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Does 401(k) vesting help retain workers?

- Employer contributions are a significant source of retirement wealth and have played a critical role in building the 401(k) system. Yet over half of 401(k) plans impose vesting requirements on employer contributions.[1] Employers who use vesting schedules are often motivated by a desire to retain workers and recoup costs from short-tenured employees.
- Our research finds that vesting does not provide a systematic retention benefit and recoups a modest 2.5% of employer contributions for the average plan.[2] Cost savings vary across plans: 10% of plans save more than 8% of contribution costs.
- By contrast, the costs to participants are substantial. Forfeitures occur in 30% of job separations, are most common among lower-income participants, and represent 40%, on average, of the affected participants' final account balances.
- Given the lack of retention effects, the vesting decision is a tradeoff for employers looking to optimize their benefit structures. Forfeiture savings can help subsidize other plan features and benefits, while immediate vesting can boost wealth accumulation among lower-income workers with higher turnover rates.

1 *How America Saves 2024*. Vanguard. institutional.vanguard.com/insights-and-research/report/how-america-saves.html.

2 This research note draws on results from a longer academic research paper on vesting schedules. For additional results and methodological details, see: Guillermo Carranza and Aaron Goodman. *Retention or Regressivity? The Empirical Effects of 401(k) Vesting Schedules*. Social Science Research Network, January 16, 2025. papers.ssrn.com/sol3/papers.cfm?abstract_id=4876231.

The importance of employer contributions

In the 50 years since the passage of the Employee Retirement Income Security Act,[3] defined-contribution (DC) retirement plans have become the principal vehicle for many Americans' retirement saving and have enabled workers to accumulate more than $12 trillion.[4] Within the DC system, employer contributions are an essential driver of wealth accumulation.[5] Over 95% of Vanguard-administered plans offer an employer contribution, and the combined participant-employer contribution rate has reached a record 11.7%.[6] Nationally, employer contributions account for over $200 billion per year, or roughly 40% of all savings in DC plans.[7]

A significant yet underappreciated fact about employer contributions is that some are not guaranteed. In plans with vesting requirements, participants forfeit a portion of their employer contributions if they leave their jobs before the end of their vesting periods.[8] Employers who use vesting schedules are generally motivated by two main goals.[9] First, many plan sponsors use vesting as a retention strategy, believing that employees will remain in their jobs longer if a portion of their 401(k) benefits depends on it.[10] Second, vesting helps with cost management by recouping some of employers' 401(k) contributions should workers choose to leave before they fully vest.

In this research note, we provide a novel empirical assessment of the retention motivation and show that vesting does not provide the systematic retention benefit that some plan sponsors may be expecting. We then discuss the cost-management considerations that we believe should guide employers' vesting choices given the lack of clear retention effects. Because cost considerations vary significantly based on factors like plan size, employer contribution structure, and workforce composition, they are best examined at the individual plan level.

3 *Employee Retirement Income Security Act (ERISA)*. U.S. Department of Labor. dol.gov/general/topic/retirement/erisa.

4 *Release: Quarterly Retirement Market Data*. Investment Company Institute, December 19, 2024. ici.org/statistical-report/ret_24_q3.

5 *National Compensation Survey-Benefits*. U.S. Department of Labor, January 28, 2025. data.bls.gov/timeseries/NBU12000000000000028312.

6 *How America Saves 2024*. Vanguard. institutional.vanguard.com/insights-and-research/report/how-america-saves.html.

7 *Private Pension Plan Bulletin: Abstract of 2021 Form 5500 Annual Reports*. U.S. Department of Labor, July 26, 2023. dol.gov/sites/dolgov/files/ebsa/researchers/statistics/retirement-bulletins/private-pension-plan-bulletins-abstract-2021.pdf.

8 Among plans administered by Vanguard in 2023, 51% of matching contributions and 55% of nonmatching contributions were subject to vesting. These are plan-weighted (rather than participant-weighted or dollar-weighted) averages. For more information, see: *How America Saves 2024*. Vanguard. institutional.vanguard.com/insights-and-research/report/how-america-saves.html.

9 Vesting schedules specify the time frames over which participants earn ownership of employer contributions. Under "cliff" schedules, all ownership rights are conferred at the end of the vesting period. For example, under a three-year cliff schedule, participants employed for less than three years own 0% of their employer contributions, and participants employed for three years or more own 100% of their employer contributions. Under "graded" schedules, the ownership share for participants increases gradually each year. For example, under a three-year graded schedule, participants with tenures of less than one year might own 0% of their employer contributions, those with tenures between one and two years might own a nonzero share (common values are 25% or 33%), those with tenures between two and three years might own a larger share (common values are 67% or 75%), and those with tenures of three years or more own 100% of their employer contributions. Vesting schedules only concern employer contributions; participants always have full ownership of their own contributions.

10 For example, see the survey of 401(k) plan sponsors in: Charles A. Jeszeck, Tamara Cross, Angie Jacobs, Sherwin Chapman, Katherine Morris, Rhiannon Patterson, and Stacy Spence. *401(k) Plans: Effects of Eligibility and Vesting Policies on Workers' Retirement Savings*. Social Science Research Network, November 30, 2016. papers.ssrn.com/sol3/papers.cfm?abstract_id=2875008.

No evidence of retention benefits

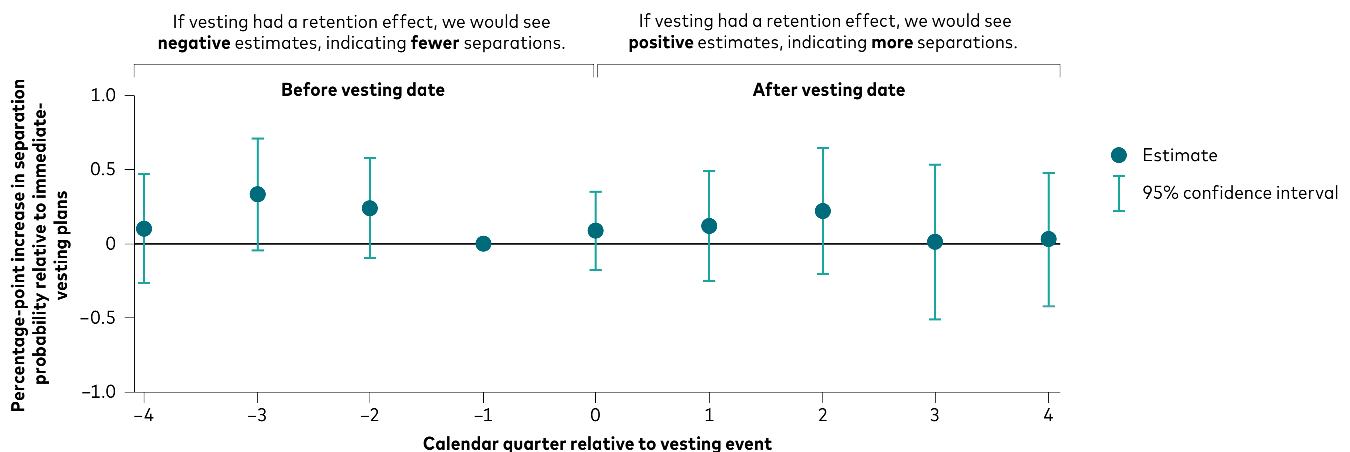
Companies are keenly focused on employee retention, and for good reason. High employee turnover harms productivity and increases recruitment and training costs. Longer-tenured workers are valuable sources of institutional knowledge and help build strong company cultures. Many employers use vesting schedules in pursuit of these retention advantages, hoping that the deferral of 401(k) benefits incentivizes employees to stay longer at their companies. Empirically, however, we find that vesting requirements do not affect workers' decisions to leave their jobs. We reach this conclusion using two different tests for retention effects.

Our first retention test compares workers' likelihood of leaving their companies before and after vesting dates. If vesting promotes retention, workers should be more likely to leave their companies just after annual vesting deadlines than just before. For example, a participant with a three-year cliff vesting schedule who has been employed for two years and 11 months has a very strong incentive to remain at the firm for one more month, since doing so will "earn" three years' worth of employer contributions. After they become fully vested, their incentive to stay at the firm becomes weaker.

But among participants in Vanguard-administered plans, we see no evidence of heightened quit rates after vesting dates (see **Figure 1**). When comparing workers with three-year cliff vesting schedules to those with immediate vesting, we find that both groups demonstrate similar separation dynamics and that three-year cliff participants are not significantly more likely to quit just after their third employment anniversaries.[11] When repeating the exercise in Figure 1 for plans with cliff and graded schedules of different lengths, we obtain similar results.

FIGURE 1

Job separations around vesting dates offer no evidence of a retention effect



Notes: We estimate a difference-in-difference event study regression with participants in 181 three-year cliff vesting plans as the treatment group and participants in 425 immediate-vesting plans as the control group. We consider participants hired between 2010 and 2022. The coefficient estimates, which represent changes in quarterly voluntary separation rates at three-year cliff plans relative to immediate-vesting plans, are normalized with respect to relative quarter −1. The regression controls for participant age and income, calendar-year and calendar-quarter fixed effects, plan-industry fixed effects, and plan-size-decile fixed effects. Error bars provide 95% confidence intervals. If a participant's plan has multiple vesting schedules (for example, one for matching and one for nonmatching contributions), we associate the participant with the longest vesting schedule offered by their plan. Regressions estimated for plans with cliff and graded schedules of different lengths produce similar results.

Source: Vanguard.

11 We focus on three-year cliff schedules because they are the longest type of cliff schedule permitted under federal law. Therefore, the 0%-to-100% jump in employer contribution ownership at the three-year mark represents the largest one-time ownership grant and the strongest retention incentive across all 401(k) vesting schedules. We compare quit rates at three-year cliff plans to those at immediate-vesting plans to control for nonvesting factors (such as bonus payments and promotion decisions) that may affect quit rates around annual employment anniversaries.

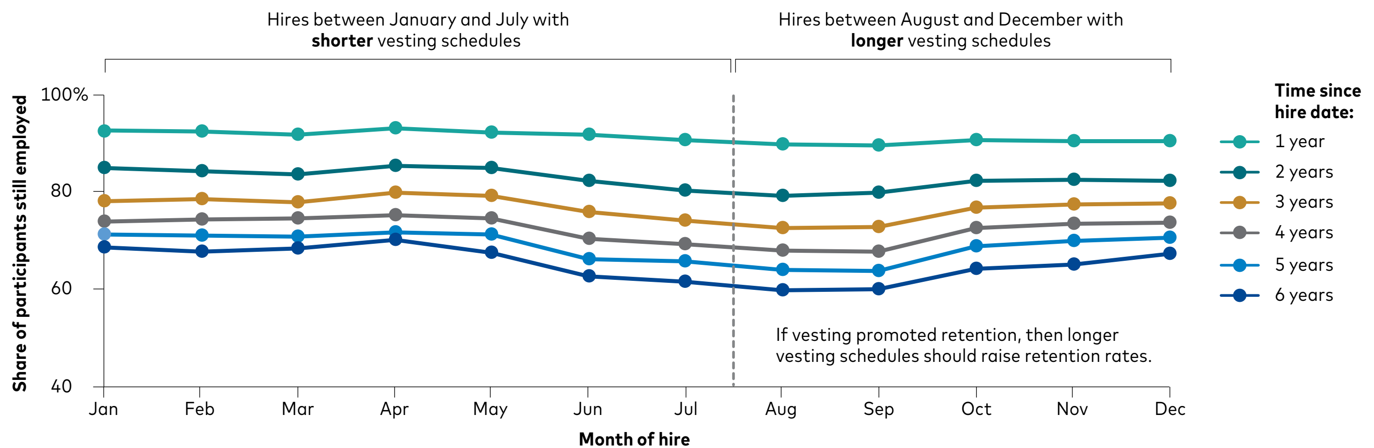
Our second retention test complements the first by comparing participants *at the same plan* who are subject to different vesting schedules. We do so by studying the minority of plans that credit service using the "equivalency method," where participants are credited with a year of vested service if they are continuously employed for five months and at least one day of a sixth month in a given calendar year.[12] As a result, participants hired in July or earlier receive credit for their first calendar year of employment but those hired in August or later do not.

This structure effectively creates two different vesting schedules within the same plan. For example, at a plan with a three-year vesting period, August hires are fully vested after three years, but July hires are fully vested after only two years. If vesting exerts a retention effect, then August hires should stay at the company longer than July hires. Once again, we find that this is not true empirically (see **Figure 2**). The probability of remaining with the company (at each hire anniversary between one year and six years) is nearly the same for July and August hires.[13]

One potential explanation for the lack of retention effects is that many 401(k) participants are unaware of vesting requirements. In a recent survey of current participants in Vanguard-administered plans, we found that only 33% of respondents could correctly state whether their plan has a vesting schedule.[14]

FIGURE 2

When comparing participants at the same company, those with longer vesting schedules do not show higher retention probabilities



Notes: Participants hired in July or earlier receive vested service credit for their first calendar year of employment. Participants hired in August or later do not receive service credit for their first calendar year and are thus subject to a longer effective vesting schedule. Results reflect approximately 114,000 participants hired between 2010 and 2022 at 29 plans using the equivalency method for service crediting. We only consider participants whose hire dates would allow for the relevant retention outcome to be observed (for example, since our data run through 2023, we can only observe six-year retention probabilities for participants hired in 2017 or earlier). We also estimate Kaplan-Meier retention probabilities that adjust for data-censoring among recent hires, and obtain similar results.

Source: Vanguard.

12 The service-crediting policies at these plans include rules that credit: 1) 45 service hours for each week in which a participant works at least one hour, 2) 90 service hours for each biweekly payroll period in which a participant works at least one hour, or 3) 190 service hours for each month in which a participant works at least one hour. Under all three rules, participants who are continuously employed for five months and at least one day of a sixth month in a given calendar year reach the requisite 1,000 service hours and are credited with a year of vested service.

13 We formalize the evidence in Figure 2 by estimating regressions, with retention probability as the dependent variable and controls including participant age and income, calendar year of hire, and plan fixed effects. The retention effect of being hired in August or later (and thus being subject to a longer effective vesting schedule) is generally statistically insignificant and is negative in most specifications.

14 There were 1,018 respondents to this survey, which was fielded among a random sample of current participants in October 2024. Respondents were asked about the vesting rules at their plans after being provided with a definition and an example of a vesting schedule.

Modest cost savings for most employers

To assess employers' direct cost savings from forfeitures, we analyzed 4.7 million separations across 1,500 Vanguard-administered plans between 2010 and 2022.[15] The results demonstrated that cost savings were generally modest. In 2022, forfeitures accounted for about 2.5% of total employer contributions at plans with vesting requirements, indicating that vesting offsets only a small share of employer contribution costs for most plan sponsors.[16] That said, cost savings varied: 25% of plans saved at least 4% of contribution costs, and 10% of plans saved more than 8% of contribution costs.

The size of forfeiture savings depends on plan-level factors. A key consideration is employee turnover, which varies across plans and can be particularly high in certain industries like retail and hospitality. Employers with higher turnover rates tend to obtain larger cost savings from forfeitures. Another factor is plan size—for large plans with thousands of employees, even modest turnover rates during the vesting period can produce significant forfeiture amounts.

Plan-level cost considerations

Because we find no evidence of retention effects, we conclude that vesting requirements are a financial choice for employers seeking to optimize their benefit structures. Vesting rules are not the only plan features that govern participants' wealth accumulation. Employers may opt for vesting requirements to help offset the costs of other plan features that improve the retirement security of their workers, such as:[17]

- **Paying plan administrative expenses:** Employers can use forfeitures to cover plan administrative expenses such as recordkeeping fees. This lowers costs and raises net investment returns for all plan participants.
- **Providing more generous employer contributions:** Plan sponsors offer a range of different employer contributions. Matching contributions are most common, but some employers make nonmatching contributions that accrue to all employees, regardless of their own contribution rates. These nonmatching contributions can be quite generous.[18] In fact, 36% of Vanguard-administered plans make both a matching and a nonmatching contribution, with the average combined value equal to 8% of employees' income.[19] Plan sponsors may find it infeasible to support generous employer contribution programs without recouping forfeitures from short-tenured employees. Employers who make both types of contributions may choose to vest the match over a shorter period (or immediately) and vest a more generous nonmatching contribution over a longer period.

15 To ensure that yearly variations in our results were not driven by plans entering or exiting our sample, we considered only plans that were record-kept by Vanguard in both 2010 and 2022. For each of the 4.7 million separations in our sample, we observed the participant's final account balance and the amount of any employer contributions the participant forfeited due to incomplete vesting.

16 The denominator for this calculation is total employer contributions among plans with vesting requirements (rather than among all plans). The 2.5% cost-savings figure is a dollar-weighted average that gives more weight to larger plans. When weighting plans equally, the average cost savings is 3.9%.

17 Under IRS regulations, employers may use forfeitures to pay plan administrative expenses or to fund employer contributions for remaining participants. For more information, see: *Use of Forfeitures in Qualified Retirement Plans*. Federal Register, February 27, 2023. federalregister.gov/documents/2023/02/27/2023-03778/use-of-forfeitures-in-qualified-retirement-plans.

18 The average promised matching contribution among Vanguard-administered plans in 2023 was 4.6% of income, while 8% of promised matches were larger than 7% of income. The average nonmatching contribution represented 5.4% of income, while 24% of nonmatching contributions represented more than 7% of income. For more information, see: *How America Saves 2024*. Vanguard. institutional.vanguard.com/insights-and-research/report/how-america-saves.html.

19 *How America Saves 2024*. Vanguard. institutional.vanguard.com/insights-and-research/report/how-america-saves.html.

- **Offering automatic enrollment and immediate eligibility:** Enrollment policy matters a great deal—the participation rate is 94% among automatic-enrollment plans and 67% among voluntary-enrollment plans.[20] Immediate eligibility similarly ensures that employees have the opportunity to begin saving early in their job tenures.[21] Plan sponsors may use forfeitures from short-tenured employees to offset some of the additional matching contribution costs associated with offering automatic enrollment and immediate eligibility to all employees.

A hit to retirement savings for workers

When viewed from the perspective of participants, forfeiture losses are significant. About 30% of all separations in 2018 involved a forfeiture of employer contributions.[22] The forfeiture rate has risen over time (from about 20% in 2010) as job transitions have become more frequent and average employment tenures have decreased. When forfeitures occur, they can claim substantial shares of participants' 401(k) account balances: The average forfeiture represents about 40% of the affected participant's final balance.

Because lower-income workers tend to have shorter employment tenures, separating participants in the bottom income quintile are about twice as likely to experience a forfeiture as those in the top quintile. Since lower-income participants have smaller account balances, even forfeitures claiming up to 40% of their final balances tend to be small relative to employers' total contribution costs. These factors help explain why vesting generally yields only modest cost savings for employers.

Forfeitures can be particularly costly to workers when they accumulate over the course of a career. In high-turnover industries where vesting requirements help contain employer costs, workers who leave one job after a short period often do so at subsequent jobs as well. The effect of vesting requirements on workers' lifetime wealth accumulation can thus exceed the forfeiture loss they experience at any single employer.

Implications for plan sponsors

Vesting is a prevalent yet understudied feature of DC retirement plans. We aim to present a framework for plan sponsors' vesting choices that is grounded in empirical evidence and accounts for the broader context in which employers design their benefits strategies.

Our analysis of employee separations in Vanguard-administered plans yields no evidence that vesting requirements lead 401(k) participants to stay in their jobs longer. Furthermore, forfeitures deliver modest cost savings for most plans. Therefore, we believe that vesting discussions should center on the size of forfeiture savings, the extent to which forfeitures subsidize other plan features, and the potential benefits of immediate vesting.

Cost savings depend on a variety of plan-level factors. Perhaps most significantly, vesting may be part of a larger plan-design strategy that makes it feasible to offer automatic enrollment, immediate eligibility, and strong employer contributions. *All* participants benefit from policies that boost saving early in their job tenures, while only *some* participants separate before becoming fully vested. We would not

20 *How America Saves 2024*. Vanguard. institutional.vanguard.com/insights-and-research/report/how-america-saves.html.

21 Plan sponsors may require employees to reach one year of service before they are eligible to make employee deferrals and/or receive employer contributions. In 2023, 74% of Vanguard-administered plans offered immediate eligibility for employee deferrals, and 63% offered immediate eligibility for employer contributions. For more information, see: *How America Saves 2024*. Vanguard. institutional.vanguard.com/insights-and-research/report/how-america-saves.html.

22 Forfeiture transactions can occur with up to a five-year lag after separation. Therefore, participants separating in 2018 are the most recent cohort for whom all forfeiture transactions are guaranteed to appear in our data (which run through 2023).

recommend changing vesting rules if doing so would require making enrollment, eligibility, or match policies less favorable to participants.

On the other hand, immediate vesting offers several advantages of its own. First, it removes the administrative costs involved in tracking employees' job tenures and maintaining a vesting schedule. Second, immediate vesting could reduce compliance costs by making it easier to obtain safe harbor from annual nondiscrimination testing.[23] Third, and most importantly, immediate vesting benefits participants. In a labor market where job transitions occur more frequently, fully vested employer contributions can help keep workers—especially those in lower-income occupations—on track for retirement success. By weighing these considerations within the context of their own plans, employers can make the types of informed plan-design choices that will drive progress in the DC system over the next 50 years.

23 Traditional safe-harbor contributions must vest immediately. Under a qualified automatic contribution arrangement, plans with automatic enrollment can employ a vesting schedule for safe-harbor contributions but must fully vest safe-harbor contributions within two years. Therefore, enacting immediate vesting is consistent with safe-harbor design but may not be sufficient to qualify for safe-harbor status, since safe-harbor standards also restrict plan features other than vesting.

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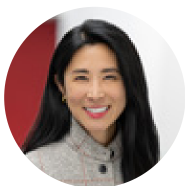

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