

The appropriate age for transition to managed accounts in a QDIA framework

It might be earlier than you think

Abstract

In this paper, we review evidence of retirement under-saving and potential solutions, as well as empirical evidence regarding investor reaction to negative market returns.

1.

We present new corroborating evidence from fund flows around the recent volatile market events in 2020 that indicates a rising loss aversion just as asset levels become significant with investors approaching retirement.

2.

We surmise that recent trading activity implies an aggregate investor preference for Target Date Fund (TDF) portfolios within a 20-year time horizon of retirement with a volatility profile that is potentially too conservative for requisite savings in later years due to concomitant lower portfolio return potential combined with the aggregate under-saving problem. This mismatch in investor preferences is compounded by a reactionary tactical investor trading strategy that essentially buys high and sells low.

3.

We propose that the rising investor loss aversion problem can be mitigated by including Guaranteed Retirement Income (GRI) products in the asset mix in a QDIA setting to provide for the desired downside risk protection against extreme events, by shifting investors from TDF to a managed account setting in later years, or by utilizing both approaches in tandem.

Given the evidence of managed account utilization in increasing aggregate savings rates, reducing portfolio risk levels and its potential to meaningfully address the serious measured return drag of 1.5% to 2.0% from investor return-chasing behavior, the potential benefits outweigh the higher average fee burden for managed advice in many cases.

The question then becomes at what age do the benefits outweigh the potential costs, on average. Based upon the recent empirical evidence of TDF flow data from 2020 and data on average account balances, we propose that the appropriate age for automatic transition to managed advice could be as early as 40.



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Introduction

TDFs have been utilized since the Pension Protection Act (PPA) of 2006 in a QDIA setting as a means of providing retirement savers with a one-stop solution suited to their age and, in some cases, risk-tolerance level. This framework with TDFs is meant to provide a comprehensive but generalized asset mix solution appropriate for most retirement investors. The associated asset mix glidepath typically decreases in portfolio risk-level over a person's lifecycle. The academic foundation of this lifecycle approach is, in large part, Human Capital Theory, that was first posited by Jacob Mincer and Nobel economist Gary Becker, in the late 1950s and early 1960s. Later extensions of this work, oriented toward lifetime savings strategies, posited that as the relative weight of the current financial value of the portfolio increases relative to the present value of future human capital, the ability to weather volatility shocks declines.

Empirical work by behavioral economists had demonstrated that, in practice, savers' investment allocation choices in the absence of QDIA options tended to follow more haphazard construction approaches, such as equally allocating among investment options, otherwise known as the 1/n heuristic.¹ The systemic response to problems identified by behavioral economists resulted in a system comprised of stimulants and stabilizers designed to address historical behavioral shortcomings in investor retirement savings behavior, including automatic enrollment, automatic contribution rate escalation and the use of QDIAs. Mounting empirical evidence, however, indicates that serious behavioral deficits that deserve plan sponsor attention persist. Two of the most pressing, among these, are the issues of under-saving and the tactical investor behavior of "chasing returns" that can work to subvert the benefits of the TDF glidepath framework.

In this paper, we review evidence of retirement under-saving and potential solutions, as well as empirical evidence regarding investor reaction to negative market returns. We present new corroborating evidence from fund flows around the recent volatile market events in 2020, which indicates a rising loss aversion just as asset levels become significant with investors approaching retirement. TDF glidepaths are meant to address rising loss aversion with less volatile portfolios for shorter time horizons, but these portfolios can't

adequately provide the downside risk protection desired in the case of extreme events. Moreover, the empirical research indicates that tactical investor behavior of "chasing returns" presents a serious return drag. We surmise that recent trading activity implies an aggregate investor preference for TDF portfolios within a 20-year time horizon with a volatility profile that is potentially too conservative for requisite savings in later years due to lower portfolio return potential combined with the aggregate under-saving problem. This extant mismatch in investor preferences is compounded by a reactionary tactical investor trading strategy that essentially buys high and sells low.

We propose that the rising investor loss aversion problem can be mitigated by including Guaranteed Retirement Income (GRI) products in the asset mix in a QDIA setting to provide for the desired downside risk protection against extreme events, by shifting investors from a TDF to a managed account setting in later years, or by utilizing both approaches in tandem. Either approach entails increased costs, but we view the benefits to outweigh these costs for most investors, particularly in terms of offsetting the potentially serious return drag that exists in their absence.

We also propose that the managed account approach has the potential to mitigate the under-saving problem through expert and active advice intervention, without the need for dramatic increases in automatic contribution escalation that some proponents have advocated. The managed account approach is currently under-utilized in the retirement savings system, but has the potential to provide a customized investment mix construction that can better account for the myriad of personal circumstances more consistent with Human Capital Theory than a more generalized TDF approach, particularly in key savings years.

We focus on the evidence and advantages of employing GRI products in a QDIA framework in our companion paper, *The Need for GRI Products in a QDIA Framework – The Margin of Safety Retirement Savers Need for Peace of Mind*. This paper highlights the evidence and advantages related to managed accounts in addressing these problems, and evaluates the considerations for an appropriate age range to target for transition from TDFs to managed accounts in a QDIA setting.

The under-saving problem

Classical economic theories of savings, such as lifecycle or permanent income, implicitly rely on savers to solve a complex inter-temporal financial optimization. Not surprisingly, these theories fail to explain investor savings behavior that is unable to maximize the utility of spending over a lifetime in the face of uncertainty.² Shlomo Benartzi and Nobel prize-winning economist Richard Thaler pointed out in 2013 that workers at risk of inadequate funds in retirement had risen from 31% in 1983 to 53% in 2010.³ The retirement savings situation has improved slightly in succeeding years, but it remains a major problem. The EBRI Retirement Security Projection Model estimates that 40.6% of households will run short of money in retirement, with an aggregate retirement household deficit of \$3.68 trillion,⁴ but this framework does not account for desired bequests and may not account for the actual level of income replacement to maintain quality of life advocated by many experts. Moreover, looking only at the 40.6% of households where shortfalls are projected, this model shows savings deficits ranging from \$117,739 for the group age 35–39 to \$105,093 for those in the group age 60–64.

The systemic solutions proposed by behavioral economists, such as Benartzi and Thaler, who coined the SMT (Save More Tomorrow™) acronym⁵ that espoused automatic enrollment, investment defaults and automatic contribution escalation, have certainly helped to improve the situation for those with access to sponsored retirement plans. These elements have become the standard in retirement plans in the years since the introduction of the PPA of 2006. Nevertheless, the under-saving problem persists.

Some industry proponents recommend contribution rates that automatically escalate up to 12–15%. For instance, Vanguard estimates that a typical participant should target a total contribution rate of 12% to 15%, including both employee and employer contributions. Four in 10 participants in 2019 had total employee and employer contribution rates that met those thresholds or reached the statutory contribution limit.⁶ Many advisor systems advocate targeted retirement savings as a multiple of annual salary at different target dates, such as 2.5 to 4 times at age 45 up to 10 to 14 times at age 65.⁷ The latest values shown in account balances by demographics in Vanguard's *How America Saves 2020*, however, are not anywhere near these recommended values of targeted wealth as a ratio of salary (see Figure 1).⁸

FIGURE 1: VANGUARD DEFINED CONTRIBUTION PLANS

	Average	Median		
All	\$106,478	\$25,775		
			Average ratio	Median ratio
Income				
<\$15,000	\$8,260	\$1,356	1.10	0.18
\$15,000–\$29,999	\$13,069	\$4,020	0.58	0.18
\$30,000–\$49,999	\$29,740	\$10,439	0.74	0.26
\$50,000–\$74,999	\$66,033	\$27,630	1.06	0.44
\$75,000–\$99,999	\$113,143	\$54,020	1.37	0.65
\$100,000–\$149,999	\$177,597	\$91,470	1.42	0.73
\$150,000+	\$298,851	\$154,989	1.99	1.03
Age				
<25	\$5,419	\$1,817		
25–34	\$26,839	\$10,402		
35–44	\$72,578	\$26,188		
45–54	\$135,777	\$46,363		
55–64	\$197,322	\$69,097		
65+	\$216,720	\$64,548		

Note: salary ratios calculated at midpoint of range except for > \$150,000 where that value is utilized. Source: Vanguard *How America Saves 2020*.

While we do not have the benefit of a dual sort on age and income, it is clearly evident that the simple averages do not exceed even the lower bound salary multiple recommendations for younger investors in the heuristics of these targeted savings frameworks. Since the average balances rise with age, it is likely that the averages by salary range are skewed towards older participants. Moreover, the averages are skewed by a relatively small percentage of participants with large balances, while the median is more reflective of the typical participant savings profile.

Unfortunately, employer education alone is not the solution to the under-saving problem. The deficits in employer education programs correlating with subsequent participant action have been well documented.⁹ In fact, this poor experience led to the advent of the more prescriptive solutions that exist today, such as auto-enrollment and auto-escalation regimes. Of course, there is the option of extending this framework even further, with auto-escalation rates moving higher and faster as some experts advocate. Many programs, however, are currently designed to default to rates where employer matches are maximized. There may be resistance on the part of many plan sponsors to a larger ramp-up that could be viewed by some as systemic overreach.

An alternative approach to promote increased savings rates is a transition from a TDF glidepath framework to a managed account framework at a particular age cohort. Research on traditional employer education deficits provides some hope that expert advice, routinely applied with participant check-ups, can have a higher likelihood at overcoming the inertia and bounded rationality, savings heuristics that behavioral studies have identified. As much as peer effects have been identified in this research as having measurable effects on savings behavior,¹⁰ expert advice is likely to have a much higher impact, as most participants recognize that they are currently under-saving.¹¹ Vanguard, for instance, notes several distinctly favorable elements for those participants in their system who had adopted managed account advice, including that nearly half of participants increased their saving rate by an average of three percentage points.¹² That substantial savings rate pick-up would be expected to be even higher for larger under-savers in a QDIA transition framework, as those most likely to use managed account advice are those focused most on saving to begin with.

The PPA gave safe harbor to managed accounts, as well as TDFs, as QDIA options. Managed accounts have a very low utilization rate on a voluntary basis,¹³ but transition to such accounts as a QDIA at an age point where extant financial balances are higher, increased savings rates in key earnings years are critical, and sufficient runway exists to have meaningful impact, are all important considerations. In the next section, we argue that the appropriate transition age is before age 45 based upon recent evidence from TDF flow data, but propose that an age as early as 40 is most beneficial because it preemptively addresses return-chasing behavior before it becomes prevalent and is implemented at a lifecycle point with substantial savings runway that can benefit from this change in discipline, as well as the concomitant increased contribution rates.

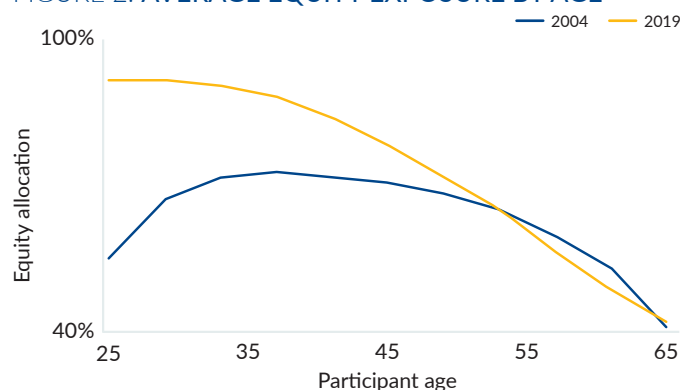
Tactical self-destruction: Buy high and sell low

The tendency of investors to market time by “chasing returns” has been well documented and the evidence is clear that it results in a serious portfolio return drag. Moreover, this behavior in the context of extreme downside return events can have a meaningful impact on subsequent retirement savings balances, as the tendency to react is higher for those participants with shorter time horizons and higher extant balances. There also is evidence that larger and more persistent downside market regimes can have a long-term impact on participant asset allocation preferences.

Benartzi and Thaler note that while new participants dramatically increased their equity allocations between 1992 and 2000 from 58% to 74%, in the succeeding two years following the 2000 market crash, this allocation fell back to 54%. As they note, “The market timing of new participants in their exposure to equities was exactly wrong. They bought high and sold low.”¹⁴ They note an accompanying phenomenon regarding allocations of participants to a technology fund investment option during the same period, as “Again participants were buying into the technology fund most aggressively at the peak.”¹⁵

It is interesting to note the changes of equity allocations highlighted in Vanguard’s *How America Saves 2020* from 2004 to 2019, as shown in Figure 2.¹⁶ They attribute this to the success of TDF glidepaths and auto-enrollment systems. An alternative interpretation would be the impact of a long bull market on participant allocations, much as Benartzi and Thaler noted from 1992 to 2000. Obviously, this time frame includes the GFC period of market disruption, but also an extended bull market thereafter. Most likely the more aggressive posture of younger savers between 2004 and 2009 is a balance between those two elements.

FIGURE 2: AVERAGE EQUITY EXPOSURE BY AGE



Source: Vanguard *How America Saves 2020*.

There is substantial evidence that investors are strongly influenced by past returns in their investment allocations and trading behavior, which implements a substantial portfolio cost burden. Greenwood and Shleifer find that investor return expectations are highly correlated with past market returns and market level.¹⁷ Similarly, Federal Reserve research economist YiLi Chien, using ICI data from 2000 to 2012, measured the correlation between equity mutual fund flows and past quarter returns, which was a remarkably high 0.49. Much like Benartzi and Thaler, Chien notes that “in the long run, the tendency to buy high and sell low when exhibiting return-chasing behavior could eventually reduce part of their profits.”

In fact, the cost in terms of return drag to investors is quite high. Comparing the actual realized return of the return-chasing to a buy and hold approach, “chasing returns caused the average U.S. mutual fund investor to miss around 2 percent return per year, which is very significant.”¹⁸ This work echoes the earlier findings of Geoffrey Friesen and Travis Sapp who find a 1.56% return drag using mutual fund cash flow data from 1991–2004.¹⁹

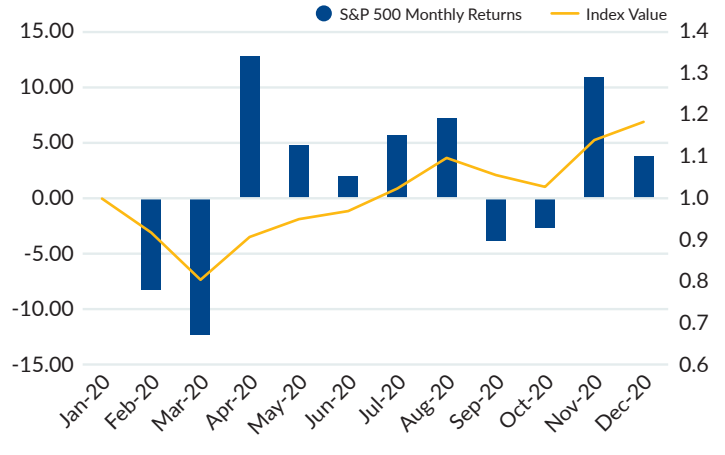
TDF glidepaths were meant to address this investor timing behavior, in part, by locking participants into an asset allocation that could be used as a “set it and forget it” framework with automatic rebalancing around such market events. We look at the recent behavior of TDF flow data during the negative return months from early 2020 based on Target Date groupings and find distinct patterns that echo other researchers’ findings of return-chasing behavior, along with interesting differences by date grouping. These findings raise serious concerns about the potential impact on some groups of retirement savers.

Figure 3 shows the monthly S&P 500 Index returns in 2020, along with a cumulative index value. The worst monthly return in 2020 was March at -12.35%, which followed February’s -8.23%. The worst return month, however, was followed by the best return month of the year in April, with a 12.82% showing. This is quite typical of markets, where extreme positive tail returns follow within a short time frame after negative tail returns. Trading around these events creates risk if that tendency is to chase returns, reducing balances even further after market declines and before the market rebounds. There are numerous statistics showing that removing the best 10 or 20 months from stock return series over extremely long horizons of 50 years or more reduces their return to something akin to that of T-Bills. Despite opening 2020 with three successive months of negative returns that drew the market down into near-bear market territory of almost 20%, the S&P 500 managed to produce a well above average annual return of over 18% for the year.

Not surprisingly, we see heightened trading activity around the early months of 2020. Figure 4 shows the trading activity for Vanguard defined contribution participants in early 2020 compared to prior years.²⁰ Moreover, they note that “In the first half of 2020, the range of equity allocations widened further, particularly to the downside. The effect was most notable among generation Xers and older millennials, where the 25th percentile equity allocation dropped between 4 and 8 percentage points.”²¹ The trading activity in March 2020 was more than double the average monthly trading volume.

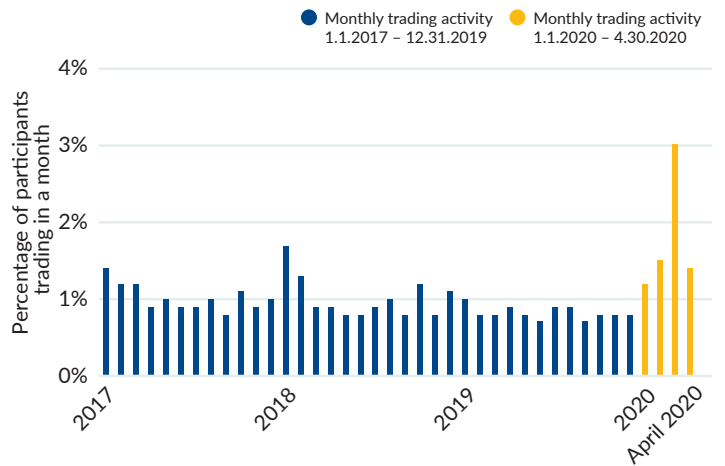
We highlight the specific flow data from Morningstar by Target Date cohort and examine the implications.

FIGURE 3: S&P 500 RETURNS



Source: Morningstar Data. Past performance is not indicative of future results.

FIGURE 4: VANGUARD DEFINED CONTRIBUTION PARTICIPANTS

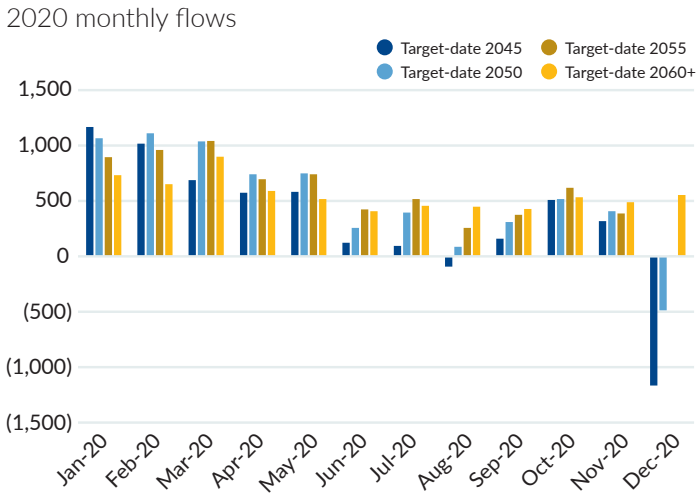


Source: Vanguard 2020.

The good news is that TDFs with time horizons of 20 years or more tended to show positive flows throughout 2020. The highest positive flows were even during the negative returning months of January to March. Of course, positive fund flows are often highest in the first few months of the year, just as they tend to be negative in the last month of the year in terms of calendar effects.²² Largely, this is due to timing of participant changes in allocation decisions, job changes correlating with plan changes, retirement, etc.

Figure 5 shows the monthly flow data for these age cohorts.

FIGURE 5: TDFS GREATER THAN 20 YEAR HORIZON

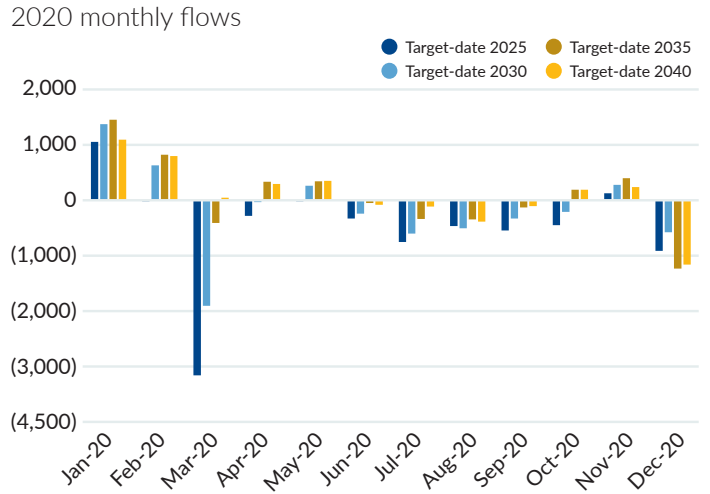


Source: Morningstar Asset Flow Data.

TDFs tend to be constructed and aggregated into five-year increments. Given the specific target date years represented, an assumed retirement age of 67, and a starting measurement date of 2020, we assume that the Target Date 2040 portfolio may be interpreted as having an age interpretation of roughly 45, with approximately 20 years to retirement. Similarly, the Target Date 2045 may be roughly associated with a rounding age of 40 and a 25 year time horizon. The flow data in Figure 5 does show a noticeable difference between the Target Date 2045 group and others, particularly in the months of March 2020 and December 2020.

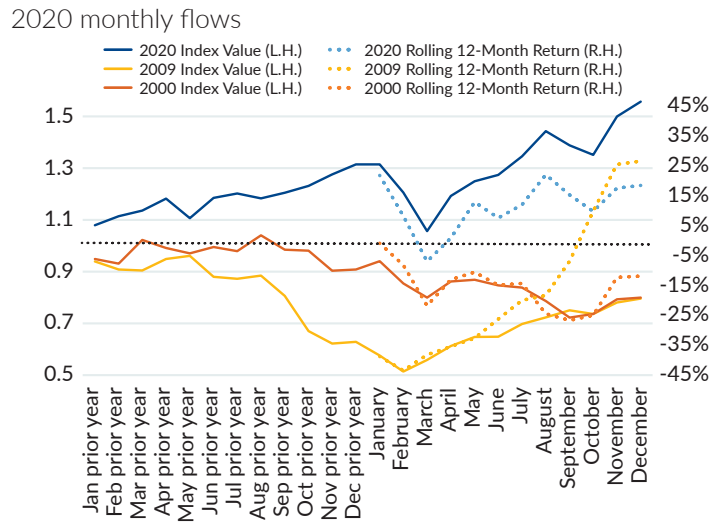
Furthermore, the monthly TDF flow data in Figure 6 shows exactly the type of return-chasing behavior that has been highlighted by earlier research work. There were clear outflows in the month of March in the worst returning month. Not surprisingly, these negative flows were the highest for the age cohort closest to retirement with the largest extant balances, with less distinct differences in other months of the year. Comparing just the months of February and March between the two charts, we can see distinct differences in investor behavior. The shorter the time horizon and the larger the financial savings balance, the more concerned that investors are with downside market risk. The TDF glidepath accounts for this rising loss aversion with age, but can't fully provide either the downside protection from dampened volatility or the discipline of a fixed portfolio allocation strategy, sufficient to address the aggregate behavioral problems that are evidenced.

FIGURE 6: TDFS WITHIN 20 YEAR HORIZON



Source: Morningstar Asset Flow Data.

FIGURE 7: COMPARISON OF ROLLING AND CUMULATIVE RETURNS FROM EXTREME DOWNSIDE EVENT PERIODS



Source: Morningstar Return Data. Past performance is not indicative of future results.

Unfortunately, by drawing down balances after negative returns and having fewer dollars at work in the portfolio, investors experienced an obvious return drag by missing the substantial market rebound in April and succeeding months. The effects in 2020 were measurable, but likely were mitigated by the very quick market rebound. Retirement savers dodged a potential bullet, as shown in Figure 7. Negative returns that are bigger and longer lasting will likely have a bigger impact on investor trading behavior. We compare 12-month rolling returns and cumulative index values starting twelve months prior for the recent downturn compared to those in 2009 and 2000. Clearly, the

magnitude and duration of impacts on investor retirement savings behavior were substantial over those earlier bear market periods. It is only a matter of time, however, before retirement savers experience another extended bear market event. Our research here clearly indicates what the impact of such a period could be for savers given the reactions to the brief downturn in 2020.

GRI products were offered a substantial boost by the SECURE Act. The interest among participants has grown and the number of offerings has proliferated in the last couple of years. Greater usage of these products is one obvious solution to offering downside protection for investors, by allowing them to better weather market downturns and maintain portfolio allocation discipline. Another solution to the problem at hand could be the greater usage and automatic transition to a MA framework, or by utilizing both approaches in tandem, which we explore further in a companion paper noted above. In their *How America Saves 2020 – Insights to Action*, Vanguard notes specifically the potential advantage of an MA platform during times of uncertainty in arguing for greater systemic usage: “During period of market volatility, participants sometimes make drastic changes to their portfolio based on emotions. In these instances, advice can be instrumental in helping participants keep a long-term perspective and navigate volatility markets with a focus on future goals.”²³ In many frameworks, the usage of GRI products and managed advice go hand in hand.

Appropriate transition age from TDF to managed accounts

Given the evidence of managed account utilization in increasing aggregate savings rates, reducing portfolio risk levels and its potential to meaningfully address the serious measured return drag of 1.5% to 2.0% from investor return-chasing behavior, the potential benefits outweigh the higher average fee burden for managed advice. The question then becomes at what age do the benefits clearly outweigh the potential costs.

Based upon the recent empirical evidence of TDF flow data from 2020, we propose that the appropriate age for automatic transition to managed advice could be as early as 40. The problem of return drag in recent investor behavior is evident by the time that investors are roughly 45, as shown earlier in Figure 6. However, data in Figure 5 shows us that TDF group around age 40 behaves differently than other longer horizon groups and we start to see a transition point in behavioral responses to market downturns.

FIGURE 8

Age “45”				
Target-date 2040	January	February	March	April
2015	1,026	917	1,055	755
2016	788	941	1,155	954
2017	1,164	1,272	1,484	701
2018	1,067	711	1,119	648
2019	1,252	1,120	944	655
5-year average	1,059	992	1,151	743
2020	1,092	796	43	292
Change	3.08%	-19.77%	-96.27%	-60.68%

Age “40”				
Target-date 2040	January	February	March	April
2015	635	752	897	704
2016	739	934	1,011	1,013
2017	1,019	1,111	1,359	796
2018	1,240	881	1,243	903
2019	1,431	1,126	990	929
5-year average	1,013	961	1,100	869
2020	1,166	1,017	688	573
Change	15.13%	5.85%	-37.45%	-34.06%

Source: Morningstar Asset Flow Data.

This data above in Figure 8 shows the behavior in 2020 versus prior five-year averages for these specific target date cohorts. We know that as the horizon shortens and financial balances grow, retirement savers start to change their behavior and loss aversion grows. It makes sense to address the behavior through advice on market behavior and/or recommendation of appropriate downside protection products in a period before any real damage is done. It’s better to shut the barn door before the horse escapes and not afterwards.

Moreover, a longer runway allows for the targeting of an appropriate savings rate, which is likely higher in aggregate than today, and customization of advice around life changes is more beneficial with a greater runway. There are numerous life changes outside of retirement savings, from college savings to refinancing decisions, that are all integrated and can benefit from managed advice. If investors haven't planned on college savings by the time that they are 45 and their kids hit college age, it might be too late. If they have continually refinanced and extended their mortgage term back to 30 years each time they refinanced in order to lower monthly payments, it might be difficult to build up substantial home equity by retirement. As Cerulli Associates notes, "Guiding participants through more immediate financial considerations, such as budgeting, debt management and short-term saving, allows providers to aid and engage more participants and put them in a better position to focus on their long-term saving and investment objectives."²⁴

Finally, the average financial balances indicated in Figure 1 for the 35–44 age group, with 40 as the midpoint, is substantial enough in many managed advice settings to qualify for account minimums and fee breakpoints, where those are relevant. In most cases, when implemented in larger plans, the costs are structured such that they might be 30 to 40 basis points for opt-in participants, but that is often lowered to 25 bp when assets are defaulted into MA programs.²⁵ The cost element in this regard is an important consideration in defaulting to a MA framework from TDF at a particular age.

Morningstar performed a research study of participants moving from both self-directed accounts and from TDF funds. They conclude that after accounting for the 40 basis point annual fee for MA services, both groups saw a median increase of 14–15% in account values at retirement. The pick-up in savings rates was accompanied by portfolios that better adjusted portfolio risk level to specific situations, with higher quality investments that generated an annual return pick-up of 14 to 32 basis points.²⁶ The author of the study believes that the impact on savings habits is where the real value in managed advice lies – "If you are successfully getting younger savers to save more, the cost is worth it."²⁷

Conclusion

While innovations over the last 15 years in automatic enrollments, automatic contribution escalations and QDIA utilization have helped to address the numerous behavioral flaws of investors that have been identified by economists, more work remains. Most individuals continue to under-save for retirement, and their tendency to chase market returns with self-destructive results continues. Luckily, there are solutions that can allow us to continue to improve the system and to address these specific problems. Unfortunately, these potential solutions currently have a low utilization rate in a voluntary opt-in framework. Therefore, the greater use of GRI products in a QDIA framework and usage of hybrid QDIA transition frameworks from TDF to managed accounts at an age as early as 40 would be appropriate for most individual participants and beneficial for systemic retirement outcomes as a whole.

Research clearly shows that managed advice results in higher savings rates and better portfolio outcomes in most instances, where the benefits justify the typical costs. These costs can generally be minimized for plans implementing a default transition framework for managed advice. Our research on recent TDF flow activity shows negative return chasing behavior entrenched by age 45, with some early indication of this behavior starting to manifest at age 40. Historical studies point to return drag costs for investors of 1.4% to 2.0% from such negative market timing. Therefore, given the preponderance of the evidence, we feel that a transition age as early as age 40 is justifiable in terms of benefits relative to typical costs for the average investor.

About Mesirow

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Neither principal nor the underlying assets of target date investments are guaranteed at any time, including the target date, and investment risk remains at all time. There is no assurance that the recommended asset allocation will either maximize returns or minimize risk or be the appropriate allocation in all circumstances for every investor with a particular time horizon.

As described in this guide, each GRI product has its own unique features. The amount that may be paid under a GRI product may be impacted by a number of different factors including, the GRI's contract provisions and the claims paying ability of the product's insurer.

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