Retirement distribution decisions among DC participants

Vanguard research | December 2013

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). The Great Recession and more recent financial market volatility did not appear to have had an impact on the distribution decisions made by retirement-age plan participants. 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.

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1. The authors would like to thank Daniel C. Proctor for his support of the data analysis.

Executive summary

The Great Recession. This paper, an update to our December 2010 analysis of retirement-age DC plan participant distribution decisions, extends our analysis through the end of 2012. Our analysis in particular includes older participants terminating in 2008 and 2009, years marked by a global financial crisis and a severe decline in stock prices. During that period, the behavior of retirement-age participants was similar to that of both earlier- and later-year cohorts.

Preservation of assets. 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 employer plan account.

Cash-out of smaller balances. 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 $20,000, whereas participants preserving assets have average balances ranging from $150,000 to $225,000, depending on the year of termination cohort.

In-plan behavior. 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. Only 10% of plans allow terminated participants to take ad hoc partial distributions. However, about 50% more participants and assets remain in the employer plan when ad hoc partial distributions are allowed.

IRA behavior. Independent research indicates that withdrawals from IRAs are infrequent among retirement age account holders until age 70, when the required minimum distribution (RMD) rules apply.

Implications. These findings have implications for the design of target-date funds[2] and retirement income programs. The tendency of participants to preserve plan assets at retirement supports the notion of "through" glide paths in target-date fund design. In other words, target-date designs should encourage an investment strategy at retirement that recognizes assets are generally preserved for several years post-retirement. Also, with the rising importance of lump-sum distributions, participants will need assistance in translating these pools of savings into a regular income stream. Based on current retirement-age participant behavior, most of these retirement income decisions will be made in the IRA marketplace, not within employer sponsored qualified plans, although this may evolve gradually with the growing incidence of in-plan payout structures. One way sponsors might encourage greater use of in-plan distributions is by eliminating rules that preclude partial ad hoc distributions from accounts.

2 Investments in target-date 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 workforce. The fund will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date. An investment in a target-date fund is not guaranteed at any time, including on or after the target date.

Background

As defined contribution (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 post-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 comes from Vanguard's DC recordkeeping clients over the period January 1, 2004, through December 31, 2012. We examine the plan distribution behavior through year-end 2012 of 266,900 participants age 60 and older who terminated employment in calendar years 2004 through 2011 (**Figure 1**). The average account balance of participants in this sample ranged from $106,800 to $149,400, depending on the year of termination cohort.

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

	Year of termination cohort								All
	2004	2005	2006	2007	2008	2009	2010	2011	
Number of participants	20,800	23,600	25,800	32,600	37,000	44,600	39,900	42,600	266,900
Average balances									
Before termination	$106,800	$116,400	$128,600	$135,100	$127,900	$108,600	$130,200	$142,700	$125,700
2012 year-end	$122,600	$130,200	$139,600	$138,900	$131,200	$125,500	$140,500	$149,400	$135,500

Note: December 31, 2012 value for assets remaining in the plan plus actual transaction value for assets distributed from the plan.

Source: Vanguard, 2013.

Approximately half of the participants in our sample had account balances of less than $50,000 (**Figure 2**), depending on the year of termination cohort. Three in 10 retirement-age participants had worked for the plan sponsor less than 10 years—one factor affecting the number of smaller balances, since account balances rise with tenure. About 45% of retirement-age participants had 20 years or more of job tenure. These longer-tenured participants had average account balances of about $190,000.

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.[3]
- Remain in their employer's plan taking installment payments.
- Roll over their assets to an IRA.
- Take their account balance in cash.
- Pursue a combination of the above strategies.

During the 2004-2012 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 these 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.[4]

Participant distribution decisions

Our analysis approach is based on calendar year of termination cohorts. Participants terminating in each of the calendar years in our sample, 2004 through 2011, are considered a distinct year of termination cohort and are followed separately through year-end 2012. Thus, the 2004 cohort, which consists of participants age 60 and older separating from service in calendar year 2004, is examined over eight subsequent calendar years: 2005, 2006, 2007, 2008, 2009, 2010, 2011, and 2012. The 2011 cohort is analyzed only over one subsequent calendar year: 2012. We can 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.

3 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).

4 See the Methodology section at the end of this report for additional details regarding our classification scheme.

Figure 2. Account balance and tenure characteristics

Participants age 60 and older by year of termination cohort

	Year of termination cohort								All
	2004	2005	2006	2007	2008	2009	2010	2011	
Account balance (Prior to termination)									
<$1,000	9%	9%	7%	10%	10%	10%	9%	8%	9%
$1,000-$9,999	16	15	15	16	16	18	16	16	16
$10,000-$24,999	14	13	13	11	13	13	12	12	13
$25,000-$49,999	14	14	13	12	13	13	13	12	13
Subtotal: < $50,000	**53%**	**51%**	**48%**	**49%**	**52%**	**54%**	**50%**	**48%**	**51%**
$50,000-$99,999	17%	17%	17%	15%	15%	15%	15%	14%	15%
$100,000-$249,999	19	19	21	21	19	19	20	21	20
$250,000+	11	13	14	15	14	12	15	17	14
Subtotal: $50,000 or more	**47%**	**49%**	**52%**	**51%**	**48%**	**46%**	**50%**	**52%**	**49%**
Job tenure (years, prior to termination)									
<3	11%	11%	11%	11%	13%	12%	12%	11%	11%
4-9	20	19	21	20	18	17	17	17	18
10-19	24	23	23	24	24	25	25	26	25
20+	45	47	45	45	45	46	46	46	46
Average account balance by job tenure									
<3	$32,500	$39,400	$37,200	$33,300	$24,000	$20,200	$26,700	$28,900	$28,700
4-9	$50,800	$49,900	$56,200	$66,400	$57,900	$50,400	$29,100	$63,200	$57,100
10-19	$95,600	$102,900	$115,100	$119,900	$105,200	$86,400	$102,800	$109,500	$104,000
20+	$154,300	$166,900	$187,500	$192,900	$199,000	$165,000	$197,700	$218,700	$188,600

Source: Vanguard, 2013.

As the 2004 year of termination 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 2004 year of termination cohort:

- Two-thirds of retirement-age participants had preserved assets in a tax-deferred account through the end of 2012 (**Figure 3**, first column). Specifically, 4% remained in the plan with no installments, 6% remained in the plan with installment payouts[5], and 56% completed an IRA rollover.
- 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 2012. Specifically, 7% of assets remained in the plan with no installment payments, 9% of assets remained in the plan with installment payments, and 72% of assets rolled over to an IRA.

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 5% of participants, who used a combination strategy, accounted for 7% of assets, some of which were preserved for retirement.

The other cohorts—retirement-age participants terminating in calendar years 2005, 2006, 2007, 2008, 2009, 2010, and 2011—demonstrate similar behavior. The main difference is that, given the shorter time periods until the end of 2012, a greater proportion of retirement-age participants and their assets remain in employer plans. For example, in the 2011 year of termination cohort, 26% of participants remained in the plan (versus 4% in the 2004 cohort), and only 46% of participants rolled over to an IRA (versus 56% for the 2004 cohort). Another difference is that cash-outs drift up by several percentage points over time.

Figure 3. Plan distribution behavior as of year-end 2012

Participants age 60 and older by year of termination cohort

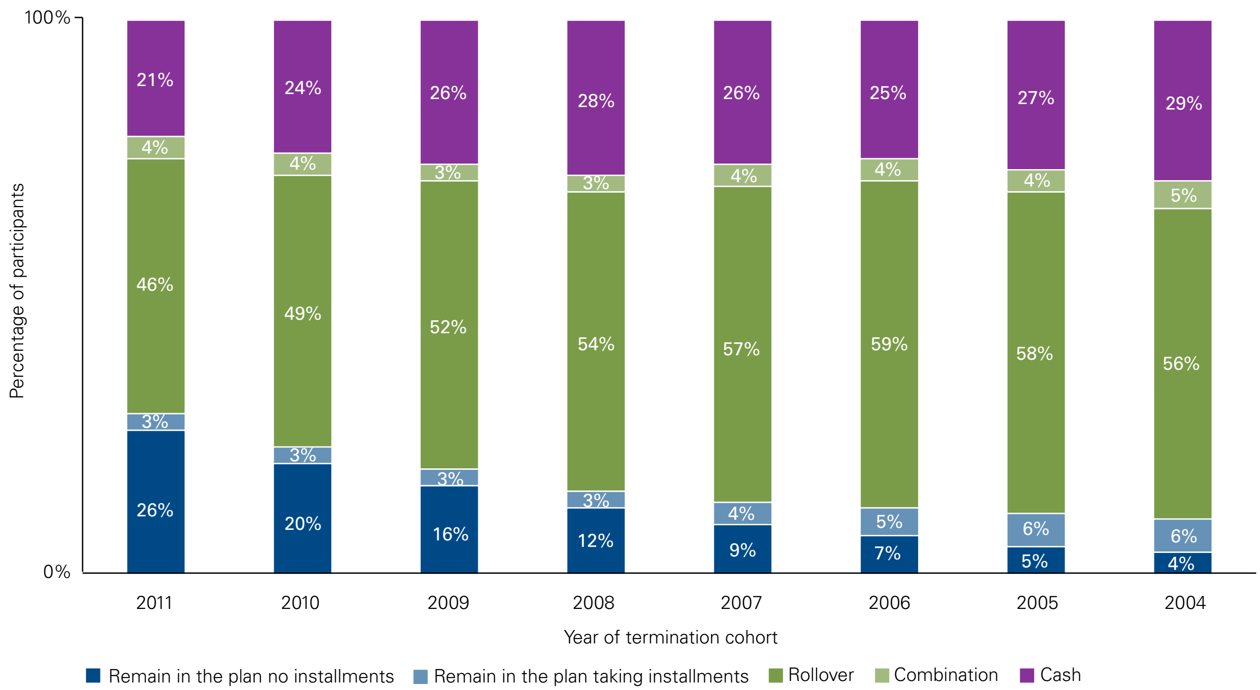
	Year of termination cohort							
	2004	2005	2006	2007	2008	2009	2010	2011
Percentage of participants at year-end 2012								
Remain in plan no installments	4%	5%	7%	9%	12%	16%	20%	26%
Remain in plan taking installments	6	6	5	4	3	3	3	3
Rollover	56	58	59	57	54	52	49	46
Preserved for retirement	**66%**	**69%**	**71%**	**70%**	**69%**	**71%**	**72%**	**75%**
Combination	5%	4%	4%	4%	3%	3%	4%	4%
Cash	29%	27%	25%	26%	28%	26%	24%	21%
Percentage of assets at year-end 2012								
Remain in plan no installments	7%	9%	10%	12%	17%	22%	25%	31%
Remain in plan taking installments	9	8	7	6	5	5	5	4
Rollover	72	72	73	72	68	64	61	56
Preserved for retirement	**88%**	**89%**	**90%**	**90%**	**90%**	**91%**	**91%**	**91%**
Combination	7%	6%	6%	6%	6%	5%	6%	6%
Cash	5%	5%	4%	4%	4%	4%	3%	3%

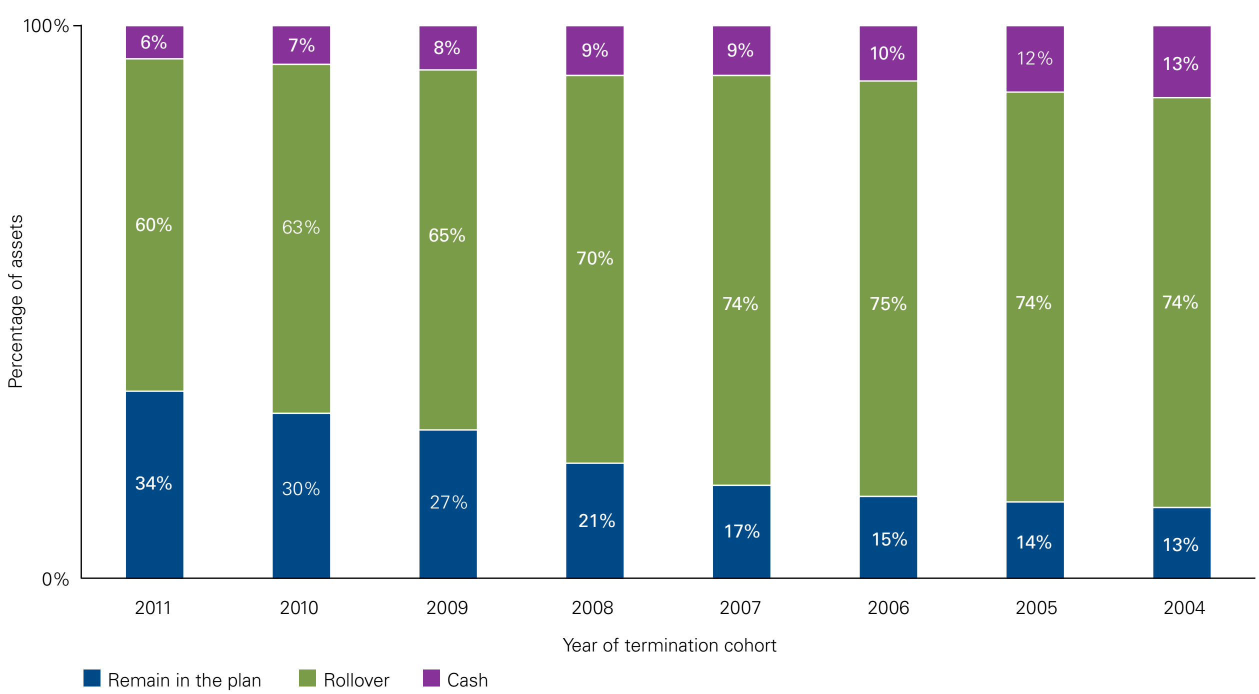
Note: December 31, 2012 value for assets remaining in the plan plus actual transaction value for assets distributed from the plan.
Source: Vanguard, 2013.

5 About 6 in 10 participants with installment payouts are satisfying RMD rules.

Figure 4. Plan distribution behavior as of year-end 2012

Participants age 60 and older by year of termination cohort





Note: December 31, 2012 value for assets remaining in the plan plus actual transaction value for assets distributed from the plan.

Source: Vanguard, 2013.

One notable feature of 2008 and 2009 is the financial crisis that caused stock prices to fall substantially during that period. What seems remarkable is that cash-out rates for retirement-age participants terminating in 2008 and 2009 were not substantively different from cash-out rates for retirement-age participants in earlier years. At least in this analysis, the Great Recession seems to have had little effect on plan distribution behavior among retirement-age participants.

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 $20,000 in all year of termination cohorts. By comparison, the average balance for participants using any other strategy—remaining in the plan, installments, IRA rollover, or a combination—was between $150,000 and $225,000, depending on the strategy and year of termination cohort.

In-plan behavior

Participants categorized as "remain in plan," "installments," and "combination" all have some assets in the plan at the end of our measurement period. For the 2004 cohort, it appears that about 15% of plan participants have some assets remaining in an employer plan after eight calendar years following the year of termination (**Figure 6**). In addition, approximately 15% of the assets remained in the plan after eight years. Data from the other calendar year cohorts suggests a similar pattern, although they cover shorter periods.

Role of plan rules

One important question is how plan rules on partial distributions might affect participants' willingness to stay within an employer plan. Ninety percent of Vanguard DC plans require terminated participants to take a distribution of their entire account balance if an ad hoc partial distribution is desired.[6] For example, if a terminated participant has $100,000 in savings, and wishes to make a one-time withdrawal of $100, he or she must withdraw all savings from the plan—for example, 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.

Figure 5. Distribution behavior and average balances

Participants age 60 and older by year of termination cohort

	Year of termination cohort								Average
	2004	2005	2006	2007	2008	2009	2010	2011	
2012 average account balance by year of termination cohort									
Remain in plan no installments	$201,000	$204,100	$191,400	$193,400	$188,700	$172,700	$175,200	$176,300	$181,300
Remain in plan taking installments	$189,300	$194,500	$212,800	$208,600	$210,000	$211,400	$211,000	$219,100	$206,800
Rollover	$153,800	$159,800	$168,100	$170,100	$157,400	$144,500	$154,000	$124,100	$152,900
Combination	$177,600	$183,500	$208,800	$214,800	$220,200	$200,300	$225,000	$233,600	$210,500
Cash	$21,800	$22,300	$24,100	$22,000	$18,900	$17,400	$19,300	$19,100	$20,200

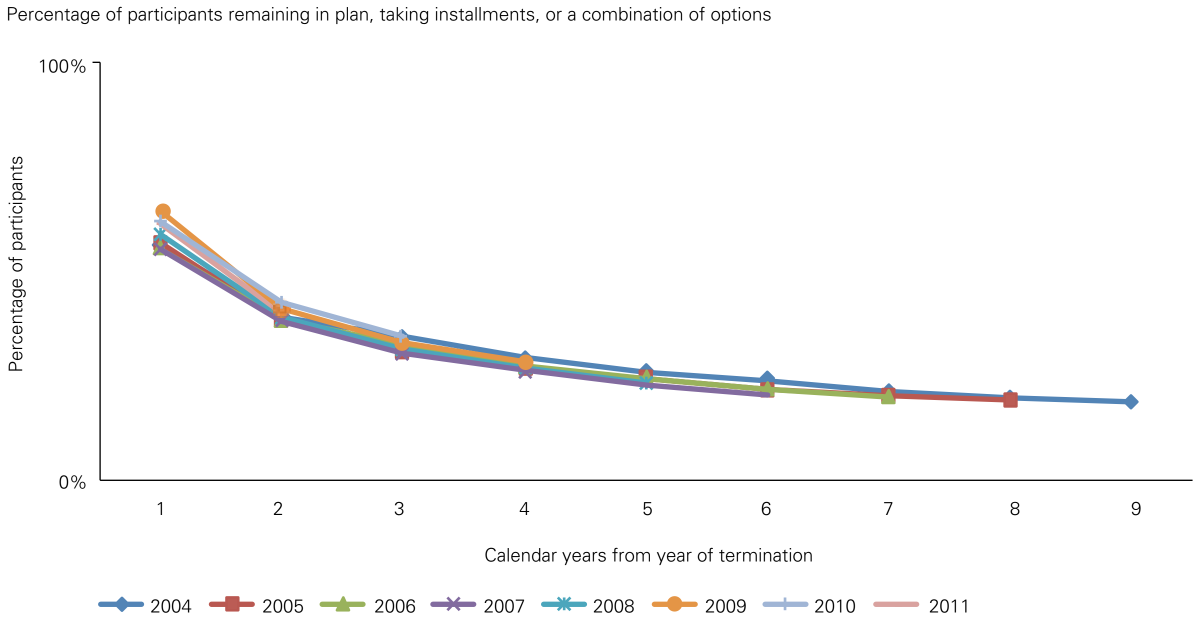
Note: December 31, 2012 value for assets remaining in the plan plus actual transaction value for assets distributed from the plan.

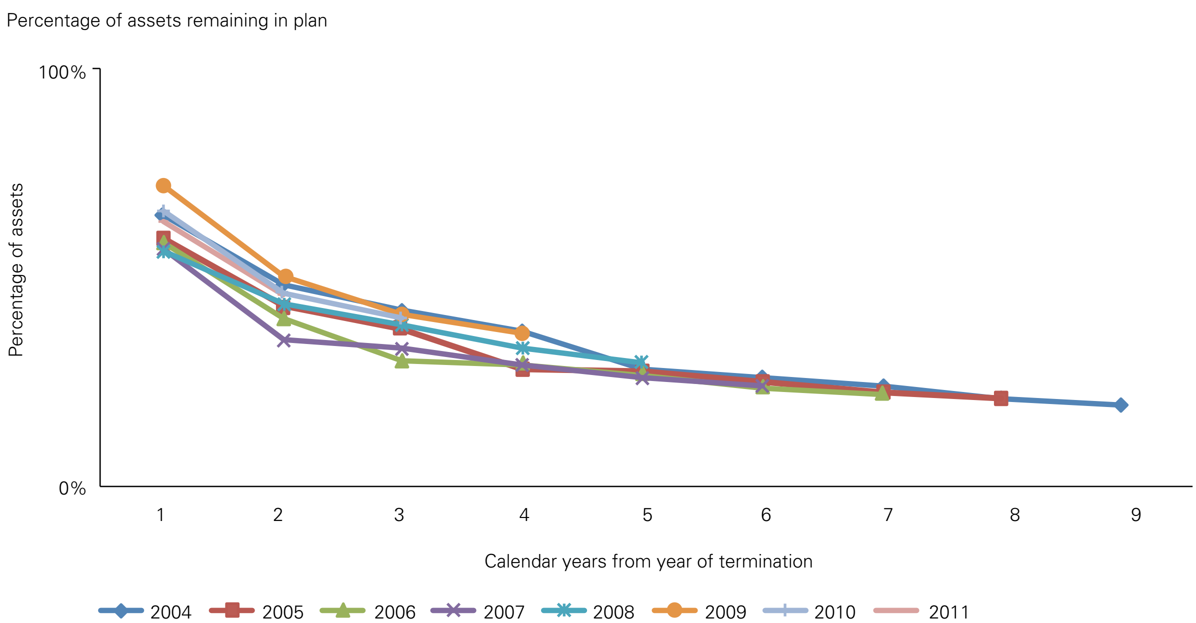
Source: Vanguard, 2013.

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

Figure 6. In-plan behavior over time

Participants age 60 and older by year of termination cohort





Note: The participant analysis includes the following participant categories: combination, installment, and remain in plan. The assets analysis represents the December 31, 2012 value for assets remaining in the plan plus actual transaction value for assets distributed from plan for all five participant categories.

Source: Vanguard, 2013.

Only 10% 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, approximately one-quarter of retirement-age participants are in plans allowing ad hoc partial distributions.

It appears that participant behavior is affected by plan rules on partial distributions. For the 2008 year of termination cohort, we analyzed participants in plans allowing partial distributions separately from those in plans that did not. Their distribution behavior follows a similar trend over time. However, about 50% more participants and assets remain in the employer plan when ad hoc partial distributions are allowed (**Figure 7**). In the 2008 cohort, five years after termination, 20% of participants and 27% of assets remain in plans allowing partial distributions compared with only 13% of participants and 18% 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.

IRA withdrawal decisions

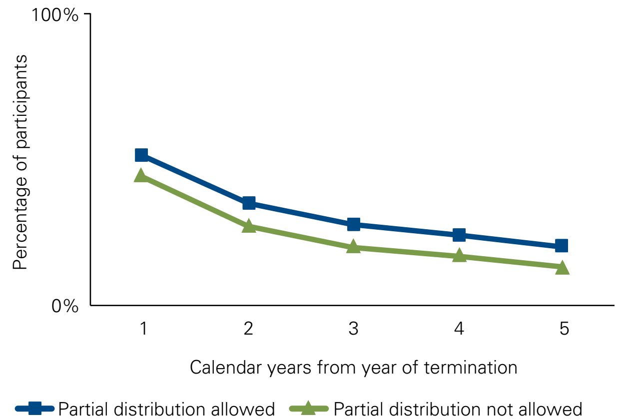
If many participants leaving an employer plan roll over to an IRA, how do participants behave once they have transferred to the IRA? Our data does not permit us to track individual participant decisions across the myriad number of financial institutions they might roll over to. However, independent survey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

The Investment Company Institute (ICI) conducts an annual survey of IRA-owning households in the United States.[7] ICI reports that 19% of IRA-owning households age 59 to 69 took a withdrawal in 2010 and 72% of households age 70 or older took a withdrawal. ICI also reports that 92% of households age 70 or older based the withdrawal amount on the RMD rules.

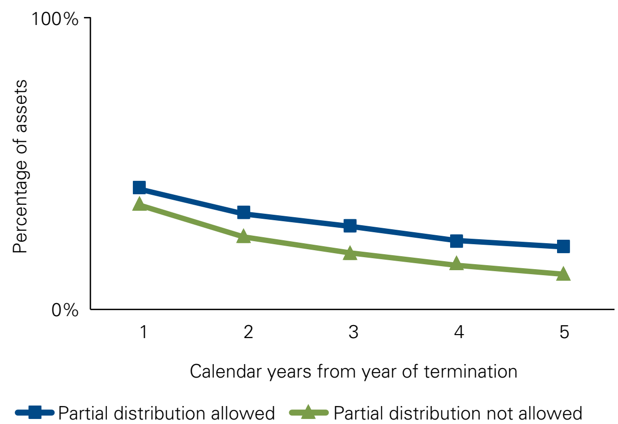
Figure 7. In-plan behavior and plan rules

Participants age 60 and older by 2008 year of termination cohort

Percentage of participants remaining in plan



Percentage of assets remaining in plan



Note: The participant analysis includes the following participant categories: combination, installment, and remain in plan. The assets analysis represents the December 31, 2012 value for assets remaining in the plan plus actual transaction value for assets distributed from plan for all five participant categories.

Source: Vanguard, 2013.

7 See Sarah Holden and Daniel Schrass, 2012, *The Role of IRAs in U.S. Households' Saving for Retirement*, 2012, ici.org.

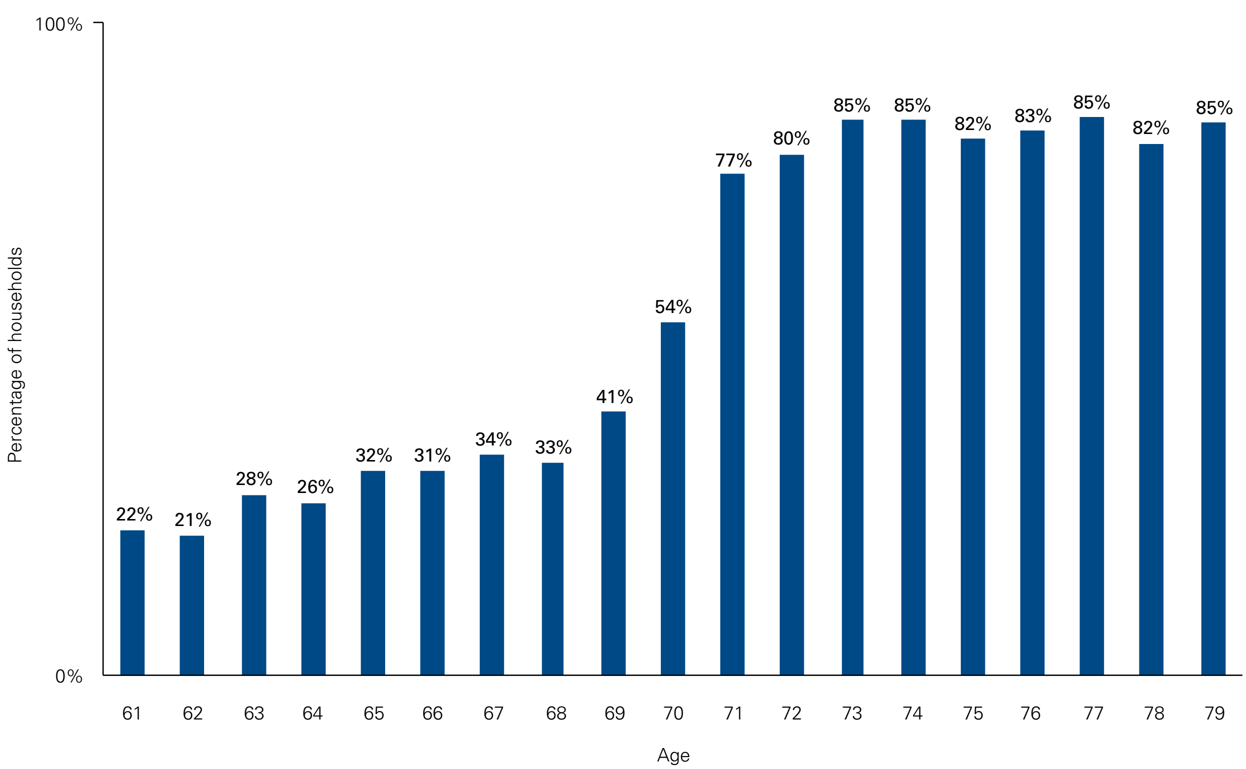
The Employee Benefit Research Institute (EBRI) analyzed IRA withdrawal behavior using a nationally representative sample of households ages 61 to 79.[8] EBRI reports that, among households taking IRA withdrawals in their 60s, 21% to 41% of IRA households (depending on the age of the household) took a withdrawal from their IRA (**Figure 8**). By comparison, over 80% of households in their 70s, when RMDs apply, took a withdrawal from their IRA.

Finally, Poterba, Venti, and Wise examine withdrawals from personal retirement accounts (PRAs), which combine all tax-deferred accounts including 401(k) plans, IRAs, and similar accounts.[9] They find only 18% of PRA-owning households between the ages of 60 and 69 take withdrawals with annual withdrawals representing about 2% of account balances. After reaching age 72, 68% of PRA-owning households take withdrawals with annual withdrawals representing about 5% of account balances. They also note that during the period they studied, the average rate of return earned on PRA balances was higher than the withdrawal rate, and average PRA balance continued to grow through at least age 85.

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

Figure 8. Percentage of households making IRA withdrawals

Households owning IRAs, 2010



Source: Employee Benefit Research Institute estimate from *Health and Retirement Study (HRS)*, 2002 to 2010.

8 See Sudipto Banerjee, 2013, *IRA Withdrawals: How Much, When, and Other Saving Behavior*, ebri.org.

9 See James M. Poterba, Steven F. Venti, and David A. Wise, 2011, *The Drawdown of Personal Retirement Assets*, 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 smaller account balances. Those cashing out have average balances of $20,000. Other behaviors—remaining in the plan, rolling over to an IRA, or combination strategies—are linked to average balances of $150,000 to $225,000 (depending on the year of termination). Third, most retirement-age participants and most participant assets leave their employer plan within five calendar years following the year of termination of employment. This termination behavior seems somewhat linked to plan rules that inhibit ad hoc or flexible withdrawals from DC plans. Finally, most retirement age IRA-owning households and 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, less than 5% of participants make use of 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 are either 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 question 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.[10]
- Remain in their employer's plan 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. Ninety percent of plans on the Vanguard recordkeeping system allow participants to establish installment payments—periodic monthly, quarterly, or annual payments from their account. During the 2004–2012 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 both the participant category and the actual dollar flows. For example, suppose 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 his or her plan account. In terms of participant counts, 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.

10 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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