

## Costs, Conflicts, and College Savings: Evaluating Section 529 Savings Plans

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*Americans collectively save hundreds of billions of dollars for their children's education in Section 529 college savings plans. These plans are sponsored by states and largely exempt from the legal regimes that typically apply to money managers. This is the first academic study to comprehensively evaluate the quality of menus offered by these plans. While some plans are cost-efficient, there is considerable variation, and many plans are egregiously expensive. While large 401(k) plans have average total costs of 0.3%, college savings plans average 0.31% in administrative fees alone, with investment expenses adding another 0.32%. Plans distributed through brokers are particularly costly. Controlling for size, broker-sold investments are twice as expensive as those sold direct to consumers, even before accounting for brokerage sales charges that may exceed five percent of invested assets. A careful examination of plans' legal disclosures shows that some states generate significant revenue from plan fees and use that revenue to support activities that do not directly benefit plan investors, including subsidizing defined-benefit-style plans. This cross-subsidization may undermine incentives for state administrators to negotiate lower costs and is in tension with state boards' role as fiduciaries. These results raise questions about whose interests are served by 529 plans and whether investors are adequately protected by existing regulations.*

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## Introduction

One of the starkest economic realities of the twenty-first century is the increasing cost of a college education. In inflation-adjusted terms, tuition has more than doubled at private colleges and tripled at public colleges in the last thirty years.<sup>1</sup> The affordability of college has become a topic of increasing political interest, and a number of proposals have been floated to address the issue.<sup>2</sup> Meanwhile, tax-favored college savings accounts under Section 529 of the Internal Revenue Code<sup>3</sup> have become a popular choice for families with the means to save for college. Between 2002 and 2018, savings in 529 plans expanded from \$18 billion to \$318 billion.<sup>4</sup> As 529 plans grow, it is critical to ask whether the regulatory regime for these plans is up to the task of protecting investors.

Section 529 college savings plans allow families to save money in state-sponsored investment programs. Contributions to these plans benefit from tax-free compounding and, in many states, investors also enjoy a state-level income tax deduction for a portion of their contributions. Most 529 plans feature a curated menu of investment options similar to an employer-based 401(k) plan. Proceeds can be used to fund educational expenses for college and, as of 2018,<sup>5</sup> K-12 education as well. All but one state offers some form of 529 plan, and most plans actively seek to attract out-of-state investors in order to benefit from economies of scale.<sup>6</sup>

Concern for the welfare of retail investors is a longstanding issue in law and finance,<sup>7</sup> and there are reasons to think that college savings plans might be

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1. *Published Tuition and Fees Relative to 1988-89, by Sector*, C. BOARD (2018), <https://trends.collegeboard.org/college-pricing/figures-tables/published-tuition-and-fees-relative-1988-89-sector> [<https://perma.cc/GU2Q-PLL3>].

2. See, e.g., Patrick Healy, *Hillary Clinton to Offer Plan on Paying College Tuition Without Needing Loans*, N.Y. TIMES (Aug. 10, 2015), <https://www.nytimes.com/2015/08/10/us/politics/hillary-clinton-to-offer-plan-on-paying-college-tuition-without-needing-loans.html> [<https://perma.cc/SV8V-7MDZ>]; Gregg Jaffe, *Obama Announces Free Community College Plan*, WASH. POST (Jan. 9, 2015), <https://www.washingtonpost.com/news/post-politics/wp/2015/01/09/obama-announces-free-community-college-plan> [<https://perma.cc/RK44-4TGN>]; Ron Lieber, *Bernie Sanders Talks Tuition, Free for All*, N.Y. TIMES:ED TALK (Feb. 3, 2017), <https://www.nytimes.com/2017/02/03/education/edlife/bernie-sanders-on-free-tuition-campaign.html> [<https://perma.cc/SC4Y-VKAF>].

3. I.R.C. § 529 (2018).

4. Madeline McCullers & Irina Stefanescu, *Introducing Section 529 Plans into the U.S. Financial Accounts and Enhanced Financial Accounts*, FEDS NOTES (Dec. 18, 2015), <https://www.federalreserve.gov/econresdata/notes/feds-notes/2015/introducing-section-529-plans-into-the-us-financial-accounts-and-enhanced-financial-accounts-20151218.html> [<https://perma.cc/T88A-C7TM>] (linking to the Enhanced Financial Accounts data, which contains the 2018 values).

5. Tax Cuts and Jobs Act, Pub. L. No. 115-97, § 11032, 131 Stat. 2054, 2081-82 (2017).

6. JOSEPH F. HURLEY, *THE BEST WAY TO SAVE FOR COLLEGE* 17 (11th ed. 2015).

7. See, e.g., Ian Ayres & Quinn Curtis, *Beyond Diversification: The Pervasive Problem of Excessive Fees and Dominated Funds in 401(k) Plans*, 124 YALE L.J. 1476 (2015); Alicia Davis Evans, *A Requiem for the Retail Investor*, 95 VA. L. REV. 1105 (2009); Jill E. Fisch, *Rethinking the Regulation*

a model of efficient design: they are overseen by state boards lacking obvious conflicts of interest and in a position to hire skilled professional managers. Plans control large pools of assets, promising economies of scale, and they face competitive pressure from out-of-state plans. But college savings plans are exempt from most of the legal regimes that protect investors in other forms of money management. For example, employer sponsors of 401(k) plans, a comparable savings regime, face liability for failure to operate plans prudently in the interest of investors.<sup>8</sup> Lawsuits against 401(k) sponsors are common and have focused attention on plan costs. States that sponsor 529 plans face no such liability. College savings plans are not subject to the registration requirements of federal securities laws, and plan administrators are not regulated as investment advisors. The performance of college savings plans therefore provides insight into the costs and benefits of the legal regimes that regulate money management.

Combining empirical and legal analysis, this is the first academic paper to offer a comprehensive examination of menu quality in college savings plans. The findings suggest cause for concern. While some plans offer cost-efficient options, many other plans are quite expensive, jeopardizing the benefits of tax-free compounding. The main driver of variation in plan quality is the distinction between direct-sold 529 plans, in which consumers invest through the plan website, and broker-sold plans, in which consumers invest with the help of a broker. Broker-sold plans are considerably worse, both in terms of costs and performance net of costs. Broker-sold plans may also be riskier: by some measures, age-based investments, which are universally offered in 529 plans, have riskier glide paths in broker-sold plans, with more exposure to the fluctuations of the stock market, and mutual funds used in broker-sold plans appear riskier in general.

These results suggest that the oversight of a state board may not be enough to protect consumers from high-cost options. But why is there such variation in plan quality? Why wouldn't states that sponsor high-cost plans simply encourage investors to use an out-of-state plan able to deliver investments at a lower cost? A careful examination of plan disclosures suggests a partial answer: a number of states operate multiple plans and use fee income from one plan to subsidize activities that do not directly benefit plan investors, including covering the expenses associated with other plans, operating scholarship programs, or even making direct transfers to other plans operated by the state. These inter-plan transfer payments are concerning because they pit

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*of Securities Intermediaries*, 158 U. PA. L. REV. 1961 (2010); Jill E. Fisch & Tess Wilkinson-Ryan, *Why Do Retail Investors Make Costly Mistakes? An Experiment on Mutual Fund Choice*, 162 U. PA. L. REV. 605 (2014); Polina Demina, Note, *Broker-Dealers and Investment Advisers: A Behavioral-Economics Analysis of Competing Suggestions for Reform*, 113 MICH. L. REV. 429 (2014); Emily D. Johnson, Note, *The Fiduciary Duty in Mutual Fund Excessive Fee Cases: Ripe for Reexamination*, 59 DUKE L.J. 145 (2009).

8. See *infra* note 70 and accompanying text.

the interests of one 529 plan within a state against another, with both plans overseen by the same board. Rather than having a conscientious, disinterested board overseeing the quality of their investment options, investors face the prospect that some plans might be run for the purpose of generating fee revenue with the proceeds used to subsidize other plans.

These dynamics are particularly concerning because competition in the 529 space is subject to a number of constraints. While consumers are free to choose an out-of-state plan, they may give up valuable in-state tax breaks to do so. Moreover, plan deficiencies like excessively risky glide paths are unlikely to be salient to consumers, and—even if they were—standard disclosures would provide little useful information. Ironically, the confusing 529 plan landscape may heighten consumers' perceived need for professional advice, pushing them toward more expensive broker-sold plans.

The results presented here are timely. There is currently a push to expand states' role in providing retirement plan options to small employers. Five states have adopted state-run IRA plans and others are considering similar measures.<sup>9</sup> These reforms are premised on the notion that states can leverage economies of scale and disinterested oversight to offer more efficient money management than can many small companies. State-sponsored IRA plans share a number of features with college savings plans, so understanding the degree to which college savings plans deliver these sought-after benefits provides important information. The role of college savings plans has also expanded: changes in the recent tax-reform bill<sup>10</sup> will enable families to use college savings plan assets to pay tuition for private K-12 schools in addition to college, promising to expand the pool of assets invested in college savings plans.

This study utilizes a proprietary dataset of college savings plan menu information from an industry data provider as well as mutual-fund information from CRSP. The data provide a comprehensive snapshot of plan offerings as of the fall of 2017. The data include information on plan menu offerings (“portfolios” in the parlance of college savings plans), plan administrative costs, and the price and performance of the underlying mutual funds that are combined to create the portfolios. Using this data, the paper addresses key questions about plan quality: how much do plans cost? How do investments perform relative to the risk investors bear? And what factors affect plan performance and cost?

The first set of tests directly examines the fees associated with plans. There is considerable variation in plan costs even within direct- and broker-sold plans. While the lowest-cost plans are quite inexpensive, most plans are more expensive than comparably sized 401(k) plans. While the average total cost

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9. See William G. Gale & David C. John, *State Sponsored Retirement Savings Plans: New Approaches to Boost Retirement Plan Coverage* (Pension Res. Council, Working Paper, 2017), <https://pensionresearchcouncil.wharton.upenn.edu/wp-content/uploads/2017/09/WP-2017-12-John-Gale.pdf> [<https://perma.cc/73PC-NX54>].

10. Tax Cuts and Jobs Act § 11032.

associated with a billion-dollar or larger 401(k) plan is about 0.3%, the average college savings plan is twice as expensive. Larger plans and direct-sold plans tend to be less costly in general. Controlling for size, broker-sold plans are 56 basis points more expensive than direct-sold plans annually, before accounting for sales charges that range as high as 5.75%.

Unsurprisingly, these high costs are associated with worse performance net of fees. Using standard risk-adjusted returns measures from the mutual fund literature, tests compare the performance of funds in broker-sold and direct-sold plans. Broker-sold plans offer portfolios that, before administrative costs, perform about as well as direct-sold funds on a risk-adjusted basis, but after accounting for all costs, the higher fees of broker-sold plans lead to significantly lower risk-adjusted performance. Broker-sold plans may also be riskier. Target-date funds in broker-sold plans show higher equity-risk exposure by some measures, holding the target date constant. Consumer investors would be poorly positioned to detect this risk variation, meaning that investors in broker-sold plans may be bearing more investment risk than is optimal.

Finally, revisiting one of the few existing academic studies of college savings plans, by Vicki Bogan,<sup>11</sup> this study examines whether state tax incentives conditioned on investing in an in-state plan are associated with higher plan costs. Since a tax incentive to utilize an in-state plan could relax the competitive constraint, such plans might charge supra-competitive fees. Depending on the specification, these tests find either no relationship or a negative relationship between state tax incentives and plan costs. This suggests that the result of the Bogan study, showing a positive relationship in data from 2004 to 2006, may no longer hold.

This paper joins a very small empirical literature on college savings plans. In addition to the Bogan study, Simona Hannon et al.<sup>12</sup> offer a brief overview of plan structure, growth, and costs in a Federal Reserve note. No other studies have empirically examined 529 plans.

This paper also contributes to two other literatures. First, this paper fits with the line of finance literature examining the distinction between direct- and broker-sold mutual funds. Daniel Bergstresser et al.<sup>13</sup> establish that broker-sold funds underperform direct-sold mutual funds, even before accounting for sales charges. Susan Christofferson et al.<sup>14</sup> show that high-commission broker-sold funds underperform low-commission broker-sold funds. Diane Del Guercio and

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11. Vicki L. Bogan, *Savings Incentives and Investment Management Fees: A Study of the 529 College Savings Plan Market*, 32 CONTEMP. ECON. POL. 826 (2014).

12. Simona Hannon et al., *Saving for College and Section 529 Plans*, FEDS NOTES (Feb. 3, 2016), <http://www.federalreserve.gov/econresdata/notes/feds-notes/2016/saving-for-college-and-section-529-plans-20160203.html> [<https://perma.cc/J2MJ-7N5B>].

13. Daniel Bergstresser et al., *Assessing the Costs and Benefits of Brokers in the Mutual Fund Industry*, 22 REV. FIN. STUD. 4129 (2009).

14. Susan E.K. Christofferson et al., *What Do Consumers' Fund Flows Maximize? Evidence from Their Brokers' Incentives*, 68 J. FIN. 201, 227 (2013).

Jonathan Reuter<sup>15</sup> present similar results, disaggregating by active and passive management. Reuter<sup>16</sup> shows that the underperformance of actively managed funds is strongest in the broker-sold space. This paper extends this literature by examining direct- and broker-sold performance in the curated menus of college savings plans. Second, this study is also related to recent work on target-date funds. Pierluigi Balduzzi and Reuter<sup>17</sup> document significant heterogeneity in target date retirement funds. This paper finds similar heterogeneity when comparing broker-sold and direct-sold age-based retirement portfolios in college savings plans, and additionally shows that target-date funds may be riskier in broker-sold plans.

This paper proceeds as follows. Part I offers an overview of 529 plans. Part II describes the data and results. Part III describes cross-subsidization between plans as a potential explanation for high costs. Part IV concludes.

## I. Background

College savings plans under section 529 of the Internal Revenue Code,<sup>18</sup> enacted in 1996,<sup>19</sup> are a unique form of tax-preferred savings account, not just in their purpose, but also in the structure of their menus, their administrative oversight, and their applicable regulatory regime. This section provides an overview of the distinct features of college savings plans. It begins with background information on the history and growth of 529 plans and then provides relevant details of plan administration, regulation, menu structure, and cost.

### A. The Creation of College Savings Plans

College savings plans are a creation of the states. The first plans were created in the late 1980s by Wyoming and Florida.<sup>20</sup> These plans were prepaid tuition plans in which investors bought credits good for future tuition at state universities. The credits were redeemed for credit hours rather than cash, so regardless of how much tuition increased, the investor would be protected against the rising cost of college. Other states joined suit, and college savings

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15. Diane Del Guercio & Jonathan Reuter, *Mutual Fund Performance and the Incentive to Generate Alpha*, 69 J. FIN. 1673 (2014).

16. Jonathan Reuter, *Revisiting the Performance of Broker-Sold Mutual Funds* (June 21, 2018) (unpublished manuscript), <https://papers.ssm.com/abstract=2685375> [<https://perma.cc/X4F2-FL4R>].

17. Pierluigi Balduzzi & Jonathan Reuter, *Heterogeneity in Target Date Funds: Strategic Risk-Taking or Risk Matching?*, 32 REV. FIN. STUD. 300 (2019).

18. I.R.C. § 529 (2018).

19. Small Business Job Protection Act of 1996, Pub. L. No. 104-188, § 1806(a), 110 Stat. 1755, 1895.

20. Kathryn Flynn, *The History of the 529 Plan*, SAVINGFORCOLLEGE.COM (May 14, 2014), <https://www.savingforcollege.com/articles/infographic-history-of-529-plan> [<https://perma.cc/6LUQ-YN5Y>].

plans gained considerable momentum with the creation of the popular Michigan Education Trust (MET) in 1988, which garnered about 55,000 enrollees in the first four years of its existence.<sup>21</sup>

A critical question for plans and participants was the tax status of the increases in value associated with the tuition guarantee. The IRS took the position that increases in value were not taxable as income to investors, but that participants in the MET program would owe tax on increased value of tuition at the time the educational services were rendered.<sup>22</sup> The IRS also took the position that the income of the trust itself was taxable, as the trust ultimately served to benefit private individuals who decided to buy the contracts, rather than the state itself.<sup>23</sup>

Michigan paid federal income taxes on plan income and then sued the IRS for a refund of the payments, arguing that—as a state instrumentality—the plan was exempt from federal taxation.<sup>24</sup> While the district court ruled in favor of the IRS,<sup>25</sup> the Sixth Circuit sided with Michigan and held that earnings in the plan were tax-exempt.<sup>26</sup> As a result, state-sponsored college savings plans were effectively tax-deferred, with investments growing in value tax-free, while the accrued tuition benefit would be taxable to the investor when the beneficiary enrolled in college.

Following the loss in court, the IRS declared that it would challenge the tax status of college savings plans on a case-by-case basis.<sup>27</sup> Instead, a bipartisan effort<sup>28</sup> in Congress led to the adoption of section 529 of the Internal Revenue Code as part of the Small Business Job Protection Act of 1996.<sup>29</sup> Formally, Section 529 created “qualified State tuition program[s],”<sup>30</sup> which would grow in value on a tax-deferred basis. Section 529 imposed a number of requirements on qualified tuition programs in order to qualify for the tax exemption<sup>31</sup>: only states could create college savings plans,<sup>32</sup> states had to provide penalties for expending plan assets on noneducation expenses, and the assets of each investor had to be segregated.<sup>33</sup> An important limitation in the

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21. *Id.*

22. I.R.S. Priv. Ltr. Rul. 88-25-027 (Mar. 29, 1988).

23. *Id.*

24. *Michigan v. United States*, 802 F. Supp. 120, 121 (W.D. Mich. 1992), *rev'd*, 40 F.3d 817 (6th Cir. 1994).

25. *Id.*

26. *Michigan v. United States*, 40 F.3d 817, 821 (6th Cir. 1994).

27. *See Flynn*, *supra* note 20.

28. *See id.*

29. Small Business Job Protection Act of 1996, Pub. L. No. 104-188, § 1806, 110 Stat. 1755, 1895.

30. *Id.*

31. *Id.* § 529(b), 110 Stat. at 1895.

32. *Id.* § 529(b)(1), 110 Stat. at 1895.

33. *Id.* § 529(b)(3)-(4), 110 Stat. at 1896.



initial version of section 529 was that investors could have no control over the investment of the assets contributed to the plan.<sup>34</sup>

With certainty achieved on the tax front, states sought to provide attractive options for families. Some states made a portion of 529 contributions exempt from the state income tax, providing a powerful incentive for families to invest. States provided other benefits as well, including matching grants, scholarships, and protection of plan assets from creditors.<sup>35</sup>

As plans grew in size and number, section 529 was revised several times. In 2001, the Economic Growth and Tax Relief Reconciliation Act<sup>36</sup> (EGTRRA) fully exempted the earnings on 529 contributions from federal taxes, providing a significant boost to the value of 529 plans. While this benefit was originally specified to sunset in 2010, the Pension Protection Act of 2006 made the exemption permanent.<sup>37</sup> The asset mix in 529 plans also began to change. Early plans typically either provided a tuition guarantee, like the MET, or a simple low-risk fixed-income option like a savings account. Plans began to offer age-based target-date portfolios that automatically shifted the risk of underlying investments as the beneficiary approached college age.<sup>38</sup> With richer plan menus, investors sought more control, and EGTRRA revised section 529 to permit annual rollover of plan assets to a new account with the same beneficiary.<sup>39</sup> The rollover mechanism provided a (clunky) workaround to the prohibition on investor direction of account assets by allowing investors to roll assets into a new portfolio. Section 529 was eventually changed to allow the reallocation of investments twice a year within the same account.<sup>40</sup>

### *B. The Current Structure of 529 Plans*

In the modern college savings market, there are two broad classes of 529 plans: prepaid tuition plans and college savings plans.<sup>41</sup> In prepaid tuition plans, investors buy tuition credits that are guaranteed keep pace with the increase in tuition at public universities in the state. These plans are similar to the original generation of college savings plans like the MET. To implement these guarantees, prepaid plans invest to generate returns that cover the future obligations of the plan. Prepaid plans are closely analogous to defined-benefit pension plans, with the risk that investment growth fails to keep pace with increases in tuition borne by the plan itself.<sup>42</sup> As with other defined-benefit

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34. *Id.* § 529(b)(5), 110 Stat. at 1896.

35. HURLEY, *supra* note 6, at 29.

36. Pub. L. No. 107-16, § 402(b)(1), 115 Stat. 38, 61-62 (2001).

37. Pub. L. No. 109-280, § 1304(a), 120 Stat. 780, 1109 (2006).

38. HURLEY, *supra* note 6, at 16.

39. EGTRRA § 402(c).

40. I.R.C. § 529(b)(4) (2018).

41. *See* HURLEY, *supra* note 6, at 71-78.

42. States vary in which party ultimately bears the risk of a shortfall. In some states, the guarantee is backed by the full faith and credit of the state. Other states simply require the state

plans, investors risk losing out on the upside of market returns that outpace the tuition increases. As Figure 1 indicates, only a small percentage of assets in 529 plans are held in prepaid tuition plans.

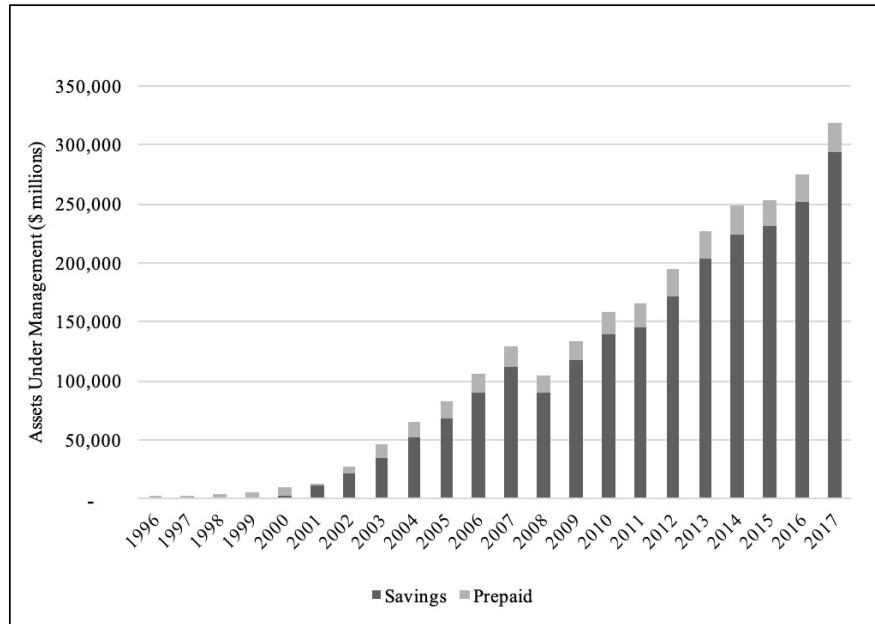


Figure 1. Total Assets Held in 529 Plans

The other type of 529 plan is commonly called a “college savings plan.”<sup>43</sup> These plans are akin to defined-contribution retirement accounts like 401(k) plans or IRAs. College savings plans feature curated menus of investment options, with investors making choices of how to allocate assets over those menus and ultimately bearing the risk that investment returns are lower than expected. These plans are the focus of this paper.

Section 529 plans have become an important part of household portfolios. The Federal Reserve Flow of Funds Report tracks money held in 529 plans beginning in 1996.<sup>44</sup> Figure 1 plots this data. While only \$2 billion was

university system to accept the payout of the plan in exchange for the stated tuition benefit. Still other states do not explicitly address consequences of a shortfall. See *An Introduction to 529 Plans*, U.S. SEC. & EXCHANGE COMMISSION (May 29, 2018), <https://www.sec.gov/reportspubs/investor-publications/investorpubsintro529htm.html> [<https://perma.cc/NFB6-ZP9T>].

43. There is inconsistent terminology in the industry. The terms “college savings plan,” “529 plan,” and “prepaid tuition plan” have overlapping usage. For clarity, I refer to defined-contribution plans with curated investment menus throughout simply as “college savings plans.” I refer to prepaid tuition and college savings plans collectively as “529 plans.”

44. McCullers & Stefanescu, *supra* note 4.

invested at the beginning of the series, plans held more than \$300 billion as of 2017. The vast majority of these assets are held in savings plans—that is, plans with a defined-contribution structure. The preponderance of assets in savings plans likely reflects several factors: prepaid tuition plans are not open to out-of-state investors, the plans may provide more value if used to fund tuition at an in-state public school, and the tuition guarantees are not always backed by the full faith and credit of the sponsoring state.<sup>45</sup>

### 1. Plan Characteristics

Currently, there are 110 plans offered under Section 529.<sup>46</sup> Nineteen of those plans are prepaid tuition plans, and ninety-one are college savings plans. Of the 91 college savings plans, 4 consist of a single savings account or certificate-of-deposit investment option carrying an FDIC guarantee. The remaining 87 plans provide menus of investment options as described below.

States vary in their tax treatment of 529 plans. While nearly all states follow the federal tax treatment of investment gains in 529 plans,<sup>47</sup> many states also offer an additional state tax benefit for investing in a 529 plan. In thirty-five states and the District of Columbia, 529 contributions are subject to either a deduction or tax credit.<sup>48</sup> Most states that do not provide a tax deduction for 529 contributions do not have a state income tax. States that provide a tax benefit typically limit the benefit to contributions to the states' own plans, meaning that investors who choose an out-of-state plan might have to forgo the tax deduction.<sup>49</sup> Seven states provide a tax benefit for a contribution to any plan, including out-of-state plans. Typically, deductions are limited by a cap on the size of the deductible contribution and are uniform across plans offered by the state.

In addition to tax benefits, states offer an assortment of other inducements to participate. Maine provides, through a charitable foundation, a \$500 grant to the account of any baby born in the state.<sup>50</sup> New Jersey offers a scholarship program that takes the form of a matching grant for plan participants who

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45. The legal status of tuition guarantees is a matter of state statute. While some states fully back their tuition guarantees by law, others do not, meaning that a shortfall in assets may or may not ultimately be made up by the state. *See supra* note 42.

46. ABLE (Achieving a Better Life Experience) plans are also available in addition to college savings plans. These plans are similar but aimed at saving to meet the needs of people with disabilities. *See About ABLE Accounts*, ABLE NAT'L RESOURCE CTR., <http://www.ablenrc.org/what-is-able/what-are-able-accounts> [<https://perma.cc/SM9K-7NXA>].

47. HURLEY, *supra* note 6, at 29.

48. The statistics in this paragraph are simple calculations based on data from *State Tax Deductions for 529 Contributions*, FINAID, <http://www.finaid.org/savings/state529deductions.phtml> [<https://perma.cc/Y2Q7-9BN9>].

49. Sufficiently motivated investors could claim the deduction and subsequently move assets to an out-of-state plan in a rollover transaction, but this would be fairly cumbersome.

50. The Alford Grant Program is funded by the Alford Scholarship Foundation. *See \$500 Alford Grant*, NEXTGEN 529, [www.500forbaby.org](http://www.500forbaby.org) [<https://perma.cc/68MR-YDN6>].

attend New Jersey state colleges.<sup>51</sup> Sixteen states provide some form of matching grant or seed deposit.<sup>52</sup> Some employers are also beginning to match 529 contributions as an employee benefit.<sup>53</sup>

College savings plans are sold in one of two ways. The majority of plans are *direct-sold*. Investors in these plans enroll by visiting the plans' websites, filling out the appropriate forms, and transferring cash to the accounts. Plan websites provide a wealth of information about plan options, but investors in these plans ultimately make investment decisions on their own or with the help of a third-party financial advisor. Other plans are *broker-sold*. Investors in these plans invest with the help of a broker who receives a stated commission (sales charge) in exchange for helping the client choose options in the plan. Broker-sold plans are managed by mutual fund complexes that also operate broker-sold mutual funds. Broker-sold mutual funds are a separate segment of the mutual fund industry, and clients who work with brokers are generally not offered options free of a sales charge. Broker-sold 529 plans allow brokers to recommend 529 investment options without sacrificing a sales commission.

## 2. Administrative Oversight of Plans

Section 529 plans are created by state statutes that lay out the administrative structure of the plan.<sup>54</sup> While the specific legal entities that oversee plans vary from state to state, plans are run by politically appointed advisory boards. In some states, these boards are run out of the office of the state treasurer or other appropriate department. For example, the Ohio plans are overseen by the Ohio Tuition Trust Authority, which is operated out of the Chancellor's office of the Ohio Department of Higher Education, a state agency.<sup>55</sup> In other cases, the oversight might come from a separate, state-chartered entity. For example, in Virginia, all 529 plans are administered by Virginia529, a state-created, self-supporting enterprise fund overseen by a board of directors appointed by various state officials.<sup>56</sup> The state 529 board typically oversees all 529 offerings by the state. Since most states offer more than one plan, state boards usually oversee multiple plans. For example,

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51. See *infra* Section IV.B.

52. See *College Savings Incentives*, PROSPERITY NOW (2016), <http://scorecard.prosperitynow.org/2016/measure/college-savings-incentives> [https://perma.cc/RWY9-A882].

53. Reyna Gobel, *Boost 529 Plans Through Employer Contributions*, U.S. NEWS & WORLD REP. (Jan. 22, 2014), <https://www.usnews.com/education/best-colleges/paying-for-college/articles/2014/01/22/boost-529-plans-through-employer-contribution-programs> [https://perma.cc/SQU2-PEEV].

54. College savings plans, as distinct from prepaid tuition plans, are required to be maintained by a "State or agency or instrumentality thereof." I.R.C. § 529(b)(1) (2018). Only one prepaid tuition plan is run by a non-state entity, the Private College 529 Plan.

55. *Ohio Tuition Trust Authority*, C. ADVANTAGE, <https://www.collegeadvantage.com/about-us> [https://perma.cc/JA5T-DMT6].

56. VA. CODE ANN. § 23.1-701 (2018).

Virginia529 oversees the Invest529 direct-sold plan, the College America broker-sold plan, the Prepaid529 prepaid-tuition plan, and the ABLE Now plan for those with disabilities.<sup>57</sup> Plan boards combine features of investment committees used in large 401(k) plans (with their oversight of investment options) and mutual fund boards (with their fee-negotiating responsibility).

State 529 boards do not operate the plans on a day-to-day basis, but instead offer high-level oversight akin that of to a corporate board of directors. The day-to-day operation of the plan is accomplished in one of two ways. Some plans are run by an in-house administrative staff. This is a common arrangement for prepaid tuition plans, where it is necessary to make frequent investment decisions in order to manage the invested assets. Other plans are run by a third-party program manager pursuant to a management contract negotiated by the board. The program manager is typically a mutual fund company given that such companies have expertise in taking deposits, tracking balances, and providing a menu of options. In either case, the board has ultimate responsibility for overseeing and negotiating the plan's investment menus and fees.

There is an operational distinction between broker-sold and direct-sold plans. Broker-sold plans are universally operated by third-party program managers on a contract basis, but direct-sold plans may either be operated by a third-party administrator or by in-house by employees of the 529 entity. For example, the CollegeAmerica 529 plan, overseen by Virginia529, is operated on a contract basis by American Funds,<sup>58</sup> one of the largest broker-sold mutual fund families. Most of the funds offered in the plan are likewise operated by American Funds. Conversely, Invest529, the state's direct-sold offering, is operated by a CEO and staff employed directly by Virginia529.<sup>59</sup>

### 3. The Structure of Plan Menus

College savings plans bear a superficial resemblance to 401(k) plans. Participants contribute funds and then have discretion, subject to the twice-a-year limit,<sup>60</sup> to direct funds to one or more selections from a menu of options chosen by the plan manager. However, unlike a 401(k) plan, the investment choices in college savings plans are not direct investments in mutual funds or

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57. Letter from Mary G. Morris, Chief Exec. Officer, Bd. of the Va. Coll. Sav. Plan, to the Members of the Bd. 1 (Oct. 10, 2017) in VIRGINIA529, VIRGINIA COLLEGE SAVINGS PLAN ANNUAL REPORT FOR THE PERIOD ENDED ON JUNE 30, 2017, at 3, 3 (2017), [https://www.virginia529.com/uploads/files/va529\\_annual\\_audited\\_statements\\_report\\_2017.pdf](https://www.virginia529.com/uploads/files/va529_annual_audited_statements_report_2017.pdf) [<https://perma.cc/G2V6-H7CD>].

58. *CollegeAmerica Program Description*, AM. FUNDS 3 (July 1, 2019), [https://www.americanfunds.com/advisor/pdf/shareholder/cagebr-001\\_529pd.pdf](https://www.americanfunds.com/advisor/pdf/shareholder/cagebr-001_529pd.pdf) [<https://perma.cc/53SH-KNBC>].

59. See *Invest529 General Information*, SAVINGFORCOLLEGE.COM, <https://www.savingforcollege.com/529-plans/virginia/invest529> [<https://perma.cc/XB8S-L576>].

60. I.R.C. § 529(b)(4) (2018).

other assets. Instead, investors choose over a set of “portfolios,” each of which consists of one or more mutual funds. The plan program manager, with the oversight of the board, selects a set of mutual funds for the plan and constructs portfolios by allocating a percentage of assets in each portfolio to selected mutual funds.

Most plans feature about twenty investment choices split between age-based portfolios and fixed portfolios. Age-based portfolios are meant to provide a “set it and forget it” approach, with the allocation of the portfolio gradually adjusting to less risky mutual funds as the beneficiary ages. Age-based portfolios either prescribe an age range, or (perhaps less judgmentally) a range of dates at which the beneficiary is expected to attend college. In either case, the selection of the age or date range is fully at the discretion of the investor. For example, if an investor has a heightened appetite for risk, they can freely choose a younger age band than the actual age of the beneficiary. Some plans are transparent about this flexibility and offer more and less risky versions of age-based portfolios in each age band.

Fixed portfolios allow investors additional flexibility by providing investment options identified by style, rather than beneficiary age. Investors whose needs are not met (or who think their needs are not met) by the age-based portfolios may choose to calibrate their risk profile manually by choosing among these options. In many plans, the fixed portfolios correspond to a single underlying mutual fund.

Finally, in addition to equity and bond mutual funds, many plans offer a safe asset class, sometimes in the form of an FDIC insured certificate of deposit.

#### 4. The Structure of Plan Fees

Investors in college savings plans incur several different types of fees. First, investors pay the fees of the mutual funds underlying the plan portfolios as disclosed in the funds’ prospectuses. These expenses include management fees, fund expenses, and 12b-1 distribution fees, if applicable. Since college savings plans control substantial pools of assets, they have access to institutional share classes that carry lower fees than retail mutual fund shares open to individual investors. Some plans make extensive use of low-cost index funds, while other plans offer limited or no indexed options.

Second, investors pay administrative fees that compensate the plan managers for running the plan. These fees are typically set at the plan level so that they are consistent across investment choices, but some plans apply lower administrative fees to certain low-return investment options, such as stable-value funds. A component of administrative fees in some plans is a “state fee” that purportedly covers the state’s cost in administering the plan, as distinct from the cost of the third-party plan manager.

Third, broker-sold plans carry distribution fees in the form of sales charges. Sales charges are commissions paid to brokers as compensation for brokerage services, often including financial planning and advice. These sales charges typically track the traditional mutual fund share class structure, with investors able to choose among a front-end load, a back-end load, or an annual load.<sup>61</sup> A front-end load is a one-time fee charged as a percentage of the invested assets, say 4%. In addition to paying a front-end load, an investor will usually pay an additional annual distribution charge known as a 12b-1 fee, which will may compensate the broker or subsidize other distribution channels. A back-end load is structured so that, for example, the same 4% is billed annually in 1% increments, unless the investors departs the fund before four years is up, in which case the balance of the 4% is due. Finally, Class C shares generally carry a 1% annual fee with no additional load upon entering or exiting the fund. This is an attractive option if the investor knows that the investment is short-term, but very costly if the investor holds the fund for many years. These loads may be reduced or eliminated for investors whose assets under management exceed certain dollar thresholds. Broker-sold college savings plans offer numerous variations on this basic fee structure.

All of the above costs are structured as a percentage of invested assets. Some plans also carry nominal services fees in fixed-dollar amounts. These are usually fairly small, often around fifteen or twenty-five dollars, and are sometimes waived for in-state investors and those with significant balances.

### *C. Administrative and Regulatory Environment*

College savings plans offer investments in securities and hold large pools of assets for the benefit of participants, but because college savings plans are created by the states, the federal government plays little role in regulating them as investments. Section 529 is part of the Internal Revenue Code, and the IRS has issued a number of notices aimed at preventing the abuse of the Section 529 tax benefit,<sup>62</sup> but the IRS does not regulate 529 plans for quality or financial safety. Indeed, no centralized agency regulates the safety, soundness, cost, or quality of 529 plans.

Interests in 529 plans are considered municipal securities, which are exempt from registration with the SEC.<sup>63</sup> The primary regulator is the Municipal Securities Regulatory Board (MSRB). The MSRB has issued regulations related to 529 plans, most of which deal with sales practices and

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61. See *Updated: Understanding Mutual Fund Classes*, FINRA (July 16, 2019), <http://www.finra.org/investors/alerts/understanding-mutual-fund-classes> [https://perma.cc/9HRP-8AFB].

62. E.g., I.R.S. Notice 2009-1, 2009-2 I.R.B. 250; I.R.S. Notice 2001-55, 2001-2 C.B. 299.

63. Registration of Municipal Advisors, Exchange Act Release No. 70,462, 78 Fed. Reg. 67468, 67472-73 (Nov. 12, 2013).

disclosures.<sup>64</sup> Those who sell or underwrite the plan investments are covered by rules promulgated by the MSRB and enforced by FINRA. This includes, most importantly, the brokers who sell broker-sold plans.

FINRA has demonstrated an interest in ensuring that brokers selling college savings plans comply with the requirement that investments sold by brokers be “suitable” for the investors who buy them.<sup>65</sup> FINRA has conducted sweeps of brokers and identified issues with sales practices.<sup>66</sup> The most significant issues have occurred when brokers sell plans operated by their brokerage rather than in-state plans with favorable tax treatment. In the case of the former, the broker will receive a commission for selling the plan, but the investor might miss out on a significant tax deduction, raising the question of whether the suitability requirement is met. FINRA has investigated or fined several brokerages for related violations, including Ameriprise, which was found to have directed *every* college savings plan investor to the Wisconsin-based, Ameriprise-operated plan.<sup>67</sup>

Outside of the sales channel, there is little oversight of college savings plans. The College Savings Plan Network is a body created by the National Association of State Treasurers that coordinates practices among the states, but it does not issue formal regulations.<sup>68</sup> It is not a stretch to say that direct-sold college savings plans answer only to the states that create them.

#### *D. Comparison with Other Tax-Favored Savings Vehicles*

It is worth briefly comparing 529 plans to other forms of tax-preferred savings accounts. College savings plans bear a resemblance to both 401(k) plans and Individual Retirement Accounts (IRAs). Both provide tax-deferred growth of invested assets, and both include a degree of investor control over how the assets in the accounts are invested. As with college savings plans, assets in 401(k)s and IRAs are not guaranteed to increase in value and are not guaranteed to be adequate to cover any particular savings goal.

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64. See Proposed Amendments to MSRB Rule G-21(e), Exchange Act Release No. 81,432, 117 SEC Docket 1654 (Aug. 18, 2017); MSRB Rule G-45, Exchange Act Release No. 71,598, 108 SEC Docket 1260 (Feb. 21, 2014).

65. See 2111. *Suitability*, FINRA, <https://www.finra.org/rules-guidance/rulebooks/finra-rules/2111> [<https://perma.cc/VV2U-8N5A>].

66. Kamran Fotouhi, *Finra Is Asking Broker-Dealers, ‘What’s in Your Clients’ 529 Savings Plans?’*, INV. NEWS (Mar. 16, 2017, 4:38 PM), <http://www.investmentnews.com/article/20170316/BLOG09/170319943/finra-is-asking-broker-dealers-whats-in-your-clients-529-savings> [<https://perma.cc/7ZBQ-N4VG>].

67. News Release, NASD, NASD Fines Ameriprise Financial Services, Inc. \$500,000 for Supervisory Violations in 529 College Savings Plan Sales (Oct. 26, 2005), <https://www.finra.org/media-center/news-releases/2005/nasd-fines-ameriprise-financial-services-inc-500000-supervisory> [<https://perma.cc/57DS-LD99>].

68. CSPN Overview, C. SAVINGS PLANS NETWORK, <https://www.collegesavings.org/cspn-overview> [<https://perma.cc/3SMZ-YV2C>].



As with college savings plans, 401(k) plans feature curated menus, often including funds that target a particular date when the investor will need the money. Target-date funds in 401(k) plans target an anticipated retirement date rather than a date of college attendance. Unlike college savings plans, menus in 401(k) plans are constructed at the plan-sponsor level, typically an employer. Plan sponsors often engage the services of financial professionals in constructing a plan's menu.

The regulatory regime in the 401(k) space is considerably different from 529 plans. 401(k) plans are covered by ERISA,<sup>69</sup> and plan sponsors are considered fiduciaries of the plans. Plan sponsors face class-action liability for breaches of this duty, including for creating plan menus that are deficient in terms of providing low-fee options. Class-action lawsuits alleging breaches of fiduciary duty are not uncommon and have had a significant effect on lowering the fees associated with 401(k) plans.<sup>70</sup> 401(k) plans also face federal regulation from the Department of Labor, which also has the ability, albeit within significant resource constraints, to bring enforcement actions in the event of serious problems.

College savings plans are an interesting contrast with 401(k) plans. College savings plans rely on state boards, rather than employer-sponsors, to oversee the construction of plan menus. While not all members of these boards may be financial experts, plans have the capacity to access unconflicted expertise. Since 529 boards exist solely for the purpose of overseeing plans and are free from obvious conflicts of interest, one might hope that they would overcome some of the limitations that have led to suboptimal menus in some 401(k) plans. On the other hand, 529 plans are not covered by ERISA and are not regulated by any federal entity, save the IRS's concern with tax abuses. While college savings plan board members are likely fiduciaries under state law,<sup>71</sup> no plan has faced private litigation alleging a breach of fiduciary duty.

Individual Retirement Accounts provide another contrast with a tax-preferred savings vehicle. IRAs have similar tax treatment to college savings plans, with contributions being made post-tax and growing tax free. Unlike 529 plans, IRAs do not feature a curated menu. Instead, IRA savers are free to open accounts with any number of service providers, often mutual fund companies, and invest in a range of options. The lack of a curated menu in IRA plans has led to concerns that investors might be pushed into high-cost options, particularly by commission-compensated brokers. A report by the Council of

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69. Employee Retirement Income Security Act of 1974, Pub. L. No. 93-406, 88 Stat. 829.

70. See Anne Tergesen, *Latest Wave of 401(k) Suits Yields Big Wins, and Big Losses, for Plaintiffs*, WALL ST. J. (July 14, 2017, 6:30 AM ET), <https://www.wsj.com/articles/latest-wave-of-401-k-suits-yields-big-wins-and-big-losses-for-plaintiffs-1499941801> [<https://perma.cc/E9GR-7B9X>]. See generally Ayres & Curtis, *supra* note 7.

71. Andrea Feirstein, *529 College Savings Plans: Lessons for Publicly Sponsored Private Retirement Plans*, GEO. UNIV. MCCOURT SCH. PUB. POL'Y CTR. FOR RETIREMENT INITIATIVES 7 (Nov. 2016), <https://cri.georgetown.edu/wp-content/uploads/2016/11/Policy-Brief-16-2.pdf> [<https://perma.cc/5XYD-ME9G>].

Economic Advisors in 2015 argued that broker-advised IRA investments underperform by about 1% as a result of receiving advice tainted by conflicts of interest.<sup>72</sup> Unlike 401(k) plans, there is no regime of fiduciary duties backed by a private right of action covering IRA assets. Only the IRS can bring enforcement actions for breaches of fiduciary duty in IRAs, and it has shown little interest in doing so.

College savings plans have the potential to solve the problem of conflicted advice because their menus are set by independent boards. Investors are not left to their own devices to find attractive options. In principle, this could solve one of the most significant problems of the IRA marketplace. Moreover, the fact that investors have a choice of college savings plans means that the employer lock-in effect of the 401(k) market is absent as well: college savings plans clearly face competitive pressure from out-of-state plans. College savings plans also have a size advantage, pooling more assets than all but the largest 401(k) plans, which should give them substantial bargaining power.

In short, as compared with 401(k) plans and IRAs, college savings plans promise a best-of-both-worlds approach. With college savings plans, investors benefit from curated menus, economies of scale, disinterested boards, and a competitive marketplace in which investors have outside options. All that is missing is a serious fiduciary liability regime in the style of ERISA. In the next Part we turn to the empirical question of whether the potential benefits of these structural advantages are realized.

### III. Measuring Menu Quality in College Savings Plans

This Part empirically examines the quality of portfolio offerings in college savings plans. A critical distinction throughout these results is the difference in quality between direct- and broker-sold plans. Some plans of both types show evidence of low-quality menus, but the offerings of a typical broker-sold plan are markedly worse. The analysis begins with an assessment of plan fees. Fees are among the most important aspects of plans quality because they directly diminish returns: a dollar paid in fees is a dollar less left to the investor. The analysis next turns to portfolio performance. There is a substantial literature in finance on mutual fund performance,<sup>73</sup> and this literature provides some empirical tools to measure the quality of college savings plans. Finally, evidence is presented on the risk profiles of investments in college savings plan.

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72. See Jason Furman & Betsey Stevenson, *The Effects of Conflicted Investment Advice on Retirement Savings*, WHITE HOUSE (Feb. 23, 2015, 9:45 AM ET), <https://obamawhitehouse.archives.gov/blog/2015/02/23/effects-conflicted-investment-advice-retirement-savings> [https://perma.cc/QM2R-3EDG].

73. The literature involves hundreds of papers. For a brief overview see Martijn Cremers et al., *Should Benchmark Indices Have Alpha? Revisiting Performance Evaluation*, 2 CRITICAL FIN. REV. 1 (2012). The cornerstone paper in the literature is Mark M. Carhart, *On Persistence in Mutual Fund Performance*, 52 J. FIN. 57 (1997).

*A. Data*

Data on college savings plan menus, portfolio construction, and costs is from a proprietary database compiled by Saving for College, LLC based on public plan documents. This database is supplemented with additional information from a similar college savings plan dataset published by Morningstar. While college savings plans are exempt from registration as securities, all plans publish documents that resemble prospectuses and include detailed information on plan costs, portfolio options, and underlying mutual funds. Plan-menu data used in this study is from the most recent plan disclosures prior to September 30, 2017 as collated in the Saving for College and Morningstar databases. Because historical menu information is not available, this study is limited to evaluating the quality of plan menus as of September 2017.

One limitation of the college savings plan data is that actual allocations of assets to individual-plan portfolios are not aggregated by the major data providers and are not universally reported by plans. As a result, it is not known how frequently investors choose each of the portfolio options in the plan menu. In light of this limitation, I equally weight the portfolios in the tests described below. Casual examination of available plan disclosures suggests that assets are well-distributed over plan options, so equal weighting is reasonable. Plan-level asset balances are taken from the College Savings Plan Network and are current as of December 31, 2017.

As noted above, the 2017 data includes eighty-seven college savings plans. Three of these plans are not included in the empirical analysis. Two of the excluded plans had significant menu turnover in 2017, meaning that matching menus to funds is not possible. The third excluded plan hires money managers to manage plan assets rather than investing in mutual funds. Because of this structure, it is not possible to get monthly information about the performance of plan assets from the CRSP mutual fund database. Excluding these plans leaves a total of eighty-four plans.

Summary statistics for the sample are laid out in Panel A of Table 1. About 57% of plan assets are direct-sold plans, while 43% are managed in broker-sold plans. While broker-sold plans have a smaller asset base, they have more accounts, suggesting that plan balances are typically smaller in broker-sold plans.

Table 1. Plan-Level Summary Statistics

These tables present summary statistics for in-sample plans. Two plans with significant changes during the 2017 fiscal year are excluded, and one plan is excluded because the underlying funds are not tracked in the CRSP mutual fund database.

Panel A. Basic Statistics

	All Plans	Direct-Sold	Broker-Sold
Number of Plans	84	54	30
Assets (\$ Billions) (Total)	292.2	166.8	125.5
Assets (\$ Billions) (Per-Plan)	3.48	3.09	4.18
Mean Number of Accounts	144,045	127,773	173,334
Plan Is Open to Out-of-State Investors	78	49	29
Number of Investment Options	51.6	29.9	90.7

Panel B. Plan Fee Summary Statistics

*Administrative fees* are any asset-based fees in excess of the mutual fund fees associated with the investment options. *Total asset-based fees* are the sums of the underlying fund fees and the administrative fees. Fees are reported as percentages.

<i>Fees are reported as percentages</i> <i>N = 84</i>	Mean	Std. Dev.	25th Percentile	Median	75th Percentile
<b>All Plans</b>					
Administrative Fees	0.314	0.213	0.136	0.278	0.463
Underlying Investment Fees	0.324	0.231	0.132	0.239	0.544
Total Asset-Based Fees	0.638	0.330	0.355	0.606	0.915
<b>Direct-Sold Plans</b>					
Administrative Fees	0.221	0.171	0.100	0.178	0.291
Underlying Investment Fees	0.215	0.173	0.101	0.147	0.287
Total Asset-Based Fees	0.436	0.192	0.268	0.420	0.597
<b>Broker-Sold Plans</b>					
Administrative Fees	0.480	0.178	0.419	0.456	0.576
Underlying Investment Fees	0.522	0.186	0.421	0.544	0.666
Total Asset-Based Fees	1.002	0.176	0.844	1.003	1.152
All-in-Fee (Includes Amortized Load)	1.510	0.312	1.279	1.564	1.786

### B. *The Cost of Investing*

Section 529 plans, including prepaid tuition plans, have periodically faced criticism for being too costly. In 2004, Congress held hearings that included criticism of fees.<sup>74</sup> In 2016, a Federal Reserve brief noted that high costs may be a limiting factor in the widespread use of college savings plans.<sup>75</sup> Websites that track 529 plans generally foreground costs as a consideration in plan choice.<sup>76</sup> The trend in the investment industry as a whole has been toward lower-cost options, and college savings plans face competition from each other as well as from other investment vehicles. To what degree are costs in college savings plans a problem?

#### 1. Measuring Costs

Plan disclosure documents include comprehensive fee information. Fees compensate the mutual fund managers whose funds comprise the underlying assets, the program manager that runs the plan, and—in some cases—the state entity that oversees the plan. For simplicity, and because disclosure documents are not consistent from state to state in categorizing fees, the results below divide fees into just two categories. *Underlying investment fees* are the fees associated with the underlying mutual funds. *Administrative fees* are asset-based fees charged in addition to the underlying fees, regardless of how they are categorized. *Total asset-based fees* are the sums of the administrative fees and underlying investment fees.

The cost of investing in 529 plans varies considerably from state to state and plan to plan. Summary statistics for the costs of investment options in eighty-four college savings plans are detailed in Table 1, Panel B. Costs over investment options are quite dispersed, with the 25<sup>th</sup> and 75<sup>th</sup> percentiles of total costs across all plans separated by 56 basis points and a factor of more than 2.5. Broker-sold plans are also more expensive than direct-sold plans, with the average total fee of broker-sold plan investment options exceeding 1% of assets invested, while the average total cost of a portfolio in a direct-sold plan is nearly two-thirds less expensive. Figure 2 presents similar information graphically as a histogram of asset-based fees for options in direct- and broker-sold plans. The higher typical cost and greater dispersion of cost in broker-sold plans is plainly apparent.

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74. *Oversight Hearing on 529 College Savings Plans: Hearing Before the Subcomm. on Fin. Mgmt., the Budget, & Int'l Sec. of the S. Comm. on Governmental Affairs*, 108th Cong. (2004).

75. Hannon et al., *supra* note 12 (citing the “relatively high cost and limited investment options” of 529 plans as a potential limit on their popularity).

76. See, e.g., Karen Wallace, *The Best 529 Plans*, MORNINGSTAR (Nov. 5, 2019), <https://morningstar.com/articles/867032/the-best-529-plans> [<https://perma.cc/2H8Y-E522>].

The relatively high cost of some plans should not obscure the fact that other plans are quite inexpensive. For example, the 25th percentile of underlying investment fees is only 13 basis points. Plans in the lowest 10%, by total cost, average only 0.16% in total fees. Clearly, some plans are succeeding in offering very low-cost options to investors. Even in broker-sold plans, the 0.52% fee attached to underlying mutual funds represents fairly low-cost options, particularly for actively managed funds. The 48 basis points of administrative fees charged by the mean broker-sold plan, however, is far higher than the 22 basis points in direct-sold plans and accounts for most of the total difference in cost between the two types of plans.

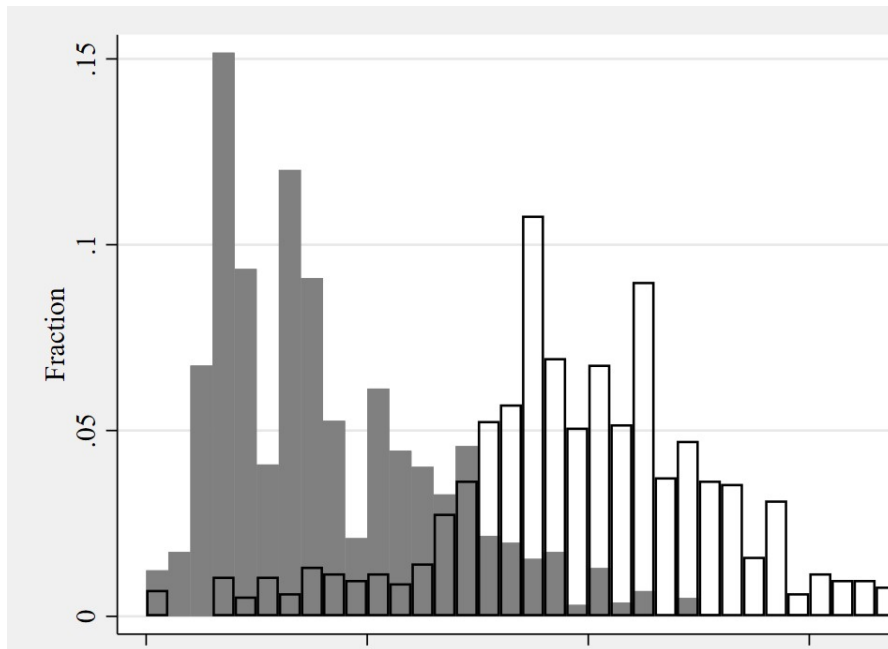


Figure 2. Histogram of Annual Asset-Based Fees for Direct- and Broker-Sold 529 Plans

A reasonable, if imperfect, benchmark for these costs is the 401(k) market. Most 401(k) plans are considerably smaller than 529 plans, but 401(k) plans nevertheless represent significant pools of tax-preferred assets with curated menus. While 401(k) plans, particularly small ones, have been criticized for their costs (including by the author),<sup>77</sup> large 401(k) plans have faced considerable fee pressure over the last decade.<sup>78</sup> According to data from

77. Ayres & Curtis, *supra* note 7.

78. See Tergesen, *supra* note 70 (describing fee litigation).

Brightscope and the Investment Company Institute, 401(k) plans with more than \$1 billion under management had average total costs of 0.30% in 2015.<sup>79</sup> This is not a precisely comparable number to the 0.64% for college savings plans, because the 401(k) data is weighted by the actual holdings of the plan, while the college savings plan data is based on equally weighted fee averages.<sup>80</sup> But given that the costs in college savings plans are twice as high, the comparison is nevertheless striking. The average administrative costs alone are more expensive than the total cost of 401(k) plans.

The costs above omit 2 components of expenses borne by college savings plan investors. First, some plans carry flat fees on a per-account basis. These fees apply in 36 plans and range from \$10 to \$25. They are often waived for in-state investors and for those who set up direct deposit. Given the nominal size and frequent waiver of these fees, they are excluded from further analysis.

Second, and more important, are sales charges. Broker-sold plans carry sales charges that compensate brokers for selling plan investments and—indirectly—for helping advise clients. In the mutual fund literature, it is common to exclude consideration of sales charges because they are, arguably, compensation for a service that direct-sold mutual funds do not provide. For example, a client might pay a sales charge of four percent when purchasing shares in a broker-sold plan pursuant to the advice of a broker who is also helping the client allocate her savings between an employer 401(k) and a conventional brokerage account. An investor choosing a direct-sold plan may be paying for financial advice on an hourly basis, paying a percentage to a registered investment advisor, or simply managing their own money. The costs of professional advice, if any, are separate from the direct-sold investment, and thus cannot be measured in the same way as broker fees. Nevertheless, sales charges are substantial, and understanding their magnitude is important. A complication with sales charges is that they depend on the precise share class that investors select, as well as on the total balance of clients' investment accounts, in some cases including accounts that the client has with the same broker outside the 529 plan. Sales charges are generally subject to breakpoint pricing, where charges are reduced for investors with substantial account balances. The prevalence of these discounts is unobservable.

To provide some sense of the impact of sales charges, Figure 3 reports a histogram of the *all-in-fee* as the total asset-based fee, plus the amortized undiscounted sales charges on front-end load share classes (the sales load

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79. *The Brightscope/ICI Defined Contribution Plan Profile: A Close Look at 401(k) Plans, 2015*, BRIGHTSCOPE & INV. COMPANY INST. 53 (Mar. 2018), [https://www.ici.org/pdf/ppr\\_18\\_dcplan\\_profile\\_401k.pdf](https://www.ici.org/pdf/ppr_18_dcplan_profile_401k.pdf) [<https://perma.cc/GQ9Z-RRTV>] [hereinafter *Brightscope/ICI Report*] (documenting a downward trend in plan costs).

80. The ICI/Brightscope data is also two years older than the college savings plan data. The general trend in both markets, but especially in the 401(k) market, has been toward lower costs. Thus, the time mismatch would likely make college savings plan fees look relatively low compared to a contemporaneous benchmark.

divided by seven). Dividing the sales charge by 7 is consistent with an investor holding the investment for 7 years before making a reallocation that incurs another sales charge. The 7-year-holding-period assumption is standard in the mutual fund literature. Because sales charges apply in broker-sold plans, but not in direct-sold plans, the difference between the 2 types of plans is even more striking.

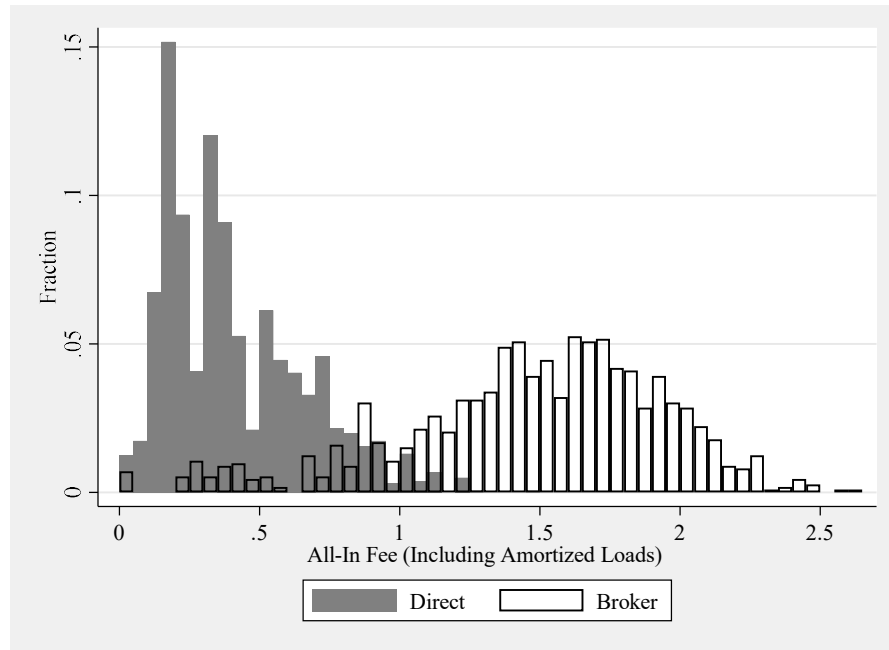


Figure 3. Histogram of All-In Costs (Including Amortized Loads) for Direct- and Broker-Sold 529 Plans

## 2. Correlates of Plan Costs

What features are associated with more expensive plans? In most asset management contexts, there are economies of scale, so large plans are cheaper to manage as a percentage of total assets than small plans. The results above also suggest that broker-sold plans are significantly more expensive. To ensure that the brokerage result is not the effect of broker-sold plans having fewer assets under management,<sup>81</sup> Table 2 presents a set of regressions measuring correlates of plan cost. The three models include controls for the natural logarithm of plan size and whether the plan is broker-sold. With respect to the total fee and the administrative fee, both independent variables are highly significant, while only the broker-sold indicator is significantly associated with

81. This possibility is unlikely, as broker-sold plans tend to be larger.



a higher cost of the underlying funds (i.e. higher underlying investment fees). As would be anticipated, larger plans are cheaper on average, suggesting that economies of scale may be passed on to investors or perhaps that investors seek out lower-cost plans.

Including both variables simultaneously permits a measurement of the difference between broker-sold plans and direct-sold plans. Broker-sold plans are fifty-seven basis points more expensive than direct-sold plans, holding the size of the plans constant.

Table 2: Correlates of Plan Cost

This table presents regressions of measures of plan costs on the log of plan assets and an indicator variable that takes the value 1 if the plan is broker-sold and is 0 otherwise. Observations are at the plan level and administrative fees and underlying fund fees are averaged over plan portfolios on an equally weighted basis. Standard errors are clustered by state.

	(1) Total Fee	(2) Admin. Fees	(3) Underlying Fund Fees	(4) All-in Fee
Log(Plan Assets)	-0.0429** (-2.58)	-0.0624*** (-3.46)	0.0195 (1.54)	-0.0495** (-2.49)
Broker-Sold	0.569*** (14.95)	0.263*** (8.74)	0.306*** (10.18)	1.076*** (18.72)
Constant	0.548*** (10.79)	0.385*** (6.28)	0.164*** (4.19)	0.566*** (9.40)
R <sup>2</sup>	0.717	0.511	0.426	0.838

*t* statistics in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ;  $N=84$

### 3. Index Fund Availability

Index funds, investments that seek to track broad market factors at low cost, have grown rapidly over the last decade. Investors who choose index funds forgo the possibility of outperforming the market in exchange for the certainty of low costs. In retirement plans, the increasing share of assets held in index funds has been a major factor in lowering plan costs. While active management has its advocates, providing at least an *option* to invest in an index fund is a near-universal feature of modern 401(k) plans. As of 2015, more than 98% of large 401(k) plans offered at least one index fund option.<sup>82</sup>

Given the similar goals of college savings plans and 401(k) plans, it is reasonable to ask whether indexed options are widely available. Because portfolios in college savings plans are combinations of various mutual funds, it

82. *Brightscope/ICI Report*, *supra* note 79, at 46 (showing that 98.2% of 401(k) plans with \$1 billion or more in assets offer an index fund option to investors).

is possible for a portfolio to consist of some index funds and some actively managed funds. Alternatively, some portfolios may offer a single index fund or a combination of funds that are all index funds.

On an equally weighted, portfolio-by-portfolio basis, a respectable 31% of portfolios in college savings plans consist entirely of index-fund options. There is a disparity, again, between broker- and direct-sold plans: In direct-sold plans, 39.7% of portfolios are indexed, while only 17% of broker-sold portfolios consist entirely of index funds. This result could partially be explained by broker-sold menus being larger.<sup>83</sup> Since there is usually no reason to offer more than one version of index fund tracking a particular index, longer menus would naturally tend to have a lower percentage of index funds. However, index options are disproportionately absent from broker-sold plans, even accounting for their longer menus: 79.4% of fully indexed portfolios are in direct-sold plans, even though direct-sold plans are only 64% of the sample.

Age-based portfolios also feature less indexing in broker-sold plans. Restricting the sample to age-based portfolios, 31.3% of the underlying mutual funds in age-based portfolios in direct-sold plans are index funds but only 13.9% in broker-sold plans. This is significant because investors bear the fees of the underlying funds directly, resulting in age-based portfolios in broker-sold plans that tend to be more expensive despite the superficial resemblance.

Most striking, though, is the availability of even a single indexed option. Of the plans examined in this study, 50 out of 54, or 92%, of direct-sold plans have at least 1 fully indexed portfolio. While this is somewhat less than in large 401(k) plans, as noted above,<sup>84</sup> it is nevertheless the overwhelming majority. However, among broker-sold plans, 10 of the 20 examined are missing any fully indexed investment option. Seven of those 10 have *not a single index fund among their underlying mutual funds*. Such menu construction is badly out of line with practices in the 401(k) segment of the asset management industry.<sup>85</sup> As already noted, 401(k) plans almost universally provide at least one index fund option, and a billion-dollar 401(k) plan without an index option would be inviting an ERISA suit.

Table 3 presents regressions analyzing index fund availability. As dependent variables, Table 3 uses the number of fully indexed portfolios, the average percentage of each portfolio that consists of index funds, and an indicator variable that takes the value one if there is at least one fully indexed portfolio in the plan. Plan size is not associated with index fund availability, but broker-sold plans are far less likely to offer index-fund options.

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83. See *supra* Table 1 (showing larger menus for broker-sold plans).

84. See *supra* note 82.

85. It should be noted that there is not a precise analogy for a “broker-sold” 401(k). While load mutual funds are sometimes used in 401(k) plans, loads for those funds are almost universally waived.

Table 3: Correlates of Index-Fund Availability

This table presents regressions of measures of index-fund availability on the log of plan assets and an indicator variable that takes the value 1 if the plan is broker-sold and is 0 otherwise. Observations are at the plan level. Standard errors are clustered by state.

	(1) OLS Number of Fully Indexed Portfolios	(2) OLS Average Underlying Index Fraction	(3) Logit Plan Has at Least One Indexed Portfolio
Log(Plan Assets)	1.483 (1.35)	-0.0138 (-0.69)	-0.232 (-1.21)
Broker-Sold	-6.096*** (-2.88)	-0.430*** (-9.12)	-1.850*** (-3.19)
Constant	7.396*** (2.79)	0.699*** (10.66)	3.177*** (3.67)
R <sup>2</sup>	0.0907	0.361	0.1314 (Pseudo-R <sup>2</sup> )

*t* statistics in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ;  $N=84$

The dearth of index funds in broker-sold college savings plans likely works to the advantage of the mutual fund companies that act as program managers for the plans. Actively managed funds carry higher fees but also are less commoditized than index funds, somewhat insulating them from price competition. As such, active management tends to be a higher-margin business for fund companies. One of the leading economic models of the mutual fund market argues that fund managers largely internalize the benefits of their management skill by allowing active funds to grow until stock-picking ability is diluted.<sup>86</sup>

The limited number of index options is striking in light of the market-wide move to lower-cost options in retirement plans and mutual-fund investing generally. Since 2009, passive funds have grown from just 20% of the market to more than 25%,<sup>87</sup> and Moody's recently announced that passively managed funds are set to overtake active funds in assets under management within the next two years.<sup>88</sup> The dearth of index funds in broker-sold 529 plans is in sharp

86. Jonathan B. Berk & Richard C. Green, *Mutual Fund Flows and Performance in Rational Markets*, 112 J. POL. ECON.1269 (2004).

87. Kenechukwu Anadu et al., *The Shift from Active to Passive Investing: Potential Risks to Financial Stability?* 2 fig.1 (Fed. Res. Bank Bos. Risk & Pol'y Analysis Unit, Working Paper No. 18-04, 2018), <https://www.bostonfed.org/-/media/Documents/Workingpapers/PDF/2018/rpa1804.pdf> [<https://perma.cc/X3FV-27A>].

88. Emily Zulz, *Passiv Market Share to Overtake Active in 2 Years: Moody's*, THINKADVISOR (Mar. 18, 2019, 09:58 AM), <https://www.thinkadvisor.com/2019/03/18/passive-market-share-to-overtake-active-in-2-years-moodys/?slreturn=20190626132501> [<https://perma.cc/5QXS-R96V>].

contrast to this trend. One need not be a Bogle-head (the self-adopted term for index fund devotees after the late founder of index fund powerhouse Vanguard, John C. Bogle) to be concerned that participants in broker-sold 529 plans are not given more index-fund options.

### *C. Performance and Risk*

High mutual-fund costs tend to persist, but strong mutual-fund performance rarely endures.<sup>89</sup> It is therefore sensible to focus, first and foremost, on the costs of options in college savings plans. That said, there is a well-developed literature in empirical finance regarding mutual fund performance, and it may shed some light on the performance differences between broker-sold and direct-sold plans.

#### 1. The Basics of Fund Performance Measurement

Meaningful measures of mutual-fund performance must control for the mutual fund's style and risk level. An equity mutual fund is generally going to produce higher returns than a bond mutual fund because equities are riskier than bonds, and their relative returns reflect compensation for bearing the higher risk of equity investing. Naturally, it does not follow that an equity fund is "better" than a bond fund, because not all investors want to bear the higher risk of equities. More subtly, even among equity funds it is important to control for differences in risk level. An equity fund that swings wildly with the market will return more than a conservative equity fund if the market goes up, but this simply reflects a more aggressive bet on the direction of the market and not actual stock-picking skill.

The academic literature typically compares mutual funds using *alpha*, or risk-adjusted returns.<sup>90</sup> Intuitively, *alpha* is the return of a mutual fund after deducting its predicted returns based on its correlation with some measure of market risk, the funds' *beta*. Since both of these concepts are in the results below, it is worth pausing to describe them.

Consider two funds, Risky Fund and Conservative Fund. Both funds invest in equities largely drawn from the S&P 500, and both are actively managed and attempt to beat the market. Over the last three years, Risky Fund's returns have exhibited a beta of 1.2 measured with respect to the S&P 500 index, while Conservative Fund exhibits a beta of 0.6. If the S&P 500 index climbs 5% in a subsequent month, based on the funds' historical correlation, one would expect that the Conservative Fund would climb 3% and the Risky Fund would climb 6%. However, this does not make the risky fund a better investment because if the market had fallen by 5%, the Risky Fund

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89. See Carhart, *supra* note 73.

90. Cremers et al., *supra* note 73.

investors would have expected to *lose* 6% as opposed to the Conservative Fund investors only losing 3%. The funds have different risk profiles and to compare them, their returns must be adjusted for the risk.

Suppose that, when the S&P 500 climbed 5%, the *actual* performance of the Conservative Fund in the same month was 4% and the Risky Fund returned 5%. Here, the Risky Fund's alpha would be negative 1% for the month, since it lagged behind its expected 6% return, while the Conservative Fund would have produced an alpha of 1%, having beat its 3% expectation.

This is all standard in the mutual fund literature, but some features are notable in the college savings context. First, absolute returns can be misleading, as they do not account for differences in risk. Above, the Risky Fund posted a higher return than the Conservative Fund but exhibited worse stock-picking ability once risk is accounted for. Second, risk-adjusted returns provide a means to compare mutual fund performance between funds with differing strategies. Once risk is controlled for, the alphas of the Conservative and Risky Funds can be meaningfully compared. Finally, college savings plans include funds that track indices other than the S&P 500. When two funds track different indices, alpha must account for correlation with both indices to be meaningful. In the results below, we follow the literature on target-date retirement funds and measure performance using an alpha that accounts for correlation with five different indices.

## 2. Portfolio Performance in College Savings Plans

Plan portfolio data includes portfolio weights and tickers for the underlying mutual funds. This data is linked by ticker to the CRSP Survivor-Bias Free Mutual Fund Database, which contains detailed historical performance information. For mutual-fund alphas, the estimation follows Bergstresser et al.<sup>91</sup> and computes alphas using rolling 36-month regressions of performance onto market indices to estimate factor weights. Monthly alphas at time  $t$  are the actual return less the factor weights estimated from  $t-1$  to  $t-37$  product with the factor returns at time  $t$ . To be included in the sample, a fund must have twelve monthly alpha observations. Since each alpha requires a 36-month window of prior returns to estimate the betas, this imposes an effective requirement that funds have a 48-month performance history to be in-sample.<sup>92</sup> Alpha for each portfolio is computed as the linear combination of in-sample fund alphas for underlying mutual funds given the portfolios' weights of each fund.

Average alphas are reported for two sets of indices. First, we report a simple CAPM alpha using the market return as the only factor. While this is a

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91. Bergstresser et al., *supra* note 13, at 4140.

92. Note that this does not mean the funds need to have been in college savings plan portfolios for this period of time, only that the fund must have been in existence for forty-eight months.

standard measure and useful point of comparison, it is not ideal here because the inclusion of many target date style portfolios means that the asset mix includes a large component of non-equity investments. To account for this, results also include a second factor model from Balduzzi and Reuter's<sup>93</sup> study of target date funds, which includes domestic and global equity market returns, two fixed-income factors, and a commodities factor. Since Balduzzi and Reuter are specifically measuring target-date performance, the model is appropriate for this closely analogous context.

Table 4 reports performance measures in three variations. The first set of results is performance net of the all-in-fee, which includes sales charges. The second set shows performance net of all asset-based fees. That is, both the underlying fund fees and plan-level fees that compensate the administrator are deducted from the raw performance. These two measures give a sense of the actual performance differences that investors will experience across plans. The third set of numbers reports performance net only of fund fees, and not plan-level fees. This measure gives a sense of the performance of the mutual funds included in each type of plan.

Broker-sold plans underperform direct-sold plans by about 19 basis points on average when all asset-based expenses are included using the 5-factor alpha, and by nearly 70 basis points when loads are included in the calculation. Comparing performance net of only fund fees, the style-adjusted returns shows a significant difference, but the 5-factor model is statistically insignificant with the broker-sold funds slightly outperforming the direct-sold funds. While the CAPM alpha is lower for broker-sold funds, this measure is not preferred for plans that include non-equity assets. Taken together, the results suggest that broker-sold plans offer essentially equivalent mutual funds in terms of performance but do so within plans that are considerably more expensive in terms of administrative costs.

The fourth set of numbers in Table 4 measures the risk of the underlying mutual funds. Two risk measures are reported. First, the standard deviation of style-adjusted returns reports standard deviation of the monthly returns of each fund after deducting the returns of funds with the same Lipper Objective Code in the same month. Second, CAPM beta is the correlation of each fund's returns with the total returns on equities. While the CAPM alpha is an imperfect measure of performance for funds that do not invest mostly in equities, CAPM beta is nevertheless the appropriate measure of how much a given fund correlates with the equities market, and therefore how much equities risk an investor in that fund is taking.

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93. Balduzzi & Reuter, *supra* note 17, at 309.

Table 4. Portfolio Performance (Equally Weighted, Annualized Percent Return)

This table presents performance measures for portfolios in direct-sold and broker-sold college savings plans. Performance net of asset-based fees adjusts performance measures for all plan costs. Performance net of fund fees reports performance net only of mutual fund fees, and not plan administrative expenses or other fees. Style-adjusted return is the 36-month average of monthly fund returns less the average return of funds in the same Lipper Objective Code. The five-factor alpha includes factors for U.S. market return, as well as “MSCI World Index excluding the United States, Barclays U.S. Aggregate Bond Index, Barclays Global Aggregate excluding the United States, and GSCI Commodity index.”<sup>94</sup> Alphas are measured by estimating factor loadings with a 36-month rolling window, then computing the monthly alpha as the return less the estimated factor loadings product with the actual factor returns.

	Direct-Sold	Broker-Sold	Difference	<i>t</i> Statistic on Differences
<b><i>Performance Net of All-In Fee</i></b>				
Style-Adjusted Returns	0.564	-0.299	0.863	-19.68***
CAPM Alpha	0.034	-1.118	1.152	-12.43***
Five-Factor Alpha	-1.314	-2.011	0.697	-7.59***
<b><i>Performance Net of Asset-Based Fees</i></b>				
Style-Adjusted Returns	0.564	0.208	0.357	-8.11***
CAPM Alpha	0.034	-0.611	0.645	-6.98***
Five-Factor Alpha	-1.314	-1.505	0.190	-2.07***
<b><i>Performance Net of Fund Fees</i></b>				
Style-Adjusted Returns	0.776	0.689	0.087	2.07**
CAPM Alpha	0.218	-0.176	0.395	2.48**
Five-Factor Alpha	-1.154	-1.096	-0.057	-0.68
<b><i>Risk Measures</i></b>				
Std. Dev. of Style-Adjusted Returns	6.564	8.512	-1.97	10.68***
CAPM Beta	0.479	0.571	-3.04	5.74***

*t* statistics in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ;  $N = 2427$

Across both risk measures, the funds in broker-sold plans appear riskier. The inclusion of riskier options in broker-sold plans could reflect those plans offering more portfolios in risky investment categories. Perhaps broker-sold

94. *Id.*

plans offer more flavors of equity-type investment portfolios, leading to riskier plans on an equally weighted basis. More concerning, it may be that broker-sold plans use riskier funds in portfolios that promise superficially similar investment styles to consumers when compared with direct-sold plans. Which of these is the case is taken up in the next Section.

These performance measures are subject to the notable limitation that they may not reflect returns actually available to investors. Data on the composition of plan portfolios does not include information concerning when funds were added to the plan, nor is panel data on plan composition available. Since adjustments to plan portfolio composition likely would favor funds with a strong recent track record, one would expect these performance measures to overstate investor returns going forward.

### 3. Heterogeneity in Target-Date Options

While performance is an important consideration for college savings plans' quality, investors also attempt to calibrate their chosen investment to fit their desired level of risk. Age-based options are designed to automate this calibration. An investor with a beneficiary already packing for the dorm ought to hold safer assets than an investor whose diaper-age beneficiary has the better part of two decades to recover from a down year. The transition of an age-based fund from mostly equity to mostly debt is known as the fund's *glide path*. While age-based portfolios simplify risk management, studies of the mutual-fund market have shown that there is considerable variation in target-date-fund glide paths.<sup>95</sup> This is problematic because investors are almost certain to give significant weight to the stated target date of the fund, and conventional mutual fund disclosures do little to help investors gain insight into differences in fund glide path. The results above suggest that risk may be generally higher in broker-sold plans. This section explores differences in glide paths for age-based funds in college savings plans.

Age-based portfolios in 529 plans are offered either by target date or by age. For age-based target funds, the presumption is that the beneficiary of the investment will attend college at eighteen or nineteen. Plans typically offer target-date options spaced three to five years apart, so that investors can choose, for example, an age-based option for ages zero to four, five to seven, and so on up through eighteen and older.

For date-based options, investors might be offered target dates of 2038, 2034, and so on, down to the current year for students now attending college. Plans differ in the number and configuration of target date options, and some plans offer conservative, moderate, and aggressive versions of each age-based portfolio. Regardless of how funds are named, the important parameter is the time between the current date and the date the investor anticipates using the

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95. *Id.* at 301.



funds to pay for education expenses. The more imminent the expenditure, the less short-term risk the investor will tolerate and the more conservative the appropriate investment portfolio.

To measure riskiness of age-based portfolios in 529 plans, the time-to-college for each age-based portfolio is computed as follows. For date-based portfolios, this is simply the target year minus the current year. For age-based portfolios, this is the average of the high and low target age deducted from nineteen. Age-based portfolios are then separated into seven groups based on the time-to-college measure, essentially standardizing the target-date menu structure across all age-based funds. For plans that have aggressive and conservative versions of their age-based portfolios, these alternatives are discarded and only the moderate portfolio is retained.

Using this data, it is possible to compute three measures of age-based portfolio riskiness. The first measure is the CAPM beta from the alpha regressions described above. In the context of measuring fund performance, CAPM beta is problematic because it accounts only for a fund's correlation with the market, not other sources of risk. However, when measuring the glide path of a target-date fund, CAPM beta is a useful number because it measures the correlation of the fund with the equity market. As an age-based fund transitions away from equity investments to safer assets along its glide path, the CAPM beta should decline. While an all-equity fund would have a CAPM beta close to one, a perfectly safe investment, such as an FDIC insured savings account, would have a CAPM beta of zero.

The second measure reported is the standard deviation of style-adjusted returns for the underlying mutual funds. This measure gives a sense of the relative volatility of underlying mutual funds, holding the style of the fund constant. A higher value indicates that the age-based portfolio is constructed of funds that, given their style, tend to show more month-to-month returns variation.

Lastly, the third measure reported to provide a direct measure of equity exposure is the average percentage of portfolio assets investing in equities for each target date portfolio. Since age-based funds are designed to transition away from equities, the share of equities is informative as to the riskiness of the glide path. While some equities are less risky than others, and that variation is not captured by this measure, it does have the advantage of being directly reported by the fund rather than estimated.

Table 5 reports these results. All three risk measures show higher point estimates for broker-sold funds, but only the returns-based measures are statistically significant. The lack of significance for the fraction-equity results may be an artifact of plans disclosing the percentage equities held in each age-based portfolio, leading managers to seek risk by holding riskier equities rather than more equities.

Table 5. Risk Measures for Age-Based Portfolios

Age-based portfolios are identified by name and standardized by taking the time-to-college for the youngest recommended age group in the portfolios and then grouping over three-year age ranges. Three measures of risk are reported. CAPM beta is the U.S. market beta estimated over a rolling 36-month window prior to the observation month. Monthly standard deviation of style-adjusted returns is the standard deviation of the monthly return of each underlying fund, less the mean return for funds with the same Lipper Objective Code in the same month, averaged across all funds in the portfolio according to portfolio weight. Fraction equity is the share of underlying fund assets held in equities averaged over all funds included in the portfolio weighted by the portfolio weight of the fund. Standard errors are clustered by state.

Indicator Variables	CAPM Beta	Monthly Std. Dev. of Style-Adjusted Returns	Fraction Equity
Age 3-6	-0.0611** (-2.38)	0.0275 (0.69)	-6.764** (-2.57)
Age 7-9	-0.195*** (-13.79)	-0.0716*** (-4.56)	-20.15*** (-13.91)
Age 10-12	-0.276*** (-9.60)	-0.107*** (-4.16)	-28.73*** (-9.60)
Age 13-15	-0.427*** (-19.13)	-0.141*** (-5.74)	-44.15*** (-17.90)
Age 16-18	-0.555*** (-20.54)	-0.206*** (-7.13)	-57.05*** (-19.53)
Age 19+	-0.626*** (-17.11)	-0.243*** (-7.41)	-64.28*** (-16.30)
Broker-Sold	0.0350** (2.21)	0.0751** (2.52)	1.641 (1.05)
Constant	0.772*** (27.44)	0.637*** (23.33)	79.85*** (28.48)
R <sup>2</sup>	0.637	0.228	0.653

*t* statistics in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ;  $N=1064$

These results are consistent with broker-sold plan administrators compensating for higher costs by seeking to generate higher *unadjusted* returns through increased exposure to market risk. Since consumers are unlikely to be sensitive CAPM beta, which is not disclosed in fund documents, but are likely sensitive to unadjusted returns,<sup>96</sup> a risky target-date glide path could reflect a strategy to make higher-cost plans appear superficially attractive to investors.

96. See Del Guercio & Reuter, *supra* note 15, at 309.

*D. State Tax Benefits and Plan Costs*

Costly plans are less concerning to the extent that investors have outside options. The vast majority of 529 plans are open to out-of-state investors, so investors have many plans to choose from. This choice, however, is more circumscribed in states that offer tax benefits in the form of a state-level income tax deduction and condition the availability of that deduction on using the state's own plans. This is the case in fifty plans in the sample. These tax-advantaged plans may face less vigorous competition from out-of-state plans, and this lack of competition might lead to increased costs. On the other hand, these tax deductions represent a potentially significant state tax expenditure, and states that offer such subsidies might be more committed to quality offerings.

Bogan<sup>97</sup> presents evidence that tax-advantaged plans may be costlier. The Bogan study is subject to an important data limitation, however, because the measure of plan costs is the average of the highest- and lowest-cost items in the plan menu, rather than an average of *all* menu offerings. Moreover, the data for that study ends in 2006, and the college savings market has continued to evolve since then.

Given the more recent and comprehensive data of this study, it is possible to revisit this result. The Saving for College data includes a measure of state tax benefits as well as information on whether that benefit is conditioned on using the in-state plan. The state tax benefit is calculated by computing the dollar benefit associated with a \$1,000 contribution to the plan from a parent making \$100,000 a year for a beneficiary eighteen years from attending college. The benefit is measured as the increase in annualized returns required to break even on an investment in an out-of-state plan that would forgo the tax benefit. Since tax benefits are available regardless of whether money is invested in-state or out-of-state, this does not distort incentives and these benefits are treated as zero. Also reported is an indicator variable that takes the value one when tax benefits are available and zero otherwise.

The results are reported in the two panels of Table 6. Panel A uses the indicator variable and Panel B uses the annualized value of the tax benefit. Models include three measures of fees: total fees, administrative fees, and underlying fund fees. Also, models are presented with and without controls for plan size and whether the plan is broker-sold.

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97. Bogan, *supra* note 11.

Table 6. Plan Costs and State Tax Benefit

This table presents regressions of measures of plan costs on an indicator variable that takes the value 1 if the plan provides tax benefits to in-state savers conditioned on using the plan but is 0 otherwise. Controls in models (4) through (6) include the log of plan assets, an indicator variable that takes the value 1 if the plan is advisor sold but is 0 otherwise. Observations are at the fund level and administrative fees and underlying fund fees are averaged over plan portfolios on an equally weighted basis. Standard errors are clustered by state.

Panel A. Indicator Variable for State Tax Benefit

	(1) Total Fee	(2) Administrative Fees	(3) Underlying Fund Fees	(4) Total Fees	(5) Administrative Fees	(6) Underlying Fund Fees
State Provides Tax Benefit (Indicator)	-0.0901* (-1.88)	0.0148 (0.33)	-0.105** (-2.21)	-0.139*** (-4.06)	0.00838 (0.23)	-0.148*** (-3.76)
Log(Plan Assets)				-0.0371** (-2.33)	-0.0627*** (-3.56)	0.0256** (2.16)
Broker-Sold				0.584*** (14.78)	0.262*** (8.54)	0.322*** (9.73)
Constant	0.692*** (17.19)	0.305*** (7.80)	0.387*** (8.80)	0.611*** (11.44)	0.381*** (5.47)	0.230*** (4.63)
R <sup>2</sup>	0.182	0.00118	0.0504	0.759	0.511	0.523

*t* statistics in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ;  $N=84$

Panel B. Annualized Value of State Tax Benefit

	(1) Total Fee	(2) Administrative Fees	(3) Underlying Fund Fees	(4) Total Fees	(5) Administrative Fees	(6) Underlying Fund Fees
Value of Tax Benefit (Percent Returns over 10 Years)	-0.0998 (-1.46)	0.0470 (0.77)	-0.147** (-2.28)	-0.173*** (-3.02)	0.0338 (0.68)	-0.206*** (-3.67)
Log(Plan Assets)				-0.0390** (-2.42)	-0.0631*** (-3.55)	0.0241** (2.06)
Broker-Sold				0.581*** (14.97)	0.260*** (8.53)	0.320*** (10.05)
Constant	0.671*** (18.58)	0.298*** (8.64)	0.373*** (9.53)	0.591*** (11.29)	0.376*** (5.57)	0.214*** (4.61)
R <sup>2</sup>	0.00966	0.00515	0.0428	0.745	0.513	0.509

*t* statistics in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ;  $N=84$

The results show a modest negative relationship between an in-state tax benefit and the overall cost of plans. Without the controls, there is no statistically significant relationship. However, once controls for plan size and whether the plan is advisor-sold are added, there is a significant, negative coefficient on both measures of tax benefit.

These results are consistent with the proposition that states offering tax subsidies for 529 plans are more conscientious in plan administration, but the results are inconsistent with the hypothesis that a relaxed competitive constraint

leads to higher plan costs. The results also suggest that the correlation described in the Bogan study may no longer be a part of the current 529 plan landscape. Since assets in 529 plans have grown five-fold since the 2004 beginning of the Bogan study, it is not surprising that competitive dynamics may have changed in the interim.

#### IV. The Issue of Cross-Subsidization

The foregoing results demonstrate considerable heterogeneity in the cost and performance of college savings plans. This raises an important question: why do states sponsor plans that offer underperforming investment options? When very low-cost, out-of-state plans are actively seeking investors, what incentive do states have to create their own options, particularly if those options are not truly competitive? Joseph Hurley argues that states are motivated by a genuine commitment to helping families fund education.<sup>98</sup> But since families have plenty of out-of-state options, a more jaundiced view might be that politicians are motivated to demonstratively *signal* such a commitment.

However, a careful review of 529 plan documents provides another potential, nonexclusive explanation. College savings plans sometimes generate more fee income than expenses. Investors in many plans pay a fee to the state as a percentage of invested assets. Broker-sold plans may carry such fees even when essentially all operational activities are handled by the third-party program manager. These fee revenues can be used by state 529 boards to offset other expenses and provide benefits to other plan investors. In this way, 529 plans can prove a material benefit to states that sponsor them. This previously unidentified incentive to sponsor plans is significant because it suggests that states are not simply neutral overseers. Rather, states may run some plans on an effectively for-profit basis with the goal of generating fee income to support other plans or related activities.

The balance of this section examines cases in which revenue-generating college savings plans have been used to subsidize other in-state plans or activities. The section concludes by considering with this cross-subsidization ought to raise normative concerns.

##### *A. Case Study: Virginia*

The largest 529 plan in the country by a factor of almost three is Virginia's CollegeAmerica plan, operated by American Funds, a major sponsor of broker-sold mutual funds. The plan benefits from the sales acumen of a nationwide network of brokers who are compensated for both selling American Funds and for having clients who choose portfolios in the CollegeAmerica plan. The CollegeAmerica plan currently manages more than \$60 billion in

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98. HURLEY, *supra* note 6, at 18.

assets, about 20% of the 529 plan total. While well-regarded, and not among the more expensive broker-sold plans, the CollegeAmerica plan is pricier than the direct-sold Virginia plan, Invest529, and, like all broker-sold plans, charges sales loads in addition to its fund expenses.

Allowing the CollegeAmerica plan to operate out of Virginia is lucrative for Virginia529, the enterprise fund that oversees all of Virginia's 529 plans. The CollegeAmerica plan describes the fees paid to Virginia529 in the program disclosure: "As compensation for its oversight and administration, Virginia529 receives a quarterly fee accrued daily and calculated at the annual rate of 0.10% on the first \$20 billion of the net assets invested in CollegeAmerica and 0.05% on net assets between \$20 billion and \$100 billion."<sup>99</sup>

The current fee, accounting for the breakpoint pricing, is seven basis points. But the Virginia529 financial statements are clear that the "oversight and administration" provided to the CollegeAmerica plan by Virginia529 do not include continuous operational control: "The American Funds acts as program manager and provides all back office and operational services for the program. As a result of this structure, Virginia529 is responsible for program oversight and review; however, Virginia529's staff has minimal day-to-day operational responsibility."<sup>100</sup>

Virginia529 disclosed fee revenue of \$41 million for the fiscal year ending June 30, 2017,<sup>101</sup> the vast majority of which was income from the CollegeAmerica plan. This revenue is set against \$25 million in operating expenses across all three plans operated by Virginia529.<sup>102</sup> That is, the total fees paid to Virginia529 by investors in the CollegeAmerica plan or American Funds are sufficient to cover the actual expenses of Invest529, Virginia's direct-sold plan, as well as the prepaid plan operated by Virginia529, with \$16 million to spare.

What becomes of the balance? The 2017 financial statements record a \$16 million "interfund transfer" into the accounts of Virginia's prepaid tuition program, Prepaid529.<sup>103</sup> This transfer is equal to about 2% of the Prepaid529 program's year-end net position. Prior years' financial records evidence transfers of similar magnitude.<sup>104</sup> These transfers are not the only means by which Virginia529 adds value to the Prepaid529 account. According to its

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99. *CollegeAmerica Program Description*, *supra* note 58, at 20 n.1.

100. *Other Information 77 in VIRGINIA529*, *supra* note 57, at 89, 91.

101. *Financial Statements 24 in VIRGINIA529*, *supra* note 57, at 35, 38 (reporting results for the year ending July 30, 2017).

102. *Id.*

103. *Id.*

104. *Financial Statements 26 in VIRGINIA529*, VIRGINIA529 ANNUAL REPORT FOR THE PERIOD ENDED ON JUNE 30, 2016, at 37, 40 (2016), [https://www.virginia529.com/uploads/files/annual\\_report\\_2016.pdf](https://www.virginia529.com/uploads/files/annual_report_2016.pdf) [<https://perma.cc/42NP--WNM7>]; *Financial Statements 26 in VIRGINIA529*, VIRGINIA529 ANNUAL REPORT FOR THE PERIOD ENDED ON JUNE 30, 2015, at 35, 38 (2015), [https://www.virginia529.com/uploads/files/annual\\_report\\_2015.pdf](https://www.virginia529.com/uploads/files/annual_report_2015.pdf) [<https://perma.cc/8FZ4-K8Q5>].

financial statements, Prepaid529 also owns the building out of which Virginia529 operates and collects rent from Virginia529.<sup>105</sup> According to a 2018 actuarial review, Prepaid529 is now funded at 138% of its anticipated liabilities.<sup>106</sup>

To be clear, the income that Virginia529 gets from the CollegeAmerica plan is ultimately used to pay for college. Virginia529 does not subsidize the general fund of the state. Moreover, the CollegeAmerica plan is highly rated by both Morningstar and Saving for College as the state fee is its only administrative expense. But the primary beneficiaries of the state fees paid by CollegeAmerica plan investors are the investors in the Prepaid529 program who enjoy a considerable actuarial cushion on their guarantees. Further, both the Commonwealth of Virginia and Virginia529 can breathe easier knowing that the CollegeAmerica plan's fee income is available to protect the tuition guarantee.

### *B. Case Study: New Jersey*

New Jersey offers a unique incentive for investors to choose one of its two NJBEST 529 college savings programs.<sup>107</sup> NJBEST beneficiaries attending college in New Jersey are eligible to receive a scholarship of \$500 to \$1,500 dollars depending on how long their college savings accounts have been open and how much they have contributed. The baseline requirement is that the account be open for four years and have at least \$1,200 contributed.<sup>108</sup> The scholarship therefore provides an incentive to save early, save using one of the New Jersey plans, and attend college in New Jersey.

The NJBEST website states that “[t]he NJBEST Scholarship is provided by the New Jersey Higher Education Student Assistance Authority (HESAA).”<sup>109</sup> HESAA does in fact oversee the scholarship program, but the money for the scholarships comes from the NJBEST Administrative Fund, rather than from HESAA's budget.<sup>110</sup> The NJBEST Administrative Fund in turn “receives fee income from . . . Franklin Templeton Investments,” which

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105. *Notes to the Financial Statements 36 in VIRGINIA529, supra note 57, at 43, 50.*

106. Alan H. Perry et al., *Actuarial Valuation of Prepaid529*, MILLIMAN 7 (June 30, 2017), <https://www.virginia529.com/uploads/files/prepaid529-valuation-2017.pdf> [<https://perma.cc/GAS2-BGBE>].

107. *NJ BEST Scholarship*, N.J. HIGHER EDUC. STUDENT ASSISTANCE AUTHORITY, <https://www.hesaa.org/Pages/NJBESTScholarship.aspx> [<https://perma.cc/W4WP-5WUC>].

108. *Id.*

109. *Applying for the NJBEST College Scholarship*, NJBEST, <https://www.njb主.com/njb主/manage/scholarship> [<https://perma.cc/PY6D-BXYB>].

110. *Other HESAA Programs and Funds: Financial Statements and Supplementary Information, Years Ended June 30, 2017 and 2016*, N.J. HIGHER EDUC. STUDENT ASSISTANCE AUTHORITY 12 (Oct. 30, 2017), <https://www.hesaa.org/Documents/Financial/AuditedFinancialStatements/2017/OtherHESAAProgramsandFundsFinancialStatements063017.pdf> [<https://perma.cc/3Y5S-3JWT>] [hereinafter *HESAA Information*] (indicating that the NJBEST Administrative Fund covers an HESAA expenses not paid by the program manager, as well as the scholarship program).

manages the NJBEST plans.<sup>111</sup> The disclosures for the NJBEST College Savings Program reveal a ten-basis-point<sup>112</sup> administrative fee as follows: “The Program management fee is used to pay for the services of FTDI, Franklin Mutual Advisers and other FTDI affiliates under the Services Agreement, *as well as to pay HESAA for its services in connection with the Program.*”<sup>113</sup>

The Franklin Templeton broker-sold plan has similar language in its disclosures.<sup>114</sup> The Administrative Fund received fee income from the NJBEST college savings plans of \$4,336,000 in the 2016-17 fiscal year.<sup>115</sup> In the same year, HESAA reported total expenses of less than \$1 million across all of its operational activities, including administering a student loan program.<sup>116</sup> The Administrative Trust Fund currently reports a balance in excess of \$20 million.<sup>117</sup>

Both of the New Jersey plans are expensive; the broker-sold plan is one of only two plans to receive a “negative” rating from Morningstar and the direct-sold plan is rated “neutral.” In the context of a more than \$4 billion plan, the amounts involved in the NJBEST scholarship program seem small enough that they are unlikely to entirely explain the low rating of the New Jersey plan. On the other hand, it appears that the program-management fee, a contributor to the plans’ high costs, is used largely to provide scholarships rather than services to the plan.

### C. Case Study: Washington

A different, and intriguing, example of potential cross-subsidization comes from the state of Washington. Washington operates a prepaid tuition program, Guaranteed Education Tuition (GET).<sup>118</sup> Investors in the GET program buy credits that can be redeemed at a value determined by the growth in tuition price at Washington’s most expensive state school. Washington also operates a college savings program called the DreamAhead College Investment Plan.<sup>119</sup>

While the GET program was designed to protect families against the rising cost of tuition, tuition at Washington public universities grew much more

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111. *Id.*

112. *Investor Handbook*, NJBEST 6 (Dec. 31, 2018), <https://www.franklintempleton.com/forms-literature/download/529NJ-HNDBK> [<https://perma.cc/3C8Q-B66X>].

113. *Id.* at 38 (emphasis added).

114. *Id.*

115. *HESAA Information* at 5.

116. *Id.* at 9.

117. *Id.* at 5.

118. GUARANTEED EDUC. TUITION, <https://www.get.wa.gov> [<https://perma.cc/EY4U-YEA5>].

119. *DreamAhead College Investment Plan*, GUARANTEED EDUC. TUITION, <https://www.get.wa.gov/savings-plan> [<https://perma.cc/SYB5-U7AH>].



slowly than the national average and actually declined from 2015 to 2017.<sup>120</sup> Meanwhile, the investments held by the GET program's trust fund increased rapidly in value over the same period.<sup>121</sup> As a result, the expected value of the GET program's obligations were assessed at \$1.7 billion, while the fund held \$2.3 billion in assets.<sup>122</sup> Further, some GET units were worth less than their initial sale price.

In the spring of 2018, Washington enacted SB 6087.<sup>123</sup> SB 6087 instructed the state board overseeing both the GET and the DreamAhead programs to establish a mechanism by which investors in the GET program could roll their units into the DreamAhead program while capturing some of the excess value of GET investments. The rollover option provided that GET investors could exit the program and receive a premium on their GET units that was nearly 40 percent over what the units would pay out under current tuition rates.<sup>124</sup> Those who remained in the GET program would receive an adjustment to their units as well, but that adjustment would be determined by the board in light of the funding status of the program after the departure of investors taking the rollover option.<sup>125</sup>

The result of this adjustment would be to provide a windfall to those whose GET units had declined in value due to the decline in Washington tuition. The adjustments for those remaining in the plan would provide a windfall as well, but the distribution of benefits between those staying in the GET program and those taking the buyout are unclear *ex ante*. While it is clear what the investors taking a buyout will receive, and that those remaining in the GET program will not be worse off, the division of gains between those who take the buyout and those who choose to stay in GET is difficult to assess. The buyout transaction risks cross-subsidization in favor of one or the other group of investors.

There are reasons that the Committee on Advanced Tuition Payment and College Savings, which oversees both plans and was charged with implementing the buyout, might favor moving more, rather than fewer, investors to the DreamAhead plan. First, by statute, the State of Washington is responsible for any shortfalls in the GET plan. This means that as assets shift to the DreamAhead plan, which makes no promises about keeping pace with tuition increases, the risk to the state of a potential decline in the market is reduced. Second, fees that cover the operating costs of the Committee are paid

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120. SENATE BILL REPORT, ESB 6087 (Wash. 2018), <http://lawfilesexternal.wa.gov/biennium/2017-18/Pdf/Bill%20Reports/Senate/6087.E%20SBR%20HA%2018.pdf> [<https://perma.cc/M342-KFUZ>].

121. *Id.*

122. *Id.*

123. S. 6087, 65th Leg. (Wash. 2018), <http://lawfilesexternal.wa.gov/biennium/2017-18/Pdf/Bill%20Reports/Senate/6087.E%20SBR%20FBR%2018.pdf> [<https://perma.cc/9H8G-Z56>].

124. *New Potential Benefits for GET Account Owners*, GUARANTEED EDUC. TUITION, <https://www.get.wa.gov/sb6087> [<https://perma.cc/PNC3-9G6G>].

125. *Id.*

on GET units at the time they are purchased.<sup>126</sup> Once the investor purchases the units, it is up to the Committee to manage and cover expenses out of the assets of the plan, subject to the guarantee. Conversely, the DreamAhead plan charges a ten-basis-point state fee annually, providing a steady stream of revenue.

In Washington, the concerns raised by this type of transaction are probably minor. SB 6087 seems a well-intentioned intervention to protect GET investors who were disadvantaged by the decline in tuition at Washington's public universities. However, this type of buyout—if undertaken in a state where the tuition guarantee is *not* backed by the state—could carry the risk that investors who do not take the rollover option could be worse off. If a defined-benefit plan without a state guarantee attempted to reduce its long-term risk by encouraging rollovers to a college savings program, investors left behind would participate in a smaller plan with a potentially lower actuarial value. In the absence of a clear set of rules for conducting these transactions, they should be approached with caution.

#### *D. Other Instances of Cross-Subsidization*

Virginia and New Jersey are not unique in using fee income to subsidize other programs related to college savings.

Nevada runs no fewer than six college savings plans, including a large direct-sold plan offered by Vanguard and a smaller broker-sold plan offered by Putnam. Notably, the Putnam plan was created in 2010, after the Great Recession had taken a toll on the state's prepaid plan.<sup>127</sup> At the same time, Nevada created a trust fund to receive and disburse fee income from plans. In 2017, a former treasurer of Nevada credited the trust fund with enabling Nevada to keep its prepaid tuition plan afloat at a time when many states had to abandon theirs.<sup>128</sup>

Rhode Island oversees a \$6 billion plan operated by AllianceBernstein. The plan offers a one-hundred-dollar credit to newborns born in the state funded directly by AllianceBernstein as part of its management contract with the state.<sup>129</sup> The Rhode Island plan has previously received a negative rating from Morningstar.<sup>130</sup>

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126. *Pricing Payout and Fees*, GUARANTEED EDUC. TUITION, <https://www.get.wa.gov/pricepayoutfees> [<https://perma.cc/QH9J-SGK4>].

127. Yesenia Amaro, *Nevada's Pre-Paid College Tuition Program Weathers Hard Times*, LAS VEGAS REV.-J. (Sept. 29, 2013, 5:50 PM) <https://www.reviewjournal.com/news/education/nevadas-pre-paid-college-tuition-program-weathers-hard-times> [<https://perma.cc/3TPC-WJW2>].

128. *Minutes of Board Meeting*, BOARD OF TRS. C. SAVINGS PLANS NEV. 2 (Apr. 13, 2017), in [http://www.nevadatreasurer.gov/uploadedFiles/nevadatreasurergov/content/CollegeSavings/Board/Meetings/2017/2017-04-20\\_Materials\\_CSB.pdf](http://www.nevadatreasurer.gov/uploadedFiles/nevadatreasurergov/content/CollegeSavings/Board/Meetings/2017/2017-04-20_Materials_CSB.pdf) [<https://perma.cc/43VZ-HBU9>].

129. Linda Borg, *In R.I., Saving for College Can Soon Begin at Birth*, PROVIDENCE J. (Dec. 10, 2014, 12:00 AM), <https://www.providencejournal.com/news/government/20141209-in-r.i.-saving-for-college-can-soon-begin-at-birth.ece> [<https://perma.cc/AMG8-8BXV>].

130. *Id.*

Many plans do not disclose enough financial details to fully evaluate the use of state fees. For example, Arizona, the sponsor of another plan receiving a negative rating from Morningstar,<sup>131</sup> also operates a trust fund that receives income from plan fees, though the usage of that fund is not clear.

*E. Is Cross-Subsidization a Problem?*

Is any of this concerning? The amounts of money involved are generally modest relative to plan size, and states seem to use 529 fee income to support college-related activities. While the disclosures related to the usage of fee income are opaque, bordering on misleading, investors' primary concern is presumably the size of the fees, which is straightforwardly disclosed, rather than their usage. This Section argues that cross-subsidization has both positive and negative effects. While calling for a ban on the practice could do more harm than good, the phenomenon should be regarded with caution.

As a descriptive matter, the ability to use fee income from broker-sold plans to subsidize defined-benefit plans or offer other benefits provides an incentive for states to offer their own plans rather than simply refer residents to out-of-state plans. Since college savings plans are mostly open to out-of-state investors, providing states with an incentive to operate them fosters competition via market entry, which may lead to lower fees overall.

On the other hand, there are obstacles to perfect competition in college savings plans. Some states charge fees to out-of-state investors and states commonly limit tax incentives to in-state plans. Further, as in the mutual fund market, consumers vary in sophistication and not all consumers may be sensitive to fees. If competition in the college savings plan space is imperfect, then the ability of states to generate useful revenue by operating high cost plans could be cause for concern.

One potential problem with cross-subsidization is that investors might misapprehend the nature of state oversight. College savings plans are explicitly associated with the states that sponsor them, and investors may take comfort in the fact that plans bear a state-government seal of approval. Indeed, college savings plan boards would surely argue that their oversight improves plan quality. However, when a state board relies on fee income from a broker-sold plan to cover unrelated expenses, the board faces conflicting incentives. When negotiating the menu offerings and cost-structure of a broker-sold plan in the presence of cross-subsidization, the board represents not only the plan investors, who have an interest in keeping costs as low as possible, but also the investors in other plans, who would prefer the plan generate more, rather than

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131. Lee Acheson, *Morningstar Names Best 529 College Savings Plans for 2017*, MORNINGSTAR (Oct. 24, 2017), <https://www.morningstar.com/articles/830917/morningstar-names-best-529-college-savings-plans-f.html> [<https://perma.cc/F9YG-9RRV>].

less, fee revenue. To the extent that investors recognize only the former motive, they may put too much weight on the value of state oversight.

Another concern is related to marketing expenditures. A board engaged in cross-subsidization wants to make the donor plan as large as possible: the larger the plan, the more fee income. But marketing is expensive, and a plan with high-margin, actively managed mutual funds will be able to cover more extensive marketing efforts than a plan that features low-cost, low-margin index options, even if the latter lead to better outcomes for investors. As such, a board may have blunted incentives to negotiate for lower-fee options in plans that provide excess fee income to subsidize other operations. This could explain the low incidence of index funds in broker-sold plans.

Consider how things would be different if each 529 plan in Virginia were overseen by a separate board. The board for the CollegeAmerica plan would have no reason to charge a seven-basis-point fee to cover services that do not benefit plan investors. Moreover, when negotiating which menu options to include, such a board would be better positioned to press for the inclusion of low-cost index options that might result in a lower margin for American Funds, even if inclusion of those funds might reduce the marketing budget for the plan. A board with duties only to CollegeAmerica investors would behave differently because its primary obligation would be to current plan participants rather than to a parent entity with a reliance on fee revenue. The fact that cross-subsidization shifts these incentives is a sign that it is problematic.

## V. Improving Outcomes for Investors in College Savings Plans

The foregoing discussion suggests that college savings plans resemble the mutual fund market as a whole, with states standing in for mutual-fund companies. Just as with mutual funds, investors choosing college savings plans should be aware that some plans carry high costs and choose with caution, but sophisticated shoppers have a number of good options. A reasonable question is whether it is possible to do better. With plans operated and overseen by the states, shouldn't investors be able to have confidence that most options are good ones? Could the market be reformed so that investors need not take a buyer-beware approach to what are, after all, nonprofit plans run primarily for the benefit of state residents? Below, proposals for reform are considered.

### *A. Ensuring College Savings Plan Boards Represent Investors*

As the cross-subsidization examples above suggest, a board that oversees multiple plans with occasionally adverse financial interests might not be able to neutrally advocate for the interests of investors in all plans, particularly when one plan is providing a subsidy to the other. While one way to address this may be avoiding cross-subsidization, cross-subsidization would be difficult to fully eliminate so long as states run multiple plans. For example, if the state board

works with a consultant to draft an investment policy statement affecting two college savings plans, it may be hard to allocate the expense of the consulting arrangement across the two plans so as to avoid any cross-subsidization issues. Moreover, as noted above, cross-subsidization has benefits in terms of enhancing incentives for market entry.

A second option would be to require plans to have boards at the individual-plan level. These could be fully independent boards or non-overlapping subcommittees of the existing state oversight board. These plan-level boards should be empowered to negotiate both with the plan program manager and with the full state board regarding the terms and costs of the plan they oversee. In negotiating with the program manager, a plan-level board would have the capacity to terminate the program-management contract, just as full boards currently do. However, the plan-level board would be better positioned to use that authority on behalf of the plan investors because it would act solely on behalf of plan participants, without responsibility for the financial impact on other plans operated by the state.

Negotiations between the plan-level board and the state board regarding state fees would be more problematic. A plan-level board could not credibly threaten to move the plan to a different state; thus, they could only advocate—perhaps publicly—for the interests of plan investors if they felt that the plan was not receiving value for its state fees. But, while the plan itself could not move, investors in the plan certainly could,<sup>132</sup> and the oversight and advocacy of a disinterested plan-level board could provide useful guidance to plan investors, giving the plan-level board negotiating leverage against the state.

The notion of an independent board to supervise the setting of fees with the state acting as a counterparty would extend the analogy of the college-savings-plan marketplace to the mutual fund market. Mutual funds feature boards of directors charged with protecting the interests of investors. While these boards have been criticized, including by the author,<sup>133</sup> as adding little value, there is reason to think they could be helpful in the college savings plan market. First, while there is competition among college savings plans, it does not approach the vigor of the mutual fund market, which is orders of magnitude larger both in terms of assets under management and in investment options. Boards' value in the mutual fund market is inversely correlated with the degree of competition. Second, while consumers are likely to understand that mutual funds are products sold for profit, state oversight of college savings plans may be leading consumers to view state plans as safer than for-profit investment options. If problems arise because consumers' mental models of the college savings plan marketplace put too much weight on the value of boards, the

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132. See John Morley & Quinn Curtis, *Taking Exit Rights Seriously: Why Governance and Fee Litigation Don't Work in Mutual Funds*, 120 YALE L.J. 84 (2010).

133. *Id.*

simplest fix is to render board oversight more effective. Adopting plan-level, unconflicted boards would be a move in that direction.

*B. Lowering Barriers to Competition*

College savings plans compete, including on costs, but obstacles to competition come in two forms. First, some plans charge additional fees to out-of-state investors. Second, some state tax advantages are available only for in-state plans.<sup>134</sup> The empirical results above suggest that states do not systematically capitalize on the competitive obstacles of in-state tax advantages to charge more to in-state investors. However, this does not mean that all investors are left unharmed by the limitations or that the limitations do not blunt competition in ways that raise fees overall. In reality, in-state favoritism puts a thumb on the scale in favor of home-state plans and may deter investors from choosing a lower-cost plan out-of-state.

There is little policy reason for in-state favoritism. While states might benefit from consolidating assets in their own plans to generate economies of scale, it would be better for them to do so by providing high quality options at a low cost rather than with a selective tax benefit. It is certainly possible for a state to adopt tax neutrality as seven states have already done. If states could be discouraged from favoring in-state plans via their tax codes, the college savings plan market would benefit from more vigorous competition. Further, plan participants in states with high-cost plans would not have to choose among keeping the tax break, saving on fees, or executing a cumbersome rollover. A college-savings-plan market in which in-state favoritism is absent would likely have better outcomes for consumers.

One can imagine states migrating voluntarily toward lower barriers to competition. As noted, some states already offer tax neutrality. Other states might agree to extend tax incentives to another state's plan on a bilateral basis. One bargain, in particular, may be attractive to some states: State *A* might extend its tax benefits to State *B*'s plan in exchange for State *B* dropping any extra fees charged to out-of-state investors for investors from State *A*. State *A* would benefit from new options for its savers, and State *B* would gain economies of scale. Of course, a change along those lines counts on State *A* being willing to lose some in-state assets, thus it is not clear that dropping in-state favorable tax incentives is likely to be adopted universally.

If Congress were inclined to act, it could condition the Section 529 tax exemption on treating in-state and out-of-state investments equally. This would surely garner pushback from the states who could argue, accurately, that they

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134. This type of favorable in-state tax treatment has garnered criticism in other contexts. See Brian D. Galle & Ethan Yale, *Can Discriminatory State Taxation of Municipal Bonds be Justified?* 117 TAX NOTES 153 (2007).

created college savings plans in the first place.<sup>135</sup> On the other hand, if a substantial portion of the federal tax benefit of Section 529 is being consumed by high fees, the federal government has an interest in protecting the intended beneficiaries of its tax expenditure by encouraging competition.

### *C. Opening the College Savings Plan Market*

Overall, the cost and quality of college savings plans do not compare favorably to large 401(k) plans. The state of the college-savings-plan market suggests that state oversight might be adding limited value. If this is the case, then why should college savings plans be limited to those offered under the auspices of a state? Consumers are free to open an IRA account with any number of financial providers. While this has led to concern that some IRA accounts, particularly those sold by brokers, are too costly, it also means that consumers can easily choose low-cost providers.

If Section 529 were amended to eliminate the state-sponsorship requirement, college savings plans could function like IRA accounts. Consumers could open a 529 account with Vanguard, Fidelity, or another provider, and choose from whatever options the provider made available. IRA accounts often provide a choice over a large universe of mutual funds. While this would lead to concerns about potential high-cost options, as in the IRA space, state oversight has not kept high-cost options out of the college-savings marketplace in any case. While some IRA accounts have high-cost mutual-fund options, they do not typically carry program fees, state fees, or administrative fees on top of mutual-fund fees. Investors in IRA accounts simply pay the fees of the mutual funds they choose.

Nor does menu curation provide a valid reason to favor state oversight. Age-based portfolios could easily be replicated by mutual funds or funds of funds, and other options in college savings plans generally correspond closely to existing mutual fund styles. The differences in risk profiles between direct- and broker-sold age-based funds suggest that state oversight has not standardized the glide paths of age-based funds, so consumers must choose with caution in any case.

Of course, some states have done quite well for investors, but opening the 529 market to private providers would not eliminate those plans. Low-cost state-run plans could compete with private-market plans and do so with the advantage of the imprimatur of state approval.

A less obvious advantage of opening the 529 space to private plans would be to divorce broker-sold plans from sponsoring states. The CollegeAmerica plan is not, in any meaningful sense, a Virginia plan. Virginia barely markets it,

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135. It is notable that states often conform their tax rules to federal-level approaches even when they disagree with the federal government's approach. See Ruth Mason, *Delegating Up: State Conformity with the Federal Tax Base*, 62 DUKE L.J. 1267, 1274-79 (2013).

and most investors are American Funds' clients from other states. The CollegeAmerica plan is associated with Virginia because Section 529 requires that it have a state sponsor. If the market were opened for American Funds to offer its funds without state sponsorship, it would likely do so, saving participants the state fee that largely functions as rent for Virginia's sponsorship.

Amending Section 529 this way would surely spark vigorous objections from the states and program managers that run the largest plans. However, the burden should be on the states to establish that they deserve the monopoly they current enjoy. If state oversight produced high quality, curated menus across most of the college-savings-plan industry, then that might justify the current arrangement. But if the current structure is simply a college-savings-plan market among state sponsors that resembles the mutual-fund market as a whole, states should compete in a market open to all entrants.

## VI. Conclusion

College savings plans are an important, but overlooked, component of the household portfolio. By putting the states at the center of plan administration, they provide a testbed for a model of asset management that is gaining favor in other contexts. This paper examines the menus of these plans and finds serious concerns of cost and risk associated with the brokerage distribution channel. These concerns might be attributable to states' capacity to use plan-based fees to subsidize other college-savings activities. When states can subsidize one plan with revenue from another, they have poor incentives to keep costs as low as possible in all plans they operate. Improving oversight and increasing competition could help mitigate these concerns.