# 529 plan savers earn better grades for behavior

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- Vanguard recently reviewed the saving behavior of its 529 client plan account owners.
- We focused on plan use and the timing and patterns of saving.[1]
- Our analysis revealed a number of positive trends, including increased usage of 529s, early onset of saving, and patterns of regular saving.

## Introduction

As part of its ongoing series on 529 account owner behavior, Vanguard recently reviewed the investment saving behavior of a random sample of its 529 client plan account owners. Our analysis revealed a number of positive trends. First, we found that the use of 529 plans continues to increase, absolutely and relative to other savings vehicles not specifically designed for college. Second, 529 college savers are starting early, giving them more time to benefit from the compounding of investment earnings and tax savings. Finally, account owners are contributing more regularly by making automatic payments. As our results show, regular contributors save more.

## College savers are opening more 529 accounts

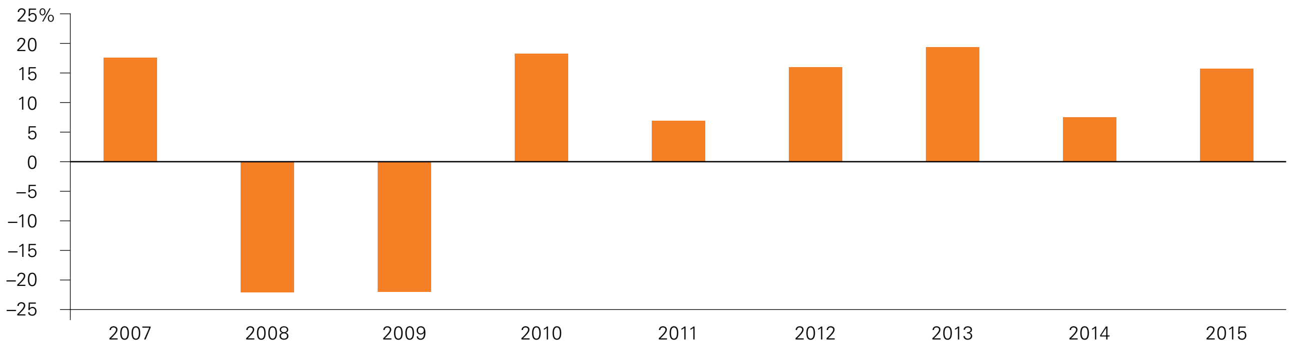
The first positive trend we found was an increase in 529 accounts. The number of new funded accounts in our sample rose steadily from 2004 through 2007. The growth rate then declined in 2008, coinciding with the global financial crisis, as illustrated in **Figure 1** (on page 2). But beginning in 2010, it rebounded, resulting in a five-year compound annual growth rate of 23% as of year-end 2014.[2] As reported in *Strategic Insight 529 Industry Analysis 2016*, the use of 529 plans has increased dramatically over the last decade; the number of accounts had grown from 5.3 million in 2004 to 11 million as of year-end 2014.

These results show not only that more investors are saving for college, but also that they are doing so using a vehicle designed specifically for that purpose. However, the opportunity for even better news is significant. Sallie Mae's *How America Saves for College 2016* finds that 61% of parents still use general savings accounts and 38% use checking accounts to save for college. Only 37% reported taking advantage of the important tax and investment benefits of a 529 plan. Fortunately, consistent with Vanguard's analysis, the Sallie Mae report finds that 529 usage is on the rise. That figure of 37% is the highest since the study began in 2009 and a significant increase from the prior year's percentage of 27%.

1 Data for this analysis are based on a sample from the following Vanguard-client, direct-sold 529 plans: Vanguard 529 College Savings Plan, CollegeInvest Direct Portfolio College Savings Plan (Colorado), College Savings Iowa 529 Plan, MOST—Missouri's 529 College Savings Plan, and New York's 529 College Savings Program Direct Plan. Our sample included accounts whose owners' Social Security numbers ended with a 1. The total number of accounts in the sample was 108,957, from a population of approximately 2.5 million.

2 As of August 31, 2015, the number of new accounts was on pace to increase from 2014 levels.

## Figure 1. Annual growth of new 529 accounts



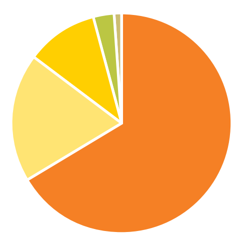

**Notes:** Results show the annual percentage change in new funded accounts in the sample through 2014. The 2015 figure represents account growth through August 31, 2015.
**Source:** Vanguard.

## College savers are starting early

A very encouraging finding is that Vanguard 529 account owners are saving early for college, increasing their saving time horizon. As shown in **Figure 2**, 66.5% of accounts are funded before the beneficiary reaches age 6, and 85.4% are funded before the beneficiary reaches age 11. When Vanguard account owners open a 529 plan, the median beneficiary age is 3.5,[3] and the most common age is 0—that is, just born or not yet born. This is consistent with Sallie Mae's findings: 52% of respondents to its survey reported that they started to save for college when their oldest child was between the ages of 0 and 5, and 74% had begun saving by the time the child was 10.

Starting early increases the likelihood of meeting college expenses, which have risen faster than headline inflation for decades.[4] An early start gives savers more time to benefit from the compounding of investment earnings. For example, if we assume an account is opened when the beneficiary is just born (age 0), $3,000 in annual contributions, and an annual return of 5%, the balance would be $88,617 in 18 years, the beginning of the typical draw-down period. If that account instead were opened when the beneficiary was 9, the balance would be only $34,734 when the beneficiary reached age 18.[5]

## Figure 2. Age of beneficiary at time of initial account funding



| Beneficiary age | Accounts opened |
|---|---|
| 0–5 | 66.5% |
| 6–10 | 18.9% |
| 11–15 | 10.7% |
| 16–18 | 3.0% |
| 19–21 | 0.9% |

**Source:** Vanguard.

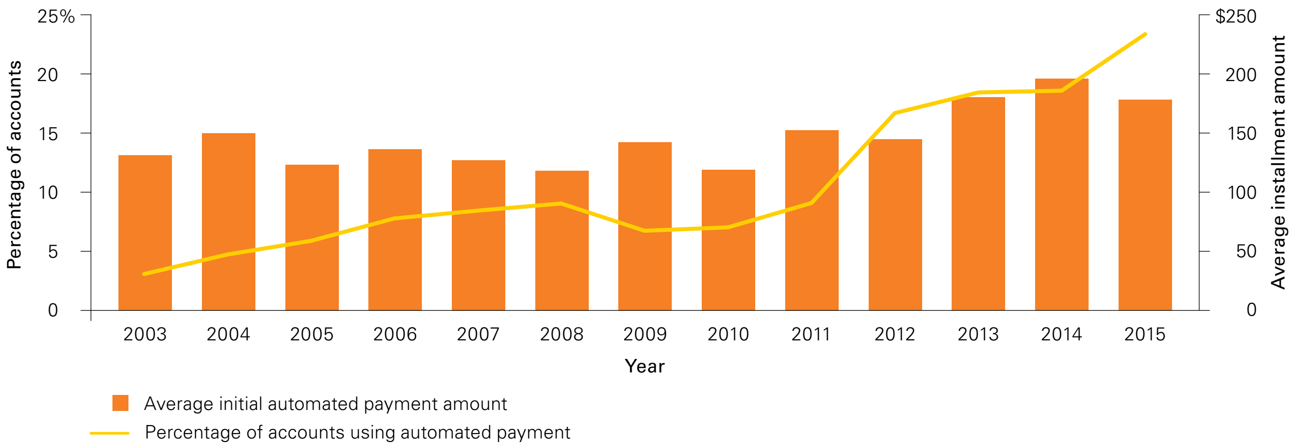
By starting to save as early as possible, account owners can also maximize tax benefits. Earnings in 529 plans are not subject to federal income tax, and 30 states currently offer partial or full state income tax deductions or credits. Let's return to the account opened for a beneficiary at age 0. If the $3,000 in annual contributions had instead been saved in a taxable account earning 5% per year, federal taxes of $10,372 would have been imposed by the time the beneficiary reached age 22. (We assume a federal marginal income tax rate of 25%, a capital gains tax rate of 15%, and a four-year draw-down beginning

3 Results based on sample as of year-end 2014.

4 For example, over the ten school years from 2005–2016, tuition and fees for private nonprofit and public four-year colleges had yearly average increases above headline inflation of 2.4% and 3.4%, respectively.

5 The federal marginal income tax rate is assumed to be 25% and the capital gains tax rate 15%. This hypothetical example does not represent the return on any particular investment and the rate is not guaranteed.

Figure 3. Use of automated payment




**Source:** Vanguard.

when the beneficiary is 19). Therefore, the 529 plan could deliver $10,372 in tax savings. If the account is opened when the beneficiary is 9, however, it has less time to reap these benefits, and its relative tax savings will amount to only $3,057. The parents who started saving when their child was born would realize $7,315 more in federal tax savings then the ones starting nine years later. And assuming a full state tax deduction, the early saver could realize a state tax benefit of $1,350 more than the later saver.[6]

## College savers are investing more consistently

Savers in Vanguard client 529 plans are increasingly making automated contributions. As these rise, so does the amount saved. As shown in **Figure 3**, more than 24% of account holders made automated payments in 2015, compared to just 5% in 2004. And since 2003, the average initial periodic installment amount increased by $47, from $131 to $178.

Automated payment provides discipline, helping to ensure consistent saving. Our results show that saving consistently improves investor outcomes. We reached this conclusion by looking at three cohorts of savers, segmented by contribution frequency:

### Lapsed savers

Clients who made no contributions beyond year three. These make up 15% of all account holders, and 7% of them made automated payments when they began saving.

### Inconsistent savers

Clients who contributed less often than every year from when the account was funded to 2015 or the year the beneficiary turned 18, whichever occurred first. These make up 40% of all account holders, and 32% made automated payments when they began saving.

### Consistent savers

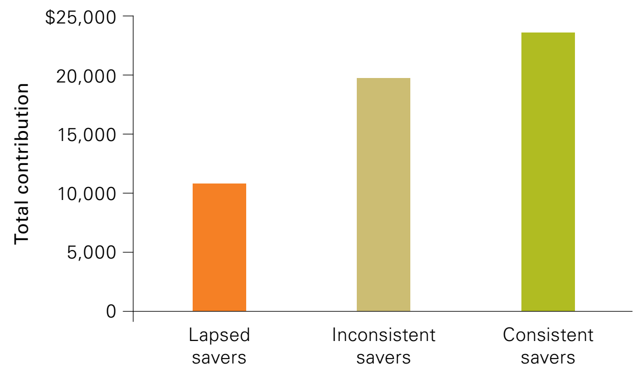
Clients who contributed every year prior to 2015 or the year in which the beneficiary turned 18, whichever occurred first. These make up 45% of all account holders, and 66% made automated payments when they began saving.

The first bit of good news to be gleaned from these results is that most Vanguard 529 account owners are saving somewhat consistently. Consistent savers make up the largest cohort, followed by inconsistent savers who missed at least one year of contributions. Only 15% are lapsed savers who have not contributed beyond year three.

**6** The state marginal income tax rate is assumed to be 5%.

A review of cumulative contributions across these groups shows the benefits of consistent savings. Although both lapsed and inconsistent savers had higher initial funding amounts, the consistent savers quickly caught up, and by year four they had outpaced both of the other groups. As shown in **Figure 4**, we found that lapsed savers had the lowest average 529 account lifetime savings, having contributed an average of $10,825 through year-end 2014. Inconsistent savers accumulated nearly double that amount, with an average lifetime contribution of $19,745. Consistent savers, the highest percentage of whom used automated payments, saved the most; their total contributions averaged $23,566.

Figure 4. Lifetime savings by cohort




**Note:** Results are for accounts funded in 2005 and 2006.
**Source:** Vanguard.

## Plan communication opportunities

These findings suggest opportunities for plan sponsors to help college savers be more successful. For example, the benefits of saving consistently may not always be appreciated by new parents and account owners. Consider campaigns targeting those not yet using an automated investment program, including new account owners, lapsed savers who stop contributing during the first few years, and those not yet saving consistently.

## Conclusion

Our third series of 529 account owner research finds a number of positive trends. First, more investors are discovering the value of saving for college through a 529 plan, a finding consistent with industry research. Second, Vanguard 529 college savers are starting to save earlier. Most are beginning before the beneficiary reaches age 5, and many begin before the beneficiary is even born. Third, 529 account owners are contributing more regularly through automatic payments, and more consistent savers have had better outcomes. All of these are strong patterns, but all could be better. This would improve the likelihood of keeping up with the fast pace of college inflation, which has averaged 7.1% annually since 1997.

## References

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Vanguard research authors

Kimberly A. Stockton and Yan Zilbering

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Vanguard Research

P.O. Box 2600
Valley Forge, PA 19482-2600



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