

California Public Employees' Retirement System Performance Review – December 31, 2012

Michael Schlachter, CFA Managing Director & Principal

Andrew Junkin, CFA Managing Director & Principal

February 2013

The Fiscal Cliff: (Temporary) Resolution



What was done ...

- Income tax increases for a small percentage of the population, plus an increase in the dividend and capital gains rate from 15% to 20% for high-income earners
- Social security payroll tax holiday allowed to expire
- AMT indexed to inflation and increase on estate taxes was limited
- One year extension of extended unemployment benefits

Still remaining...

- Automatic budget cuts (sequestration) were delayed for two months
- Debt limit was reached at year-end, if it is to be raised, that will need to be done by late February

Bottom line...

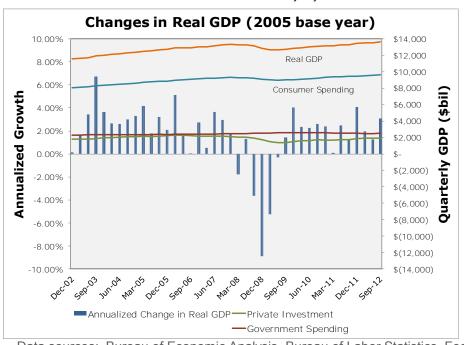
- Congressional Budget Office (CBO) estimates that the deal saved a 1.5% hit to GDP – while the remaining items could still result in a 1.25% decline
- Updated CBO outlook due Monday, February 4th continued deficits are expected although the amount is yet to be understood

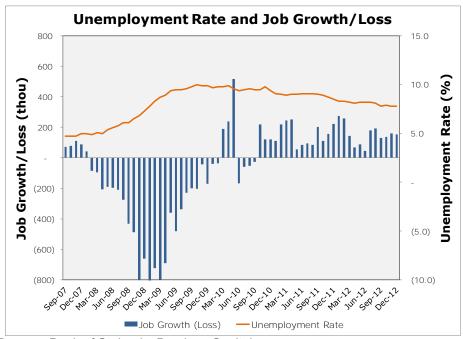
Economic Review



December 31, 2012		Key Ecoi	nomic Indicators	
CPI (all items)	Monthly C	Change	Cumulative Change)
Seasonally adjusted	Dec-12	0.0	3-Month -	0.2
	Nov-12	-0.3	12-Month	1.7
	Oct-12	0.1	10-Yr Annual	2.4
Breakeven Inflation	10-Year	2.6		
Consumer Sentiment	Dec-12	72.9		
Unv. of Michigan Survey	Nov-12	82.7		
	1-Yr Ago	69.9	10-Yr Avg 7	9.0
Manufacturing	Dec-12	50.7	Change in Manufacturing Sec	ctor
Inst. for Supply Mgmt	Nov-12	49.5	>50 Expansio	n
Purchasing Mngrs' ldx	1-Yr Avg	51.7	<50 Contracti	on

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



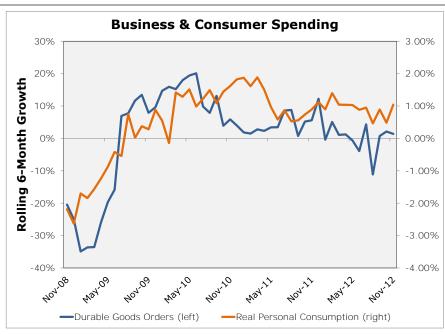


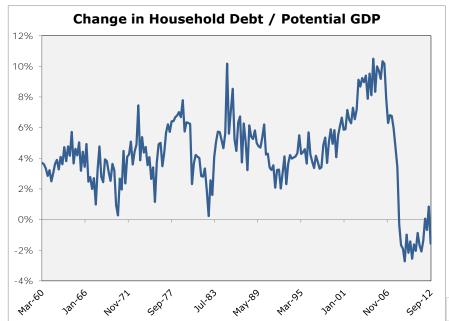
Data sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Bank of St. Louis, Barclays Capital

Spending Patterns



- Business spending (represented by Durable Goods Orders) supported the early economic recovery but has since slowed
- Growth in consumer spending has been positive since early 2010 and is currently trending at 1% for a 6-month period
- Consumer spending is by far the largest component of GDP, at 70%
- Households continue to deleverage with defaults still overwhelming new borrowing



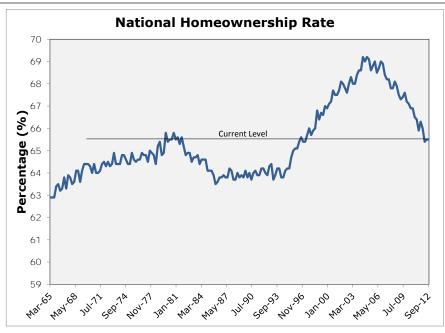


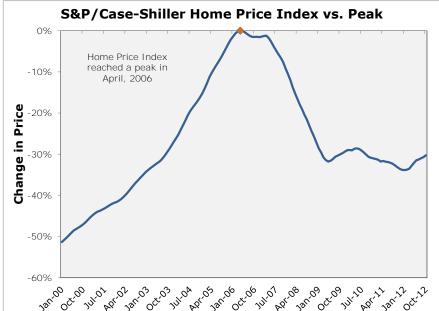
Housing Conditions



 Ownership rate in the U.S. is approaching what had been a fairly consistent level before the mid-1990's

 Home prices are back on the rise after a second downturn



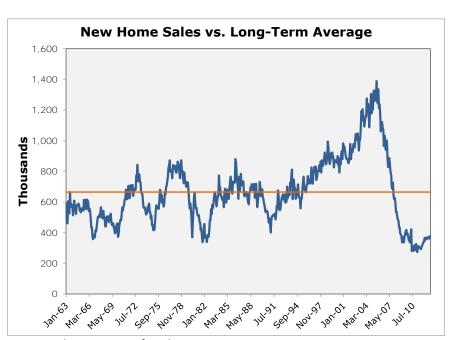


Housing Conditions



6

- Affordability low prices and low rates – highest in many decades
- Sales slowly improving
- More encouraging, housing starts have experienced a sharp increase







Sources: National Association of Realtors, Census Bureau

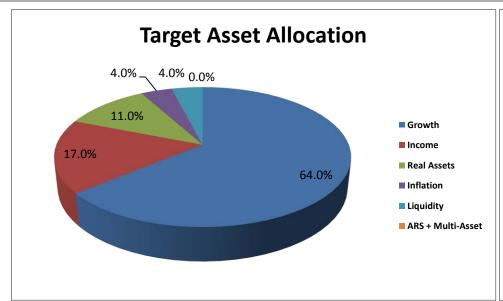
CalPERS Investments are Expected to Provide Return

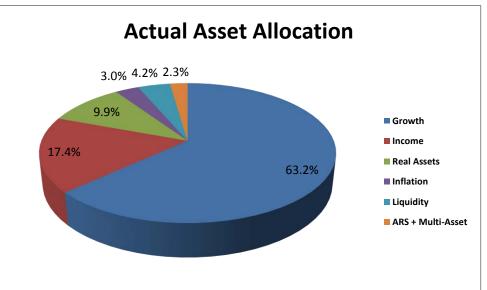


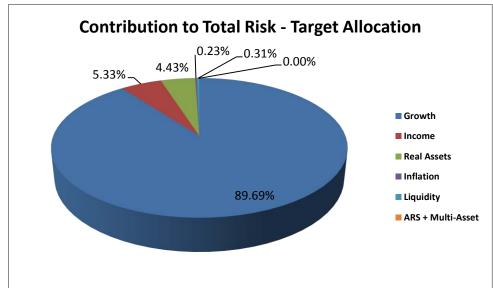


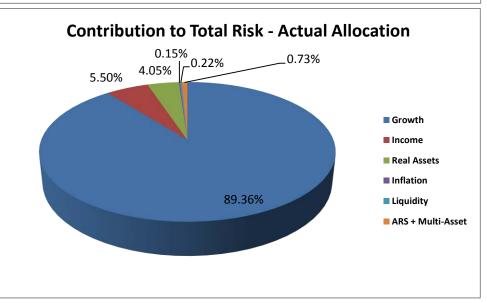
Asset and Risk Allocation





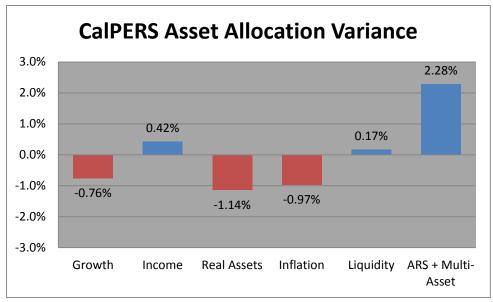


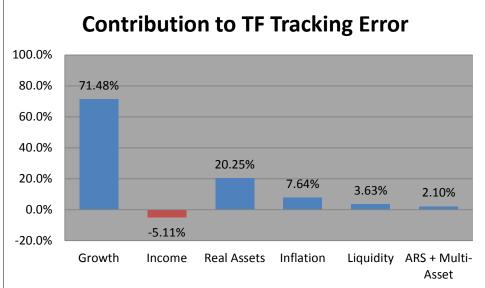




Drivers of Expected Excess Risk







- 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



	35.1.4							Five-Yea	r Ratios
TOTAL FUND Total Fund Policy Benchmark Actuarial Rate	Market <u>Value</u> \$248.8 bil	Otr 2.7% 2.8% 1.8%	1-Year 13.3% 14.4% 7.6%	3-Year 8.8% 8.9% 7.7%	5-Year 1.0% 3.4% 7.7%	10-Year 7.5% 8.3% 7.7%	<u>VaR</u> \$31.8 bil	Sharpe 0.0 0.2	<u>Info</u> -0.7 0.0
GROWTH	156.4	3.7%	16.1%	9.1%	0.4%	8.5%	\$31.3 bil	0.0	-0.5
Growth Policy Benchmark		4.2%	20.0%	8.8%	2.1%	9.2%		0.1	0.0
PUBLIC EQUITY	124.3	3.5%	17.2%	7.5%	-0.5%	8.0%	\$23.8 bil	0.0	-0.4
Public Equity Policy Benchmark		3.2%	17.1%	7.0%	0.2%	8.4%		0.0	0.0
PRIVATE EQUITY	32.1	4.4%	12.2%	15.3%	5.8%	11.5%	\$10.0 bil	0.5	-0.3
Private Equity Policy Benchmark		7.5%	28.5%	14.2%	11.1%	12.2%		0.7	0.0
INCOME	43.3	0.4%	7.6%	10.5%	8.8%	7.9%	\$5.6 bil	1.2	0.2
Income Policy Benchmark		0.1%	6.3%	9.7%	8.2%	6.9%		1.2	0.0
REAL ASSETS	24.5	1.8%	12.8%	6.0%	-11.0%	3.5%	\$2.7 bil	-0.7	-1.1
Real Assets Policy Benchmark		2.5%	10.3%	10.2%	3.1%	8.7%		0.5	0.0
INFLATION	7.6	0.9%	5.0%	7.9%	2.3%	%	\$0.5 bil	0.1	-0.1
Inflation Policy Benchmark		0.8%	6.4%	6.7%	2.8%	%		0.2	0.0
LIQUIDITY	10.4	0.0%	1.2%	1.8%	1.7%	2.5%	\$0.5 bil	N/A	N/A
Liquidity Policy Benchmark		0.0%	1.6%	2.0%	1.8%	2.5%		N/A	N/A
ABSOLUTE RETURN STRATEGIES	5.2	0.6%	3.2%	3.0%	-0.1%	5.2%		-0.1	-1.0
Absolute Return Strategies Policy Benchmark		1.3%	5.3%	5.6%	6.5%	8.6%		7.6	0.0
MULTI-ASSET CLASS COMPOSITE	0.5	%	%	%	%	%		N/A	N/A
Absolute 7.5%		%	%	%	%	%		N/A	N/A
CURRENCY + ASSET ALLOCATION TRANSITION	0.9	%	%	%	%	%			



Total Fund – Attribution (Quarter)

California Public Employees' Retirement System Total Fund Attribution - Quarter As of 12/31/2012

	Actua	l (%)	Policy	y (%)	Differe	nce (%)	Т	otal Fund Return	n Contribution (%)	
Asset Class	Weight	Return	Weight	Return	Weight	Return	Actual Allocation	Interaction	Active Management	Total
Growth	62.19	3.68	64.00	4.17	-1.81	-0.49	-0.02	0.01	-0.31	-0.33
Public Equity	48.81	3.48	50.00	3.24	-1.19	0.24	0.00	0.00	0.12	0.12
Private Equity	13.39	4.37	14.00	7.51	-0.61	-3.13	-0.03	0.02	-0.43	-0.44
Income	18.15	0.41	17.00	0.11	1.15	0.30	-0.04	0.00	0.05	0.02
Real Assets	10.05	1.77	11.00	2.48	-0.95	-0.71	0.00	0.01	-0.08	-0.07
Inflation	3.08	0.86	4.00	0.80	-0.92	0.06	0.02	0.00	0.00	0.02
Absolute Return	2.09	0.60	0.00	1.29	2.09	-0.69	-0.04	-0.01	0.00	-0.05
Liquidity	4.44	-0.01	4.00	0.00	0.44	-0.01	-0.01	0.00	0.00	-0.01
Monthly Linked Return	100.00	2.58	100.00	2.99		-0.41	-0.08	0.00	-0.34	-0.41
Trading/Hedging		0.10		-0.16		0.27	_	_		0.27
Total		2.68		2.83		-0.14				-0.14



Total Fund – Attribution (Calendar YTD)

California Public Employees' Retirement System Total Fund Attribution - Calendar Year-to-Date As of 12/31/2012

	Actua	l (%)	Policy	y (%)	Differe	nce (%)	T	otal Fund Return	n Contribution (%)	
Asset Class	Weight	Return	Weight	Return	Weight	Return	Actual Allocation	Interaction	Active Management	Total
Growth	62.97	16.13	64.00	19.96	-1.03	-3.83	-0.10	0.02	-2.38	-2.46
Public Equity	48.92	17.18	50.00	17.08	-1.08	0.10	-0.17	0.00	0.05	-0.12
Private Equity	14.05	12.25	14.00	28.45	0.05	-16.20	-0.06	-0.01	-2.28	-2.34
Income	18.02	7.64	17.00	6.29	1.02	1.35	-0.16	0.02	0.24	0.09
Real Assets	9.78	12.79	11.00	10.26	-1.22	2.53	0.03	-0.04	0.29	0.28
Inflation	3.14	5.02	4.00	6.45	-0.86	-1.43	0.07	0.01	-0.06	0.02
Absolute Return	2.17	3.23	0.00	5.25	2.17	-2.02	-0.23	-0.05	0.00	-0.28
Liquidity	3.93	1.20	4.00	1.63	-0.07	-0.43	0.01	0.00	-0.02	-0.01
Monthly Linked Return	100.00	12.94	100.00	15.29		-2.36	-0.38	-0.04	-1.93	-2.35
Trading/Hedging		0.32		-0.86		1.18				1.17
Total		13.26		14.43		-1.18				-1.18



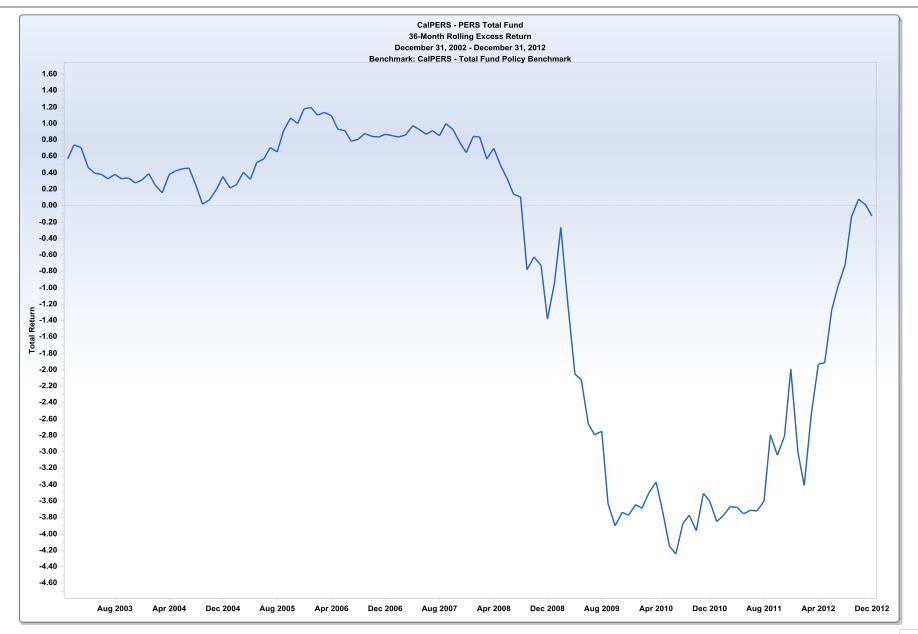
Total Fund – Attribution (Fiscal YTD)

California Public Employees' Retirement System Total Fund Attribution - Fiscal Year-to-Date As of 12/31/2012

	Actua	l (%)	Policy	y (%)	Differe	nce (%)	T	otal Fund Returi	n Contribution (%)	
Asset Class	Weight	Return	Weight	Return	Weight	Return	Actual Allocation	Interaction	Active Management	Total
Growth	62.52	9.27	64.00	9.00	-1.48	0.27	-0.03	-0.01	0.16	0.12
Public Equity	48.62	10.76	50.00	10.54	-1.38	0.22	-0.06	0.00	0.11	0.04
Private Equity	13.91	4.22	14.00	3.20	-0.09	1.01	-0.08	0.06	0.09	0.07
Income	18.21	3.39	17.00	2.51	1.21	0.88	-0.06	0.01	0.15	0.11
Real Assets	10.15	2.73	11.00	4.73	-0.85	-1.99	0.02	0.02	-0.23	-0.19
Inflation	3.09	6.80	4.00	5.76	-0.91	1.04	0.01	-0.01	0.04	0.04
Absolute Return	2.12	2.86	0.00	2.68	2.12	0.18	-0.09	0.00	0.00	-0.09
Liquidity	3.91	0.38	4.00	0.57	-0.09	-0.19	0.02	0.00	-0.01	0.01
Monthly Linked Return	100.00	6.95	100.00	6.94		0.01	-0.14	0.01	0.13	0.00
Trading/Hedging		0.14		-0.38		0.52				0.52
Total		7.09		6.56		0.53				0.53

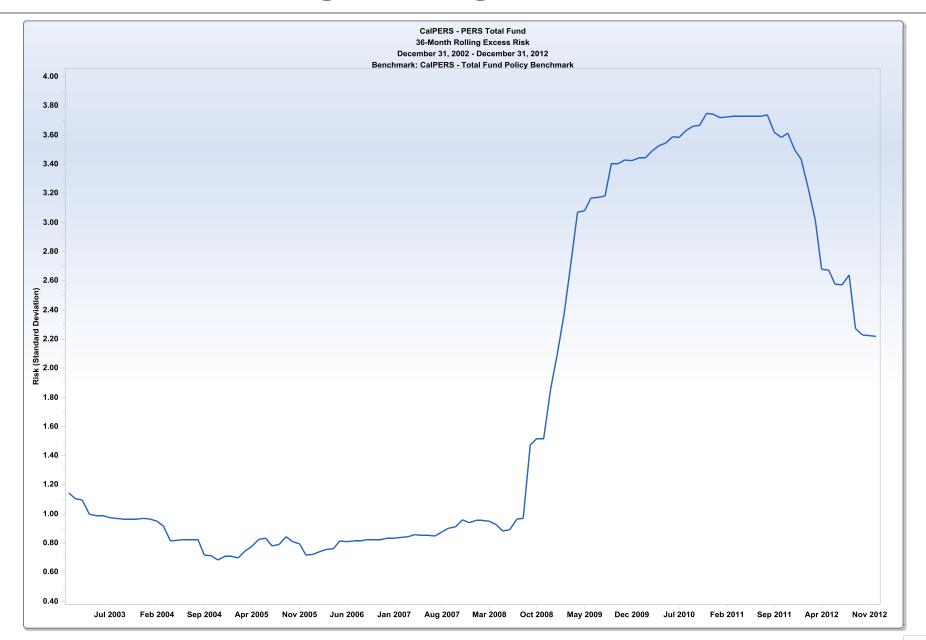






W Wilshire

Total Fund – Rolling Tracking Error

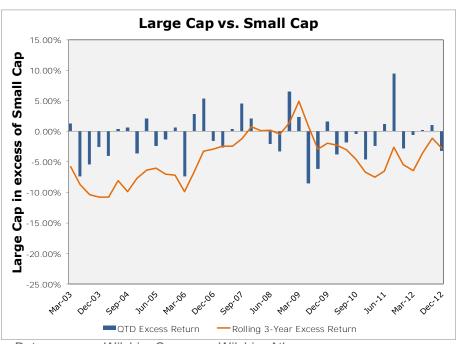


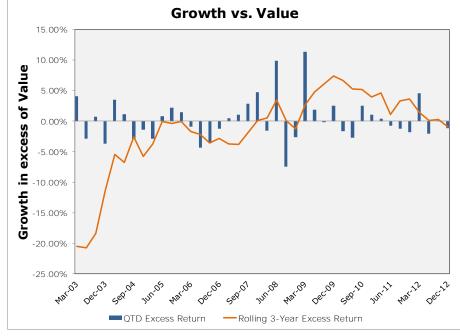
U.S. Capital Markets: Equity



December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Wilshire 5000	0.1	16.1	16.1	11.1	2.0	7.9
Wilshire U.S. Large Cap	-0.2	15.7	15.7	10.8	1.7	7.4
Wilshire U.S. Small Cap	3.1	18.8	18.8	13.9	5.5	11.5
Wilshire U.S. Large Growth	-0.7	16.9	16.9	10.1	2.7	7.5
Wilshire U.S. Large Value	0.3	14.6	14.6	11.5	0.5	7.2
Wilshire U.S. Small Growth	1.7	15.7	15.7	14.3	5.1	12.0
Wilshire U.S. Small Value	4.3	21.5	21.5	13.4	5.8	10.9
Wilshire REIT Index	2.5	17.6	17.6	18.2	5.2	11.6
MSCI USA Minimum Volatility Index	-1.8	10.2	10.2	12.0	3.5	6.9
FTSE RAFI U.S. 1000 Index	2.2	17.2	17.2	12.1	3.7	n.a.





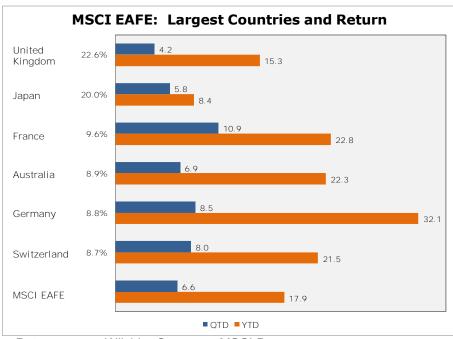


Data sources: Wilshire Compass, Wilshire Atlas



W	Wilshire

December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
MSCI ACWI ex-US (\$g)	5.9	17.4	17.4	4.3	-2.4	10.2
MSCI EAFE (\$g)	6.6	17.9	17.9	4.0	-3.2	8.7
MSCI Emerging Markets (\$g)	5.6	18.6	18.6	5.0	-0.6	16.9
MSCI Frontier Markets (\$g)	3.1	9.2	9.2	3.5	-10.2	8.7
MSCI EAFE Minimum Volatility ldx	0.3	12.0	12.0	7.0	0.7	11.0
FTSE RAFI Developed ex-US Index	7.5	15.9	15.9	2.2	-2.9	n.a.
JPM Non US Global Bond	-2.8	0.8	0.8	4.5	5.7	6.6
JPM Non US Global Bond Hedged	1.1	5.6	5.6	5.0	5.0	4.6
JPM EMBI Global	3.3	18.5	18.5	12.9	10.5	11.6
Euro vs. Dollar	2.5	1.6	1.6	-2.8	-2.1	2.3
Yen vs. Dollar	-10.0	-11.0	-11.0	2.5	5.3	3.2
Pound vs. Dollar	0.7	4.6	4.6	0.2	-4.0	0.1



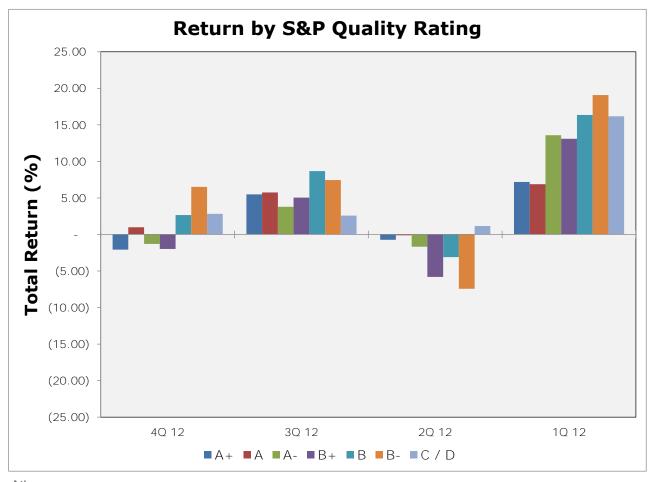




Returns by Quality Segment



Lower quality names dominated the market for 2012, with groups rated single B and lower returning 24+% while higher quality segments returned 10-14%



Data sources: Wilshire Atlas

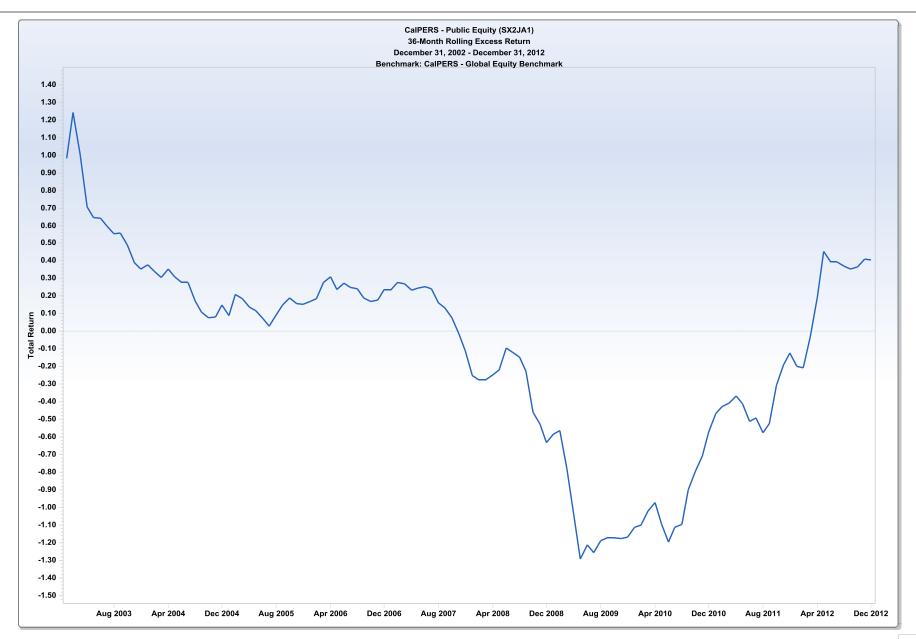
Growth: Public Equity – Performance



	Market <u>Value</u>	<u>Qtr</u>	<u>1-Year</u>	3-Year	<u>5-Year</u>	<u> 10-Year</u>	<u>VaR</u>	5-year Sharpe <u>Ratio</u>	5-year Info <u>Ratio</u>
PUBLIC EQUITY	124.3	3.5%	17.2%	7.5%	-0.5%	8.0%	\$23.8 bil	0.0	-0.4
Public Equity Policy Benchmark Value Added		3.2% 0.3%	17.1% 0.1%	7.0% 0.5%	0.2% -0.7%	8.4% -0.4%		0.0	0.0
US Equity Composite (ex ARS)	56.5	0.5%	16.3%	11.1%	1.9%	7.6%		0.1	0.1
Custom US Equity Benchmark Value Added		0.3% 0.2%	16.3% 0.0%	11.0% 0.1%	1.8% 0.1%	7.6% 0.0%		0.1	0.0
Total Int'l Equity (ex ARS)	66.2	6.2%	18.0%	4.7%	-2.3%	9.9%		-0.1	0.4
Custom Int'l Equity Benchmark Value Added		6.3% -0.1%	17.5% 0.5%	4.0% 0.7%	-2.8% 0.5%	9.6% 0.3%		-0.1	0.0
Global Equity Equitization	1.1	4.3%	18.2%	7.7%	%	%			
Custom Benchmark Value Added		3.2% 1.1%	17.1% 1.1%	7.0% 0.7%	% %	% %			

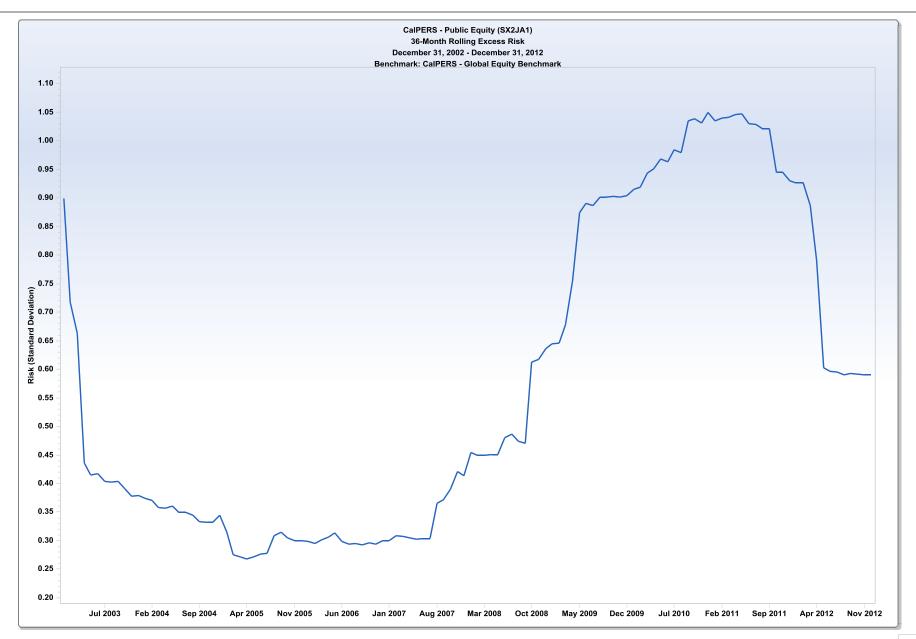
Growth: Public Equity – Rolling Excess Returns





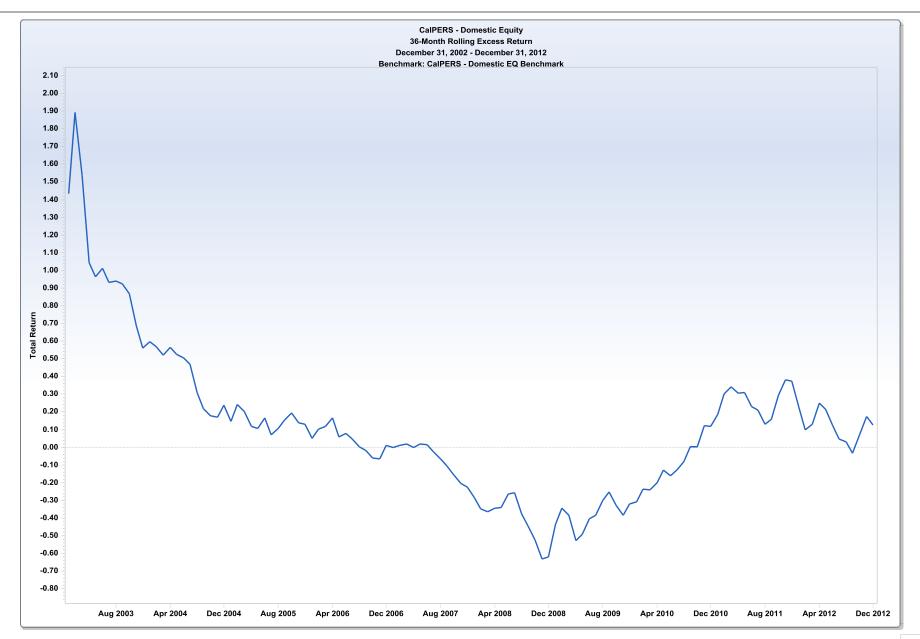
Growth: Public Equity – Rolling Tracking Error





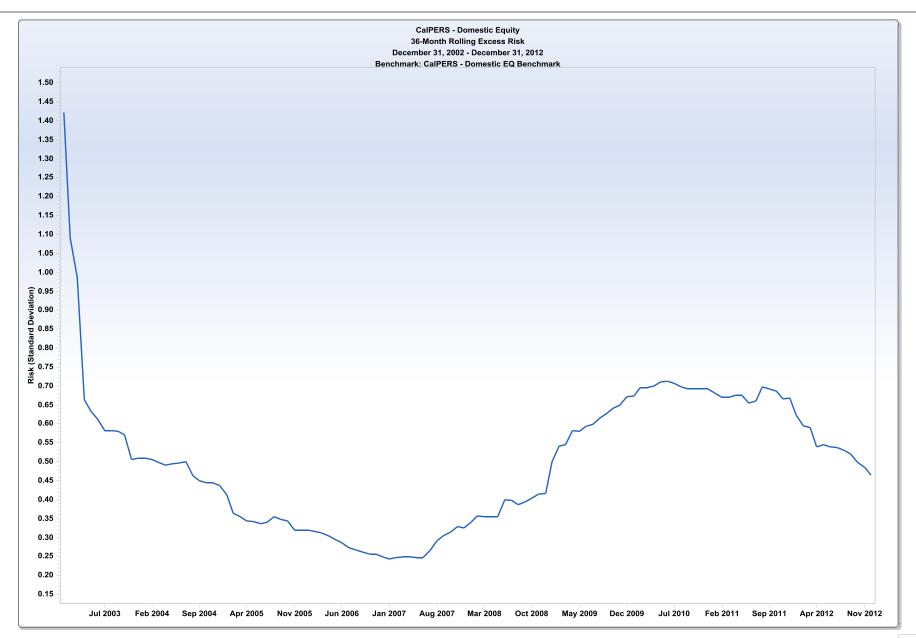
Growth: US Equity – Rolling Excess Returns





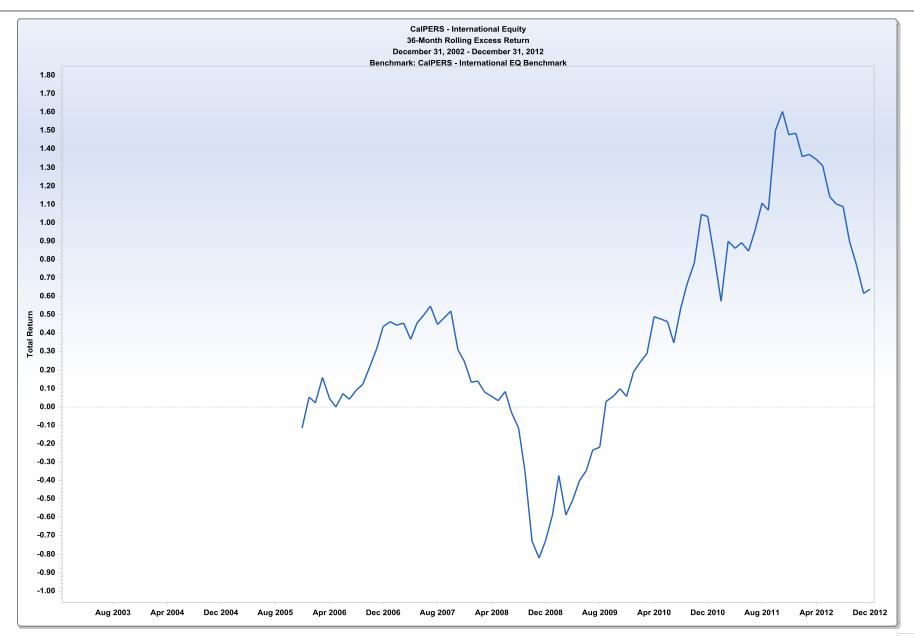
Growth: US Equity – Rolling Tracking Error





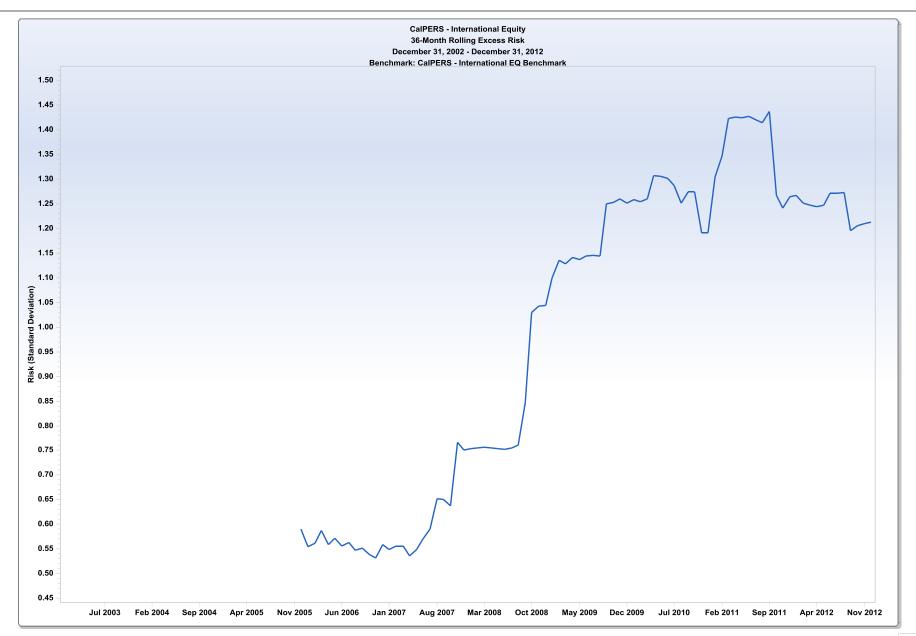
Growth: International Equity – Rolling Excess Returns





Growth: International Equity – Rolling Tracking Error





Growth: Corporate Governance/MDP/FoF



	Market <u>Value</u>	<u>Qtr</u>	1-Year	3-Year	5-Year	<u> 10-Year</u>	<u>Date</u>
Total Corporate Governance	4.3	4.7%	12.0%	5.7%	-1.8%	7.1%	12/98
Policy Benchmark		5.4%	16.1%	6.1%	-1.5%	7.1%	
Value Added		-0.7%	-4.1%	-0.4%	-0.3%	0.0%	
Total MDP	1.4	0.7%	16.1%	8.3%	0.3%	7.2%	6/00
Policy Benchmark		2.7%	17.8%	8.6%	1.8%	8.7%	
Value Added		-2.0%	-1.7%	-0.3%	-1.5%	-1.5%	
Total FoF	0.9	2.1%	16.4%	10.3%	%	%	3/08
Policy Benchmark		2.7%	17.4%	9.9%	%	%	
Value Added		-0.6%	-1.0%	0.4%	%	%	

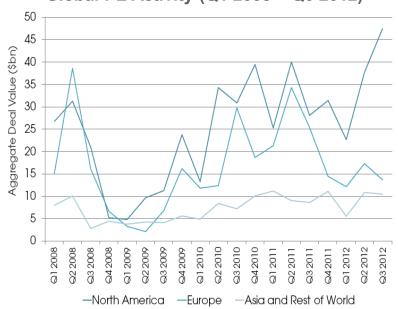
Private Equity Environment – Fundraising & Investment Activity



Global PE Fundraising (Q1 2005 - Q3 2012)



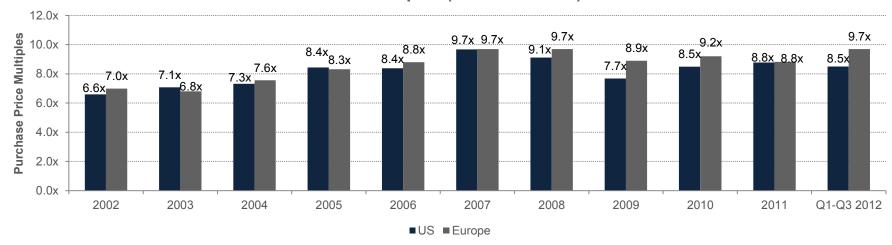
Global PE Activity (Q1 2008 - Q3 2012)



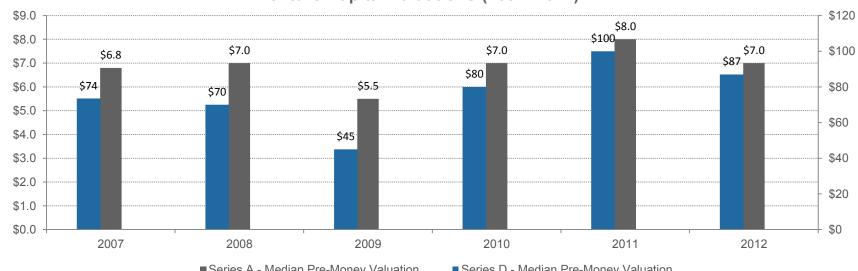
Private Equity Environment – **Pricing**



Global LBO Multiples (2002 - Q1 2012)



Venture Capital Valuations (2007–2012)



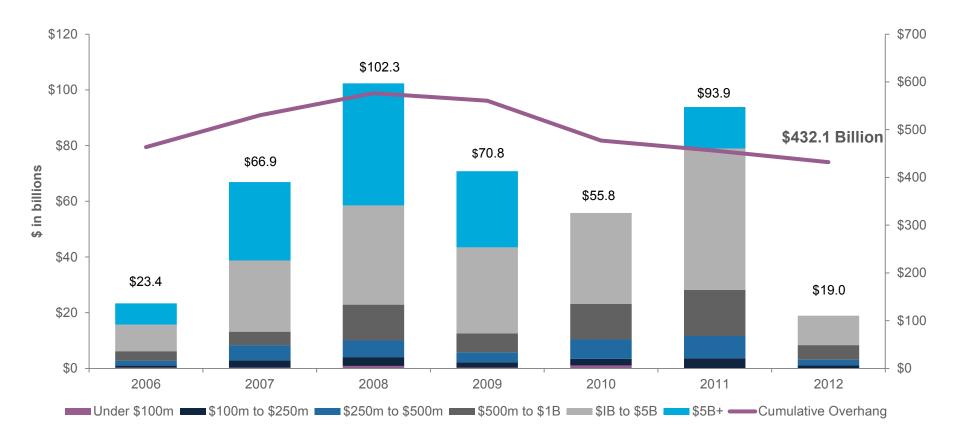
■ Series A - Median Pre-Money Valuation

Series D - Median Pre-Money Valuation

North American Private Equity Overhang



Vintage Year Overhang



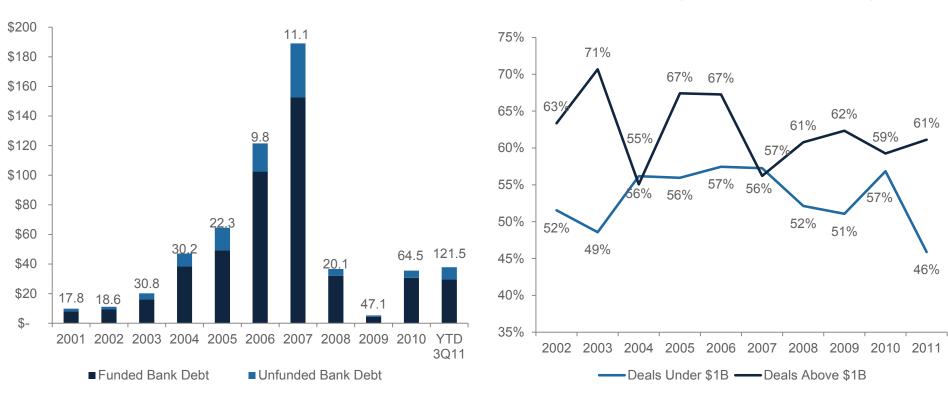
• While the total private equity overhang has decreased since its peak in 2008, there remains a large amount of capital to be deployed.

U.S. Debt Markets





Percentage of Debt Used in Buyouts



- The amount of capital available for leverage has gone down significantly since its peak volume in 2007, but continues to climb from the historically low levels in 2009.
- Transactions under \$1 billion continue to apply less leverage than those of larger deals by a significant percentage.

30

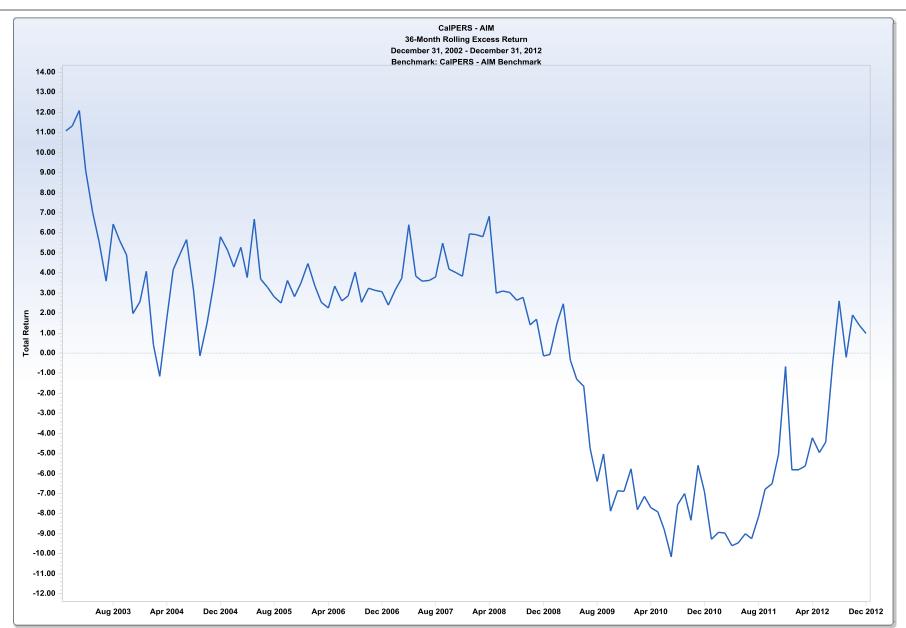
Growth: Private Equity (AIM) – Performance



PRIVATE EQUITY (AIM)	Market Value 32.1	<u>Qtr</u> 4.4%	<u>1-Year</u> 12.2%	3-Year 15.3%	5-Year 5.8%	10-Year 11.5%	<u>VaR</u> \$10.0 bil	5-year Sharpe <u>Ratio</u> 0.5	5-year Info Ratio -0.3
AIM Policy Benchmark Value Added		7.5% -3.1%	28.5% -16.3%	14.2% 1.1%	11.1% -5.3%	12.2% -0.7%		0.7	0.0
Private Equity Partnership Investments	32.0	4.4%	12.5%	15.4%	6.0%	11.6%			
Private Equity Distribution Stock	0.1	-13.5%	-52.9%	-15.8%	-5.3%	3.8%			

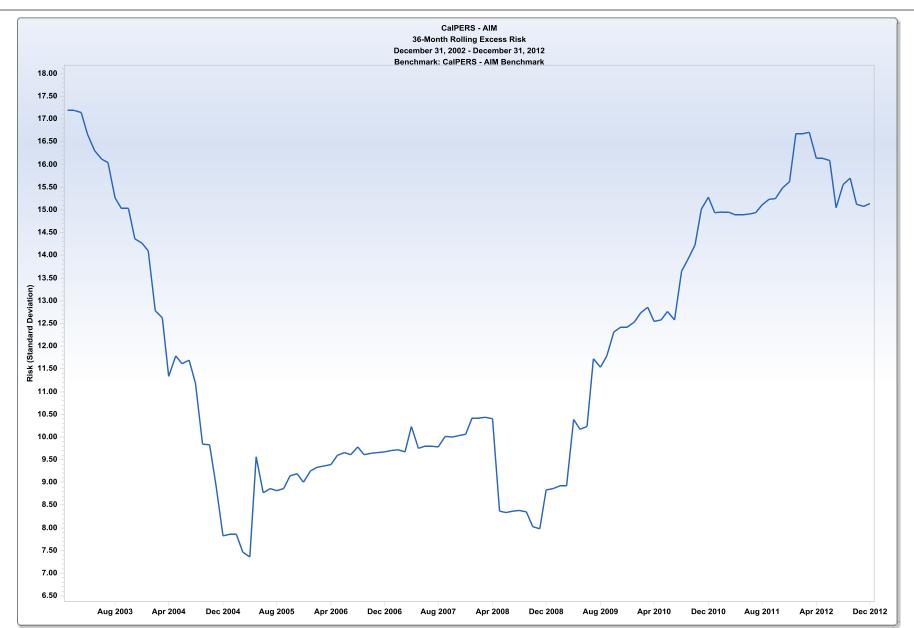
Growth: Private Equity (AIM) – Rolling Excess Returns





Growth: Private Equity (AIM) – Rolling Tracking Error

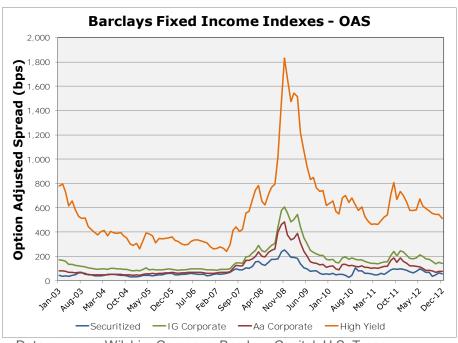


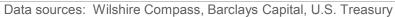


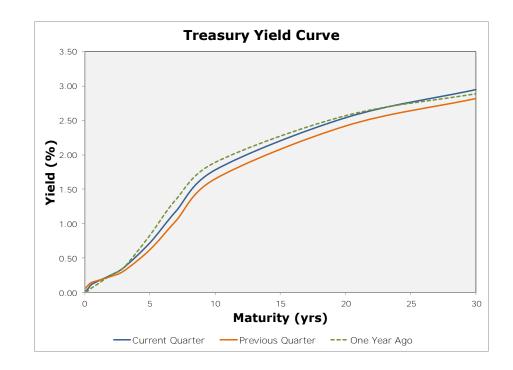


U.S. Capital Markets: Fixed Income

December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays Aggregate Bond Index	0.2	4.2	4.2	6.2	5.9	5.2
Barclays Treasury Index	-0.1	2.0	2.0	5.8	5.4	4.7
Barclays Govt-Related Index	0.5	4.9	4.9	5.5	5.5	4.9
Barclays Securitized Index	-0.1	3.0	3.0	5.2	5.6	5.0
Barclays Corporate IG Index	1.1	9.8	9.8	9.0	7.9	6.3
Barclays LT Govt/Credit Index	0.5	8.8	8.8	13.6	10.2	8.0
Barclays Long-Term Treasury Index	-0.8	3.6	3.6	13.7	9.7	7.6
Barclays U.S. TIPS Index	0.7	7.0	7.0	8.9	7.0	6.7
Barclays High Yield Index	3.3	15.8	15.8	11.9	10.3	10.6
Treasury Bills	0.0	0.1	0.1	0.1	0.5	1.8



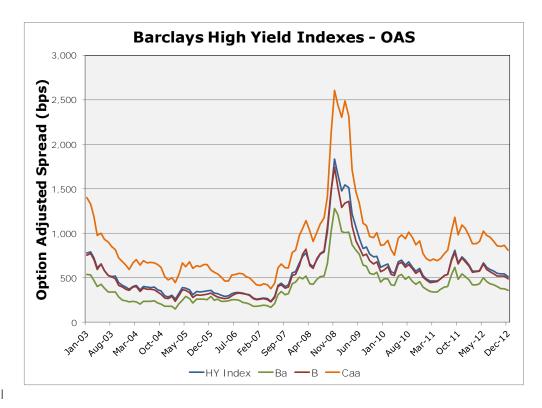




High Yield by Quality



December 31, 2012	Weight	Qtr	Ytd	1 Yr	3 Yr
Barclays High Yield Index	100%	3.3	15.8	15.8	11.9
Quality Distribution					
Ba U.S. High Yield	36.6%	2.8	14.6	14.6	11.9
B U.S. High Yield	46.1%	3.6	15.5	15.5	11.5
Caa U.S. High Yield	15.9%	3.3	18.3	18.3	11.7
Ca to D U.S. High Yield	1.1%	7.0	29.7	29.7	14.3
Non-Rated U.S. High Yield	0.4%	1.9	22.4	22.4	13.6



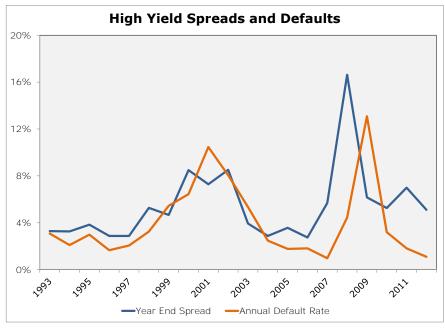
Data sources: Barclays Capital

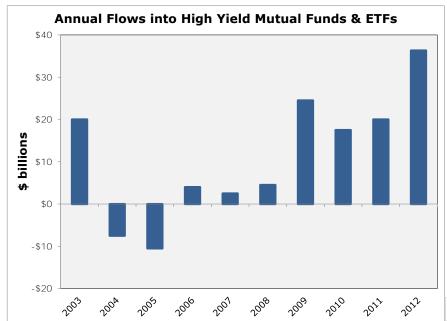
High Yield Market Conditions



- Default rates in the high yield market have come down dramatically
- Spreads have moderated but are still above pre-crisis levels

 Inflows appear very strong for 2012



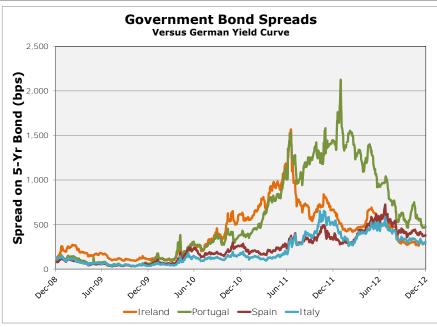


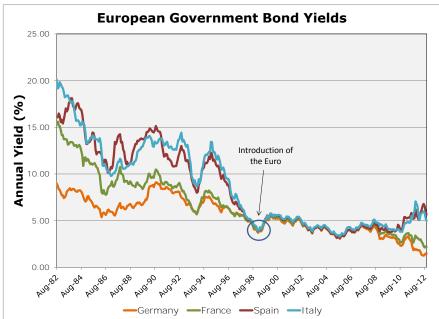
European Debt Issues

W Wilshire

 Spreads have come down during 2012 for most of the countries included in the chart except for Spain, which are up slightly

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





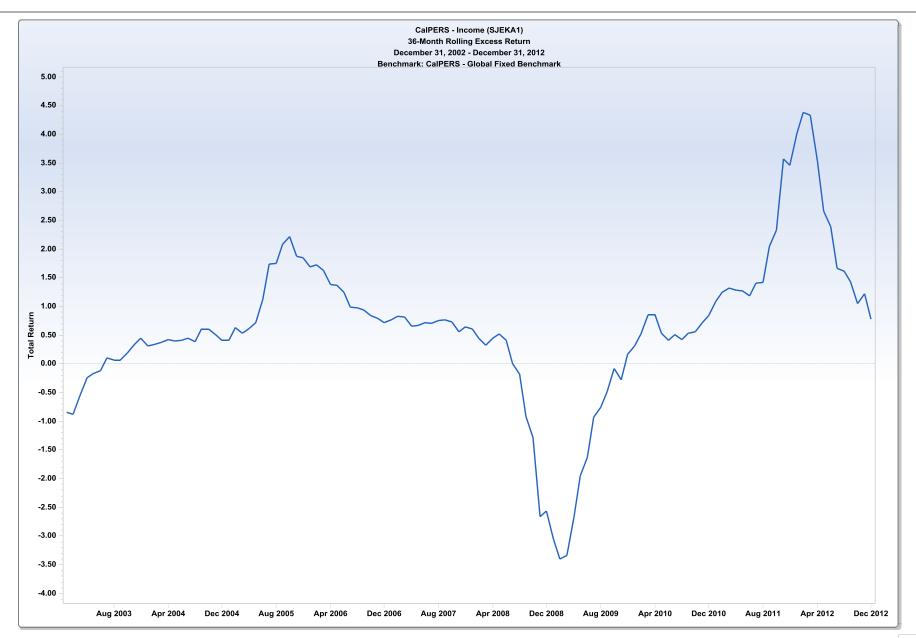
Income - Performance



INCOME Income Policy Benchmark Value Added	Market Value 43.3	Otr 0.4% 0.1% 0.3%	1-Year 7.6% 6.3% 1.3%	3-Year 10.5% 9.7% 0.8%	5-Year 8.8% 8.2% 0.6%	10-Year 7.9% 6.9% 1.0%	<u>VaR</u> \$5.6 bil	5-year Sharpe Ratio 1.2 1.2	5-year Info Ratio 0.2 0.0
U.S. Income	39.8	0.7%	8.1%	11.0%	9.0%	7.8%		1.2	0.1
U.S. Income Policy Benchmark		0.3%	6.7%	10.1%	8.5%	6.8%		1.2	0.0
Value Added		0.4%	1.4%	0.9%	0.5%	1.0%			
Non-U.S. Income	3.5	-2.4%	2.8%	6.2%	6.9%	7.3%		0.6	0.9
Non-US Income Policy Benchmark		-2.5%	1.5%	4.3%	5.3%	6.4%		0.5	0.0
Value Added		0.1%	1.3%	1.9%	1.6%	0.9%			

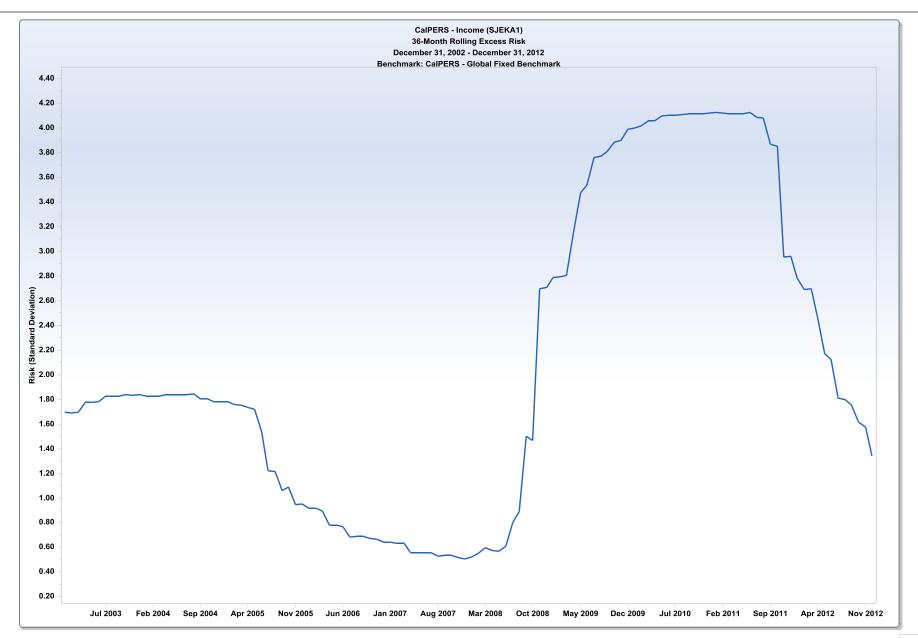
Income - Rolling Excess Returns





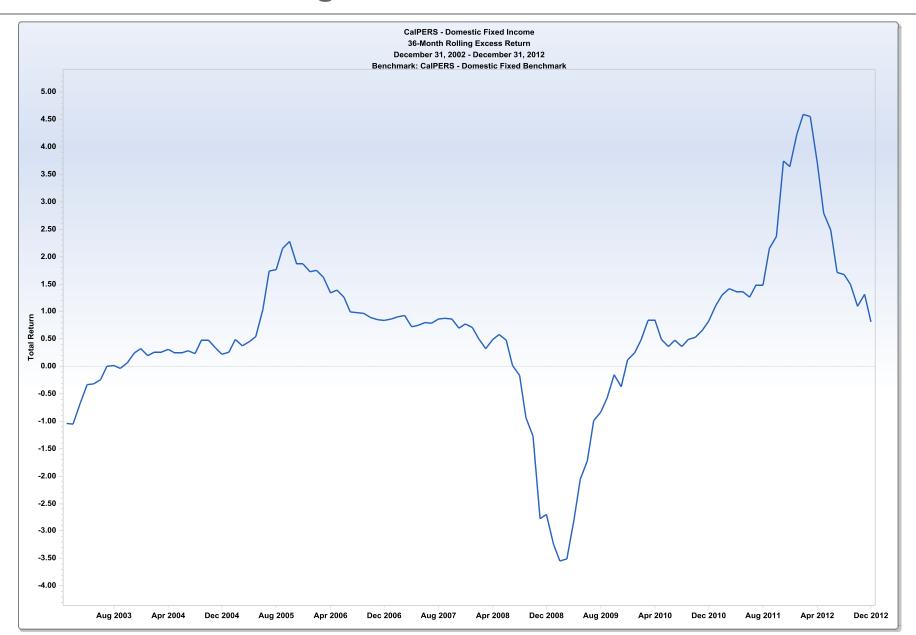
Income - Rolling Tracking Error





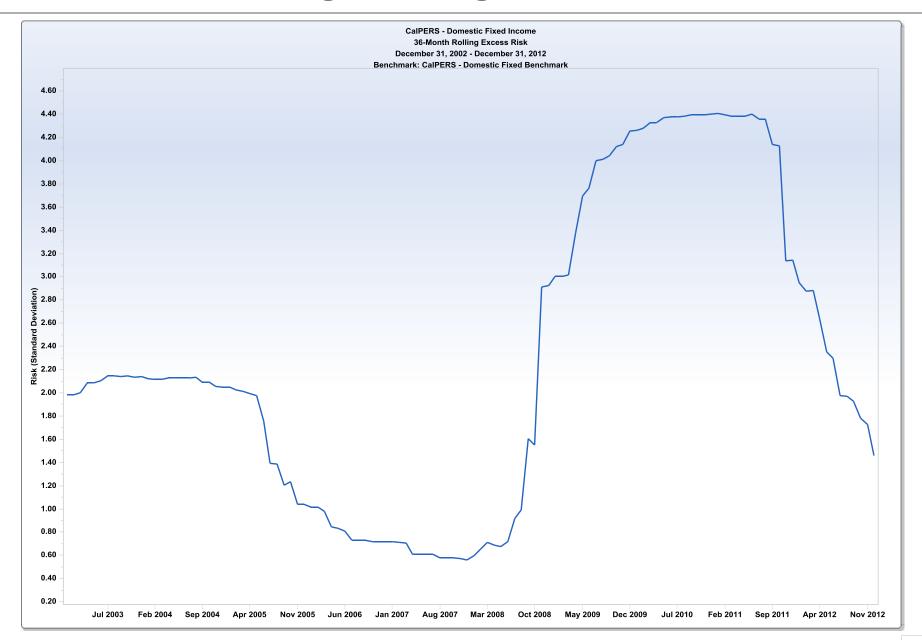
W Wilshire

US Income - Rolling Excess Returns



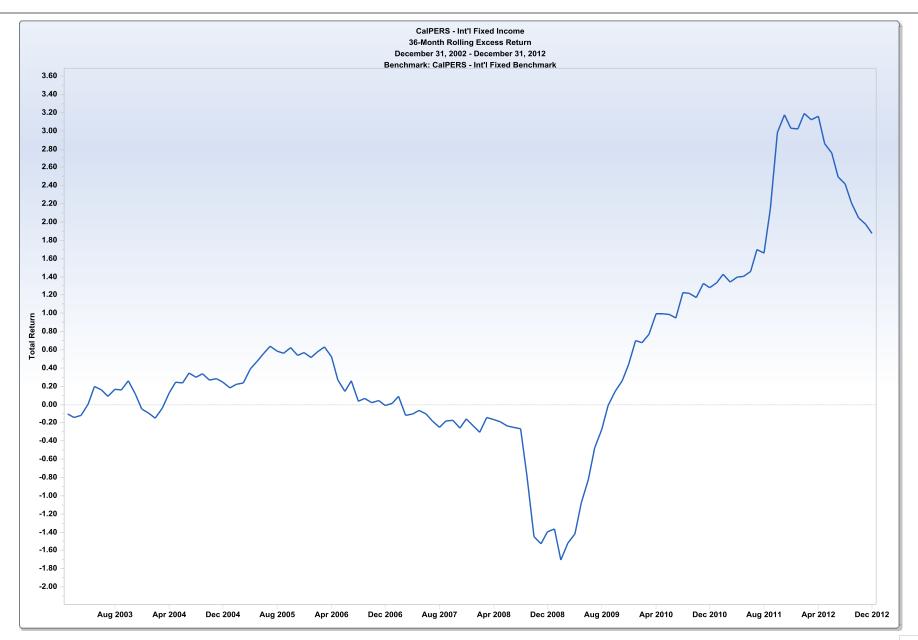
W Wilshire

US Income - Rolling Tracking Error



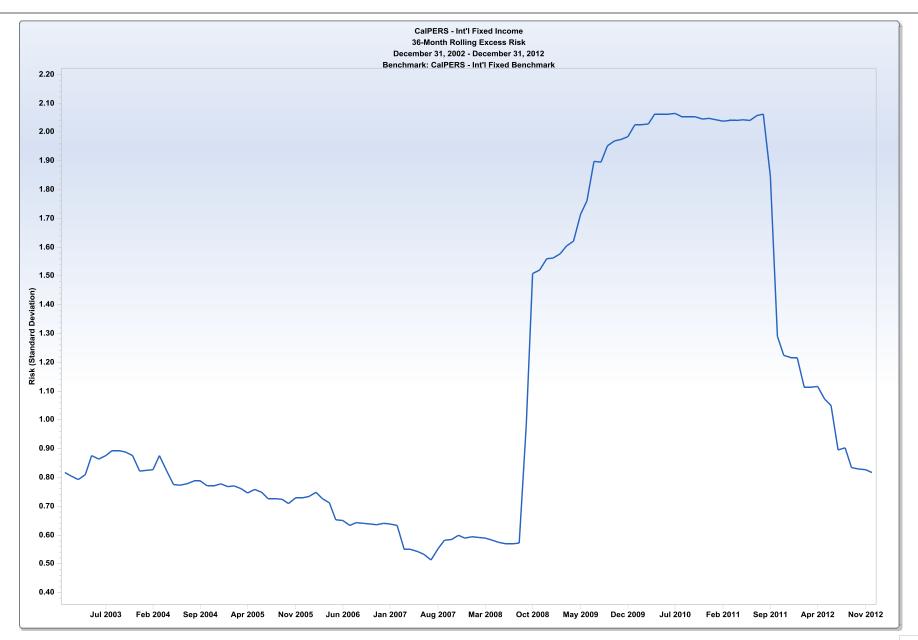
International Income – Rolling Excess Returns





International Income – Rolling Tracking Error



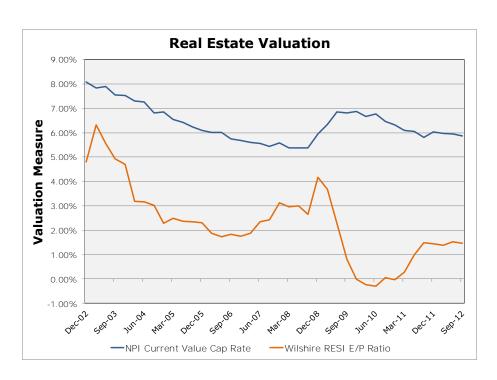


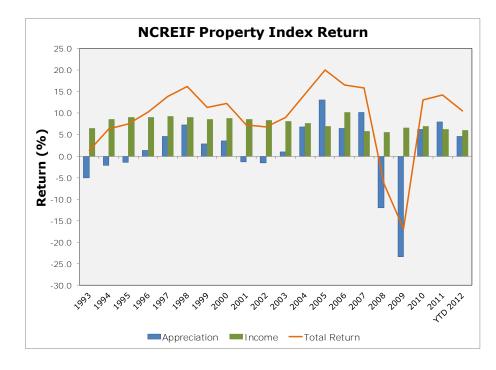
Real Assets



December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays U.S. TIPS Index	0.7	7.0	7.0	8.9	7.0	6.7
Dow Jones UBS Commodity Index	-6.3	-1.0	-1.0	0.1	-5.2	4.1
Global Public Real Estate*	3.8	23.4	23.4	16.8	3.7	12.4
NCREIF Property Index	2.5	10.5	10.5	12.6	2.1	8.4
NCREIF Timberland Index	5.9	7.8	7.8	3.0	2.7	8.2
Alerian MLP Index (Oil & Gas)	-3.4	4.8	4.8	17.5	12.5	16.5

^{*} Wilshire Global Real Estate Securities from December 2002 to December, 2004. Wilshire Global REITs from 2004 to present.





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

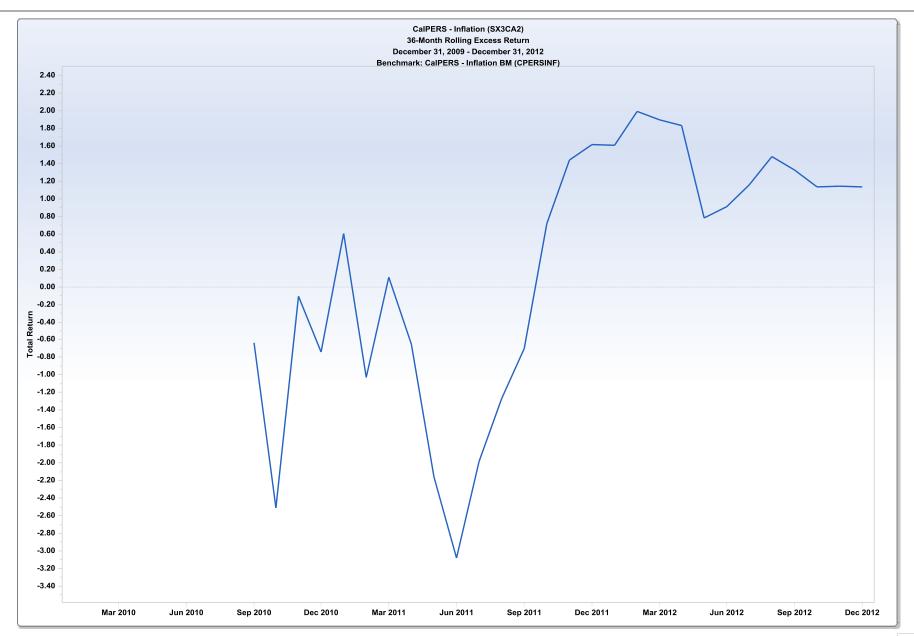
Inflation – Performance



INFLATION	Market <u>Value</u> 7.6	<u>Qtr</u> 0.9%	1-Year 5.0%	3-Year 7.9%	5-Year 2.3%	10-Year %	<u>VaR</u> \$0.5 bil	5-year Sharpe <u>Ratio</u> 0.1	5-year Info <u>Ratio</u> -0.1
Inflation Policy Benchmark		0.8%	6.4%	6.7%	2.8%	%		0.2	0.0
Value Added		0.1%	-1.4%	1.2%	-0.5%	%			
Commodities	1.6	-2.8%	-0.3%	3.0%	-8.2%	%			
GSCI Total Return Index		-3.3%	0.1%	2.5%	-8.2%	%			
Value Added		0.5%	-0.4%	0.5%	0.0%	%			
Inflation Linked Bonds	6.0	2.5%	8.1%	8.5%	%	%			
Custom Benchmark		2.2%	8.2%	8.2%	%	%			
Value Added		0.3%	-0.1%	0.3%	%	%			

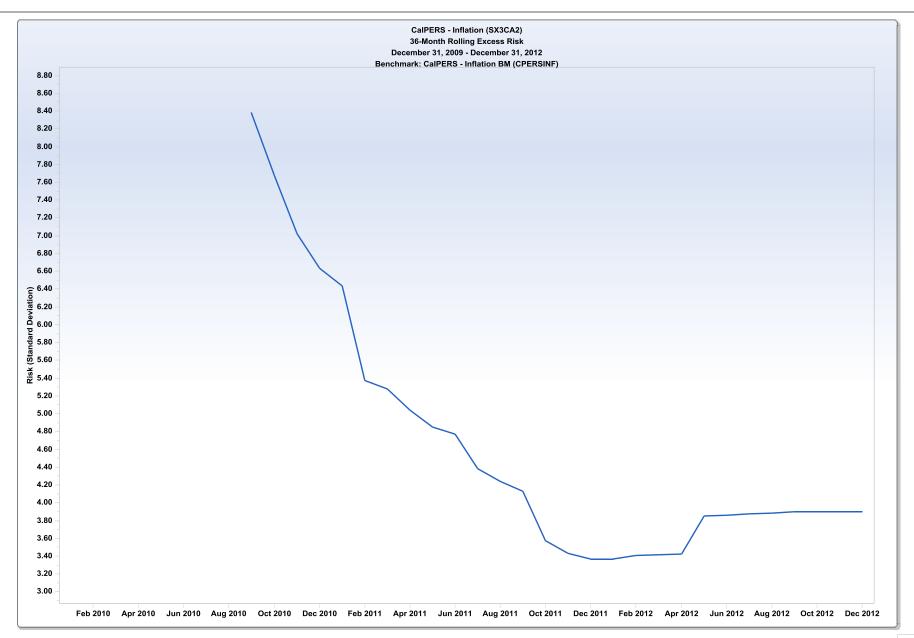
Inflation - Rolling Excess Returns





Inflation – Rolling Tracking Error





Real Assets - Performance



REAL ASSETS	Market Value 24.5	<u>Qtr</u> 1.8%	<u>1-Year</u> 12.8%	3-Year 6.0%	<u>5-Year</u> -11.0%	10-Year 3.5%	<u>VaR</u> \$2.7 bil	5-year Sharpe Ratio -0.7	5-year Info <u>Ratio</u> -1.1
Real Assets Policy Benchmark		2.5%	10.3%	10.2%	3.1%	8.7%		0.5	0.0
Value Added		-0.7%	2.5%	-4.2%	-14.1%	-5.2%			
Real Estate	21.3	1.9%	15.5%	6.9%	-12.2%	2.8%	\$2.9 bil	-0.7	-1.1
Real Estate Policy Benchmark		2.7%	11.6%	12.2%	4.0%	9.2%		0.5	0.0
Value Added		-0.8%	3.9%	-5.3%	-16.2%	-6.4%			
Forestland	2.1	0.4%	-7.1%	-3.8%	-0.6%	%			
NCREIF Timberland Index		0.7%	2.2%	-0.5%	3.3%	%			
Value Added		-0.3%	-9.3%	-3.3%	-3.9%	%			
Infrastructure	1.1	2.7%	6.9%	18.7%	12.3%	%			
CPI + 400 BPS 1Qtr Lag		1.8%	6.1%	7.3%	7.0%	%			
Value Added		0.9%	0.8%	11.4%	5.3%	%			

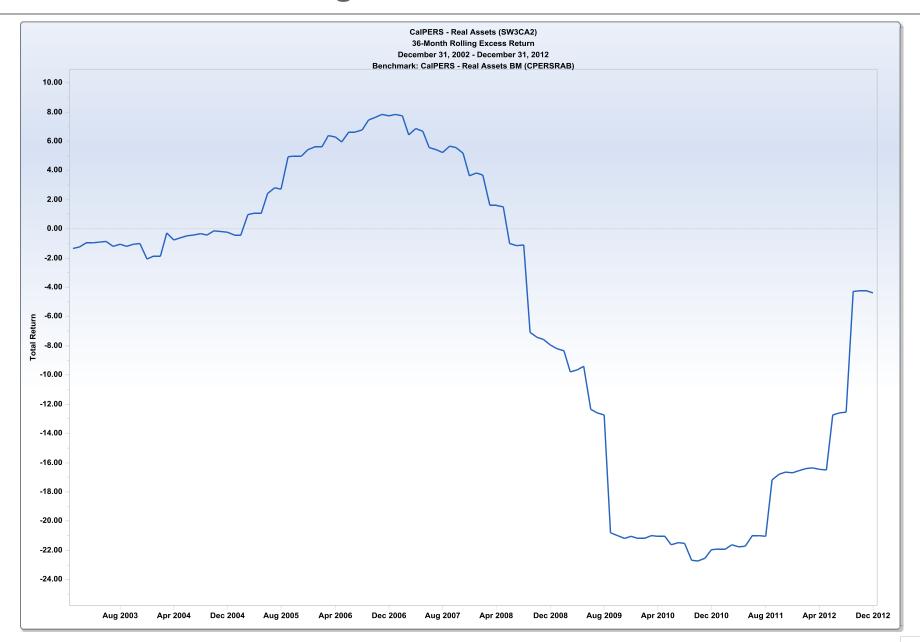
Real Estate - Performance



	Market Value	<u>Qtr</u>	<u>1-Year</u>	3-Year	5-Year	<u>10-Year</u>	<u>VaR</u>	5-year Sharpe <u>Ratio</u>	5-year Info <u>Ratio</u>
Real Estate	21.3	1.9%	15.5%	6.9%	-12.2%	2.8%	\$2.9 bil	-0.7	-1.1
Real Estate Policy Benchmark Value Added		2.7% -0.8%	11.6% 3.9%	12.2% -5.3%	4.0% -16.2%	9.2% -6.4%		0.5	0.0
Strategic Real Estate	13.6	1.4%	17.3%	13.4%	5.1%	14.5%			
Wt. NCREIF ODCE+FTSE EPRA NAREI	T	2.7%	11.6%	12.2%	4.0%	9.2%			
Value Added		-1.3%	5.7%	1.2%	1.1%	5.3%			
Legacy Real Estate ex Public	7.0	2.3%	10.5%	1.9%	-18.2%	-1.2%			
Wt. NCREIF ODCE+FTSE EPRA NAREI	T	2.7%	11.6%	12.2%	4.0%	9.2%			
Value Added		-0.4%	-1.1%	-10.3%	-22.2%	-10.4%			
Public REITS	0.7	5.8%	28.5%	12.9%	0.2%	11.0%			
FTSE EPRA/NAREIT DE Index		5.8%	28.7%	13.4%	1.1%	12.1%			
Value Added		0.0%	-0.2%	-0.5%	-0.9%	-1.1%			

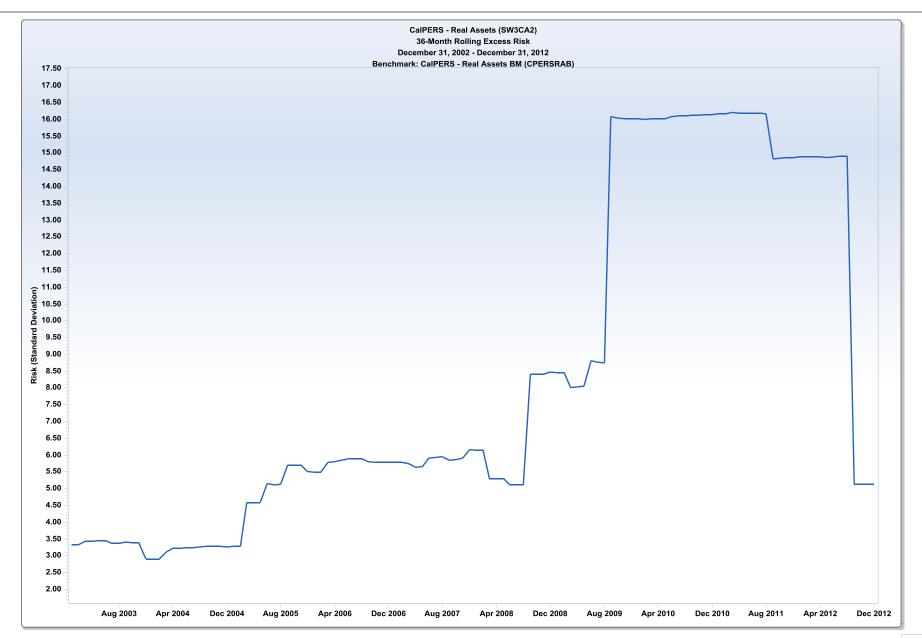
W Wilshire

Real Assets - Rolling Excess Returns



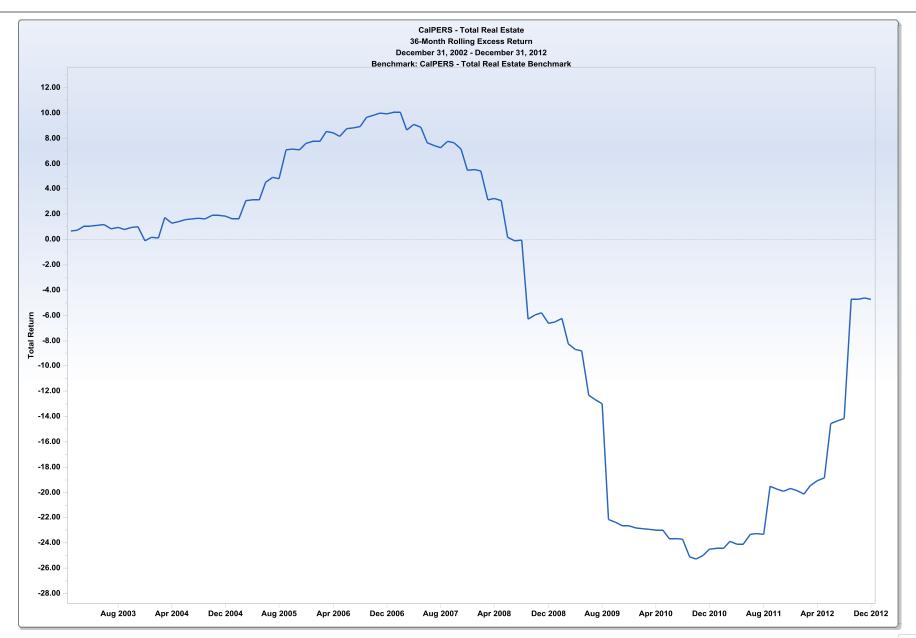
Real Assets - Rolling Tracking Error





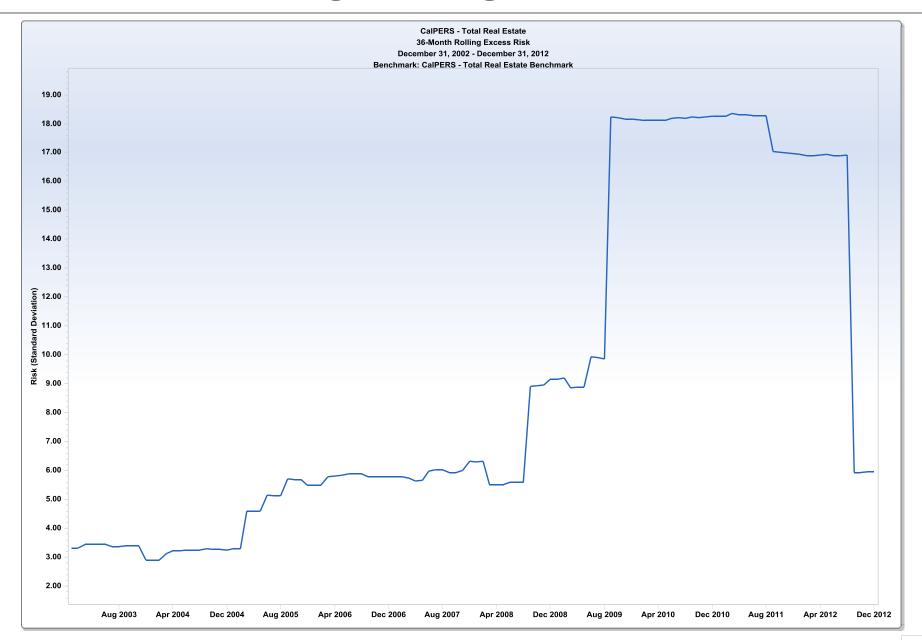
Real Estate - Rolling Excess Returns





W Wilshire

Real Estate - Rolling Tracking Error



Hedge Fund Performance



December 31, 2012	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
DJ CS Hedge Fund Index	2.0	7.7	7.7	5.2	2.2	6.9
Event Driven Index	3.2	10.6	10.6	4.2	2.3	8.2
Global Macro Index	1.3	4.6	4.6	8.1	6.1	9.6
Long/Short Equity Index	2.1	8.2	8.2	3.1	1.0	7.0
Multi-Strategy Index	2.7	11.2	11.2	7.4	3.3	7.0
Wilshire 5000	0.1	16.1	16.1	11.1	2.0	7.9
MSCI ACWI ex-US (\$g)	5.9	17.4	17.4	4.3	-2.4	10.2
Barclays Aggregate Bond Index	0.2	4.2	4.2	6.2	5.9	5.2
Dow Jones UBS Commodity Index	-6.3	-1.0	-1.0	0.1	-5.2	4.1



ARS – Distribution of Performance



	<u>Market</u> Value	<u>Qtr</u>	1-Year	3-Year	<u>5-Year</u>	10-Year	5-Year Info Ratio	5-Year Up Capture Ratio	5-Year Sharpe Ratio	
Absolute Return Strategies	5.2	0.6%	3.2%	3.0%	<u>-0.1%</u>	5.2%	-1.0	0.0	-0.1	-0.1
Absolute Return Strategies	3.4	0.0 70	3.4 70	3.0 70	-0.1 70	3.470	-1.0	0.0	-0.1	-0.1
ARS Policy Benchmark		1.3%	5.3%	5.6%	6.5%	8.6%				
Value Added		-0.7%	-2.1%	-2.6%	-6.6%	-3.4%				
Total Direct Investments	3.6	0.3%	3.4%	4.0%	0.5%	5.7%				
Total Funds of Funds	1.5	1.3%	2.8%	0.3%	-0.9%					
HFRI Fund of Funds Index		2.4%	2.9%	1.5%	-1.7%	3.6%				

ARS – Histogram of Monthly Returns



