

California Public Employees' Retirement System Performance Review – March 31, 2013

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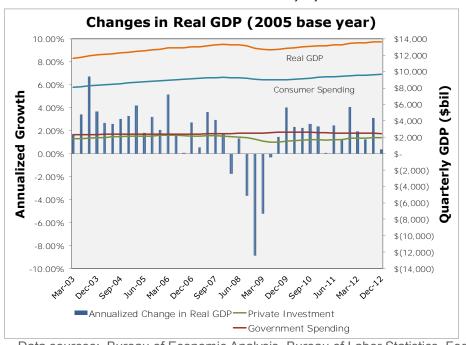
May 2013

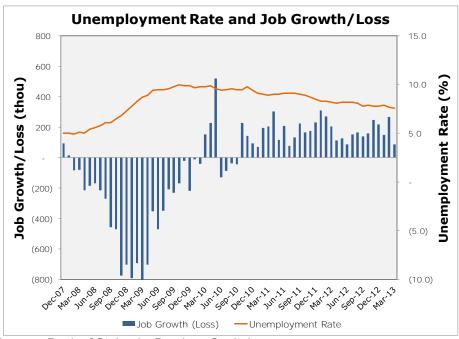
Economic Review



March 31, 2013		Key Economic Indicators							
CPI (all items)	Monthly C	hange	Cumulativ	e Change					
Seasonally adjusted	Mar-13	-0.2	3-Month	0.5					
	Feb-13	0.7	12-Month	1.5					
	Jan-13	0.0	10-Yr Annual	2.4					
Breakeven Inflation	10-Year	2.5							
Consumer Sentiment	Mar-13	78.6							
Unv. of Michigan Survey	Feb-13	77.6							
	1-Yr Ago	76.2	10-Yr Avg	78.9					
Manufacturing	Mar-13	51.3	Change in Manufac	turing Sector					
Inst. for Supply Mgmt	Feb-13	54.2	>50	Expansion					
Purchasing Mngrs' ldx	1-Yr Avg	51.7	<50	Contraction					

Note: Seasonally adjusted CPI data is utilized to better reflect short-term pricing activity.





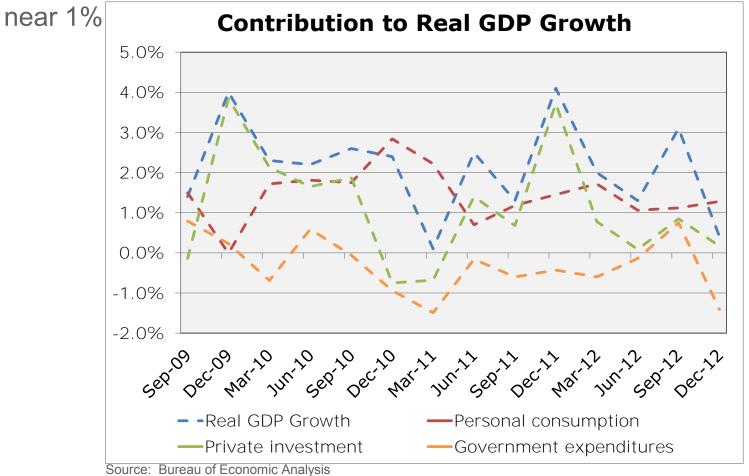
Data sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Bank of St. Louis, Barclays Capital

Drivers of Economic Growth



- Real GDP growth has been moderate 1.8% in 2011, 2.2% in 2012
- Private investment (largely non-residential construction, technology spending and other equipment) led the way early

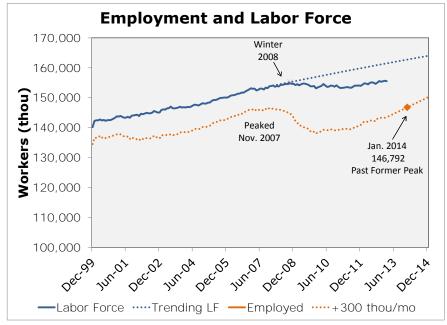
Contribution from personal consumption (70% of GDP) has been stable

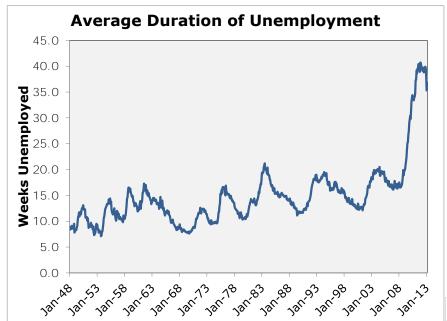


Employment Constraints



- High unemployment continues to restrain growth
 - Almost no growth in the labor force
 - Currently 3 million jobs below previous peak
- Average unemployment duration remains elevated
- Long-term average for the time period included to the right is 14.9 weeks

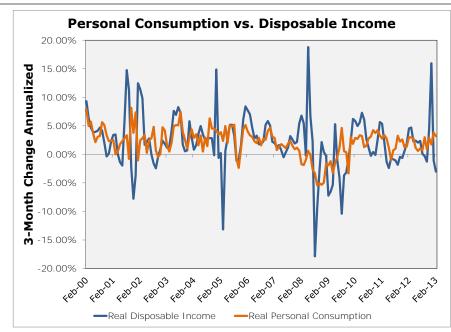




Spending Habits



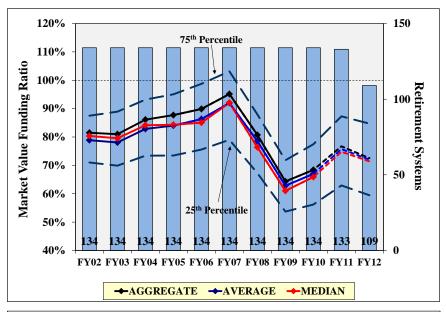
- Income jumped in December due to increased dividend and bonus payments
- Entering 2013, income then fell sharply due to increased taxation
- Although a decline in disposable income can lead to a decline in spending, the magnitude is typically not the same
- Spending habits changed little with last year's increase in disposable income
- Savings rate fell to accommodate increased spending

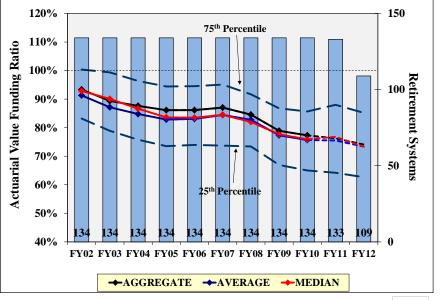






- 109 state retirement systems reported actuarial values on or after June 30, 2012
- Deterioration in funding ratio fueled by global stock market volatility in the 12 months ending June 30
- Funding ratios based on actuarial values also fell for 2012
- Actuarial ratios tend to exhibit moderated patterns of change, due to the smoothing of actuarial values

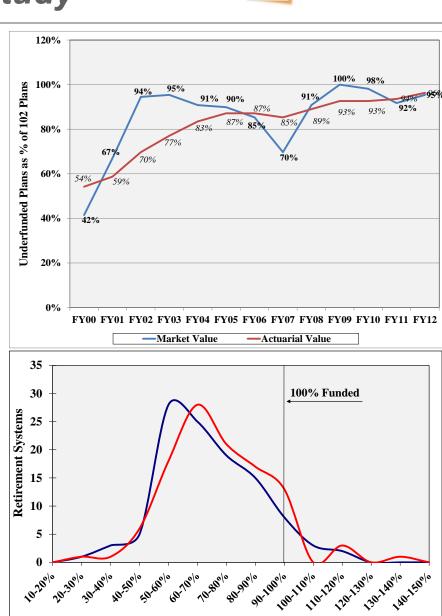






 Of the 109 plans with 2012 data, 95% of them were underfunded based on market values

 On a market value basis, a majority of the 109 plans are less than or equal to 80% funded



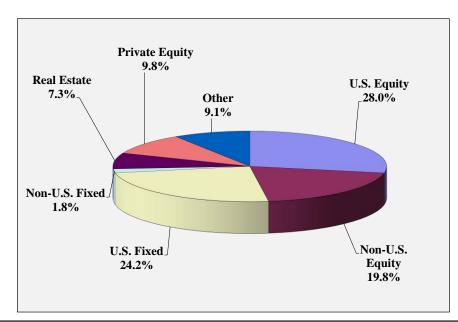
-Market Value

-Actuarial Value



U.S. Equity plus Non-U.S.
 Equity equals 48% of assets

 Average allocation to Non-U.S. Equities has increased while allocation to U.S. Bonds has decreased



				Change in l	Exposure
Equity	<u>2002</u>	<u>2007</u>	<u>2012</u>	<u>02-12</u>	<u>07-12</u>
U.S. Equity	42.3 %	41.0 %	28.0 %	-14.3 %	-13.0 %
Non-U.S. Equity	12.9	18.2	19.8	6.9	1.6
Real Estate	4.0	5.2	7.3	3.3	2.1
Private Equity	4.2	4.6	9.8	5.6	5.2
Equity Subtotal	63.4	69.0	64.8	1.4	-4.2
Debt					
U.S. Fixed	35.2	26.4	24.2	-11.0	-2.2
Non-U.S. Fixed	1.4	0.9	1.8	0.4	0.9
Other	0.0	3.7	9.2	9.2	5.5
Debt Subtotal	36.6	31.0	35.2	-1.4	4.2
Return *	6.5	6.7	6.7	0.2	0.0
Risk *	11.0	11.5	11.2	0.2	-0.3

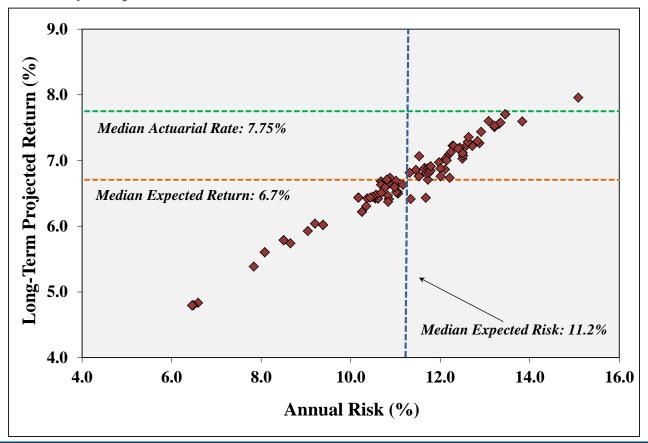
Asset Class Assumptions Update



	Т	otal Return (%)	Risk (%)
	2013	Q1	Change	2013
	ACA	2013	vs YE	ACA
Investment Categories:				
U.S. Stocks	7.75	7.50	(0.25)	17.00
Dev ex-U.S. Stocks	7.75	7.50	(0.25)	18.00
Emerging Mkt Stocks	7.75	7.50	(0.25)	26.00
Global Stocks	8.00	7.75	(0.25)	17.30
Private Markets	10.75	10.45	(0.30)	27.50
Cash Equivalents	1.55	1.50	(0.05)	1.25
Core Bonds	3.25	3.25	-	5.00
LT Core Bonds	3.10	3.50	0.40	10.00
TIPS	2.60	2.70	0.10	6.00
High Yield Bonds	5.15	5.00	(0.15)	10.00
Non-U.S. Bonds (Hdg)	2.90	2.90	-	3.50
U.S. RE Securities	5.30	5.25	(0.05)	15.00
Private Real Estate	6.05	6.00	(0.05)	12.25
Commodities	4.55	4.50	(0.05)	13.00
Real Asset Basket	6.35	6.30	(0.05)	7.75
Inflation:	2.55	2.50	(0.05)	1.75
Returns minus Inflation:				
U.S. Stocks	5.20	5.00	(0.20)	
U.S. Bonds	0.70	0.75	0.05	
Cash Equivalents	(1.00)	(1.00)	(0.00)	
Stocks minus Bonds:	4.50	4.25	(0.25)	
Bonds minus Cash:	1.70	1.75	0.05	

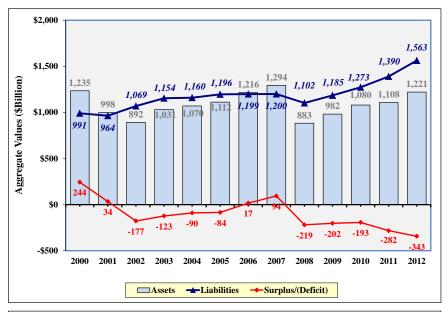


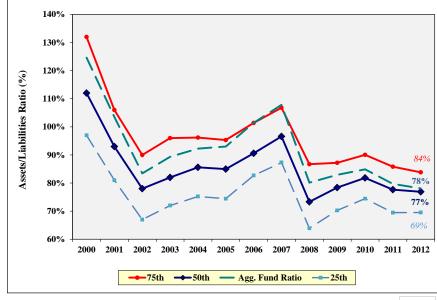
- Using Wilshire Consulting's January 2013 asset class assumptions to calculate return forecasts for the 134 plans in our study, the median expected return is 6.7% per year
- Only one plan is projected to meet or exceed the median actuarial rate of 7.75%





- Data for fiscal years 2012 and 2011 are based on S&P 500 Index constituents as of yearend 2012
- Aggregate funding ratio has slipped for the second straight year
- Pension liabilities have increased along with asset growth and increased contributions

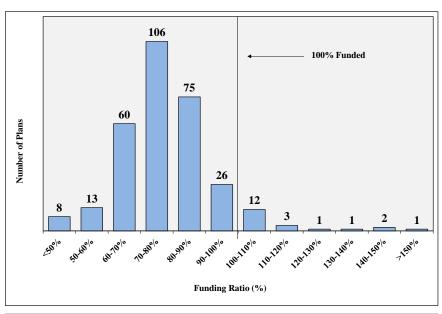


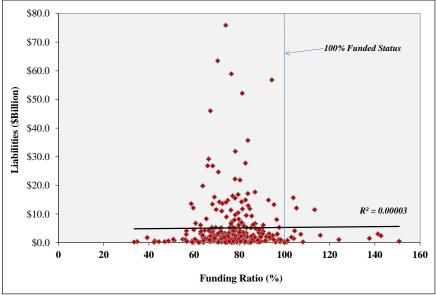




 Just 20 out of 308 corporations have pension assets that equal or exceed liabilities

 Almost no relationship between liability size and funding ratio

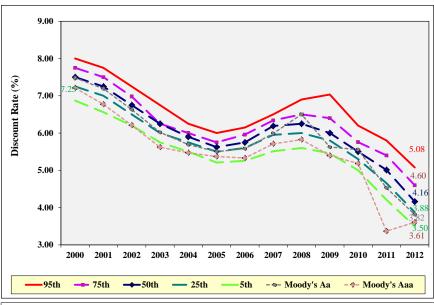


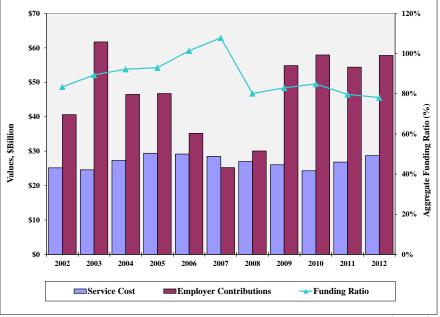




 Discount rates have been falling, generally, during the past 4 years

 Contributions have been up since 2008

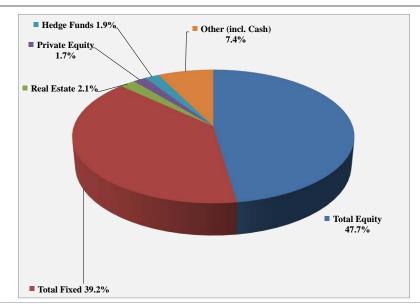






 The corporate plans in our study had an average 47.7% exposure to public markets equity (U.S. and non-U.S.)

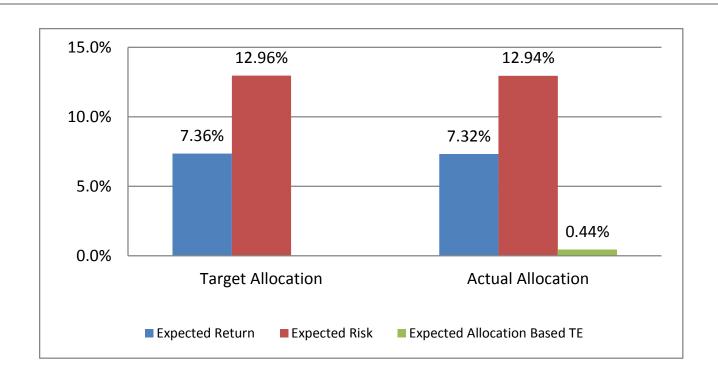
- Using Wilshire Consulting's
 January 2013 asset class
 assumptions to calculate return
 forecasts for these plans, the
 median expected return is 6.3%
 per year
- Only one plan is projected to meet or exceed the median expected return on assets of 7.75%





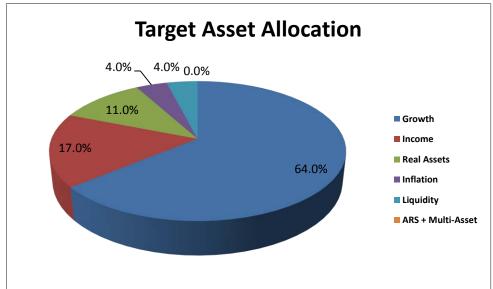
CalPERS Investments are Expected to Provide Return

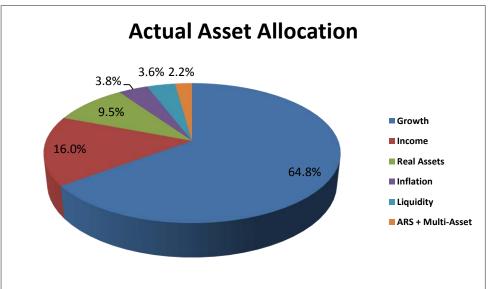


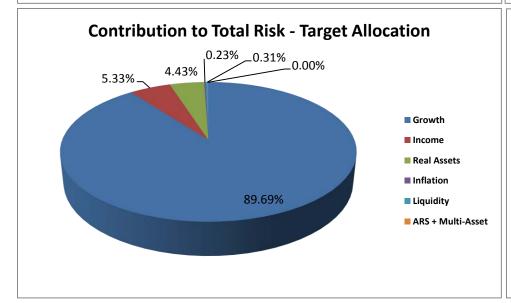


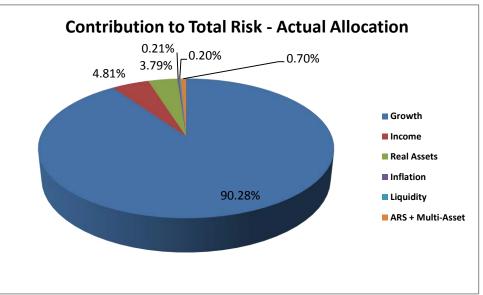
Asset and Risk Allocation





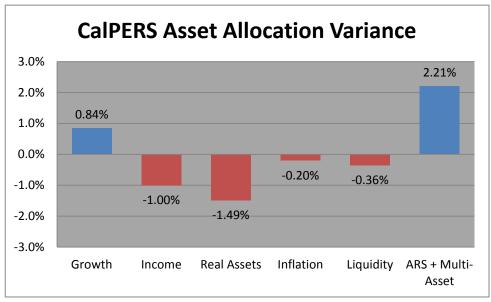


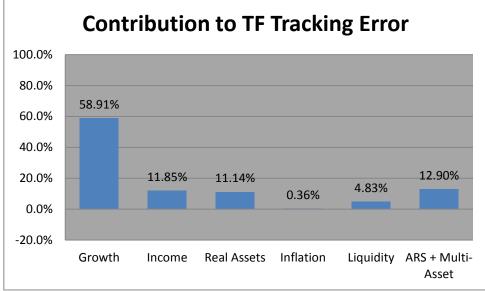




Drivers of Expected Excess Risk







- This excess risk forecast is based on asset allocation variance only.
- Other sources of risk (structural within asset classes, manager/program specific source of tracking error, covariance) are not considered here.

Total Fund – Performance



								Five-Yea	r Ratios
TOTAL FUND Total Fund Policy Benchmark	Market <u>Value</u> \$257.4 bil	Otr 4.5% 3.8%	1-Year 10.9% 10.6%	3-Year 9.1% 9.3%	5-Year 2.8% 5.1%	10-Year 8.1% 8.9%		Sharpe 0.2 0.4	<u>Info</u> -0.7 0.0
Actuarial Rate		1.8%	7.6%	7.7%	7.7%	7.7%			
GROWTH	165.3	6.6%	12.5%	9.9%	3.3%	9.6%	\$33.5 bil	0.2	-0.5
Growth Policy Benchmark		6.2%	13.9%	9.6%	5.0%	10.3%		0.3	0.0
PUBLIC EQUITY	133.3	7.2%	12.0%	8.6%	3.0%	9.2%	\$25.8 bil	0.1	-0.3
Public Equity Policy Benchmark		7.1%	11.7%	8.4%	3.6%	9.6%		0.1	0.0
PRIVATE EQUITY	32.0	4.0%	13.8%	14.3%	5.5%	11.9%	\$10.1 bil	0.5	-0.4
Private Equity Policy Benchmark		2.9%	20.3%	12.8%	11.2%	12.9%		0.7	0.0
INCOME	41.2	-0.8%	6.7%	8.9%	8.2%	7.4%	\$5.1 bil	1.1	0.2
Income Policy Benchmark		-1.1%	5.5%	8.6%	7.4%	6.5%		1.1	0.0
REAL ASSETS	24.5	1.2%	12.0%	7.1%	-11.1%	3.3%	\$2.7 bil	-0.7	-1.1
Real Assets Policy Benchmark		2.4%	9.7%	11.7%	3.0%	8.8%		0.5	0.0
INFLATION	9.8	-0.6%	0.8%	7.9%	0.6%	%	\$0.6 bil	0.0	-0.2
Inflation Policy Benchmark		-0.3%	3.0%	6.8%	1.3%	%		0.1	0.0
LIQUIDITY	9.3	0.0%	1.7%	1.8%	1.5%	2.5%	\$0.4 bil	N/A	N/A
Liquidity Policy Benchmark		0.1%	2.2%	2.1%	1.7%	2.5%		N/A	N/A
ABSOLUTE RETURN STRATEGIES	5.2	3.8%	5.6%	3.3%	1.7%	5.5%		0.2	-0.7
Absolute Return Strategies Policy Benchmark		1.3%	5.3%	5.5%	6.1%	8.8%		10.8	0.0
MULTI-ASSET CLASS COMPOSITE	0.5	%	%	%	%	%		N/A	N/A
Absolute 7.5%		%	%	%	%	%		N/A	N/A
CURRENCY + ASSET ALLOCATION TRANSITION	1.6	%	%	%	%	%			

Total Fund – Attribution (Quarter)



California Public Employees' Retirement System Total Fund Attribution - Quarter As of 3/31/2013

	Actua	l (%)	Polic	y (%)	Differe	nce (%)	T	otal Fund Returi	Contribution (%)	
Asset Class	Weight	Return	Weight	Return	Weight	Return	Actual Allocation	Interaction	Active Management	Total
Growth	63.43	6.56	64.00	6.16	-0.57	0.39	-0.02	-0.01	0.25	0.23
Public Equity	50.82	7.22	50.00	7.06	0.82	0.16	0.00	0.00	0.08	0.08
Private Equity	12.61	3.97	14.00	2.90	-1.39	1.07	0.00	-0.01	0.15	0.14
Income	16.88	-0.75	17.00	-1.06	-0.12	0.31	-0.02	0.00	0.05	0.03
Real Assets	9.71	1.25	11.00	2.38	-1.29	-1.13	0.02	0.02	-0.13	-0.09
Inflation	3.58	-0.56	4.00	-0.30	-0.42	-0.26	0.01	0.00	-0.01	0.00
Absolute Return	2.24	3.76	0.00	1.30	2.24	2.46	-0.06	0.06	0.00	-0.01
Liquidity	4.15	0.04	4.00	0.12	0.15	-0.09	-0.01	0.00	0.00	-0.01
Monthly Linked Return	100.00	4.15	100.00	4.00		0.15	-0.08	0.07	0.16	0.15
Trading/Hedging/Other		0.37		-0.22		0.60				0.60
Total		4.53		3.78		0.75				0.75

Total Fund – Attribution (Calendar YTD)



California Public Employees' Retirement System Total Fund Attribution - Calendar Year-to-Date As of 3/31/2013

	Actua	d (%)	Polic	y (%)	Differe	nce (%)	T	otal Fund Returi	n Contribution (%)	
Asset Class	Weight	Return	Weight	Return	Weight	Return	Actual Allocation	Interaction	Active Management	Total
Growth	63.43	6.56	64.00	6.16	-0.57	0.39	-0.02	-0.01	0.25	0.23
Public Equity	50.82	7.22	50.00	7.06	0.82	0.16	0.00	0.00	0.08	0.08
Private Equity	12.61	3.97	14.00	2.90	-1.39	1.07	0.00	-0.01	0.15	0.14
Income	16.88	-0.75	17.00	-1.06	-0.12	0.31	-0.02	0.00	0.05	0.03
Real Assets	9.71	1.25	11.00	2.38	-1.29	-1.13	0.02	0.02	-0.13	-0.09
Inflation	3.58	-0.56	4.00	-0.30	-0.42	-0.26	0.01	0.00	-0.01	0.00
Absolute Return	2.24	3.76	0.00	1.30	2.24	2.46	-0.06	0.06	0.00	-0.01
Liquidity	4.15	0.04	4.00	0.12	0.15	-0.09	-0.01	0.00	0.00	-0.01
Monthly Linked Return	100.00	4.15	100.00	4.00		0.15	-0.08	0.07	0.16	0.15
Trading/Hedging/Other		0.37		-0.22		0.60				0.60
Total		4.53		3.78		0.75				0.75

Total Fund – Attribution (Fiscal YTD)

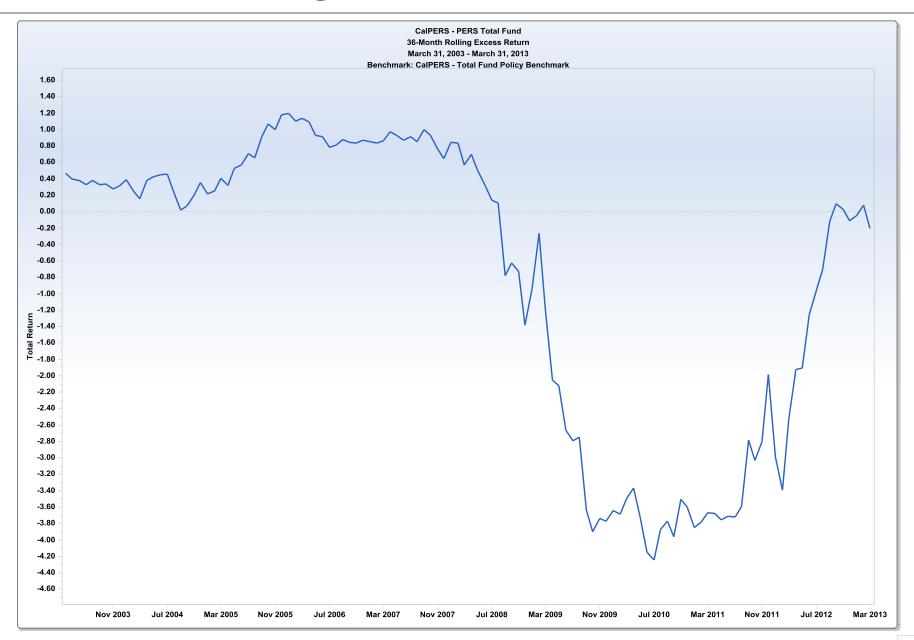


California Public Employees' Retirement System Total Fund Attribution - Fiscal Year-to-Date As of 3/31/2013

	Actua	l (%)	Policy	y (%)	Differe	nce (%)	T	otal Fund Returi	n Contribution (%)	ı
Asset Class	Weight	Return	Weight	Return	Weight	Return	Actual Allocation	Interaction	Active Management	Total
Growth	62.83	16.43	64.00	15.71	-1.17	0.72	-0.05	-0.02	0.44	0.37
Public Equity	49.35	18.76	50.00	18.35	-0.65	0.41	-0.06	0.00	0.20	0.13
Private Equity	13.47	8.36	14.00	6.20	-0.53	2.16	-0.08	0.05	0.25	0.22
Income	17.77	2.62	17.00	1.40	0.77	1.23	-0.08	0.01	0.22	0.15
Real Assets	10.00	4.01	11.00	7.22	-1.00	-3.20	0.04	0.04	-0.37	-0.30
Inflation	3.26	6.20	4.00	5.44	-0.74	0.75	0.02	-0.01	0.03	0.04
Absolute Return	2.16	6.73	0.00	4.01	2.16	2.72	-0.16	0.06	0.00	-0.10
Liquidity	3.99	0.42	4.00	0.70	-0.01	-0.28	0.01	0.00	-0.01	0.00
Monthly Linked Return	100.00	11.40	100.00	11.22		0.18	-0.23	0.09	0.31	0.17
Trading/Hedging		0.54		-0.64		1.18				1.18
Total		11.94		10.58		1.36				1.36

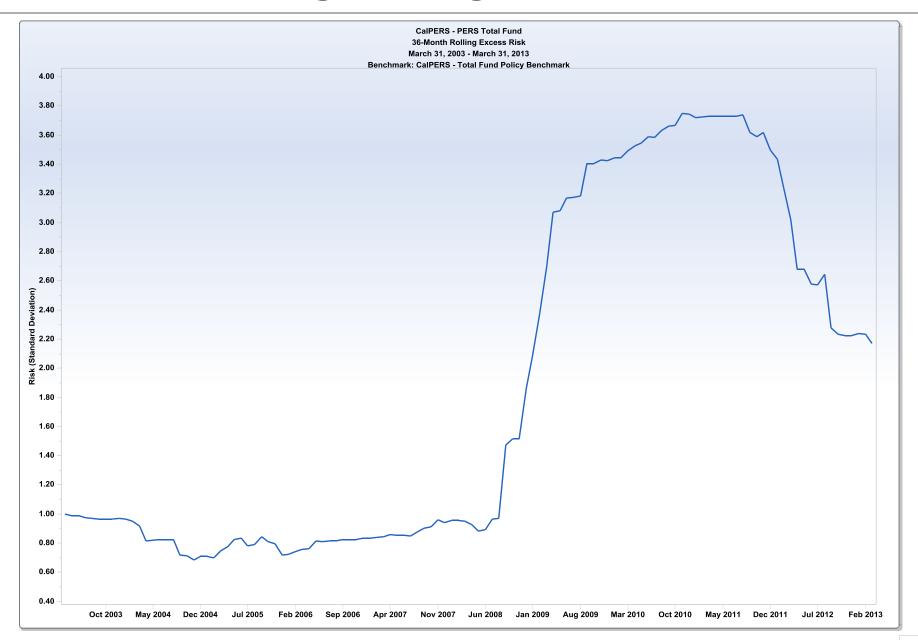
Total Fund – Rolling Excess Returns





Total Fund – Rolling Tracking Error



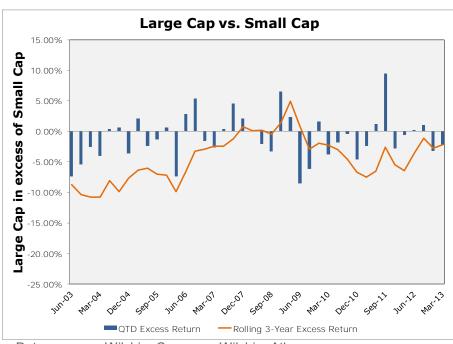


U.S. Capital Markets: Equity



March 31, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Wilshire 5000	10.9	10.9	14.1	12.8	6.3	9.3
Wilshire U.S. Large Cap	10.6	10.6	13.7	12.6	5.8	8.8
Wilshire U.S. Small Cap	13.1	13.1	18.5	15.1	10.3	13.4
Wilshire U.S. Large Growth	9.1	9.1	10.3	11.6	6.7	8.6
Wilshire U.S. Large Value	12.0	12.0	16.8	13.4	4.8	9.0
Wilshire U.S. Small Growth	13.4	13.4	16.3	16.0	10.6	13.9
Wilshire U.S. Small Value	12.9	12.9	20.6	14.0	10.0	12.8
Wilshire REIT Index	7.4	7.4	14.0	17.3	6.3	12.2
MSCI USA Minimum Volatility Index	13.2	13.2	17.6	15.6	8.4	8.8
FTSE RAFI U.S. 1000 Index	12.8	12.8	18.7	13.4	8.4	n.a.





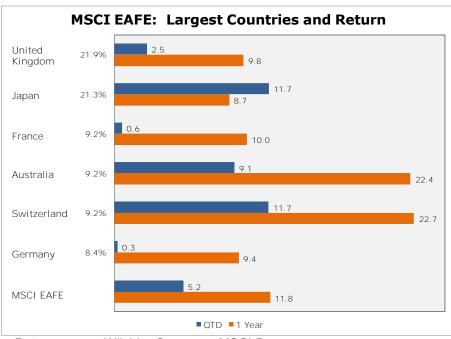


Data sources: Wilshire Compass, Wilshire Atlas

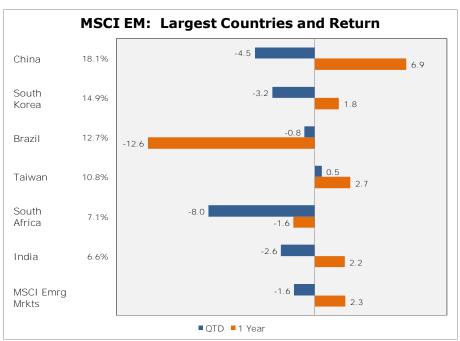
Non-U.S. Capital Markets



March 31, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
MSCI ACWI ex-US (\$g)	3.3	3.3	8.9	4.9	0.1	11.4
MSCI EAFE (\$g)	5.2	5.2	11.8	5.5	-0.4	10.2
MSCI Emerging Markets (\$g)	-1.6	-1.6	2.3	3.6	1.4	17.4
MSCI Frontier Markets (\$g)	8.2	8.2	12.0	2.5	-8.4	9.3
MSCI EAFE Minimum Volatility ldx	10.5	10.5	17.0	10.2	4.0	12.6
FTSE RAFI Developed ex-US Index	2.8	2.8	7.8	2.9	-0.5	n.a.
JPM Non US Global Bond	-4.2	-4.2	-2.7	3.7	2.7	5.8
JPM Non US Global Bond Hedged	1.3	1.3	5.6	5.0	4.8	4.6
JPM EMBI Global	-2.3	-2.3	10.4	10.6	9.8	10.6
Euro vs. Dollar	-2.6	-2.6	-3.6	-1.7	-4.2	1.6
Yen vs. Dollar	-8.0	-8.0	-12.5	-0.2	1.1	2.3
Pound vs. Dollar	-6.6	-6.6	-5.0	0.0	-5.2	-0.4



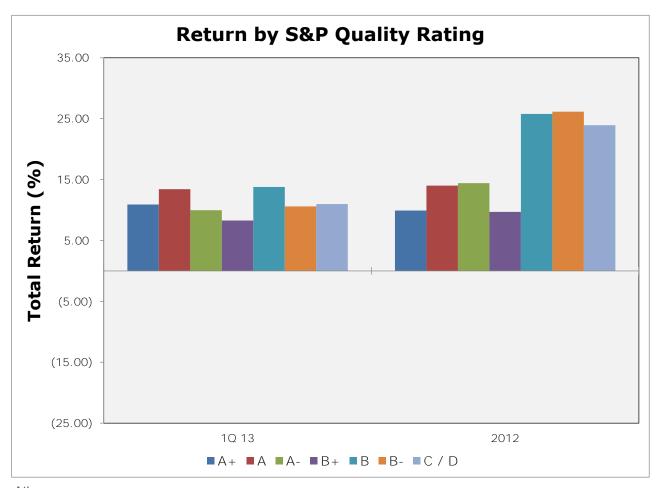




Returns by Quality Segment



Returns were evenly distributed by quality rating during the first quarter, particularly compared to 2012



Data sources: Wilshire Atlas

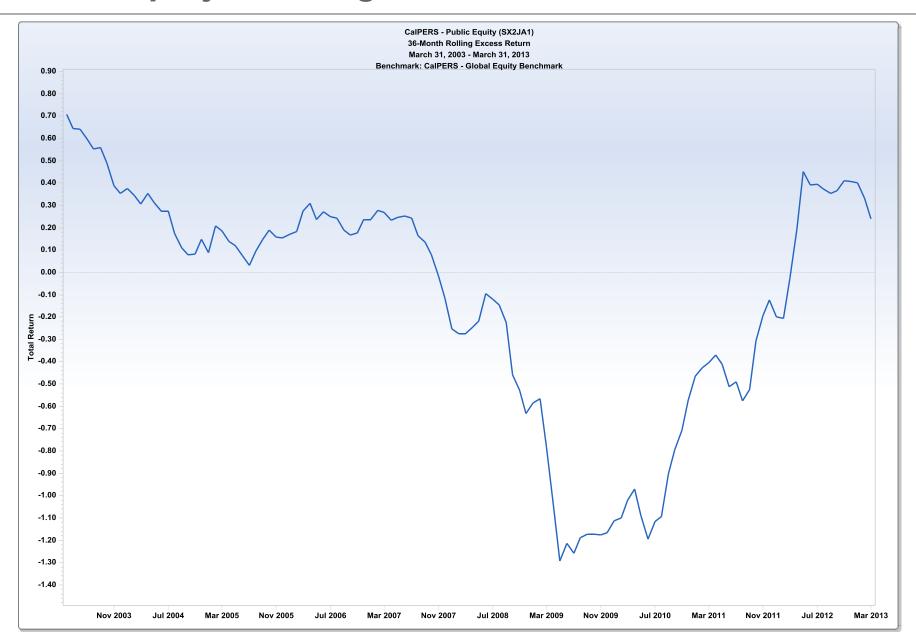
Growth: Public Equity – Performance



	Market <u>Value</u>	<u>Qtr</u>	<u>1-Year</u>	3-Year	5-Year	10-Year	<u>VaR</u>	5-year Sharpe <u>Ratio</u>	5-year Info <u>Ratio</u>
PUBLIC EQUITY	133.3	7.2%	12.0%	8.6%	3.0%	9.2%	\$25.8 bil	0.1	-0.3
Public Equity Policy Benchmark Value Added		7.1% 0.1%	11.7% 0.3%	8.4% 0.2%	3.6% -0.6%	9.6% -0.4%		0.1	0.0
US Equity Composite (ex ARS)	63.0	11.7%	15.1%	12.9%	6.4%	9.1%		0.3	0.3
Custom US Equity Benchmark Value Added		11.2% 0.5%	14.5% 0.6%	12.7% 0.2%	6.1% 0.3%	9.1% 0.0%		0.3	0.0
Total Int'l Equity (ex ARS)	68.3	3.4%	9.2%	5.2%	0.2%	11.2%		0.0	0.3
Custom Int'l Equity Benchmark Value Added		4.0% -0.6%	9.9% -0.7%	4.9% 0.3%	-0.2% 0.4%	10.9% 0.3%		0.0	0.0
Global Equity Equitization	1.4	6.5%	13.7%	8.9%	%	%			
Custom Benchmark Value Added		7.1% -0.6%	11.7% 2.0%	8.4% 0.5%	% %	% %			

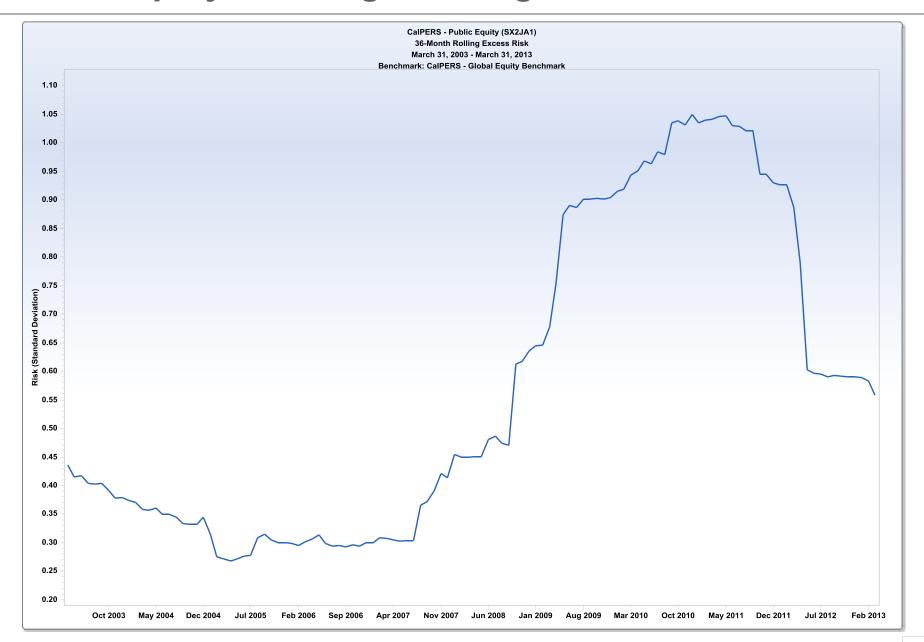
Growth: Public Equity – Rolling Excess Returns





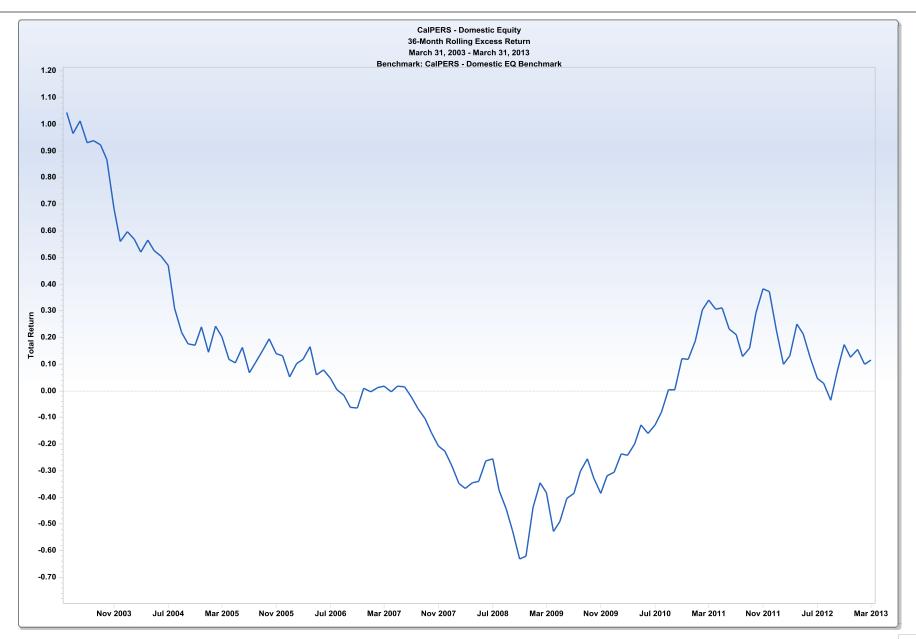
Growth: Public Equity – Rolling Tracking Error





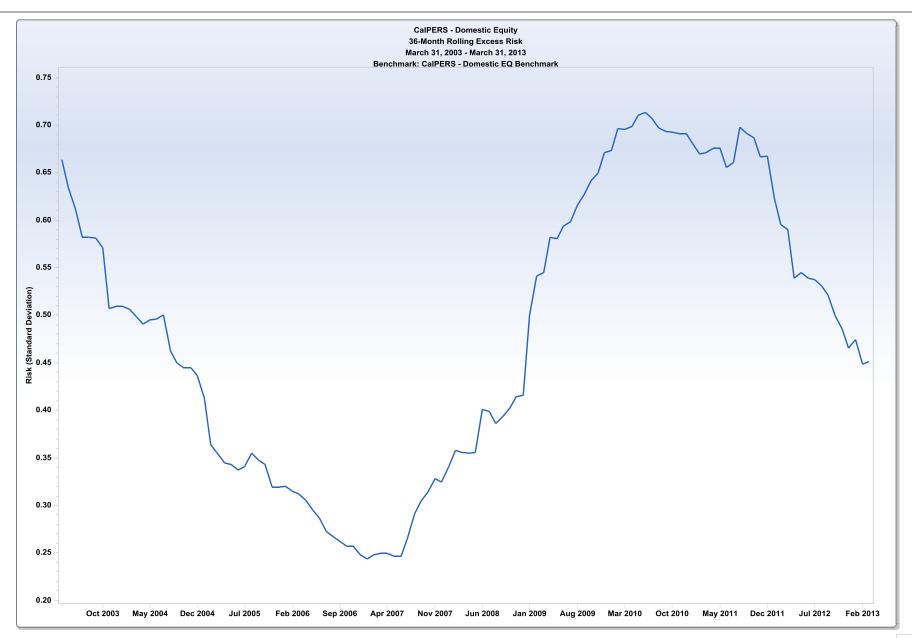
Growth: US Equity – Rolling Excess Returns





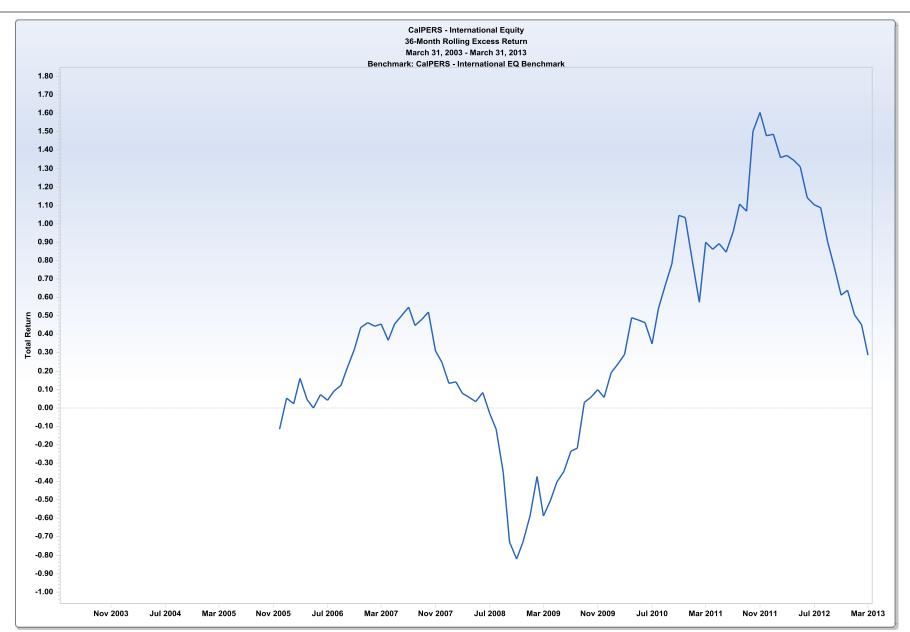
Growth: US Equity – Rolling Tracking Error





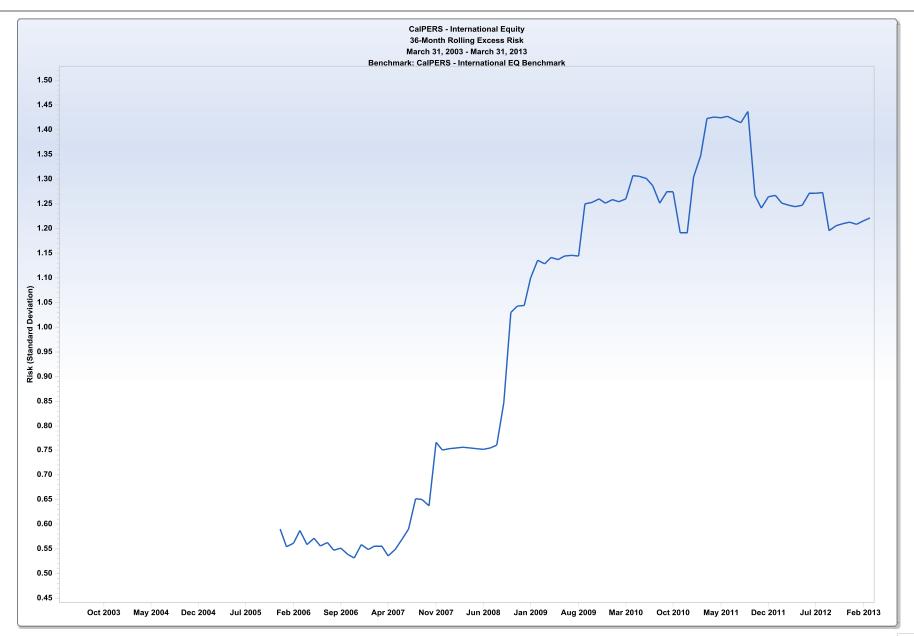
Growth: International Equity – Rolling Excess Returns





Growth: International Equity – Rolling Tracking Error





Growth: Corporate Governance/MDP/FoF

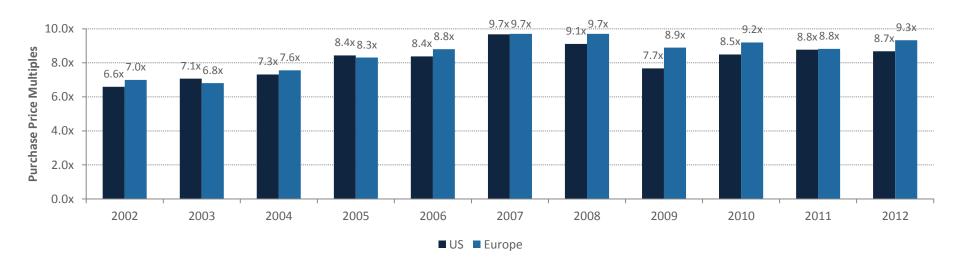


	Market <u>Value</u>	<u>Qtr</u>	<u>1-Year</u>	3-Year	5-Year	10-Year	<u>Date</u>
Total Corporate Governance	4.6	11.7%	13.2%	7.3%	2.4%	9.4%	12/98
Policy Benchmark		9.7%	13.5%	8.2%	2.5%	8.7%	
Value Added		2.0%	-0.3%	-0.9%	-0.1%	0.7%	
Total MDP	1.5	7.6%	10.3%	9.4%	3.7%	8.5%	6/00
Policy Benchmark		6.8%	11.5%	9.4%	4.9%	9.9%	
Value Added		0.8%	-1.2%	0.0%	-1.2%	-1.4%	
Total FoF	1.0	8.7%	11.4%	11.6%	6.5%	%	3/08
Policy Benchmark		8.5%	12.5%	10.8%	6.4%	%	
Value Added		0.2%	-1.1%	0.8%	0.1%	%	

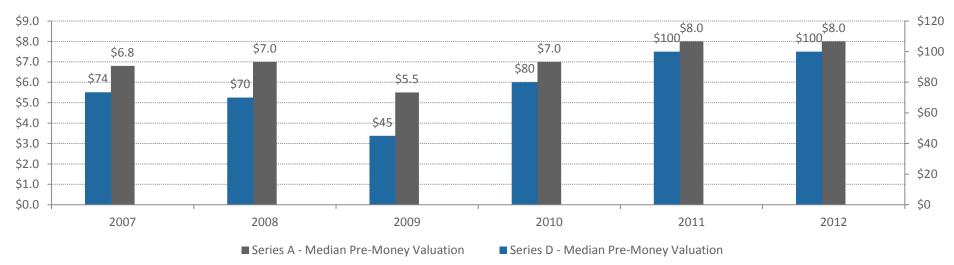
Private Equity Environment – Pricing



Global LBO Multiples (2002 - 2012)

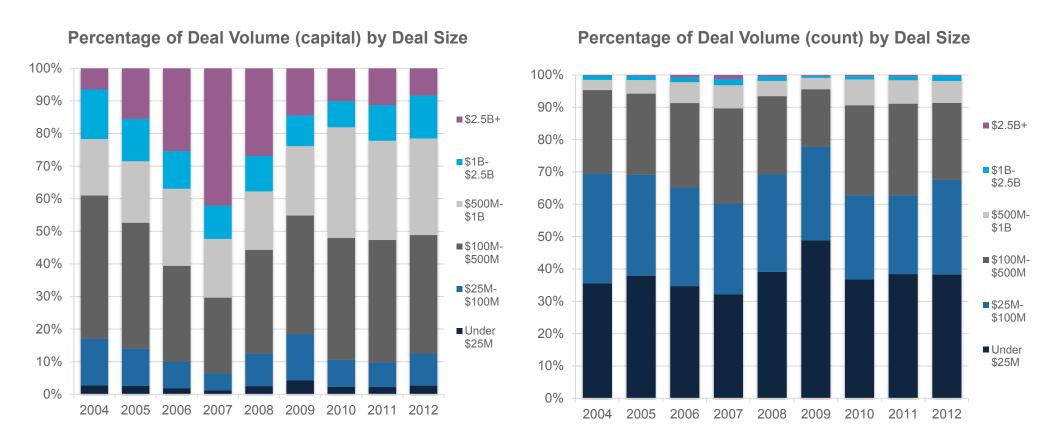


Venture Capital Valuations (2007 – 2012)



U.S. Investment Activity by Deal Size





• The middle-market, defined as deals between \$100 million and \$500 million, continues to represent the core of private equity deal transactions and accounts for approximately 24% of deal activity and 36% of capital invested in 2012.

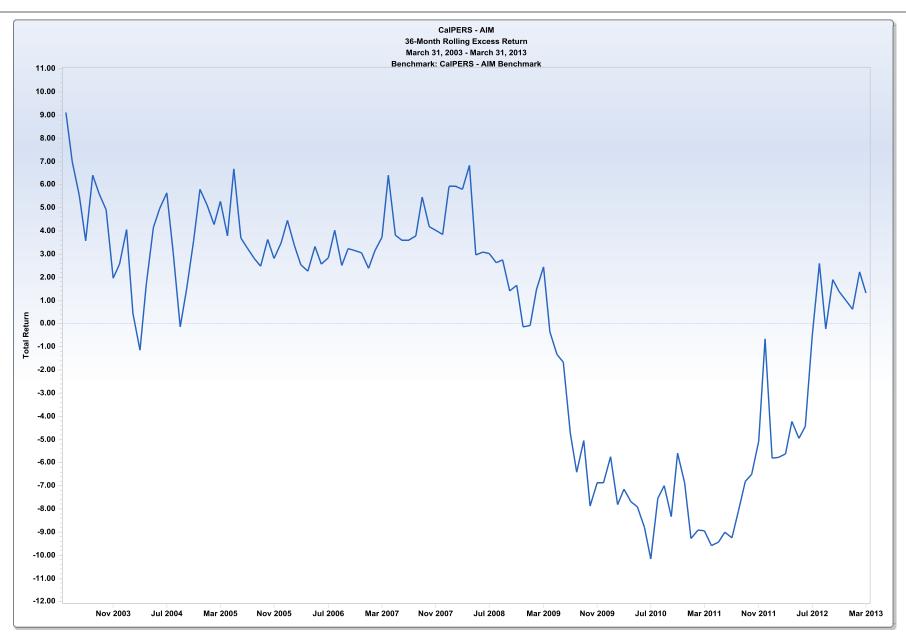
Growth: Private Equity (AIM) – Performance



	Market <u>Value</u>	<u>Qtr</u>	<u>1-Year</u>	<u>3-Year</u>	<u>5-Year</u>	<u> 10-Year</u>	<u>VaR</u>	5-year Sharpe <u>Ratio</u>	5-year Info <u>Ratio</u>
PRIVATE EQUITY (AIM)	32.0	4.0%	13.8%	14.3%	5.5%	11.9%	\$10.1 bil	0.5	-0.4
AIM Policy Benchmark		2.9%	20.3%	12.8%	11.2%	12.9%		0.7	0.0
Value Added		1.1%	-6.5%	1.5%	-5.7%	-1.0%			
Private Equity Partnership Investments	32.0	4.0%	13.9%	14.4%	5.7%	12.0%			
Private Equity Distribution Stock	0.0	7.6%	-40.9%	-17.0%	2.4%	5.2%			

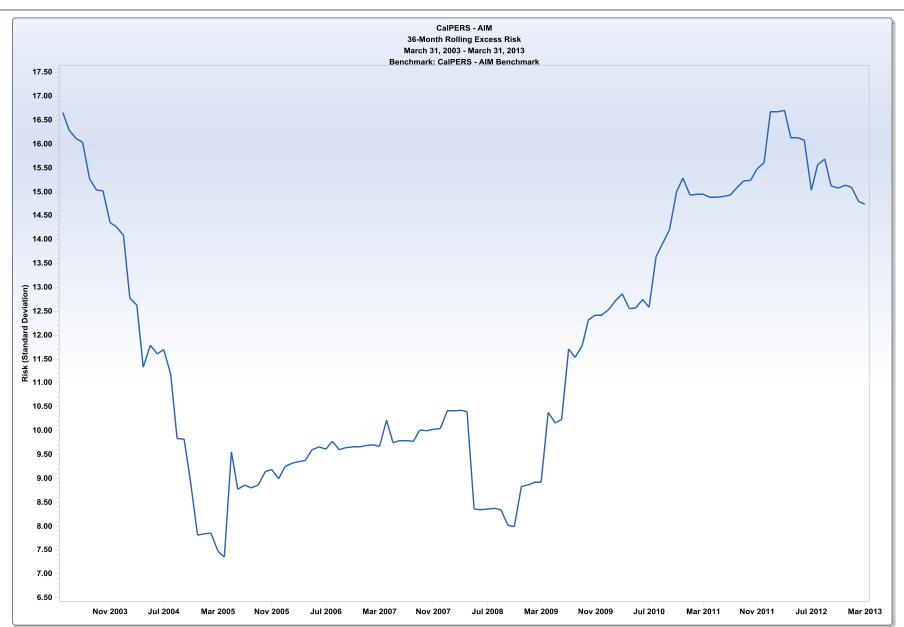
Growth: Private Equity (AIM) – Rolling Excess Returns





Growth: Private Equity (AIM) – Rolling Tracking Error

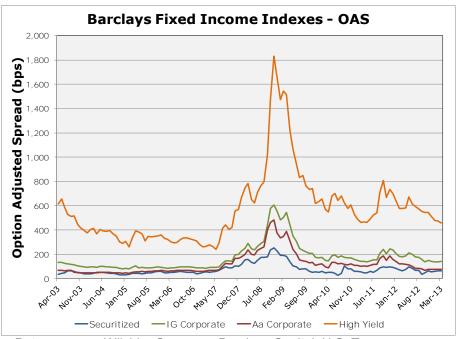


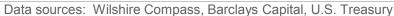


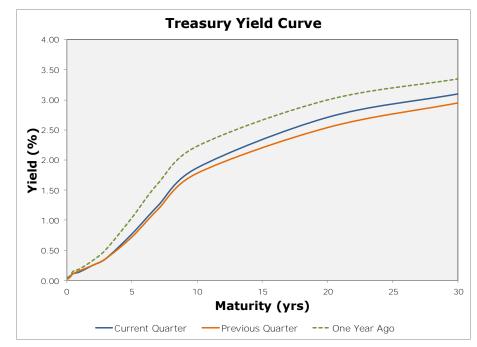
U.S. Capital Markets: Fixed Income



March 31, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays Aggregate Bond Index	-0.1	-0.1	3.8	5.5	5.5	5.0
Barclays Treasury Index	-0.2	-0.2	3.1	5.4	4.5	4.6
Barclays Govt-Related Index	-0.2	-0.2	3.8	5.0	4.8	4.7
Barclays Securitized Index	0.0	0.0	2.2	4.5	5.2	4.9
Barclays Corporate IG Index	-0.1	-0.1	7.5	8.1	7.9	6.1
Barclays LT Govt/Credit Index	-2.0	-2.0	8.9	12.3	9.5	7.5
Barclays LT Treasury Index	-2.4	-2.4	7.3	12.5	8.3	7.2
Barclays LT Go√t-Related Index	-1.5	-1.5	9.1	12.6	9.0	8.0
Barclays LT Corporate IG Index	-1.8	-1.8	10.0	11.8	10.6	7.6
Barclays U.S. TIPS Index	-0.4	-0.4	5.7	8.6	5.9	6.3
Barclays High Yield Index	2.9	2.9	13.1	11.2	11.6	10.1
Treasury Bills	0.0	0.0	0.1	0.1	0.3	1.8



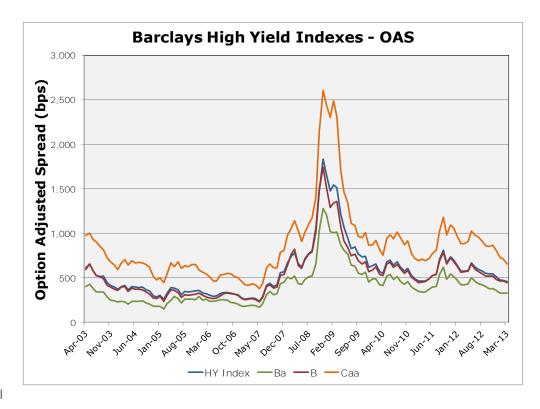




High Yield by Quality



March 31, 2013	Weight	Qtr	Ytd	1 Yr	3 Yr
Barclays High Yield Index	100%	2.9	2.9	13.1	11.2
Quality Distribution					
Ba U.S. High Yield	37.8%	2.0	2.0	11.9	11.0
B U.S. High Yield	43.8%	2.7	2.7	13.1	11.2
Caa U.S. High Yield	17.0%	5.8	5.8	15.8	11.9
Ca to D U.S. High Yield	1.0%	-1.2	-1.2	13.4	9.4
Non-Rated U.S. High Yield	0.4%	3.9	3.9	16.1	12.8



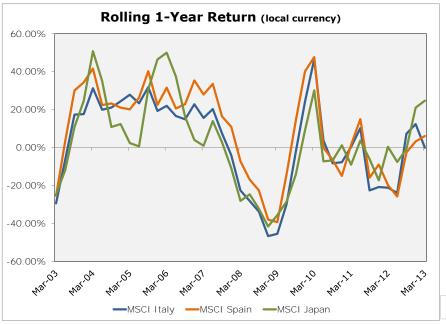
Data sources: Barclays Capital

Economic Growth and Equity Returns



- Although many headlines have focused on "periphery" countries (Greece, Cyprus), larger economies also are experiencing on-going problems
 - Italy is the world's 8th largest economy by GDP
 - Spain is the 12th largest
- Japan is showing signs of rebounding from their recent recession
- From a return perspective, Japan's local stock market has done better lately than those in Italy and Spain



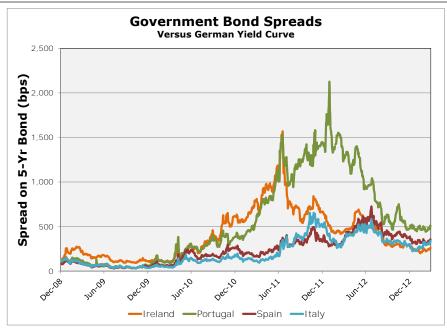


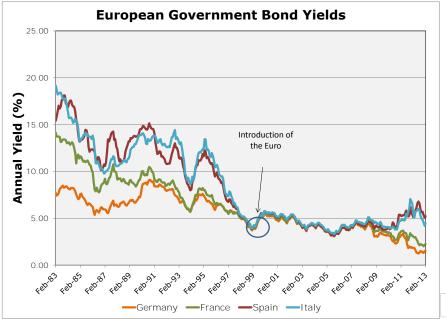
European Debt Issues



 Spreads have leveled-off to some degree but remain elevated

 Yields remain low in some of the largest economies across the globe – including Germany and France along with the U.S.





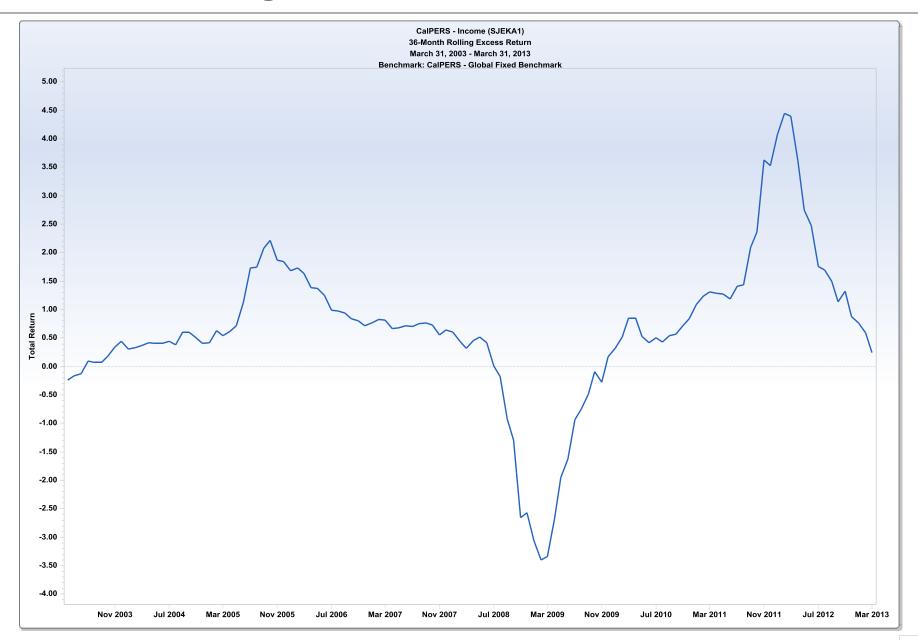
Income - Performance



INCOME	Market Value 41.2	<u>Qtr</u> -0.8%	<u>1-Year</u> 6.7%	3-Year 8.9%	5-Year 8.2%	10-Year 7.4%	<u>VaR</u> \$5.1 bil	5-year Sharpe <u>Ratio</u> 1.1	5-year Info <u>Ratio</u> 0.2
Income Policy Benchmark		-1.1%	5.5%	8.6%	7.4%	6.5%		1.1	0.0
Value Added		0.3%	1.2%	0.3%	0.8%	0.9%			
U.S. Income	38.0	-0.5%	7.4%	9.3%	8.7%	7.5%		1.2	0.2
U.S. Income Policy Benchmark		-0.7%	6.4%	9.2%	7.9%	6.6%		1.2	0.0
Value Added		0.2%	1.0%	0.1%	0.8%	0.9%			
Non-U.S. Income	3.2	-3.8%	-0.7%	5.1%	4.0%	6.5%		0.4	0.9
Non-US Income Policy Benchmark		-4.0%	-2.3%	3.4%	2.4%	5.6%		0.2	0.0
Value Added		0.2%	1.6%	1.7%	1.6%	0.9%			

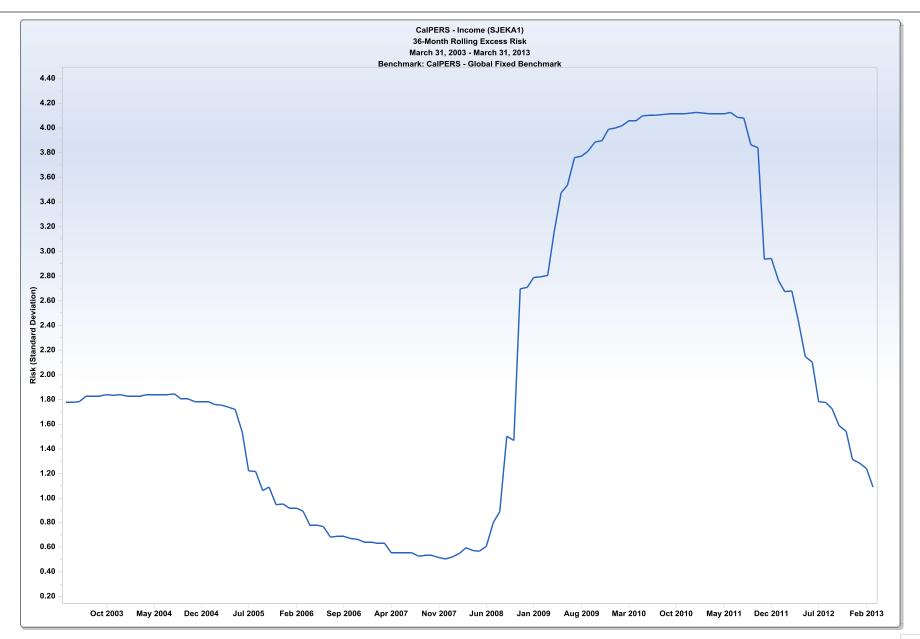
Income - Rolling Excess Returns





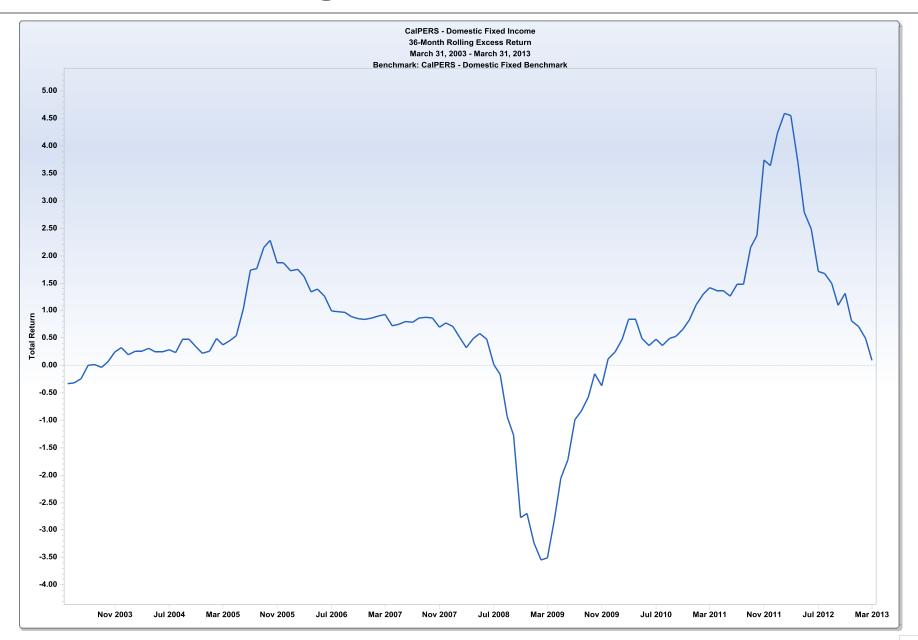
Income - Rolling Tracking Error





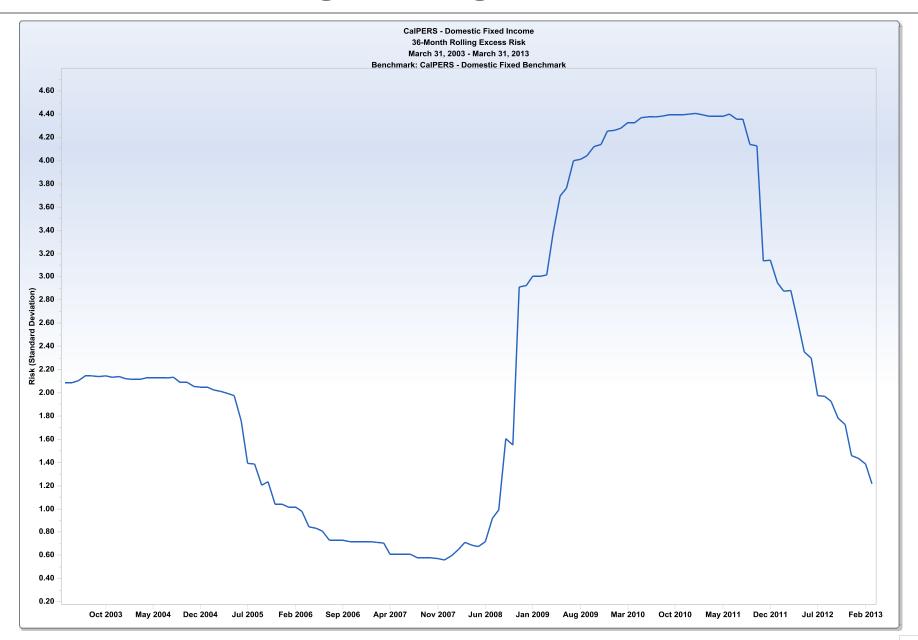
US Income - Rolling Excess Returns





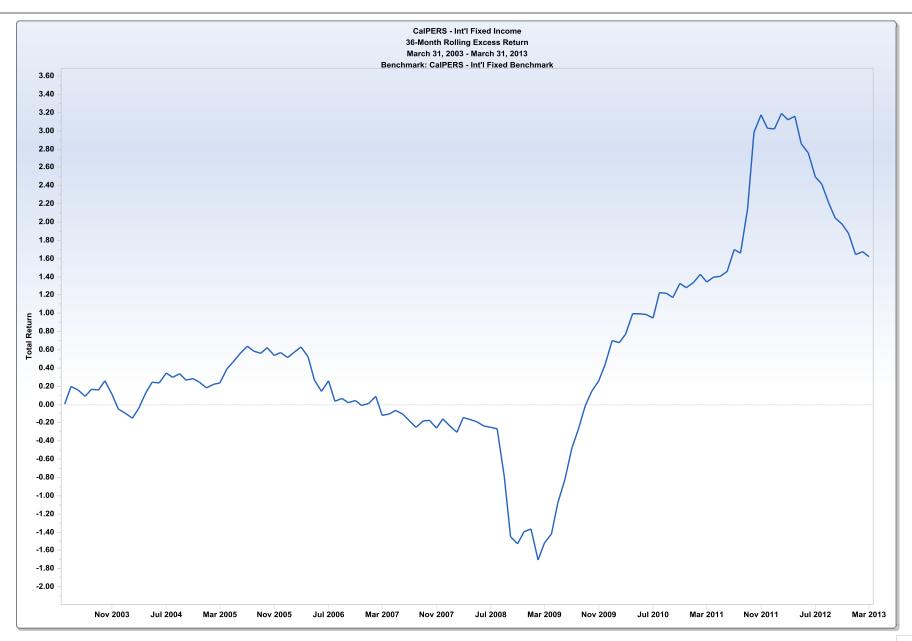
US Income - Rolling Tracking Error





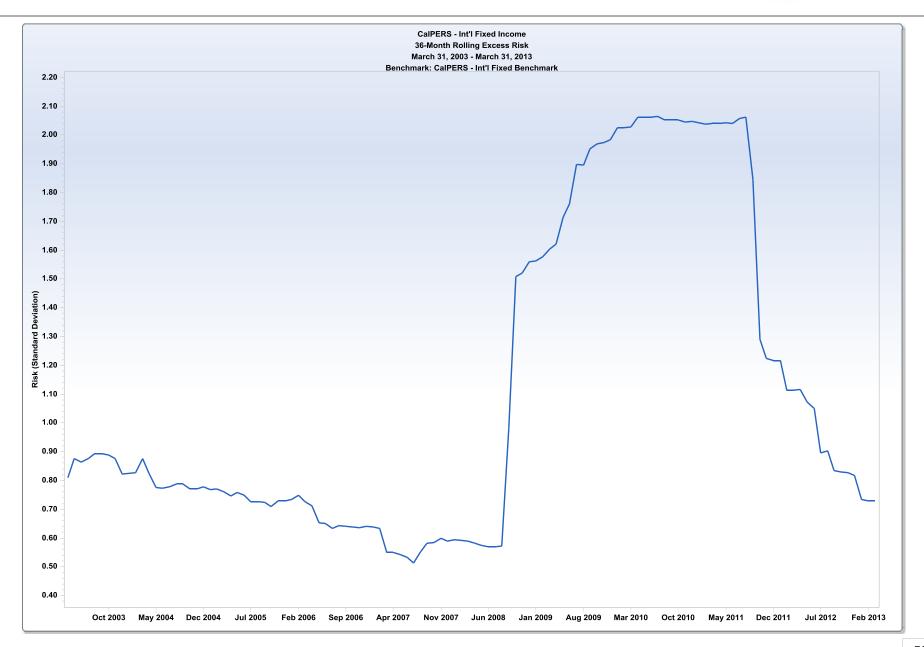
International Income – Rolling Excess Returns





International Income – Rolling Tracking Error





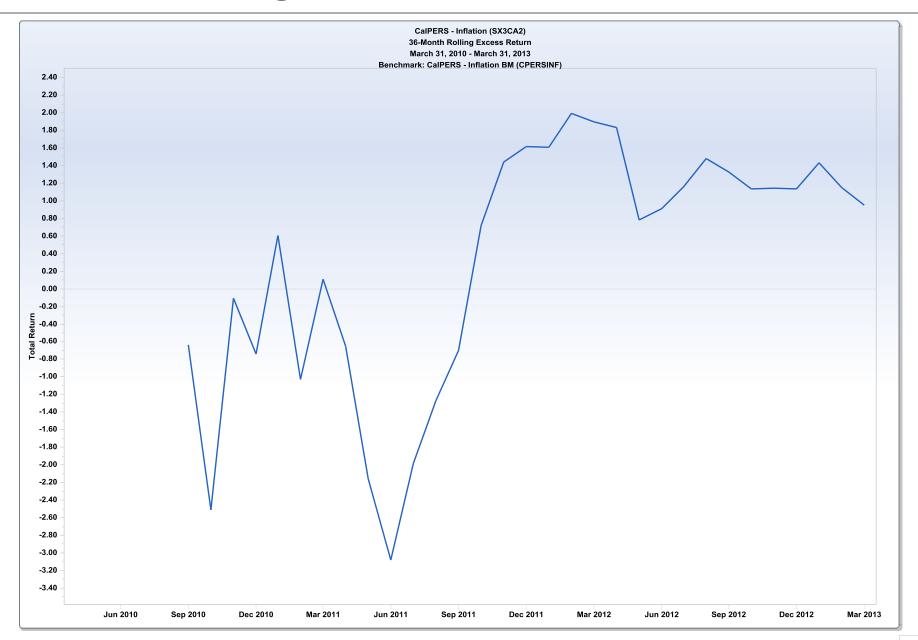
Inflation – Performance



INFLATION	Market Value 9.8	<u>Qtr</u> -0.6%	1-Year 0.8%	3-Year 7.9%	5-Year 0.6%	10-Year %	<u>VaR</u> \$0.6 bil	5-year Sharpe <u>Ratio</u> 0.0	5-year Info Ratio -0.2
Inflation Policy Benchmark		-0.3%	3.0%	6.8%	1.3%	%		0.1	0.0
Value Added		-0.3%	-2.2%	1.1%	-0.7%	%			
Commodities	1.3	0.9%	-5.0%	3.3%	-9.4%	%			
GSCI Total Return Index		0.5%	-5.0%	3.0%	-9.8%	%			
Value Added		0.4%	0.0%	0.3%	0.4%	%			
Inflation Linked Bonds	6.1	-1.1%	5.3%	8.4%	4.9%	-,-%			
Custom Benchmark		1.0%	7.2%	8.8%	5.2%	%			
Value Added		-2.1%	-1.9%	-0.4%	-0.3%	%			

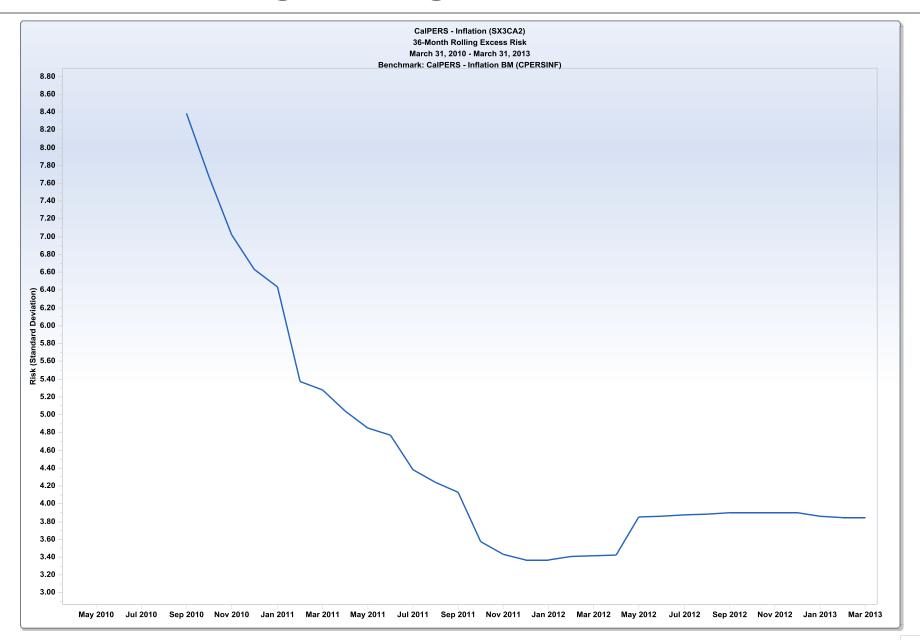
Inflation – Rolling Excess Returns





Inflation – Rolling Tracking Error



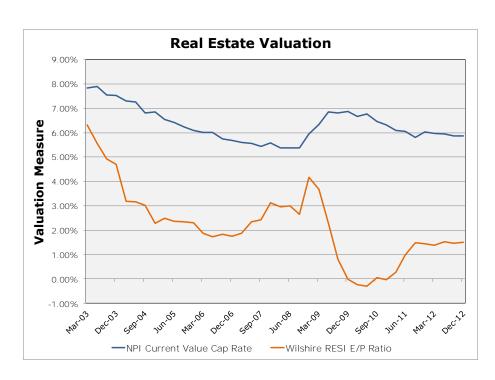


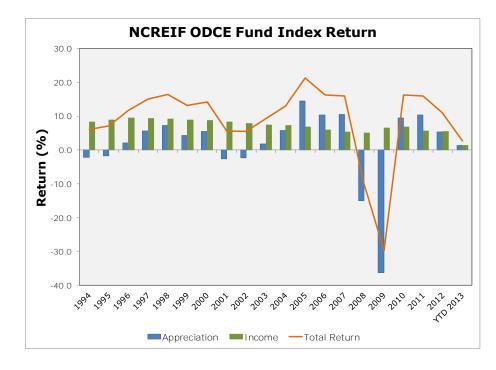
Real Assets



March 31, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays U.S. TIPS Index	-0.4	-0.4	5.7	8.6	5.9	6.3
Dow Jones UBS Commodity Index	-1.1	-1.1	-3.0	1.4	-7.1	3.7
Global Public Real Estate*	6.8	6.8	18.2	17.4	5.2	13.2
NCREIF ODCE Fund Index	2.7	2.7	10.8	15.1	-0.8	6.8
NCREIF Timberland Index	1.5	1.5	9.0	3.6	2.1	8.3
Alerian MLP Index (Oil & Gas)	19.7	19.7	23.1	21.5	18.4	17.8

^{*} Wilshire Global Real Estate Securities from March 2003 to December, 2004. Wilshire Global REITs from 2004 to present.

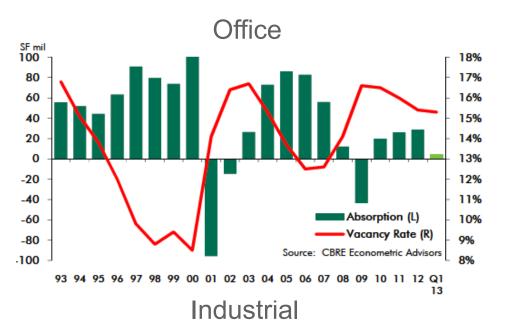


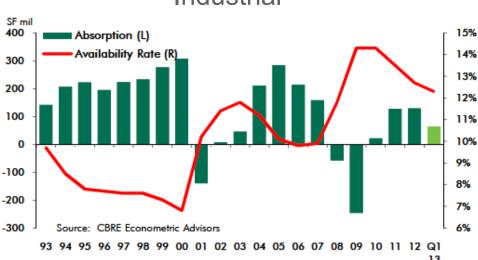


Data sources: Wilshire Compass, National Council of Real Estate Investment Fiduciaries

Commercial Property

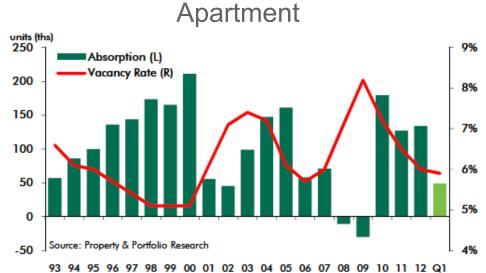






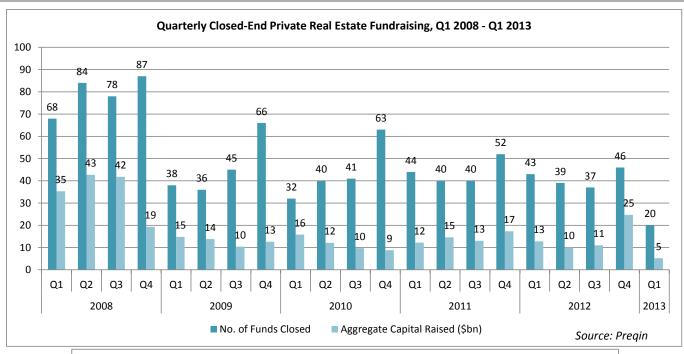
Source: CB Richard Ellis

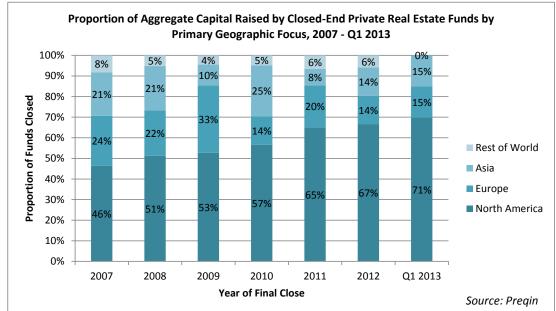




Real Estate Fundraising



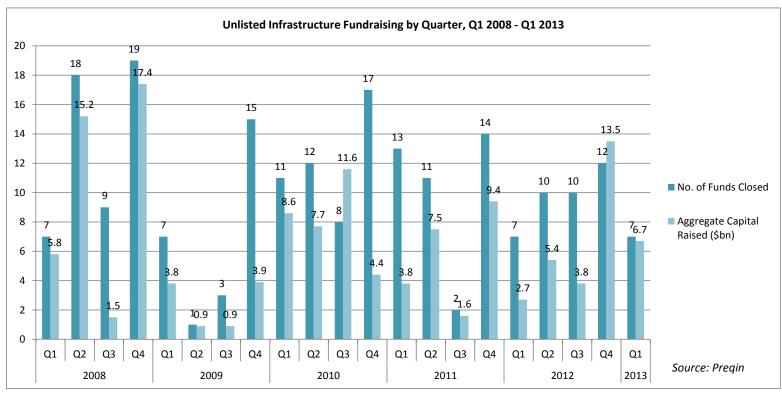


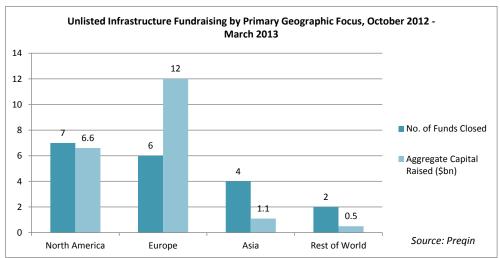


Source: Pregin

Infrastructure







Source: Pregin

Timber



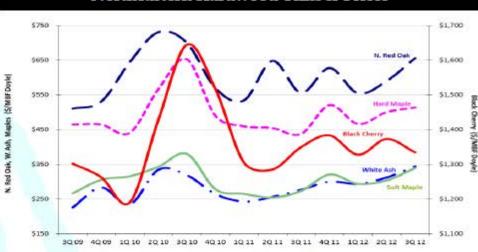
Southeastern Timber Prices | Sis | Fine Sawtimber | Sis | S

Source: Forest2Market®



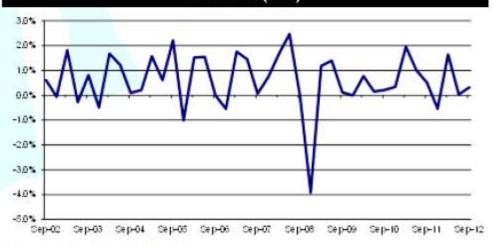
Source: Forest Investment Associates

Northeastern Hardwood Timber Prices



Source: Pennsylvania Woodlands Timber Market Report - Northwest Region

Inflation (CPI)



Source: http://www.bls.gov/cpi/home.htm

Real Assets - Performance



REAL ASSETS	Market Value 24.5	<u>Qtr</u> 1.2%	<u>1-Year</u> 12.0%	3-Year 7.1%	<u>5-Year</u> -11.1%	10-Year 3.3%	<u>VaR</u> \$2.7 bil	5-year Sharpe <u>Ratio</u> -0.7	5-year Info <u>Ratio</u> -1.1
Real Assets Policy Benchmark		2.4%	9.7%	11.7%	3.0%	8.8%		0.5	0.0
Value Added		-1.2%	2.3%	-4.6%	-14.1%	-5.5%			
Real Estate	21.1	0.6%	12.7%	7.9%	-12.4%	2.5%	\$2.8 bil	-0.7	-1.1
Real Estate Policy Benchmark		2.2%	10.4%	13.4%	3.8%	9.3%		0.5	0.0
Value Added		-1.6%	2.3%	-5.5%	-16.2%	-6.8%			
Forestland	2.3	6.8%	6.9%	-2.3%	0.0%	%			
NCREIF Timberland Index		5.9%	7.8%	3.0%	2.7%	%			
Value Added		0.9%	-0.9%	-5.3%	-2.7%	%			
Infrastructure	1.1	2.9%	9.3%	20.1%	13.3%	%			
CPI + 400 BPS 1Qtr Lag		0.2%	5.8%	6.8%	6.6%	%			
Value Added		2.7%	3.5%	13.3%	6.7%	%			

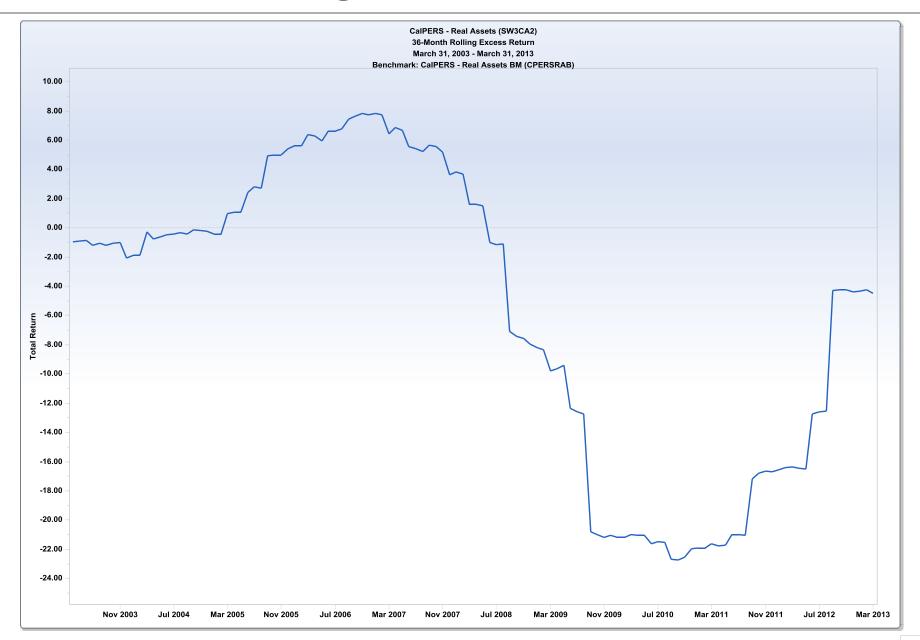
Real Estate - Performance



	Market <u>Value</u>	<u>Qtr</u>	<u>1-Year</u>	<u>3-Year</u>	<u>5-Year</u>	<u> 10-Year</u>	<u>VaR</u>	5-year Sharpe <u>Ratio</u>	5-year Info <u>Ratio</u>
Real Estate	21.1	0.6%	12.7%	7.9%	-12.4%	2.5%	\$2.8 bil	-0.7	-1.1
Real Estate Policy Benchmark		2.2%	10.4%	13.4%	3.8%	9.3%		0.5	0.0
Value Added		-1.6%	2.3%	-5.5%	-16.2%	-6.8%			
Strategic Real Estate	14.4	0.7%	15.4%	13.3%	0.7%	14.3%			
Wt. NCREIF ODCE+FTSE EPRA NARI	EIT	2.2%	10.4%	13.4%	3.8%	9.3%			
Value Added		-1.5%	5.0%	-0.1%	-3.1%	5.0%			
Legacy Real Estate ex Public	6.7	-0.1%	7.8%	3.3%	-17.2%	-1.5%			
Wt. NCREIF ODCE+FTSE EPRA NARI	EIT	2.2%	10.4%	13.4%	3.8%	9.3%			
Value Added		-2.3%	-2.6%	-10.1%	-21.0%	-10.8%			

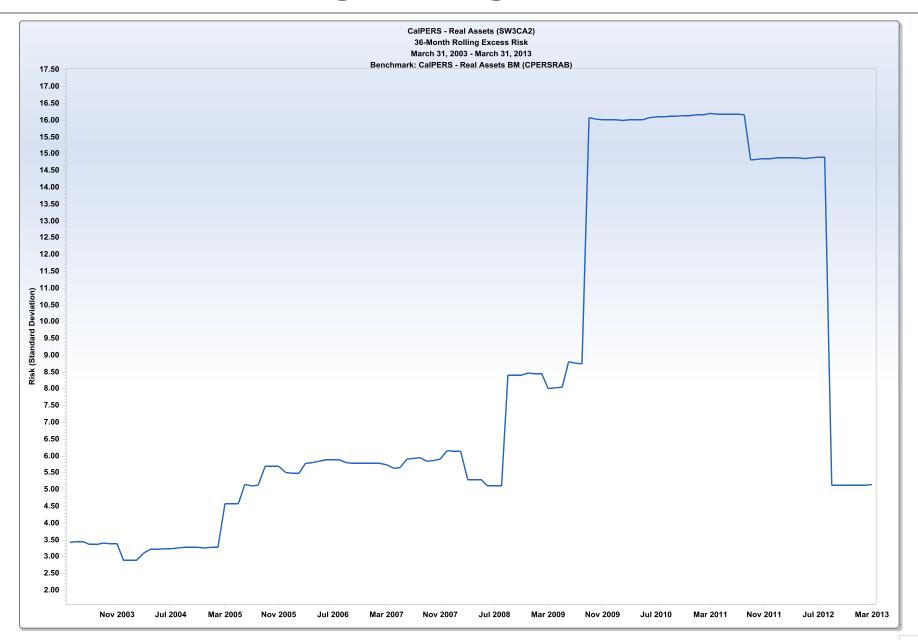
Real Assets - Rolling Excess Returns





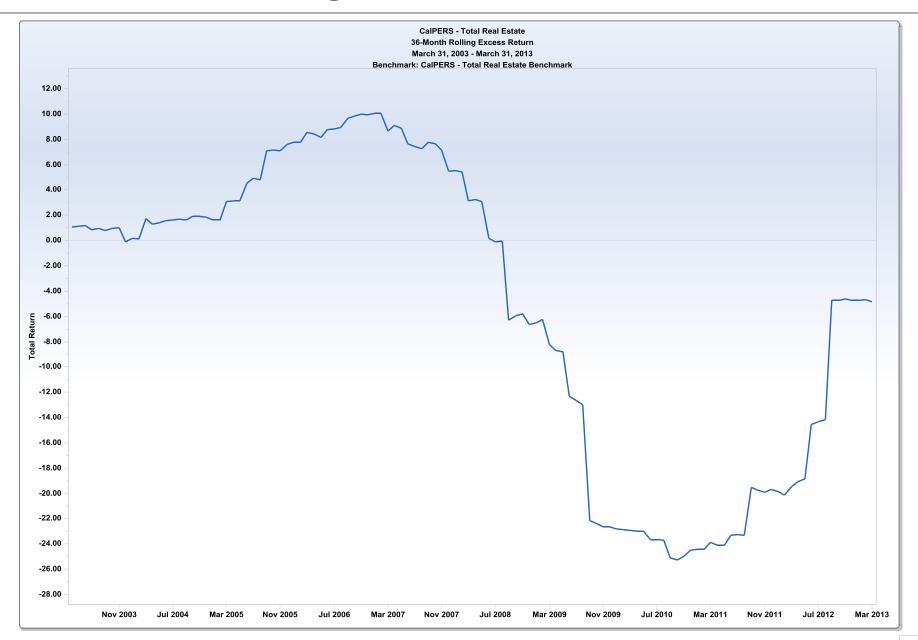
Real Assets - Rolling Tracking Error





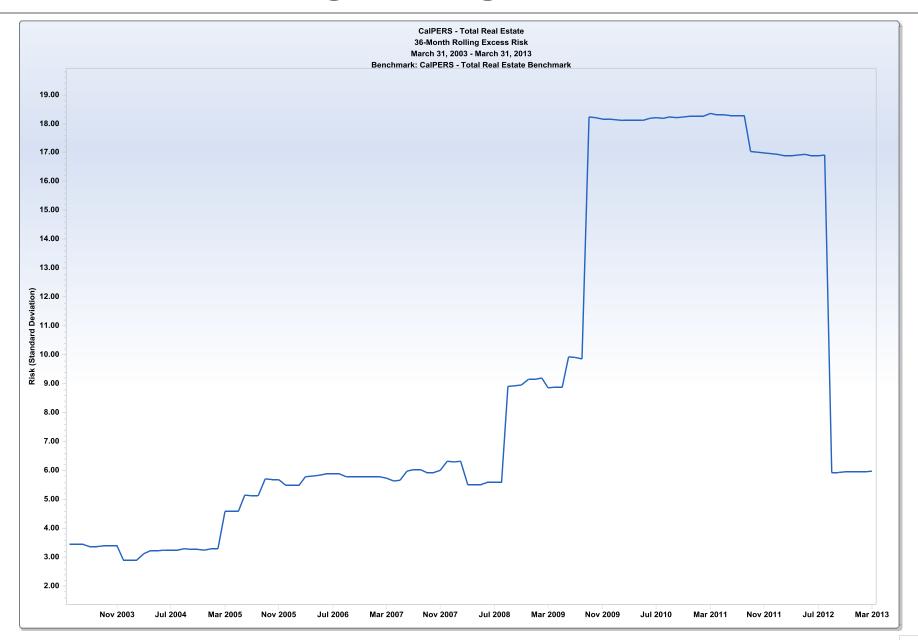
Real Estate - Rolling Excess Returns





Real Estate - Rolling Tracking Error





Hedge Fund Performance



March 31, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
DJ CS Hedge Fund Index	3.6	3.6	7.2	5.4	3.4	7.1
Event Driven Index	4.8	4.8	10.2	4.3	4.0	8.3
Global Macro Index	2.2	2.2	5.1	7.9	5.1	9.5
Long/Short Equity Index	5.1	5.1	6.1	3.9	2.9	7.5
Multi-Strategy Index	3.1	3.1	9.5	7.5	4.8	7.1
Wilshire 5000	10.9	10.9	14.1	12.8	6.3	9.3
MSCI ACWI ex-US (\$g)	3.3	3.3	8.9	4.9	0.1	11.4
Barclays Aggregate Bond Index	-0.1	-0.1	3.8	5.5	5.5	5.0
Dow Jones UBS Commodity Index	-1.1	-1.1	-3.0	1.4	-7.1	3.7



Data sources: Wilshire Compa

ARS - Distribution of Performance



	<u>Market</u> Value	Ota	1 Voor	2 Voor	5 Vaan	10 Voor	5-Year Info Ratio	5-Year Up Capture Ratio	5-Year Sharpe Ratio	
		<u>Qtr</u>	<u>1-Year</u>	3-Year	<u>5-Year</u>	<u>10-Year</u>				
Absolute Return Strategies	5.2	3.8%	5.6%	3.3%	1.7%	5.5%	-0.7	0.3	0.2	0.3
ARS Policy Benchmark		1.3%	5.3%	5.5%	6.1%	8.8%				
Value Added		2.5%	0.3%	-2.2%	-4.4%	-3.3%				
Total Direct Investments	3.6	3.6%	5.6%	4.1%	2.3%	6.0%				
Total Funds of Funds	1.6	4.1%	5.4%	1.3%	0.3%					
HFRI Fund of Funds Index		3.9%	5.3%	2.3%	-0.2%	3.9%				

ARS – Histogram of Monthly Returns



