



Mendocino County Employees' Retirement Association

International Equity and Fixed Income Asset Class Structure Reviews

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Overview

Guiding Principles of Investment Structures

- **Active management offers the potential to add value over the index and can be complementary to passive management.**
 - Excess returns are more difficult to achieve in efficient markets such as Large Cap U.S. Equity and U.S. Fixed Income.
 - Potential for excess returns are most compelling in Small/Mid Cap U.S. equity, Non-US equity, Emerging equity and Non-US Small Cap equity.

- **Well-diversified market-neutral exposure with no unintended biases.**
 - Avoid overlapping mandates.
 - Many Plans purposefully add bias to Small/Mid Cap U.S. equity and Emerging Markets equity for potential return enhancement.



Overview

Guiding Principles of Investment Structures

- **Callan’s overriding philosophy is to keep the structure as simple as possible.**
- **Manager allocations should be meaningful at the asset class and total Plan level.**
- **The appropriate number of managers must balance: style diversification, manager diversification, fees, and monitoring costs.**
- **Primary influences on the appropriate number of managers:**
 - Size of the allocation relative to the total Plan.
 - The higher the allocation, the greater the desired manager diversification.
- **Active versus passive decisions:**
 - Fewer managers may be suitable when the portfolio is managed passively or low tracking error strategies are utilized.



Fixed Income Manager Structure



Four Types of Fixed Income Strategies

■ **Passive**

- Seeks to replicate the characteristics and return pattern of an index, most typically the Barclays Aggregate. The Barclays Aggregate is a broad market index consisting of U.S. investment grade, dollar denominated debt.

■ **Core**

- An active management strategy where the fixed income manager invests predominantly in sectors represented within the Barclay's Aggregate.
- Value added by duration management, yield curve positioning, sector and security selection.

■ **Core Plus**

- An active management strategy where the manager invests opportunistically in non-benchmark sectors such as high yield, non-U.S. bonds, and emerging market debt.
- Moderate tracking error.
- Performance is typically compared to investment grade index like the Barclay's Aggregate.

■ **Specialty Managers**

- Can include high yield, non-U.S, bank loans, and/or convertibles.
- Often used in a “core satellite structure” which combines index/core managers with smaller allocations to specialty managers.
- Emphasize excess returns and specialized markets.
- Plan sponsor establishes target allocation and rebalancing ranges.
- Each sector has its own manager and its own benchmark.



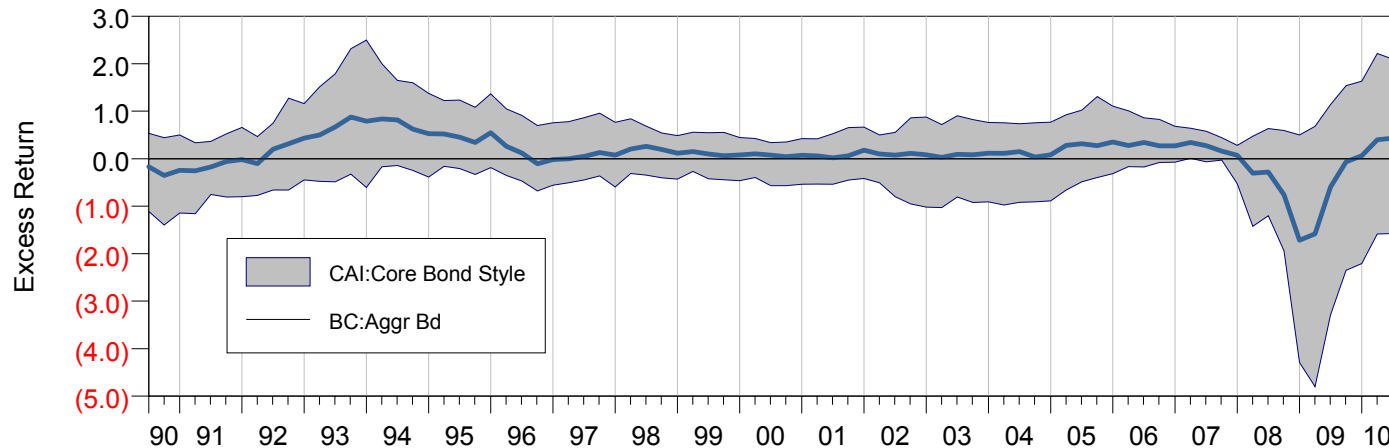
Active vs Passive – Core

Percent of Three-Year Periods where Manager Beat Benchmark by More than Hurdle - by Percentile

Hurdle	0.20%	0.25%	0.30%	0.35%	0.40%	0.45%	0.50%	0.55%	0.60%	0.65%
Median	38%	35%	25%	19%	16%	14%	13%	9%	8%	6%
45th Percentile	43%	39%	31%	26%	21%	18%	16%	15%	11%	8%
40th Percentile	55%	48%	39%	34%	30%	25%	18%	16%	16%	14%
35th Percentile	69%	56%	48%	38%	35%	31%	25%	21%	18%	16%
30th Percentile	80%	68%	59%	48%	40%	35%	33%	26%	25%	21%
25th Percentile	89%	80%	70%	60%	50%	45%	38%	35%	31%	29%

Average Annualized Excess Return - Median Manager: 0.12%

**Rolling 12 Quarter Excess Return Relative To BC:Aggr Bd
for 20 Years Ended June 30, 2010**





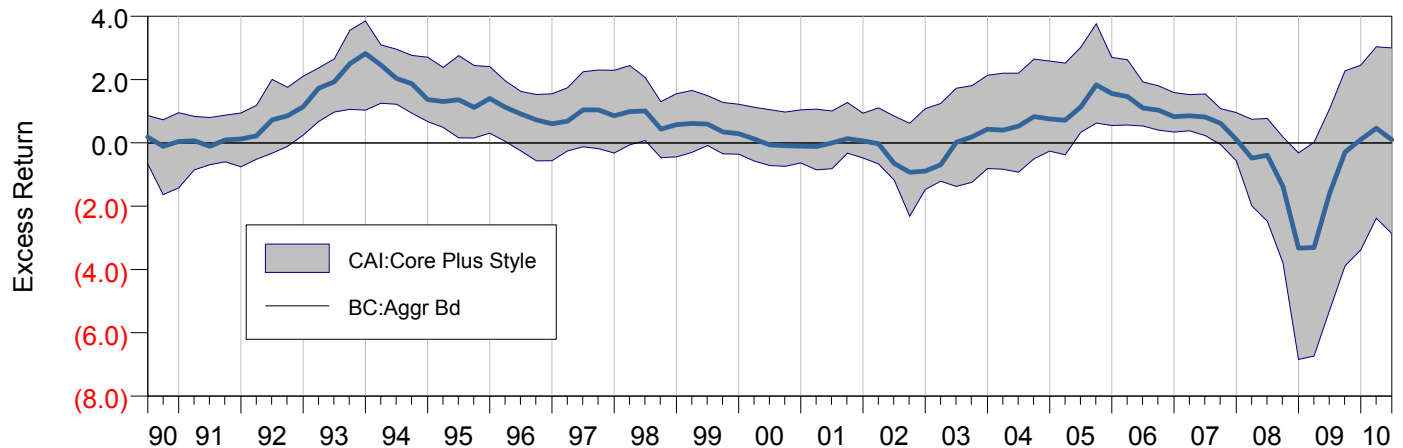
Active vs Passive – Core Plus

Percent of Three-Year Periods where Manager Beat Benchmark by More than Hurdle - by Percentile

Hurdle	0.20%	0.25%	0.30%	0.35%	0.40%	0.45%	0.50%	0.55%	0.60%	0.65%
Median	61%	60%	59%	58%	58%	54%	53%	51%	50%	45%
45th Percentile	66%	65%	60%	60%	60%	59%	56%	55%	53%	51%
40th Percentile	70%	68%	68%	65%	64%	63%	61%	59%	59%	58%
35th Percentile	75%	74%	70%	68%	66%	66%	66%	65%	63%	60%
30th Percentile	84%	80%	78%	75%	74%	73%	70%	69%	69%	64%
25th Percentile	89%	88%	88%	84%	83%	79%	75%	73%	73%	70%

Average Annualized Excess Return - Median Manager: 0.49%

**Rolling 12 Quarter Excess Return Relative To BC:Aggr Bd
for 20 Years Ended June 30, 2010**





Current MCERA Fixed Income Structure

- **MCERA Fixed Income Allocation Has Performed Very Well**
 - 12th percentile relative to other public funds over five years ended Q2 2010.
 - Top quartile over the trailing two and three years ended Q2 2010.
- **Three Managers**
 - All the managers are benchmarked to the Barclays Aggregate.
 - Bradford & Marzec and Dodge & Cox are best described as Core.
 - Bradford & Marzec and Dodge & Cox are separate account mandates.
 - PIMCO is a Core Plus mandate and a mutual fund.
 - Dodge & Cox and PIMCO have similar weights (~15-16% of total assets each) while Bradford & Marzec has about 1/3rd the weight of the other managers (~6%).

Style	Allocation (%, Fixed Income Assets)	Allocation (%, Total Assets)	Allocation (\$, mm)
Passive	0.0%	0.0%	\$0.0
Core	56.7%	20.8%	\$59.3
Bradford & Marzec	15.5%	5.7%	\$16.2
Dodge & Cox	41.3%	15.1%	\$43.1
Core Plus	43.3%	15.8%	\$45.2
PIMCO	43.3%	15.8%	\$45.2
Total	100.0%	36.6%	\$104.4



Current MCERA Fixed Income Structure

■ **Bradford & Marzec**

- Core bond strategy governed by separate account guidelines.
- Duration has been modestly above the benchmark but modestly below that of peers.
- Yield has generally been above the benchmark but often less than peers.
- Guidelines allow some exposure to Non-US Debt.
- Sector Rotation has been a significant source of value added historically.
- Fees are 28.5 bps on all assets.

■ **Dodge & Cox**

- Core bond strategy governed by separate account guidelines.
- Historical bias to overweight corporate debt.
- Duration is often shorter than index and peers.
- Yields have generally been high relative to the benchmark.
- Fees are 24.3 bps on assets. Mutual Fund with 43 bps fee is available.

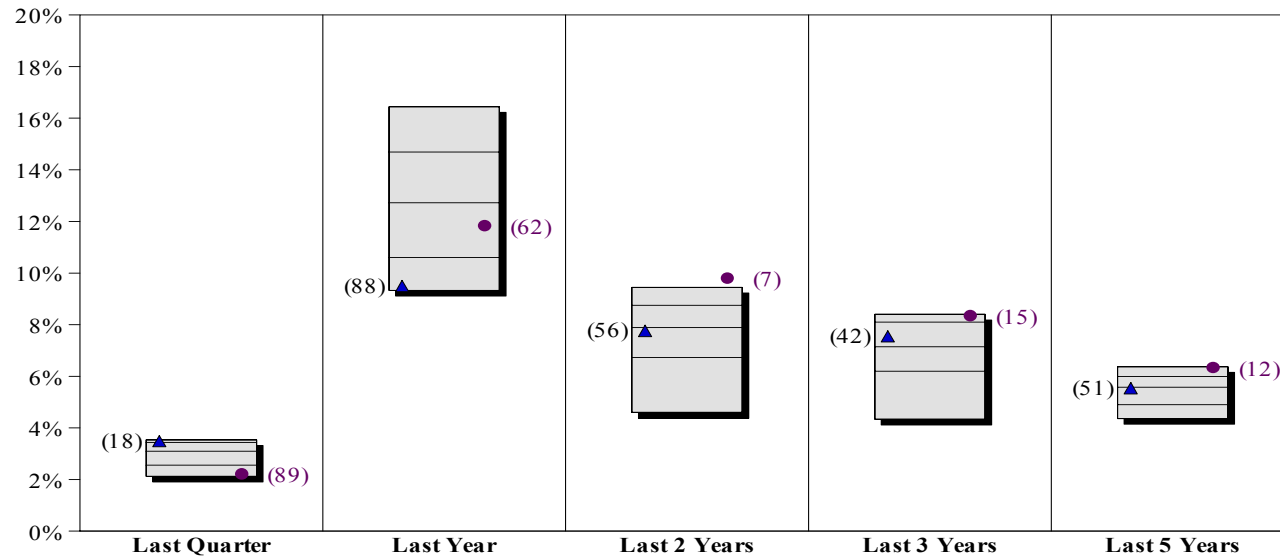
■ **PIMCO**

- Core plus bond strategy government by mutual fund documents.
- Top down manager with complicated investment strategy.
- Duration has varied measurably more than Aggregate or peers.
- Tends to underweight corporate bonds.
- Mutual Fund fees are 46 bps.



Fixed Income Composite Performance

Performance vs Public Fund - Domestic Fixed (Gross)

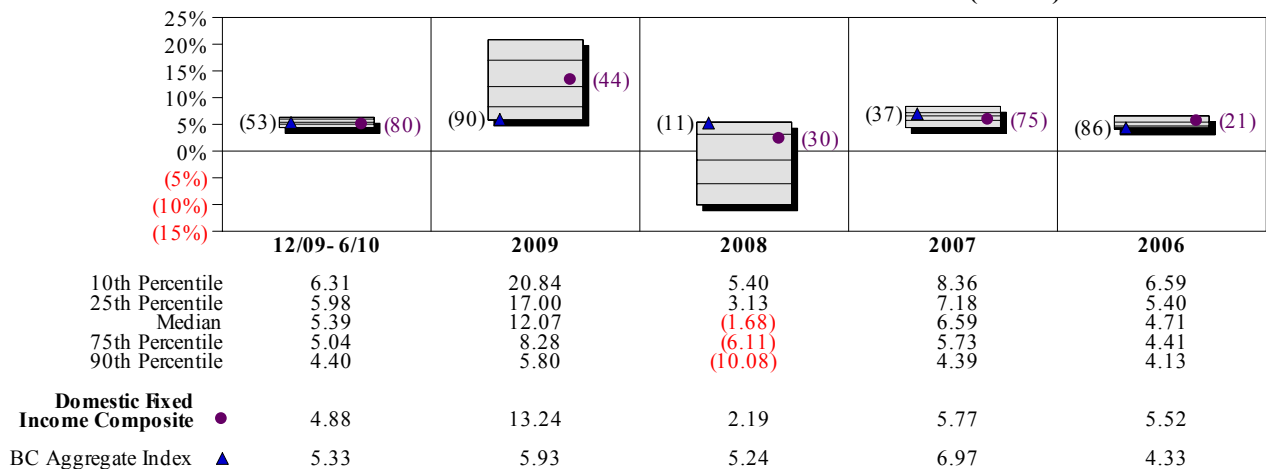


10th Percentile	3.54	16.45	9.45	8.40	6.37
25th Percentile	3.44	14.69	8.75	8.10	6.00
Median	3.10	12.72	7.89	7.15	5.58
75th Percentile	2.56	10.60	6.73	6.20	4.90
90th Percentile	2.12	9.33	4.60	4.33	4.36
Domestic Fixed Income Composite ●	2.16	11.78	9.75	8.29	6.28
BC Aggregate Index ▲	3.49	9.50	7.76	7.55	5.54

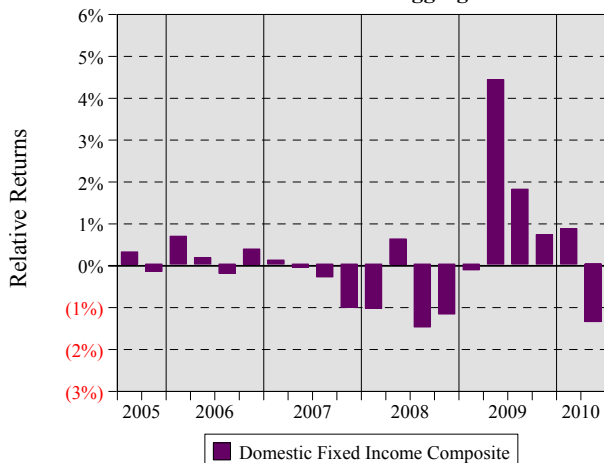


Fixed Income Composite Performance and Risk Characteristics

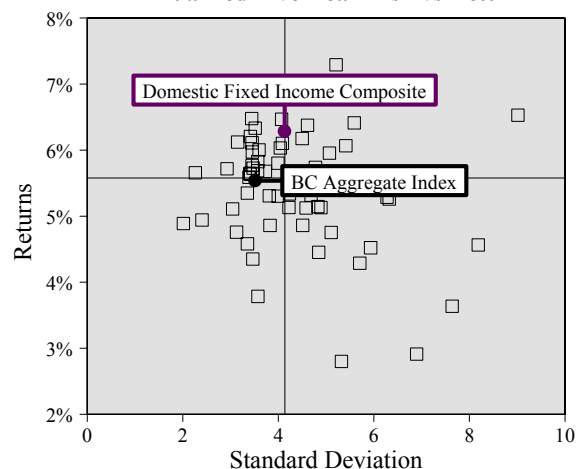
Performance vs Public Fund - Domestic Fixed (Gross)



Relative Return vs BC Aggregate Index



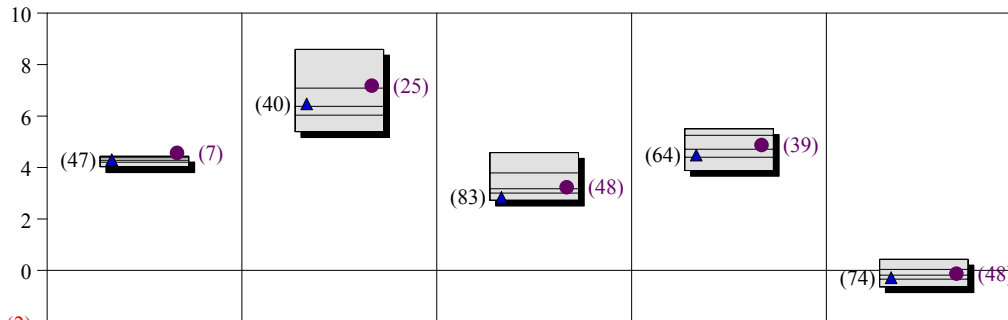
Public Fund - Domestic Fixed (Gross) Annualized Five Year Risk vs Return





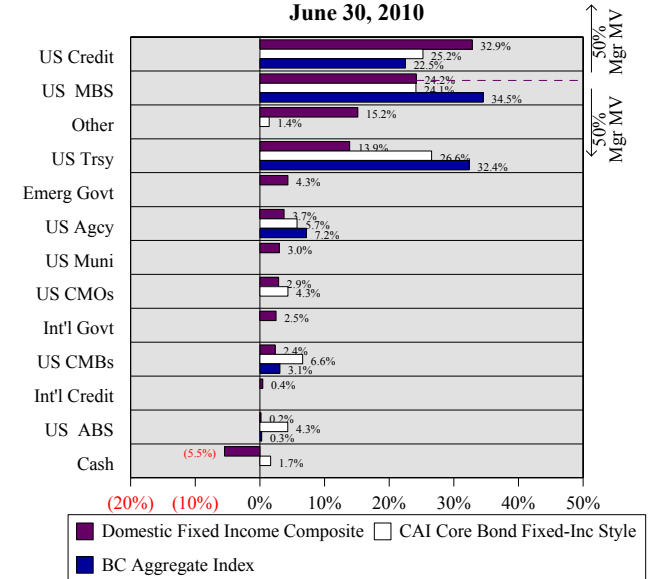
Fixed Income Composite Bond Characteristics

Fixed-Income Portfolio Characteristics
Rankings Against CAI Core Bond Fixed-Inc Style
as of June 30, 2010



	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
10th Percentile	4.44	8.59	4.58	5.50	0.43
25th Percentile	4.38	7.09	3.79	5.25	0.04
Median	4.28	6.38	3.18	4.71	(0.18)
75th Percentile	4.20	6.03	3.01	4.40	(0.34)
90th Percentile	4.03	5.39	2.73	3.88	(0.64)
Domestic Fixed Income Composite ●	4.56	7.17	3.22	4.86	(0.14)
BC Aggregate Index ▲	4.30	6.47	2.83	4.48	(0.29)

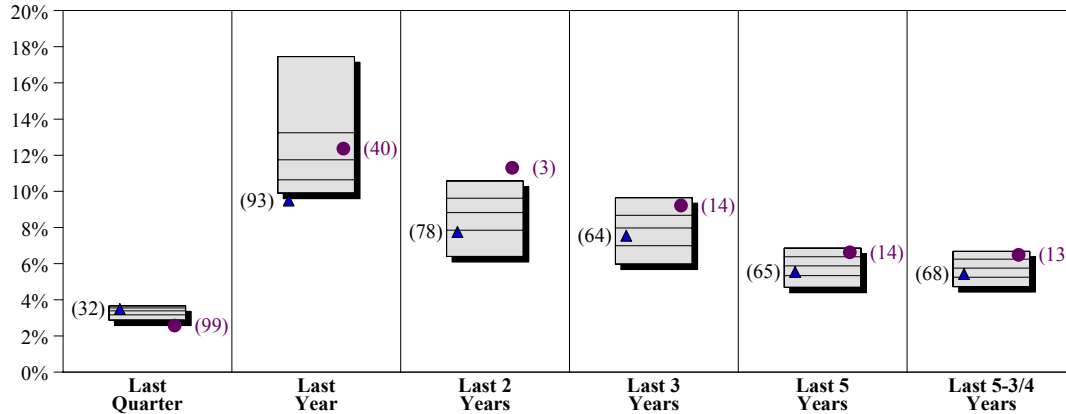
Sector Allocation
June 30, 2010





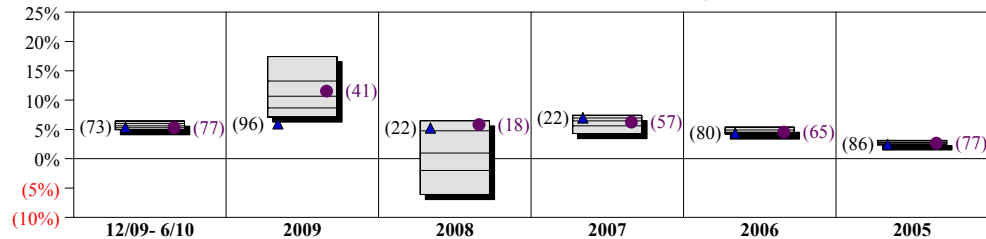
Bradford & Marzec Performance

Performance vs CAI Core Bond Fixed-Inc Style (Gross)



	Last Quarter	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 5-3/4 Years
10th Percentile	3.66	17.45	10.58	9.65	6.86	6.68
25th Percentile	3.55	13.24	9.62	8.67	6.38	6.24
Median	3.39	11.75	8.83	7.98	5.88	5.76
75th Percentile	3.16	10.63	7.85	6.99	5.34	5.25
90th Percentile	2.88	9.90	6.40	5.98	4.69	4.72
Bradford & Marzec ●	2.57	12.36	11.29	9.20	6.62	6.48
BC Aggregate Index ▲	3.49	9.50	7.76	7.55	5.54	5.43

Performance vs CAI Core Bond Fixed-Inc Style (Gross)

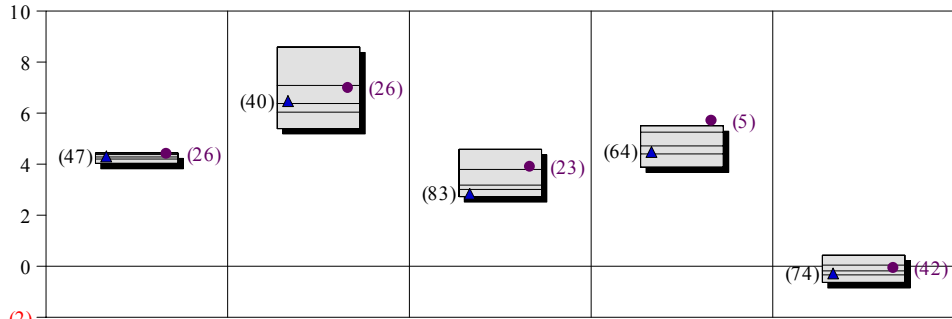


	12/09-6/10	2009	2008	2007	2006	2005
10th Percentile	6.43	17.43	6.50	7.39	5.38	3.14
25th Percentile	6.03	13.23	4.77	6.93	4.90	3.01
Median	5.63	10.67	0.96	6.46	4.54	2.77
75th Percentile	5.27	8.65	(2.02)	5.61	4.42	2.64
90th Percentile	4.95	7.10	(6.08)	4.30	4.22	2.37
Bradford & Marzec ●	5.26	11.49	5.79	6.22	4.48	2.61
BC Aggregate Index ▲	5.33	5.93	5.24	6.97	4.33	2.43



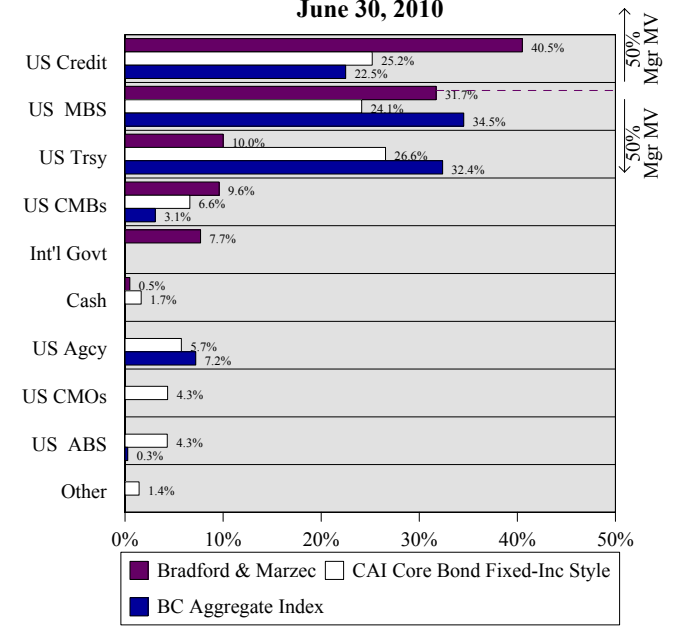
Bradford & Marzec Bond Characteristics

Fixed-Income Portfolio Characteristics
Rankings Against CAI Core Bond Fixed-Inc Style
 as of June 30, 2010



	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
10th Percentile	4.44	8.59	4.58	5.50	0.43
25th Percentile	4.38	7.09	3.79	5.25	0.04
Median	4.28	6.38	3.18	4.71	(0.18)
75th Percentile	4.20	6.03	3.01	4.40	(0.34)
90th Percentile	4.03	5.39	2.73	3.88	(0.64)
Bradford & Marzec ●	4.37	6.95	3.86	5.67	(0.10)
BC Aggregate Index ▲	4.30	6.47	2.83	4.48	(0.29)

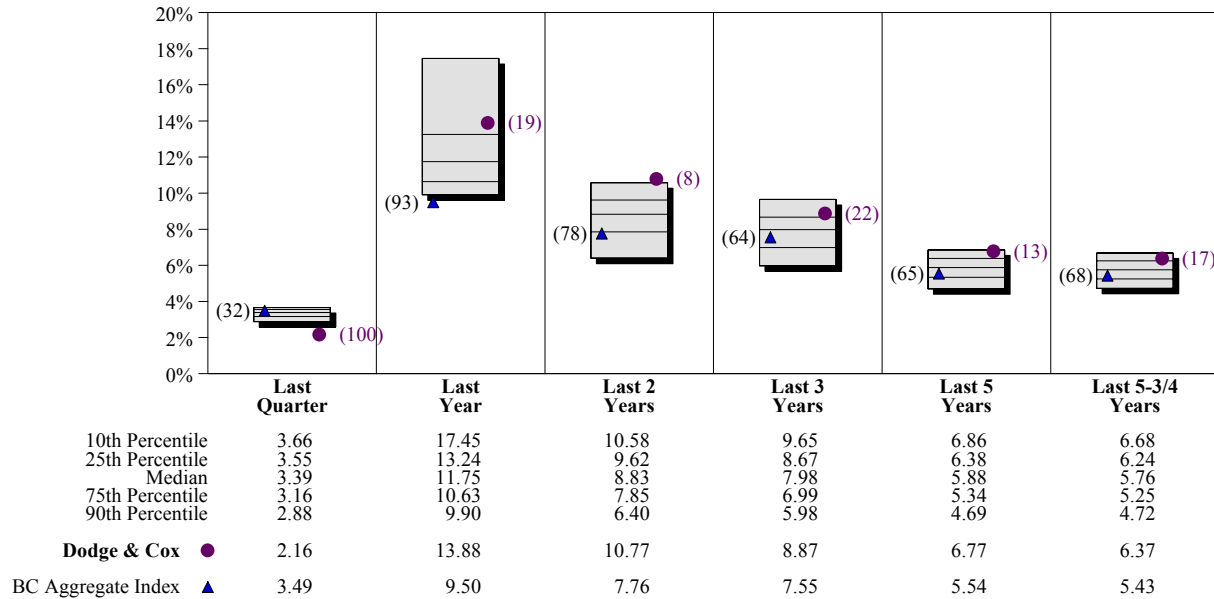
Sector Allocation
 June 30, 2010



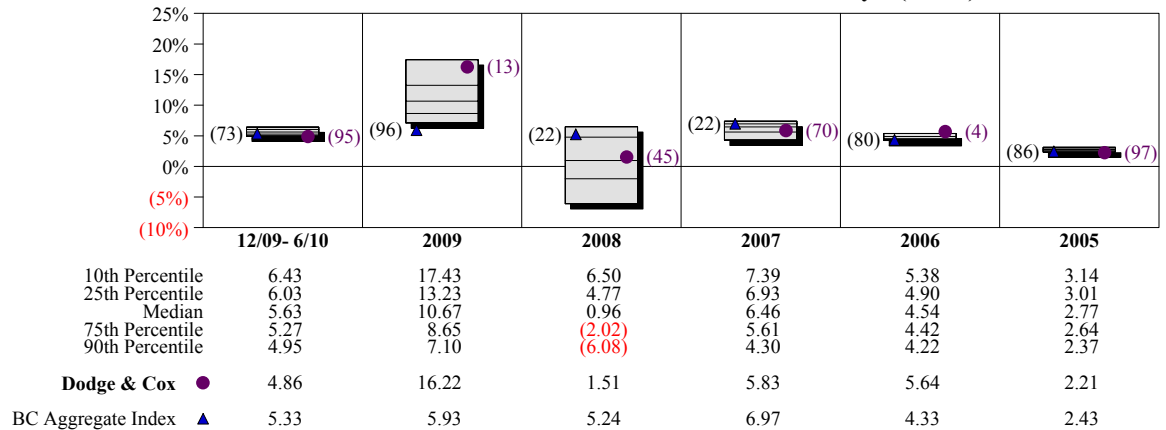


Dodge & Cox Performance

Performance vs CAI Core Bond Fixed-Inc Style (Gross)



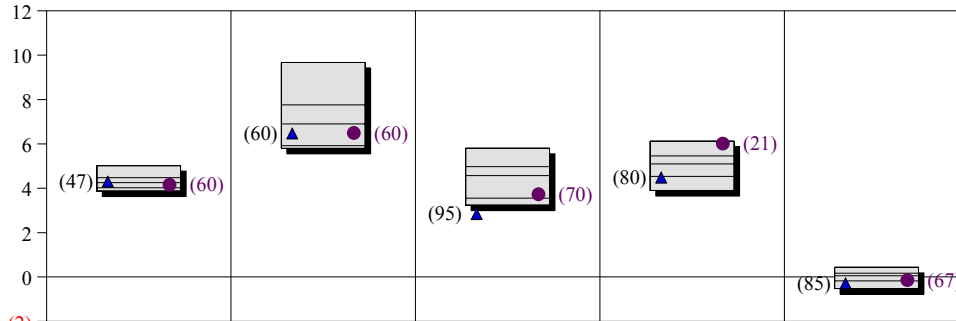
Performance vs CAI Core Bond Fixed-Inc Style (Gross)





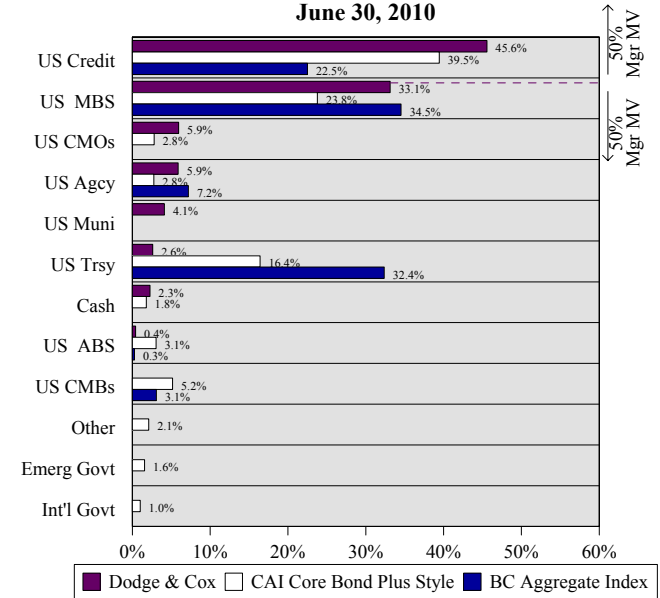
Dodge & Cox Bond Characteristics

**Fixed-Income Portfolio Characteristics
Rankings Against CAI Core Bond Plus Style
as of June 30, 2010**



	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
10th Percentile	5.02	9.68	5.80	6.12	0.43
25th Percentile	4.48	7.76	4.97	5.46	0.17
Median	4.26	6.90	4.57	5.10	0.05
75th Percentile	4.02	5.92	3.56	4.54	0.18
90th Percentile	3.88	5.80	3.24	3.90	0.53
Dodge & Cox ●	4.15	6.48	3.72	6.00	0.15
BC Aggregate Index ▲	4.30	6.47	2.83	4.48	0.29

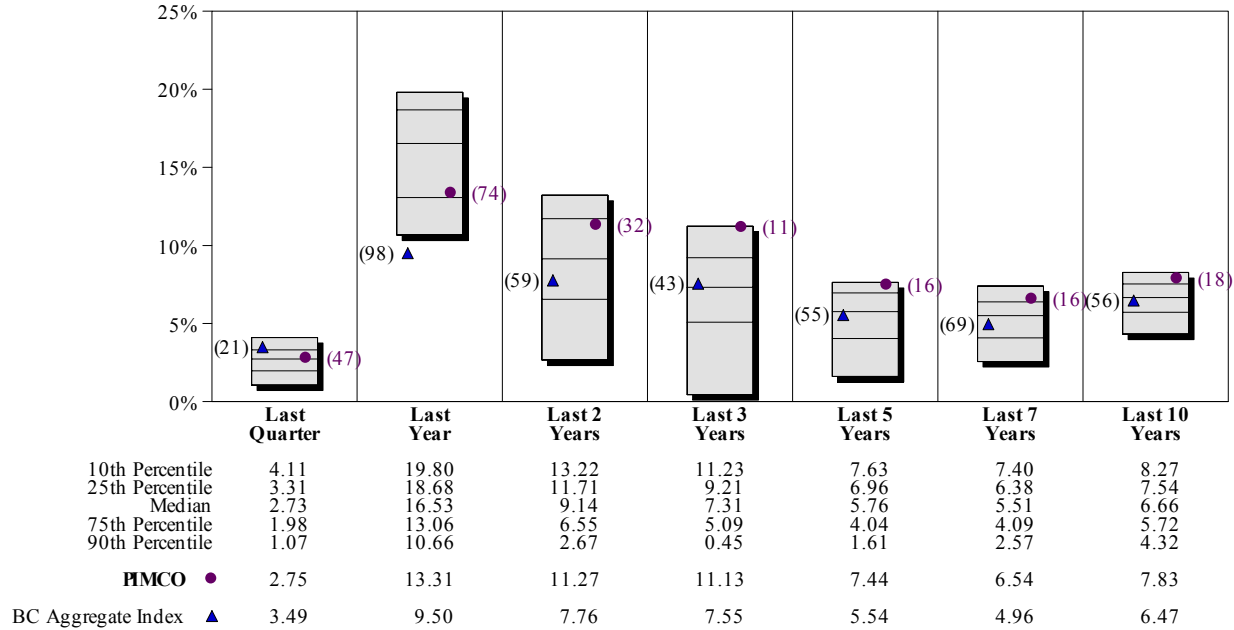
**Sector Allocation
June 30, 2010**



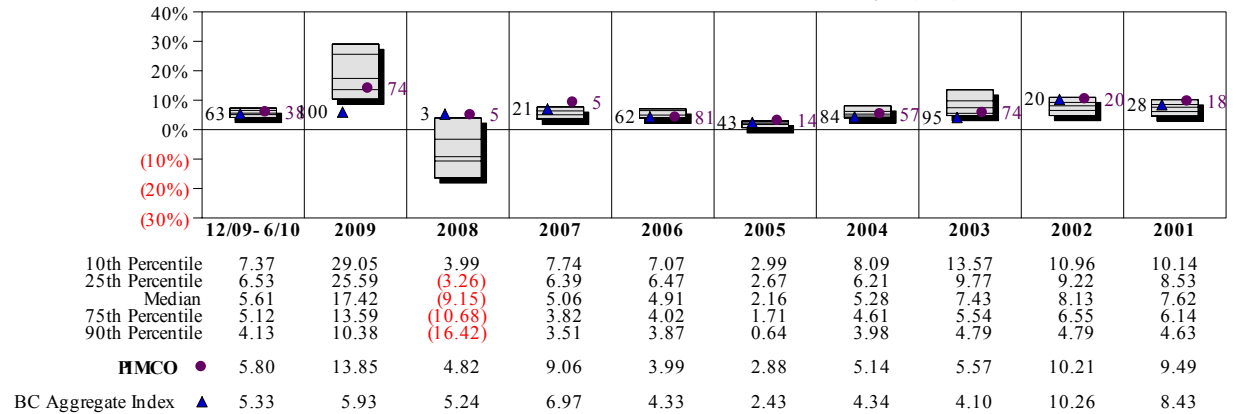


PIMCO Performance

Performance vs CAI MF - Core Plus Style (Net)



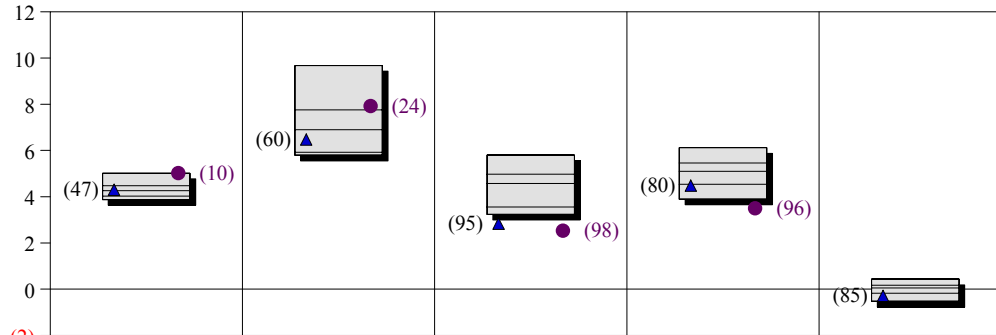
Performance vs CAI MF - Core Plus Style (Net)





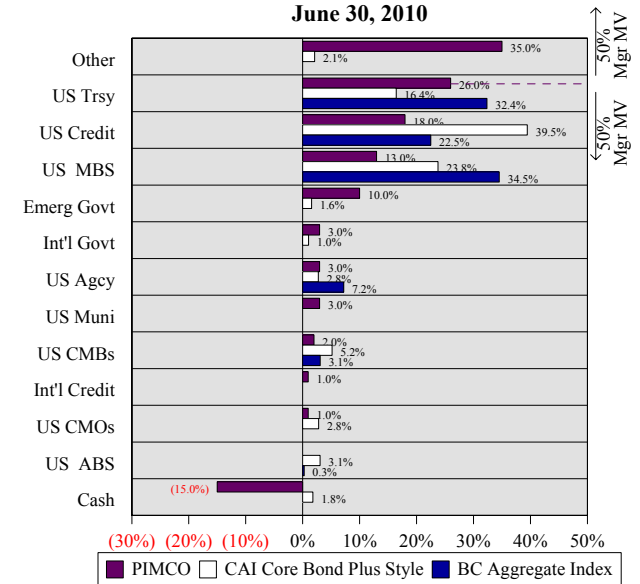
PIMCO Bond Characteristics

**Fixed-Income Portfolio Characteristics
Rankings Against CAI Core Bond Plus Style
as of June 30, 2010**



	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
10th Percentile	5.02	9.68	5.80	6.12	0.43
25th Percentile	4.48	7.76	4.97	5.46	0.17
Median	4.26	6.90	4.57	5.10	0.05
75th Percentile	4.02	5.92	3.56	4.54	(0.18)
90th Percentile	3.88	5.80	3.24	3.90	(0.53)
PIMCO	5.01	7.91	2.52	3.49	-
BC Aggregate Index	4.30	6.47	2.83	4.48	(0.29)

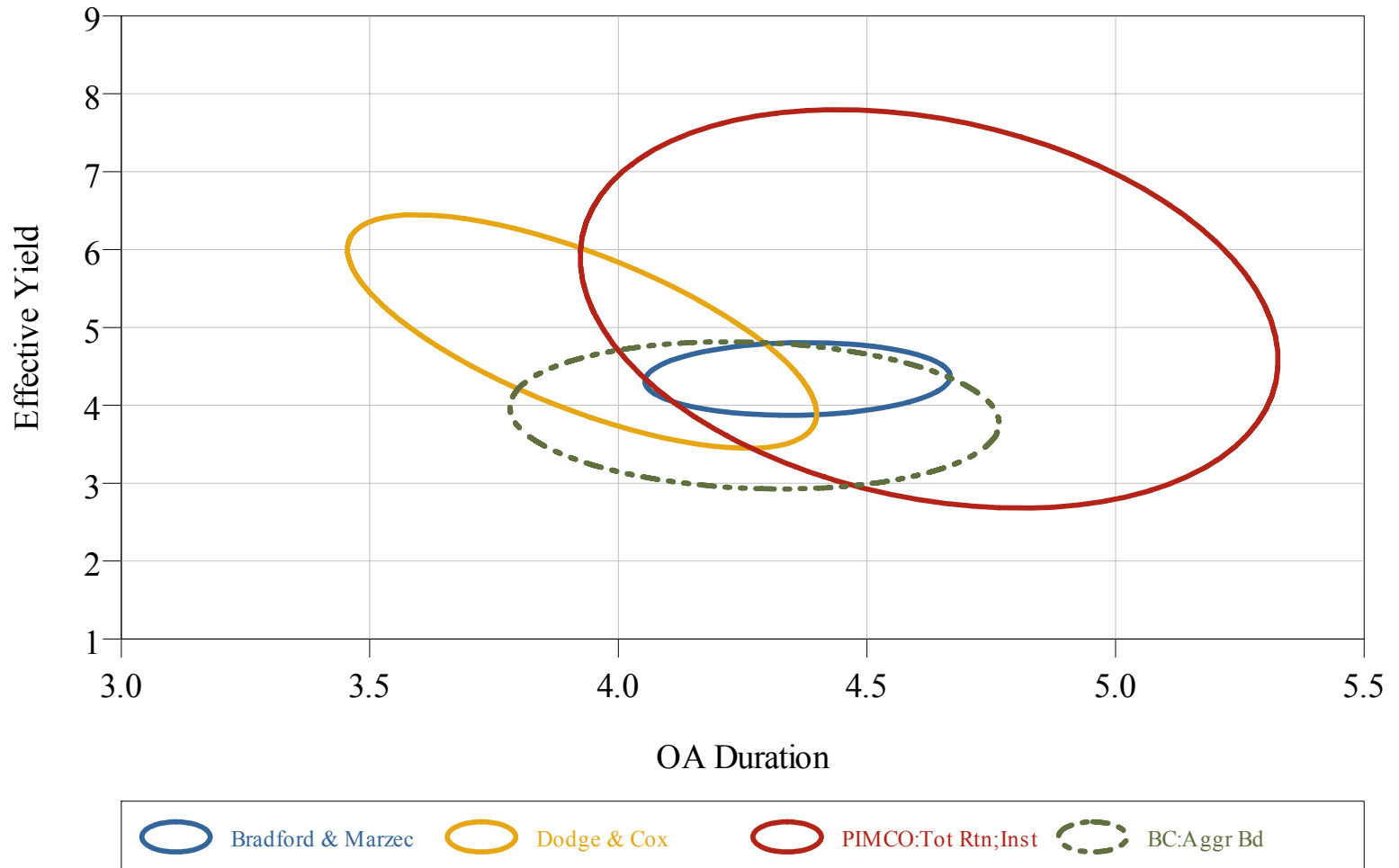
**Sector Allocation
June 30, 2010**





Interest Rate Sensitivity and Yield

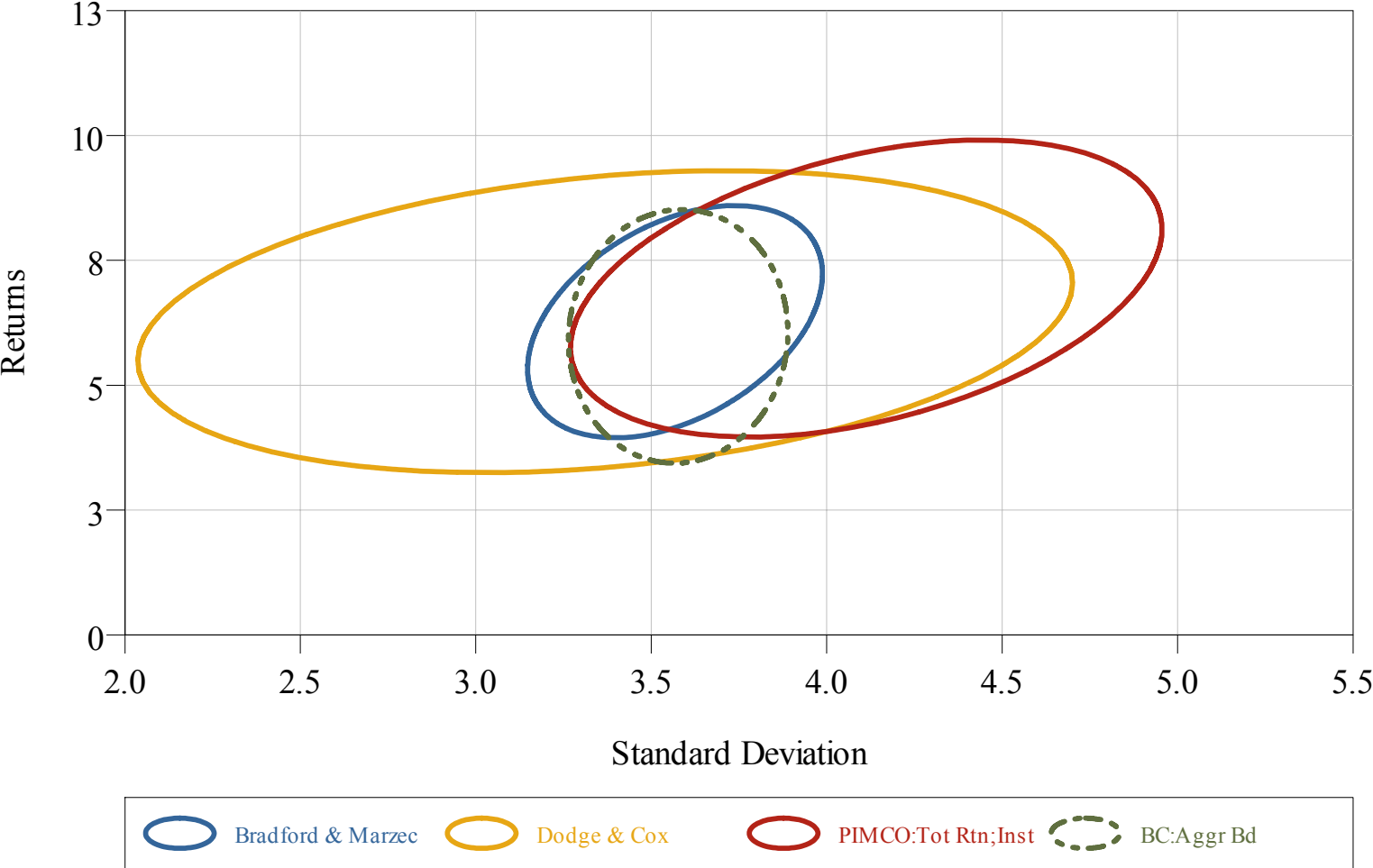
Rolling 3 Month Scatter Chart
for 2 Years Ended June 30, 2010





Return and Risk

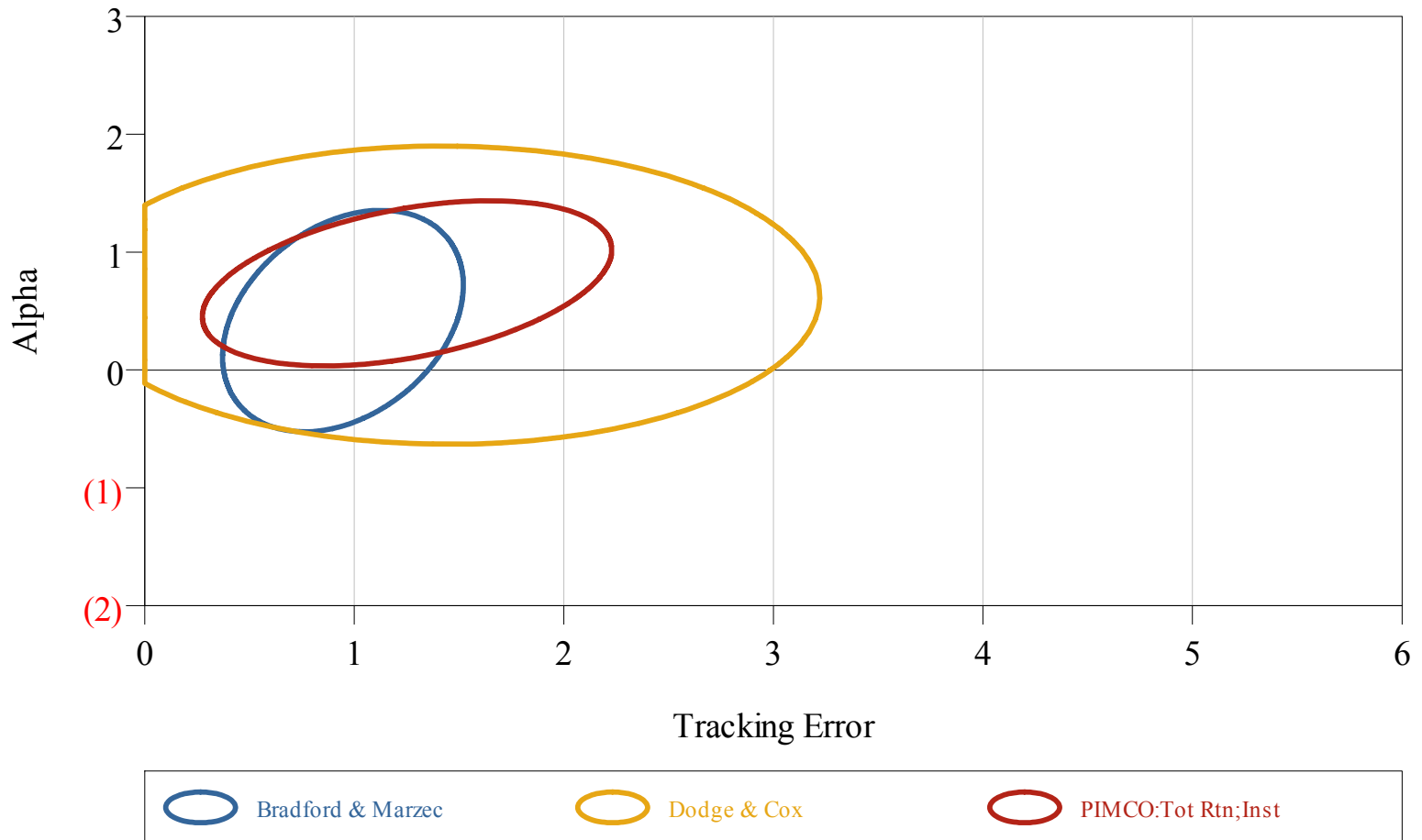
Rolling 12 Quarter Scatter Chart
for 10 Years Ended June 30, 2010





Alpha and Tracking Error

Rolling 12 Quarter Scatter Chart
for 10 Years Ended June 30, 2010
Benchmark: BC:Aggr Bd





Observations Regarding the Current Fixed Income Structure

- **The Current Structure is Diversified and has been Successful**
 - Two core managers.
 - One core plus manage.

- **There is No Passive Allocation**
 - The average core fixed income manager has not meaningfully beaten the index, net of fees.
 - Above average Core and Core Plus managers have provided returns that are competitive with the index net of fees.
 - As a group active managers tend to underperform when equity markets decline.

- **More Managers Than Necessary?**
 - It is more common to see one or two fixed income managers employed for this amount of assets.
 - Does the Bradford & Marzec portfolio provide a meaningful impact to the total portfolio at its current size?



Fixed Income Structure Alternatives

Style	Fees	Current	Alternative A	Alternative B	Alternative C
Passive		0.0%	100.0%	0.0%	0.0%
Manager A	0.100%	0.0%	100.0%	0.0%	0.0%
Core		56.7%	0.0%	50.0%	0.0%
Bradford & Marzec	0.285%	15.5%	0.0%	0.0%	0.0%
Dodge & Cox	0.243%	41.3%	0.0%	50.0%	0.0%
Core Plus		43.3%	0.0%	50.0%	100.0%
PIMCO	0.460%	43.3%	0.0%	50.0%	50.0%
Manager B	0.450%	0.0%	0.0%	0.0%	50.0%
Total		100.0%	100.0%	100.0%	100.0%
Number of Managers		3	1	2	2
Fees		0.343%	0.100%	0.352%	0.455%



Structure Alternatives

- **Current Structure**

- The current structure is a viable alternative.

- **Alternative A – Passive**

- This structure has only 1 manager which simplifies monitoring and reporting.
- A single passive manager would provide a similar broad market exposure with a reduction in fees and reporting complexity.

- **Alternative B – Style Diversification**

- This structure has 2 managers, one core and one core plus.
- All actively managed.
- Provides a balance between opportunity to add return while still controlling risk.

- **Alternative C – Return Enhancement**

- Least benchmark orientation of the alternatives.
- No core or passive exposure.
- Opportunity for highest return at the expense of the highest risk.
- Would need to fund a new core plus manager or expand an existing managers portfolio to core plus.



International Equity



Five Types of Non-U.S. Equity Strategies

- **Passive and Enhanced Passive**

- Tracking error: 0% - 2%.
- Low-cost diversification, liquidity, a vehicle for transition.
- Can be a low-tracking error anchor complement to more volatile strategies.

- **Active Core**

- Tracking error: 2% - 6%.
- Provide diversified international exposure.
- Style exposure and market capitalization close to that of the benchmark.
- Active Core managers have style biases including:
 - Value and growth
 - Market capitalization
 - Emerging markets exposure



Five Types of Non-U.S. Equity Strategies

- **Benchmark Unaware**

- Tracking Error: 6+%.
- Focus on absolute returns rather than returns relative to a benchmark.
- Can meaningfully over or under-weight major return sources.
- Allocations complement more risk-controlled investment approaches.

- **Small Cap**

- Used to provide a consistent and intentional small cap tilt within a structure.
- Dedicated allocations are relatively new and still somewhat uncommon.
- Dedicated allocation can duplicate exposure provided by active core and benchmark agnostic managers.
- Focused specialized management.

- **Emerging Markets**

- Used to provide a consistent and intentional emerging markets tilt within a structure.
- Broad consistent emerging markets exposure.
- Dedicated allocation can duplicate exposure provided by active core and benchmark agnostic managers.
- Focused specialized management.



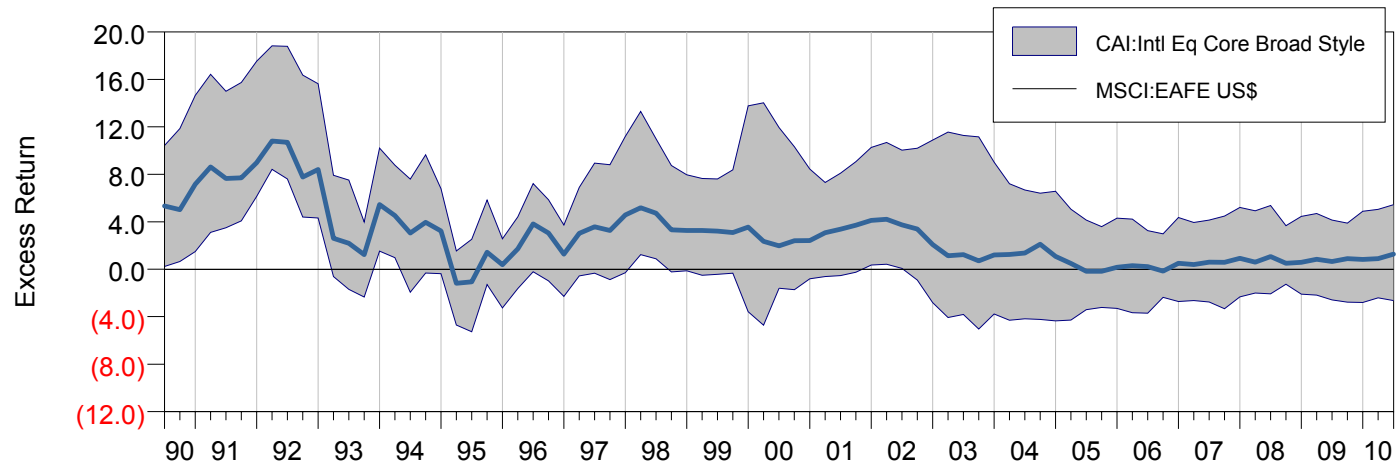
Active vs Passive – Core

Percent of Three-Year Periods where Manager Beat Benchmark by More than Hurdle - by Percentile

Hurdle	0.45%	0.50%	0.55%	0.60%	0.65%	0.70%	0.75%	0.80%	0.85%	0.90%
Median	88%	88%	84%	81%	79%	78%	76%	76%	75%	74%
45th Percentile	95%	93%	93%	93%	91%	89%	88%	88%	86%	85%
40th Percentile	98%	98%	98%	98%	96%	96%	96%	95%	93%	90%
35th Percentile	98%	98%	98%	98%	98%	98%	98%	96%	96%	96%
30th Percentile	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
25th Percentile	100%	99%	98%	98%	98%	98%	98%	98%	98%	98%

Average Annualized Excess Return - Median Manager: 2.77%

**Rolling 12 Quarter Excess Return Relative To MSCI:EAFE US\$
for 20 Years Ended June 30, 2010**





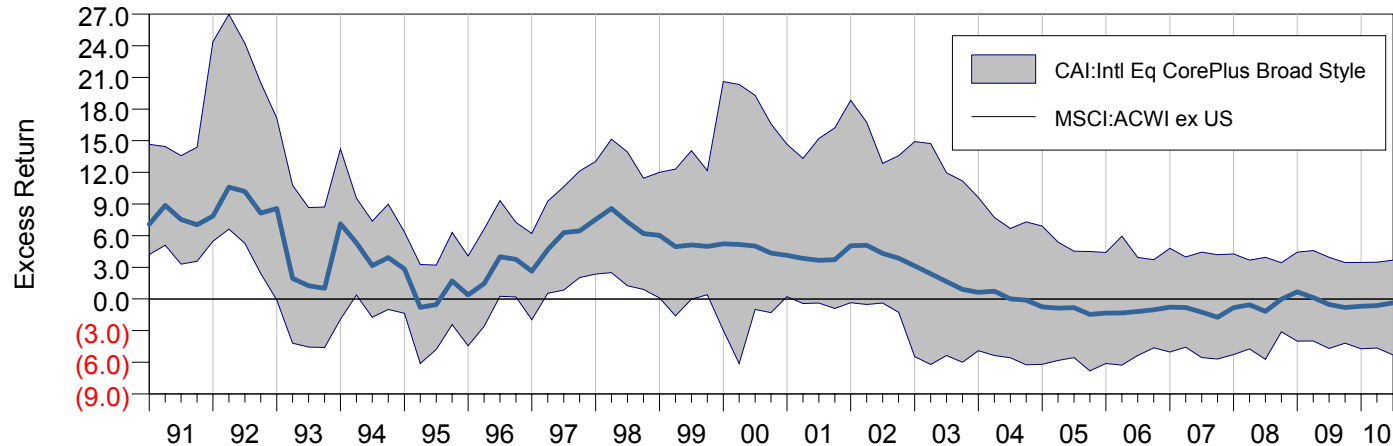
Active vs Passive – Core Plus

Percent of Three-Year Periods where Manager Beat Benchmark by More than Hurdle - by Percentile

Hurdle	0.45%	0.50%	0.55%	0.60%	0.65%	0.70%	0.75%	0.80%	0.85%	0.90%
Median	65%	65%	65%	65%	64%	63%	63%	62%	62%	62%
45th Percentile	68%	68%	68%	68%	65%	65%	65%	65%	65%	65%
40th Percentile	72%	72%	72%	72%	72%	71%	71%	69%	69%	69%
35th Percentile	85%	82%	81%	79%	78%	76%	76%	73%	73%	73%
30th Percentile	95%	95%	95%	95%	95%	95%	94%	91%	87%	83%
25th Percentile	100%	100%	100%	100%	100%	100%	99%	97%	97%	97%

Average Annualized Excess Return - Median Manager: 2.84%

Rolling 12 Quarter Excess Return Relative To MSCI:ACWI ex US for 19 1/2 Years Ended June 30, 2010





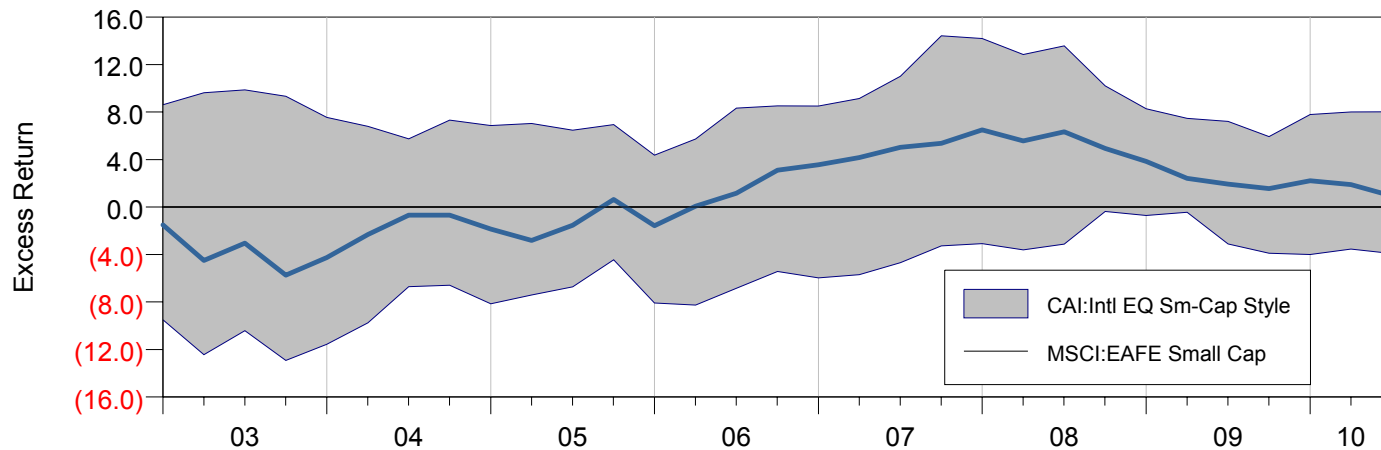
Active vs Passive – Small Cap

Percent of Three-Year Periods where Manager Beat Benchmark by More than Hurdle - by Percentile

Hurdle	0.75%	0.80%	0.85%	0.90%	0.95%	1.00%	1.05%	1.10%	1.15%	1.20%
Median	57%	57%	57%	57%	53%	53%	53%	53%	53%	50%
45th Percentile	63%	63%	60%	60%	60%	60%	60%	60%	60%	60%
40th Percentile	67%	67%	67%	63%	63%	63%	63%	63%	63%	63%
35th Percentile	77%	77%	73%	73%	73%	73%	73%	73%	73%	73%
30th Percentile	93%	93%	93%	93%	93%	93%	90%	90%	90%	90%
25th Percentile	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Average Annualized Excess Return - Median Manager: 1.08%

Rolling 12 Quarter Excess Return Relative To MSCI:EAFE Small Cap for 7 1/2 Years Ended June 30, 2010





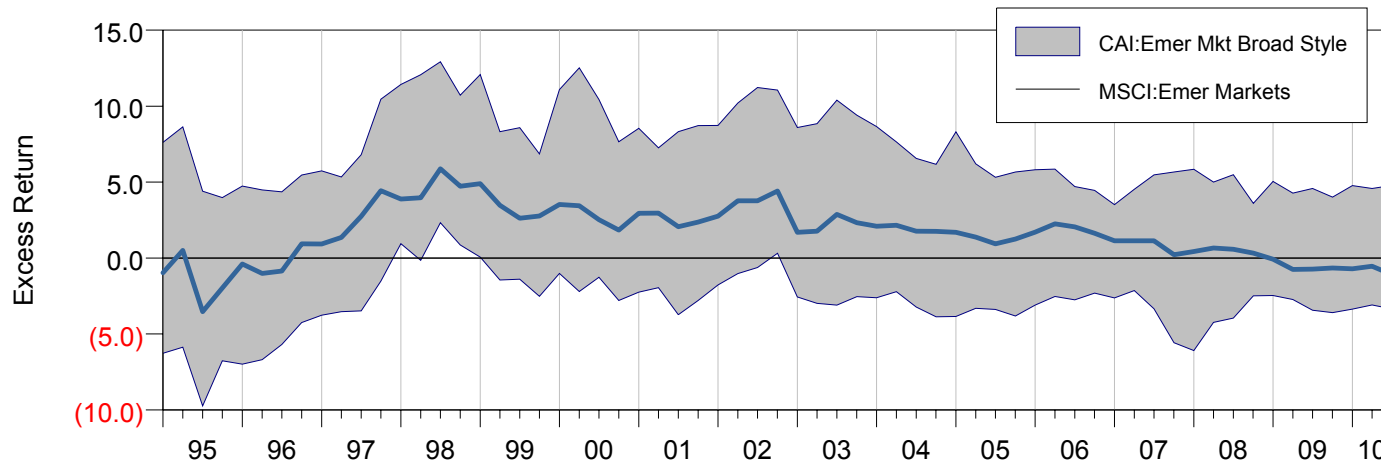
Active vs Passive – Emerging Markets

Percent of Three-Year Periods where Manager Beat Benchmark by More than Hurdle - by Percentile

Hurdle	0.70%	0.75%	0.80%	0.85%	0.90%	0.95%	1.00%	1.05%	1.10%	1.15%
Median	71%	71%	71%	71%	71%	66%	66%	66%	66%	61%
45th Percentile	79%	77%	77%	76%	76%	76%	76%	74%	73%	73%
40th Percentile	81%	81%	81%	81%	81%	79%	79%	79%	79%	79%
35th Percentile	90%	90%	90%	89%	87%	87%	82%	82%	82%	82%
30th Percentile	95%	95%	95%	95%	95%	95%	95%	95%	94%	92%
25th Percentile	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Average Annualized Excess Return - Median Manager: 1.65%

**Rolling 12 Quarter Excess Return Relative To MSCI:Emer Markets
for 15 1/2 Years Ended June 30, 2010**





Current MCERA International Equity Structure

- **MCERA International Equity Allocation Has Performed Very Well.**
 - Top decile performance relative to other public funds over cumulative periods up to five years ended Q2 2010 (excluding most recent quarter).
- **All Six Managers Have Very Similar Allocation Sizes.**
- **Existing Structure has a Growth tilt and Small Cap bias, partially due to benchmark unaware managers.**

Style	Allocation (%, International Assets)	Allocation (%, Total Assets)	Allocation (\$, mm)
Passive	0.0%	0.0%	\$0.0
Active Value	15.8%	3.0%	\$8.1
Harbor International	15.8%	3.0%	\$8.1
Active Growth	49.6%	9.6%	\$25.7
American Funds EuroPacific Growth Fund	16.7%	3.2%	\$8.6
Artisan International	14.8%	2.9%	\$7.6
Janus Overseas	18.1%	3.5%	\$9.5
Benchmark Unaware	18.3%	3.5%	\$9.6
Oakmark	18.3%	3.5%	\$9.6
Dedicated Small Cap	16.3%	3.1%	\$8.8
Columbia Acorn International	16.3%	3.1%	\$8.8
Total	100.0%	19.3%	\$52.3



Current MCERA International Equity Structure

- **Columbia Acorn**
 - Small to mid capitalization
 - Modest growth orientation (growth at a reasonable price, “GARP”)

- **American Funds EuroPacific Growth Fund**
 - Large capitalization
 - Growth style

- **Artisan**
 - Large capitalization
 - Growth style

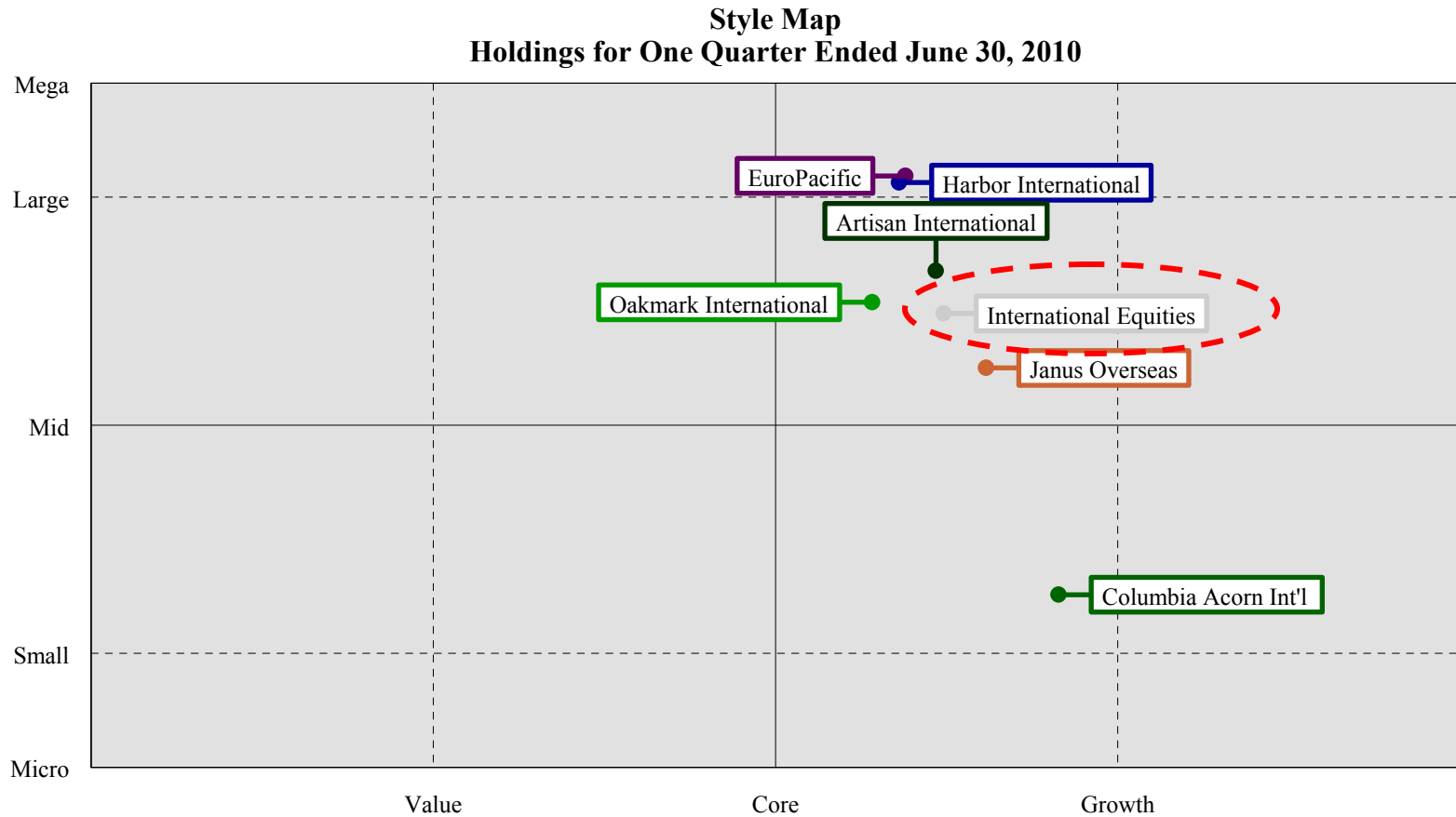
- **Harbor**
 - Large capitalization
 - Value style

- **Janus**
 - Large capitalization
 - Growth style

- **Oakmark**
 - Large capitalization with some small and mid cap exposures
 - Benchmark Unaware and concentrated (30-60 stocks)
 - Value philosophy but inconsistent style plotting



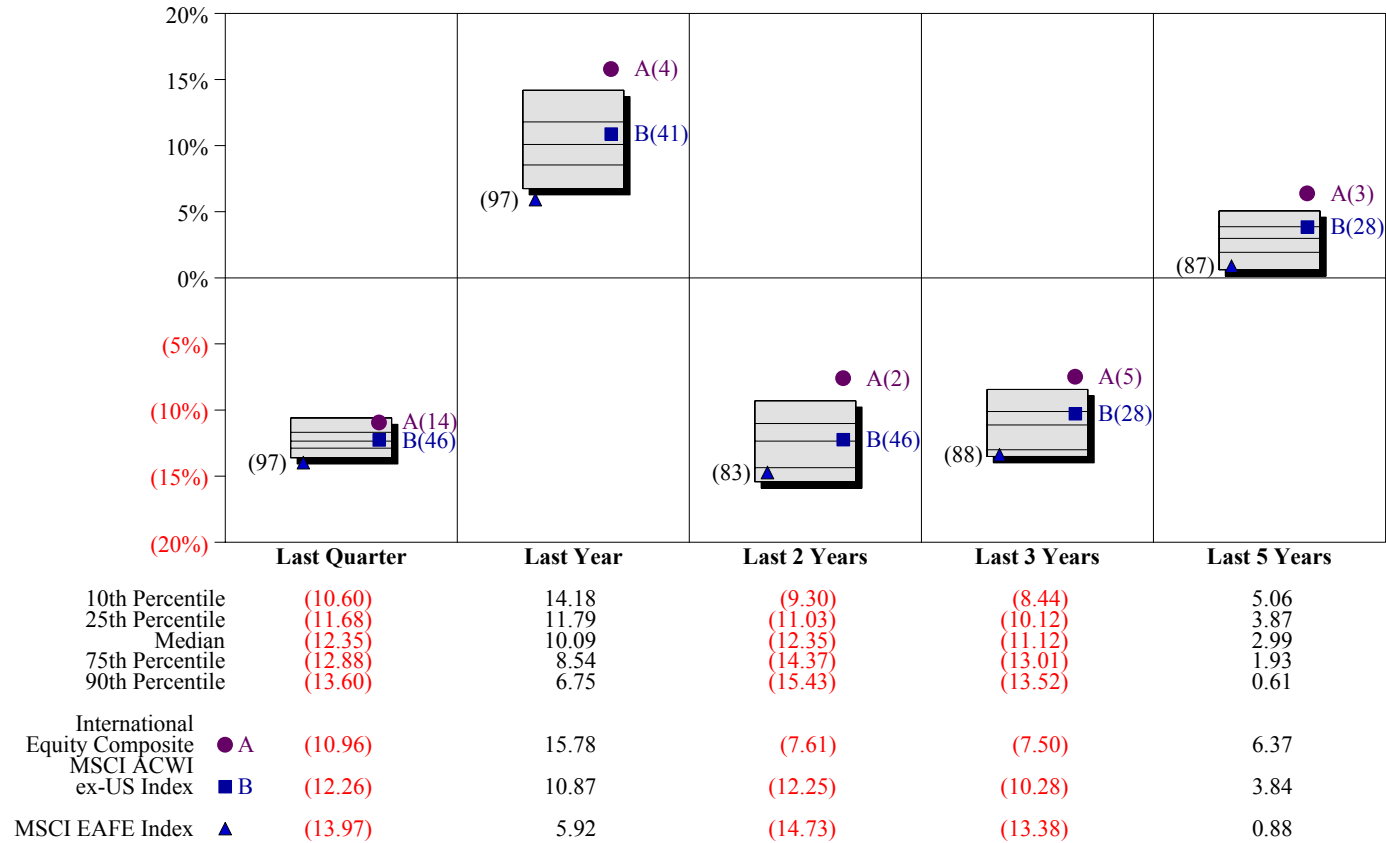
International Equity Style Map





International Equity Composite Performance

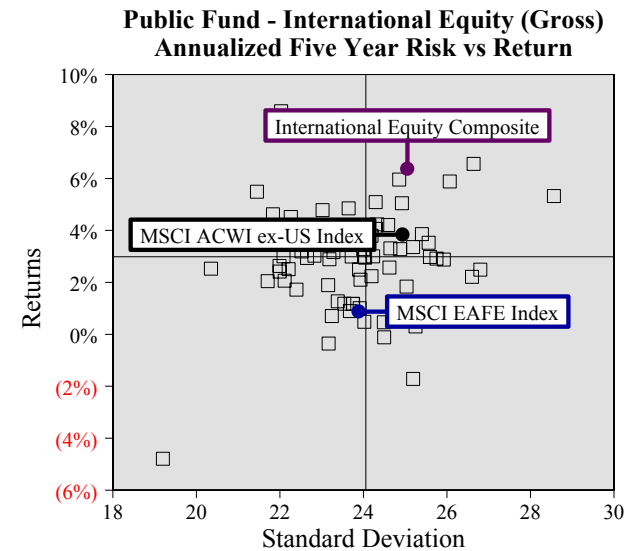
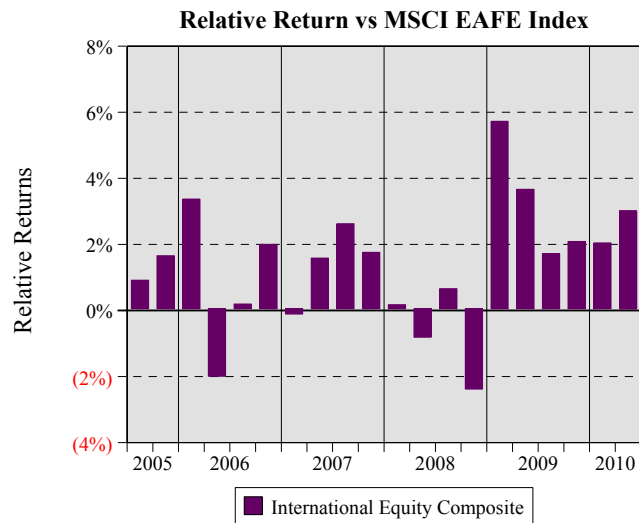
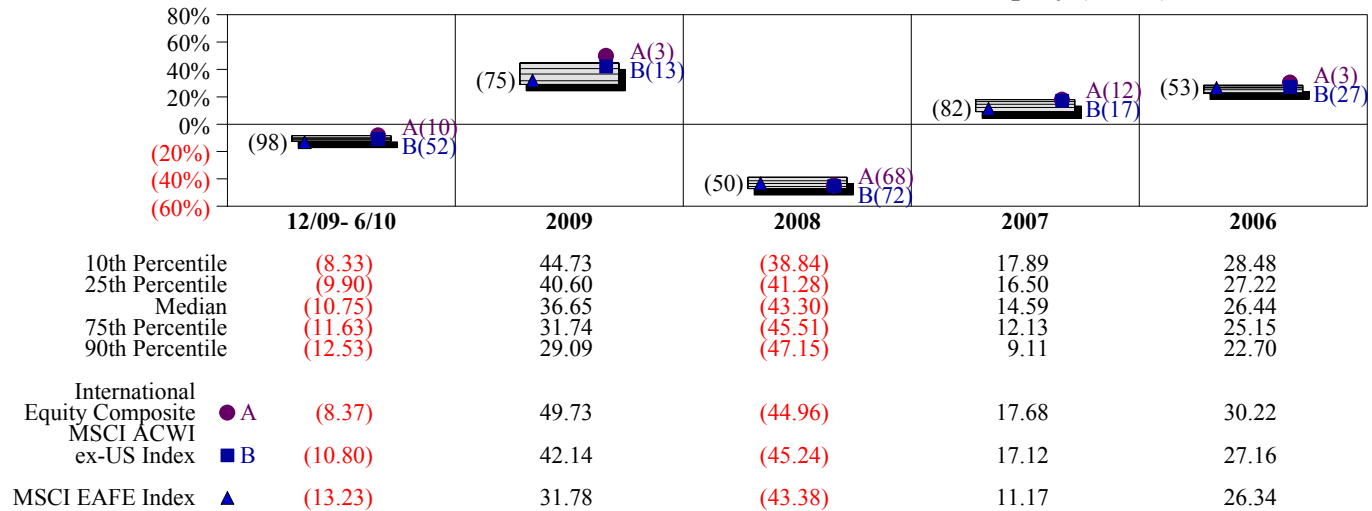
Performance vs Public Fund - International Equity (Gross)





International Equity Composite Performance

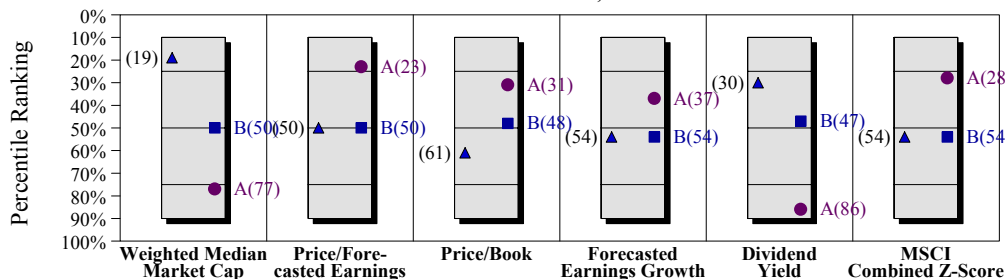
Performance vs Public Fund - International Equity (Gross)





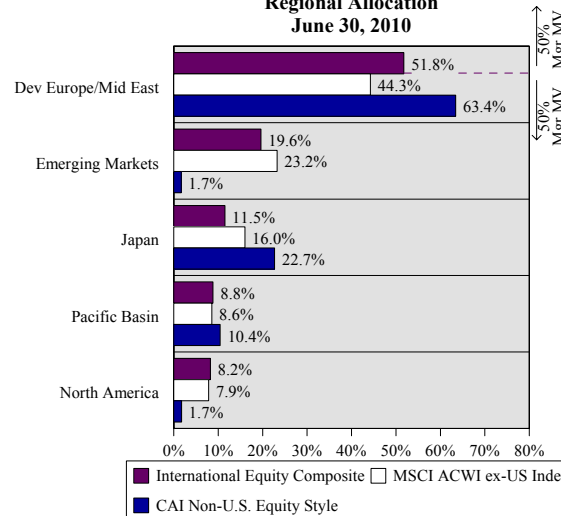
International Equity Composite Characteristics

**Portfolio Characteristics Percentile Rankings
Rankings Against CAI Non-U.S. Equity Style
as of June 30, 2010**

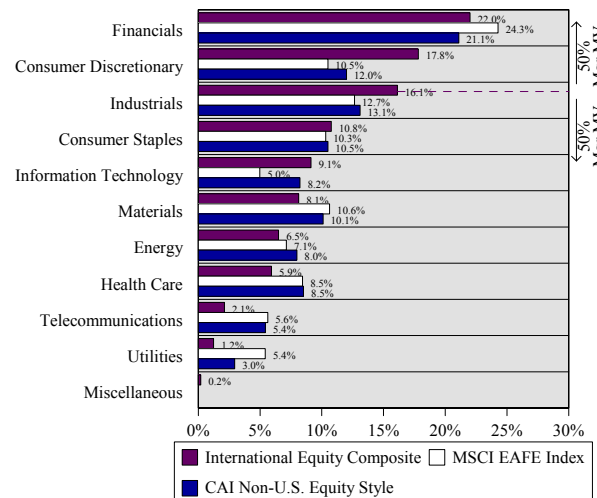


	Weighted Median Market Cap	Price/Forecasted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	34.20	12.68	2.04	18.45	3.78	0.55
25th Percentile	27.45	12.00	1.79	16.64	3.39	0.35
Median	23.68	11.01	1.47	15.00	2.94	0.05
75th Percentile	17.76	10.35	1.31	13.31	2.56	(0.19)
90th Percentile	11.36	9.88	1.15	11.40	2.28	(0.33)
International Equity Composite	● A 17.07	12.15	1.70	16.02	2.36	0.34
MSCI ACWI ex-US Index	■ B 23.76	11.04	1.50	14.80	3.01	(0.01)
MSCI EAFE Index	▲ 28.70	11.01	1.38	14.61	3.31	(0.01)

**Regional Allocation
June 30, 2010**



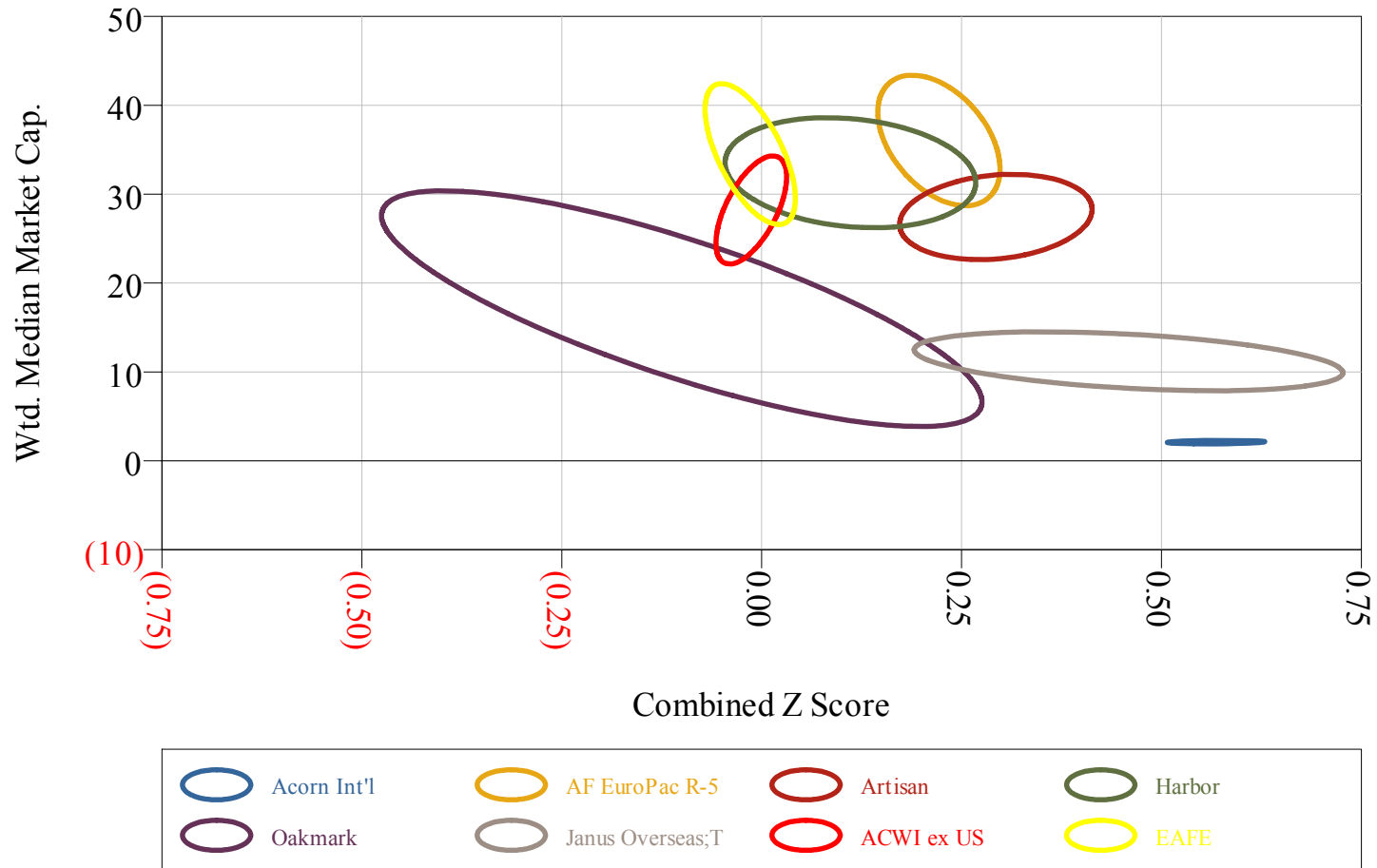
**Sector Allocation
June 30, 2010**





Style and Capitalization

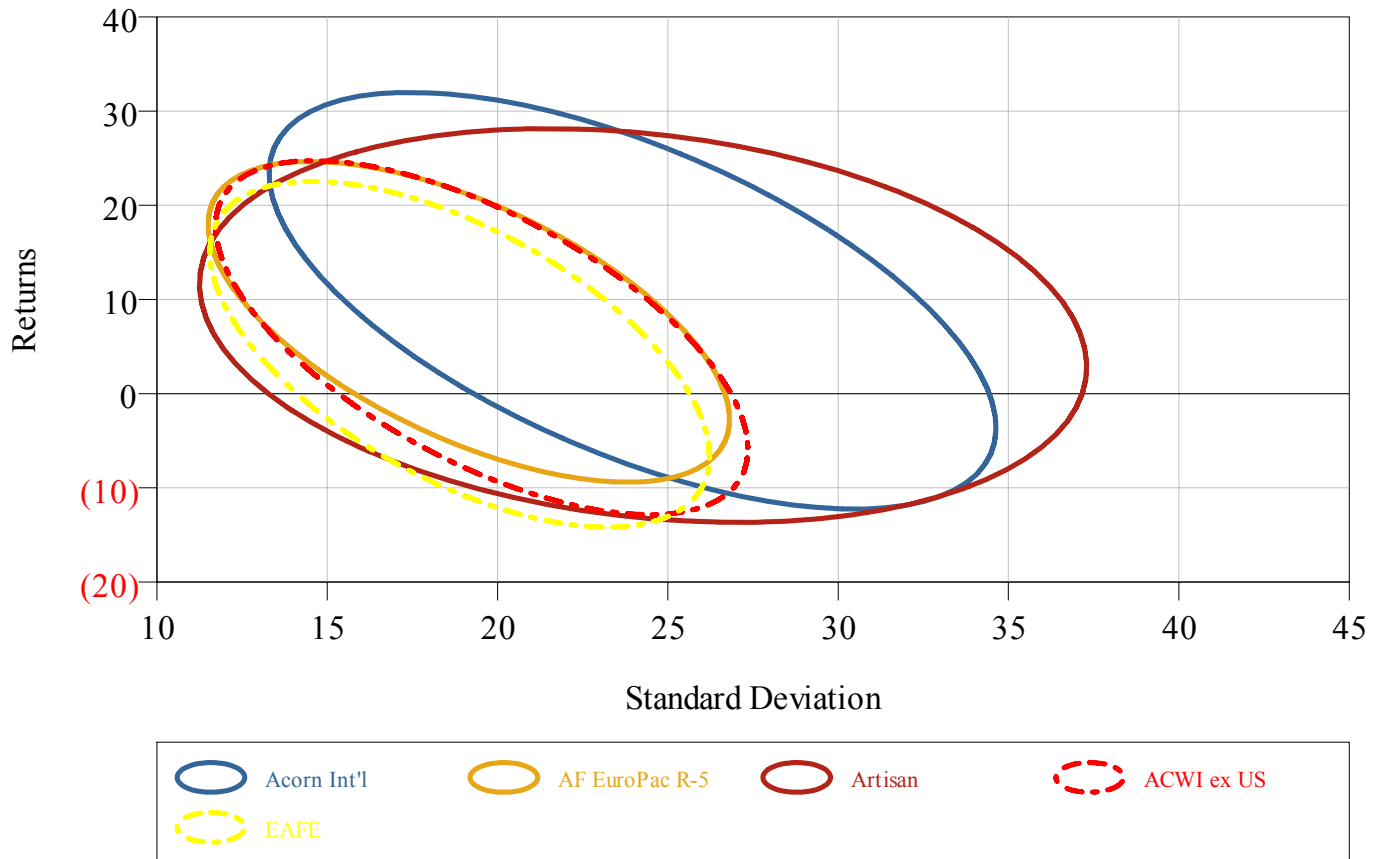
Rolling 36 Month Scatter Chart
for 3 1/2 Years Ended June 30, 2010





Return and Risk

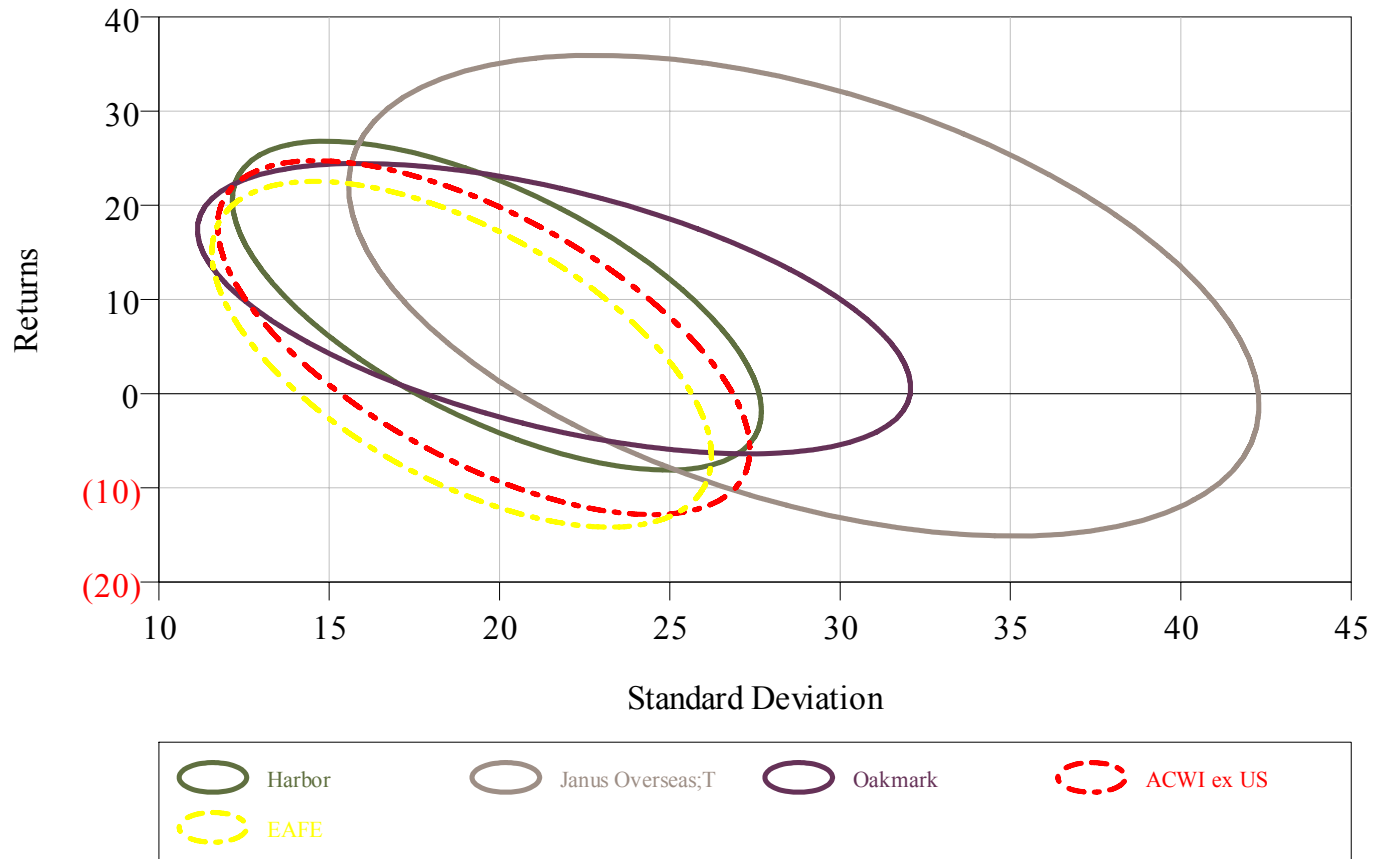
Rolling 12 Quarter Scatter Chart
for 10 Years Ended June 30, 2010





Return and Risk

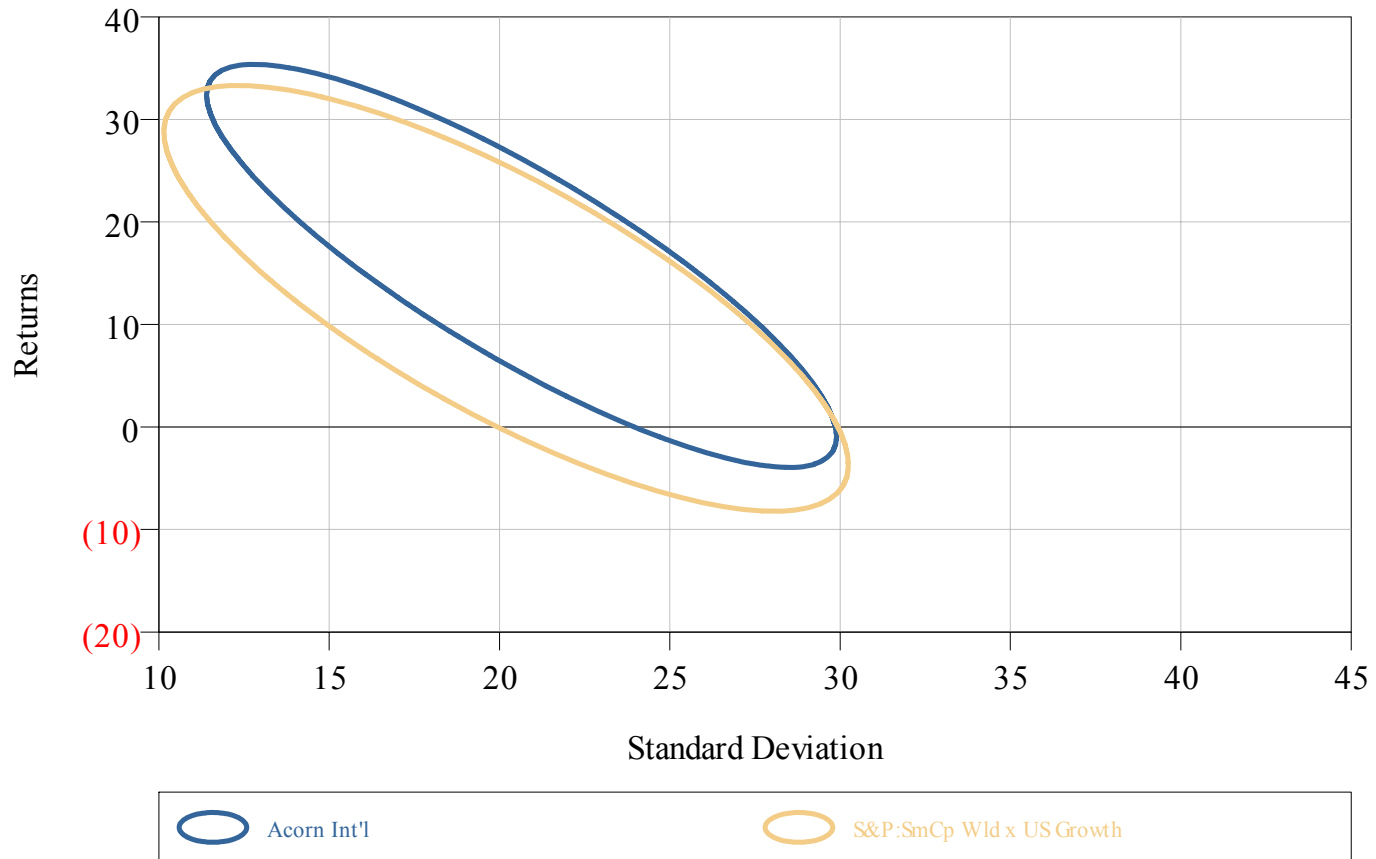
Rolling 12 Quarter Scatter Chart
for 10 Years Ended June 30, 2010





Return and Risk

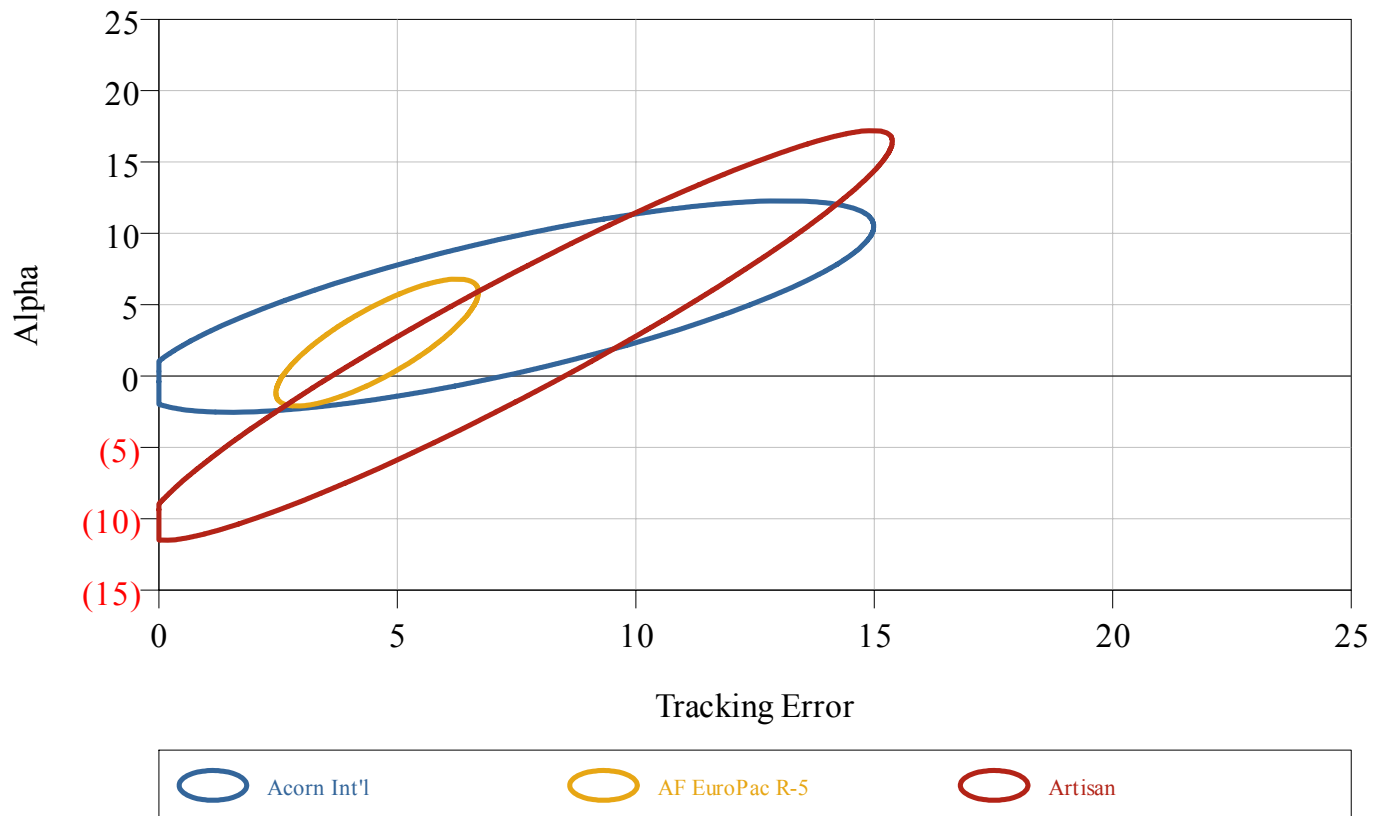
Rolling 12 Quarter Scatter Chart
for 6 1/2 Years Ended June 30, 2010





Alpha and Tracking Error

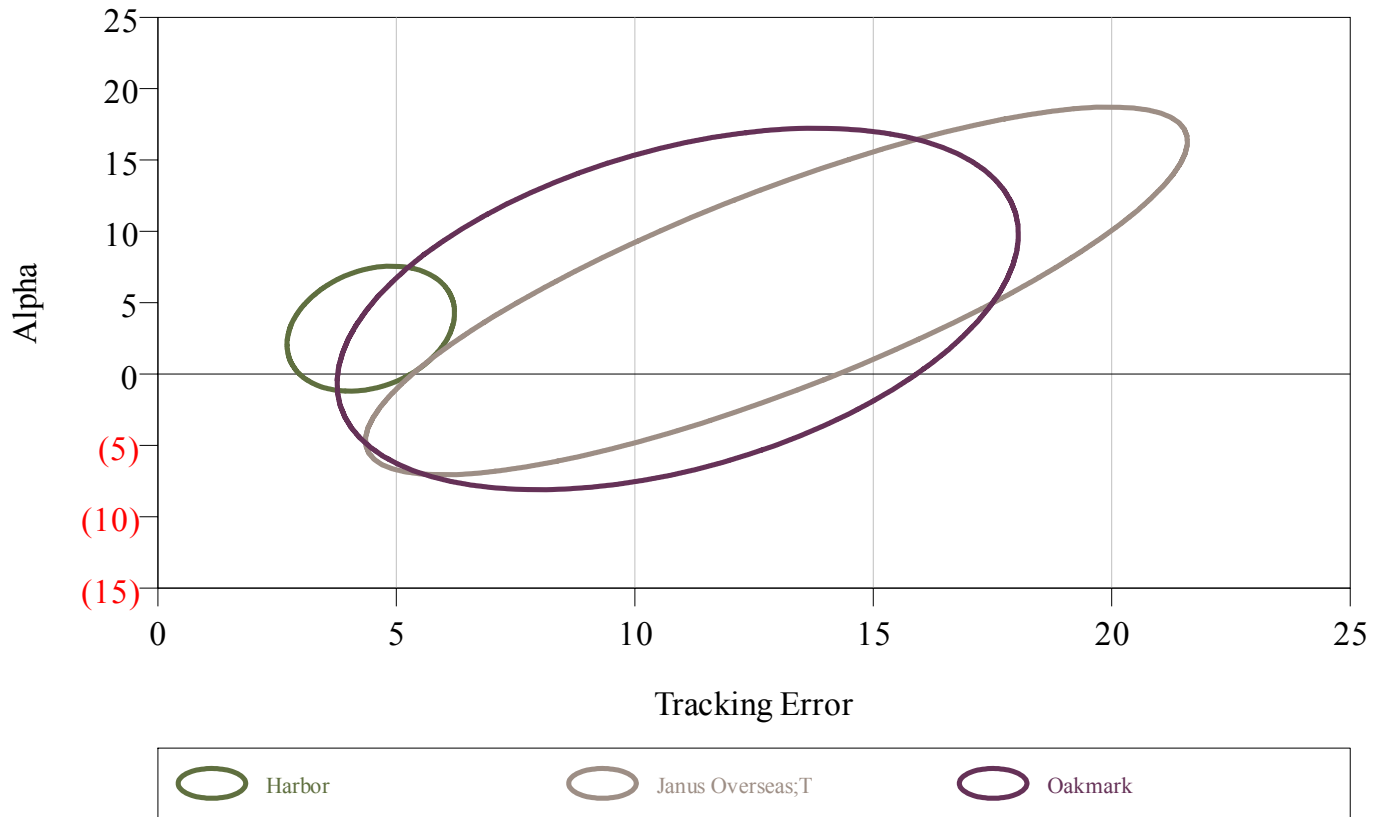
Rolling 12 Quarter Scatter Chart
for 10 Years Ended June 30, 2010
Benchmark: ACWI ex US





Alpha and Tracking Error

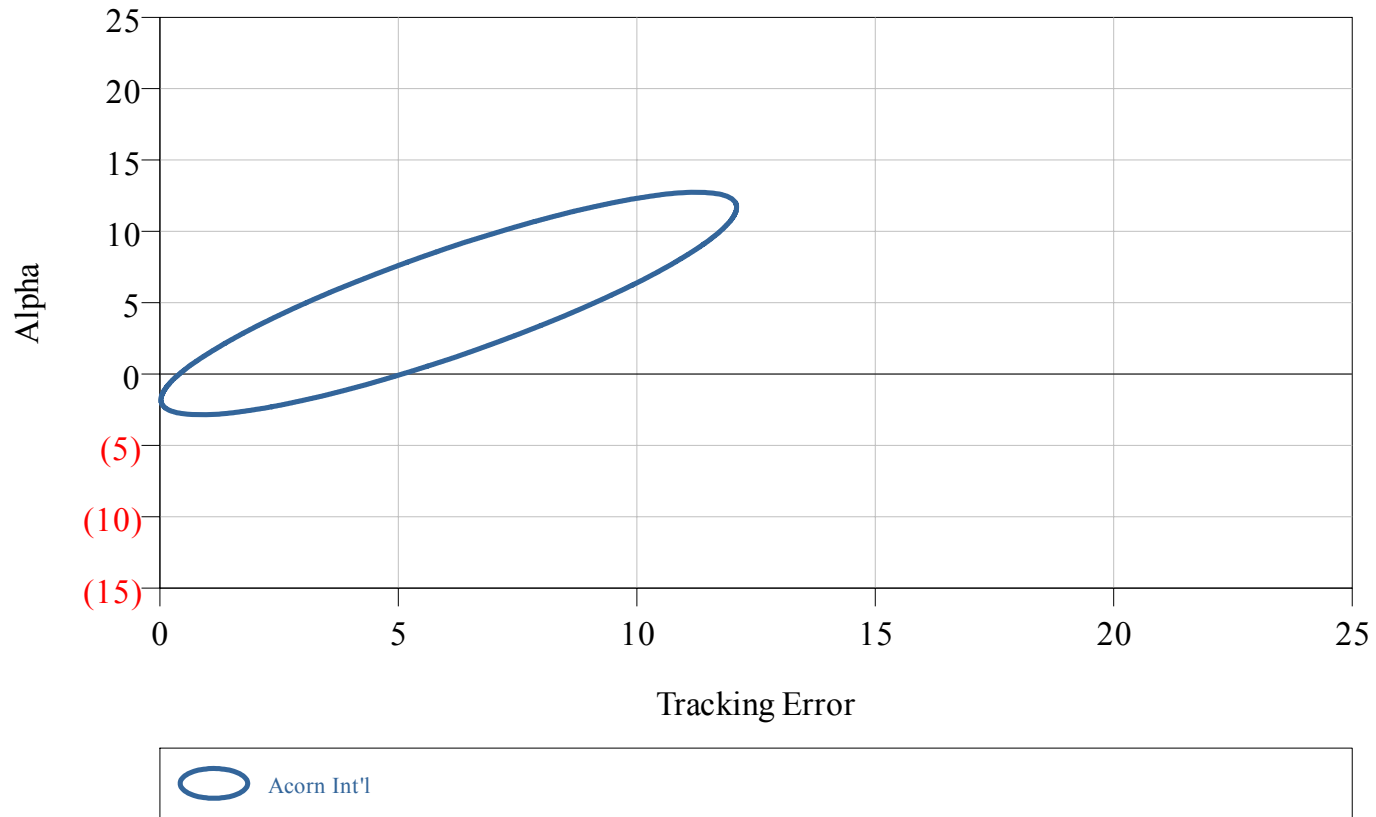
Rolling 12 Quarter Scatter Chart
for 10 Years Ended June 30, 2010
Benchmark: ACWI ex US





Alpha and Tracking Error

Rolling 12 Quarter Scatter Chart
for 10 Years Ended June 30, 2010
Benchmark: S&P:SmCp Wld x US Growth





Observations Regarding the Current International Equity Structure

- **The Current Structure is Diversified by number of managers**
 - Core
 - Growth
 - Benchmark unaware
 - Active small cap

- **No Consistent Exposure to Value**
 - Value managers are benchmark unaware and have shifted towards growth.

- **Large Number of Managers for Limited Mandates**
 - Smaller numbers of managers are easier to monitor and show higher conviction.
 - Larger allocations reduce separate account fees but not mutual fund fees.
 - Consider not replacing managers who are terminated in the future.



Evaluation of the Current Structure

- **Could Use Commingled Funds or Separate Accounts**
 - Mutual funds are currently used.
 - Commingled funds or separate accounts could reduce management fees assuming MCERA allocations exceed the account minimums.
 - However, custody costs and administrative difficulties will likely offset the attractive fees offered by separate accounts.

- **There is No Passive Allocation**
 - Historically the average active manager has been able to add value within international equity.
 - Passive can be used to minimize transactions costs during rebalancing and manager transitions when commingled funds or separate accounts are used.
 - While minimizing fees, passive also limits the potential active management premium.



Structure Alternatives

Style	Fee	EM Weight	Current	Alternative A	Alternative B	Alternative C	Alternative D
Passive			0.0%	70.0%	40.0%	0.0%	0.0%
Manager A	0.100%	0.0%	0.0%	70.0%	40.0%	0.0%	0.0%
Active Value			15.8%	0.0%	30.0%	50.0%	37.5%
Harbor International	0.810%	17.5%	15.8%	0.0%	30.0%	25.0%	18.8%
Manager B	0.900%	23.0%	0.0%	0.0%	0.0%	25.0%	18.8%
Active Growth			49.6%	0.0%	30.0%	50.0%	37.5%
American Funds EuroPacific Growth Fund	0.510%	26.6%	16.7%	0.0%	30.0%	16.7%	18.8%
Artisan International	1.220%	16.9%	14.8%	0.0%	0.0%	16.7%	0.0%
Janus Overseas	0.690%	36.5%	18.1%	0.0%	0.0%	16.7%	18.8%
Benchmark Unaware			18.3%	0.0%	0.0%	0.0%	15.0%
Oakmark	1.100%	8.3%	18.3%	0.0%	0.0%	0.0%	15.0%
Dedicated Small Cap			16.3%	10.0%	0.0%	0.0%	10.0%
Columbia Acorn International	0.960%	20.2%	16.3%	5.0%	0.0%	0.0%	0.0%
Manager D (Small Cap Value or Core)	1.200%	10.0%	0.0%	5.0%	0.0%	0.0%	10.0%
Dedicated Emerging Markets			0.0%	20.0%	0.0%	0.0%	0.0%
Manager E	1.250%	100.0%	0.0%	20.0%	0.0%	0.0%	0.0%
Total			100.0%	100.0%	100.0%	100.0%	100.0%
Number of Managers			6	4	3	5	6
Estimated Average Expense Ratio			0.876%	0.428%	0.436%	0.831%	0.831%
Average Emerging Markets Equity Weight			21.1%	21.5%	13.2%	23.5%	21.7%



Structure Alternatives

■ **Current Structure**

- The current structure is viable if MCERA is willing to accept a small cap and growth tilt, as well as the number of current managers.

■ **Alternative A – Core Satellite**

- Add a passive allocation to the EAFE index to get broad developed markets exposure and reduce management fees.
- Spend Active Risk only in Small Cap and Emerging Markets.

■ **Alternative B – Simplify**

- Add a passive allocation to the EAFE index to get broad developed markets exposure and reduce management fees.
- Maintain two core oriented style managers.

■ **Alternative C – Style Diversification**

- All actively managed
- Complement growth managers with value managers
- More benchmark oriented with the absence of a benchmark agnostic manager

■ **Alternative D – Return Enhancement**

- Maintain active management focus.
- Both dedicated core managers and small cap managers.
- Add a Value manager to off-set growth tilt.
- Consider reducing number of managers by eliminating one growth fund.
- Consider adding a small cap value manager or replacing Acorn with a small cap core fund.
 - Or accept small cap growth tilt.