations and wish for someone else to make their decisions. However, the result is an association, and the causal direction is not obvious – does a feeling of information overload lead to spending less time and energy on investing, or do people who spend less time and energy on investing develop a sense of information overload?

We estimated several Probit regression models to examine the relationship between participant demographics, financial literacy and information overload with four elements of portfolio decision-making: the initial time spent investing, the time spent reviewing, uncertainty about current holdings, and the desire to have another party make the decision. Preliminary unweighted results are reported in Table 6. We used four questions as a measure of asset awareness/financial knowledge on such issues as diversification, market risk, money funds and bonds. [8] In the regression results, it is clear that information overload is positively related to less time spent initially allocating the 401(k) portfolio and the subsequent frequency reviewing it. In addition, correct responses associated with three of our four financial literacy questions are related to the initial time allocating assets, and with respondents who were more likely to be aware of their allocations. Those answering the questions correctly were also more likely to

[8] The following is a list of the four financial knowledge/asset awareness questions used with the correct answers underlined: 1) Which of the following types of investments are typically found in a money market fund? A. Stocks B. Long-term Bonds C. <u>Short-term debt securities</u> D Not Sure 2) If interest rates go up, then bond prices generally: A Increase B. <u>Decrease</u> C. Do Not Change D. Not Sure 3) When an investor spreads his money among different types of investments, does the risk of losing money: A. Increase B<u>. Decrease</u> C. Stay the Same D. Not Sure 4) A stock fund's beta is a relative measure comparing the fund to a market portfolio. For example, the S&P 500. Is beta a measure of relative: A. <u>Volatility versus the Market</u> B. Growth versus the Market C. Capital outflow versus the Market D. Not Sure

spend more time with investment choices. Again, as noted above, these are simply associations, and the direction of the causality cannot be determined with these regressions.

We also asked survey respondents why they chose the allocation strategy they did. Table 7 tabulates their responses (with those who had never heard of or were not sure of their allocations not included in this table). Supporting findings from the focus groups and prior research, we found that self-reported pure investors' top reasons for investing their account in one target-date fund were because it was an easy way to diversify (88 percent) and because it was a simple investment option (87 percent). Seventy percent also liked that target-date funds did it for you because they were not familiar with investing. Almost half (49 percent) reported choosing the funds because they did not want to make their own investment choices.[9]

Meanwhile, 75 percent of self-reported mixed investors reported they chose a mixed strategy because they felt they needed other investments in addition to target-date to be adequately diversified. This is consistent with the focus group responses and may indicate that individuals may not fully understand the concept of diversification underlying target-date strategies, or have a view of diversification that is different than that of the target-date fund designer. Future analysis will seek to determine how this need for diversification is related to other factors in our survey, such as trust in financial institutions. In addition, many mixed-investors (70 percent) reported wanting to "dial up" the risk in target-date funds by holding other more aggressive funds. This is consistent with aggressive equity mixed investors and core/satellite mixed investors identified by Pagliaro and Utkus (2010). Other important reasons for mixed investor behavior included wanting to customize the portfolio beyond target-date funds (69 percent) and wanting to limit target-date funds to only part of their portfolio (67

[9] Ameriks, Hamilton and Ren (2011) find similar results.

percent). Non-target date fund investors also reported wanting to make their own investment choices (60 percent) and not wanting to have all their money in one fund (57 percent). Once again, the responses hint towards themes of control and diversification that emerged in the focus group discussions.

The survey asked respondents a series of questions regarding target-date funds. The first set of question pertained to basic factual statements about target-date funds; the second set, more advanced statements; and the third, opinions about the role of the funds. Figures 4-6 summarize results based on respondent self-reported allocations. The results exclude those who reported having not heard of target-date funds. (The total sample size is thus reduced to 1,599.) Figure 4 reports the responses to basic factual statements.[10] These statements and the proper response are summarized below.

| **Basic Target –Date Fund Statement** | **Correct Response** |
|---|---|
| Target Retirement Funds are guaranteed against losses. | Disagree |
| Target Retirement Funds are a fund that offers a diversified mix of stock and bond investments. | Agree |
| Target Retirement Funds become more conservative as you approach the Target year. | Agree |

In Figure 4, a greater percentage of respondents who are invested in these funds (either mixed or pure) responded correctly to these questions relative to those who were unsure or thought they were not invested in these funds. For example, over 80 percent of the pure and mixed investors disagreed with the statement that target-date fund guaranteed against losses.[11] By comparison, 64 percent of the non-target date holders and 53 percent of the individuals that

[10] Note that the questions refer to Target Retirement Funds. This is Vanguard's name for target-date funds and was used in the survey because participants would recognize it.

[11] These findings are in contrast to an Envestnet survey of 251 individuals aged 25-70 that reported 40 percent of respondents 'strongly agreed' or 'somewhat agreed' that target-date funds provide a guaranteed return (Behling, 2009).

were unsure of their allocations disagreed. The “neither agree nor disagree” responses are also interesting to consider because they suggest a lack of a firm opinion about the answer. Those not invested in these funds or who were unsure of their investments reported a higher percentage of these responses compared to the target-date holders. Perhaps target-date holders have stronger opinions because they have learned about the funds by investing in them. Of course, the causality could also run in the opposite direction and people who are more aware of these options and their benefits are more likely to select them.

Figure 5 reports results for the more advanced target-date questions. The statements and correct responses are as follows:

| **More Advanced Target-Date Fund Statement** | **Correct Response** |
|---|---|
| You have to draw income from Target Retirement Funds by the Target Year | Disagree |
| You can keep your investments in Target Retirement Funds beyond the target year | Agree |
| The asset allocation in Target Retirement Funds will continue to change after the target year | Agree |

As shown in Figure 5, the greater complexity of these issues is reflected in a much larger “neither” category, in which respondents report that they “neither agree nor disagree” with the statement. At the same time, a similar pattern from Figure 4 reappears in Figure 5, with those investing in the funds reporting a higher percentage of correct answers and less uncertainty in their answers than those that do not.

Figure 6 reports respondents’ views regarding the role of target-date funds. Not surprisingly, 73 percent of respondents who were pure investors did not feel that target retirement funds were too simplistic for their needs while only 33 percent of non-target investors felt the same way. One of the most interesting responses concerned people’s opinions about the ability of one target-date fund to give adequate diversification. In total, only 21 percent of all respondents agreed with the statement and 41 percent disagreed. As expected, a smaller percentage of pure investors disagreed (25 percent) compared to mixed and non-target date investors (49 percent and 44 percent, respectively).

It appears that target-date fund holders, for the most part, understand the important features of these products but those who are unsure of their allocations or who are non-target date holders could benefit from additional education.

## V. Conclusions

This paper provides a preliminary summary of data from a project designed to better understand the determinants associated with portfolio allocations to target-date funds. In the future, we will explore these determinants in greater detail, including the role of trust, financial literacy, information overload and other factors.

The preliminary results, drawn from focus groups and summary statistics of raw survey data, provide insights into feelings associated with retirement investing and basic motivations for target-date fund allocations. The focus groups provide a context for retirement investing decisions: in the focus groups many, but not all, individuals report finding the prospect of planning and saving for retirement overwhelming and stressful. (Again, it is difficult to disentangle whether this attitude measures an emotional reaction to recent economic events or is an accurate measure of future retirement prospects.) As far as the reasons for different target-date strategies, both focus group and survey responses are fairly consistent. Pure investors like the simplicity and the diversification of the vehicle, while mixed investors believe they need more diversification than provided by a single target retirement fund—a belief that may have naïve or rational origins. In addition, mixed target-date investors report the desire to make their own financial decisions as their top reason for their approach.

We also find that participants who use target-date funds (either pure or mixed) have stronger opinions about the strategy and are more likely to answer correctly questions associated with their design. For example, many target-date investors correctly understand that the funds become more conservative over time, or that the funds are not guaranteed. However, levels of knowledge appear to be lower with regard to more sophisticated questions, such as whether participants must begin withdrawing from their target-date fund holdings when they retire. Importantly, target-date holdings appear to be related to such factors as knowledge of basic financial concepts (our measure of financial literacy), trust in financial institutions, and information overload. Further findings from the survey indicate that many individuals do not take into account their broader financial position in making portfolio allocation decisions, which may reflect some element of mental accounting. In addition, there is a positive relationship between feelings of information overload and time spent considering retirement investments, as well as the desire for help in making decisions; meanwhile, there is an inverse relationship between information overload and knowledge of one's own allocation or awareness of target-date funds at all.

Based on these preliminary findings, perceptions of target-date funds appear to mirror portfolio behavior. Pure investors in target-date funds emphasize their simplicity and diversification characteristics, while mixed investors perceive them as not a single portfolio solution but part of a broader investment strategy. In future research, our aim is to address a number of outstanding questions. First, how do pure and mixed target-date investors differ from non-target-date investors, not only with respect to demographic characteristics but also with respect to elements such as trust, financial literacy and information overload? Second, can we disentangle naïve forms of diversification from sophisticated forms among mixed investors? Third, what specific groups are knowledgeable about both basic and advanced features of target-date funds—and which are not? Answers to these questions can help inform improvements in target-date communication materials for plan participants, and assist regulators, plan sponsors and service providers in improving target-date information and disclosure.

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**Table 1: Verbatim Focus Group Quotes Related to Major Themes**

| Theme | Quotes |
|---|---|
| Trust | It's a matter of trust. It's a matter of trusting the information you're getting … No one can tell you what the right answer is. It's still a guessing game.<br><br>It's my money and I don't trust. Even though I have a financial advisor, I'm very wary about it. The market seems to fluctuate. So are they going to pay commission? Are they doing it based on what's going to ultimately yield?<br><br>I started saving more. I just wanted to pull everything out of everywhere and just keep my money close to me because I just didn't feel like anyone knew what the hell they were doing with my money. |
| Information Overload | So if you can't find a financial advisor that you trust, then you're left to do it yourself and when there are thousands of mutual funds, it can be overwhelming.<br><br>…scared, confused, being shot at with a whole bunch of different funds. Not knowing what they're about. Not being explained in detail. I feel we need a Vanguard fund for dummies. Literally, speak to me in kindergarten language so I understand word by word what you are talking about. And you know, it's just very scary. I fear that if I make the wrong decisions I am going to be falling, I'm going to be losing a lot.<br><br>You get overwhelmed but you may not gain in the end. |
| Lack of Knowledge | I don't have time to sit and study… to prepare and study as some of you might study and I wouldn't trust my own judgment because I don't know enough…<br><br>Very confusing. I have no clue what I am looking at or what it is all about or how it works. So I have a friend who is pretty knowledgeable and my brother is pretty knowledgeable, so I said, help me choose. What is the best thing for me? And they showed me, showed me, and that is what I did. Bom, bom, bom.<br><br>And even when I try to gain insight, because I like to know what I'm doing, I still don't feel like I have the knowledge to make those decisions, so I sort of do it, cross my fingers… |
| Lack of Control | There are external factors beyond my control like we discussed, and, sort of, that makes you feel, a little, helpless.<br><br>(Participant describing the picture they chose) It's a chess piece and somebody moving it and sometimes I feel like I'm a chess piece and sometimes I'm trying to get away from that feeling. So I was just pushing my money, pushing my money in. And then I hate feeling out of control. I feel out of control, not really understanding it.<br><br>It can be a gamble. Even in some of the companies that you thought never could have got bankrupt, last year went bankrupt. We're not always privy to Wall Street. |
| Diversification | If you diversify… I feel like that may not be the case on paper but at the same time it might feel comfortable in my heart that I've taken some risk here in order to compensate for whatever those losses are in the long term….<br><br>You've gotta spread the risk. You don't want to put all your eggs in one basket or else you'll have a situation like Enron happen to you all over again.<br><br>First one was diversification. I put all of my money in just a few portfolios, if you will, so diversification was big. Again, like he said, based on my age, I wanted to be more in a stock fund then a bond fund. So that was my guiding principle. |

## Table 2: Demographics of Sample

| | Total Sample | Pure | Mixed | Non-Target |
|---|---|---|---|---|
| N | 1993 | 652 | 662 | 679 |
| Percent in Plans Offering Automatic Enrollment | 45% | 48% | 49% | 40% |
| Percent Automatically Enrolled | 13% | 28% | 8% | 3% |
| Percent Male | 60% | 53% | 62% | 64% |
| Average Age | 47 | 46 | 47 | 49 |
| Median Age | 49 | 47 | 49 | 51 |
| Age Range | 25 to 61 | 25 to 61 | 26 to 60 | 25 to 61 |
| Average Job Tenure | 12.43 | 7.337 | 14 | 16 |
| Median Job Tenure | 9.66 | 4.05 | 11 | 13 |
| Percent Married | 78% | 75% | 80% | 79% |
| Average Number of Dependents | 2 | 2 | 2 | 2 |
| Median Number of Dependents | 2 | 2 | 2 | 2 |
| Ethnic Group | | | | |
| African-American | 6% | 7% | 6% | 6% |
| Asian | 3% | 2% | 3% | 3% |
| Caucasian | 82% | 82% | 82% | 81% |
| Hispanic | 4% | 4% | 4% | 3% |
| Native Hawaiian or Pacific Islander | 0% | 1% | 0% | 1% |
| Multi-race | 1% | 1% | 1% | 2% |
| Other | 1% | 0% | 1% | 1% |
| Refused | 2% | 2% | 3% | 2% |
| Total | 100% | 100% | 100% | 100% |
| Job Type | | | | |
| Hourly | 31% | 35% | 30% | 27% |
| Administrative | 7% | 6% | 6% | 8% |
| Management | 21% | 19% | 22% | 21% |
| Professional | 32% | 29% | 32% | 35% |
| Other Salaried | 9% | 9% | 10% | 8% |
| Retired | 0% | 0% | 0% | 0% |
| Not_Working | 0% | 0% | 0% | 0% |
| Refused | 1% | 1% | 1% | 1% |
| Total | 100% | 100% | 100% | 100% |
| Household Income | | | | |
| Less than $30,000 | 3% | 4% | 2% | 3% |
| $30,000 to $50,000 | 13% | 15% | 12% | 11% |
| $50,000 to $75,000 | 19% | 22% | 19% | 16% |
| $75,000 to $100,000 | 22% | 20% | 22% | 23% |
| Greater than $100,000 | 35% | 32% | 37% | 36% |
| Refused | 8% | 6% | 8% | 10% |
| Total | 100% | 100% | 100% | 100% |
| Savings | | | | |
| Less than $25,000 | 18% | 23% | 17% | 14% |
| $25,000 to $50,000 | 9% | 12% | 9% | 7% |
| $50,000 to $100,000 | 15% | 15% | 15% | 14% |
| $100,000 to $250,000 | 18% | 14% | 22% | 18% |
| $250,000 to $500,000 | 12% | 9% | 13% | 15% |
| $500,000 to $1,000,000 | 7% | 5% | 6% | 9% |
| Greater than $1,000,000 | 2% | 2% | 2% | 4% |
| Refused | 19% | 20% | 16% | 20% |
| Total | 100% | 100% | 100% | 100% |

**Table 3: Tabulations of Actual Allocations versus Self-Described Allocations**

| | Self-Described Allocation | | | | | |
|---|---|---|---|---|---|---|
| **Actual Allocation** | **Pure** | **Mixed** | **Non-Target** | **Not Sure** | **Not Heard** | **Total** |
| **Pure** | 220 | 117 | 111 | 71 | 133 | 652 |
| | 11% | 6% | 6% | 4% | 7% | 33% |
| **Mixed** | 82 | 321 | 116 | 69 | 74 | 662 |
| | 4% | 16% | 6% | 3% | 4% | 33% |
| **Non-Target** | 17 | 53 | 363 | 59 | 187 | 679 |
| | 1% | 3% | 18% | 3% | 9% | 34% |
| **Total** | 319 | 491 | 590 | 199 | 394 | 1,993 |
| | 16% | 25% | 30% | 10% | 20% | 100% |

**Table 4: Tabulations of Survey Responses to Question regarding Frequency of Portfolio Reviews**

| Frequency of Review | Number | Percent |
|---|---|---|
| Quarterly | 587 | 29% |
| Annually | 297 | 15% |
| Occasionally | 280 | 14% |
| Don't Typically Review | 259 | 13% |
| Semi-Annually | 220 | 11% |
| Monthly | 190 | 10% |
| Weekly or More Often | 145 | 7% |
| I don't review | 15 | 1% |
| **Total** | **1993** | **100%** |

## Table 5. Information Overload

### Panel A: Relationship between Information Overload and Time Spent Reviewing Portfolio

| | | Reports Spending Less than a "A Great Deal of Time" or "A Moderate Amount of Time" to Initial 401(k) Portfolio Allocation | | Reports "Occasionally", "Don't Typically Review" or "I Don't Recall" regarding how often review 401(k) Portfolio | |
|---|---|---|---|---|---|
| **Information Overload** | **Total** | **No** | **Yes** | **No** | **Yes** |
| **Low** | 997 | 544 | 453 | 797 | 200 |
| | 50% | 57% | 44% | 55% | 36% |
| **High** | 996 | 418 | 578 | 642 | 354 |
| | 50% | 43% | 56% | 45% | 64% |
| **Total** | 1993 | 962 | 1031 | 1439 | 554 |

### Panel B: Relationship between Information Overload and Knowledge of Allocation and Desire for Others to Make Investment Decisions

| | | Reports either "Not Sure" of Allocation or "Never Heard" of Target Date Funds | | Agrees or Strongly Agrees to statement "I just wish someone would make my retirement investment decisions for me" | |
|---|---|---|---|---|---|
| **Information Overload** | **Total** | **No** | **Yes** | **No** | **Yes** |
| **Low** | 997 | 767 | 230 | 876 | 121 |
| | 50% | 55% | 39% | 55% | 29% |
| **High** | 996 | 633 | 363 | 704 | 292 |
| | 50% | 45% | 61% | 45% | 71% |
| **Total** | 1993 | 1400 | 593 | 1580 | 413 |

**Table 6: Probit Regressions** Estimated using robust standard errors. Tables report coefficients.

| Dependent Variable | Reports Spending Less than a "A Great Deal of Time" or "A Moderate Amount of Time" to Initial 401(k) Portfolio Allocation | | Reports "Occasionally", "Don't Typically Review" or "I Don't Recall" regarding how often review 401(k) Portfolio | | Reports either "Not Sure" of Allocation or "Never Heard" of Target Date Funds | | Agrees or Strongly Agrees to statement "I just wish someone would make my retirement investment decisions for me" | |
|---|---|---|---|---|---|---|---|---|
| High Information Overload | 0.1967 | ** | 0.3344 | ** | 0.2306 | ** | 0.5396 | ** |
| | (0.0634 ) | | (0.0687 ) | | (0.0670 ) | | (0.0731 ) | |
| Automatically Enrolled Participant | 0.1400 | | 0.0261 | | 0.1044 | | 0.0983 | |
| | (0.0956 ) | | (0.1019 ) | | (0.1001 ) | | (0.1102 ) | |
| Diversification Question Correct | -0.0025 | | -0.1256 | | -0.2124 | ** | -0.0236 | |
| | (0.0683 ) | | (0.0722 ) | | (0.0719 ) | | (0.0767 ) | |
| Bond Price Question Correct | -0.2667 | ** | -0.1551 | | -0.2146 | ** | -0.1892 | * |
| | (0.0721 ) | | (0.0806 ) | | (0.0793 ) | | (0.0847 ) | |
| Beta Question Correct | -0.3791 | ** | -0.2337 | | -0.3156 | * | -0.1634 | |
| | (0.1156 ) | | (0.1360 ) | | (0.1379 ) | | (0.1495 ) | |
| Money Market Question Correct | -0.2220 | * | -0.0654 | | -0.1978 | | -0.1800 | |
| | (0.0886 ) | | (0.1010 ) | | (0.1014 ) | | (0.1119 ) | |
| Demographic Controls | YES | | YES | | YES | | YES | |
| Household Income Controls | YES | | YES | | YES | | YES | |
| Job Type Controls | YES | | YES | | YES | | YES | |
| Race Controls | YES | | YES | | YES | | YES | |
| Education Controls | YES | | YES | | YES | | YES | |
| **N** | **1804** | | **1804** | | **1804** | | **1804** | |
| **Pseudo R-Squared** | **0.0607** | | **0.0803** | | **0.0759** | | **0.0889** | |

Demographic Controls: sex, age,married, number of dependents
Household Income Controls: Indicator variables for different ranges of household income
Job Type Controls: Indicator variables for hourly workers, administrative/support, management/supervisory, professional/technical, and other salaried
Race Controls: Indicator variable for caucasian
Education Controls: Indicator Variables for high school or less, some college, college degree, some graduate school, graduate degree

**Table 7: Reasons for Investment Strategies Ranked by Self-Described Allocation**

| Pure Investor (N=185) | | | |
|---|---|---|---|
| | Yes | No | Don't Recall |
| It is an easy way to diversify | 88% | 6% | 6% |
| It is a simple investment option | 87% | 11% | 2% |
| You are not familiar with investing so you liked that the Target Retirement Funds did it for you | 70% | 29% | 2% |
| You did not want to make your own investment choices | 49% | 48% | 3% |
| It was recommended to you | 42% | 54% | 3% |
| Your employer selected it for you | 18% | 79% | 3% |
| **Mixed Investors (N=498)** | | | |
| | Yes | No | Don't Recall |
| You think you need to hold other investments with Target Retirement Funds to be adequately diversified | 75% | 20% | 5% |
| You wanted to hold other, more aggressive, investments besides Target Retirement Funds | 70% | 27% | 3% |
| You wanted to customize your portfolio beyond what a Target Retirement Fund allows | 69% | 25% | 6% |
| You wanted to limit your use of Target Retirement Funds to only part of your portfolio | 67% | 28% | 6% |
| You wanted to hold other, more conservative, investments besides Target Retirement Funds | 45% | 51% | 4% |
| Your employer selected the funds for you | 10% | 88% | 3% |
| **Non-Target Investors (N=590)** | | | |
| | Yes | No | Don't Recall |
| You want to make your own investment choices | 60% | 34% | 6% |
| You do not want to have all your money in one fund | 57% | 37% | 6% |
| Target Retirement Funds were not a fund option when you joined your 401(k) plan | 36% | 42% | 23% |
| You didn’t realize they were an option for you | 31% | 62% | 7% |
| You do not understand them | 25% | 67% | 7% |
| They do not offer enough diversification | 25% | 52% | 24% |
| They are too simplistic for your needs | 17% | 65% | 17% |
| Your employer selected the funds for you | 15% | 79% | 6% |

**Figure 1: Example of Picture Chosen During Focus Group Sessions**

**Associated Quotes:**

***"This is how I felt when the market started to crash. I felt like I had a knife to my throat. I was in the hands of other people and I felt totally powerless."***

**(Male, Unaware)**

***"I feel like him – if I make the wrong choice, I'm going to be hurting myself, cutting myself, losing a lot. But I can't tell which choices are right and which are wrong. It's very scary. I'd like to be able to understand what's going on but I just don't."***

**(Female, Unaware)**

***"I think the barber represents the managers who are doing your mutual funds. You are the guy in the seat and that blade is kind of like them managing your money: if he's good at it, then you will get a good shave. But if he's not so good, you might have some nicks there. And that makes me feel uneasy – how that shave turns out is completely out of my control."***

**(Male, Unaware)**

**Figure 2: Survey Responses to "Thinking Back to When You First Established your Retirement Account, How Much Time Did You Spend Choosing the Funds to Include in Your 401(k) Plan and How Much to Invest in Each Fund? Did you spend …"**

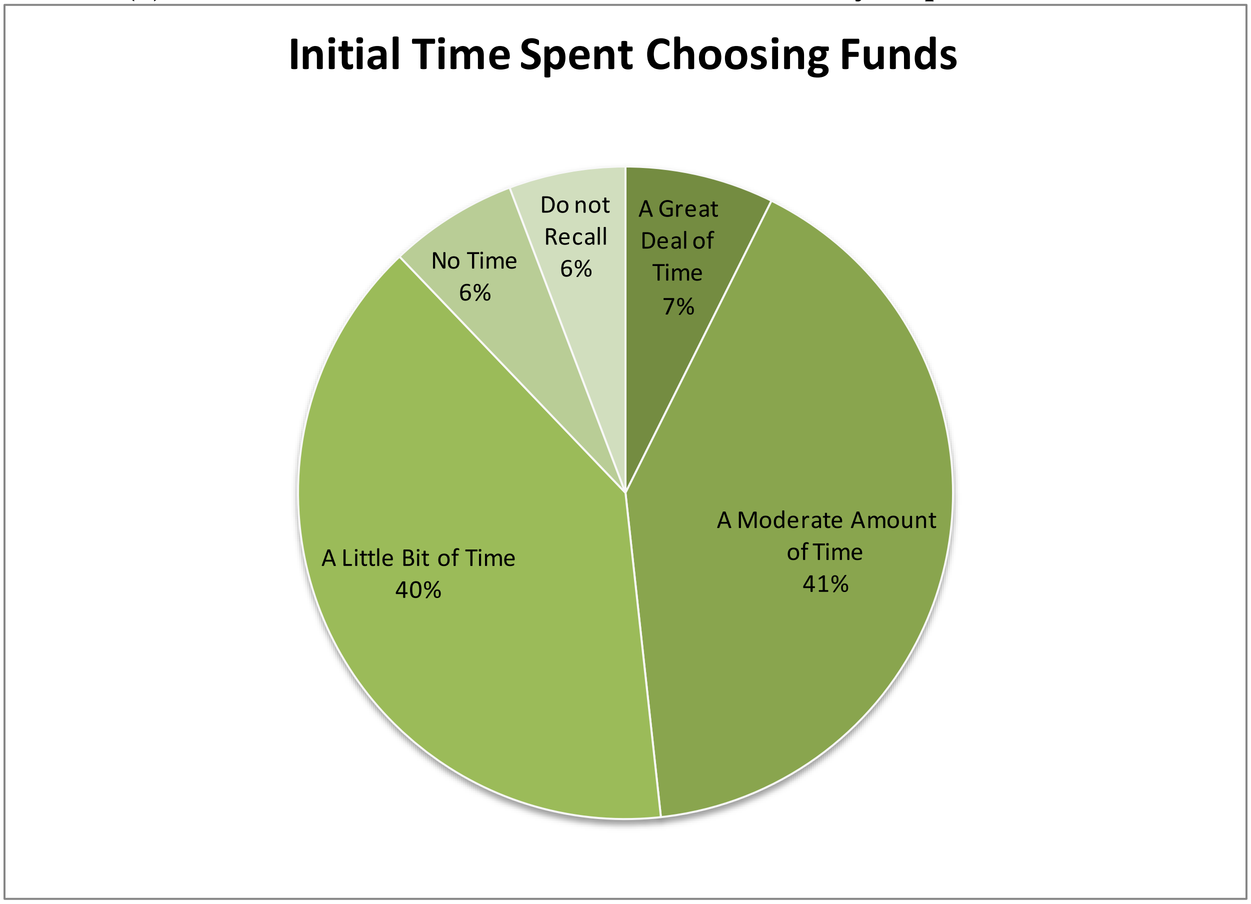


**Figure 3: Survey Responses to "When You First Selected Your Retirement Account, Did You Make Your 401(k) Selection Purposefully Taking into Account Other Assets You May Own-Such as Your Savings Account, Your Stock Holdings, Your Bond Holdings, Your Home, etc?"**

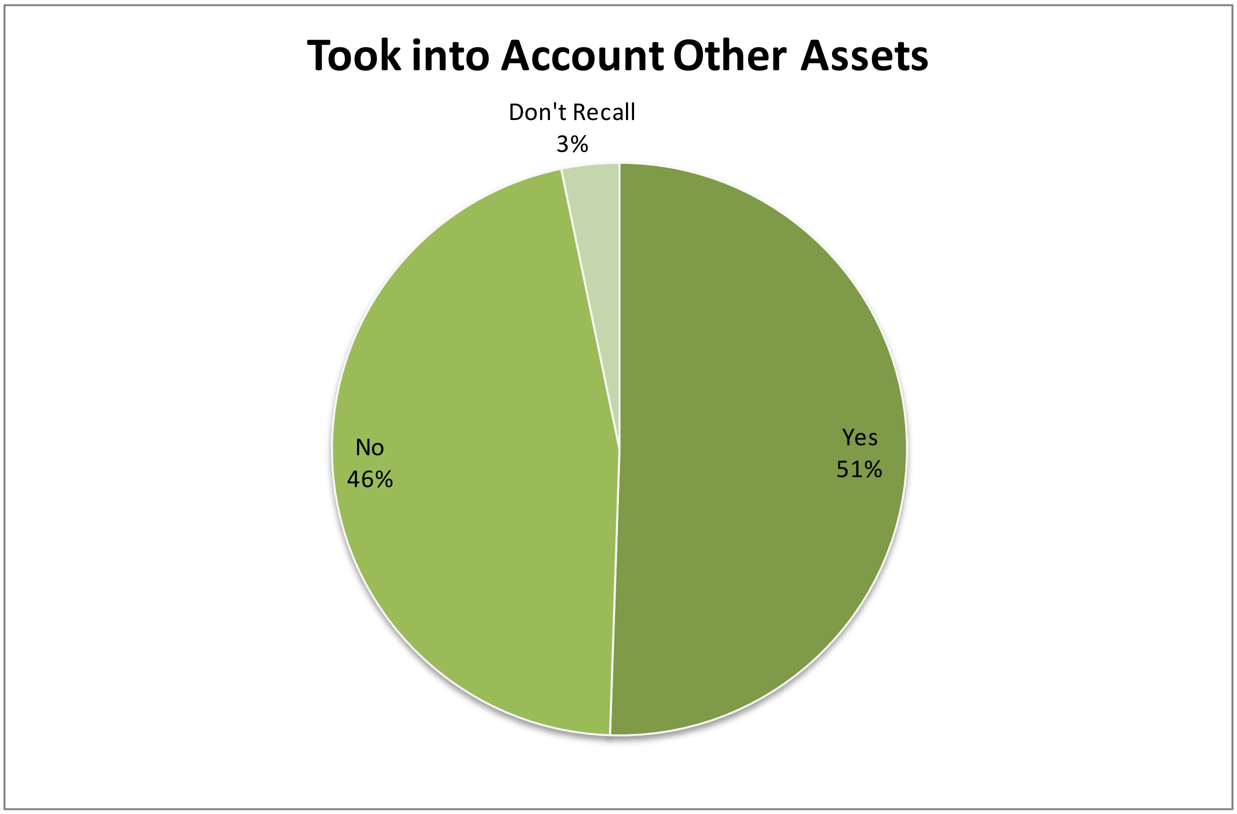
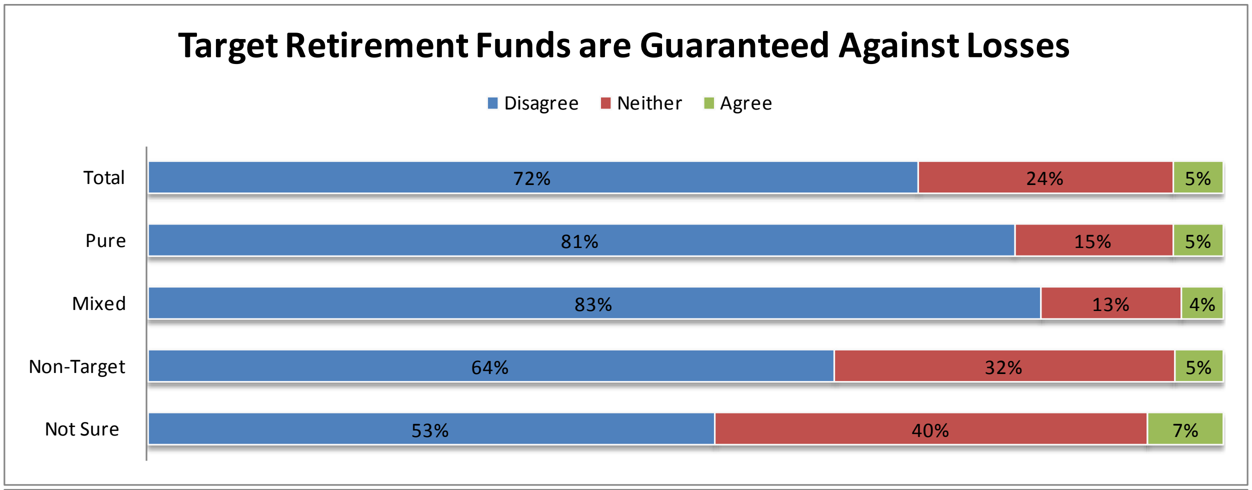
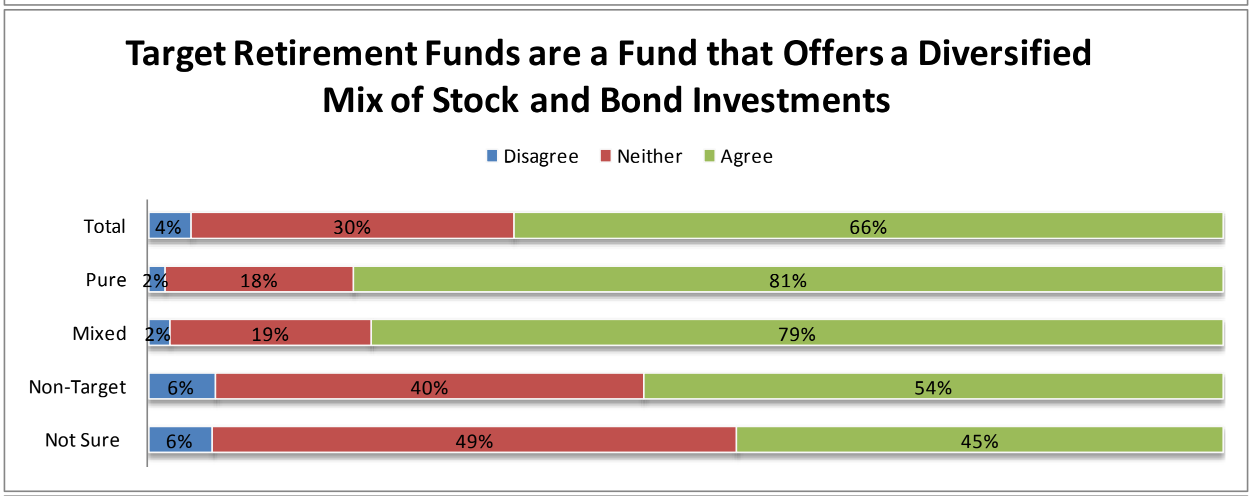


**FIGURE 4: Responses to Questions Associated with Basic Factual Statement Related to Target-Date Funds**



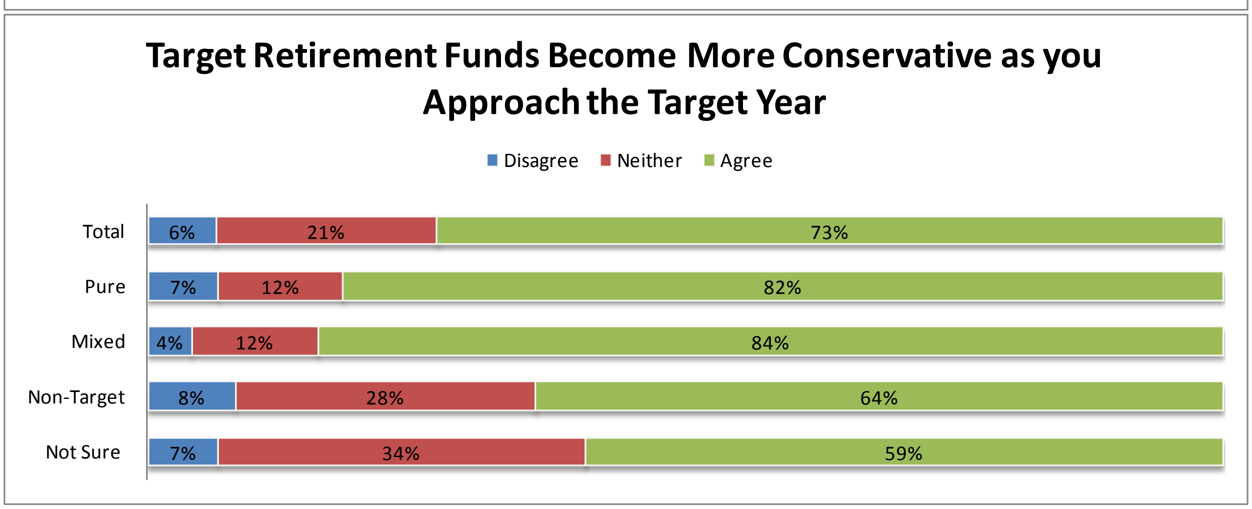



**FIGURE 5: Responses to Questions Associated with More Advanced Factual Statement Related to Target-Date Funds**

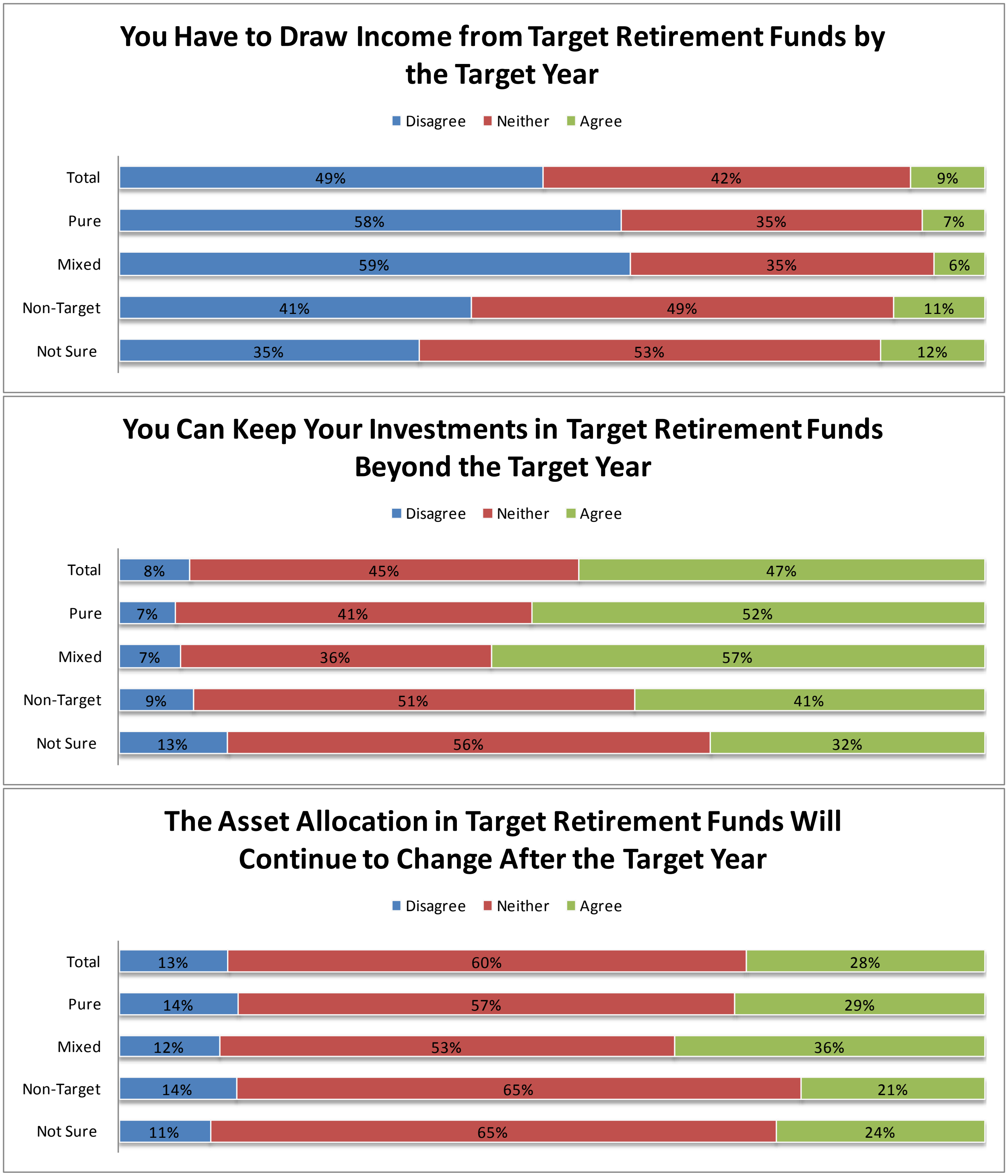


**FIGURE 6: Responses to Questions Associated with Opinions Towards Target-Date Funds**