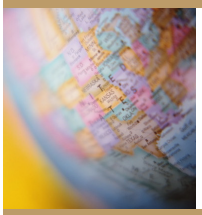

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HOW DO FEES AFFECT PLANS' ABILITY TO BEAT THEIR BENCHMARKS?

*By Jean-Pierre Aubry and Caroline V. Crawford**

Introduction

Public plans review their investment performance in two main ways. At a broad level, they compare their overall portfolio returns to their peers or to a simplified portfolio (such as a 60/40 stock/bond index). A recent Center study used a peer comparison approach while other researchers have used a simplified portfolio approach.[1] Such comparisons are helpful for understanding how a plan's overall strategy has fared relative to the general marketplace and whether adjustments to the strategy are warranted or desirable.

At a narrower level, plans compare their returns by asset class to selected benchmarks that reflect their investment goals for the asset class. Plans pay fees to external asset managers with the expectation that the managers will exceed these benchmarks. As such, this *brief* focuses on the benchmarks to assess the role of fees. The question is whether higher fees help or hinder the ability for a plan to outperform its chosen benchmarks. The analysis relies on newly collected data from 2011-2016 on plan performance relative to benchmarks and fees paid.[2]

The discussion proceeds as follows. The first section provides an overview of the asset class benchmarks used by plans.[3] The second section discusses how plans have performed relative to their benchmarks. The third section examines fees paid by asset class since the financial crisis, and discusses whether fees have any relationship to total portfolio performance relative to benchmarks. The *brief* concludes that higher fees are associated with lower net-of-fee performance relative to benchmarks, and that plans that underperform their benchmarks pay higher fees across all major asset classes – particularly for alternative assets such as private equity and hedge funds.

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Benchmarking Plan Performance

Typically, a plan's Investment Committee is responsible for selecting the specific benchmarks used to assess performance within individual asset classes.[4] In most cases, the benchmark represents a minimum acceptable performance for the asset class.[5] The asset classes considered in this analysis are domestic equity, international equity, fixed income, and alternatives (which broadly consist of real estate, commodities, private equity, and hedge funds).

For traditional asset classes such as equity or fixed income, most plans use established indices as benchmarks. These indices usually represent changes in the total market value for a large number of relatively liquid and publicly traded assets, such as the Russell 3000 or S&P 500 for domestic equities, Morgan Stanley's All Country World Index (MSCI ACWI) for international equities, and Barclays U.S. Aggregate Bond Index for fixed income (see Table 1). Additionally, plans sometimes create custom benchmarks that represent a value-weighted combination of multiple established indices.[6]

Table 1. Distribution of Public Equity and Fixed Income Benchmarks, 2015

Domestic equity		Int'l equity		Fixed income	
Russell	63%	MSCI	95%	Barclays	68%
S&P	15	Other index	1	Other index	26
Other index	22	Custom	4	Custom	5
Total	100%		100%		100%*

* Total does not add to 100 percent due to rounding.
Sources: Plan comprehensive annual financial reports (CAFRs) and investment reports.

When looking at alternative asset classes, benchmarks are more diverse. For real estate, the most commonly used indices come from the National Council of Real Estate Investment Fiduciaries (NCREIF) (see Table 2).[7] For commodities, a plurality of plans benchmark performance against the Consumer Price Index (CPI) plus a set premium, since plans often use commodity investments as a hedge against inflation.

For private equity or hedge funds, plans tend to use an existing index of publicly traded assets (see Table 3). For private equity, this index is often an established public equity index. For hedge funds, the index is generally one that tracks short-term borrowing rates, and in some instances, a high-yield bond index.[8] The public index benchmarks often include a premium over the stated index; the premiums range from 1 to 5 percent, but are generally around 3 percent.[9] Other benchmarks are designed to specifically monitor private equity or hedge fund performance, such as the Cambridge Associates Private Equity Index (CAPEI) and the Hedge Fund Research Index (HFRI).

Table 2. Distribution of Real Estate and Commodity Benchmarks, 2015

Real estate		Commodities	
NCREIF	74%	CPI + premium	43%
FTSE	9	Bloomberg/S&P*	22
Other index	3	Other index	15
Custom	14	Custom	19
Total	100%		100%**

* Refers to Bloomberg/S&P Commodity Index
** Total does not add to 100 percent due to rounding.
Sources: Plan CAFRs and investment reports.

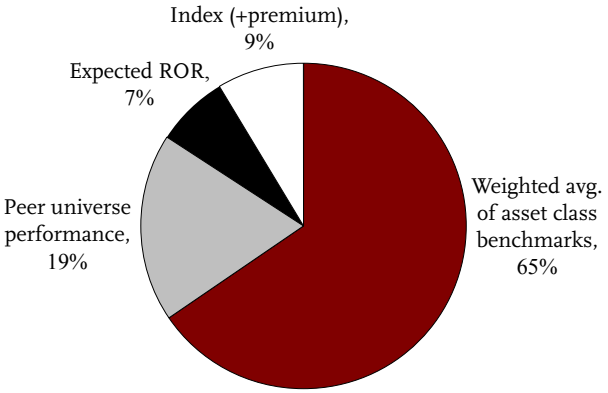
Table 3. Distribution of Private Equity and Hedge Fund Benchmarks, 2015

Private equity		Hedge funds	
Public index	60%	Public index	48%
CAPEI (e.g.)*	24	HFRI	34
Custom	15	Custom	19
Total	100%**		100%**

* CAPEI is one example of such an index.
** Totals do not add to 100 percent due to rounding.
Sources: Plan CAFRs and investment reports.

To benchmark the whole portfolio, state and local plans use either a weighted average of asset class benchmarks, the average performance of a selected peer universe, the expected rate of return on investments, or a public index (often, plus a premium). Figure 1 (on the next page) shows that the majority of plans use a weighted average as their benchmark. For these plans, the benchmark is usually a blend of the specific benchmarks that the plan uses for individual asset classes.

Figure 1. Distribution of Total Portfolio Benchmarks, 2015



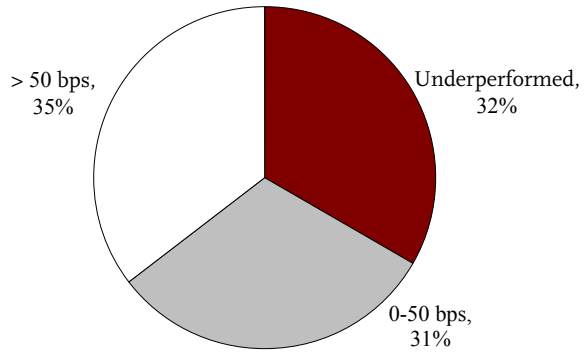
Sources: Plan CAFRs and investment reports.

Very few plans (only 7 percent) adopt the actuarially expected rate of return – the long-term investment goal used for funding purposes – as their portfolio benchmark.[10] While some plans are willing to use this long-term rate to assess annual success of the portfolio, most plans – in anticipation of short-term market fluctuations – rely on market-related metrics instead.[11]

How Have Plans Performed Relative to Their Benchmarks?

Given that most plans benchmark their total portfolio performance using a weighted average of individual asset class benchmarks, we constructed the "blended" benchmark for each plan's portfolio using the plan's stated benchmark for each asset class that it holds, weighted by the plan's allocation to the asset class.[12]

Figure 2. Distribution of Gap between Total Plan Performance and Benchmark from 2002-2016



Sources: Plan CAFRs and investment reports.

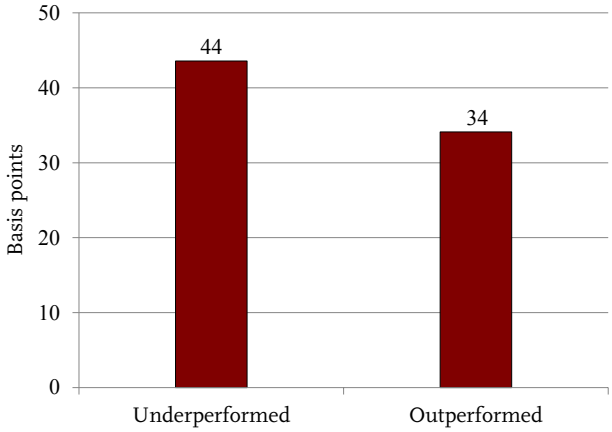
When comparing the annualized return from 2002-2016, plans outperformed their blended benchmark by 31 basis points on average.[13] However, individual plan experience varied significantly – about a third of plans underperformed their benchmark, a third outperformed within 50 basis points, and another third outperformed by 50 basis points or more (see Figure 2). Importantly, the range in performance can be attributed to both differences in net returns, as well as differences in benchmark choices for each asset class.[14]

How Do Fees Affect Performance?

In the wake of the financial crisis, news stories have often linked poor performance to higher fees.[15] While many researchers have found a negative relationship between fees and net-of-fee performance for traditional stocks and bonds, when it comes to alternatives, the relationship is inconclusive and highly dependent on the asset classes scrutinized.[16]

This analysis of fees begins with a basic comparison of total fees and performance relative to benchmarks. The analysis focuses on the post-crisis period because the reported fee data are more robust. Figure 3 shows that, on average, plans that reported better net-of-fee performance relative to their blended benchmark from 2011-2016 also paid lower fees.[17]

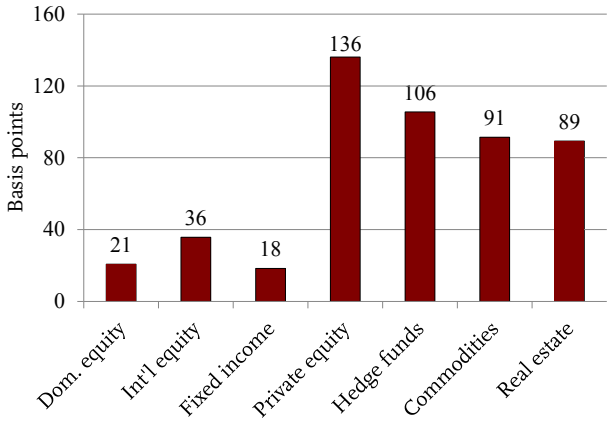
Figure 3. Average Expense Ratios from 2011-2016, by Plan Performance Relative to Benchmark



Note: Presents average fees for plans that under- or outperformed benchmarks by at least 5 basis points.
Sources: Plan CAFRs and investment reports.

Digging deeper, Figure 4 compares the average expense ratio for each asset class – defined as the dollar amount of fees paid divided by the dollar amount invested in the asset class – from 2011-2016. As expected, the average expense ratio increases with the degree of active management required for the asset class. The lowest fees – averaging 18 basis points – are for fixed-income investments, while the highest fees – averaging 136 basis points – are for private equity. Importantly, fees reported for alternative asset classes often understate the total value of fees paid, and tend to exclude the performance fee generally charged to managers (see Box 1 for a discussion of fee disclosure). For this reason, the expense ratios presented in Figure 4 should be treated as a conservative estimate of the fees that plans pay.

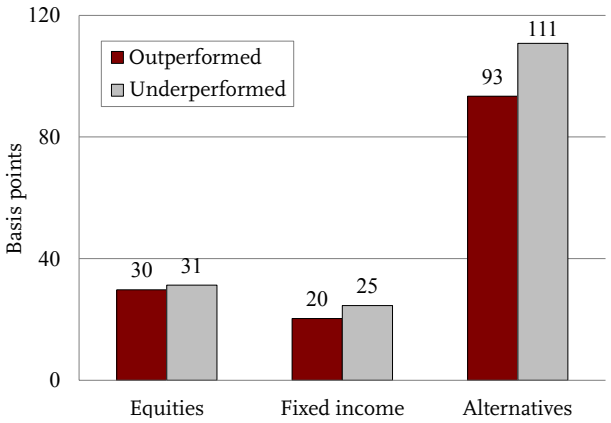
Figure 4. Average Expense Ratios from 2011-2016, by Asset Class



Sources: Plan CAFRs and investment reports.

Finally, Figure 5 shows the average expense ratio – by broad asset class – for plans that outperformed and underperformed their blended portfolio benchmark from 2011-2016. To relate the fees paid for a specific asset class to a plan's overall performance, it is best if the asset class is held consistently over the entire period. Because plans often move in and out of smaller asset classes, the analysis focuses on the three broad asset classes that plans consistently hold – equities, fixed income, and alternatives. For all asset classes, plans that outperformed their benchmark had lower expense ratios than those that underperformed

Figure 5. Average Expense Ratios from 2011-2016, by Plan Performance Relative to Benchmark and Broad Asset Class



Note: Data are average fees for plans that under- or outperformed benchmarks by at least 5 basis points.
Sources: Plan CAFRs and investment reports.

Box 1. The Problem with Alternative Fee Data

A common concern with fees reported for alternatives is that they often understate the total fees paid.[18] Fees for private equity and hedge funds contain several components – the primary two are management fees and performance fees. Management fees are a flat rate paid to the investment manager regardless of performance – generally equal to 2 percent of assets invested. Performance fees – also known as "carried interest" – are paid to investment managers if performance exceeds a certain threshold, called the hurdle rate. Generally, performance fees are equal to about 20 percent of the return earned above the hurdle rate.[19]

While the fee data reported by plans rarely specify what types of fees are included, the fees for both private equity and hedge funds often fall well below 20 percent of the plan's return – a rough estimate of the performance component of fees. As such, the fees reported for these investments are likely a lower bound.[20]

Importantly, the reported fee data are often incomplete because pension funds do not have access to full information. Investors can be contractually prohibited from obtaining details about fees from their investment managers.[21] Some groups, such as the Institutional Limited Partners Association, have actively promoted fee transparency, but comparing alternative fees remains a challenge.

their benchmark. This difference was much more pronounced for alternatives. These findings suggest that investment fees – in particular, outsized fees on alternatives – may play a meaningful role in plan underperformance.[22]

Conclusion

In recent years, public plans have increasingly scrutinized the fees they pay to external asset managers to gauge whether the fees are justified. To isolate the impact of fees on performance, the analysis focused on each plan's ability to meet its stated asset-class benchmarks. Interestingly, plans are not uniform in their asset-class benchmarks; some use publicly quoted indices, others use indices that capture the performance of narrow asset classes such as private equity, and still others use custom benchmarks. But, regardless of the benchmarks used for each asset class, most plans have outperformed their blended portfolio benchmark over the long term.

Even though most plans outperform their blended benchmark, the data show a correlation between higher fees and worse relative performance. And, looking at expense ratios across the various asset classes, it is clear that alternatives charge much higher fees than traditional asset classes such as public equities and fixed income. Finally, plans that underperformed their blended benchmark from 2011-2016 reported higher expense ratios than plans that outperformed their benchmark, particularly within alternative asset classes.

These initial findings suggest that investment fees – in particular, outsized fees on alternatives – may play a meaningful role in plan underperformance. Future research on the impact of fees would benefit from a longer timeframe that incorporates a full market cycle – which will be increasingly possible as the trend toward improved fee disclosure continues.

Endnotes

1 Aubry et al. (2018) compared total portfolio performance across plans and apportioned the overall differences in performance to differences in asset allocation and differences in returns by asset class. Hooke and Park (2018) compared the 10-year returns of a 60/40 index portfolio to the returns of 21 large state pension funds.

2 These data document the annual returns, benchmarks, benchmark returns, and fees by public plans for individual asset classes. The sample includes 157 state- and locally-administered plans from the *Public Plans Data* (PPD) website. Plan data are collected directly from regularly released comprehensive annual financial reports (CAFRs) and publicly available investment reports.

3 In practice, some plans pool their assets within the same investment fund, which is overseen by a single board that sets investment policy for the fund as a whole. For example, Colorado PERA manages the pooled assets for the Colorado State, School, and Municipal pension plans in a single investment fund. In these cases, the decision-making unit for investment policy is the fund, not the individual plans within the fund. This *brief* chooses to report investment data at the plan level to align with other important plan-specific characteristics, such as the funded ratio and cash flows. However, separately reporting on the investment policy of individual plans within the same investment fund may overstate the prevalence of asset allocation strategies, investment returns, and benchmarks.

4 Generally, public plan Investment Committees are comprised of General Board members who have substantial actuarial or financial experience. However, some plans have a separate Investment Board that is responsible for the development and monitoring of investment policies.

5 CEM Benchmarking (2016).

6 For example, a plan may benchmark its equity performance against the return for a hypothetical equity portfolio that invests 65 percent in the S&P 500 and 35 percent in the Russell 3000.

7 NCREIF produces several quarterly indices that show real estate performance returns using data submitted to the Center by investment managers and plan sponsors who own or manage real estate in a fiduciary setting.

8 Research by CEM Benchmarking (2016) discourages the use of cash-based benchmarks – such as the LIBOR + 4 percent – for hedge fund returns. These benchmarks can be very easy to beat, and often generate "random noise" when trying to evaluate plan performance.

9 About half of plans that use an index-related benchmark for private equity report no premium on the benchmark index.

10 Additionally, unlike some plans in the private sector that have implemented liability driven investing, no plans in the PPD reported the use of pension liability characteristics (such as duration) when benchmarking their investment performance.

11 See Government Finance Officers Association (2002).

12 The blended portfolio benchmark for each plan is estimated by weighting the return for the plan's stated benchmark for each asset class by the plan's actual allocation to the asset class in the previous year. For consistency when comparing the plan's actual return to the benchmark, the plan's portfolio return is estimated by weighting the actual net-of-fee return for each asset class by the plan's actual allocation to the asset class in the previous year. For plans that report gross returns and fees by asset class, the net-of-fee return is calculated by subtracting fees from the reported gross return. (The analysis excludes plans that report gross returns without fee data.)

13 Plan performance may deviate from benchmarks for several reasons. Generally speaking, deviations can be due to the skills of the manager or the choice of a benchmark that does not precisely reflect the asset mix or strategy (perhaps due to a structural bias within the investment portfolio). An additional factor is the market equilibrium consideration: for every winner invested in the pool, there is also a loser. For example, if a benchmark reflects the median performance of all pension funds, you would expect half of the funds to outperform the benchmark and half to underperform.

14 Some plans that outperformed their benchmark achieved lower net returns than those that underperformed their benchmark. The analysis does not assess the appropriateness of each plan's stated benchmarks and assumes that differences in benchmarks across plans reflect real differences in the plan's investment goals for each asset class.

15 See, for example, Flood (2018), Corkery (2013), Hiltzik (2016), and Thomas Jr. (2017).

16 Broeders, van Oord, and Rijsbergen (2017) demonstrate that while *performance* fees are positively related to gross performance for all alternative asset classes, only hedge fund performance demonstrated higher net-of-fee returns. Robinson and Sensoy (2013) show that while management fees are negatively related to mutual fund net returns, fees seem to be unrelated to private equity returns. Malkiel (2013) demonstrated a negative relationship between net returns and management fees for mutual funds, but not for high-fee private equity funds.

17 Because market performance was particularly strong from 2011-2016, index funds – which are cheaper than actively managed funds – outperformed many actively managed funds over the period. As such, results from this period may overstate the relationship between higher fees and underperformance.

18 Pew Charitable Trusts (2017).

19 While the hurdle rate for private equity is typically an 8-percent annual return, the hurdle rate for hedge funds is often 0 percent (i.e., they charge a performance fee for all positive returns).

20 Performance fees are sometimes excluded because they are seen as a commission earned by a manager rather than a "fee" paid by the plan.

21 The Roosevelt Institute (2015) and Appelbaum (2015).

22 Data on the maturity of private equity investments – which is not consistently available in public plan reports – would help inform the relationship between fees and performance. Private equity investments may sustain low returns (sometimes losses) in the initial years and earn increased returns as the investment matures – the so-called J-curve. As such, the relationship between fees and performance can vary greatly over the life of the investment.

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