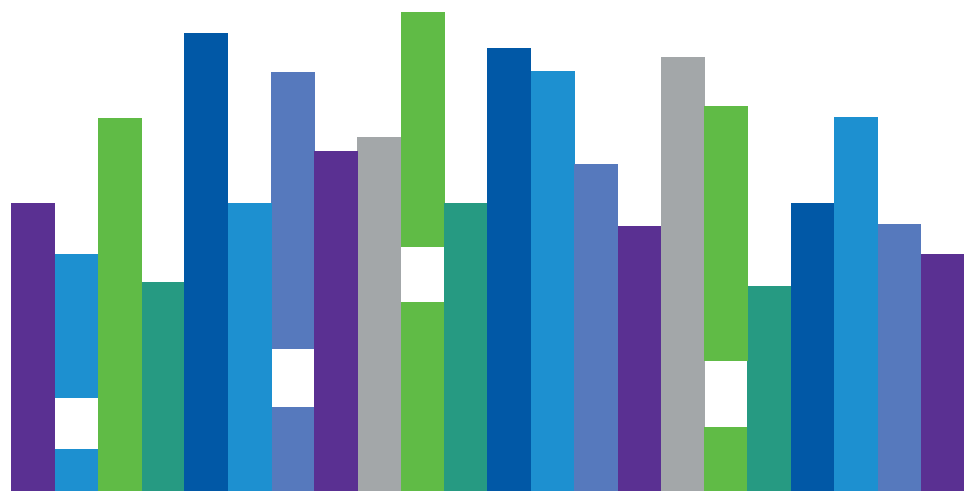


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FEES


THE COST OF INVESTING

Sheetal Radia, CFA
Supported by CFA
UK's Market Integrity
and Professionalism
Committee



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INTRODUCTION

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Supported by CFA UK's Market Integrity and Professionalism Committee

"In my mind, to justify his or her fee structure, a manager should be able to show the ability, net of fees, either to deliver returns that are superior to the market with equivalent risk or to deliver market equivalent returns with less risk."

(Lee S. Ainslie III, Managing Partner, Maverick Capital)¹

DEFINITION

'Fees' has become used as the catch-all term for the costs incurred by asset owners for investing. The cost of investing can include direct charges (including the ongoing charge), transaction costs, taxes and even performance fees. There may also be indirect charges such as implementation costs. From the asset owner's perspective it is the total risk-adjusted return net of all charges that matter. However, challenges remain in gaining sufficient clarity about the costs involved with investing, how they are calculated and how they are aligned with client interests.

THE PURPOSE OF THIS PAPER

In a low-return environment, the costs related to investing are under greater scrutiny as they represent a greater proportion of the potential return available to clients.

It is important that investors are fully informed about the costs they face when investing (how they are levied and applied), but they also need to be aware of the value being generated from their investment. For example, if a fund has a 3% cost of investment but provides a net risk-adjusted return higher than its benchmark then the investment manager is delivering value.

In seeking to identify if a manager had delivered value, it is important to look beyond costs alone. This paper sets out the three dimensions for estimating value and

explains how these can be used to align client and investment manager interests. These three dimensions are –

- » Performance
- » Risk
- » Cost - Fees and charges

In essence, the value delivered to clients is a combination of performance, fees and charges, and risk. Clients care about the real risk-adjusted returns net of fees and charges.

CFA UK believes that clients need to have a complete picture of the fees and charges that apply to their portfolios or segregated accounts –

Our professional members should:

- » Make their fees and charges clear to their clients in advance.
- » Clearly set out the details of what the fees and charges are for: management, transaction, administration, custody etc.
- » Emphasise the net-of-fees-and-charges return to clients, and how fees affect the returns the client receives.
- » Give clients a clear understanding of the impact of fees on returns
- » Incorporate the risk taken to achieve performance - focus on risk-adjusted returns net of fees.

Appendix A provides a helpful client-centric case study that incorporates the three essential dimensions for fee structures.

Appendix B summarises members' responsibilities in relation to costs as described in CFA Institute's Code of Ethics and Standards of Professional Conduct

This paper responds to member feedback for CFA UK to provide a more detailed follow up to the Fees and Compensation paper published in 2013².

¹Portfolio Construction and Risk Management: Long-Short Portfolios, Lee S. Ainslie, Jr. AIMR Conference Proceedings, April 2002, Vol. 2002, No. 2:47-49, 55-57.

²Fees and Compensation, CFA UK, April 2013

https://secure.cfauk.org/assets/3769/CFAll92_Fees_Comp_Position_paper_v2.pdf

THE THREE KEY DIMENSIONS

1. PERFORMANCE

"Although the whole population of managers cannot be winners, some managers will beat the market or earn a positive alpha (that is, beat the relevant benchmark after an appropriate adjustment for risk)."

(CFA Institute's Research Foundation monograph 'Manager Selection')³

Allocating capital to passive mandates is less challenging than seeking out active managers that will deliver value, especially when there is a limited supply of skilled managers. In 2010, Eugene Fama and

Kenneth French reviewed the distribution of active manager performance and compared it with a random distribution of returns where the excess return (or alpha) was zero, otherwise known as zero-mean alphas. They sought to determine statistically whether over- and underperforming managers deliver results from the application of skill, or simply through good luck. Their tests suggest that more managers generate high levels of statistically significant risk-adjusted performance than randomness alone would suggest and, similarly, that more managers generate statistically-significant low levels of alpha than would be expected from luck.

FIGURE 1 T-STATISTICS OF ALPHAS FOR PERCENTILE RANGES OF ACTUAL VS. SIMULATED ZERO-ALPHA MANAGERS, 1984–2006

Performance Percentile for fund	t-Statistic for Actual	t-Statistic for Simulation	Difference
Bottom 5%	-2.1	-1.7	-0.4
Bottom 10%	-1.6	-1.3	-0.3
Bottom 40%	-0.3	-0.3	0.0
Top 40%	0.3	0.3	0.0
Top 10%	1.6	1.3	0.3
Top 5%	2.1	1.7	0.4

Note: t-Statistics are based on monthly time series of regression-estimated, four-factor, gross-of-expenses alphas for US equity mutual funds.

Source: Fama and French (2012)

Figure 1 summarises their statistical analyses, listing t-statistics of alphas computed over a 22-year period for groups of managers, sorted by computed t-statistics and compared with a distribution of t-statistics from a randomised world with variable but zero-mean alphas. The alphas are listed in the form of t-statistics, rather than raw alphas, to standardise for variability through time. A positive number in the third column of figure 1 indicates that a group outperformed the simulated results; the top 10% and top 5% of the sample have positive numbers in this column, which provides evidence that those groups added value. To summarise, the top and bottom 10% of mutual fund managers generated gross alphas higher and lower, respectively, than simple randomness in a population would give you. The test results indicate that there is skill in the tail deciles, gross of expenses, though there is little evidence to indicate there is sufficient statistically-significant alpha to cover expenses.

³Manager Selection, Research Foundation Publications December 2013, Vol. 2013, No. 4 by Scott D. Stewart, CFA <http://www.cfapubs.org/toc/rf/2013/2013/4>

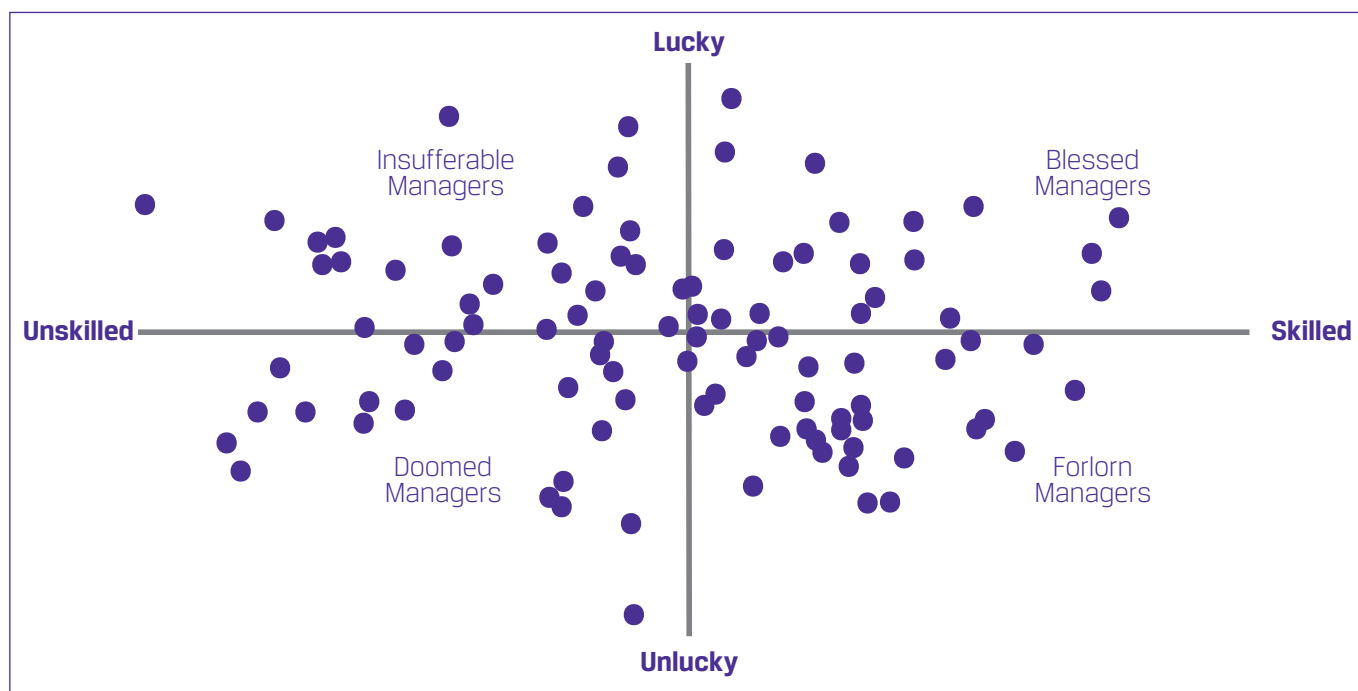
In the UK, The Pensions Institute⁴ (2014) applied the approach used by Fama and French (2010) to UK equity funds. Using the monthly returns on 561 UK domestic equity (open-ended) mutual funds (unit trusts and OEICs) over the period January 1998–September 2008, a total of 129 months. The study found that the average equity mutual fund manager was unable to deliver outperformance from stock selection or market timing, once allowance is made for fund manager fees, and for a set of common risk factors that are known to influence returns. There were a small number of skilled managers, although they were found to retain all the value they generate for investors. The study also found that a vast majority of fund managers were not unlucky but had not demonstrated skill.

When seeking performance especially in the active management space, skill is vital. However, the number of skilled managers is limited.

Figure 2 sets out four main types of managers as categorised by Donald Raymond, CFA⁵, (Managing Partner of Alignvest Management Investment)

- » Bottom left quadrant are the doomed managers. They are managers without skill who additionally have had a bad draw from the return distribution and are destined to go out of business.
- » The top left quadrant represents the insufferable managers. These are managers without skill who happen to have had good returns, so they have been lucky.
- » Top right quadrant are the blessed managers - skilled and been lucky.
- » Managers on the lower right are forlorn; they have skill but have had a bad draw and have either not added value or added less value than they otherwise should have based on their skill alone.

FIGURE 2 FOUR TYPES OF MANAGERS



⁶Source: Based on Grinold and Kahn (1999)

⁴DISCUSSION PAPER PI-1404, *New Evidence on Mutual Fund Performance: A Comparison of Alternative Bootstrap Methods*; David Blake, Tristan Caulfield, Christos Ioannidis, and Ian Tonk, June 2014

⁵Paying (Only) for Skill (Alpha)—A Practical Approach; Donald Raymond, CFA; CFA Institute Conference Proceedings Quarterly June 2008, Vol. 25, No. 2

⁶Active Portfolio Management: A Quantitative Approach for Producing Superior Returns and Controlling Risk, 2nd ed 1999. Grinold, Richard C., and Ronald N. Kahn. New York: McGraw-Hill

2. RISK

"In the modern practice of institutional investment management, compensation typically has nothing to do with risk taken to earn the returns." (Stefan Whitwell, CFA CIPM)⁷

The second dimension related to value is risk. When investing, the client's total capital is at risk. However, fee structures rarely see the manager and investor sharing a common view of risk. Hence, the need to focus on risk-adjusted returns net of charges.

The following hypothetical example (Example A) demonstrates the misalignment of value when one takes risk into account. For the purposes of the example the Sharpe Ratio is used as the measure of risk-adjusted returns. On a headline basis it would appear that the active manager is adding value. Even after taking into account costs, (let us presume the TER also includes all the other charges,) manager B does deliver 'alpha'.

We still need to take into account the risk taken by the fund. Often, when assessing active management, there is a focus on the Information Ratio - the excess return divided by the volatility of that excess return. However, from the investor's perspective whether they invest in the passive or the active fund they are risking their entire capital and so the total risk (or Sharpe Ratio) will be used as the risk metric. For the purposes of this example let us presume that the client is willing to pay a fee based on the risk-adjusted premium over the benchmark (after all costs).

EXAMPLE A – ACTIVE AND PASSIVE UK EQUITY FUNDS

Unleveraged fund	Passive Fund A	Active Fund B
Gross return	10%	12%
Gross alpha	0%	2%
TER	0.25%	1.67%
Return net of TER*	9.75%	10.33%
Net alpha [^]	-0.25%	0.58%
Volatility	20%	20%
Sharpe Ratio ^{^^}	0.49	0.52

*Based on Which? average TER for active funds, excludes transaction costs.

[^]Net alpha is the excess return remaining after the costs for both funds have been deducted from the headline performance - Fund B (12%-1.67%)- Fund A (10%-0.25%) = 0.58%

^{^^} For the purposes of this example the risk free rate is presumed to be zero

⁷Investment Management Fees: Act II, Stefan Whitwell, CFA, CIPM, Investment Risk and Performance Feature Articles, September 2013 Vol. 2013 No. 1

The volatility of both funds is the same, 20%. The unleveraged (the fund does not use borrowing to enhance performance) fund B produces a Sharpe Ratio of 0.52 that is 6% higher than the passive equivalent. From the client's perspective, the value added on a risk-adjusted basis is modest, with the manager taking the majority of the risk-adjusted benefit. In this case one could state that the majority of the returns generated were from the market exposure and so the manager should keep less of the total benefit.

To demonstrate this further, another hypothetical example (Example B) is presented, but this time the fee charged by the active fund is the same as the passive alternative. From Example B one can see that on a risk-adjusted basis after costs the active fund delivers a 20% premium to its benchmark.

EXAMPLE B – ACTIVE AND PASSIVE UK EQUITY FUNDS

Unleveraged fund	Benchmark	Active Fund A
Gross return	10%	12%
Gross alpha	0%	2%
Costs	0.25%	0.25%
Return net of costs*	9.75%	11.75%
Net alpha	-0.25%	2.00%
Volatility	20%	20%
Sharpe (0% risk free rate)	0.49	0.59
Risk-adjusted alpha	0%	20%

Hence, in addition to the fund's TER of 0.25% it should also receive as an additional fee of 20% of the excess risk-adjusted return net of costs or 0.4%; making its total fee 0.65%. The manager is rewarded for skill or adding value and the client also obtains a larger share of excess returns generated by the fund. The client should benefit in this way because it is their capital that is at risk. The client benefit of the excess return is calculated as follows:

Net excess return	200bp
Standard fee	25bp
Fee for risk-adjusted alpha generated	40bp
Net excess return to client	135bp

The client benefits from higher risk-adjusted returns and the asset manager increases the fee from the client as a result of their skill by 160%. When the fees for the same fund were 1.67% the client received a modest benefit. Of course this is a simple example and does not address issues such as moral hazard, discontinuity and high watermarks.

Analysis of the risk-adjusted return can be complicated by the investment approaches and asset classes used by an investment manager. It is not uncommon for asset managers to suggest that they have used skill to generate excess returns when in fact they were merely taking more risk in the portfolio⁸ or relying on financial engineering through the use of leverage, derivatives, short positions or currency overlays.

⁸Invesco Perpetual fined £18.6 million for failings in fund management by for exposing investors to greater levels of risk than they had been led to expect between 2008 and 2012. <http://www.fca.org.uk/news/invesco-perpetual-fined-186-million-for-failings-in-fund-management>

3. COSTS – "ALL-INCLUSIVE FEE", "TOTAL EXPENSE RATIO" – WHAT'S NOT IN A NAME?

"Ongoing charge 1.16%.....the ongoing charge figure is based on a fixed, all-inclusive fee as at 1 April 2014. Investors will be provided with advance notice if any increases to this figure occur. The figure excludes portfolio transaction costs." (Key Investor Information Document of a large UK asset manager).

Fees and charges matter to clients because they are the drag on performance. There are a variety of fee structures that are used and each has its strengths and weaknesses.

Fixed percentage of assets – these are based on a fixed percentage of assets under management. As assets increase, so does the fee accruing to the asset manager. This structure is common in the funds offered to retail clients and to some extent in the institutional retail arena, and encourages asset gathering. The manager is paid regardless of whether they have skill or not and whether they provide value or not.

While the fixed percentage fee may provide information about the cost of investing in these funds, it is not the

whole story; using terms like 'all-inclusive' and 'total' are at best incomplete. There are other charges that need to be taken into account such as transaction costs, bid-offer spreads, commissions, taxes, dilution levies and market impact costs. In the UK, determining the total cost is not without challenge and while future transaction costs are unlikely to be known, indications of these and other charges need to be communicated effectively. According to a study by the Financial Services Authority in 2005, an equity fund with a 100% turnover might incur an additional 1.8%⁹ on top of the total expense ratio.

To help improve the information regarding costs and charges the Investment Association has created the following initiatives (see Box for further details).

BOX 1: THE INVESTMENT ASSOCIATION INITIATIVES ON COST DISCLOSURE

- 1) Investment cost and charges
 - i) Voluntary industry guidance on enhanced disclosure of charges and costs¹⁰ incurred by UK-authorized funds.
 - ii) Statement of Recommended Practice (SORP) to change the way by which information on the performance, charges and costs of funds is presented.
- 2) Pension Fund Disclosure Code (2007)¹¹. Pension Fund Disclosure Code (2007)¹². The aim of the Code was to promote the accountability of fund managers to their clients and for pension fund trustees to have an understanding of the fees and charges levied on the management of the assets they are responsible for. The IA is developing a technical paper using the framework from the Code to incorporate the evolving position regarding the use of dealing commission.

To understand the importance about 'other charges', a study about hidden costs of US equity mutual funds may provide further insights. Using data for 1,758 U.S

domestic equity funds between 1995-2006, Edelen et al¹³ calculated the additional costs of investing.

⁹Different types of investment: Are fund charges eating into your returns? Which?

<http://www.which.co.uk/money/savings-and-investments/guides/different-types-of-investment/are-fund-charges-eating-into-your-returns/>

¹⁰Enhanced Disclosure of Fund charges and costs, September 2012, IMA <http://www.theinvestmentassociation.org/assets/files/industry-guidance/20120920-enhanceddisclosureoffundchargesandcosts.pdf>

¹¹Pension Fund Disclosure Code, IMA, September 2007 <http://www.theinvestmentassociation.org/assets/files/industry-guidance/20070901pfdc3.pdf>

¹²Pension Fund Disclosure Code, IMA, September 2007 <http://www.theinvestmentassociation.org/assets/files/industry-guidance/20070901pfdc3.pdf>

¹³Shedding Light on "Invisible" Costs: Trading Costs and Mutual Fund Performance Roger Edelen, Richard Evans, and Gregory Kadlec; Financial Analysts Journal Volume 69, Number 1, 2013.

TABLE 1: SUMMARY STATISTICS FOR MUTUAL FUND SAMPLE, 1995–2006

Fund Group	Turnover		Total Net Assets (\$ millions)		Four-Factor Model		Obs.
	Mean	Std.Dev	Mean	Std. Dev	Mean	Std. Dev	
All	82.4%	6.6%	1,525.1	343.0	-1.77%	3.74%	25,423
<i>Small cap</i>							
Value	58.1%	16.0%	445.1	155.2	-1.09%	7.85%	1,034
Blend	71.8	16.6	523.9	148.1	-1.71	5.66	1,956
Growth	118.5	20.5	587.2	161.1	-3.41	8.25	3,186
<i>Mid cap</i>							
Value	70.4%	12.6%	1,287.7	720.8	-1.20%	6.31%	1,554
Blend	71.0	15.9	1,020.3	469.8	-0.53	6.15	1,803
Growth	122.1	14.5	1,104.5	301.5	-2.27	9.32	3,642
<i>Large cap</i>							
Value	65.2%	7.5%	2,183.4	876.4	-1.61%	5.05%	2,893
Blend	52.2	8.2	2,412.5	674.8	-1.50	3.74	4,925
Growth	89.3	9.8	1,851.5	653.6	-2.00	5.64	4,430
Large TNA	76.7%	5.8%	2,877.3	666.2	-2.09%	3.82%	12,742
Small TNA	88.0	11.8	163.7	33.0	-1.44	3.89	12,681

Notes: This table reports the mean and standard deviation of sample funds' turnover, total net assets, and annualized four-factor alphas (Carhart 1997), calculated over the quarter (Months 0 to 2) by using betas estimated over the previous 36 months (Months -36 to -1). "Obs." stands for number of observations.

Table 1 reports summary statistics for fund size, turnover, and risk-adjusted performance in the sample. To calculate risk-adjusted fund performance, the authors used a four-factor model:

$$\begin{aligned}
 (R_{i,t} - R_t^{TBill}) &= a_i + \beta_i^{HML} (R_t^{Mkt} - R_t^{TBill}) \\
 &\quad + \beta_i^{SMB} R_t^{SMB} + \beta_i^{HML} R_t^{HML} \\
 &\quad + \beta_i^{Mom} R_t^{Mom} + \varepsilon_{i,t}.
 \end{aligned}$$

The model includes four return factors: the market (Mkt), market-cap (SMB = small minus big), and book-to-market (HML = high minus low) factors

proposed by Fama and French (1993), plus the momentum factor (Mom) proposed by Carhart (1997). Table 1 reaffirms the proposition that on aggregate active management does not deliver value. During the period of this sample the average value added was negative. The average turnover was quite high with growth funds seeing the highest levels of turnover. High turnover indicates that the investor bears higher costs and on average these higher costs do not result in added value.

TABLE 2 DESCRIPTIVE STATISTICS FOR AGGREGATE TRADING COST, 1995–2006

Fund Group	Trading Volume	Per Unit Trading Cost				Aggregate Trading Cost: Volume x Per Unit Cost		Expense Ratio	
	Mean	Commission +	Bid-Ask Spread +	Price impact =	Per Unit Cost	Mean	Std. Dev.	Mean	Std. Dev.
	1	2	3	4	5	6	7	8	9
All	177%	0.14%	0.13%	0.53%	0.80%	1.44%	0.64%	1.19%	0.05%
<i>Small cap</i>									
Value	150%	0.17%	0.29%	1.18%	1.64%	2.29%	1.09%	1.28%	0.11%
Blend	168	0.17	0.28	1.04	1.49	2.32	1.09	1.20	0.11
Growth	229	0.16	0.28	1.07	1.51	8.17	1.47	1.39	0.08
<i>Mid cap</i>									
Value	162%	0.14%	0.10%	0.46%	0.70%	1.13%	0.59%	1.15%	0.11%
Blend	164	0.15	0.12	0.63	0.90	1.44	0.88	1.22	0.07
Growth	226	0.14	0.15	0.60	0.89	1.87	1.04	1.34	0.09
<i>Large cap</i>									
Value	159%	0.13%	0.07%	0.33%	0.52%	0.84%	0.41%	1.07%	0.08%
Blend	130	0.13	0.07	0.23	0.42	0.61	0.35	0.98	0.07
Growth	187	0.12	0.07	0.29	0.48	0.97	0.51	1.23	0.06
Large TNA	168%	0.14%	0.13%	0.71%	0.98%	1.69%	0.82%	1.08%	0.06%
Small TNA	187	0.14	0.13	0.36	0.62	1.19	0.47	1.30	0.04

Table 2 provides more insight into the costs and this indicates that transaction costs on average could be more than 100% of the TER.

Fixed percentage (base fee) plus performance fee – the performance fee is collected without having a high watermark. Where the base fee is a large proportion of the total fee, the fee structure suffers from the weakness of the fixed percentage model. In addition, the manager gets paid for skill/luck as long as they 'add value'. Where a performance fee is incorporated, there is always the risk that the hurdle rate used to trigger the performance fee may not be very stretching, e.g.

using current low money market rates as the hurdle rate for performance.

Base fee plus performance fee subject to a high watermark provision – this structure moves towards alignment with the client, although the structure can also share some of the material limitations of the above fee structure. Here again the manager gets paid for skill/luck, as long as they add value. The presence of a performance fee means that the manager has the incentive to maximise the payoff of this fee option and may encourage more active risk than the risk budget allowed by the client.

Fees related to performance raise the question: 'How is performance measured?' Senik¹⁴ provides several case studies that set out these challenges, and also highlight the need for fund prospectuses to define clearly how performance is measured, the number of shares or units to be used, and when performance fees will be collected. In one case study an investor challenged the manager's fee of \$23.2Mln; the client expected to pay a fee of \$9.4 Mln. Both parties accepted a much lower performance fee figure of \$8.5Mln based on the formula below:

$$\left[(V_E - (V_B \times (1 + R_{Hurdle})) + \sum_{i=1}^n CF \times (1 + \frac{R_{Hurdle}}{\frac{360 - D_i}{360}})) \right] \times R_{Fee}$$

The above formula was applied as follows

Step 1 - determine the initial target fund value. This amount was the fund value at the beginning of the year, which in this case was \$41.6 million, multiplied by 1.15. In other words, the initial fund value must generate the 15 percent hurdle rate return.

Step 2 - determine the target value contribution of every external cash flow. Each cash flow must achieve the pro-rata return of the 15% hurdle rate. This would

also need to take into account the changes in the number of shares outstanding following subscriptions and redemptions.

Step 3 - All the calculated cash flow target value contributions and the initial target value were summed together to produce the target total fund value that the fund manager was supposed to generate free of a performance fee. That value was compared with the effective total fund value at year-end to determine the performance fee, and the difference was multiplied by the performance fee of 20%. In this case, the performance fee was calculated as \$8.5Mln.

Two further case studies set out the asymmetry that arises based on how performance is measured and the period used to measure this performance. In Table 3 one can see how much performance fee is generated when using time-weighted returns (TWR) and money weighted returns (MWR). In Panel A, with monthly crystallisation, using TWR the manager achieves a performance fee in the first sub-period (+50%) and earns a performance fee. In Panel B, with intra-monthly crystallisation, the manager earns a higher fee with TWR but is not penalised for the negative performance in the second sub-period in January. Using MWR the manager again earns no performance fee.

TABLE 3 COMPARISON OF TWR AND MWR APPROACHES IN PERFORMANCE FEE CALCULATION WITH ONE-MONTH AND INTRA-MONTH CRYSTALLISATION

Date	Cash Flow	Portfolio Value	TWR	MWR	Hurdle Rate	Excess Return (TWR)	Performance Fee		
							(20% basis)	(AIC basis)	(end-value basis)
A. Monthly Crystallization									
01 Jan 10	\$100.0	\$100.0							
14 Jan 10		150.0	50.0%						
15 Jan 10	100.0								
31 Jan 10		200.0	-20.0						
January 2010			20.0%	0.0%	5.0%	15.0%	\$3.0	\$4.50	\$6.00
B. Intramonthly Crystallization									
01 Jan 10	\$100.0	\$100.0							
14 Jan 10		150.0	50.0%		2.47%	47.53%	\$9.51	9.51	14.26
15 Jan 10	100.0								
31 Jan 10		200.0	-20.0		2.47	-22.47	0.0	0.0	0.00
January 2010			20.0%	0.0%	5.0%	14.4%	\$9.51	\$9.51	\$14.26

Note: AIC is average invested capital.

¹⁴Practical Issues with Performance-Based Fees Dimitri A. Senik, CFA CFA Institute Conference Proceedings Quarterly March 2011

TABLE 4. SAMPLE CRYSTALLISATION SCHEDULE FOR ONE YEAR AND ASSOCIATED ANNUAL, QUARTERLY, AND MONTHLY PERFORMANCE FEES

Date	Units	NAV	Annual	Quarterly	Monthly
31 Dec 04	\$100	\$100			
31 Jan 05	200	101			$=(101-100) \times 20\% = 0.2$ NAV 101 is the new HWM
28 Feb 05	150	1012			$=(102-101) \times 20\% = 0.2$ NAV 102 is the new HWM
31 Mar 05	210	103		$=(103-100) \times 20\% = 0.6$ NAV 103 is the new HWM	
30 April 05	220	105			$=(105-103) \times 20\% = 0.4$ NAV 105 is the new HWM
31 May 05	200	102			$=(102-105) < 0 = 0$
30 June 05	180	101		$=(101-103) < 0 = 0$	$=(101-105) < 0 = 0$
31 July 05	190	98			$=(98-105) < 0 = 0$
31 Aug 05	210	99			$=(99-105) < 0 = 0$
30 Sep 05	180	104		$=(104-103) \times 20\% = 0.2$ NAV 104 is the new HWM	$=(104-105) < 0 = 0$
31 Oct 05	160	102			$=(102-105) < 0 = 0$
30 Nov 05	200	101			$=(101-105) < 0 = 0$
31 Dec 05	300	103	$=(103-100) \times 20\% = 0.6$	$=(103-104) < 0 = 0$	$=(103-105) < 0 = 0$
Total performance fees (\$ million)			\$0.6	\$0.8	\$1.0

Note: Calculations are based on a 20 percent performance fee. HWM is high-water mark.

Table 4 sets out how much performance fee a manager earns depending on the frequency of when the performance fee is collected. The more frequent the fee crystallisation the larger the amount of fee earned by the manager; the less capital at work for the asset owner.

High quality investor reporting matters. The absence of any globally accepted industry practice in this area prompted CFA Institute to publish the Principles for Investor Reporting¹⁵. The five principles in this publication provide a valuable framework to facilitate

dialogue between asset managers and their clients as well as harmonise the understanding between both parties. While having a framework is valuable, it is the quality of its implementation that matters. In the examples we have seen in this paper it is vital that asset managers are clear about charges and how they are calculated and that this information is available to their clients. Similarly, asset owners should be equipped to understand the nature and mechanics of the charges they will pay the asset manager.

¹⁵Principles for Investor Reporting, Second Edition, CFA Institute, 2014 http://www.cfainstitute.org/learning/future/Documents/principles_for_investment_reporting.pdf

CONCLUSION

By taking into account performance, charges and risk, a client has transparency about the quality of the returns they receive, the fees they will pay and the value provided by their investment professional.

By taking this three-dimensional approach we can move on from the current focus on fees and charges alone (which ignores value entirely), can move beyond the comparison of fees and charges to headline performance (that misrepresents value) and can arrive at a position where value is correctly identified and appropriately compensated.

The Appendix contains a real world example of how a fee structure that aligns manager and client interests can be achieved.

CALL TO ACTION

Fees and charges matter to clients. Equally, fees and charges are necessary for investors to benefit from the profession's efforts. Now more than ever, the profession has to be transparent about fees and charges and demonstrate how these align with client interests. The various fee structures in use each have strengths and weaknesses. Some, in the way they are structured and calculated, can work against the client's interests. Others, used well, can align the interests of investment managers and clients. To raise the quality of the alignment between the profession and the ultimate beneficiary the following principles should be followed by asset owners and asset managers¹⁶–

ASSET OWNERS

- » Be clear on what your mandate is and what you expect from the asset manager e.g defining skill.
 - » Make sure you are aware of the benchmark you will use to provide a meaningful opportunity cost for your portfolio.
 - » Understand and be clear on how performance will be measured and the frequency of this measurement.
 - » Understand the charges you will pay and also be able to distinguish between the charges involved with your mandate e.g advisory, manager, transaction costs, costs for the use of leverage etc
- » Be clear on how and when your charges will be calculated and the impact on performance
 - » Ensure that the focus is on risk-adjusted performance and that this is net of all charges.
 - » Set out clearly how you will measure performance and the extent to which leverage and derivatives and any other approaches will be used to generate performance and how these will affect the costs and risk of the portfolio.

¹⁶For further details please see *Principles for Investor Reporting, Second Edition*, CFA Institute, 2014 http://www.cfainstitute.org/learning/future/Documents/principles_for_investment_reporting.pdf

ASSET MANAGERS

- » Set out how you will measure the risk associated with the mandate and how it aligns with the asset owner's requirements
 - » Emphasise risk-adjusted returns and demonstrate how you will measure this.
 - » Agree an appropriate benchmark that reflects closely with the client's opportunity cost of investing.
 - » Be clear about all the charges related to the mandate e.g manager charges, transaction costs, implementation costs, referral fees etc.
- » Set out in detail how and when you will calculate fees and charges and how this will impact performance and risk.
 - » Present results in a manner that is meaningful to the client.
 - » Report performance that reconciles gross performance with net performance and the risk of that performance.

This paper provides examples of good and poor practices with regard to fees. As a profession we should aim for best practice in relation to fee structures and fee calculation just as we aim for best practice in the quality of the investment services that are provided to clients. We should use a three-dimensional approach that integrates fees, performance and risk

and make these meaningful to our clients. Similarly, we should educate our clients to have the same focus and strengthen the foundation of understanding and expectation between client and provider. As this paper reports, clients are not averse to paying fees as long as they are shown that they are likely to receive value and that value will be measured in a meaningful manner.

APPENDIX A: CASE STUDY - CANADA PENSION PLAN INVESTMENT BOARD (CPPIB)¹⁷

"When we present this fee structure to managers, most of them are initially puzzled because it looks complicated..... Overall, the skilled managers like the fee structure. They see the alignment of interests and the simplicity..... Unfortunately, the forlorn managers are not so thrilled." (Donald Raymond, CFA)¹⁸

The three dimensions of client performance is demonstrated by the fee structure designed by CPPIB. When constructing a fee structure the CPPIB used the following parameters –

- » Define the fee structure and terms of termination up front.
- » Have few parameters.
- » Keep it simple.
- » Offer continuous incentives.
- » Reduce moral hazard.
- » Pay a manager for skill in adding value.
- » Negotiate the parameters.

STAGE 1 – DEFINING SKILL

CPPIB had to define skill so that it could be identified and rewarded accordingly. The definition of skill was determined as follows –

- a) The probability (Pr) that a manager has skill 1 minus the probability that the manager is lucky.
- b) Make an assumption about the probability distribution of active returns - if one assumes that active returns are normally distributed, this probability is the cumulative normal distribution, $F(\bullet)$, of the information ratio, IR, at time N (number of years) multiplied by the square root of time.
- c) Define QN, the quality factor at year N, as the probability that the manager has skill:

$$\begin{aligned} Pr\{\text{skill}\} &= 1 - Pr\{\text{luck}\} \\ &= 1 - Pr\{\text{realized returns were due to chance}\} \\ &= F(IR_N \times N^{1/2}) \\ &= Q_N \end{aligned}$$

where QN is bounded between zero and one.

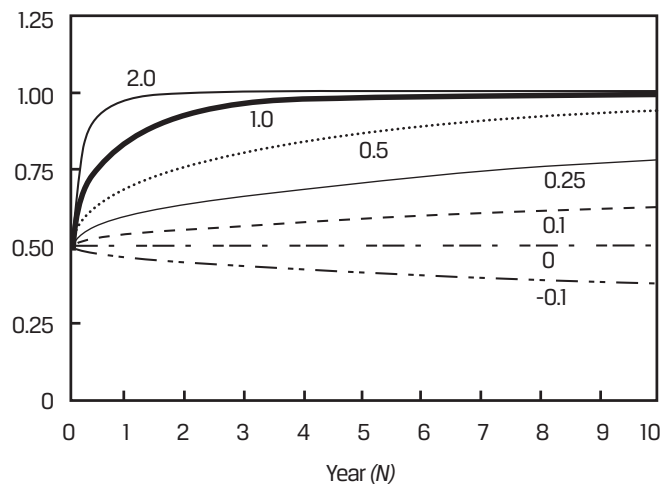
Figure 3 provides a graphical representation of the q factor. In essence CPPIB gives all its managers,

regardless of prior history, a Q factor of 0.5; a manager has a 50% probability that they have skill. As Figure 3 demonstrates, skilled managers - those that deliver high IRs - see their Q factors rise quickly to 1. After one year, it is at about 0.95, meaning there is a 95% chance they have skill, and after two years, it is essentially 1. For a low IR, such as 0.1, it takes a long time to get the quality factor up to 1. In fact, even after 10 years, it is approximately 0.62. Q is also a continuous function and addresses the moral hazard inherent in fee structures with discontinuities.

Figure 3 Quality Factor over Time for Various IRs

STAGE 2 –BASE FEE - "KEEPING-THE-LIGHTS-ON"

Quality Factor (Q)



Minimum annual base fee, or the "keeping-the-lights-on" component. The short-term base fee, or annual minimum fee (a). The negotiated base-fee rate, B, is a negotiated parameter in the fee structure and is a

$$a = B \times \sigma$$

percentage of the active risk target (o).

The active risk target is expressed in absolute dollar terms. As an example, consider a \$500 million mandate with 4 percent active risk. It would have an absolute risk target of \$20 million

¹⁷Paying (Only) for Skill (Alpha)—A Practical Approach - CFA Institute Conference Proceedings Quarterly June 2008 | Vol. 25 | No. 2 | 9 pages, CFA Institute, Donald M. Raymond, CFA <http://www.cfapubs.org/doi/pdf/10.2469/cp.v25.n2.8>

¹⁸Ibid

STAGE 3 – PERFORMANCE FEE

The cumulative performance fee, F, paid at year N is equal to a participation rate, P, (a negotiated parameter) equal to the proportion of total value added that the manager earns, multiplied by the quality factor (Q) at year N multiplied by X, the cumulative value added to year N (in dollars):

$$F_N = P \times Q_N \times X_N.$$

"Putting It All Together"

$$f_N = \max\{B \times \sigma; (P \times Q_N \times X_N) - F_{N-1}\}$$

The annual fee is the maximum of the base fee and the performance fee.

- » If the base fee exceeds the annual performance fee, the manager earns the base fee.
- » If the performance-fee component is larger, the manager earns the performance fee.

The part of the expression to the right of the semicolon expresses the performance fee as the difference between the cumulative total performance fee minus all the fees paid up until the prior year.

From the client's perspective this fee structure has three additional features-

- 1) Base fee is an advance on future performance fees.
- 2) High-water-mark feature because fees are limited to a proportion of total cumulative value added.
- 3) Performance fees can be held back in the early years because Q starts at 0.5. Figure 4 shows that over time as the manager proves their skill less is held back.

Negotiated parameters and termination

The two negotiable parameters are the base rate, B, and the participation rate, P on the performance side. In the long run P is the more important parameter, because it is the proportion of total added value that goes to the manager relative to the client. The base fee, B also needs to be considered so that it does not dominate P and hence it becomes important to know the breakeven point at which the two sides of the max operator are equal to one another.

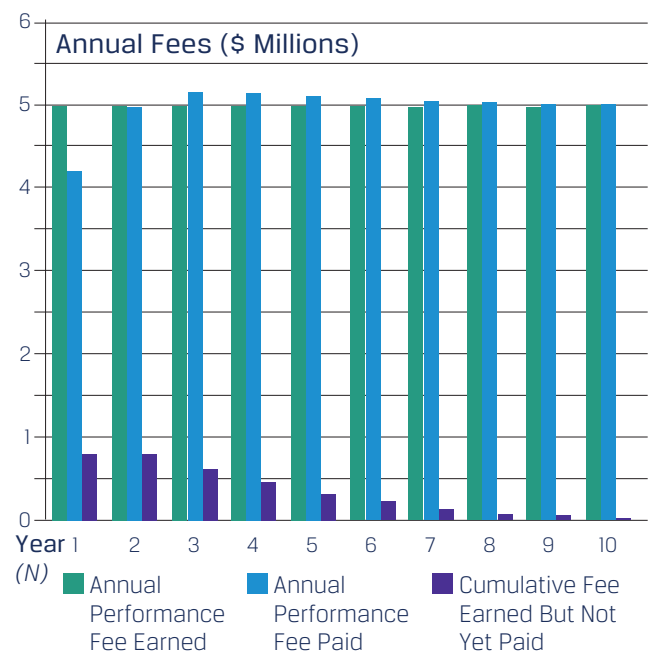
$$f_N = \max\{B \times \sigma; (P \times Q_N \times X_N) - F_{N-1}\}$$

Solving for B/P:

$$\begin{aligned} B \times \sigma &= (P \times X_N) - F_{N-1} \\ &= (P \times X_N) - P \times X_{N-1} - 1 \\ &= P \times (X_N - X_{N-1} - 1) \\ &= P \times x_N \\ \frac{B}{P} &= \frac{x_N}{\sigma} = \text{Implied Breakdown IR,} \end{aligned}$$

where xN is the value added in year N.

B/P can be thought of as an implied breakeven IR. For example, if B is 2.0 percent and P is 20 percent, the implied breakeven IR is 0.1. The asset owner would be seeking managers with IRs of much greater than 0.1.



Termination

CPPIB believed it fair and appropriate for termination events so as not to create moral hazard issues from either a manager's or from the board's perspective. It was essential to define the terms of termination before negotiating the fee parameters. If the manager is fired for breach of contract Q goes to zero and the manager forfeits any fees accrued. If the mandate is terminated because there is a change in CPPIB's strategy then Q goes to 1 and all accrued performance fees are released to the manager. If the manager resigns then Q stays where it is and the performance fees accrued up to that point is then paid to the manager.

APPENDIX B: MEMBERS' RESPONSIBILITIES UNDER THE CODE AND STANDARDS

From the Codes and Standards, Standard III(D) Performance Presentation states

When communicating investment performance information, Members and Candidates must make reasonable efforts to ensure that it is fair, accurate, and complete.

When presenting performance the CFA Institute's Global Investment Performance Standards (GIPS) approach is recommended. However, compliance to Standard III (D) without applying GIPS Standards can be applied using several actions two of which are set out as follows -

- » considering the knowledge and sophistication of the audience to whom a performance presentation is addressed,
- » including disclosures that fully explain the performance results being reported (for example, stating, when appropriate, that results are simulated when model results are used, clearly indicating when the performance record is that of a prior entity, or disclosing whether the performance is gross of fees, net of fees, or after tax).

Based on the Code and Standards is the CFA Institute's *Asset Manager Code for Professional Conduct*⁹ which includes a section on disclosures:

Code F: Disclosures

Managers must:

1. Communicate with clients on an ongoing and timely basis.
2. Ensure that disclosures are truthful, accurate, complete, and understandable and are presented in a format that communicates the information effectively.
3. Include any material facts when making disclosures or providing information to clients regarding themselves, their personnel, investments, or the investment process.
4. Disclose the following:
 - a. Conflicts of interests generated by any relationships with brokers or other entities, other client accounts, fee structures, or other matters.
 - b. Regulatory or disciplinary action taken against the Manager or its personnel related to professional conduct.
 - c. The investment process, including information regarding lock-up periods, strategies, risk factors, and use of derivatives and leverage.
 - d. Management fees and other investment costs charged to investors, including what costs are included in the fees and the methodologies for determining fees and costs.
 - e. The amount of any soft or bundled commissions, the goods and/or services received in return, and how those goods and/or services benefit the client.

⁹ Asset Manager Code of Professional Conduct, CFA Institute
<http://www.cfapubs.org/doi/pdf/10.2469/ccb.v2009.n8.1>



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