In search of a more dynamic QDIA

Abstract

1. Our experience suggests that QDIA options haven't evolved as quickly as other plan design and investment features.
2. Some QDIAs may lose their effectiveness over time.
3. Behavioral finance research suggests that difficulties in considering the future may result in delayed retirement planning today.
4. Participants who use investment advice show higher levels of retirement planning confidence and higher income replacement projections.
5. This research leads us to conclude that a dynamic QDIA may benefit participants.

It's been a decade since the passage of the Pension Protection Act (PPA) paved the way for the adoption of modern plan design features intended to help individuals better prepare for retirement.

In today's technology-driven world, 10 years is a lifetime. Consider for a moment that in 2006, the Apple iPhone had yet to hit the market.

Innovation has led to enhancements across all industries, improving both the products and the services people use and enjoy every day. While the last 10 years has brought great progress in the adoption by retirement plans of qualified default investment alternatives (QDIAs), we have seen limited change in their design and application.

An opportunity exists today for QDIAs to make a major leap forward, in much the same way the iPhone revolutionized the mobile device market. A decade of experience suggests that investment programs would benefit from a new solution that may offer a way for retirement plan participants to optimize their plan's investment mix as they advance in their careers.

1. Industry advancements and the progression of QDIAs

When the PPA was passed in 2006, it represented a significant leap forward in setting people on a course that would help increase their chances of a successful retirement outcome. With it came an increase in modern plan design features — facilitated by automation and integration in recordkeeping and payroll technology — that were rarely embraced prior to the new law.

The PPA has ushered in some notable enhancements:

- Automatic enrollment being utilized in plans has risen from 19% of plans to 62%.[1]
- Automatic escalation being utilized in plans has risen from 9% of plans to 42%.[1]
- Allocation to target date funds has grown from just over 4% to more than 25%.[1]

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It truly has represented a seismic shift. Nowhere is that more evident than in the adoption of QDIAs. Prior to the PPA, an estimated 70% of plan sponsors offered stable-value funds and money market funds as QDIA options. That compares with just 3% today.[2] Plan sponsors have commonly moved to one of the three most popular QDIA types established by the final Department of Labor (DOL) PPA regulations for investing participant contributions:

- **Target date funds** — Age-based options that adjust risk levels over time
- **Balanced or risk-based funds** — Administratively simple solutions to match overall participant risk profiles of the plan as a whole
- **Managed accounts** — Investment management service that allocates contributions based on the age and target retirement date of each participant

Of the three options, plan sponsors have chosen target date funds as their QDIA 72% of the time, balanced or risk-based funds 21% of the time and a managed account solution 4.5% of the time.[3]

The 10-year anniversary of the final PPA regulations offers an ideal milestone to explore how innovations, particularly automating the participant experience, can be applied to QDIAs to help better prepare individuals to arrive at a successful retirement outcome.

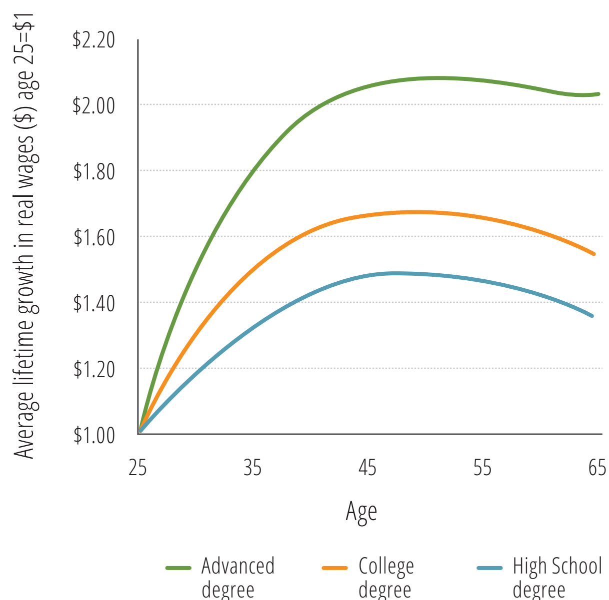
2. The effectiveness of target date funds over time

By design, target date funds serve as a single investment choice for individual investors. When individuals first enter the workforce at a young age, target date funds may be a suitable option because of the fact that there is less variance among that population. For example, they typically maintain a less complex investment profile and generally share a similar life stage.

Using average lifetime earnings based on educational level attained as a measure, the chart to the right illustrates that the least amount of divergence in this area occurs in early career stages.[4] During this period, when the group is the most homogeneous, it makes sense that a single investment strategy may be an appropriate fit for all.

However, as these individuals move further along in their careers, you can see why a single investment option may no longer make the most sense for all.

Average lifetime real earnings curve



Source: 2010 Survey of Consumer Finances

This is just one differentiating factor among many. It's hard to imagine a single target date fund working most effectively for each individual investor in a group as other variables are added to the mix, such as outside assets, health state, expected Social Security benefit, marital status and family circumstance. All these considerations are more likely to be in closer alignment when people begin their career arc, but the spectrum broadens as they progress toward retirement.

Further evidence of why target date funds may be most adequate for a more homogeneous investing audience is the underlying asset allocation of the actual target date offerings. Part of the job of a target date fund manager is to make asset allocation decisions to optimize participant retirement outcomes. Although they all hold true to the basic investment tenet of moving from a more aggressive allocation to a more conservative allocation over time, they are not all created equal.

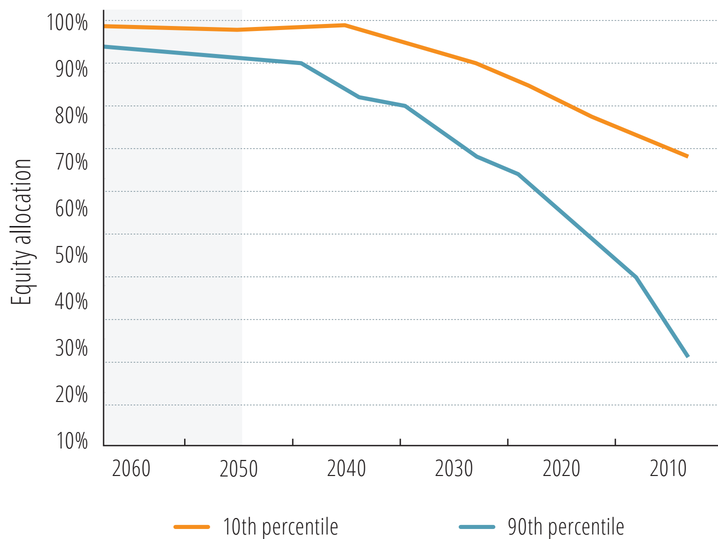
Through an analysis of all target date funds from Morningstar Direct as of April 1, 2016, each fund can be ranked by equity allocation. The difference in equity allocations can then be calculated to determine the variance between the 90th percentile fund and the 10th percentile fund.

As one can see, these target date funds have a similar allocation in their 2060, 2055 and 2050 vintages. However, between 2045 and 2040, they begin to diverge significantly —

and don't ever converge. From this analysis, there are two clear conclusions:

1. There is a consensus that a high-equity allocation may be ideal for individuals who are further from retirement.
2. There is no clear consensus related to what equity holdings should be for individuals who are closer to retirement.

Divergence in allocation over time



This lack of consensus may result from contrasting assumptions among target date fund managers about the balance sheet and risk tolerance of investors, as well as differences in specific investment objectives these solutions are built to address (e.g., minimizing volatility versus maximizing long-term return). Regardless of the primary underlying assumptions driving the allocations, this analysis reveals additional challenges plan fiduciaries face when making a single target date fund a QDIA.

Traditional Monte Carlo simulation, which is the foundation of many retirement forecasting tools, offers additional context. Monte Carlo simulations calculate a range of possible outcomes based on a few key inputs. Common inputs include the following:

- Amount of money invested
- Amount of time the money will be invested
- Asset allocation of the invested money
- Expected investment return
- Standard deviation

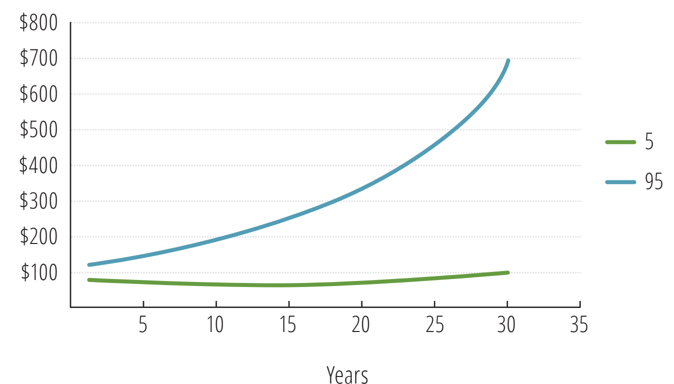
Using these inputs, retirement forecasting tools can produce a range of possible outcomes. Although professionals such as financial advisors can put this information to great use, it may overwhelm the average person.

The industry has acknowledged this by representing the results of the sophisticated simulations in a simplified manner (selecting and showing one to three different scenarios). Unfortunately, projecting one's retirement income isn't that simple. And it gets even more uncertain the further an individual is from retirement.

Retirement forecasting, like most predictions, becomes less reliable based on how far out in the future it attempts to forecast. Think about it in terms of weather. It's far easier to estimate what the temperature will be tomorrow than it is to determine what it will be in two weeks.

The following Monte Carlo simulation, which displays the fifth and 95th percentiles (assuming $100 is invested in a portfolio that comprises 60% equity and 40% bonds), clearly illustrates this point.

Monte Carlo simulation variance



The range of outcomes begins to grow rather significantly when the simulation extends beyond 10-15 years. Now imagine how the variance could grow exponentially when equity and bond splits are not static. That's exactly the challenge of predicting the effectiveness of target date funds.

As the Monte Carlo simulation begins to show a widening variance in predictability, the timing is roughly the same as when the equity position of target date funds begins to vary the most (about 30 years before retirement). It sheds further light on the idea that target date funds may become less suitable for certain participants in a plan over time — namely because the variance among participants becomes

more and more disparate and each person's financial situation becomes increasingly more unique as they approach retirement.

The bottom line is that target date funds may serve as an appropriate entry point to investing but may lose effectiveness for some individuals over time.

Moving individuals into an investment option that considers key retirement planning variables, such as account balance, asset allocations, outside assets, Social Security benefit, tax implications, marital status and family circumstance (as a managed account does), when they are between the ages of 45 and 55 or when they are within 10 to 20 years of retirement may make sense. This is based on how investor traits diverge over time, how target date fund equity positions begin to vary and how Monte Carlo simulations become less reliable over longer periods.

In addition, a managed account may be more appealing to this demographic because these individuals are closer to making decisions about:

- Taking Social Security.
- Creating a spend-down strategy.
- Working beyond retirement.
- Choosing a tax-optimization scenario.

A managed account solution typically addresses all these factors as well as provides guaranteed income solutions, if allowed in your plan. A single QDIA as the investment solution for all participants may present one of the largest challenges to plan sponsors.

3. Behavioral research shows why people delay retirement planning

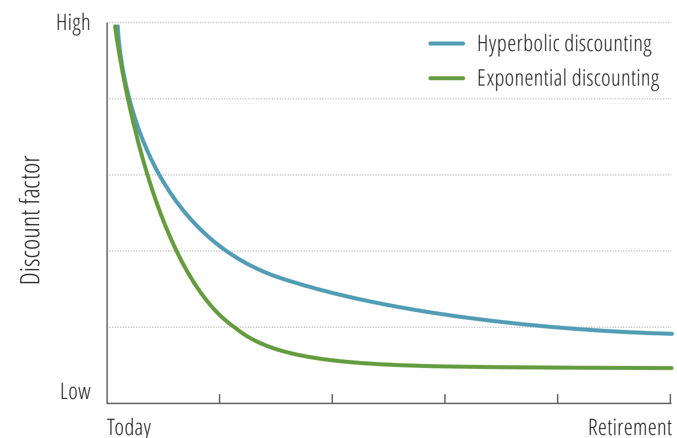
Behavioral finance research offers keen insight to help understand the financial decisions people make, or avoid, throughout their lives. As much as people excel in their ability to multitask and navigate through their day-to-day lives, they also tend to fall woefully short when it comes to making the best financial choices for their future.

In many ways, the reasons why mirror the same challenges presented by Monte Carlo simulations. The distant future is not only hard to predict, but it's also hard to assess. There is a significant amount of existing research on the topic of making trade-offs between rewards now and rewards later. Known in academic circles as temporal discounting, people have a tendency to discount rewards that are further into the future.

A component of temporal discounting is exponential discounting, which was first introduced as a concept nearly 70 years ago. It uses a single discount rate to relate choices about current rewards and future rewards.[5] The basic premise is that discounting the future is a rational thing to do. In financial terms, this logic positions a dollar today as being worth more than a dollar tomorrow.

Modern research has led to the creation of the hyperbolic discounting model, which may better explain why people choose rewards now versus rewards later.[6] Hyperbolic discounting leads people to pick rewards today over rewards tomorrow based on the belief that they will make smarter decisions in the future. This model can help explain why people may delay dieting and exercising, as well as why they consistently choose to spend money now rather than save for retirement.

Discounting the trade off between today and retirement

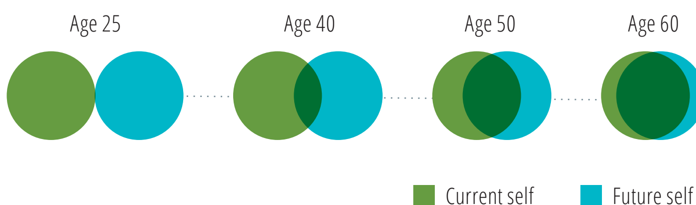


Research from UCLA further supports a significant disconnect between people's views of today and of the distant future. It shows that when people are asked to think about themselves in the distant future, the parts of the brain that activate are the same ones that activate when they are asked to think about a stranger.[7,8] As a result, a 25-year-old may not connect with his or her 65-year-old future self nearly as well as a 60-year-old may be able to.

Based on the same UCLA research, we can expect that those who are further from retirement will discount the value of retirement and delay retirement planning by assuming that they will make the right choices in the future — ultimately causing a delay in retirement planning. The advent of functional magnetic resonance imaging (MRI) technology further confirms this research.[9]

MRI scans show that people remain disconnected with their very distant future self, helping explain why they may choose not to plan for retirement when it is in the very distant future.[9] The closer people get to retirement, the better they can connect with their future self. Also, as retirement approaches, the discount rate applied to retirement decreases, making retirement more valuable and therefore decreasing the likelihood of delaying retirement planning.

How much people connect with their future self



Although behavioral research doesn't identify a definitive point at which people are very likely to start planning for retirement, it does offer a rationale as to why a single QDIA may not be the best option for all plan participants. For example, those who are younger may benefit from a simple default solution, such as a target date fund. As people get closer to retirement and increase their engagement, however, they may gain more value from a managed account to help personalize their strategy.

As people progress in their career life cycle, they will likely accumulate a larger savings balance. This means that there is more to gain — and more to potentially lose — in terms of portfolio value. Moving from a one-for-all investment to one that takes into account personal goals and unique situations may make the most sense.

Beyond the behavioral research previously cited, data shows that as individuals age, they become more receptive to planning for retirement.[7,8,9] This may be a result of their account balance being large enough for them to consider seeking out financial help, or it could simply be because of their increasingly more intricate financial circumstances (e.g., multiple savings accounts, a growing family or specific tax considerations).

Behavioral research — coupled with the life changes people experience as they move toward retirement — supports the development of innovative, dynamic QDIAs that provide personalized asset allocation and planning services as they approach retirement. Based on the results of our research, this move may be most effective when they are between the ages of 45 and 55 or when they are within 10 to 20 years of retirement.

AGE OF HOUSEHOLD	ASSET BALANCE[10]
Under 35 years	6,676
35 to 44 years	35,000
45 to 54 years	84,542
55 to 64 years	143,964
65 to 69 years	194,226
70 to 74 years	181,078
75 and over	155,714

4. Improving retirement planning confidence and higher income replacement

The above findings coupled with other industry research lead to a clear conclusion: Dynamic QDIAs — the use of two different default options to create a solution that may be more aligned with a participant's retirement savings goals — can be the next evolution to further help individuals arrive at a successful retirement outcome.

Dynamic QDIAs can:

- Provide better asset allocation for later-stage workers exactly when target date fund equity positions and personal investment paths begin to diverge.
- Increase the likelihood of people engaging in retirement planning, as well as maximize the value a managed account can provide at the behavioral life stage when it's most appropriate.
- Allow people to receive more personalized retirement strategy recommendations by including outside assets and offering tax-favorable spend-down scenarios based on individual retirement income needs.
- Help participants improve their retirement savings outcome.

Moving people from a target date fund to a managed account at the right time makes sense — it can help people reach their goals. We already know — based on Empower Retirement's Lifetime Income Score℠ (LIS) study — that people who receive paid advice have a significantly higher LIS.[11]

LIS results with a traditional and/or online advisor = **87**

LIS results without any advice = **57**

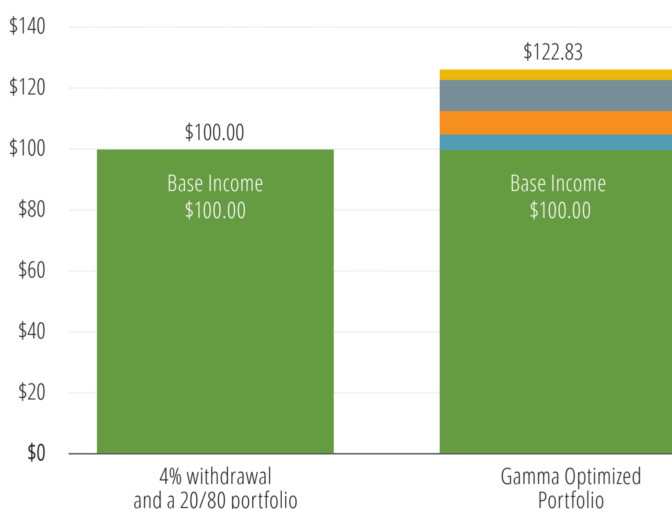
The LIS study includes survey results from more than 4,000 American workers aged 18 to 65. Based on individual responses, it estimates the percentage of working income — the LIS — that American households are on track to replace in retirement. For those receiving paid advice, LIS results are 30 points higher.

Where evidence of advice directly correlates with a likelihood of higher income replacement, it also correlates with a higher level of confidence. According to a recent LIMRA study, 30% of investors who have a written retirement plan score themselves 10 out of 10 in terms of feeling prepared for retirement, compared with only 4% of investors who don't have a written retirement plan.[12]

Finally, Morningstar Investment Management, LLC, through its Alpha, Beta, Now ...Gamma paper, was also able to quantify the value of working with an investment professional when planning for retirement. The paper outlined five key planning techniques:

1. Total wealth approach to asset allocation
2. Use of liability-relative optimization
3. Allocation to a guaranteed lifetime withdrawal benefit
4. Dynamic mortality updating for withdrawals
5. Tax-efficient asset allocation and withdrawal strategy

By using these five techniques (relative to a typical 20% equity/80% fixed income portfolio), participants closer to retirement were able to improve their retirement income by about 22% (or produce the equivalent of 1.89 basis points for alpha). The optimal managed accounts solution would include all five of these techniques.



A decade's worth of PPA experience makes it the right time to take a fresh look at QDIAs — specifically, making dynamic QDIAs an important, next-generation solution to build on the initial foundation of the PPA.

5. Advancing QDIAs to benefit your participants

With a dynamic QDIA, the plan sponsor or the fiduciary would select two default investment options for the plan. A common scenario may include a target date fund and a managed account. Next, the plan sponsor or the fiduciary would designate the grouping criteria, such as years to retirement. The grouping criteria would determine which group would default into the target date fund (or the asset allocation model) and which group would default into the managed account.

The table below outlines several considerations that may drive how to group individuals.

RESEARCH TOPIC	FAR FROM RETIREMENT	CLOSE TO RETIREMENT
Likelihood of planning	Low	High
Use of planning tools	Low	High
Complexity of situation/size of assets	Low/small	High/large
Complexity of planning decision	Low	High
Predictability of retirement	Low	High
Need for personalized allocation	Low	High

Dynamic QDIA — the concept of using two different QDIA options, one for younger and one for older participants, to better align the QDIA with the plan's population and their willingness to engage in retirement planning and the complexity of their investment profile — may address the shortfalls of a single investment option for all plan participants. The default is described as being dynamic because a participant is automatically transferred between investment alternatives when they reach the prescribed transition event.

For example, let's assume that everyone with more than 20 years to retirement defaults into a target date fund and that those with less than 20 years default into a managed account. Using this default strategy when a participant moves within 20 years of his or her retirement date, the recordkeeper would automatically switch the defaulted participant from a target date fund to a managed account. The automatic switch provides the dynamic aspect of this default program. This approach better utilizes modern recordkeeping systems in the way that auto-enroll and auto-increase did in 2006.

The guidelines in the table on the previous page take into consideration that early stage workers may not embrace a managed account. They may not fully value the personalization of a managed account and may not engage in planning for their future. That's not to say that young workers might not benefit from a managed account — especially one designed to deliver planning and advice support relevant for this demographic in areas that include:

- Debt management.
- Budgeting assistance.
- Next-dollar planning support.

Dynamic QDIA considerations for fiduciaries

This research and new insights might prompt fiduciaries to consider a QDIA structure may not have been considered 10 years ago and revisit the DOL requirements finalized in 2007:

"The plan fiduciary must prudently select and monitor an investment fund, model portfolio or investment management service within any category of qualified default investment alternatives in accordance with ERISA's general fiduciary rules. For example, a plan fiduciary that chooses an investment management service that is intended to comply with paragraph (e)(4)(iii) of the final regulation must undertake a careful evaluation to prudently select among different investment management services."[13]

Furthermore, EBSA Field Assistance Bulletin No. 2008-03 confirms that plan sponsors can use multiple default funds in a plan.

Factors to consider in adopting a Dynamic QDIA

- Detailed review of workplace demographics as well as participant saving and investing behaviors may be helpful to establish the benefits of a dynamic QDIA approach.
- A review of participant QDIA usage may be advisable to determine whether participants are reallocating away from target date funds or other current QDIA offerings. This participant behavior may suggest the use of a single investment option that is not aligned with participant objectives.
- An evaluation of current QDIAs can help determine whether glide-path or risk-based models align with participant demographics and whether they may be the best alternative for use as part of a QDIA.
- In the broader context of retirement preparedness, an evaluation of the financial planning needs of participants (retirement income planning, Social Security claiming, tax planning, etc.) can help determine the interest level among participants.

Research indicates that each individual maintains different needs throughout his or her life cycle, deriving different value from default investment solutions along the way. For those further from retirement, target date funds may be appropriate. For those closer to retirement, the planning services and portfolio personalization of a managed account solution may drive better results as financial balance sheets and financial decisions become more complicated.

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Further reading:

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2. Cerulli Associates – Retirement Markets, 2015; Target Date + Managed Account = Winning Combination
3. Vanguard, A powerful combination: Target-date funds and managed accounts.
4. Morningstar Investment Management, LLC, Alpha, Beta, and Now...Gamma

1 Source: https://www.callan.com/research/files/1186.pdf

2 Source: www.plansponsor.com/QDIAs-Expected-to-Gravitate-to-Customization-and-Managed-Accounts/?p=1

3 Source: Cerulli Report – Retirement Markets, 2015

4 Source: corporate.morningstar.com/ib/documents/methodologydocuments/researchpapers/blanchett_true-cost-of-retirement.pdf

5 Source: Samuelson, Paul, 1937; A Note on Measurement of Utility, Rev. Econ. Stud. 4, pp. 155-61

6 Source: Strotz, R., 1955-1956, "Myopia and inconsistency in dynamic utility maximization." Review of Economic Studies 23, No. 3, 165-180.

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8 Source: Pronin, E. & L. Ross. 2006. Temporal Differences in Trait Self-Ascription: When the Self is Seen as an Other. J. Pers. Soc. Psychol. 90: 197-209

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10 Source: http://www.census.gov/people/wealth

11 Source: Empower Retirement, Lifetime Income Score VI, The Road Best Traveled, April 2016

12 Source: 2015 Retirement Income Reference Book (LIMRA Secure Retirement Institute)

13 Source: https://www.dol.gov/ebsa/regs/fedreg/final/07-5147.pdf

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