

Very Preliminary Draft
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Mutual Fund Choice in 529 Plans:
Federal Tax Advantages and Local Monopolies

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Abstract:

The passage of tax reform in 2001 opened up new tax-advantaged opportunities for families to save for college educations through 529 plans. Unlike other tax-advantaged savings accounts, 529 plans must be chartered by states. Several factors, including more favorable state income tax treatment of contributions or withdrawals, suggest the possibility of a “home bias” in which residents of a state tend to invest disproportionately in their own state’s plan. Home bias confers a local monopoly rent on the mutual fund family that manages the 529 plan. This paper analyzes the extent to which that rent appears in the fee structure and performance characteristics of mutual funds that are made available in 529 plans. While examples can be found of poor offerings in 529 plans, the general result is that mutual fund companies do not systematically offer higher fee, lower performing funds to their captive market than to their retail market.

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I. Introduction

The federal tax code is rife with examples of tax preferences to encourage activities that are deemed socially worthwhile. Many of these preferences pertain to programs that promote personal saving, such as Individual Retirement Accounts (IRAs) and employer-sponsored pensions, whether defined benefit or defined contribution, as in the case of 401(k) plans. Until the last few years, savings incentives typically focused on saving for retirement, and to a lesser extent, saving for health expenditures in Medical Savings Accounts (MSAs). However, with the passage of tax reform legislation in 2001, the opportunities for tax-preferred saving for educational expenses through 529 plans were greatly enhanced. These accounts allow annual, after-tax deposits of up to \$11,000 per beneficiary from each parent in which earnings grow tax-free, and are never taxed if withdrawals are used for postsecondary education. Parents can even make use of a five-year-averaging option that allows a deposit of \$55,000 per child in a single year.¹ At present, almost nothing is known about the incidence of the tax benefits for these accounts or their broader economic consequences. This paper is part of a growing literature that considers the impact that 529 plans will have on saving, taxation, and ultimately the market for higher education.²

While comparisons with tax-advantaged retirement accounts, such as 401(k) plans, may in some cases be useful, there are several unique aspects of 529 plans that raise new and important considerations. The first is that, because 529 plans evolved out of state-sponsored pre-paid tuition plans, states remain the only entities that can charter a

¹ Similarly, the federal Coverdell Education Savings Account (ESA), structured much like the Roth IRA, allows annual, after-tax deposits of up to \$2,000 a year. Earnings are untaxed so long as withdrawals are used for educational expenses, which include those incurred in primary or secondary school. Expenses are broadly defined to include not only tuition but also computers, books, supplies and transportation to school.

² See Dynarski (2003) and Ma (2003) for early contributions to the academic literature.

plan. When tax reform in 2001 eliminated federal tax on withdrawals, almost every state that did not already offer a savings plan created one and began to actively market it. It would seem that a market with about 50 suppliers of essentially the same financial product would be quite competitive. However, there are four reasons why the market is in fact segmented by state of residence. One, economies of scale in marketing and selling the plans would lead each state to focus on its own residence. Two, some states, particularly those that offer a small matching contribution or state subsidy of the administrative costs of the plan, restrict eligibility to beneficiaries or account owners who are residents of the state. Three, some states exempt withdrawals from only their own plans from state income tax, while leaving the withdrawals from other states' plans subject to state income tax. Four, some states provide a further incentive to contribute to the home state plan by giving contributions an upfront state income tax deduction, which is not available on contributions to other states' plans. A segmented market confers a local monopoly on each plan in its home state. This "home bias" is a feature of the market for 529 plans and no other tax-advantaged saving account.

The second unique aspect of 529 plans is that the federal tax exemption on withdrawals was made conditional on the requirement that participants not have substantial direct or indirect control over the investment choices in the 529 plan. Thus, almost all states contracted out the management of their 529 plans to a mutual fund family. 529 plan investment options are in most cases portfolios of several individual mutual funds, often designed on an age-related basis in which the account gradually shifts from equities to bonds as the beneficiary approaches college age. This additional layer of intermediation reduces the transparency of 529 plan accounting. Investors much search

through the plan disclosure documents to identify the underlying mutual funds in these portfolios if they are to assess the quality of the plan investments.

The extra layer of intermediation also generates another opportunity for administrative fees to be imposed. One of the most contentious issues in the financial literature on mutual funds is whether there is any advantage to having the mutual fund be actively rather than passively managed. The latter simply hold stocks in the same proportions as a standardized portfolio, such as the S&P 500 index. They offer diversification, and nothing else, for very low fees. Actively managed funds also offer the “expertise” of a professional manager to pick and choose stocks with the goal of providing a more favorable return for a given level of risk compared to an index fund. Fees are substantially higher on actively managed portfolios.³

This dichotomy in mutual fund investment strategies is also manifest in the two main arrangements for asset-based fees in 529 plans. Those that are managed by a mutual fund family that traditionally offers its retail investors many passively managed funds and thus a low cost structure charge a “wrap” fee that subsumes the fees of the underlying mutual funds. On the plans administered by TIAA-CREF, for example, this asset-based fee averages slightly over 70 basis points per year. This in itself is quite high—about 30 basis points higher than a single index fund that would be available in a 401(k) plan. In contrast, 529 plans that are managed by a mutual fund family with many actively managed funds often charge an asset-based fee (such as 30 basis points) while subjecting the 529 portfolios to the full expenses of the underlying mutual funds. It is not uncommon for the total fees on age-related portfolios (particularly in the equity-laden

³ As discussed in Malkiel (2000), there is very little evidence to support the claim that these extra fees actually result in better performance for the small investor.

early years of accumulation) to exceed 150 basis points per year. The typical fees on 529 plans are higher than those in other tax-advantaged accounts like 401(k) plans and have already drawn criticism.⁴

If investors do exhibit substantial “home bias,” then each state’s fund provider will have significant market power. The market power induced by home bias generates a rent that may be split between the state and its contracted mutual fund family. The high average fees may be one aspect of that market power. Opponents of such a view may counter that the high fees are due to temporary factors, such as the small account balances in the early years of the plan, which will eventually disappear on their own. They may also appeal to traditional arguments in favor of actively managed funds; namely, that they can generate higher performance than passively managed funds that charge lower fees.

The purpose of this paper is to provide evidence on these assertions in a way that abstracts from the complications associated with the nascent state of the 529 industry. Specifically, mutual fund families that manage the 529 plans typically do not make available all of their retail mutual funds in the 529 plan portfolios. At any point in time, including the start-up phase, 529 plan sponsors could choose to construct the portfolios out of funds that have historically performed well at a low cost or out of funds that have performed poorly at a high cost. The research strategy is to compare the subset of mutual funds that underlie the 529 plan portfolios with other retail offerings from the same fund families that have the same investment objective but that are not included in the 529 plan. To the extent that sponsors This empirical design holds the 529 plan sponsors and managers accountable only for what they could have offered within the current system, not features of the current system that may be beyond their immediate control.

⁴ Goolsbee (2002) was an early and eloquent statement of the problem.

Section II of the paper illustrates the argument with a simple example from Fidelity Investments, which manages the plans for Delaware, Massachusetts, and New Hampshire. The argument begins by noting that only in the Massachusetts plan is there an index fund among the set of underlying mutual funds. Comparing the underlying funds to the excluded funds with similar investment objectives, the underlying funds have higher costs and lower performance. The remainder of the paper analyzes the extent to which the Fidelity example is representative of the entire 529 plan market.

Section III discusses the data collection procedures that are used to identify the underlying and excluded mutual funds in each 529 plan portfolio. Performance and other characteristics of the mutual funds are taken from the mutual fund database of the Center for Research on Security Prices (CRSP). Risk-adjustments are made based on the factor portfolios introduced in Fama and French (1993).

Section IV estimates a set of probit models for whether a mutual fund is included in the 529 plan managed by its fund family as a function of performance, cost, and risk characteristics. Estimates are conducted separately for equity and bond funds. Estimates are also conducted separately for plans with wrap fees and non-wrap fees, since the potential to appropriate the local monopoly rent via the expense ratio is available only in the non-wrap plans where a higher expense ratio actually increases the manager's income.

There are two main results. First, the estimates show only weak support for the hypothesis that mutual fund families systematically use high cost funds in their 529 plan portfolios. For equities, underlying funds tend to have higher expense ratios than excluded funds in non-wrap plans and lower expense ratios than excluded funds in wrap

plans, but neither estimate is statistically significant. For bonds, higher expense ratios predict inclusion in the 529 plan for both non-wrap and wrap plans, though the estimates are significant only in the latter case. Second, and more importantly, risk-adjusted performance positively and significantly predicts inclusion of a mutual fund for equities in non-wrap plans. The marginal effect of a one standard deviation increase in the risk-adjusted return is a 21 percent increase in the probability of inclusion. The point estimate for risk-adjusted performance for equities in wrap plans is insignificant and generates a marginal effect that is less than one sixth the size of the effect for non-wrap plans. Thus, to the extent that plan managers with discretion over a range of actively managed plans are making systematic choices about which of their funds to include, they are in general making choices that benefit the 529 plan owner. Section V discusses directions for further research and concludes.

II. A Simple Example of Mutual Fund Selection

As preliminary evidence on the potential problem, consider Fidelity Investments, which currently manages 529 plans in Massachusetts, Delaware, and New Hampshire. The New Hampshire plan is comprised of 15 underlying funds (10 equity, 5 bonds) and is the one that Fidelity markets nationally. Absent from this list of funds is any index fund, suggesting that the included funds are likely to have higher fees, higher turnover, and lower performance than a passively managed fund.⁵ Table 1 uses data from Fidelity's website in April 2002 to compare the included funds with all other funds offered on the retail market listing the same objective (as defined by Morningstar) as any included fund.

⁵ The Massachusetts plan includes Fidelity's Spartan 500 Index Fund. The New Hampshire and Delaware plans do not.

The first row of the table shows that the average fund included in the 529 plan is about twice the size of the average fund not included in the 529 plan. Despite this larger size, the next two rows show that the included funds have higher turnover and slightly higher expenses than the excluded funds. Annual returns over the previous three years are also about 2.4 percentage points lower for the included funds. This lower return does not appear to come with lower market risk, as the market betas for the funds both average about 0.85. This lower risk-return tradeoff is evident in the lower Sharpe ratio and Morningstar overall rating. Overall, the comparisons in the table are suggestive of lower quality offerings in the 529 plan than outside of it, but they leave considerable room for further study. In particular, none of the comparisons of interest are statistically significant. This is not surprising in a small sample of funds for a single 529 plan. The remainder of the paper collects analogous data for all states' plans. By increasing the sample size, we can more precisely ascertain whether these patterns are important outcomes of the way 529 plans were established.

III. Data

We combine data from three sources to more systematically study the differences between plans that are included in 529 plan portfolios and other retail offerings of the same mutual fund families. Our first source of data is the list of mutual funds underlying all of the 529 plans. We identify these funds directly from the plan disclosure documents for each 529 plan. We downloaded the plan documents as of June 30, 2002, through the links on the website, www.savingforcollege.com. The website also provides summary information on each plan and other standardized comparisons across plans. The set of

underlying funds in all 529 plans was identified from these documents. This represents the 529 plan universe at a still early stage of development. Not all 529 plans that are currently available are in the dataset. In total, there are data for 47 plans, of which 23 wrap their fees and 24 do not.

For each 529 plan, we identify the mutual fund family that contributes each mutual fund. We then use the mutual fund family's website to identify all retail mutual funds offered by that family that have the same company-reported investment objective as any of the funds included in the 529 plan. Our primary dataset consists of all of these funds: those actually in the 529 plan and those that have the same mutual fund family and investment objective.

Our second source of data is the CRSP mutual fund database, which provides information on returns, net assets, expenses, fees, and other characteristics of all mutual funds. We matched each mutual fund in the primary dataset by name with its ICDI number in the CRSP dataset. We use information from calendar year 2001, the last full year prior to the date of our plan disclosure documents, as well as historical return data.

Comparisons of mutual funds based on performance must consider differences in risk exposure as well as differences in historical returns. Carhart (1997) shows the importance of the empirically derived risk factors from Fama and French (1993) in predicting mutual fund performance. To adjust for risk, we downloaded the monthly risk factor portfolios—the market factor, small-minus-big, high-minus-low, and up-minus-down—for the 5-year period from 1997 – 2001.⁶ For each mutual fund in the primary sample, we estimated the asset pricing line and saved the intercept and factor sensitivities. The intercept is the average monthly excess return over the risk-free rate

⁶ The portfolios are available at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

that is not attributable to systematic risk. We include the estimated coefficients as explanatory variables in the probit regressions below.

One complication with the mutual fund data is that many mutual funds, particularly those that are actively managed, have different classes of shares that distinguish different types of loads. 529 plans that are sold through financial advisors, rather than directly through the mutual fund family, inherit these different share classes. For the purpose of the analysis, we combined all share classes on a value-weighted basis (using the end of year 2001 net assets) into a single observation.

Table 2 reports the means and standard deviations of the variables used in the econometric estimates below. Descriptive statistics are shown separately for equity funds and bond funds, with diversified funds classified as equity for this purpose. There are 944 observations in the equity sample and 416 observations in the bond sample. For both types of funds, about 18 percent of the eligible plans are actually included in the 529 plans. Equity and bond funds are of similar size, on average. Bond funds have greater turnover, while equity funds have higher expense ratios and total load factors. Income yields are much higher on bond funds, and equity funds exhibit greater monthly fluctuations over the year. The average risk-adjusted returns (net of the riskfree rate) are negative for both equity and bond funds. For equity funds, the average market beta is close to one, while the average sensitivities to the individual risk factors are closer to zero. For bond funds, the average factor sensitivities are all close to zero.

IV. Probit Models for Underlying Funds in 529 Plans

Table 3 presents the estimated coefficients for the probit models of mutual fund inclusion in 529 plans. Four sets of results are shown. Separate results are presented for equity funds and bond funds, based on the investment objectives listed in the CRSP database and with the equity group including funds that invest in both equity and bonds. Tax-exempt bond funds are not included in the sample. For each type of fund, results are further disaggregated by whether the 529 plan “wraps” the underlying fund fees into a single asset-based fee or whether the investor pays the fees for each underlying fund in addition to an overall asset-based fee. In the sample of 529 plans, 23 are wrap plans and 24 are non-wrap plans. However, the number of individual fund observations is only half as large for the wrap plans, indicating that the mutual fund families that wrap their fees are ones that offer fewer total funds to their retail investors.

The dependent variable in each specification is a dummy variable for whether the mutual fund is included in a given state’s 529 plan given that some mutual fund from the same family with the same objective is included. The first three variables in the table revisit the characteristics from the Fidelity example in Table 1. Larger market cap predicts inclusion, consistent with the earlier finding. This effect is apparent for both equity and bond funds and is more robust for plans that do not wrap their fees. In contrast to the finding in Table 1, higher turnover is associated with slightly lower probability of inclusion, although the effect is not statistically significant in any specification. For expense ratios, there is weak evidence in favor of the conjecture that 529 plans consist of higher expense funds when the investor pays those expenses directly. For equities, the coefficient on the expense ratio is positive for the plans that do not wrap

fees and negative for plans that do not wrap fees, though neither coefficient is statistically significant. For bond funds, having higher fees is associated with higher probability of inclusion in both types of plan.

The next two rows consider other characteristics that affect the investor's return in the 529 plan compared to other investments. For plans that do not wrap their fees, there is no significant effect of charging sales or redemption loads on the probability of inclusion. For plans that do wrap their fees, higher loads reduce the likelihood of being included in the 529 plan. For bond funds, in which income yields are most of the return each year, having a high income yield does not have a significant effect on the probability of inclusion. For equity funds, the higher the income yield, the lower the probability of inclusion, with a stronger effect in plans that wrap their fees. This is somewhat surprising, given the classical reasons for holding high-yield assets in tax-advantaged accounts. However, it is not out of line with more recent predictions from Shoven (1999) that tax advantages to 401(k) plans may in fact be higher by putting equities in the tax-advantaged account to allow the tax-free compounding to interact with a higher realized average return. The effect is larger in the plans that wrap their fees.

The remainder of the table considers the risk and return characteristics of the mutual funds. The standard deviation of monthly returns (measured in 2001) has no significant effect. In contrast, the average monthly risk-adjusted returns have an important effect on the probability that a fund is included in a 529 plan. For equities, the effect is positive and significant for plans that do not wrap their fees and insignificant for plans that wrap their fees. The marginal effect of a 10 basis point increase in risk-adjusted monthly returns (roughly one sixth of a standard deviation) increases the

probability of inclusion by 0.6 percentage points, or 3.7 percent of the baseline probability of inclusion (16.6 percent for the equity funds in non-wrap plans). For bonds, higher risk-adjusted returns strongly predict inclusion in the 529 plan. Taking into consideration that the (cross-sectional) standard deviation of the risk-adjusted returns is about half that for equities, the marginal effect of such a change is more than twice the size of the effect for equities.

The last rows of the table show the coefficients for the sensitivities of the fund's returns to the factor portfolios in the Fama-French model. Not surprisingly, the results for bonds are insignificant, as the model is based on factors empirically derived from equity returns. For equities, there are no significant patterns for plans that do not wrap their fees. For plans that do wrap their fees, there is a disproportionate share of value (having a higher sensitivity to the High-Minus-Low portfolio) funds rather than growth funds, possibly at the expense of small cap funds.

Overall, the results from the probit estimates suggest that mutual fund families do not systematically discriminate against their 529 plans in the choice of funds. For equity funds in plans that do not wrap the administrative costs, expense ratios are higher but portfolio turnover and sales loads are lower. Most importantly, funds with higher risk-adjusted returns are more likely to be included as an underlying fund in a 529 plan. The lack of significant coefficients on the factor sensitivities also suggests that these plans do not restrict the investment styles available. Mutual fund families in plans that do wrap their fees, like TIAA-CREF, have a smaller number of funds. The ones that are included in the plan tend to be larger funds with low loads and income yields and a tilt toward value rather than growth investing.

V. Conclusions

Mutual funds offer the small investor the opportunity to obtain the benefits of a diversified portfolio of stocks and bonds. They are the dominant investment vehicles in 401(k) retirement plans, and they are the underlying investments in almost all 529 plan portfolios. Given the large sums of money expected to flow into 529 plans, the characteristics of the underlying funds are critically important. The rapid chartering of 529 plans in nearly every state provides something of a case study in which we can investigate the outcome of contracting between state treasurers and mutual fund companies. Due to the likely “home bias” in investing caused by investor inertia, lower marketing costs, and special state tax incentives, states have granted their mutual fund company some degree of local monopoly power in designing the 529 plan.

In the typical arrangement, the mutual fund company makes available a subset of its retail mutual funds to form the 529 plan portfolios. Although examples can be found of plans with a relatively poor offering of underlying funds, the general result is that mutual funds with higher expenses are not significantly more likely to appear in 529 plans where investors face those costs at the margin. As a rule, 529 plans in which the investor is exposed directly to the expenses of the underlying funds tend to select larger funds with higher risk-adjusted returns.

The overall level of fees is certainly high compared to other tax-advantaged accounts, but it may be too early to say for certain that high fees are a permanent result of the local monopoly power rather than a start-up phenomenon. Data from the industry on the extent of cross-state investing will eventually allow us to make a more careful

analysis of a more mature system. There are nonetheless several possibilities for making the market more competitive through legislation. Chief among them would be to raise the contribution limits on Coverdell Savings Accounts (formerly the Education IRA) from the current level of \$2,000, as suggested in Goolsbee (2002). Coverdells have less favorable treatment under the financial aid formulas, but they do not require the explicit involvement of a state or any specific financial institution. Another possibility would be the simplification of the tax-advantage savings markets, perhaps along the lines suggested by the Bush administration in its proposals for Lifetime Savings Accounts. LSAs permit a \$7,500 after-tax contribution with tax-free withdrawals at any time.

Within the current system, some 529 plans offer investment options that are not mutual funds but programs that guarantee principal plus a low interest rate, like 3 percent. These options typically have lower asset-based fees. An innovative investment option present in the Montana and Arizona plans is the CollegeSureCD, an investment that guarantees a return equal to the growth in an index of private college prices minus 1 percentage point. These states charge no administrative fees on this investment. In addition to the insurance element, investors could then choose to hold mutual funds in a less fee-intensive environment.

This paper represents an early attempt at the question of incidence for tax-advantaged savings accounts for education. The experiment in question—the choice of mutual funds to underlay the portfolios—looks for a systematic response to a potentially segmented market. The broader market for higher education includes many participants, such as students, parents, state governments, the federal government, and the educational institutions themselves. Other studies (Dynarski, 2003) have documented the potential

distribution of tax benefits by income. Two important directions for further research are the extent to which higher educational institutions, whether private or public, will raise their tuitions to appropriate some of those benefits and the extent to which 529 plans, which disproportionately benefit those with higher incomes, will change the equilibrium returns to getting an education.

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Table 1
Comparison of Underlying Mutual Funds in NH 529 Plan to All Fidelity Retail Offerings

Mutual Fund Characteristic	Included in NH 529 Plan	Not Included in NH 529 Plan
Net Assets (\$ billion)	10.20	5.23
Turnover Ratio (percentage)	135.40	112.15
Expense Ratio (basis points)	77.27	72.86
3-Year Returns (percentage)	1.95	4.34
Market Beta (x 100)	85.27	85.34
Sharpe Ratio	0.03	0.10
Morningstar Overall Rating	3.47	3.61
Number of Mutual Funds	15	44

Source: Fidelity Investments Website, April 2002. All figures in the table reflect the average across mutual funds in each category.

Table 2
Descriptive Statistics for Primary Mutual Fund Sample

	Equity Funds		Bond Funds	
	Mean	Standard Deviation	Mean	Standard Deviation
Included in 529 Plan (Probability)	18.22	38.62	18.75	39.08
Log of Net Assets (Millions)	5.48	2.50	5.63	2.34
Turnover (Percent of Portfolio)	0.92	1.05	1.37	1.82
Expense Ratio (Percentage Points)	1.27	0.69	0.93	0.50
Total Loads (Percentage Points)	2.72	2.27	1.79	1.96
Income Yield (Percentage Points)	0.70	1.11	6.00	2.55
Annual Std Dev of Monthly Returns (Percent)	5.95	2.60	1.34	1.24
Average Monthly Risk-Adjusted Returns (Percentage Points)	-0.09	0.57	-0.07	0.28
Risk Factor Sensitivities				
Market Portfolio	0.90	0.31	0.07	0.21
Small Minus Big Market Cap	0.14	0.28	0.05	0.09
High Minus Low Book/Mkt	0.07	0.34	0.06	0.12
Up Minus Down (Momentum)	0.02	0.14	-0.01	0.14
Number of Funds	944		416	

Notes:

1) An observation is a mutual fund-529 plan combination in which the fund is either included in the plan or has the same mutual fund family and investment objective as a fund that is included in the plan, as of June 30, 2002.

2) When a mutual fund has different share classes, the share data for all share classes are combined into a single observation using the total net assets of each share class as weights.

Table 3
Probit Estimates for Mutual Fund Inclusion in a 529 Plan

	Equity Funds		Bond Funds	
	Non-Wrap	Wrap	Non-Wrap	Wrap
Constant	-1.7789 (0.3454)	-0.2679 (0.3780)	-2.8796 (0.7917)	-1.4992 (0.5911)
Log of Net Assets	0.1974 (0.0427)	0.0852 (0.0357)	0.2565 (0.0701)	0.0742 (0.0566)
Turnover	-0.1926 (0.1000)	-0.0528 (0.0930)	-0.0382 (0.0780)	0.0589 (0.0616)
Expense Ratio	0.2047 (0.1659)	-0.1257 (0.1304)	0.2824 (0.3255)	0.6436 (0.3081)
Total Loads	-0.0230 (0.0383)	-0.1122 (0.0397)	0.0604 (0.0726)	-0.1616 (0.0791)
Income Yield	-0.2740 (0.0877)	-0.5729 (0.1213)	0.0146 (0.1148)	-0.0279 (0.1029)
Std Dev of Monthly Returns	-0.0247 (0.0801)	0.0736 (0.0999)	0.0325 (0.2432)	-0.1787 (0.2618)
Average Monthly Risk-Adjusted Returns	0.2772 (0.1113)	0.0374 (0.1450)	1.2399 (0.7170)	2.2506 (1.0580)
Risk Factor Sensitivities				
Market Portfolio	-0.1882 (0.5559)	-0.7474 (0.6908)	-0.2155 (2.3608)	1.8921 (2.2976)
Small Minus Big Market Cap	0.1366 (0.3451)	-0.6111 (0.4527)	3.9773 (4.9300)	-2.7566 (4.3940)
High Minus Low Book/Mkt	0.4737 (0.4756)	1.2299 (0.5415)	-5.2414 (2.4694)	5.6509 (4.4803)
Up Minus Down (Momentum)	1.0864 (0.8829)	1.5543 (0.9777)	-0.4917 (3.5136)	3.3289 (3.9884)
Pseudo R-squared	0.1015	0.1017	0.1148	0.1068
Number of Observations	580	364	239	177

Notes:

1) Plans that “wrap” fees subsume the expenses of the underlying mutual funds into a single asset-based fee. Plans that do not “wrap” fees charge a (usually lower) asset-based fee for the plan as a whole in addition to the asset-based fees of the underlying funds. There are 23 plans that wrap fees and 24 plans that do not wrap fees in the sample.

2) Heteroskedasticity robust standard errors are in parentheses.