

Proxy Fund Expected Cost Report

Prepared for: Björkmo Consulting

Prepared by: CEM Benchmarking Inc.

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Table of Contents	Page No.
1. Executive Summary.....	3
2. Methodology and Discussion of Results.....	4
2.1 Proxy Fund Construction.....	4
2.2 Composition of Peer Groups.....	6
2.3 Expected Cost Calculations and Discussion.....	8

List of Tables	Page No.
Table 1: Expected cost difference between Small and Big Fund.....	3
Table 2: Asset holdings and implementation style for Proxy Fund.....	5
Table 3: Peer group profiles.....	6
Table 4: Distribution of peer groups by asset size.....	7
Table 5: Peer group average costs.....	8

Appendix A: 2007 CEM Investment Benchmarking Survey - Europe

1. Executive Summary

This report was prepared by CEM Benchmarking Inc. for Björkmo Consulting to evaluate expected costs for 'Proxy Fund', using data from the CEM Investment Performance Database. Proxy Fund is a hypothetical fund that approximates the average asset mix and implementation style obtained by combining four independent funds: AP1, AP2, AP3, and AP4. Expected costs for Proxy Fund were calculated for two asset size points using average 2007 costs from two different peer groups. 'Small Fund' costs were calculated using a peer group of 20 international pension funds with a median size of about SEK227 Billion, or close to current size for each of the 4 AP funds. 'Big Fund' costs were calculated using a peer group of 19 international pension funds with a median size of about SEK943 Billion, or roughly four times the current size of the individual AP funds.

Appendix A is the 2007 CEM Investment Benchmarking Survey, European version, which includes data definitions and CEM's instructions for completing our data survey.

Expected total fund costs are 22.0 bps for Small Fund and 17.3 bps for Big Fund. The difference, and expected cost saving from scale economies for Proxy Fund, is 4.7 bps. Table 1 summarizes expected costs and differentials by major cost component.

Table 1: Expected cost difference between Small and Big Fund

Summary Cost Components	Small Fund (bps)	Big Fund (bps)	Difference (bps)
Stocks	13.4	10.1	3.3
Fixed Income	1.7	1.7	0.0
Other Investments	<u>4.3</u>	<u>3.4</u>	<u>0.9</u>
Total Investment Management Cost	19.3	15.2	4.1
Oversight	0.9	0.8	0.1
Consulting & Perf. Measurement	0.3	0.3	0.0
Custody	1.1	0.7	0.4
Audit	0.1	0.1	0.0
Other	<u>0.3</u>	<u>0.2</u>	<u>0.1</u>
Total Administrative Cost	2.7	2.1	0.6
Total Expected Cost	22.0	17.3	4.7

2. Methodology and Discussion of Results

2.1 Proxy Fund Construction

The purpose of Proxy Fund was to create a fund that would reasonably represent a single Swedish fund. The four individual funds have participated in the CEM database at various times over the past several years. We used the data they provided to CEM to generate asset class holdings and implementation styles for Proxy Fund. For AP1, AP2, and AP3, we used 2007 calendar year data. For AP4, we used 2005 data, which was the last available year of data in the database for this fund.

There were four major reasons for using 2007 data in the case of AP1, AP2, and AP3, and 2005 data for AP4. First, CEM will only have 2008 data for two of the AP funds. Second, the 2007 data year is complete and contains superior peer group capability, since CEM cannot guarantee timely 2008 data delivery from all funds. Third, the focus of this report is on costs, and from CEM's experience, component cost levels change very little from one year to the next. Rather, significant cost changes arise from changes in asset mix and implementation style (external/internal; active/passive; use of fund of funds). Therefore, we believe there is no detriment to using 2007 (and 2005 in the case of AP4) data as the basis for Proxy Fund. Fourth, although the AP4 data is older, it has the required level of detail.

Asset class data reported to CEM reflects the varying ways individual funds organize their mandates and the categorization flexibility made available to them on the CEM survey. Consequently, for a few sub-asset class categories, only one AP fund reported data and holdings were trivial. We decided to 'roll up' these holdings into their 'parent' broader asset class categories. We only did this when the roll up made sense and would improve the analysis. One example is global small cap equity which we rolled up into global equity. In the CEM database, global equity includes mostly large cap but also includes some small cap.

For Private Equity (PE) we used 'amount on which fees are based', rather than net asset value (NAV) to determine holdings. For all other asset classes we used NAV. This has the effect of making the PE % of holdings higher than you might expect by looking at financial statements, which use NAV. For PE, CEM collects both NAV and the amount on which fees are based. Our standard practice for PE cost benchmarking is to use the amount on which fees are based.

Proxy Fund asset mix and implementation style is outlined in Table 2.

Table 2: Asset holdings and implementation style for Proxy Fund

Stock - Europe	
Internal Passive	2.5%
Internal Active	10.0%
External Passive	2.4%
External Active	<u>2.0%</u>
Total	16.9%

Fixed Income - US	
Internal Passive	0.0%
Internal Active	7.2%
External Passive	0.0%
External Active	<u>0.8%</u>
Total	8.0%

Tactical Asset Allocation	
External Active	0.1%

Hedge Funds	
External Active	0.1%

Stock - US	
Internal Passive	0.0%
Internal Active	1.2%
External Passive	0.1%
External Active	<u>5.7%</u>
Total	7.0%

Fixed Income - Europe	
Internal Passive	4.5%
Internal Active	6.7%
External Passive	0.0%
External Active	<u>0.0%</u>
Total	11.2%

REITS	
Internal Passive	0.0%
Internal Active	2.8%
External Passive	0.0%
External Active	<u>0.0%</u>
Total	2.8%

Stock - Global	
Internal Passive	0.2%
Internal Active	15.3%
External Passive	0.0%
External Active	<u>11.0%</u>
Total	26.5%

Fixed Income - Asia Pacific	
Internal Passive	0.0%
Internal Active	1.8%
External Passive	0.0%
External Active	<u>0.0%</u>
Total	1.8%

Real Estate ex-REITS	
Co-Investment	0.0%
Internal	0.4%
External Direct	0.0%
External FoF*	<u>0.0%</u>
Total	0.4%

Stock - Asia-Pacific	
Internal Passive	0.7%
Internal Active	0.0%
External Passive	1.2%
External Active	<u>0.6%</u>
Total	2.5%

Fixed Income - Global	
Internal Passive	0.1%
Internal Active	12.7%
External Passive	0.0%
External Active	<u>1.2%</u>
Total	14.0%

Diversified Private Equity	
Internal Active	0.0%
External Direct	1.7%
External FoF*	0.3%
Total	<u>2.0%</u>

Stock - Emerging	
Internal Passive	0.4%
Internal Active	0.0%
External Passive	0.7%
External Active	<u>3.1%</u>
Total	4.2%

Fixed Income - Inflat'n Indexed	
Internal Passive	0.0%
Internal Active	2.5%
External Passive	0.0%
External Active	<u>0.0%</u>
Total	2.5%

*FoF = Fund of Funds

Total Stock	
Internal Passive	1.3%
Internal Active	16.5%
External Passive	2.0%
External Active	<u>20.3%</u>
Total	40.2%

Total Fixed Income	
Internal Passive	4.6%
Internal Active	23.7%
External Passive	0.0%
External Active	<u>1.2%</u>
Total	29.5%

2.2 Composition of the Peer Groups

To calculate expected costs for Proxy Fund at the two size points, we used average 2007 costs obtained from two different peer groups: Small Fund Peer Group and Big Fund Peer Group. Demographic and size distribution information for both groups is included in Tables 3 and 4.

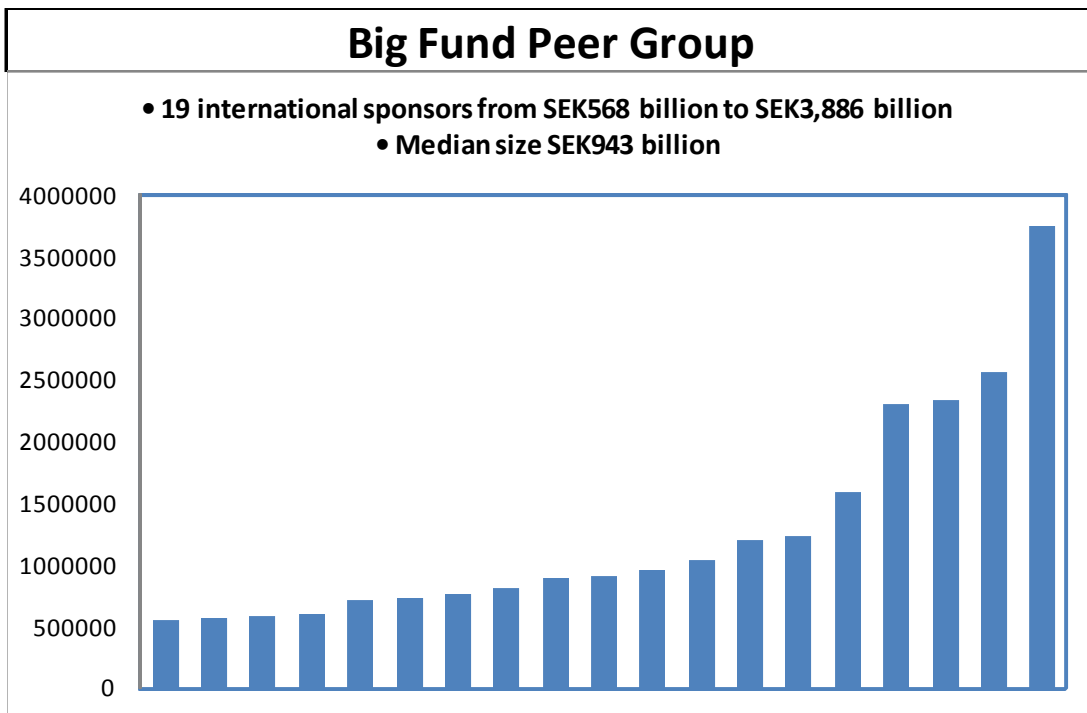
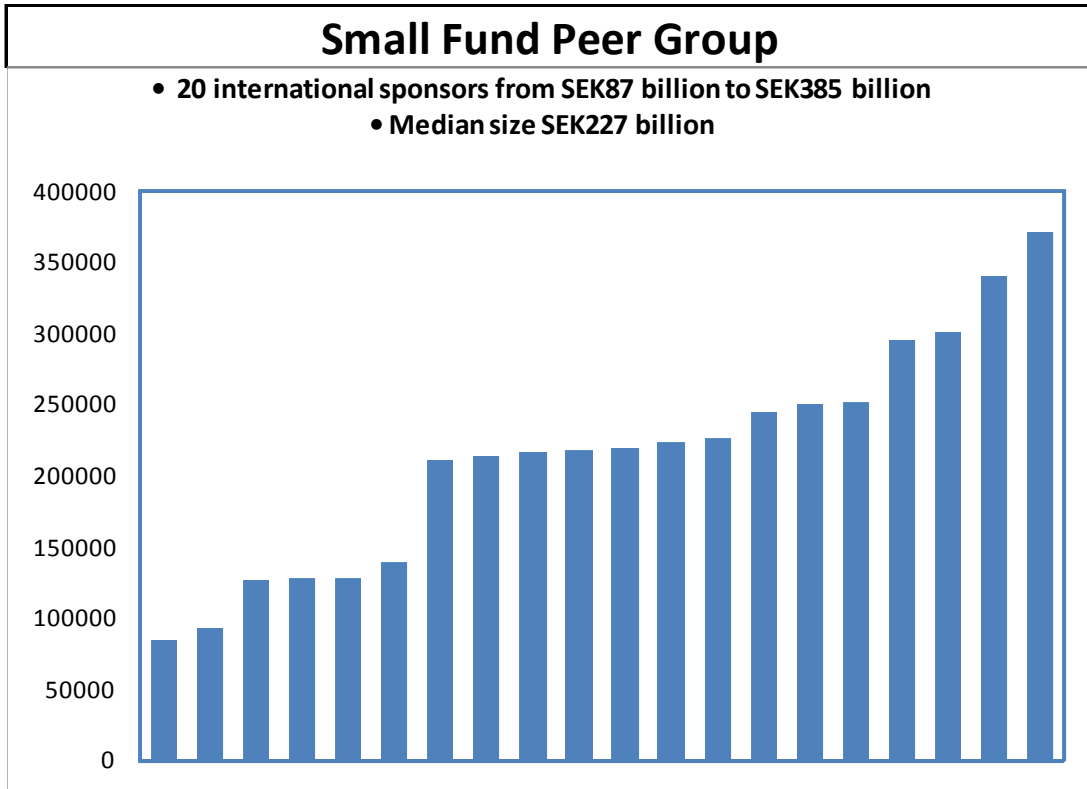
Table 3: Peer Group Profiles

Representation by Country		
Country	Small	Big
Canada	0	3
Europe	15	4
United States	<u>5</u>	<u>12</u>
Total	20	19

Implementation Style by Category		
Implementation Style	Small	Big
Internal Passive	2%	19%
Internal Active	30%	35%
External Passive	19%	8%
External Active	<u>49%</u>	<u>38%</u>
Total	100%	100%

Average Asset Mix		
Asset Class	Small	Big
<i>Stock:</i>		
Europe & EAFE	23%	9%
US	17%	23%
Emerging	3%	2%
Global	7%	9%
Other	<u>0%</u>	<u>6%</u>
Total Stocks	50%	49%
Fixed Income	39%	34%
Real Estate & REITS	7%	10%
Hedge Funds	2%	1%
Private Equity	<u>2%</u>	<u>6%</u>
Total	100%	100%

Table 4: Distribution of Peer Groups by Asset Size



2.3 Expected Cost Calculations and Discussion

Expected cost calculations were made by taking the average cost for each asset class and implementation style for each of the peer groups. Table 5 outlines average costs and the differential between the two peer groups.

Table 5: Peer group average costs

Asset Class and Implementation Style	Small Fund Costs (bps)	Big Fund Costs (bps)	Difference (bps)
Stocks:			
Europe			
Internal Passive	5.1	0.2	4.9
Internal Active	6	3.9	2.1
External Passive	7.9	3.7	4.2
External Active	46.8	37.5	9.3
US			
Internal Active	4	12.9	-8.9
External Passive	5.8	2.4	3.4
External Active	39.1	30.1	9.0
Global			
Internal Passive	4.7	5.2	-0.5
Internal Active	8.6	9.4	-0.8
External Active	45.1	31.9	13.2
Asia Pac			
Internal Passive	4.6	4.6*	0.0
External Passive	5.3	6.8	-1.5
External Active	50.1	27.3	22.8
Emerging			
Internal Passive	4.3	5.1	-0.8
External Passive	16.1	11.1	5.0
External Active	78.5	52.6	25.9

*No Big Fund used this asset class, so a value of 4.6 was assigned to neutralize the difference calculation.

Asset Class and Implementation Style	Small Fund Costs (bps)	Big Fund Costs (bps)	Difference (bps)
Fixed Income:			
US			
Internal Active	6.1	3.6	2.5
External Active	20	14.2	5.8
Europe			
Internal Passive	1.8	2.3	-0.5
Internal Active	3.3	3.9	-0.6
Asia Pacific			
Internal Active	5.1	1.4	3.7
Global			
Internal Passive	4.4	7.1	-2.7
Internal Active	2.9	3.5*	-0.6
External Active	16.9	30.9*	-14.0
Inflat'n Indexed			
Internal Active	4.4	4.2	0.2

*One extreme outlier removed from sample

Asset Class and Implementation Style	Small Fund Costs (bps)	Big Fund Costs (bps)	Difference (bps)
TAA			
External Active	112.9	41.8	71.1
Hedge Funds			
External Active	218.4	99.8	118.6
REITS			
Internal Active	13.8	8.5	5.3
Real Estate ex-REITS			
Internal	15.8	31	-15.2
Diversified PE			
External Direct	151.6	127.9	23.7
External FoF	219.8	192.9	26.9

Administration	Small Fund Costs (bps)	Big Fund Costs (bps)	Difference (bps)
Oversight and Consulting			
Oversight	0.9	0.8	0.1
Consulting & Perf. Measurement	0.3	0.3	0.0
Custodial, Audit and Other Costs			
Custody	1.1	0.7	0.4
Audit	0.1	0.1	0.0
Other	0.3	0.2	0.1

Discussion of Expected Cost Data and Results

Based on CEM’s empirical evidence for an economy of scale effect for pension investment costs, it was expected that Big Fund expected total cost would be lower than Small Fund. The general scale effect is logarithmic and can be summarized as follows: on average a \$10 billion fund would be expected to have about 19 bps lower investment costs than a \$1 billion fund. Our analysis yielded an expected cost difference between Big Fund and Small Fund of 4.7 bps, with a scale factor of approximately 4.

While the overall result was in the direction expected, some of the component results were contrary to expectation: expected costs were lower for Small Fund. This effect was most obvious in the fixed income components and resulted in the same overall cost between Big and Small Fund in this category. In addition, although we expected Big Fund to have lower costs than Small Fund throughout most asset classes, there were some asset classes where the cost differential was larger than we would have expected based on scale economies. Examples are Tactical Asset Allocation (TAA), and Hedge Funds.

The counter-intuitive or unusually large cost differences described above suggest that the results for some individual asset classes should be interpreted with caution. We believe that there are several data and methodology issues that contribute to the unexpected results:

Small sample size for some asset class/implementation styles: The CEM survey provides flexibility for funds to submit data in asset class categories that reflect various possibilities for assignment of investment mandates. For example, some funds assign only Global equity mandates whereas others assign regionally (E.g. Europe, U.S., Asia-Pacific, Emerging Markets). For Proxy Fund, this results in some asset class/implementation style cells where very few funds reported matching data. The extreme example was Asia-Pacific Internal Passive Equity where no Big Fund used this asset class/style. We assigned a cost of 4.6 bps which was the Small Fund

average cost, to neutralize the impact of this anomaly. Results from small sample sizes should always be interpreted with caution.

Data outliers: Particularly with small sample sizes, outliers can have a big impact on results for individual asset classes/implementation style results. In two cases, Global Fixed Income Internal Active and Global Fixed Income External Active, a single extreme outlier was removed from each sample. In our opinion, these outliers were not representative of reasonable costs for these categories. We did not adjust or remove any other outlier data.

Attribution of Internal Costs: The highest quality cost data is total fund cost as it is generally easy for funds to identify and CEM puts a lot of effort into ensuring that we capture standardized total fund costs. Component costs, and particularly internal costs, are subject to 'noise error' arising from attribution of total internal costs to the various components. It is important to remember that errors are off-setting at the total fund cost level. That is, if more cost than actually incurred is assigned to one component, less has been assigned to another, assuming reported total costs are accurate.



CEM ANNUAL EUROPEAN INVESTMENT BENCHMARKING SURVEY

for the year ended December 31, 2007

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Toronto, ON, Canada M5H 2A4
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email: cem@cembenchmarking.com
www.cembenchmarking.com

Please complete and return by May 1st, 2008
Online or Excel survey available at www.cembenchmarking.com
The confidentiality of your data will be strictly maintained.

A. FUND SPONSORSHIP

Full name of fund sponsor: _____

Main contact: _____

Title: _____

Telephone: _____

Email: _____

Survey prepared by: _____

Title: _____

Telephone: _____

Email: _____

Total market value of fund at Dec. 31, 2007: _____ € millions

Total fund return for year ended Dec. 31, 2007: _____ %

Total fund return is: Gross* Net**

* Gross is before deducting investment management and other fees and expenses.

** To ensure consistent comparisons between funds, we will gross up net returns.

If net, describe the netted costs or indicate the total amount deducted in €000s? _____

Do you invest in any pooled or commingled funds? Yes No

B. HOLDINGS, RETURNS, and COSTS for the year-ended December 31, 2007

Use the asset class categories that best match your mandates.

Asset Class	INTERNALLY - MANAGED ¹						EXTERNALLY - MANAGED ¹						
	Passive ²			Active			Passive ²			Active			
	Holdings €mils	Gross Return ³	Costs €000s ²⁷	Holdings €mils	Gross Return ³	Costs €000s ²⁷	Holdings €mils	Gross Return ³	Costs €000s ²⁸	Holdings €mils	Gross Return ³	Base Fees €000s ²⁸	Performance Fees €000s
Stocks:													
U.S. Large Cap or All ⁴		%			%			%			%		
U.S. Small Cap		%			%			%			%		
Europe ⁶		%			%			%			%		
Europe Small Cap		%			%			%			%		
Asia-Pacific ⁷		%			%			%			%		
Emerging ¹⁰		%			%			%			%		
Global ¹¹		%			%			%			%		
Global Small Cap		%			%			%			%		
Other		%			%			%			%		
Fixed Income:													
U.S.		%			%			%			%		
Europe ⁶		%			%			%			%		
Asia-Pacific ⁷		%			%			%			%		
Emerging ¹⁰		%			%			%			%		
Global ¹¹		%			%			%			%		
Global - Government ¹²		%			%			%			%		
Global - Credits ¹³		%			%			%			%		
Inflation Indexed Bonds		%			%			%			%		
High Yield ¹⁴		%			%			%			%		
Mortgages ¹⁵		%			%			%			%		
Other		%			%			%			%		
Cash & Equivalents¹⁶					%						%		
Hedge Funds²²													
Not Fund of Fund ²⁴					%						%		
Fund of Fund ^{25, 30}											%		
Funded TAA¹⁷					%						%		
Listed Real Assets													
Commodities ¹⁸		%			%			%			%		
REITs		%			%			%			%		

Non-listed Real Assets and Private Equity are shown on the next tab: Holdings continued

Asset values provided are : Year End Average Assets*

* Using average assets for the holdings will result in more accurate basis point cost calculations.

B. HOLDINGS, RETURNS, and COSTS for the year-ended December 31, 2007

(continued)

Asset Class	Internal & Co-Investment			External - Direct				Fund of Fund			
	Holdings €mils	Gross Return ³	Costs €000s ²⁷	Amount on which fees are based ²⁶	Holdings NAV €mils	Gross Return ³	Cost & base fees before rebates €000s ²⁹	Amount on which fees are based ²⁶	Holdings (NAV) €mils	Gross Return ³	Cost & base fees €000s ³⁰
Non-Listed Real Assts											
Real Estate ex-REITs ^{20, 29}		%				%				%	
Infrastructure ¹⁹		%				%				%	
Other Real Assets ²¹		%		n/a		%		n/a		%	
Private Equity²³											
Diversified or All		%				%				%	
Venture Capital		%				%				%	
LBO		%				%				%	
Other Non-Listed Assets²³		%				%				%	
Describe below: _____											

C. DERIVATIVES, OVERLAY, UNFUNDED LONG/SHORT PROGRAMS

Complete the table below for your DB master trust/ largest /most representative plan. Costs shown in the table should not be included elsewhere on the survey.

Type of Program	INTERNAL		EXTERNAL		
	Notional Amount €mils	Base Fees €000s	Notional Amount €mils	Base Fees €000s	Performance Fees €000s
Currency Hedge ³¹					
Currency Discretionary ³²					
Rebalancing, Passive Beta ³³					
Duration Management ³⁴					
TAA Overlay ³⁵					
Commodity Futures ³⁶					
Long/Short ³⁷					
Other Overlay					

D. POLICY RETURNS, BENCHMARKS & EXTERNAL MANAGERS

Asset Class	Policy Weight % ³⁸	Benchmark ³⁹		# of external active mandates ⁴⁰
		Description	Return % ³	
Stocks:				
U.S. Large Cap or All ⁴	%		%	
U.S. Small Cap	%		%	
Europe ⁶	%		%	
Europe Small Cap	%		%	
Asia-Pacific ⁷	%		%	
Emerging ¹⁰	%		%	
Global ¹¹	%		%	
Global Small Cap	%		%	
Other	%		%	
Fixed Income:				
U.S.	%		%	
Europe ⁶	%		%	
Asia-Pacific ⁷	%		%	
Emerging ¹⁰	%		%	
Global ¹¹	%		%	
Global - Government ¹²	%		%	
Global - Credits ¹³	%		%	
Inflation Indexed Bonds	%		%	
High Yield ¹⁴	%		%	
Mortgages ¹⁵	%		%	
Other	%		%	
Cash & Equivalents¹⁶	%		%	
Hedge Funds & Funded TAA²²				
Hedge Funds ²²	%		%	
Funded TAA ¹⁷	%		%	
Real Assets				
Commodities ¹⁸	%		%	
REITs	%		%	
Real Estate ex-REITs ²⁰	%		%	
Infrastructure ¹⁹	%		%	
Other Real Assets ²¹	%		%	
Private Equity²³				
Diversified or All	%		%	
Venture Capital	%		%	
LBO	%		%	
Other Non-Listed Assets²³	%		%	
Total Policy Weights	100.0%			

Total Policy or Benchmark Return (if available)⁴¹

%

E. OVERSIGHT, CUSTODIAL & OTHER COSTS

(Investment and oversight related)⁴²

2007 Costs
(€000s)

Oversight of the fund⁴³ - Staff time, expenses and overhead pertaining to overseeing the fund assets. If unavailable we will use a default.

€ _____

Trustee and custodial⁴⁴

- Total
- re: Non-Euro holdings (if available)
- re: Euro holdings (if available)

€ _____

€ _____

€ _____

Consulting & performance measurement⁴⁵

€ _____

Audit

€ _____

Other⁴⁶ (please describe below)

€ _____

Total Oversight, Custodial & Other Costs

€ _____

F. OTHER

Do you lend securities? Yes No

If yes:

Net security lending income in 2007 from:

All lending? _____ €000s

Euro lending (if available)? _____ €000s

Other lending (if available)? _____ €000s

What % of lending income does your custodian keep from:

Euro lending? _____ %

Other lending? _____ %

Were any of your stock or bond external active managers subject to performance-based fee arrangements? Yes No

If yes, approximately what % of your external active stock and bond assets were subject to such arrangements in 2007? _____ %

Do you use any enhanced passive or tilt strategies? Yes No

Do you participate in directed brokerage programs (i.e., commission recapture and/ or soft dollar)? Yes No

If yes, for 2007 provide the:

Gross amount of directed commissions in the program? _____ €000s

Amount of cash was recaptured by the fund? _____ €000s

'Hard' cash value of invoices/ services paid using soft dollars? _____ €000s

G. For Defined Benefit Plans Only: PLAN DATA

What were your 2007 actuarial fees (include both the normal valuation of plan liabilities plus special project work)? _____ €000s

Number of plan members/beneficiaries at Dec 31, 2007 that were:

Active - accruing benefits? _____ #

Retired - receiving benefits? _____ #

Inactive/ deferred - entitled to future benefits? _____ #

What type of plans do you have? Final/ Best/ Highest Average

Career Average

Flat Benefit

Other (describe): _____

To what extent are your retired members' benefits contractually indexed to inflation? (enter 0% for pensions that are not indexed, increasing up to 100% if fully indexed, or fully indexed up to a cap) _____ %

If the indexation is subject to a cap, (i.e. 100% inflation up to 5%), please describe the cap. _____

What percentage of the plan's liabilities pertain to retired members? _____ %

What were your actuarial assumptions for 2007 for funding purposes:

Liability discount rate? _____ %

Salary progression rate? _____ %

Expected rate of return? _____ %

Private Equity (optional)

Responding to this page is optional. Complete the table below if you have external direct private equity funds and would like to receive more detailed cost comparisons.

External direct ¹ private equity holdings in:	Stage of Investment:	Net Asset Value (millions)	Commit- ment Amount (millions)	Unreturned invested capital ² (i.e., book cost) (millions)	Cost & base fees <i>before</i> rebates ³ (000s)	Rebates ³ (if available) (000s)	Weighted Average Carried Interest %
Diversified or All	In commitment period	_____	_____	_____	_____	_____	_____
	After commitment period	_____	_____	_____	_____	_____	_____
Venture Capital	In commitment period	_____	_____	_____	_____	_____	_____
	After commitment period	_____	_____	_____	_____	_____	_____
LBO	In commitment period	_____	_____	_____	_____	_____	_____
	After commitment period	_____	_____	_____	_____	_____	_____
Other	In commitment period	_____	_____	_____	_____	_____	_____
	After commitment period	_____	_____	_____	_____	_____	_____

Definitions

(1) Direct is externally managed funds that directly invest in private equity. Do NOT include fund of funds.

(2) Unreturned invested capital equals contributed capital less contributed capital attributable to realized investments plus the aggregate amount of write-downs, if any, with respect to unrealized investments. It is often the amount on which fees are based after the commitment period ends.

(3) Rebates are the limited partners' share of certain fee income realized by the General Partner in connection with the fund, such as fees for break-up, monitoring and funding. Rebated fee income is often treated as a reduction in the reported management fees paid by the limited partners to the General Partner. Thus fees appearing in the accounting statements are often net of rebated fee income.

INSTRUCTIONS AND FOOTNOTES

2007 European Investment Benchmarking Survey

Cost Instructions and Footnotes

Costs to include

All costs relating to the investment and oversight of assets should be included in this survey regardless of:

- *Whether or not they were charged to the fund.* For example, IT system costs absorbed by the sponsor.
- *How paid.* For example, costs paid through soft dollars. The value of the services should be included at their hard dollar equivalent.
- *Whether netted from returns.* For example, commingled fund management fees should still be estimated.
- *Whether there are offsetting revenues or reimbursements.* For example custodial costs should be before security lending revenues.

Include any applicable taxes paid (e.g., VAT, GST, etc.)

Allocating Costs

Costs that can be directly related to an asset class or activity should be included with the cost of that asset class or activity. For example, an internal fixed income manager's travel costs should be included with internal fixed income investment costs.

Costs that are not directly related to specific activities need to be allocated to applicable or all asset classes and/or Oversight. These costs are usually called 'overhead'. Examples may include: rent, utilities, IT, investment accounting, financial control, human resources, trading systems, risk management, etc. 100% of these costs should be allocated and accounted for in this survey. Ideally, they should be allocated based on usage. For example, the cost of a trading system used by both internal domestic stock and fixed income managers should be allocated to both internal domestic stock and fixed income investment cost based on an estimate of usage. A simpler and acceptable alternative allocation method is to allocate overhead costs based on relative direct head count.

Holdings & Returns Instructions & Footnotes

1. **Internally managed** means that the buy-sell decisions for the underlying assets (e.g., individual stocks, bonds, property) are made within the organization (including wholly-owned subsidiaries).
Externally managed means that the buy-sell decision for the underlying assets are made by third-party organizations (such as money managers).
2. **Passive assets** (also called indexed) are intended to replicate broad capital market benchmarks (e.g., the S&P500 for US Stocks) or are dedicated to matching a specific set of liabilities.
Enhanced Passive mandates that seek to add value over an index while maintaining a low tracking error (for example, 25 basis points or more) should be included under active, not passive.
3. **Gross Return:** If actual, full-year returns are unavailable, enter "n/a".
If you engage in any currency management ensure that the returns reported match the benchmark.
If hedging is done at the total portfolio level provide unhedged returns and benchmarks.
If hedging is done at the asset class level provide hedged returns and benchmarks.
4. **U.S. Stocks:** If you do not distinguish between Large Cap and Small Cap, then include all U.S. stock mandates under Large Cap. U.S. 130/30 type strategies can be included under U.S. stocks.
5. Intentionally omitted
6. **Europe:** Should include the following countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom. If you do not distinguish between European Large Cap and Small Cap stock then both can be included under Europe.
7. **Asia-Pacific:** Includes Australia, Hong Kong, Japan, New Zealand and Singapore.
- 8-9. Intentionally omitted
10. **Emerging:** Include Emerging markets and any other countries not explicitly listed in the above categories.

11. **Global:** Should include mandates where you invest on a global basis rather than using geographical mandates. Where you have specific mandates that fit into any of the above categories include them there. Also, if you prefer to show global mandates on a separated basis using the above categories it is fine to do so.
12. **Global Bonds: Government** Should include mandates invested in sovereign or government backed debt across countries.
13. **Global Bonds: Credit** represents fixed income mandates in corporate or other spread fixed income instruments across countries. Note that mandates that are specifically invested in high yield debt should be included in the 'high yield bonds' category.
14. **High Yield Bonds** are issued by organizations that do not qualify for investment grade ratings by one of the leading credit rating agencies. If you have High Yield mandates they should be shown here. You do not have to break out high yield holdings that are part of other mandates. **Distressed Debt** refers to debt trading at or near default levels. It is a component of the high yield universe and can be included here or under private equity if it is invested through a partnership structure.
15. **Mortgages** should include only direct mortgages, not mortgage backed securities. Mortgage backed securities are treated as normal fixed income instruments and should be in the appropriate geographic category (i.e. U.S., EAFE).
16. **Cash & Equivalents** should only include cash managed as a separate asset class. Uninvested residual cash should be included in its related asset class mandate. DO NOT include the notional value of long or short derivatives positions, but DO include cash underlying derivative positions.
17. **Funded TAA** should only reflect a fully funded segregated asset pool dedicated to tactical asset allocation. If the TAA program is derivative-based and is unfunded other than margin requirements, it should be reported with Derivative/Overlay Programs on the 'Holdings continued' tab and the margin should be included in cash.
18. **Commodities** refers to actual physical exposures in commodities (i.e., crude oil, sugar, copper etc), commodity funds or products with similarities to the Goldman Sachs Commodities Index. Derivative exposures should be reported on the Holdings continued tab under the 'Derivatives and Overlay Programs' section.
19. **Infrastructure** can include local distribution networks for electricity, water and gas, and certain transportation assets, such as toll roads, bridges and tunnels.
20. **Real Estate** includes direct real estate holdings, real estate partnerships, segregated real estate holdings, etc. Internal Real Estate means that internal staff makes the buy/sell decision on individual properties. Otherwise, it should be classified as an External Real Estate holding.
21. **Other Real Assets** refers to investments in real assets other than the classes noted above. This could include investments like oil & gas partnerships and timber.
22. **Hedge Funds** includes Absolute Return Strategies. These investments may allow leverage or short positions.
23. **Private Equity** includes Venture Capital, LBO as well as equity or fixed income investments in turnarounds, start-ups, and mezzanine financing. Distressed Debt investments through partnership arrangements should also be included here. If you have specific investments in **Venture Capital** and **LBO** and would like to list them separately please do so, otherwise they can be classified under the main heading 'Diversified or All'. Mature companies that are not in distress but choose to be private belong in '**Other Non-Listed Assets**'. Investments made through Co-Investment arrangements should be included under internal.
24. **Not Fund of Funds** are direct investments and investments made through funds that hold underlying assets directly.
25. **Fund of Funds:** Investments in funds whose holdings consist primarily of other funds.
26. For Real Estate, Infrastructure and Private Equity investments provide the **Amount on which fees are based**. This is usually the committed amount during the commitment period and unreturned invested capital (i.e., book cost) afterward. Unreturned invested capital equals contributed capital less contributed capital attributable to realized investments plus the aggregate amount of write-downs, if any, with respect to unrealized investments.

27. **Internal Investment Costs** are the costs related to internally managed investments. They should include: direct investment costs (compensation and benefits of employees managing internal portfolios and support staff, related travel, research, conference costs, subscriptions, memberships, etc.) and allocated overhead costs (see Cost Instructions at the beginning of the footnotes). Do not include overall fund oversight and custodial costs here. They are collected separately in Section E: Oversight, Custodial & Other Costs.
28. **External Investment Costs** include:
- All fees paid to 3rd-party managers including investment management fees, manager-of-managers fees performance-based fees, commitment fees and 'hidden' fees netted from the returns. Fees should be gross before any reductions.
 - Other internal and external costs that can be directly attributed to specific externally managed holdings. For example, legal fees that pertain to external venture capital holdings belong in external venture capital costs. Similarly, internal staff whose sole responsibility is overseeing a single external asset class should be included in the cost of that asset class. For the purpose of simplicity and comparability, the cost of internal staff who oversee multiple asset classes or the total fund should be included under 'Oversight of the Fund' in section E: Oversight, Custodial & Other Costs.
 - For external active costs, there are now separate areas to enter both the base fee and the performance fee for each asset class. If a split is not available, include all costs under base fees.
- Partial year** costs should be included and identified as such. **Costs of balanced mandates** can be allocated on a pro-rata basis based on actual holdings.
- Performance fees** represent any additional fees (on top of your base fees) which participate in manager performance. If you have several managers, but only some have performance fees, simply add together all the performance fees paid and enter that number.
29. **Real Estate and Private Equity Costs** - Include all 3rd-party fees before reduction for rebates Rebates are the limited partners' share of certain fee income realized by the General Partner in connection with the fund, such as fees for break-up, monitoring and funding. Rebated fee income is often treated as a reduction in the reported management fees paid by the limited partners to the General Partner. Thus fees appearing in the accounting statements are often net of rebated fee income.
- Do not include performance fees or carried interest (a fee that is a portion of returns exceeding a hurdle rate) for these asset classes.
- For external holdings, also include internal costs (as described in footnote 28) pertaining to the holdings.
- **Real Estate** costs should include management and acquisition/dispersal fees but exclude property management fees. When costs that have been netted from returns are pulled out and reported, returns should be grossed up accordingly.
30. **Fund of Funds Costs:** Include the top layer management fees charged by the fund-of-funds manager. Do not include the costs paid in the underlying funds. CEM will use a standard default for all participants.

Derivatives, Overlays, Unfunded Long/Short

31. **Currency hedge:** A program designed to maintain a stated level of currency hedging on a pool of assets. There is little/no discretion for the currency weight to deviate from the policy weight.
32. **Currency discretionary:** A currency program where managers take active currency bets to add value. This includes hedging programs where managers have some discretion to deviate from policy hedging weights.
33. **Rebalancing / passive beta:** A program that uses derivatives to adjust actual asset mix and/or to rebalance the portfolio synthetically.
34. **Duration Management:** A derivatives program to adjust the duration of portfolio relative to liabilities.
35. **TAA Overlay:** A program that uses derivatives to profit from exposures to various asset classes or macroeconomic factors based on expected market conditions. Includes Global TAA.
36. **Commodity Futures:** A derivatives-based investments that involve trading commodity futures.
37. **Long/short:** Derivatives-based program that involves removing market risk to some degree through shorting so as to isolate the portfolio's alpha potential. May include leverage.

Policy Return & Benchmarks Instructions and Footnotes

38. **Policy Weights** reflect long-term policy, normal or target asset mix such as 60% stock and 40% bonds and must add to 100%. If your asset mix policy is expressed in ranges, use midpoints. Policy weights should be provided at year end levels.
39. **Benchmarks** are broad investable capital market indexes (for example, the S&P500 for US stocks) against which asset class performance is measured.
- If your fund has more than one asset class benchmark, indicate each benchmark and its appropriate weight (such as 60% S&P500, 40% Russell 3000)

If you engage in any currency management ensure that the returns reported match the benchmark.

If hedging is done at the total portfolio level provide unhedged returns and benchmarks.

If hedging is done at the asset class level provide hedged returns and benchmarks.

40. Provide the **number of external active manager mandates** for each asset category.
- If you retain a manager for more than one mandate (e.g., a domestic equity and a foreign equity mandate), include the manager in both the domestic equity and foreign equity counts. For private market investments, indicate number of funds or partnerships you are invested in.
41. **Total Policy Return** should reflect the impact of any policy mix and/or benchmark changes.
- If part of your policy is to hedge currency, then the impact should be reflected in your policy return.

Oversight, Custodial and Other Instructions & Footnotes

42. This section should not include liability related costs such as benefit administration costs, PBGC premiums or actuarial valuation costs (however, total actuarial costs are under Section G: Plan Data).
43. **Oversight** of the fund includes staff salaries, direct expenses (travel, fees paid to directors, director's insurance, etc) and related unallocated overhead pertaining to overseeing the fund assets. Include executives and their staff responsible for the total fund or responsible for overseeing multiple asset classes (for example, CEO, CIO office, Board of Director/Investment Committee etc.) Staff responsible for overseeing a single asset class should have their costs included with that asset class. If you have both a defined benefit and a defined contribution plan, then oversight costs should be allocated according to the time and resources spent only on the defined benefit plan.
44. **Trustee and custodial** costs should be gross before any reductions, if any, relating to securities lending or other revenues credited against fees. Also they should not include the custodians portion of securities lending revenue. Exclude the costs of preparing benefit checks. Fees for performance measurement services should be split from total custodial costs and included in the appropriate category below.
45. **Consulting** includes both third party costs for manager searches, scenario testing, system consulting, etc and internal costs for performance measurement teams.
46. **'Other'** includes legal fees related to the entire fund, fiduciary insurance, printing, etc. Do not include actuarial fees here, instead include them in Section G: Plan Data. Do not include expenses that are liability or benefit administration related such as pension guarantee premiums.