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Retirement distribution decisions among DC participants

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- The overwhelming majority of retirement-age defined contribution (DC) plan participants leave their employer's retirement plan within five years of separation from service, mostly for a rollover individual retirement account (IRA). When plans permit flexible distributions, retirement-age participants are more likely to remain in the employer plan. This finding has implications for the "to versus through" debate in target-date fund design, as well as for the demand for in-plan versus out-of-plan retirement income programs.

- Seven in 10 retirement-age participants (defined as those age 60 and older terminating from a DC plan) have preserved their savings in a tax-deferred account after five calendar years. In total, 9 in 10 retirement dollars are preserved, either in an IRA or in an employer plan account.

- The 3 in 10 retirement-age participants who cashed out from their employer plan over five years typically hold smaller balances. The average amount cashed out is approximately $21,000, whereas participants preserving assets have average balances ranging from $157,700 to $307,200, depending on the termination year cohort.

- Only about one-fifth of retirement-age participants and one-fourth of assets remain in the employer plan after five calendar years following the year of termination. In other words, most retirement-age participants and their plan assets leave the employer-sponsored qualified plan system over time. Only one-quarter of plans allowed terminated participants to take ad hoc partial distributions. However, in plans allowing ad hoc partial distributions, 22% of participants remain in the plan, compared with only 18% of participants in plans without ad hoc partial distributions, a relative increase of about 22%. Similarly, 25% of assets remain in the plan, compared with 21%, a relative increase of about 20%.

Introduction

As DC plans have emerged as the dominant type of private-sector retirement plan, policymakers, plan sponsors, and providers have increasingly focused attention on the distribution decisions older participants make when they stop working. Participant behavior at retirement age is of particular interest in addressing two contemporary questions: First, should the glide path of target-date funds be based on a "to retirement" or a "through retirement" approach? The former would suggest a more conservative glide path, assuming assets are used immediately at retirement; the latter, an investment strategy that recognizes that assets are generally preserved for several years after retirement. Second, should retirement income programs—designed to help participants translate account balances into income streams—be offered within qualified retirement plans? Or is the IRA rollover marketplace the more likely destination for plan assets in retirement?

To better understand the decisions made by participants at retirement, this paper examines the decisions made by participants age 60 and older who separated from service with their employer. For convenience, we define this group as "retirement-age" participants—although some will have separated from service with one employer only to continue to work with another.

Data characteristics

The data for this analysis come from Vanguard's DC recordkeeping clients over the period January 1, 2008, through December 31, 2018. We examine the plan distribution behavior through year-end 2018 of 451,000 participants age 60 and older who terminated employment in calendar years 2008 through 2017 (**Figure 1**). The average account balance of participants in this sample ranged from $103,100 to $179,100, depending on the termination year cohort.

Figure 1. Participants age 60 and older by year of termination cohort

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	All
Number of participants	29,700	35,300	30,900	33,800	37,300	44,800	49,100	58,200	66,500	65,400	451,000
Average balances											
Prior to termination	$118,800	$103,100	$120,400	$133,600	$143,600	$157,000	$172,200	$176,200	$170,800	$179,100	$154,300
2018 year-end	$128,300	$127,700	$144,400	$153,800	$167,700	$176,300	$184,900	$188,800	$185,100	$185,100	$169,900

Notes: December 31, 2018, value for assets remaining in the plan plus the actual transaction value for assets distributed from the plan.

Source: Vanguard, 2019.

Investments in Target Retirement Funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year (the target date) when an investor in the fund would retire and leave the work force. The fund will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date. An investment in the Target Retirement Fund is not guaranteed at any time, including on or after the target date.

Overall, approximately half of the participants in our sample had account balances of less than $50,000 (**Figure 2**). Three in 10 retirement-age participants had worked for the plan sponsor less than ten years—one factor affecting the number of smaller balances, since account balances rise with tenure. Forty-four percent of retirement-age participants had 20 years or more of job tenure. These longer-tenured participants had average account balances of about $236,000.

Distribution options

DC plan participants who separate from service with an employer may choose among several options. They may:

- Remain in their employer's plan without initiating installment payments.[1]
- Remain in their employer's plan while taking installment payments.
- Roll over their assets to an IRA.
- Take their account balance in cash.
- Pursue a combination of the above strategies.

Figure 2. Account balance and tenure characteristics

Participants age 60 and older by year of termination cohort

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	All
Average balance (prior to termination)											
<$1,000	11%	10%	9%	9%	8%	8%	9%	10%	9%	11%	10%
$1,000–$9,999	17	19	17	17	16	15	15	15	16	16	16
$10,000–$24,999	13	13	12	12	12	11	11	11	12	11	11
$25,000–$49,999	12	13	13	12	12	11	11	11	11	11	11
Subtotal: < $50,000	53%	55%	51%	50%	48%	45%	46%	47%	48%	49%	48%
$50,000–$99,999	15%	15%	15%	14%	14%	14%	14%	13%	13%	13%	14%
$100,000–$249,999	19	19	20	20	20	21	19	18	18	17	19
$250,000+	13	11	14	16	18	20	21	22	21	21	19
Subtotal: $50,000 or more	47%	45%	49%	50%	52%	55%	54%	53%	52%	51%	52%
Job tenure (years, prior to termination)											
<3	13%	11%	12%	11%	11%	11%	13%	14%	15%	18%	13%
4–9	19	17	17	17	17	17	17	16	16	16	17
10–19	23	25	25	26	25	26	26	26	26	25	26
20+	45	47	46	46	47	46	44	44	43	41	44
Average account balance by job tenure											
<3	$23,100	$20,500	$26,000	$29,800	$34,100	$35,500	$32,200	$29,500	$30,800	$30,900	$29,900
4–9	56,000	49,000	57,000	62,400	64,700	79,200	77,400	82,500	72,900	76,200	69,900
10–19	101,000	86,600	100,800	108,200	119,900	132,000	143,000	146,500	144,000	152,700	129,900
20+	180,500	150,000	179,000	198,800	218,500	233,300	262,900	271,900	267,700	288,700	236,000

Source: Vanguard, 2019.

1 Plan sponsors have the option of requiring participants with balances of less than $5,000 to leave the plan. If the balance is greater than $1,000 and the participant doesn't make a distribution election, the plan sponsor must roll over the balance to an IRA; balances of less than $1,000 can be distributed in cash (i.e., as a check payable to the participant).

During the 2008–2018 period, 80% of participants age 60 and older who terminated employment chose a single option (100% of account disbursements fell into a single category); the rest chose a combination of the distribution options. In our analysis, we categorized participants based on whether 80% or more of their account disbursements fell into a particular category. We created a "combination" category for participants whose behavior could not be classified according to the 80% rule.[2]

Participant distribution decisions

Our analysis approach is based on the calendar year of termination cohorts. Participants terminating in each of the calendar years in our sample, 2008 through 2017, are considered a distinct termination year cohort and are followed separately through year-end 2018. Thus, the 2008 cohort, which consists of participants age 60 and older separating from service in calendar year 2008, is examined over ten subsequent calendar years: 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, and 2018. The 2017 cohort is analyzed only over one subsequent calendar year: 2018. We only analyze participant DC plan behavior—if a participant rolls over the DC plan account balance to an IRA and then cashes out the IRA, we do not observe the IRA cash-out behavior in this analysis.

As the 2008 termination year cohort spans the longest time period, it is perhaps the best illustration of the dynamics of plan distribution behavior over time (**Figures 3 and 4**). In the 2008 termination year cohort:

- Two-thirds of retirement-age participants had preserved assets in a tax-deferred account through the end of 2018 (Figure 3, first column). Specifically, 2% remained in the plan without taking installment payments, 7% remained in the plan while taking installment payments, and 57% completed an IRA rollover.[3]
- About 3 in 10 retirement-age participants took a cash-out (cashing out either their entire account or more than 80%), accounting for 5% of assets.
- About 9 in 10 retirement savings dollars were preserved through the end of 2018. Specifically, 4% of assets remained in the plan with no installment payments, 13% of assets remained in the plan with installment payments, and 73% of assets rolled over to an IRA.[4]

We regard the percentage of assets "preserved for retirement" as a low estimate because some of the "combination" participants also preserved part of their savings. The 4% of participants who used a combination strategy accounted for 5% of assets, some of which were preserved for retirement.

2 See the Methodology section on page 12 for additional details regarding our classification scheme.

3 About 6 in 10 participants with installment payouts are satisfying the Internal Revenue Code's rules for required minimum distributions (RMD).

4 For an in-depth analysis of IRA trends from the Investment Company Institute (ICI), see Holden, Sarah, and Steven Bass, 2016. *The IRA Investor Profile: Traditional IRA Investors' Activity, 2007–2014.* ICI Research Report. Available at www.ici.org. The ICI reports that in 2014, only 23% of traditional IRA-owning individuals took a withdrawal.

Figure 3. Plan distribution behavior as of year-end 2018

Participants age 60 and older by termination year cohort

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of participants at year-end 2018										
Remain in plan no installments	2%	3%	5%	7%	9%	10%	14%	18%	23%	29%
Remain in plan taking installments	7	7	7	6	6	6	6	6	5	5
Rollover	57	57	56	56	56	57	54	49	46	40
Preserved for retirement	66	67	68	69	71	73	74	73	74	74
Combination	4%	4%	4%	4%	4%	4%	3%	4%	3%	3%
Cash	30	29	28	27	25	23	23	23	23	23
Percentage of assets at year-end 2018										
Remain in plan no installments	4%	7%	9%	12%	14%	16%	19%	26%	30%	35%
Remain in plan taking installments	13	13	12	11	11	10	8	9	8	7
Rollover	73	70	68	68	67	67	65	58	55	51
Preserved for retirement	90	90	89	91	92	93	92	93	93	93
Combination	5%	6%	7%	5%	5%	4%	5%	5%	4%	5%
Cash	5	4	4	4	3	3	3	2	3	2

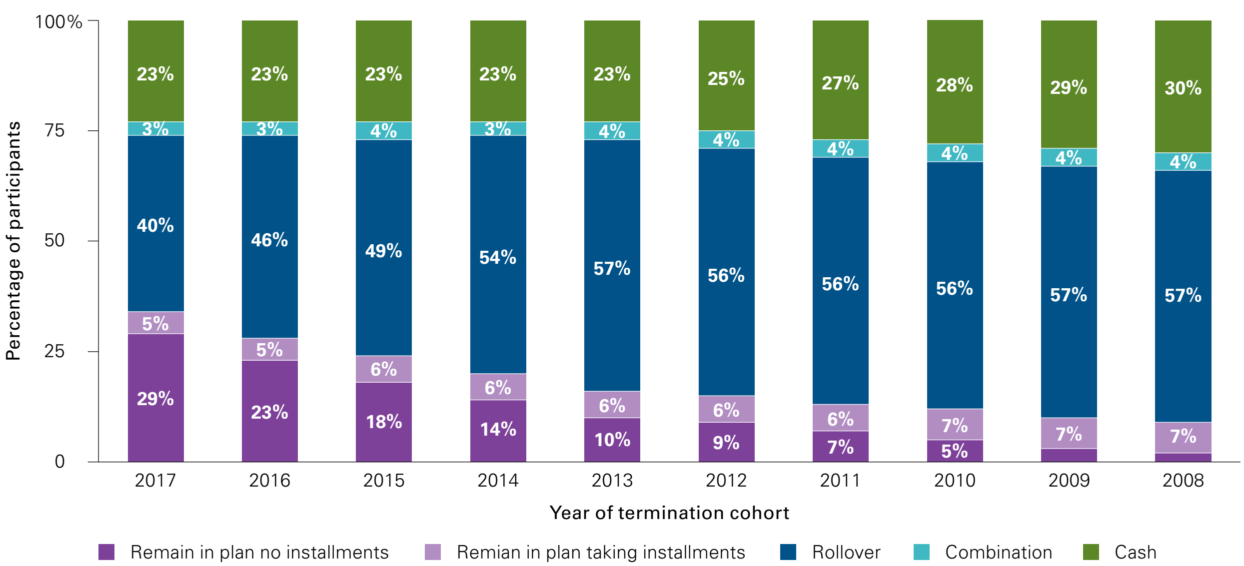
Note: December 31, 2018, value for assets remaining in the plan plus the actual transaction value for assets distributed from the plan. Participants are assigned to "cash," "rollover," and "remain in plan taking installments" if greater than 80% of their account disbursements fell into these categories. Participants were categorized as "remain in plan no installments" if more than 80% of their account balance remained in the plan. All other participants were categorized as "combination" as one disbursement type did not dominate their account disbursements and less than 80% of their account remained in the plan.

Source: Vanguard, 2019.

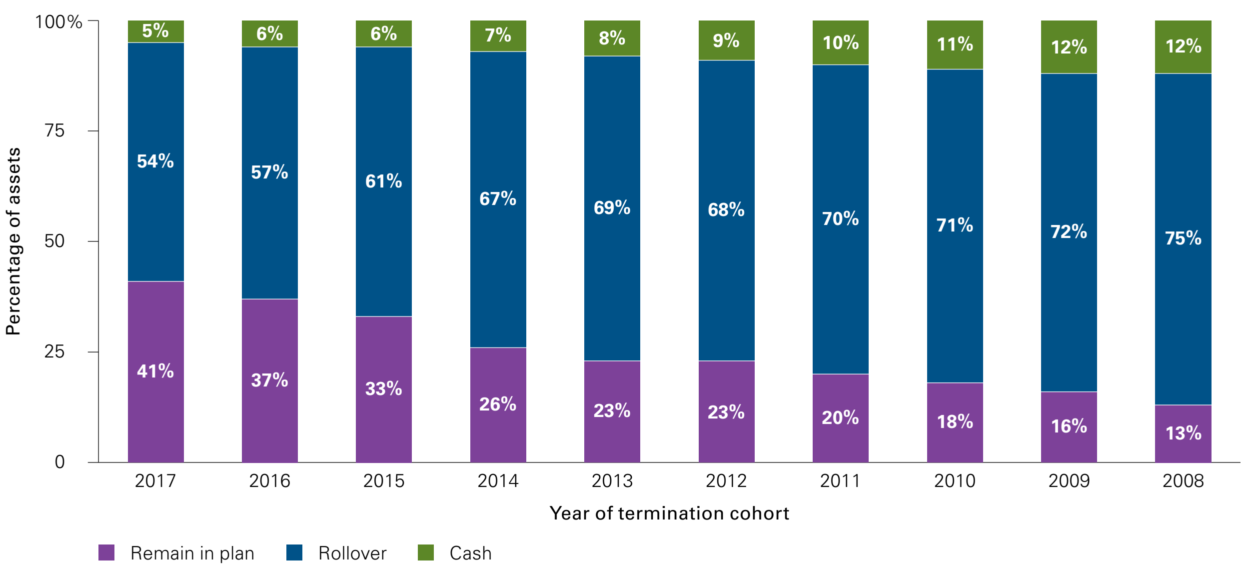
Figure 4. Plan distribution behavior as of year-end 2018

Participants age 60 and older by termination year cohort

Participants



Assets



Notes: December 31, 2018, value for assets remaining in the plan plus the actual transaction value for assets distributed from the plan. Participants were assigned to "cash," "rollover," and "remain in plan taking installments" if greater than 80% of their account disbursements fell into these categories. Participants were categorized as "remain in plan no installments" if more than 80% of their account balance remained in the plan. All other participants were categorized as "combination" as one disbursement type did not dominate their account disbursements and less than 80% of their account remained in the plan.

Source: Vanguard, 2019

The other cohorts—retirement-age participants terminating in calendar years 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, and 2017—demonstrate similar behavior. The main difference is that, given the shorter time periods until the end of 2018, a greater proportion of retirement-age participants and their assets remain in employer plans. For example, in the 2017 termination year cohort, 29% of participants remained in the plan with no installments (versus 2% in the 2008 cohort), and only 40% of participants rolled over to an IRA (versus 57% for the 2008 cohort). Another difference is that cash-outs drift up by several percentage points over time.

Impact of small balances

Cash distributions are strongly linked to smaller balances (**Figure 5**). The average balance of participants cashing out their entire account balance was around $21,000 in all termination year cohorts. By comparison, the average balance for participants using any other strategy—remaining in the plan without installments, remaining in the plan with installments, rolling over to an IRA, or using a combination of those—was between $157,700 and $307,200, depending on the strategy and termination year cohort.

Figure 5. Distribution behavior and average balances

Participants age 60 and older by year of termination cohort

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average
2018 average account balance by year of termination cohort											
Remain in plan no installments	$246,500	$240,100	$266,500	$259,400	$265,300	$265,000	$250,400	$261,500	$243,300	$223,700	$252,200
Remain in plan taking installments	255,400	249,700	265,700	286,200	307,200	297,300	263,200	273,500	279,500	262,300	274,000
Rollover	163,500	157,700	175,600	186,000	197,300	207,700	226,100	224,600	224,500	236,300	199,900
Combination	174,300	187,300	209,300	197,200	222,100	223,700	248,600	267,900	245,300	275,400	225,100
Cash	20,000	19,500	21,000	21,900	22,600	21,400	20,900	19,800	19,900	18,400	20,600

Note: December 31, 2018, value for assets remaining in the plan plus the actual transaction value for assets distributed from the plan.
Source: Vanguard, 2019.

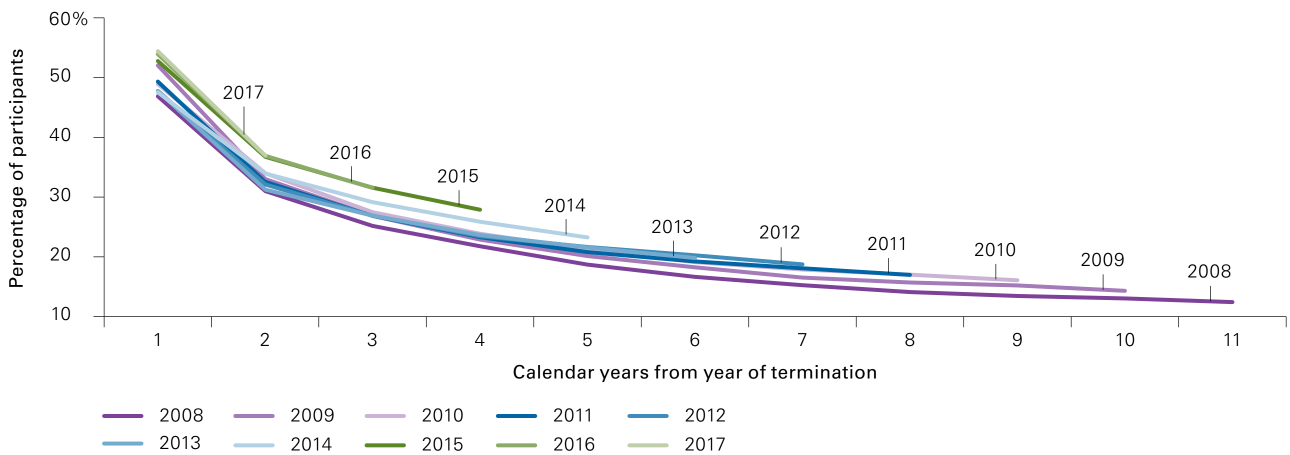
In-plan behavior

Participants categorized as "remain in plan no installments," "remain in plan taking installments," and "combination" all have some assets in the plan at the end of our measurement period. For the 2008 cohort, 12% of plan participants have some assets remaining in an employer plan after ten calendar years following the year of termination (**Figure 6**). In addition, 13% of the assets remained in the plan after ten years. Data from the other calendar year cohorts suggest a similar pattern, although they cover shorter periods.

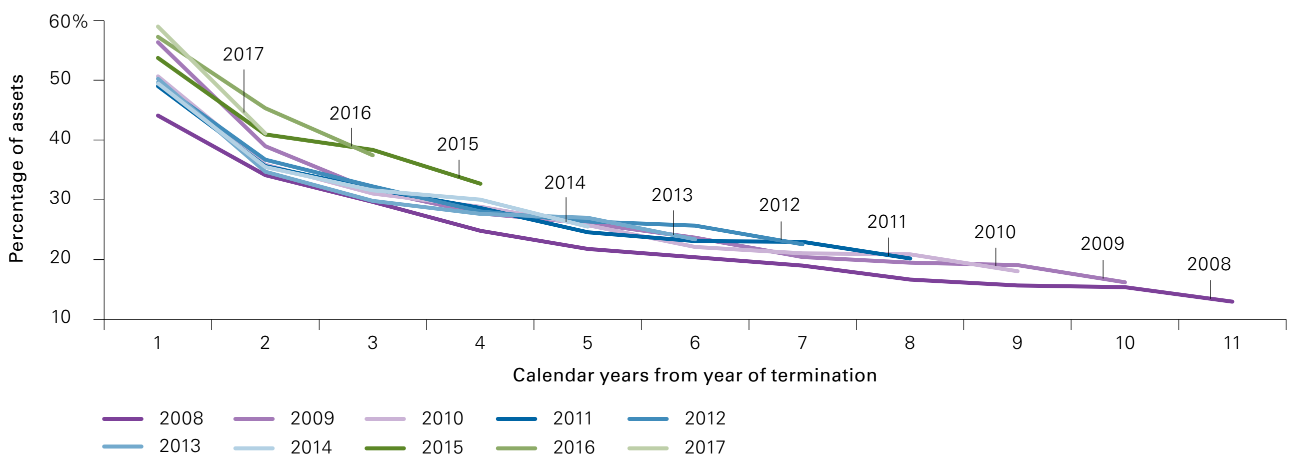
Figure 6. In-plan behavior over time

Participants age 60 and older by termination year cohort

Percentage of participants remaining in a plan without taking installments, remaining in a plan while taking installments, or using a combination of options



Percentage of assets remaining in plan



Note: The participant analysis includes three of the participant categories: remain in plan no installments, remain in plan taking installments, and combination. The basis for the asset analysis represents the December 31, 2018, value for assets remaining in the plan plus the actual transaction value for assets distributed from the plan.

Source: Vanguard 2019.

Role of plan rules

One important question is how plan rules on partial distributions might affect participants' willingness to stay within an employer plan. Seventy-six percent of Vanguard DC plans in 2017 required terminated participants to take a distribution of their entire account balance if an ad hoc partial distribution was desired.[5] For example, a terminated participant who has $100,000 in savings, and wishes to make a one-time withdrawal of $100, must withdraw all savings from the plan—by rolling over the entire $100,000 to an IRA and withdrawing the $100 from the IRA, or by executing an IRA rollover of $99,900 and taking a $100 cash distribution.

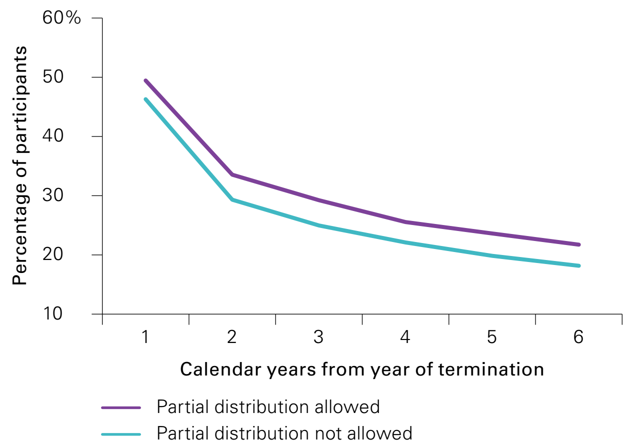
Only 24% of plans allow terminated participants to take ad hoc partial distributions. However, plans allowing partial distributions tend to be larger plans, and as a result, 45% of retirement-age participants were in plans that allow ad hoc partial distributions.

It appears that participant behavior is affected by plan rules on partial distributions. For the 2013 termination year cohort, we analyzed participants in plans that allowed partial distributions separately from those in plans that did not. Their distribution behavior follows a similar trend over time. However, about 20% more participants and 20% more assets remain in the employer plan when ad hoc partial distributions are allowed (**Figure 7**). In the 2013 cohort, five years after termination, 22% of participants and 25% of assets remain in plans allowing partial distributions compared with only 18% of participants and 21% of assets for plans that do not allow partial distributions. This result suggests that not allowing partial distributions is one factor leading participants to exit their employer's plan.

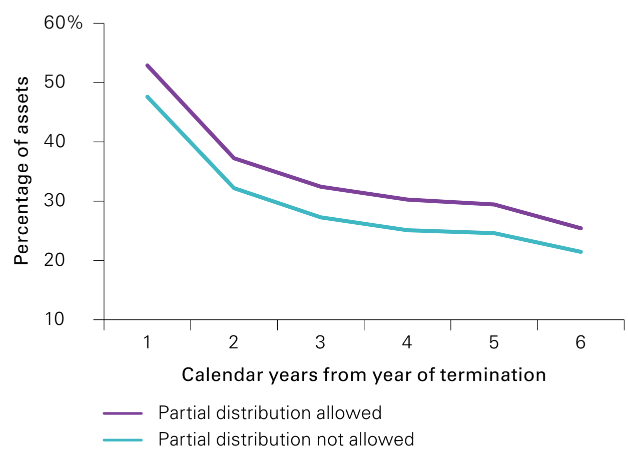
Figure 7. In-plan behavior and plan rules

Participants age 60 and older for 2013 termination year cohort

Percentage of participants remaining in a plan without taking installments, remaining in a plan while taking installments, or using a combination of options



Percentage of assets remaining in plan



Note: The participant analysis includes three of the participant categories: remain in plan no installments, remain in plan taking installments, and combination. The asset analysis represents the December 31, 2018, value for assets remaining in the plan plus the actual transaction value for assets distributed from the plan for all five participant categories.

Source: Vanguard 2019.

5 Ad hoc partial distributions are distinct from the periodic regular installment payments discussed previously.

IRA withdrawal decisions

If many participants leaving an employer plan roll over to an IRA, how do they behave once they have transferred to the IRA? Our data do not permit us to track individual participant decisions across the myriad number of financial institutions they might roll over to. However, independent survey data provide some insights into IRA behavior. Generally speaking, withdrawals from IRAs are infrequent until the RMD rules apply.

The Investment Company Institute (ICI) maintains an account-level database with more than 17 million individual IRA investors and also conducts an annual survey of IRA-owning households in the United States. The ICI reported that in 2016, 22% of IRA-owning individuals age 60 to 69 took a withdrawal and 79% of individuals age 70 or older took a withdrawal (**Figure 8**). The institute also reported that 58% of individuals age 70 or older based the withdrawal amount on the RMD rules.

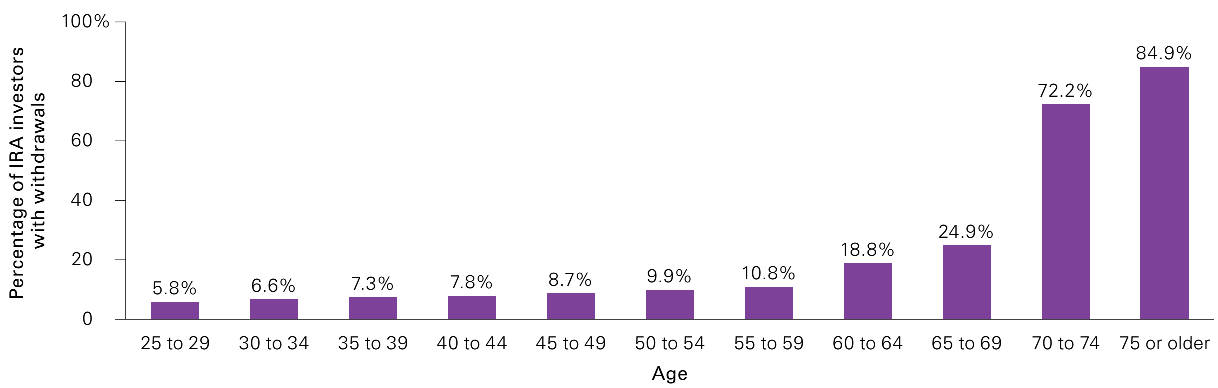
The Employee Benefit Research Institute (EBRI) analyzed IRA withdrawal behavior using a nationally representative sample of households ages 61 to 79.[6] The EBRI reported that 21% to 41% of IRA households in their 60s (depending on the age of the household) took a withdrawal from their IRA. By comparison, over 80% of households in their 70s, when RMDs apply, took a withdrawal from their IRA.

Finally, Poterba, Venti, and Wise examined withdrawals from personal retirement accounts (PRAs), which combine all tax-deferred accounts, including 401(k) plans, IRAs, and similar accounts.[7] They found that only 18% of PRA-owning households between the ages of 60 and 69 took withdrawals, with annual withdrawals representing about 2% of account balances. After reaching age 72, 68% of PRA-owning households took withdrawals, with annual withdrawals representing about 5% of account balances. The authors also noted that during the period they studied, the average rate of return earned on PRA balances was higher than the withdrawal rate, and average PRA balances continued to grow through at least age 85.

Overall there is little evidence of widespread withdrawals from IRAs for participants prior to the RMD age.

Figure 8. Percentage of individuals making IRA withdrawals

Individuals owning traditional IRAs, 2016



Source: Holden and Bass (2016).

6 See Banerjee, Sudipto, 2013. *IRA Withdrawals: How Much, When, and Other Saving Behavior.* Employee Benefit Research Institute. Available at www.ebri.org.

7 See Poterba, James M., Steven F. Venti, and David A. Wise, 2011. *The Drawdown of Personal Retirement Assets.* National Bureau of Economic Research. Available at www.nber.org.

Implications

Our analysis of retirement-age plan participants demonstrates a number of important findings regarding plan distribution behavior. First, 7 in 10 participants take steps to preserve assets, and 9 in 10 plan dollars are preserved for retirement. Second, cash-out behavior is strongly linked to having a smaller account balance. Those cashing out have average balances of $21,600. Other behaviors—remaining in the plan, rolling over to an IRA, or using a combination of strategies—are linked to average balances from $157,700 to $307,200 (depending on the year of termination). Third, only about one-fifth of retirement-age participants and one-fifth of assets remain in the employer plan after five calendar years following the year of termination. In other words, most retirement-age participants and their plan assets leave the employer-sponsored qualified plan system over time. This termination behavior seems linked to plan rules that inhibit ad hoc or flexible withdrawals from DC plans. Finally, in most retirement-age IRA-owning households, most IRA assets are not accessed until after age 70, when the RMD rules apply.

These findings have implications for two contemporary issues: the “to versus through” debate in the design of the glide path for target-date funds and the expected demand for in-plan retirement income programs.

In terms of target-date funds, our findings suggest that most plan assets are preserved in tax-deferred retirement accounts. Participants’ strong tendency to preserve assets for retirement supports a “through” glide path in target-date funds—in other words, a glide path that assumes that participants will remain invested into retirement. In terms of retirement income strategies, it appears that most retirement income decisions will be made outside of employer plans because the bulk of assets are rolled over into IRAs. Moreover, fewer than 10% of participants make use of current in-plan installment options.

It is possible, of course, that in-plan behavior among retirement-age participants could change, especially as plans begin to introduce more payout structures for retirement-age participants, or lift restrictions on ad hoc withdrawals. Many larger plans offer other features—such as lower-cost investment options, stable value funds, or advice programs—that either are not available in the IRA marketplace or are available at a higher cost. Additional education about these benefits might encourage more participants to remain in their plans.

An important future research topic concerns participant motivation for choosing an IRA rollover compared with an employer sponsored qualified plan account, and whether this motivation is explained by the desire for consolidation and financial simplification, the influence of advisors, or participant concerns, real or imagined, about the rules imposed by the employer plan on retirees.

Methodology

DC plan participants who separate from service with an employer may choose among several options. They may:

- Remain in their employer's plan without initiating installment payments.[8]
- Remain in their employer's plan while taking installment payments.
- Roll over their assets to an IRA.
- Take their account balance in cash.
- Pursue a combination of the above strategies.

In analyzing those remaining in their employer's plan, we separately distinguished those who remained in their employer plan and also established installment payments from their account. Sixty-one percent of plans on the Vanguard recordkeeping system in 2017 allowed participants to establish installment payments—periodic monthly, quarterly, or annual payments from their account. Nearly all plans have automated RMD payment. During the 2008–2018 period, 80% of participants age 60 and older who terminated employment chose a single option (100% of account disbursements fell into a single category); one-fifth chose a combination of the distribution options.

In our analysis, we categorized participants based on whether 80% or more of their account disbursements fell into a particular category. We are able to categorize participant assets based on the both the participant category and the actual dollar flows. For example, suppose that three years after termination, a participant had taken a cash distribution equal to 15% of his or her account balance, with 85% of assets remaining in the plan account. In terms of participant category, the participant would be classified as remaining in the plan; in terms of asset flows, 15% of flows could be categorized as "cash" and 85% of flows as "remaining in the plan."

We created a "combination" category for participants whose behavior could not be classified according to the 80% rule. For example, if a participant cashed out 50% of assets and rolled over 50% of assets to an IRA, he or she was classified as a "combination" participant because neither strategy (cash-out or rollover) dominated the distribution decision by exceeding 80% of assets. In our analysis of aggregate asset flows, the assets are classified based on actual flows—50% rollover and 50% cash distribution.

8 Plan sponsors have the option of requiring participants with balances of less than $5,000 to leave the plan. If the balance is greater than $1,000 and the participant doesn't make a distribution election, the plan sponsor must roll over the balance to an IRA; balances of less than $1,000 can be distributed in cash (i.e., as a check payable to the participant).

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All investing is subject to risk. Annuity income guarantees are subject to the claims-paying ability of the issuing insurance company.

When taking withdrawals from an IRA before age 59½, you may have to pay ordinary income tax plus a 10% federal penalty tax.

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