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***California Public Employees' Retirement System***

*Performance Review – June 30, 2013*

*Michael Schlachter, CFA  
Managing Director & Principal*

*Andrew Junkin, CFA  
Managing Director & Principal*

*August 2013*



# Asset Class Assumptions Update

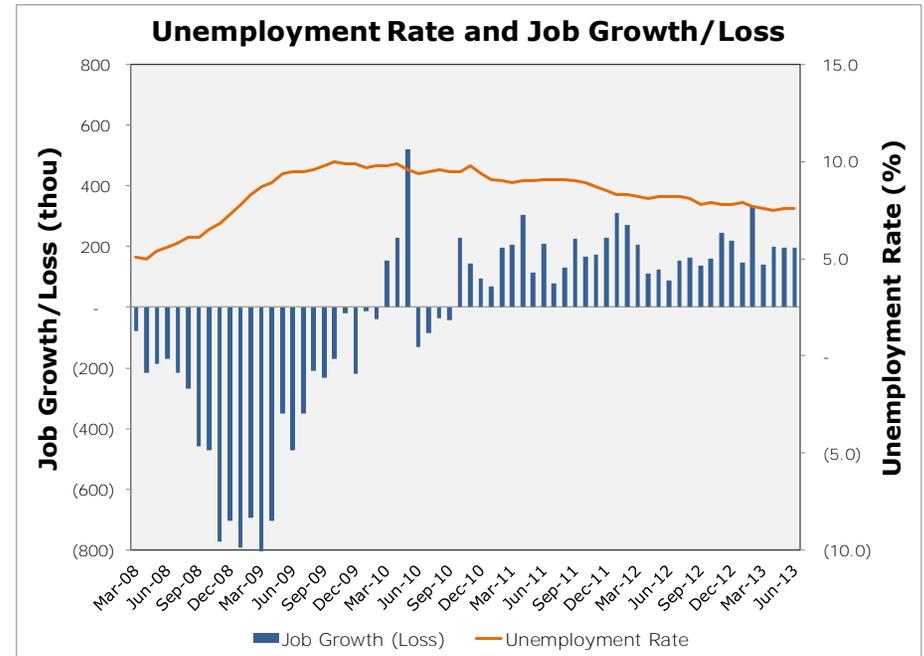
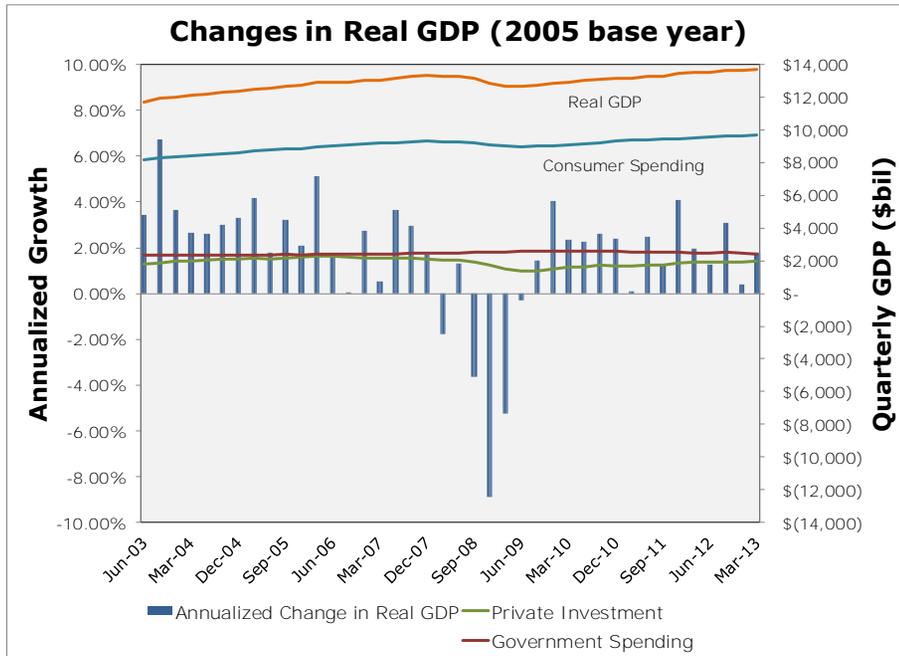
	Total Return (%)			Risk (%)
	2013 ACA	Q2 2013	Change vs YE	2013 ACA
<u>Investment Categories:</u>				
U.S. Stocks	7.75	7.25	(0.50)	17.00
Dev ex-U.S. Stocks	7.75	7.25	(0.50)	18.00
Emerging Mkt Stocks	7.75	7.25	(0.50)	26.00
Global Stocks	8.00	7.50	(0.50)	17.30
Private Markets	10.75	10.45	(0.30)	27.50
Cash Equivalents	1.55	1.30	(0.25)	1.25
Core Bonds	3.25	3.75	0.50	5.00
LT Core Bonds	3.10	4.35	1.25	10.00
TIPS	2.60	3.40	0.80	6.00
High Yield Bonds	5.15	5.35	0.20	10.00
Non-U.S. Bonds (Hdg)	2.90	3.40	0.50	3.50
U.S. RE Securities	5.30	4.90	(0.40)	15.00
Private Real Estate	6.05	5.65	(0.40)	12.25
Commodities	4.55	4.05	(0.50)	13.00
Real Asset Basket	6.35	6.15	(0.20)	7.75
<u>Inflation:</u>	2.55	2.05	(0.50)	1.75
<u>Returns minus Inflation:</u>				
U.S. Stocks	5.20	5.20	-	
U.S. Bonds	0.70	1.70	1.00	
Cash Equivalents	(1.00)	(0.75)	0.25	
<u>Stocks minus Bonds:</u>	4.50	3.50	(1.00)	
<u>Bonds minus Cash:</u>	1.70	2.45	0.75	



# Economic Review

June 30, 2013	Key Economic Indicators			
<b>CPI (all items)</b> Seasonally adjusted	Monthly Change		Cumulative Change	
	Jun-13	0.5	3-Month	0.3
	May-13	0.1	12-Month	1.8
	Apr-13	-0.4	10-Yr Annual	2.4
Breakeven Inflation	10-Year	2.0		
<b>Consumer Sentiment</b> Unv. of Michigan Survey	Jun-13	84.1		
	May-13	84.5		
	1-Yr Ago	73.2	10-Yr Avg	78.7
<b>Manufacturing</b> Inst. for Supply Mgmt Purchasing Mngrs' Idx	Jun-13	50.9	Change in Manufacturing Sector	
	May-13	49.0	>50	Expansion
	1-Yr Avg	51.2	<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

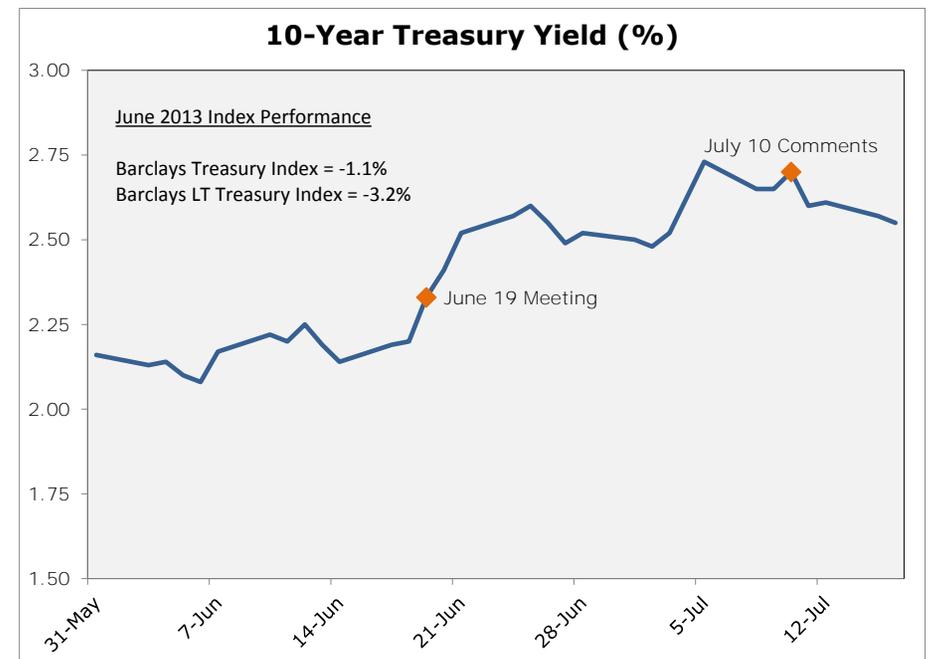


## Fed Statement of June 19<sup>th</sup>

- Excerpt from Chairman Bernanke's press conference:
 

“If the incoming data are broadly consistent with this forecast [of moderate, improving growth], the Committee...anticipates that it would be appropriate to moderate the monthly pace of purchases later this year...ending purchases around midyear [2014].”
- Yields responded quickly with the 10-Year Treasury rate up 40 bps in 5 days
- Equity investors reacted as well, with the equity market down -4.8% in 4 days
- Investors found reassurance in Bernanke's comments of July 10<sup>th</sup>:
 

“Highly accommodative monetary policy for the foreseeable future is what's needed”
- Global equities experienced a mini-rally and the 10-Year ticked lower



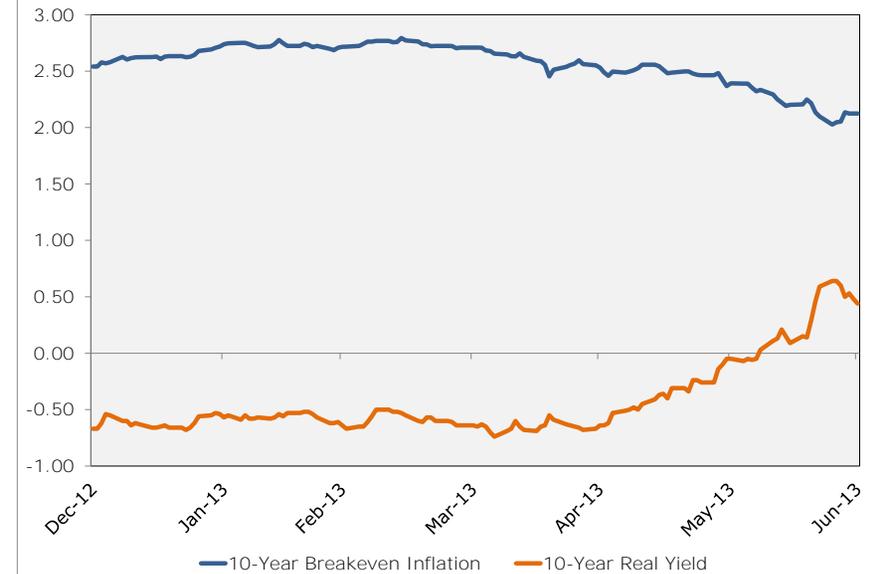
Source: Federal Reserve, U.S. Department of Treasury, Barclays Capital



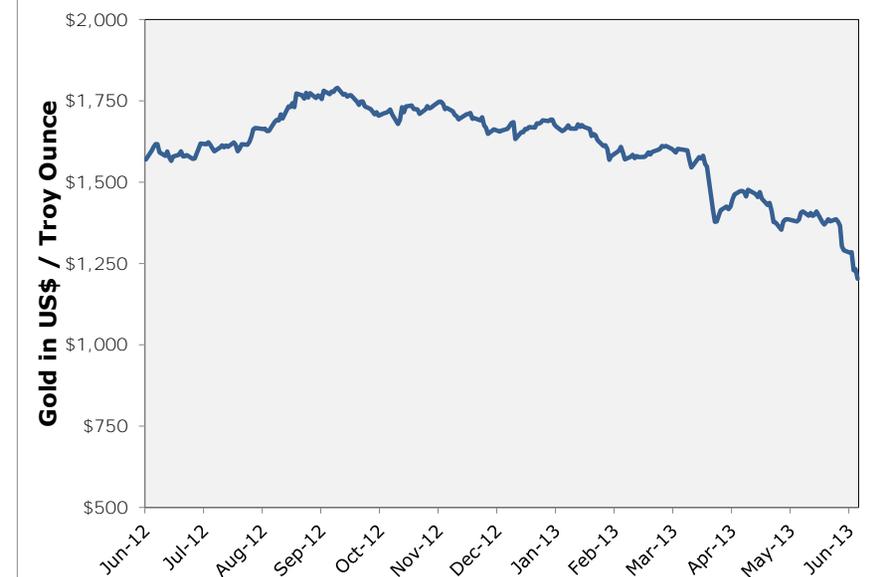
## Inflation Signals

- Inflation expectations remain subdued as investors don't seem to think moderate growth will lead to higher inflation
- Breakeven inflation was on the decline for most of the quarter
- Real yields have moved dramatically higher along with nominal yields
- Commodity prices have suffered
  - Global economic growth is below the long-term trend
  - Gold prices were down -23% for the quarter
  - DJUBS Commodity Index down -10% for 2013

Effects of TIPS Pricing (%)



Gold Prices

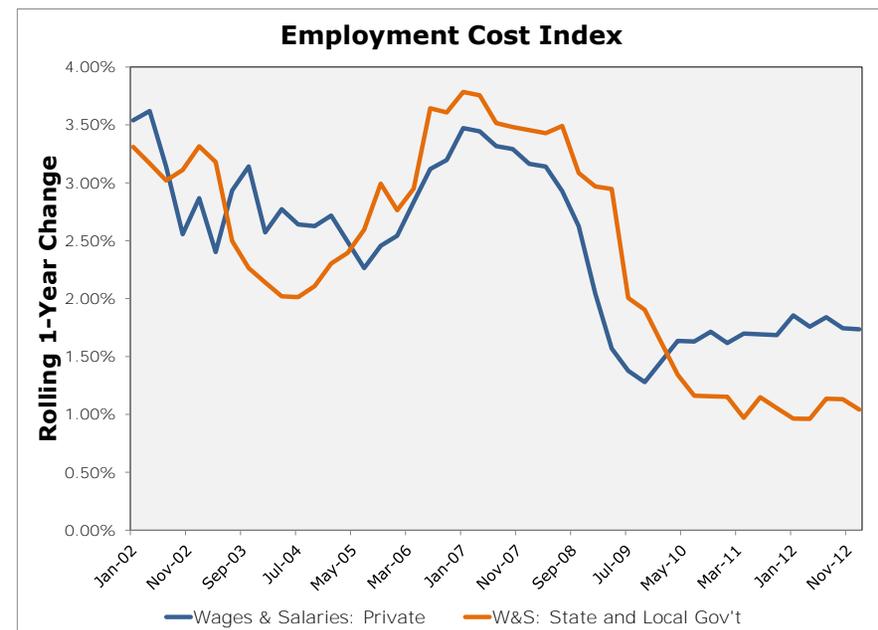
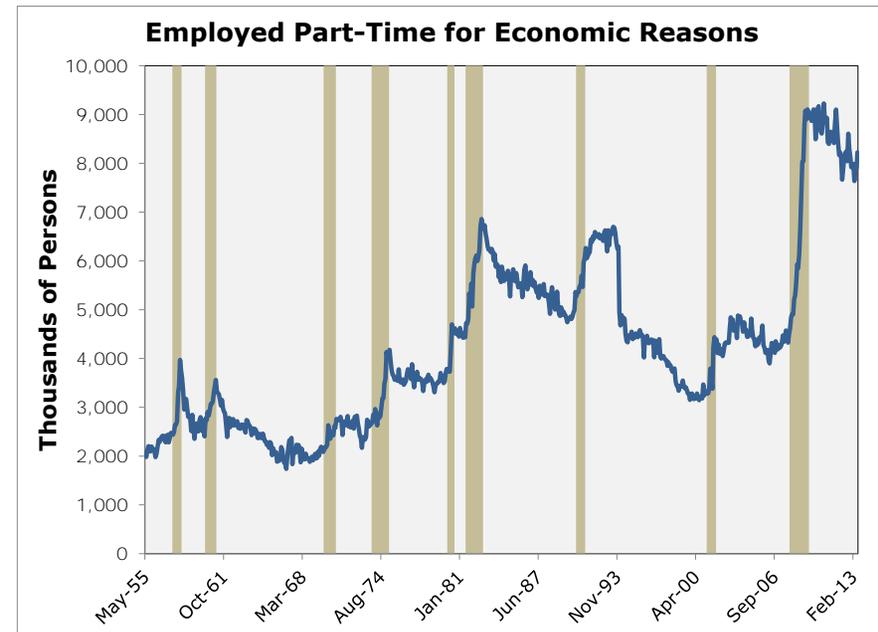




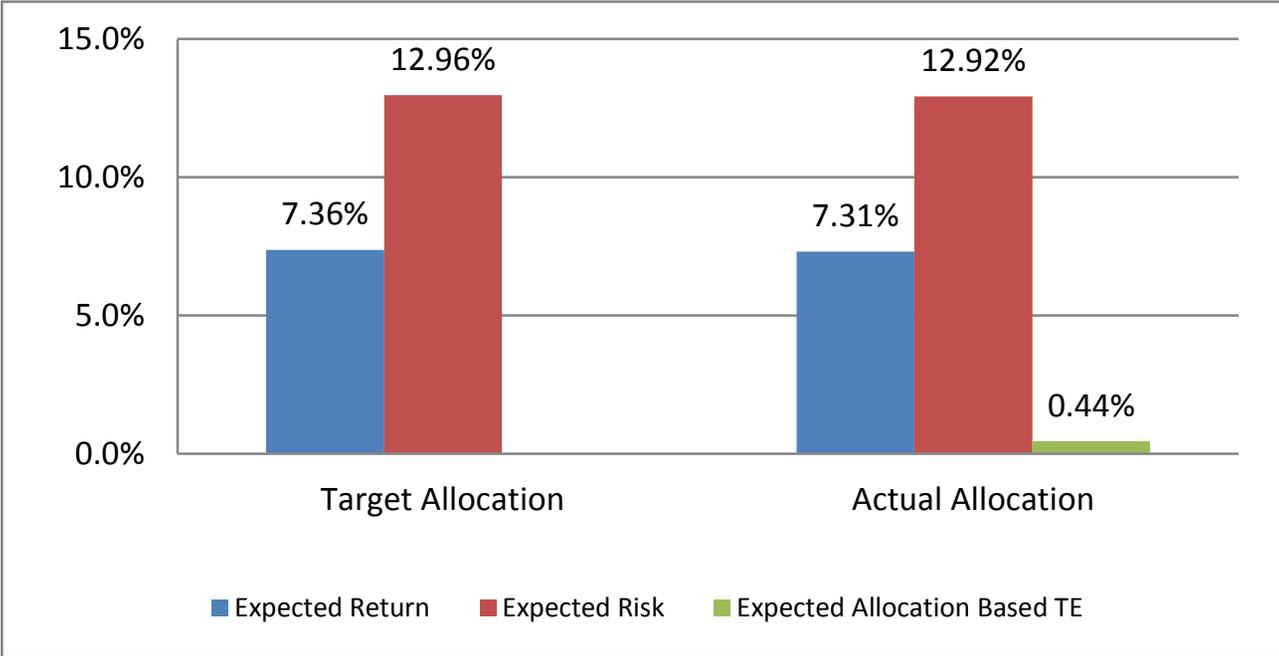
## Employment Conditions

- Employed part-time for economic reasons are those individuals who are unable to find full-time employment
- While this number typically increases during recession (shaded areas), the recent rise was far more dramatic as the number doubled
- Poor job growth has led to stagnant wage growth
- Government, in aggregate, continues to shed jobs

Source: Bureau of Labor Statistics



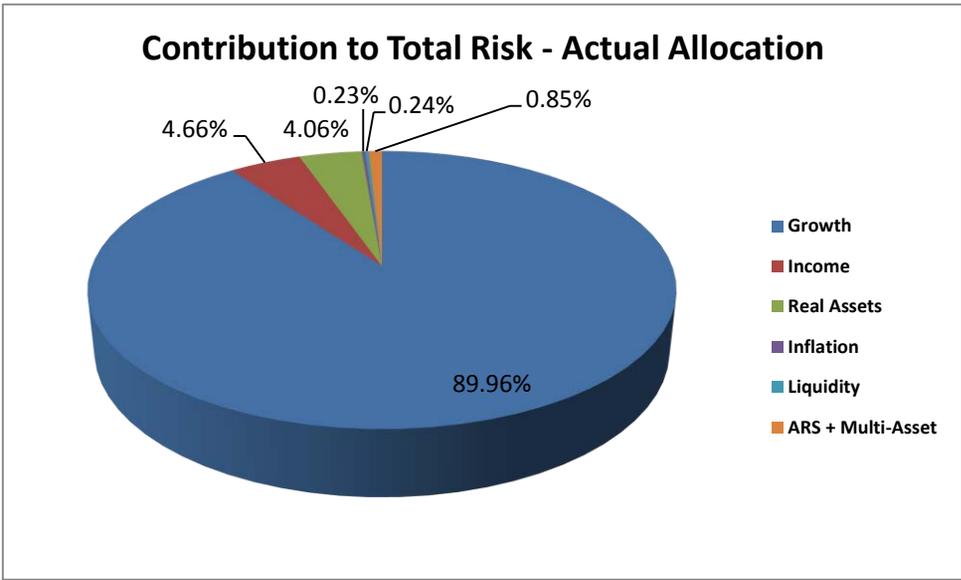
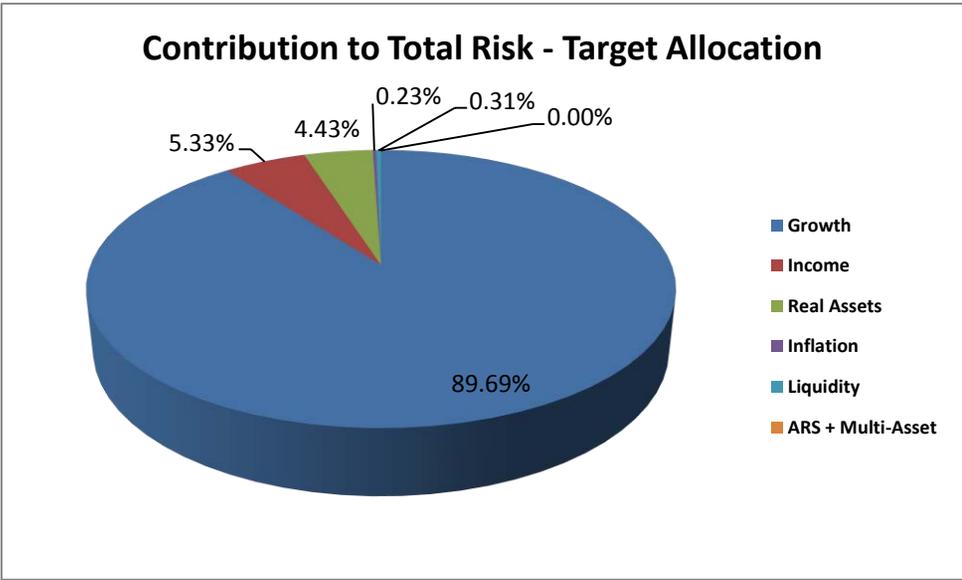
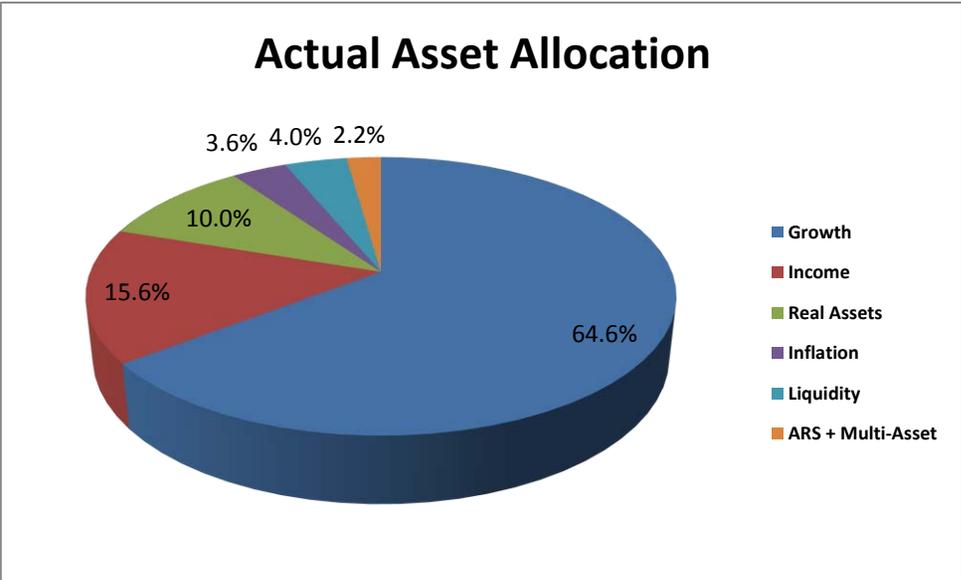
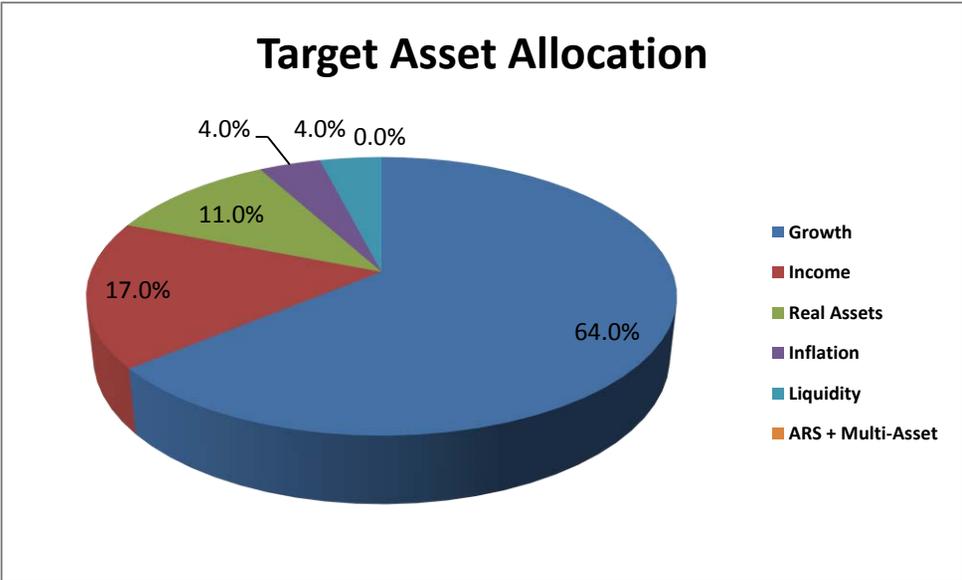
# CalPERS Investments are Expected to Provide Return



Forecasts using Wilshire's June 2013 Asset Class Assumptions.



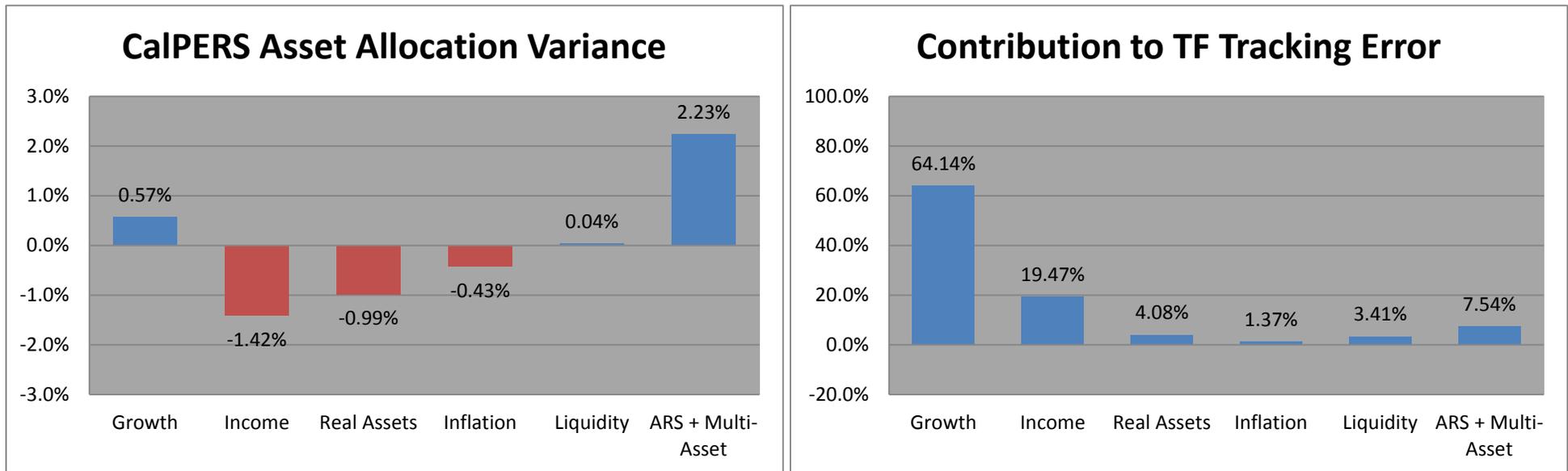
# Asset and Risk Allocation



Forecasts using Wilshire's June 2013 Asset Class Assumptions.



## 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

	Market Value	Five-Year Ratios							
		Qtr	1-Year	3-Year	5-Year	10-Year	VaR	Sharpe	Info
<b>TOTAL FUND</b>	\$257.9 bil	<b>0.5%</b>	<b>12.5%</b>	<b>11.1%</b>	<b>3.1%</b>	<b>7.0%</b>	\$34.0 bil	<b>0.3</b>	<b>-0.7</b>
<i>Total Fund Policy Benchmark</i>		<b>0.4%</b>	<b>11.1%</b>	<b>10.7%</b>	<b>5.3%</b>	<b>7.8%</b>		<b>0.4</b>	<b>0.0</b>
<i>Actuarial Rate</i>		1.8%	7.5%	7.7%	7.7%	7.7%			
<b>GROWTH</b>	165.0	<b>1.1%</b>	<b>17.7%</b>	<b>13.5%</b>	<b>3.6%</b>	<b>8.2%</b>	\$33.8 bil	<b>0.2</b>	<b>-0.6</b>
<i>Growth Policy Benchmark</i>		2.0%	18.0%	13.2%	5.6%	9.0%		<b>0.3</b>	<b>0.0</b>
<b>PUBLIC EQUITY</b>	133.6	<b>0.2%</b>	<b>19.0%</b>	<b>13.2%</b>	<b>3.3%</b>	<b>7.5%</b>	\$26.2 bil	<b>0.1</b>	<b>-0.3</b>
<i>Public Equity Policy Benchmark</i>		0.0%	18.3%	12.7%	3.9%	7.9%		<b>0.2</b>	<b>0.0</b>
<b>PRIVATE EQUITY</b>	31.4	<b>4.8%</b>	<b>13.6%</b>	<b>14.5%</b>	<b>6.1%</b>	<b>12.5%</b>	\$9.9 bil	<b>0.6</b>	<b>-0.4</b>
<i>Private Equity Policy Benchmark</i>		9.3%	16.0%	13.7%	12.7%	14.1%		<b>0.8</b>	<b>0.0</b>
<b>INCOME</b>	40.2	<b>-4.1%</b>	<b>-1.6%</b>	<b>5.9%</b>	<b>7.7%</b>	<b>6.4%</b>	\$4.7 bil	<b>1.0</b>	<b>0.3</b>
<i>Income Policy Benchmark</i>		-4.5%	-3.1%	5.1%	6.7%	5.6%		<b>0.9</b>	<b>0.0</b>
<b>REAL ASSETS</b>	25.8	<b>6.9%</b>	<b>11.2%</b>	<b>11.0%</b>	<b>-9.5%</b>	<b>3.7%</b>	\$3.0 bil	<b>-0.6</b>	<b>-1.0</b>
<i>Real Assets Policy Benchmark</i>		2.4%	9.7%	12.4%	3.2%	8.9%		<b>0.5</b>	<b>0.0</b>
<b>INFLATION</b>	9.2	<b>-5.6%</b>	<b>0.2%</b>	<b>6.8%</b>	<b>-3.2%</b>	<b>-.%</b>	\$0.6 bil	<b>-0.3</b>	<b>-0.5</b>
<i>Inflation Policy Benchmark</i>		-6.1%	-0.9%	5.3%	-1.2%	-.%		<b>-0.1</b>	<b>0.0</b>
<b>LIQUIDITY</b>	10.4	<b>-1.2%</b>	<b>-0.8%</b>	<b>1.3%</b>	<b>1.2%</b>	<b>2.3%</b>	\$0.4 bil	<b>0.7</b>	<b>-0.4</b>
<i>Liquidity Policy Benchmark</i>		-1.5%	-0.8%	1.5%	1.3%	2.3%		<b>0.7</b>	<b>0.0</b>
<b>ABSOLUTE RETURN STRATEGIES</b>	5.2	<b>0.6%</b>	<b>7.3%</b>	<b>3.8%</b>	<b>1.4%</b>	<b>5.0%</b>		<b>0.2</b>	<b>-0.8</b>
<i>Absolute Return Strategies Policy Benchmark</i>		1.3%	5.3%	5.4%	6.1%	8.0%		<b>11.3</b>	<b>0.0</b>
<b>MULTI-ASSET CLASS COMPOSITE</b>	0.5	<b>-0.3%</b>	<b>-.%</b>	<b>-.%</b>	<b>-.%</b>	<b>-.%</b>		<b>N/A</b>	<b>N/A</b>
<i>Absolute 7.5%</i>		1.8%	-.%	-.%	-.%	-.%		<b>N/A</b>	<b>N/A</b>
<b>CURRENCY + ASSET ALLOCATION TRANSITION</b>	1.5	<b>-.%</b>	<b>-.%</b>	<b>-.%</b>	<b>-.%</b>	<b>-.%</b>			



# Total Fund – Attribution (Quarter)

## California Public Employees' Retirement System Total Fund Attribution - Quarter As of 6/30/2013

Asset Class	Actual (%)		Policy (%)		Difference (%)		Total Fund Return Contribution (%)			
	Weight	Return	Weight	Return	Weight	Return	Actual Allocation	Interaction	Active Management	Total
<b>Growth</b>	64.32	1.08	64.00	1.97	0.32	-0.89	0.00	-0.01	-0.56	-0.57
<b>Public Equity</b>	52.07	0.23	50.00	-0.04	2.07	0.27	-0.02	0.01	0.14	0.12
<b>Private Equity</b>	12.25	4.83	14.00	9.26	-1.75	-4.43	-0.15	0.07	-0.59	-0.68
<b>Income</b>	16.62	-4.14	17.00	-4.46	-0.38	0.32	0.02	0.00	0.06	0.07
<b>Real Assets</b>	9.37	6.86	11.00	2.36	-1.63	4.50	-0.04	-0.08	0.51	0.39
<b>Inflation</b>	3.71	-5.65	4.00	-6.05	-0.29	0.40	0.02	0.00	0.02	0.03
<b>Absolute Return</b>	2.23	0.58	0.00	1.27	2.23	-0.69	0.02	-0.02	0.00	0.00
<b>Liquidity</b>	3.75	-1.20	4.00	-1.47	-0.25	0.26	0.01	0.00	0.01	0.02
<b>Monthly Linked Return</b>	<b>100.00</b>	<b>0.40</b>	<b>100.00</b>	<b>0.45</b>		<b>-0.05</b>	<b>0.02</b>	<b>-0.10</b>	<b>0.03</b>	<b>-0.05</b>
<b>Trading/Hedging/Other</b>		0.14		-0.02		0.15				<b>0.15</b>
<b>Total</b>		<b>0.53</b>		<b>0.43</b>		<b>0.10</b>				<b>0.10</b>



# Total Fund – Attribution (Calendar YTD)

California Public Employees' Retirement System  
Total Fund Attribution - Calendar Year-to-Date  
As of 6/30/2013

Asset Class	Actual (%)		Policy (%)		Difference (%)		Total Fund Return Contribution (%)			
	Weight	Return	Weight	Return	Weight	Return	Actual Allocation	Interaction	Active Management	Total
<b>Growth</b>	63.88	7.70	64.00	8.25	-0.12	-0.55	-0.02	-0.01	-0.34	-0.37
<b>Public Equity</b>	51.45	7.47	50.00	7.02	1.45	0.45	-0.02	0.01	0.22	0.21
<b>Private Equity</b>	12.43	8.99	14.00	12.43	-1.57	-3.44	-0.15	0.06	-0.48	-0.57
<b>Income</b>	16.75	-4.86	17.00	-5.47	-0.25	0.61	-0.01	0.00	0.11	0.11
<b>Real Assets</b>	9.54	8.19	11.00	4.79	-1.46	3.40	-0.02	-0.06	0.40	0.32
<b>Inflation</b>	3.65	-6.18	4.00	-6.33	-0.35	0.15	0.03	0.00	0.01	0.04
<b>Absolute Return</b>	2.23	4.37	0.00	2.59	2.23	1.78	-0.04	0.04	0.00	0.00
<b>Liquidity</b>	3.95	-1.17	4.00	-1.34	-0.05	0.18	0.00	0.00	0.01	0.01
<b>Monthly Linked Return</b>	<b>100.00</b>	<b>4.57</b>	<b>100.00</b>	<b>4.47</b>		<b>0.10</b>	<b>-0.06</b>	<b>-0.04</b>	<b>0.19</b>	<b>0.10</b>
<b>Trading/Hedging</b>		0.52		-0.24		0.76				<b>0.76</b>
<b>Total</b>		<b>5.09</b>		<b>4.23</b>		<b>0.86</b>				<b>0.86</b>



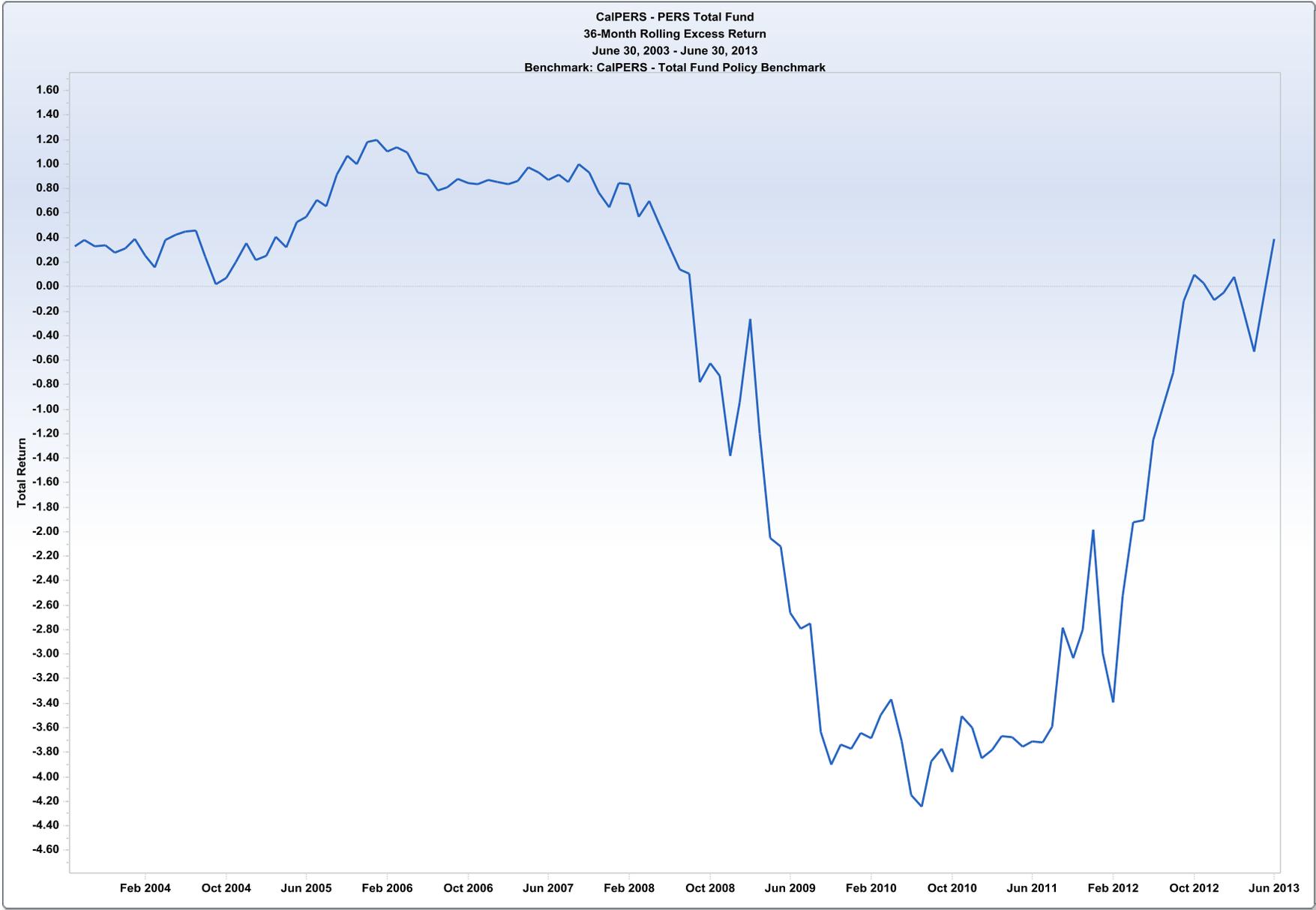
# Total Fund – Attribution (Fiscal YTD)

**California Public Employees' Retirement System**  
**Total Fund Attribution - Fiscal Year-to-Date**  
**As of 6/30/2013**

Asset Class	Actual (%)		Policy (%)		Difference (%)		Total Fund Return Contribution (%)			
	Weight	Return	Weight	Return	Weight	Return	Actual Allocation	Interaction	Active Management	Total
<b>Growth</b>	63.20	17.69	64.00	17.99	-0.80	-0.30	-0.05	-0.02	-0.19	-0.26
<b>Public Equity</b>	50.03	19.03	50.00	18.30	0.03	0.73	-0.08	0.00	0.35	0.27
<b>Private Equity</b>	13.17	13.59	14.00	16.03	-0.83	-2.44	-0.25	0.13	-0.42	-0.54
<b>Income</b>	17.48	-1.62	17.00	-3.12	0.48	1.50	-0.07	0.01	0.29	0.23
<b>Real Assets</b>	9.84	11.15	11.00	9.74	-1.16	1.41	0.00	-0.05	0.19	0.14
<b>Inflation</b>	3.37	0.20	4.00	-0.94	-0.63	1.14	0.04	-0.01	0.05	0.08
<b>Absolute Return</b>	2.17	7.35	0.00	5.33	2.17	2.02	-0.14	0.05	0.00	-0.09
<b>Liquidity</b>	3.93	-0.79	4.00	-0.78	-0.07	-0.01	0.02	0.00	0.00	0.02
<b>Monthly Linked Return</b>	<b>100.00</b>	<b>11.84</b>	<b>100.00</b>	<b>11.72</b>		<b>0.12</b>	<b>-0.20</b>	<b>-0.02</b>	<b>0.34</b>	<b>0.12</b>
<b>Trading/Hedging</b>		0.70		-0.66		1.36				<b>1.36</b>
<b>Total</b>		<b>12.54</b>		<b>11.06</b>		<b>1.48</b>				<b>1.48</b>

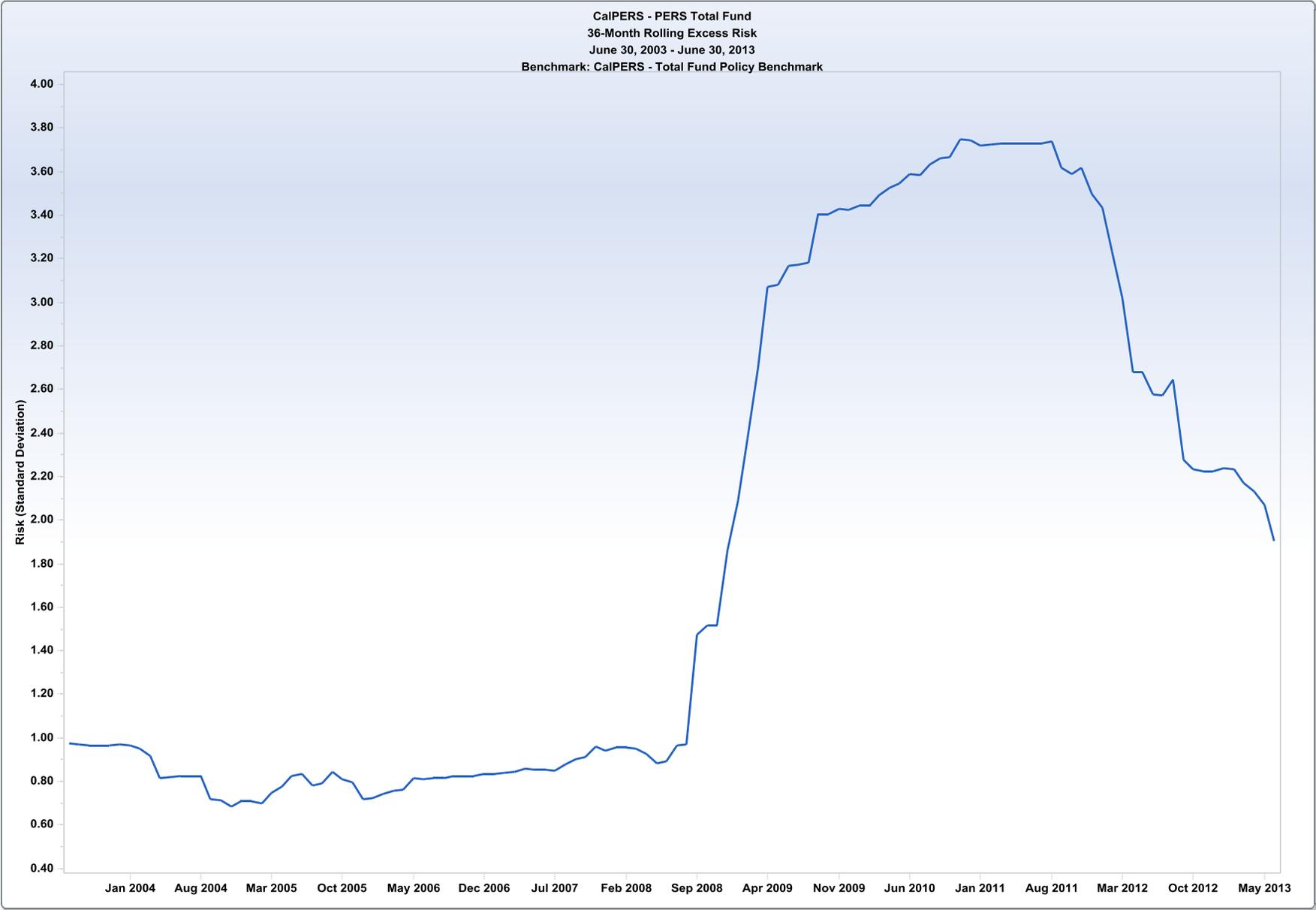


# Total Fund – Rolling Excess Returns





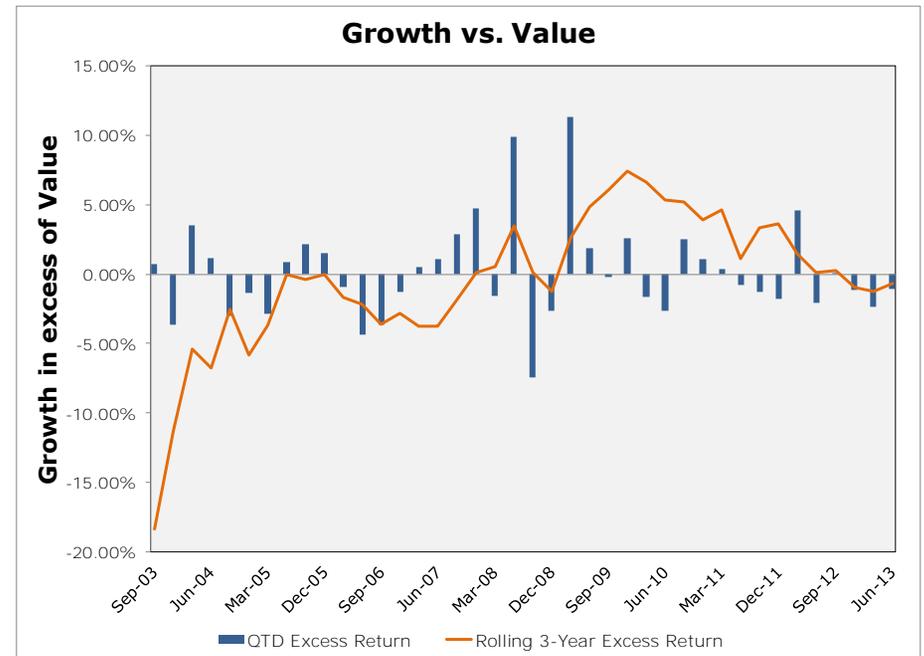
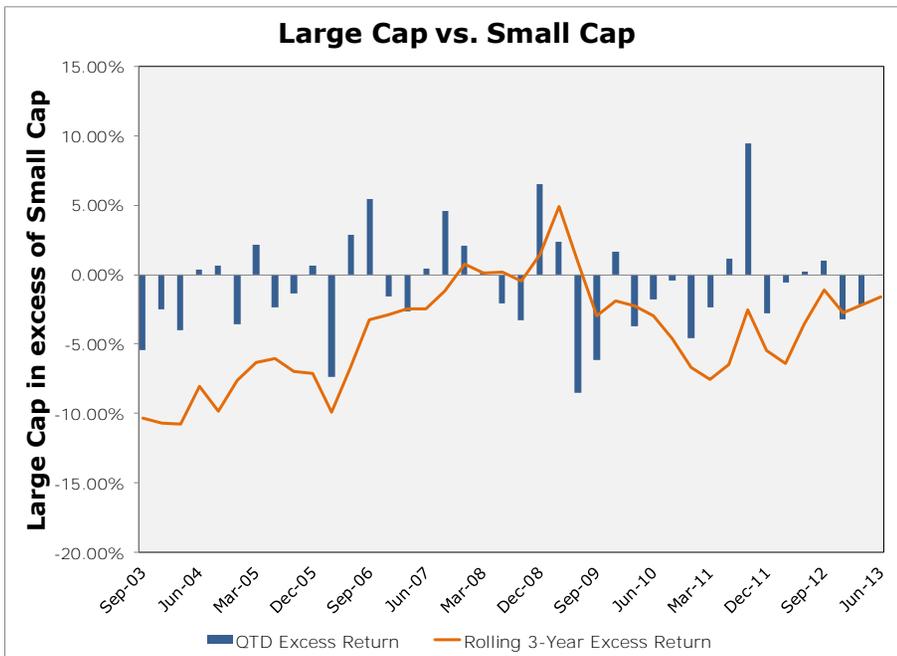
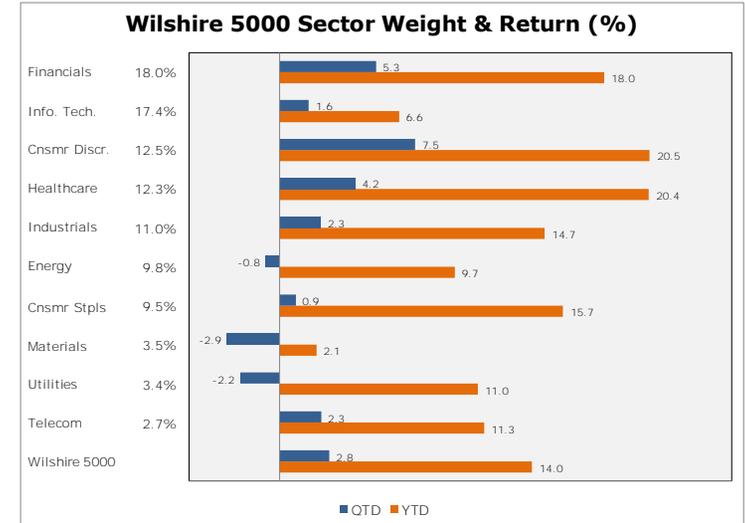
# Total Fund – Rolling Tracking Error





# U.S. Equity Market

June 30, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Wilshire 5000	2.8	14.0	21.1	18.5	7.2	8.0
Wilshire U.S. Large Cap	2.7	13.7	20.5	18.3	6.8	7.6
Wilshire U.S. Small Cap	2.8	16.3	26.1	20.2	10.9	11.2
Wilshire U.S. Large Growth	1.9	11.1	17.3	17.6	6.6	7.4
Wilshire U.S. Large Value	3.5	15.9	23.4	18.8	7.0	7.6
Wilshire U.S. Small Growth	4.6	18.6	26.9	21.2	10.5	11.7
Wilshire U.S. Small Value	1.3	14.3	25.3	19.1	11.3	10.7
Wilshire REIT Index	-1.4	5.9	8.4	18.5	7.2	10.8
MSCI USA Minimum Volatility Index	-0.3	12.9	14.4	18.2	8.7	7.6
FTSE RAFI U.S. 1000 Index	3.5	16.7	27.0	19.4	10.7	n.a.

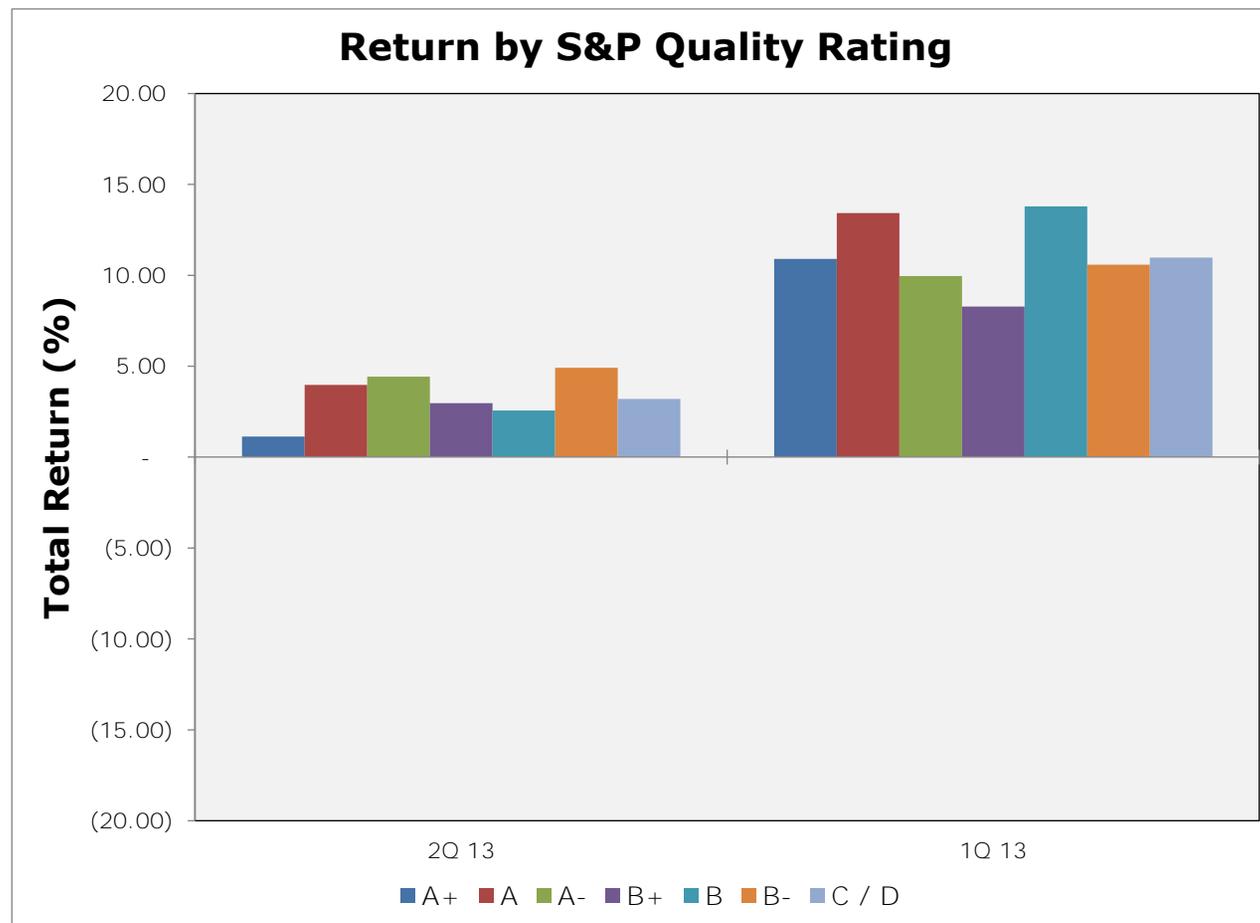


Data sources: Wilshire Compass, Wilshire Atlas



## Returns by Quality Segment

Although returns in an absolute sense were much lower during 2Q, they were again broadly based like in 1Q

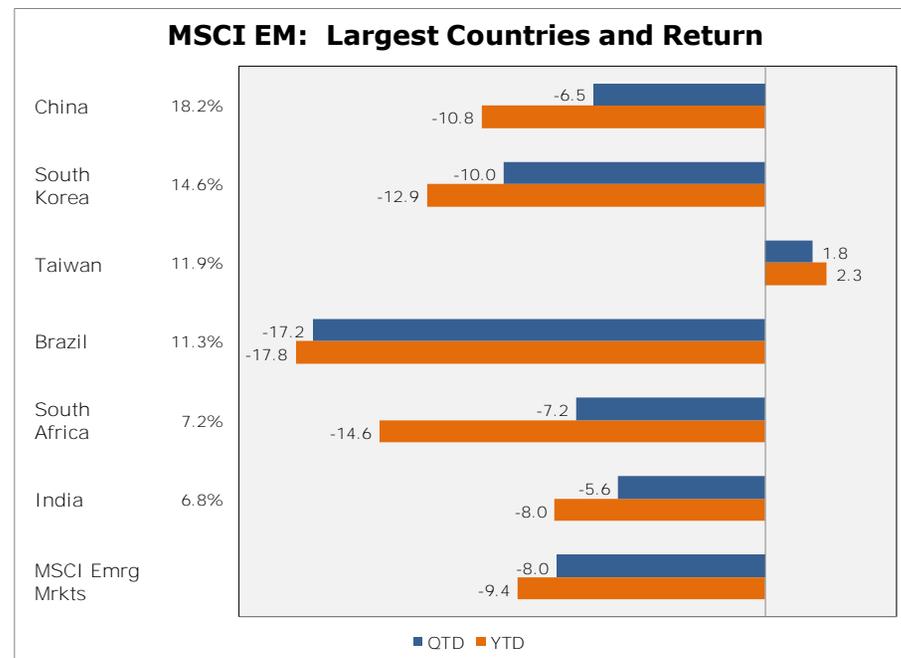
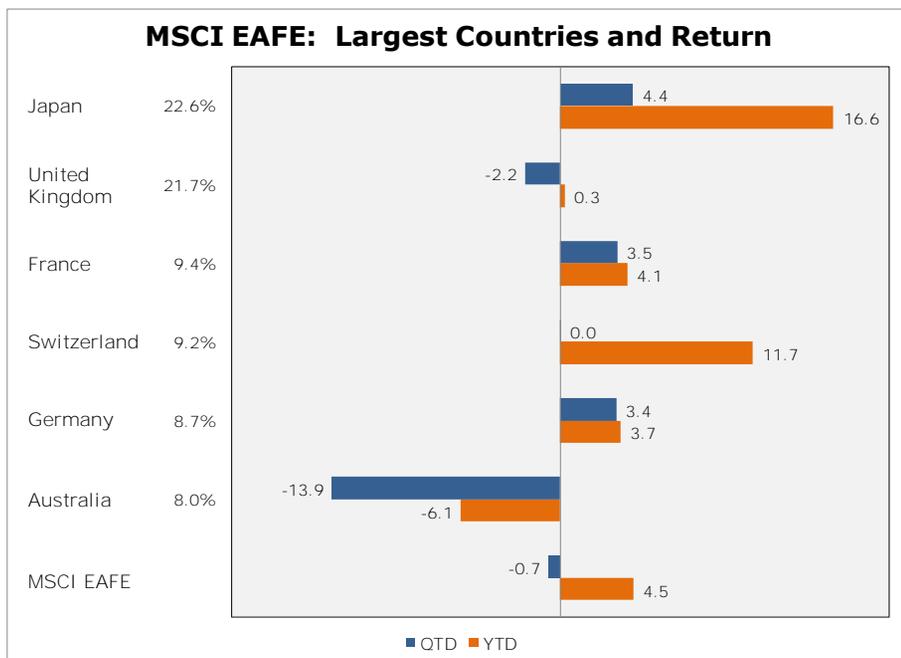


Data sources: Wilshire Atlas



# Non-U.S. Equity Market

June 30, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
MSCI ACWI ex-US (\$g)	-2.9	0.3	14.1	8.5	-0.3	9.1
MSCI EAFE (\$g)	-0.7	4.5	19.1	10.5	-0.2	8.2
MSCI Emerging Markets (\$g)	-8.0	-9.4	3.2	3.7	-0.1	14.0
MSCI Frontier Markets (\$g)	3.0	11.5	23.4	7.0	-8.3	8.3
MSCI EAFE Minimum Volatility Idx	-3.1	7.1	15.2	11.3	4.2	10.9
FTSE RAFI Developed ex-US Index	0.8	3.6	19.6	8.8	0.4	n.a.
MSCI EAFE LC (\$g)	1.5	11.4	25.5	9.5	1.6	6.5
MSCI Emerging Markets LC (\$g)	-4.3	-4.7	6.5	5.3	2.4	13.5



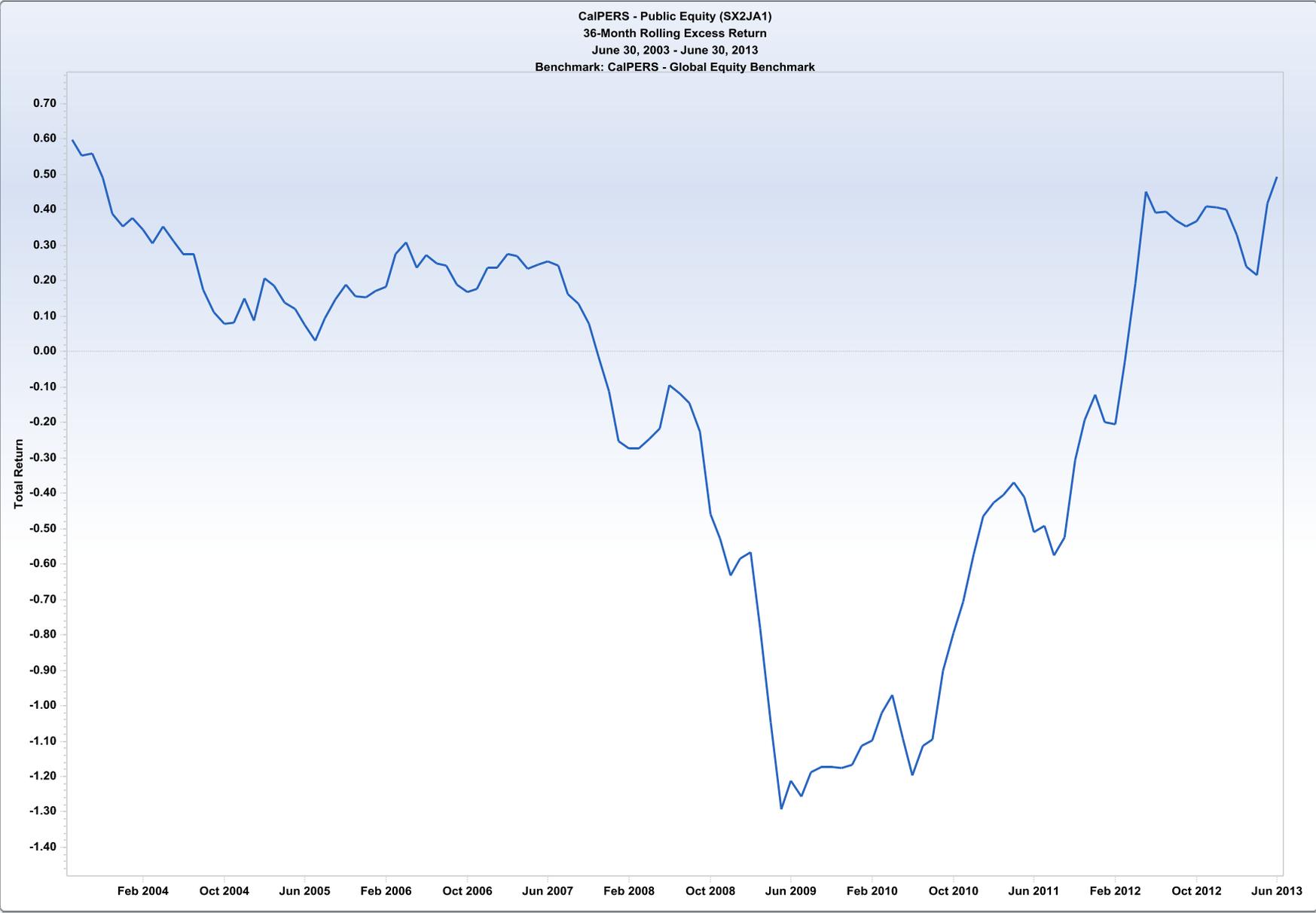
Data sources: Wilshire Compass, MSCI Barra

# Growth: Public Equity – Performance

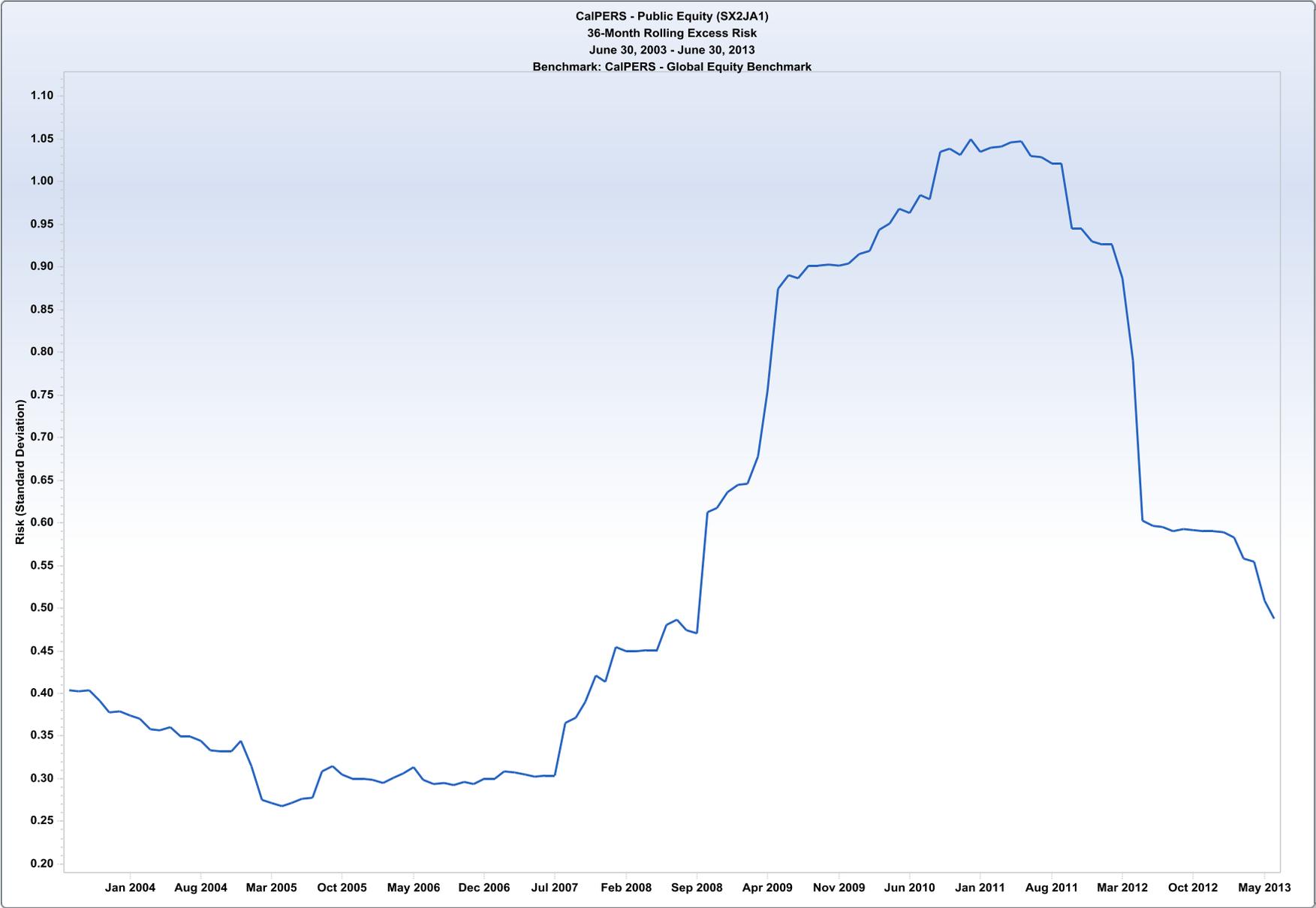


	<u>Market Value</u>	<u>Qtr</u>	<u>1-Year</u>	<u>3-Year</u>	<u>5-Year</u>	<u>10-Year</u>	<u>VaR</u>	<u>5-year Sharpe Ratio</u>	<u>5-year Info Ratio</u>
<b>PUBLIC EQUITY</b>	<b>133.6</b>	<b>0.2%</b>	<b>19.0%</b>	<b>13.2%</b>	<b>3.3%</b>	<b>7.5%</b>	<b>\$26.2 bil</b>	<b>0.1</b>	<b>-0.3</b>
<i>Public Equity Policy Benchmark</i>		0.0%	18.3%	12.7%	3.9%	7.9%		<b>0.2</b>	<b>0.0</b>
<i>Value Added</i>		0.2%	0.7%	0.5%	-0.6%	-0.4%			
<b>US Equity Composite (ex ARS)</b>	<b>65.4</b>	<b>3.1%</b>	<b>23.2%</b>	<b>18.6%</b>	<b>7.3%</b>	<b>7.8%</b>		<b>0.4</b>	<b>0.3</b>
<i>Custom US Equity Benchmark</i>		2.9%	21.9%	18.4%	7.1%	7.8%		<b>0.4</b>	<b>0.0</b>
<i>Value Added</i>		0.2%	1.3%	0.2%	0.2%	0.0%			
<b>Total Int'l Equity (ex ARS)</b>	<b>66.7</b>	<b>-2.5%</b>	<b>15.3%</b>	<b>8.7%</b>	<b>-0.1%</b>	<b>8.9%</b>		<b>0.0</b>	<b>0.2</b>
<i>Custom Int'l Equity Benchmark</i>		-2.0%	16.4%	9.0%	-0.3%	8.7%		<b>0.0</b>	<b>0.0</b>
<i>Value Added</i>		-0.5%	-1.1%	-0.3%	0.2%	0.2%			
<b>Global Equity Equitization</b>	<b>0.9</b>	<b>0.0%</b>	<b>17.3%</b>	<b>14.2%</b>	<b>-.-%</b>	<b>-.-%</b>			
<i>Custom Benchmark</i>		0.0%	18.3%	12.7%	-.-%	-.-%			
<i>Value Added</i>		0.0%	-1.0%	1.5%	-.-%	-.-%			

# Growth: Public Equity – Rolling Excess Returns

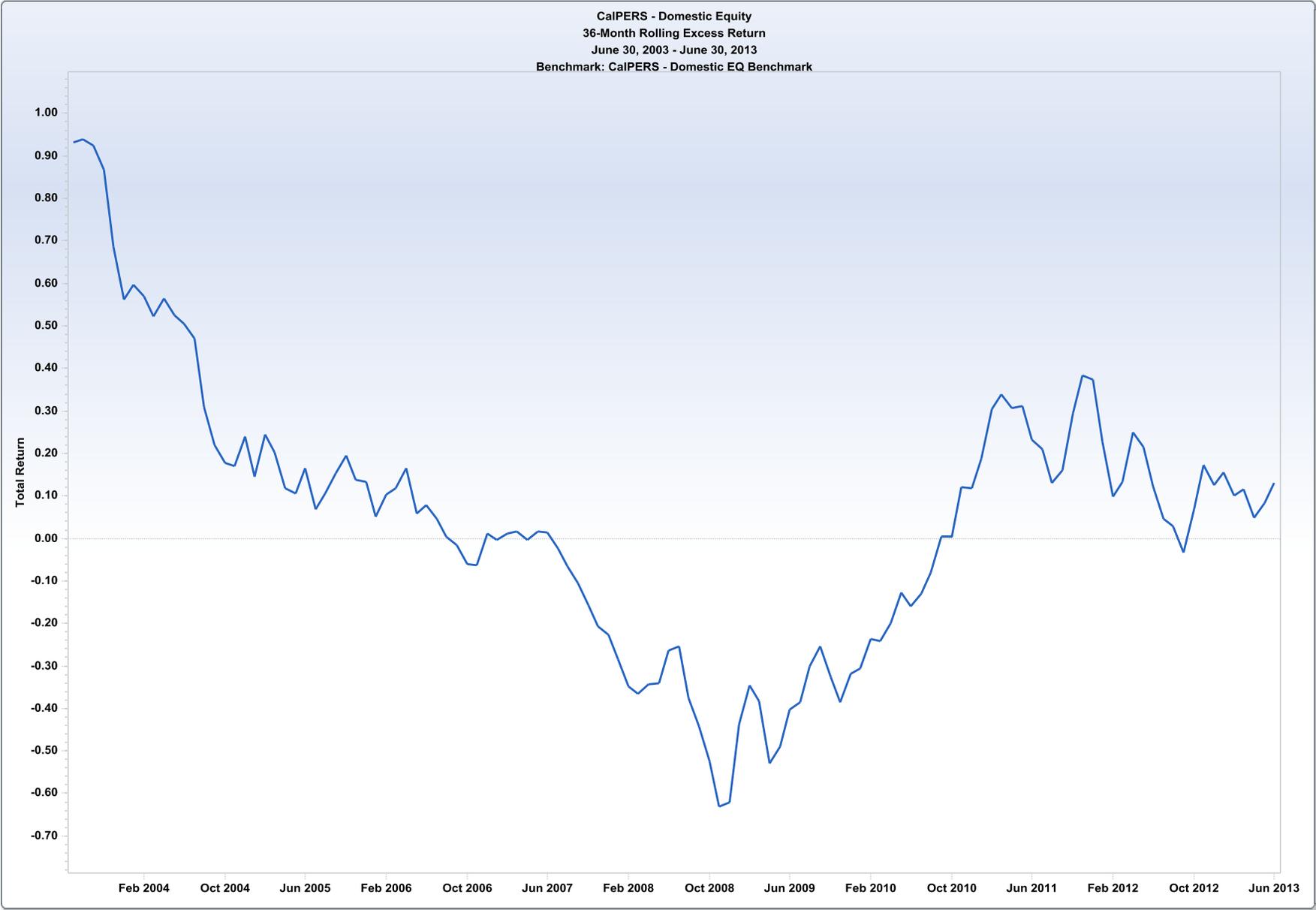


# Growth: Public Equity – Rolling Tracking Error



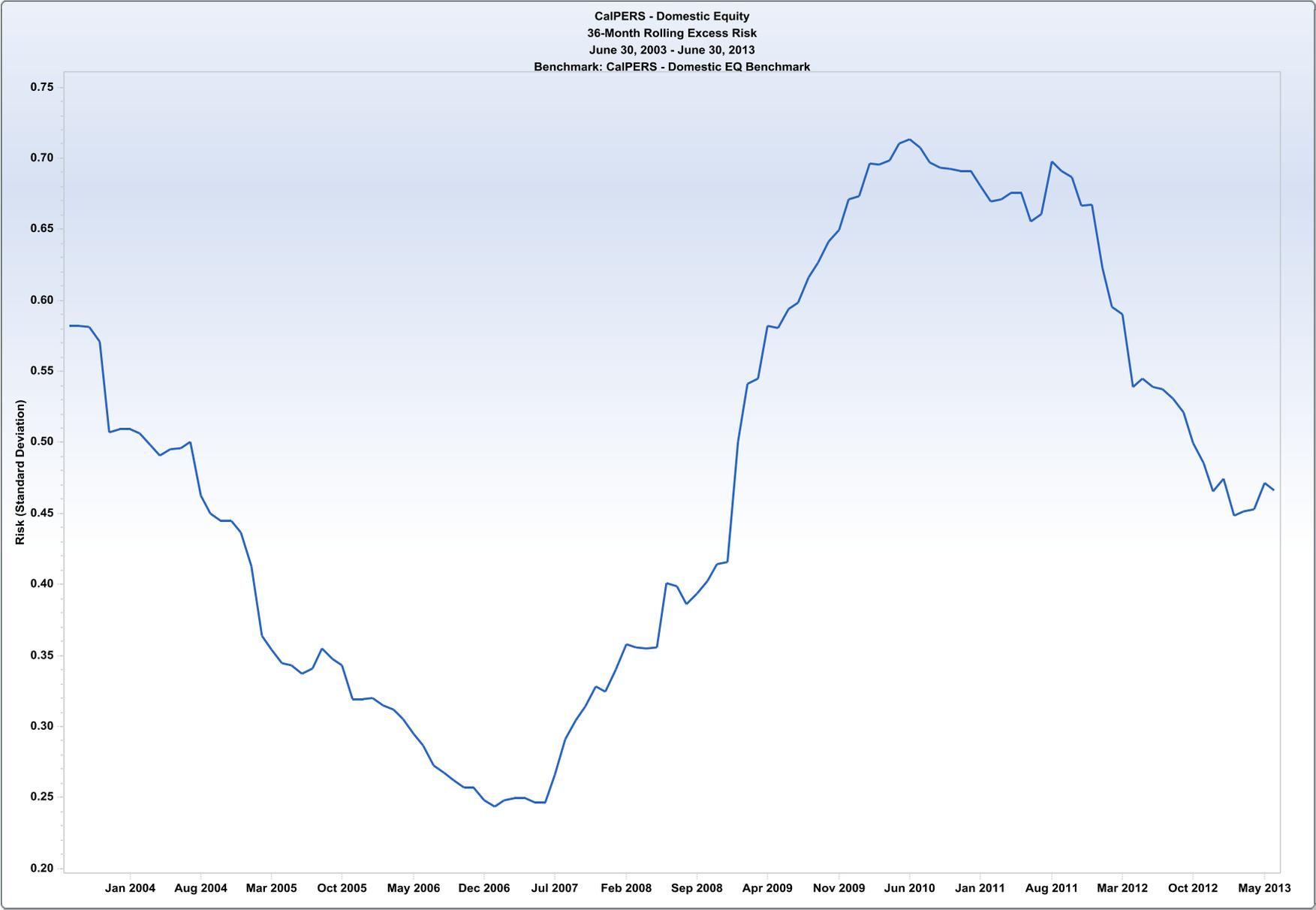


# Growth: US Equity – Rolling Excess Returns

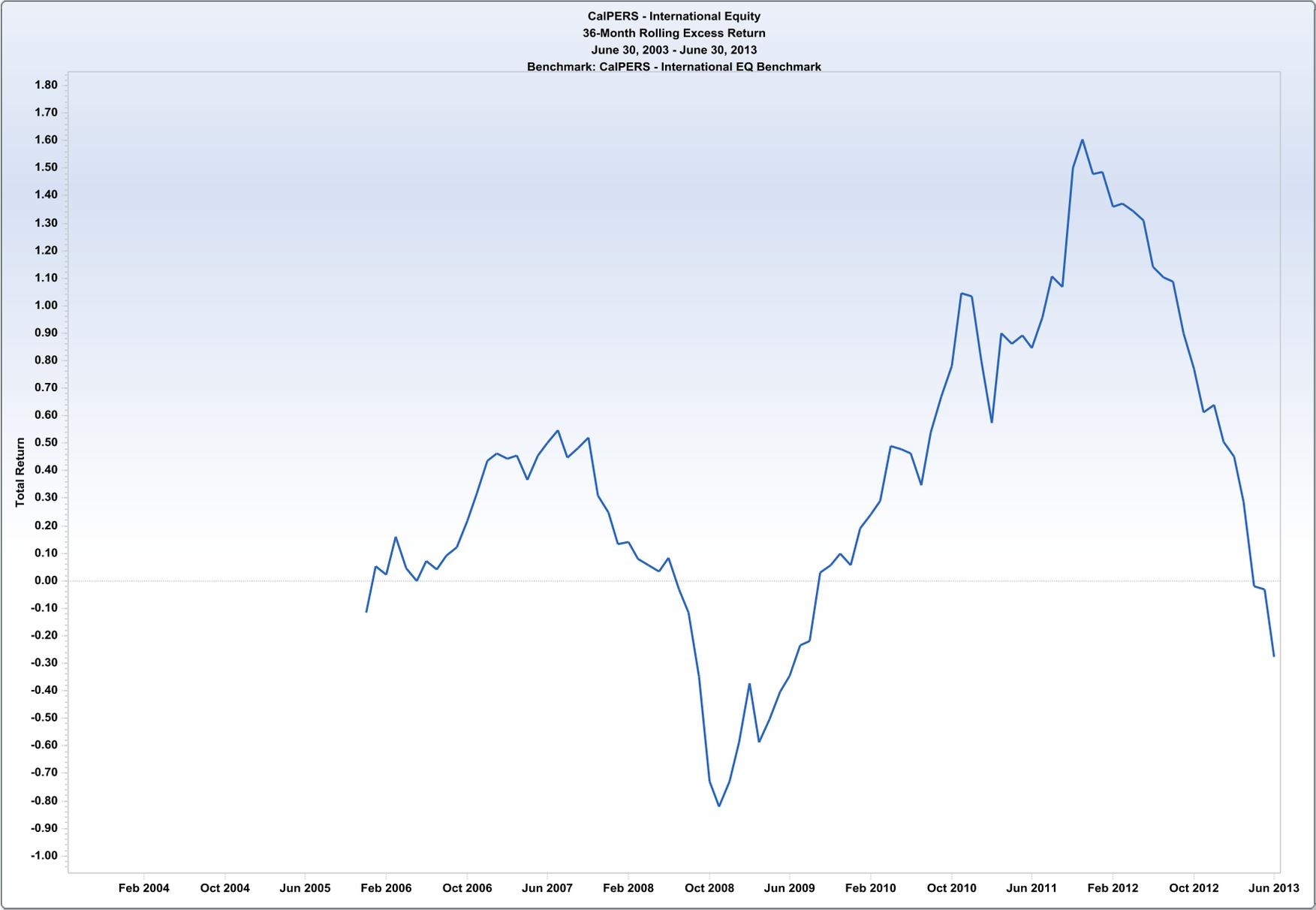




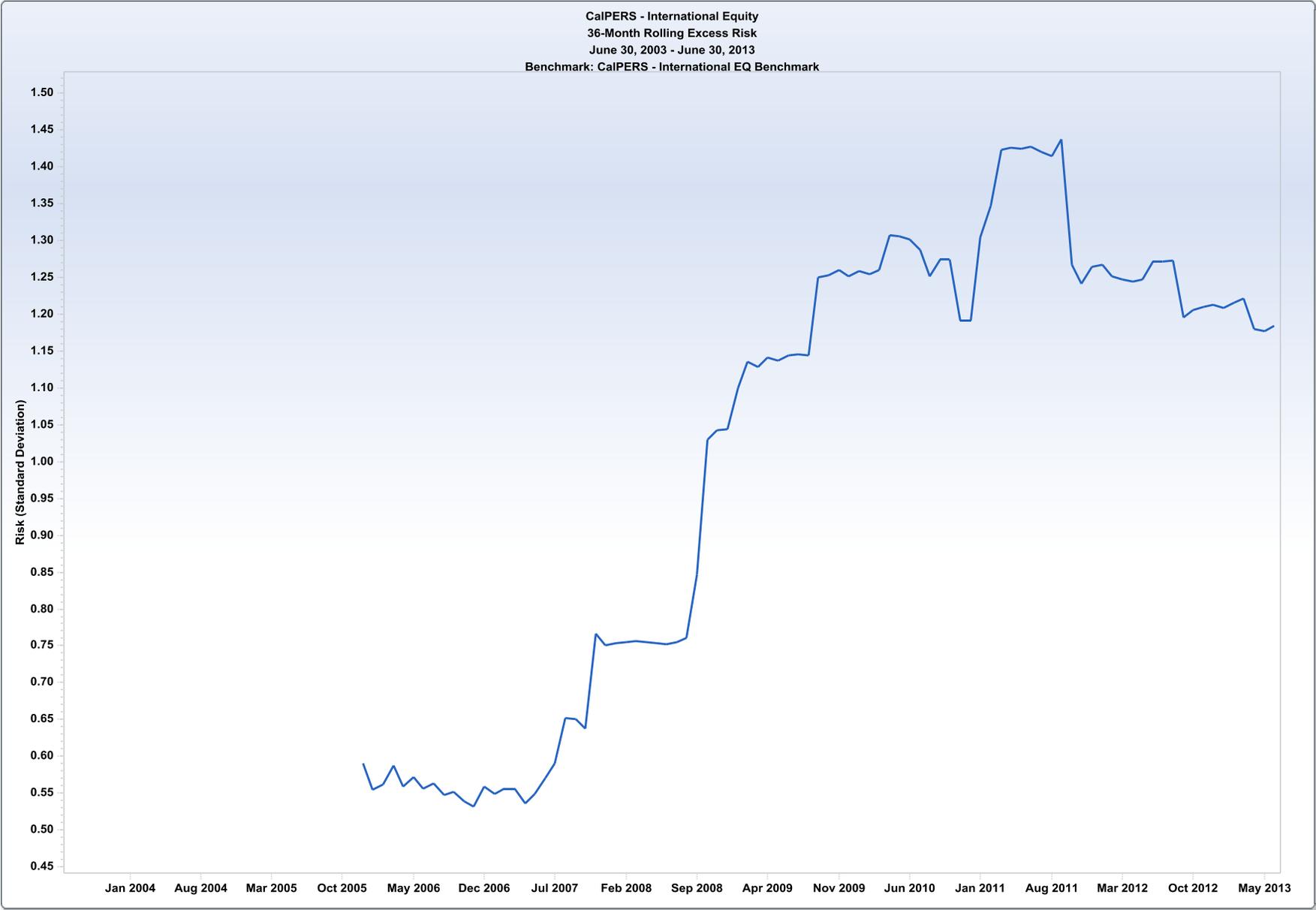
# Growth: US Equity – Rolling Tracking Error



# Growth: International Equity – Rolling Excess Returns



# Growth: International Equity – Rolling Tracking Error



# Growth: Corporate Governance/MDP/FoF

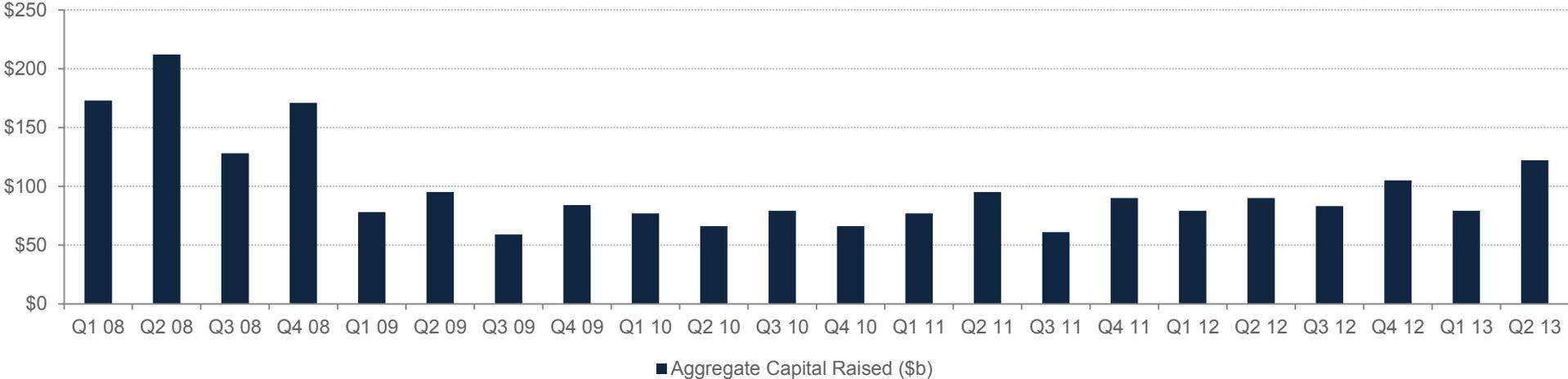


	<u>Market</u> <u>Value</u>	<u>Qtr</u>	<u>1-Year</u>	<u>3-Year</u>	<u>5-Year</u>	<u>10-Year</u>	<u>Date</u>
<b>Total Corporate Governance</b>	<b>4.5</b>	<b>1.2%</b>	<b>23.6%</b>	<b>11.3%</b>	<b>2.8%</b>	<b>7.9%</b>	<b>12/98</b>
<i>Policy Benchmark</i>		2.2%	22.6%	13.1%	2.9%	7.1%	
<i>Value Added</i>		-1.0%	1.0%	-1.8%	-0.1%	0.8%	
<b>Total MDP</b>	<b>1.5</b>	<b>0.9%</b>	<b>17.6%</b>	<b>13.7%</b>	<b>3.7%</b>	<b>7.0%</b>	<b>6/00</b>
<i>Policy Benchmark</i>		0.6%	18.4%	13.6%	5.2%	8.2%	
<i>Value Added</i>		0.3%	-0.8%	0.1%	-1.5%	-1.2%	
<b>Total FoF</b>	<b>1.0</b>	<b>1.4%</b>	<b>20.0%</b>	<b>16.0%</b>	<b>6.0%</b>	<b>-.-%</b>	<b>3/08</b>
<i>Policy Benchmark</i>		1.0%	19.5%	15.3%	6.6%	-.-%	
<i>Value Added</i>		0.4%	0.5%	0.7%	-0.6%	-.-%	

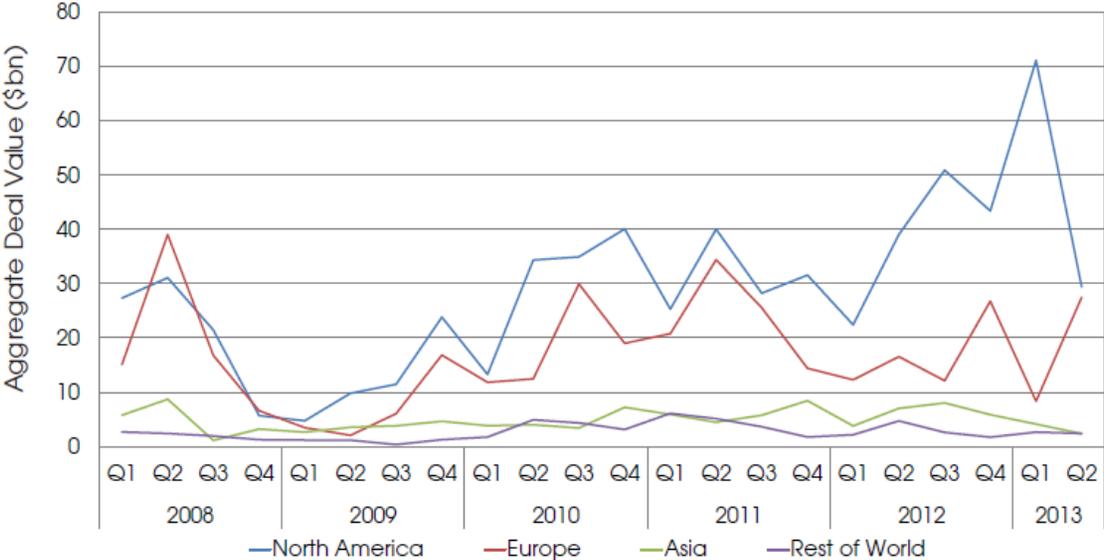
# Private Equity Environment – Fundraising & Investment Activity



Global PE Fundraising (Q1 2008 – Q2 2013)



Global PE-Backed Buyout Activity (Q1 2008 – Q2 2013)

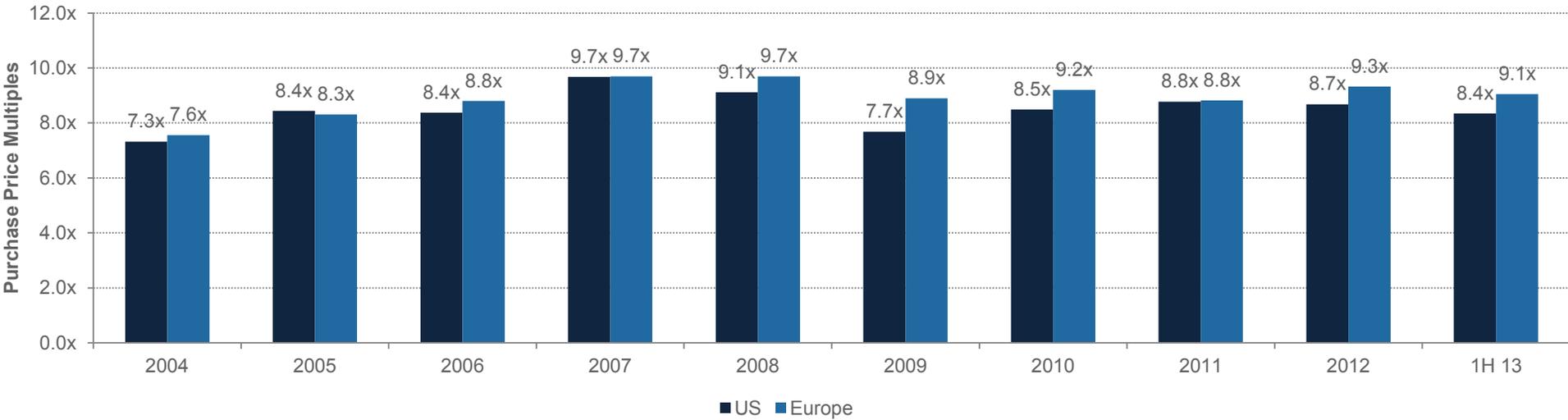


Sources: Preqin.

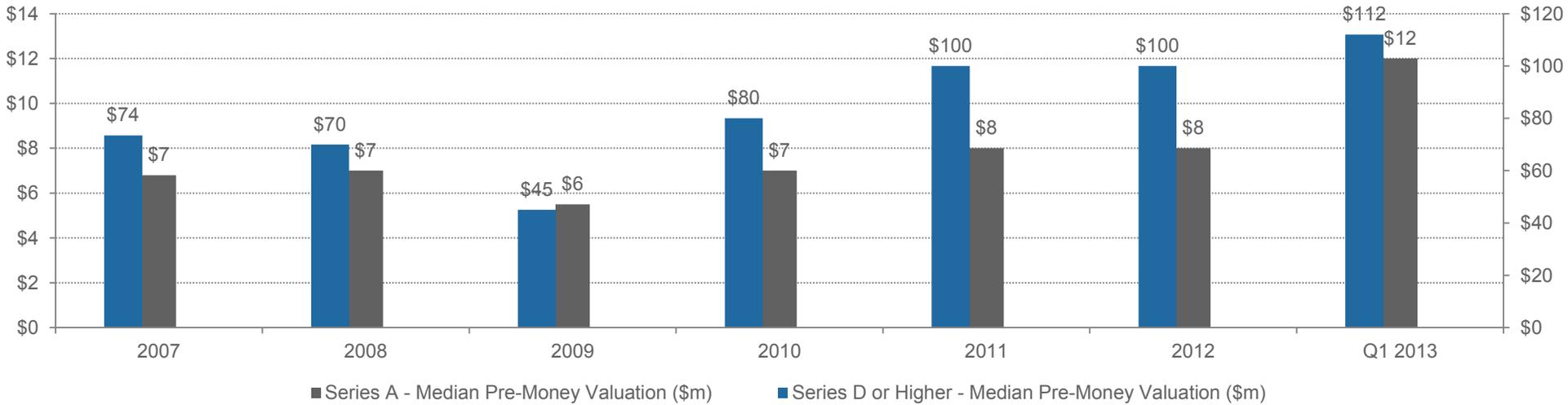
# Private Equity Environment – Pricing



Global LBO Multiples (2004 – 1H 2013)



Venture Capital Valuations (2007 – Q1 2013)

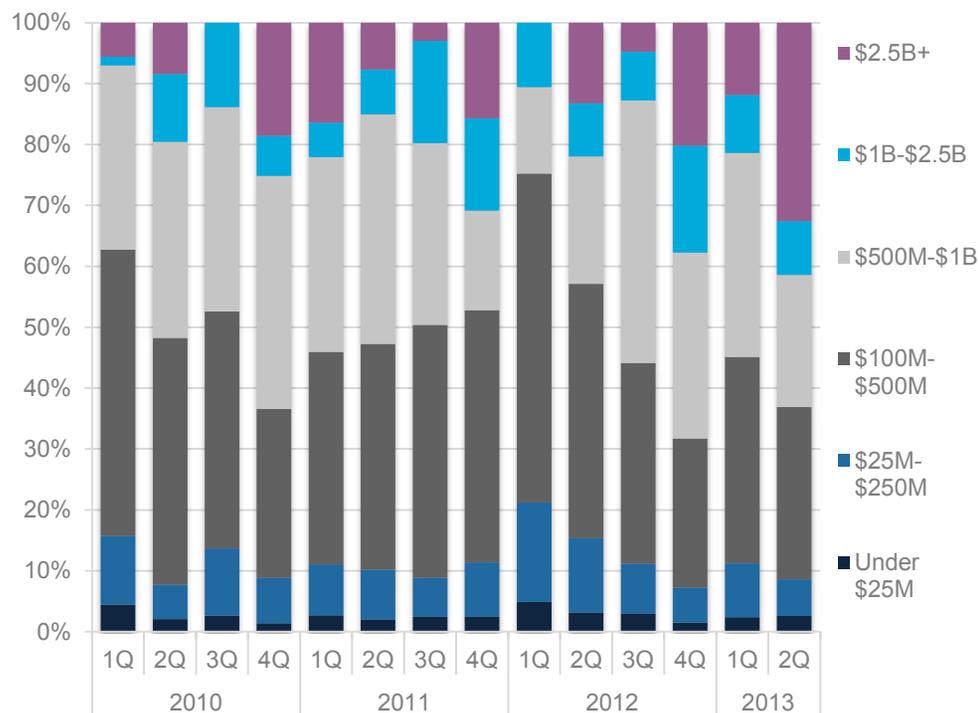


Source: S&P LCD; Cooley Venture Financing Report.

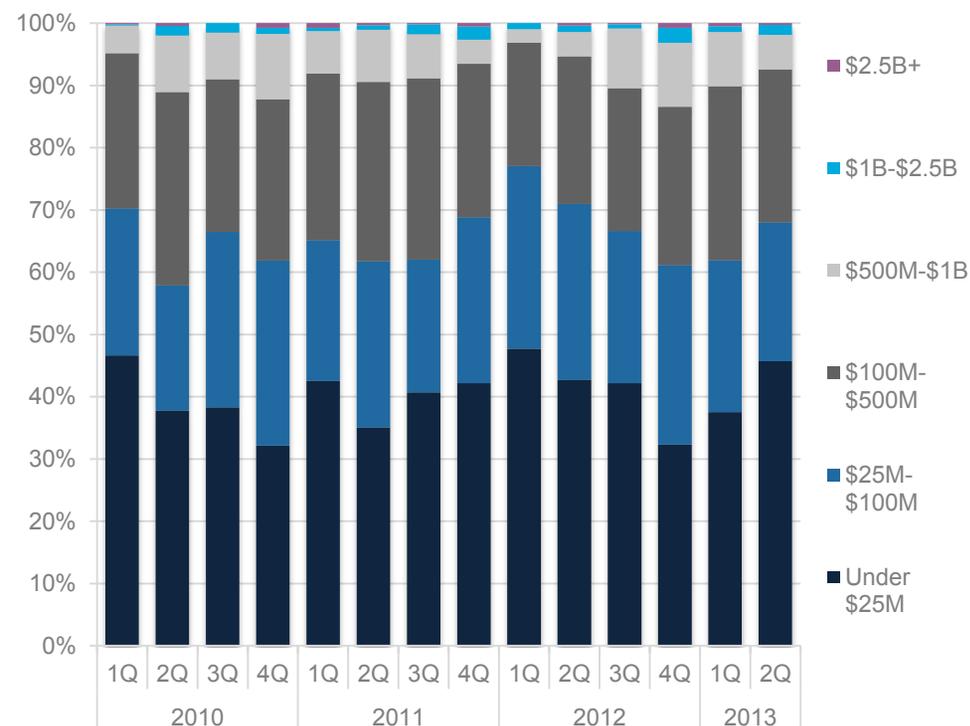


# U.S. Investment Activity by Deal Size

## Percentage of Deal Volume (capital) by Deal Size



## Percentage of Deal Volume (count) by Deal Size

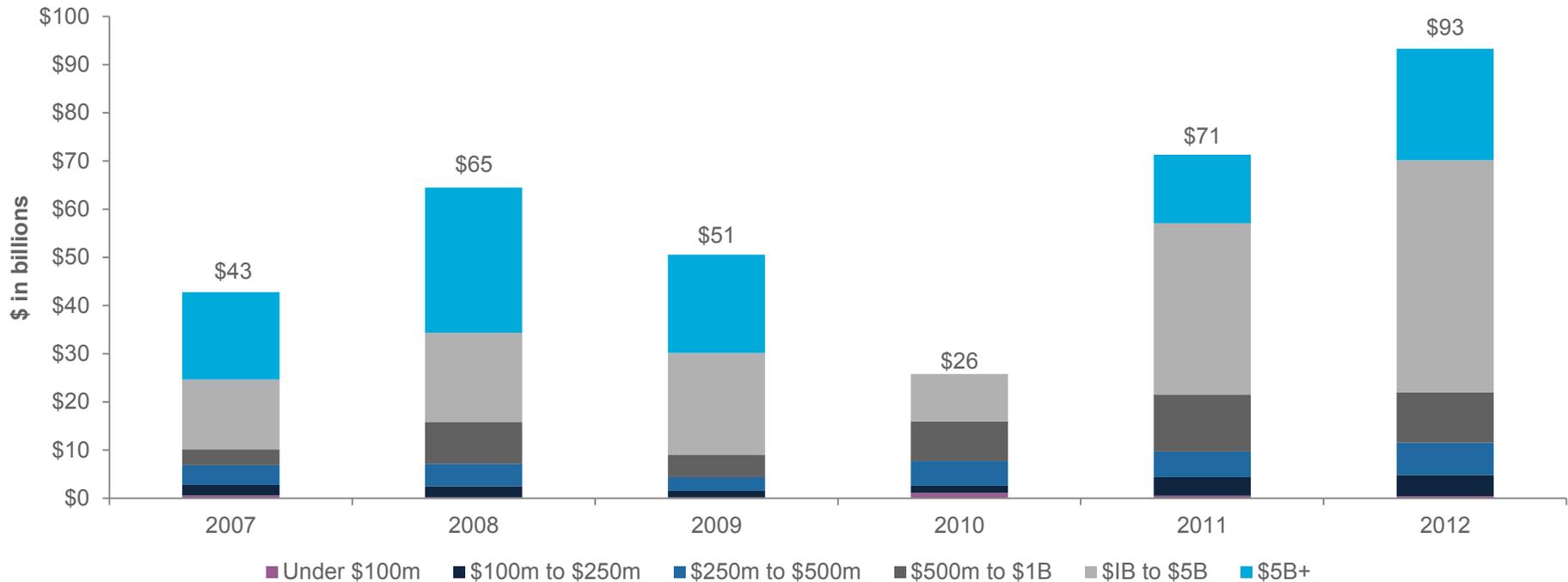


- Smaller deals continue to dominant deal activity by count.
- However, larger deals (\$2.5b+) accounted for 33% of capital invested in Q2 2013.

# North American Private Equity Overhang



## Vintage Year Overhang

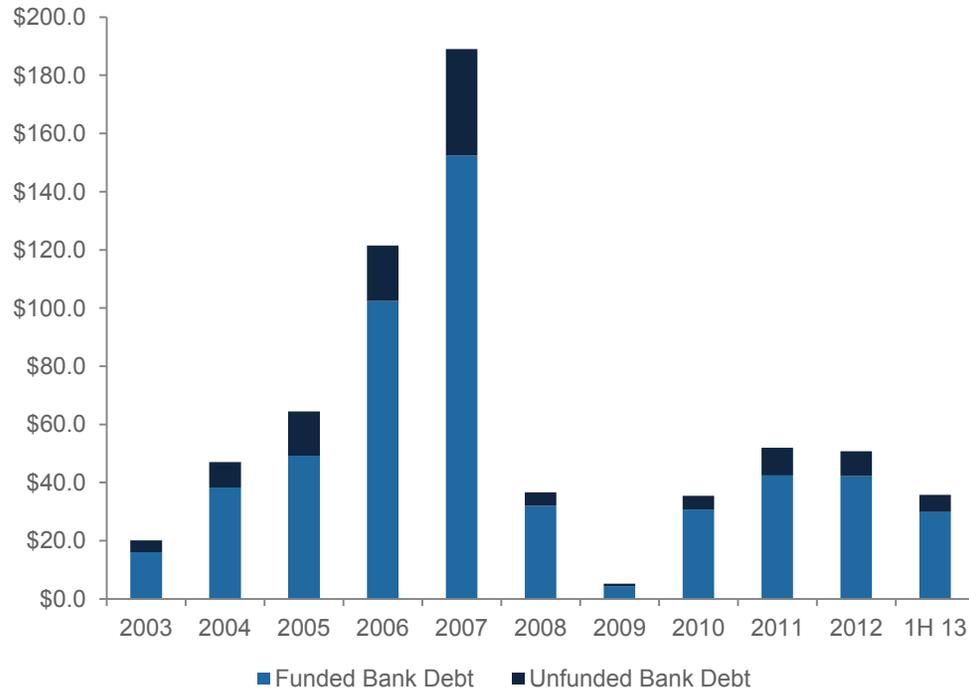


- Total private equity overhang significantly grew to over \$500 billion during the run-up to the financial crisis.
- While the total private equity overhang has decreased to approximately \$348 billion, there still remains a large amount of capital to be deployed.

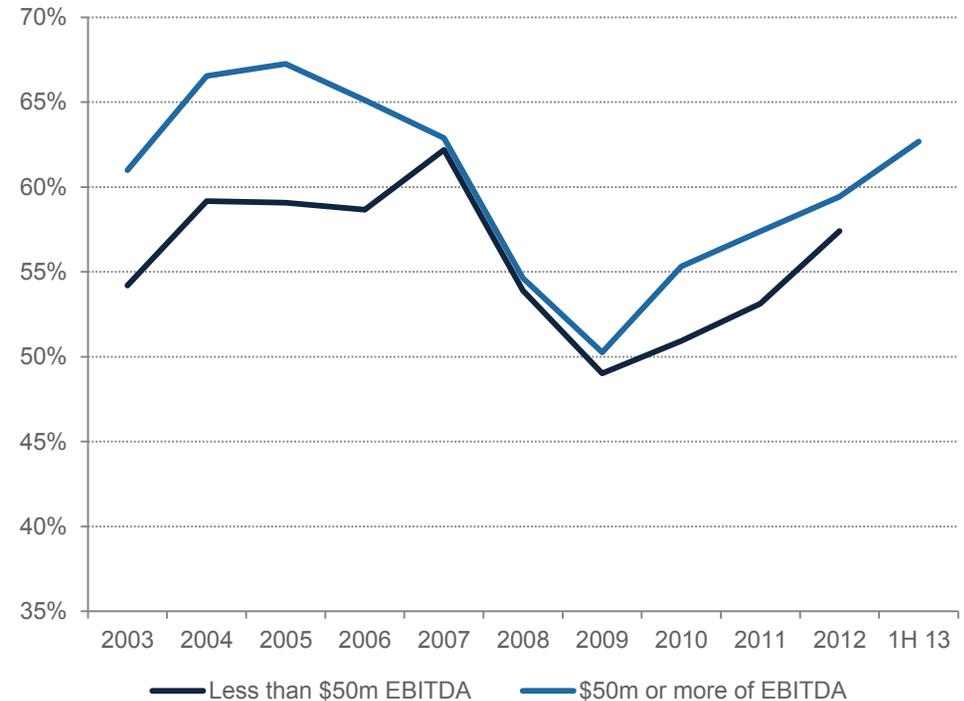


# U.S. Debt Markets

Total U.S. Leveraged Buyout Loan Volume (\$b)



Percentage of Debt Used in Buyouts

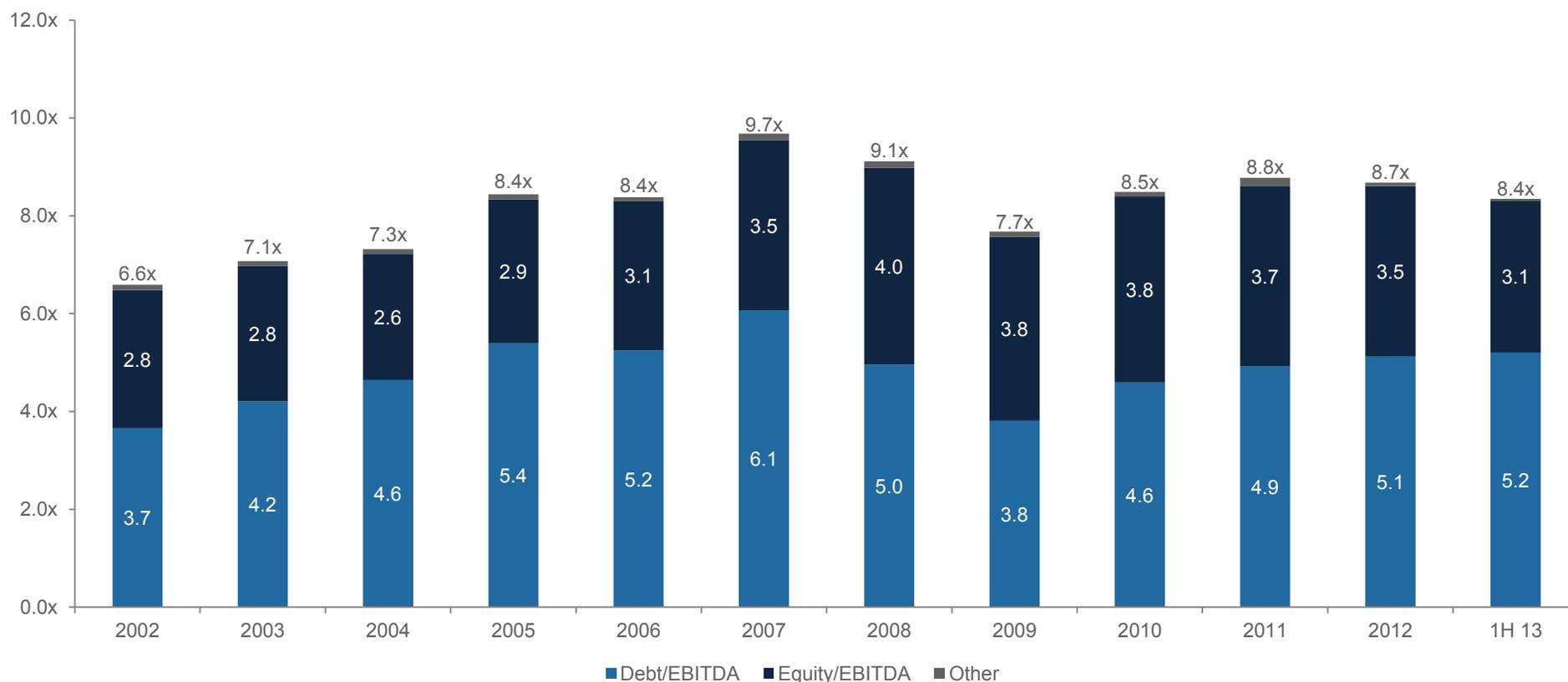


- The amount of capital available for leverage has gone down significantly since its peak volume in 2007, but continues to climb from the historically low levels in 2009.
- Transactions with less than \$50m of EBITDA continue to apply less leverage than those of larger deals by a meaningful percentage.



# U.S. LBO Purchase Price Multiples

Purchase Price Multiples of LBO Transactions



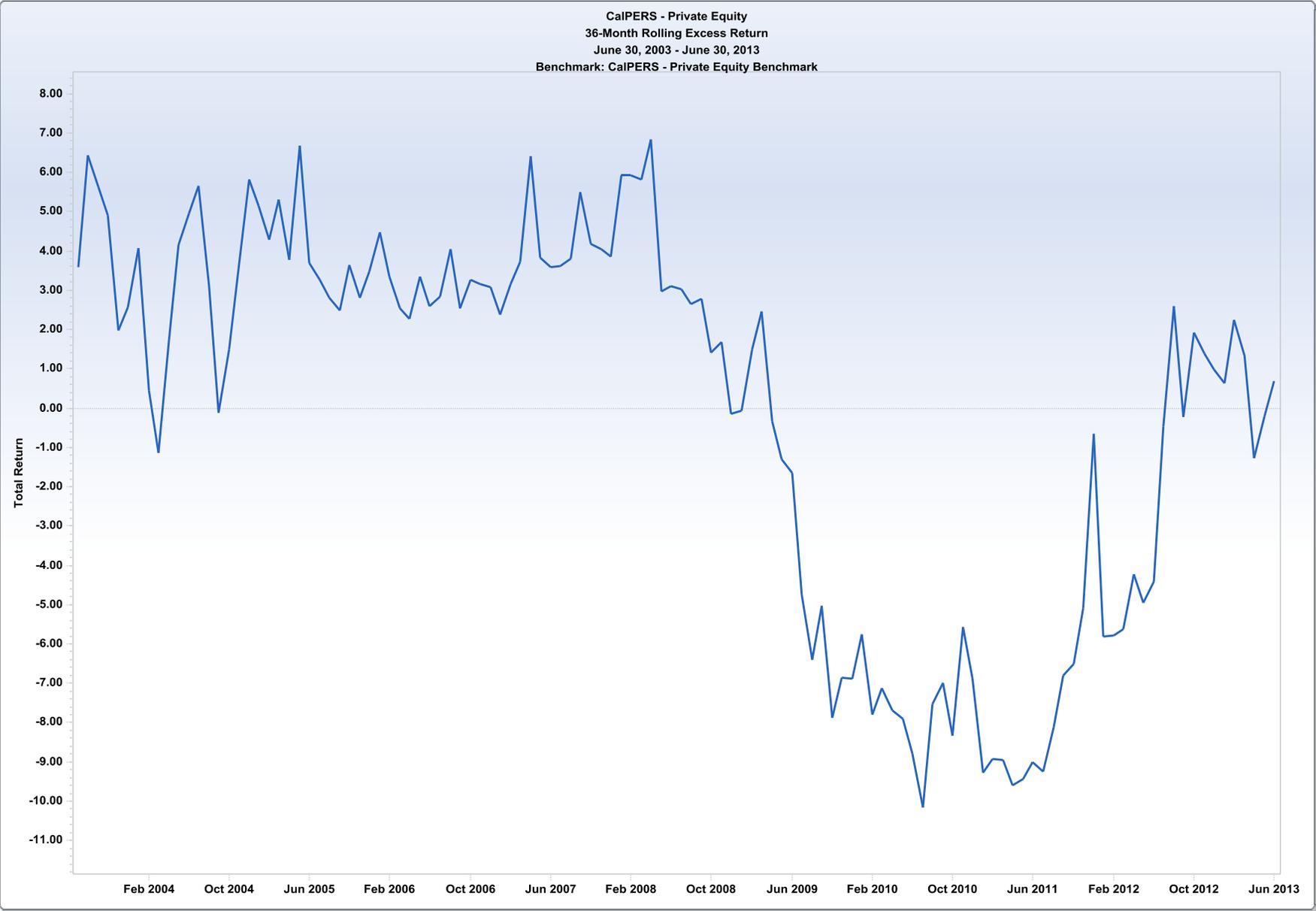
- As the debt markets have come back, purchase price multiples have increased from 2009 and have been stable in the 8.5x to 8.8x range.
- In the first half of 2013, purchase price multiples seem to have slightly decreased.

# Growth: Private Equity – Performance

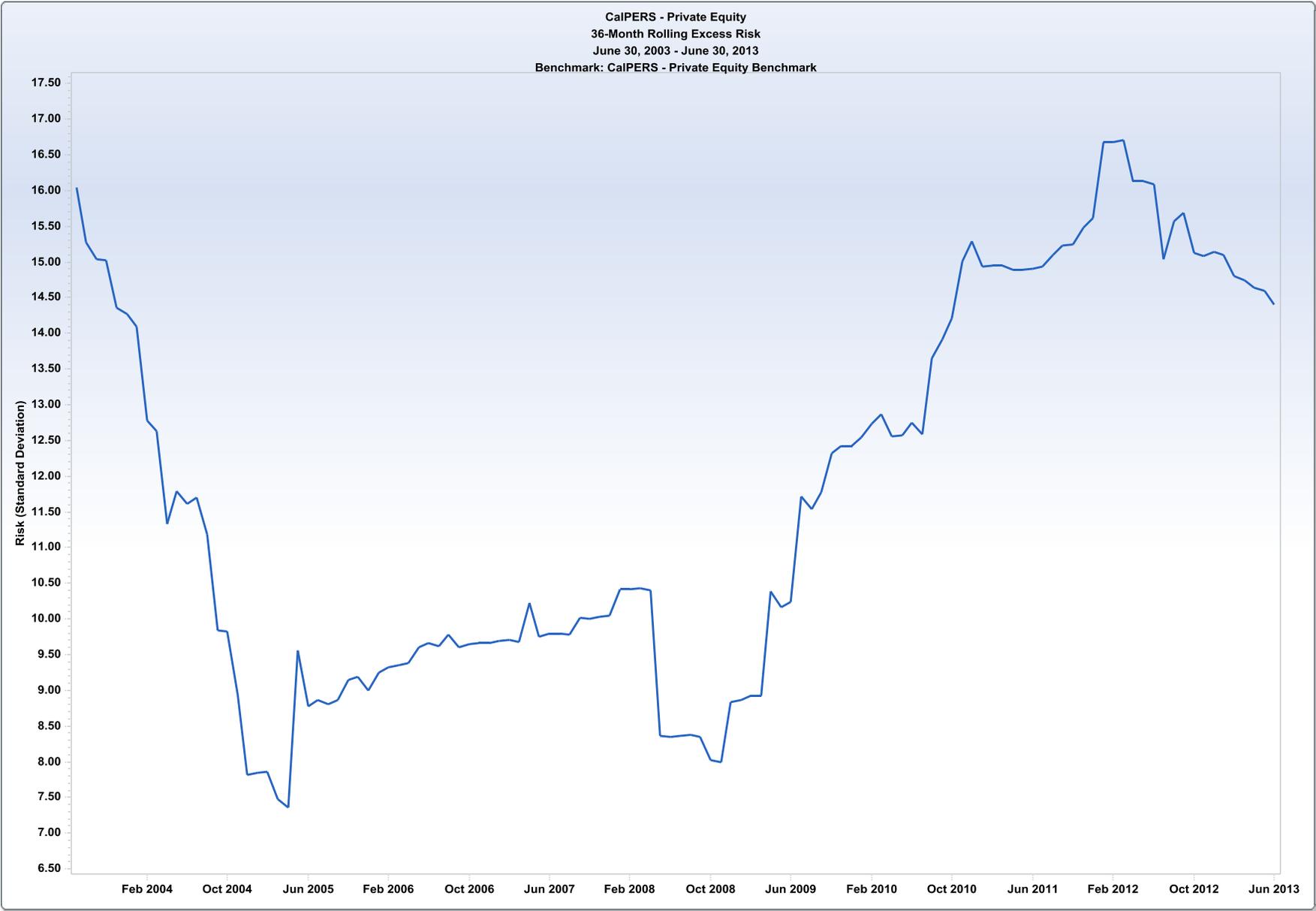


	<b>Market Value</b>	<b>Qtr</b>	<b>1-Year</b>	<b>3-Year</b>	<b>5-Year</b>	<b>10-Year</b>	<b>VaR</b>	<b>5-year Sharpe Ratio</b>	<b>5-year Info Ratio</b>
<b>PRIVATE EQUITY</b>	<b>31.4</b>	<b>4.8%</b>	<b>13.6%</b>	<b>14.5%</b>	<b>6.1%</b>	<b>12.5%</b>	<b>\$9.9 bil</b>	<b>0.6</b>	<b>-0.4</b>
<i>PE Policy Benchmark</i>		9.3%	16.0%	13.7%	12.7%	14.1%		<b>0.8</b>	<b>0.0</b>
<i>Value Added</i>		-4.5%	-2.4%	0.8%	-6.6%	-1.6%			
Private Equity Partnership Investments	31.4	4.8%	13.7%	14.6%	6.2%	12.7%			
Private Equity Distribution Stock	0.0	3.6%	-26.3%	-15.1%	2.2%	3.5%			

# Growth: Private Equity – Rolling Excess Returns



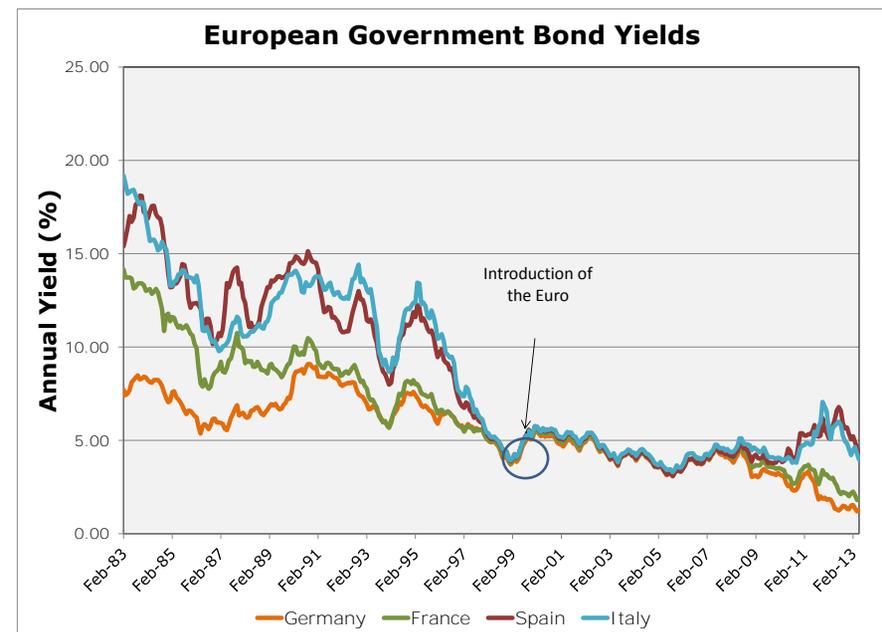
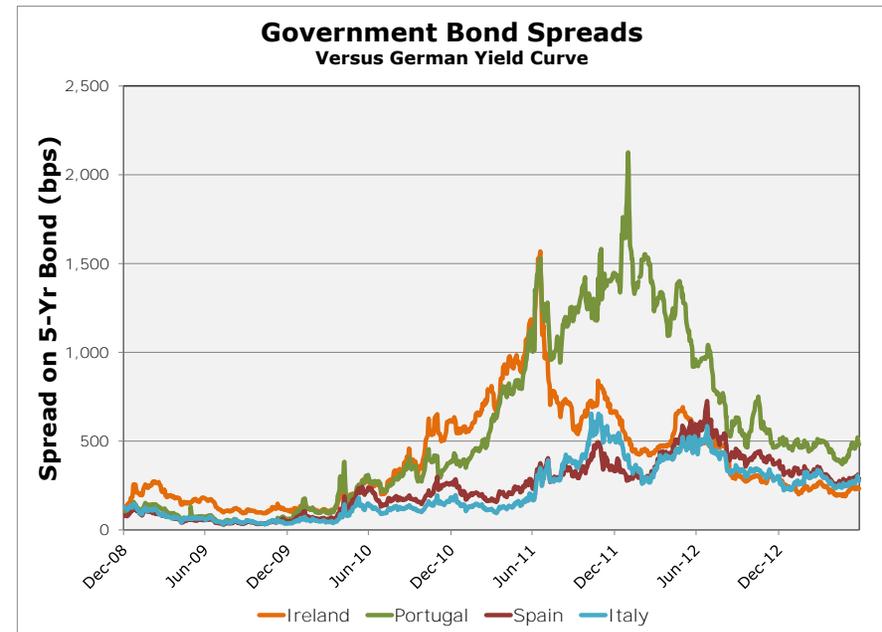
# Growth: Private Equity – Rolling Tracking Error





# European Debt Issues

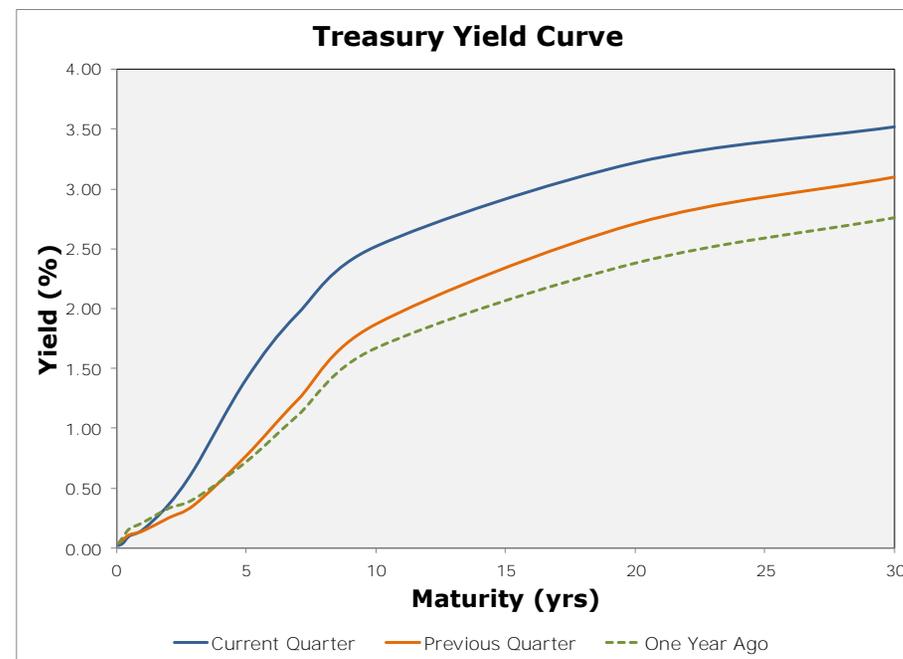
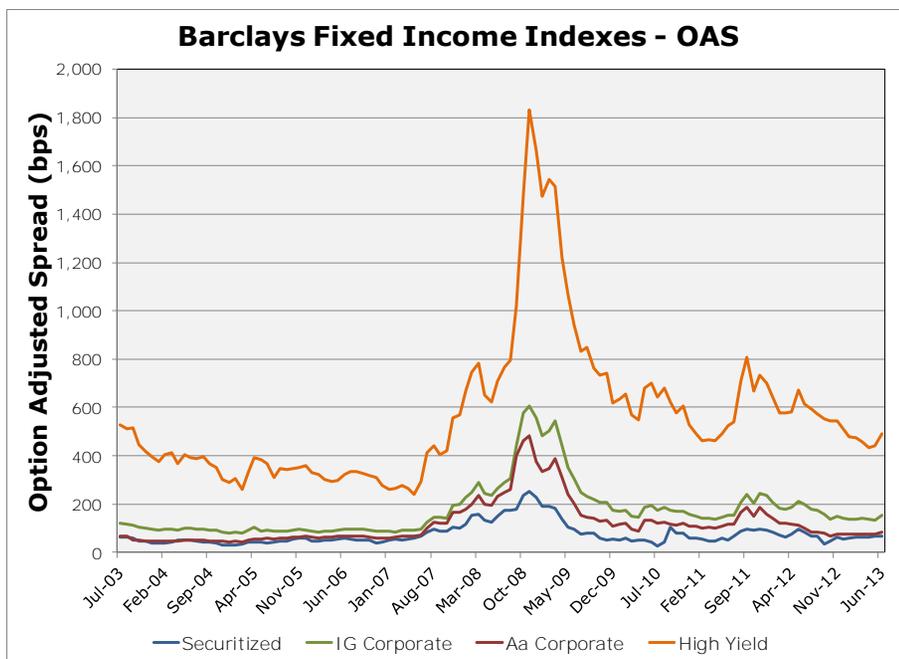
- Spreads have leveled-off to some degree but remain elevated
- Yields on government bonds continue their downward trend, with some spread emerging between France and Germany





# U.S. Fixed Income Market

June 30, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
Barclays Aggregate Bond Index	-2.3	-2.4	-0.7	3.5	5.2	4.5
Barclays Treasury Index	-1.9	-2.1	-1.6	3.1	4.5	4.1
Barclays Govt-Related Index	-2.9	-3.1	-1.0	3.0	4.5	4.2
Barclays Securitized Index	-1.9	-1.9	-0.8	2.8	4.9	4.6
Barclays Corporate IG Index	-3.3	-3.4	1.3	5.7	7.3	5.2
Barclays LT Govt/Credit Index	-6.1	-8.0	-4.7	7.0	8.5	6.2
Barclays LT Treasury Index	-5.6	-7.8	-8.4	6.2	7.6	6.1
Barclays LT Govt-Related Index	-8.1	-9.4	-4.6	7.3	7.8	6.5
Barclays LT Corporate IG Index	-5.7	-7.5	-1.3	7.5	9.4	6.2
Barclays U.S. TIPS Index	-7.1	-7.4	-4.8	4.6	4.4	5.2
Barclays High Yield Index	-1.4	1.4	9.5	10.7	10.9	8.9
Treasury Bills	0.0	0.0	0.1	0.1	0.3	1.7



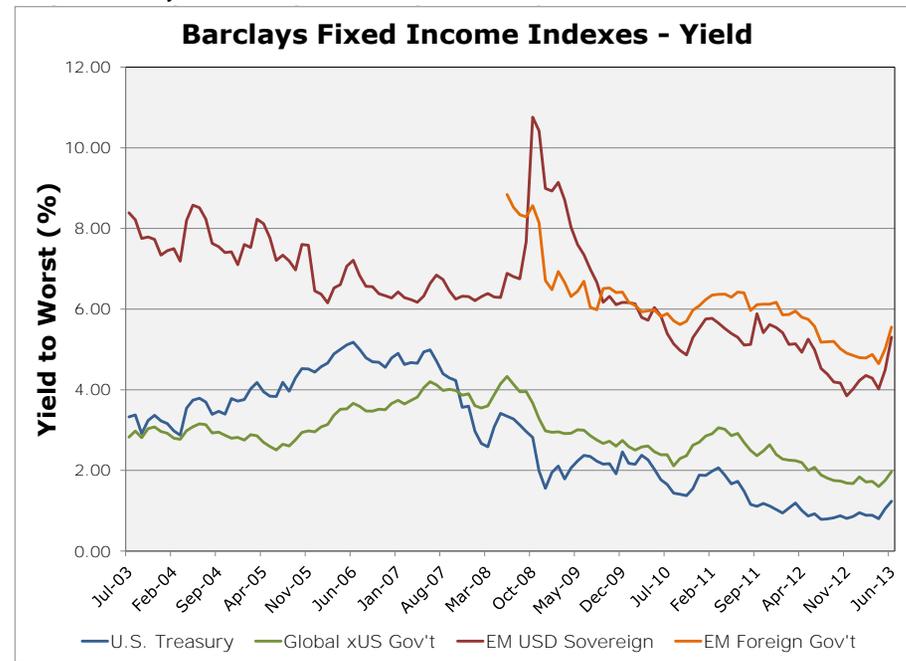
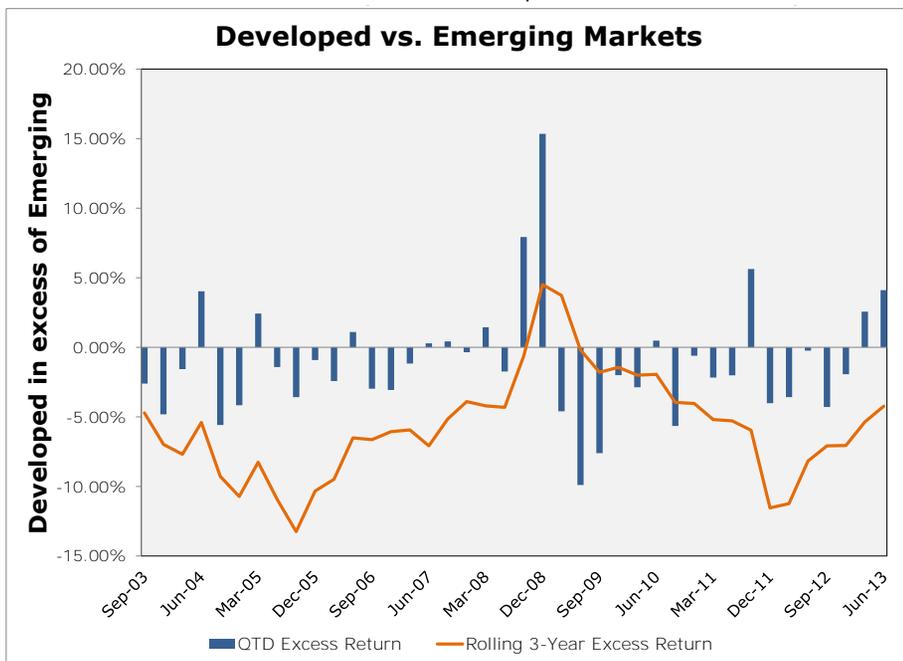
Data sources: Wilshire Compass, Barclays Capital, U.S. Treasury



# Non-U.S. Fixed Income Market

June 30, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
<i>Developed Markets</i>						
Barclays Global Aggregate xUS	-3.1	-6.5	-3.4	3.6	2.7	5.0
Barclays Global Aggregate xUS *	-1.2	-0.2	3.3	3.4	4.8	4.1
Barclays Wrld Govt xUS IL Bond	-6.0	-6.8	-1.5	6.0	1.0	6.0
Barclays Wrld Govt xUS IL Bond *	-5.4	-1.6	1.2	5.0	4.8	5.2
<i>Emerging Mkts (Hard Currency)</i>						
Barclays EM USD Aggregate	-5.1	-6.5	3.1	8.0	8.8	9.0
<i>Emerging Mkts (Foreign Currency)</i>						
Barclays EM Local Currency Govt	-6.4	-6.0	2.8	6.4	4.7	n.a.
Barclays EM Local Currency Govt *	-3.1	-2.0	1.9	3.7	5.4	n.a.
Euro vs. Dollar	1.2	-1.4	2.4	2.0	-3.8	1.2
Yen vs. Dollar	-5.4	-13.0	-19.7	-3.8	1.3	1.9
Pound vs. Dollar	-0.1	-6.7	-3.3	0.5	-5.3	-0.9

\* Returns are reported in terms of local market investors, which removes currency effects.

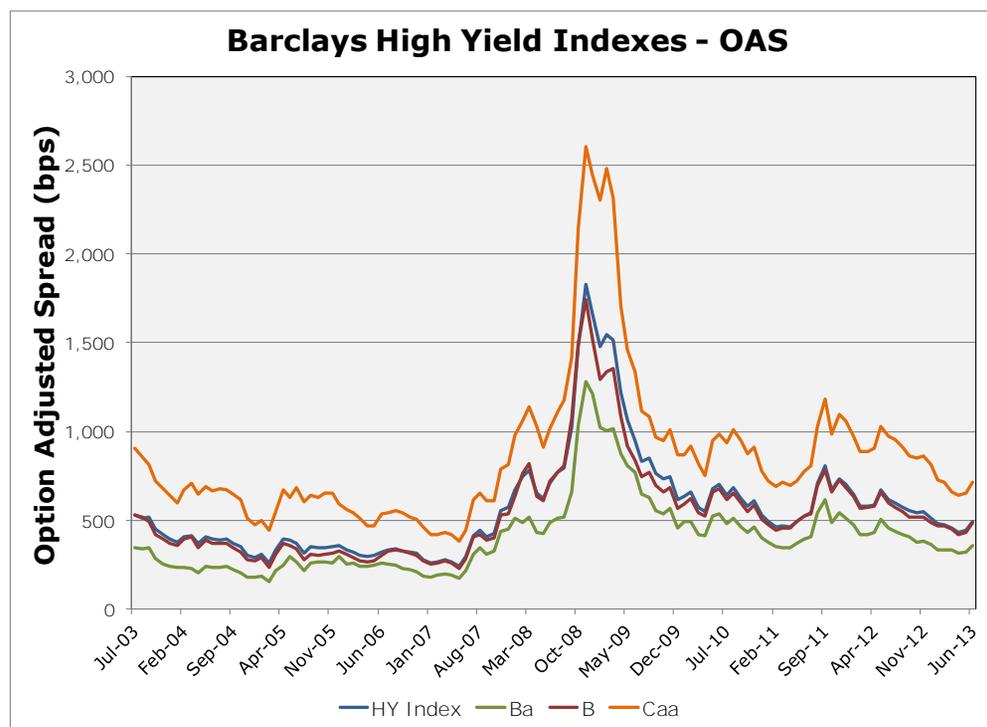


Data sources: Wilshire Compass, Barclays Capital



## High Yield by Quality

June 30, 2013	Weight	Qtr	Ytd	1 Yr	3 Yr
Barclays High Yield Index	100%	-1.4	1.4	9.5	10.7
Quality Distribution					
Ba U.S. High Yield	38.1%	-1.9	0.1	7.3	10.2
B U.S. High Yield	43.8%	-1.5	1.2	9.5	10.7
Caa U.S. High Yield	16.8%	-0.5	5.3	14.0	12.2
Ca to D U.S. High Yield	0.9%	1.7	0.5	17.5	10.6
Non-Rated U.S. High Yield	0.4%	-2.2	1.6	12.3	13.6



Data sources: Barclays Capital

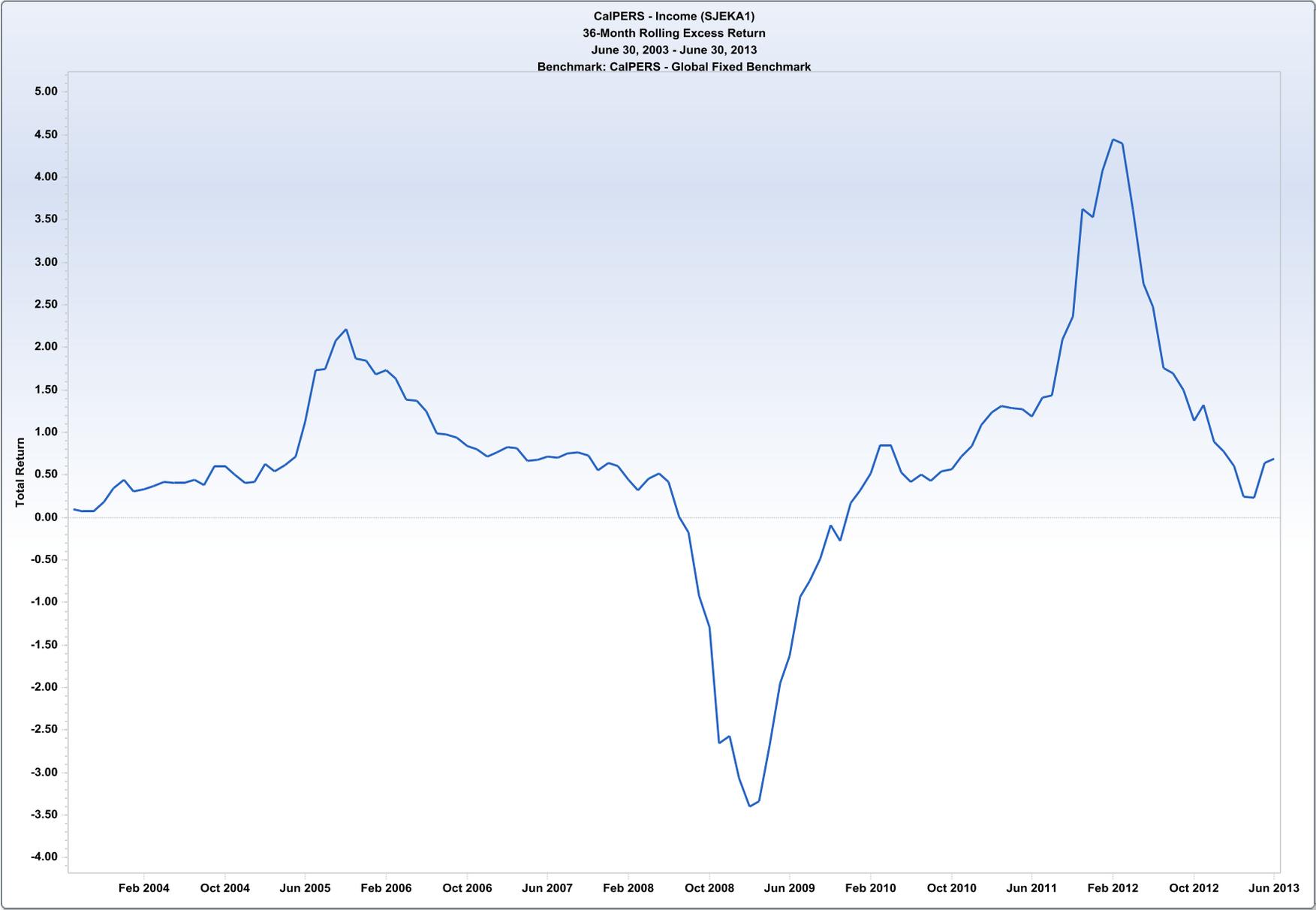


## Income – Performance

	<b>Market Value</b>	<b>Qtr</b>	<b>1-Year</b>	<b>3-Year</b>	<b>5-Year</b>	<b>10-Year</b>	<b>VaR</b>	<b>5-year Sharpe Ratio</b>	<b>5-year Info Ratio</b>
<b>INCOME</b>	<b>40.2</b>	<b>-4.1%</b>	<b>-1.6%</b>	<b>5.9%</b>	<b>7.7%</b>	<b>6.4%</b>	<b>\$4.7 bil</b>	<b>1.0</b>	<b>0.3</b>
<i>Income Policy Benchmark</i>		-4.5%	-3.1%	5.1%	6.7%	5.6%		<b>0.9</b>	<b>0.0</b>
<i>Value Added</i>		0.4%	1.5%	0.8%	1.0%	0.8%			
<b>U.S. Income</b>	<b>37.2</b>	<b>-4.1%</b>	<b>-1.2%</b>	<b>6.1%</b>	<b>8.1%</b>	<b>6.5%</b>		<b>1.1</b>	<b>0.3</b>
<i>U.S. Income Policy Benchmark</i>		-4.6%	-2.8%	5.5%	7.1%	5.7%		<b>1.0</b>	<b>0.0</b>
<i>Value Added</i>		0.5%	1.6%	0.6%	1.0%	0.8%			
<b>Non-U.S. Income</b>	<b>3.0</b>	<b>-4.4%</b>	<b>-6.1%</b>	<b>3.7%</b>	<b>4.0%</b>	<b>5.5%</b>		<b>0.4</b>	<b>0.7</b>
<i>Non-US Income Policy Benchmark</i>		-3.6%	-6.2%	2.5%	2.6%	4.8%		<b>0.3</b>	<b>0.0</b>
<i>Value Added</i>		-0.8%	0.1%	1.2%	1.4%	0.7%			

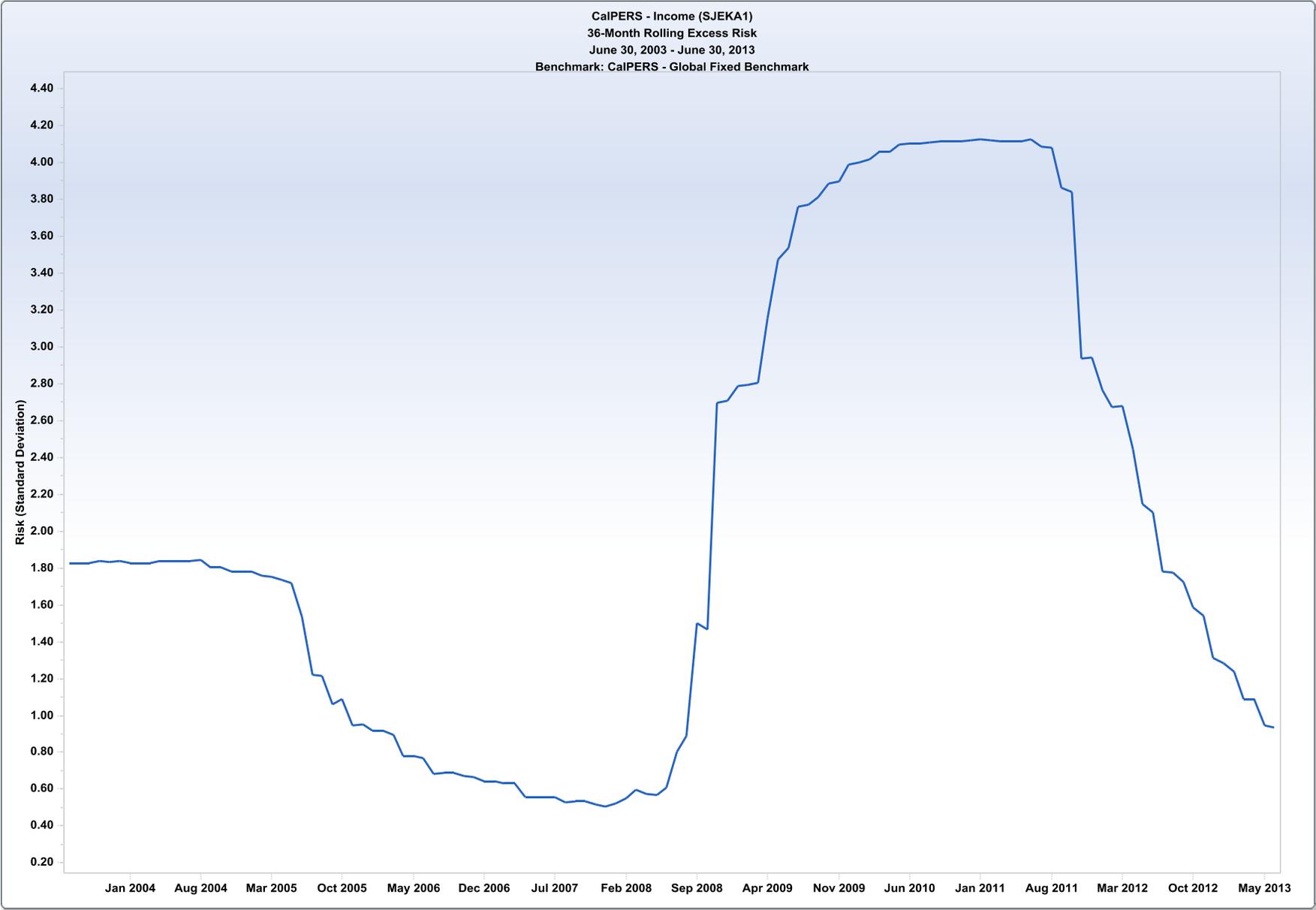


# Income – Rolling Excess Returns



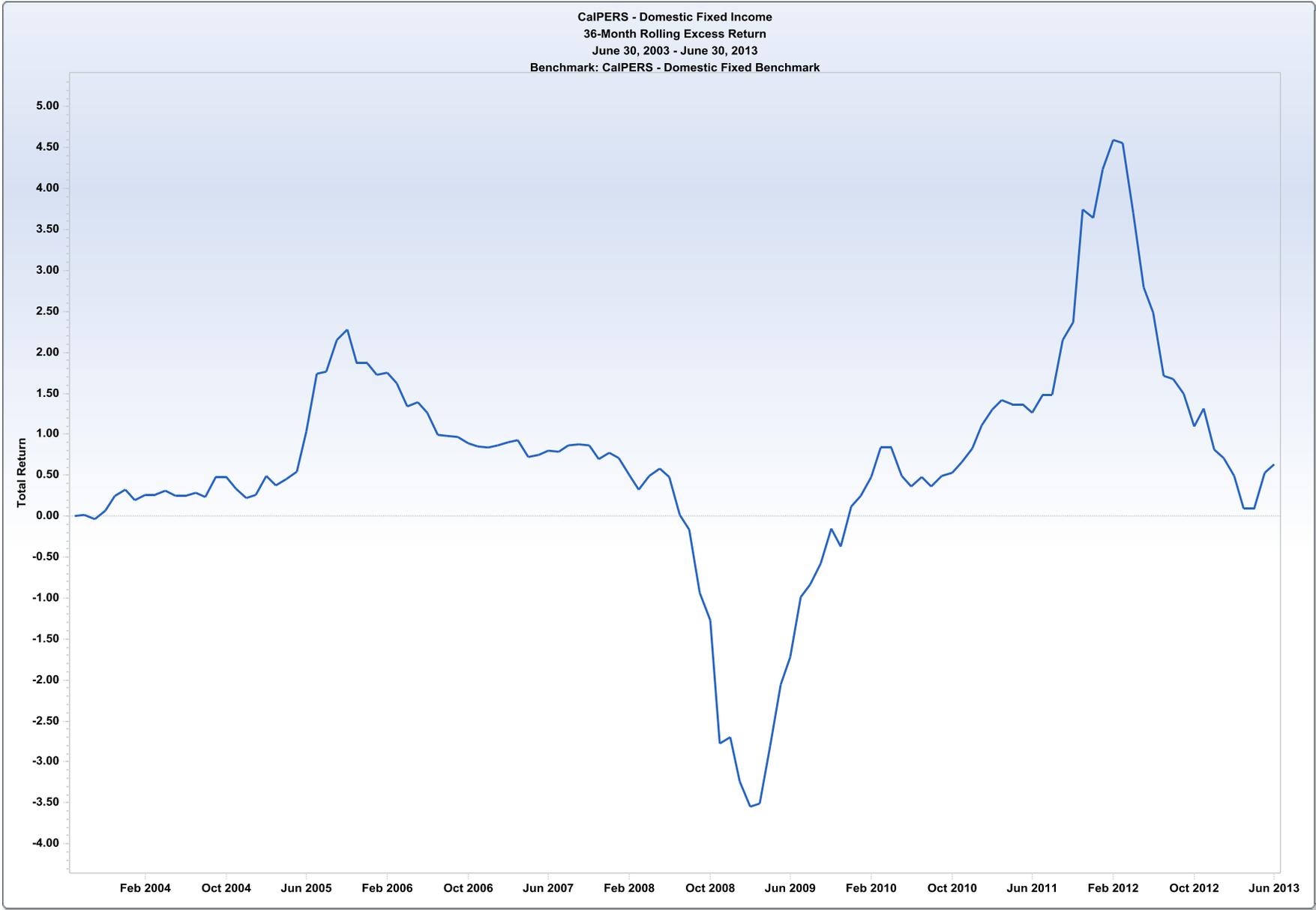


# Income – Rolling Tracking Error



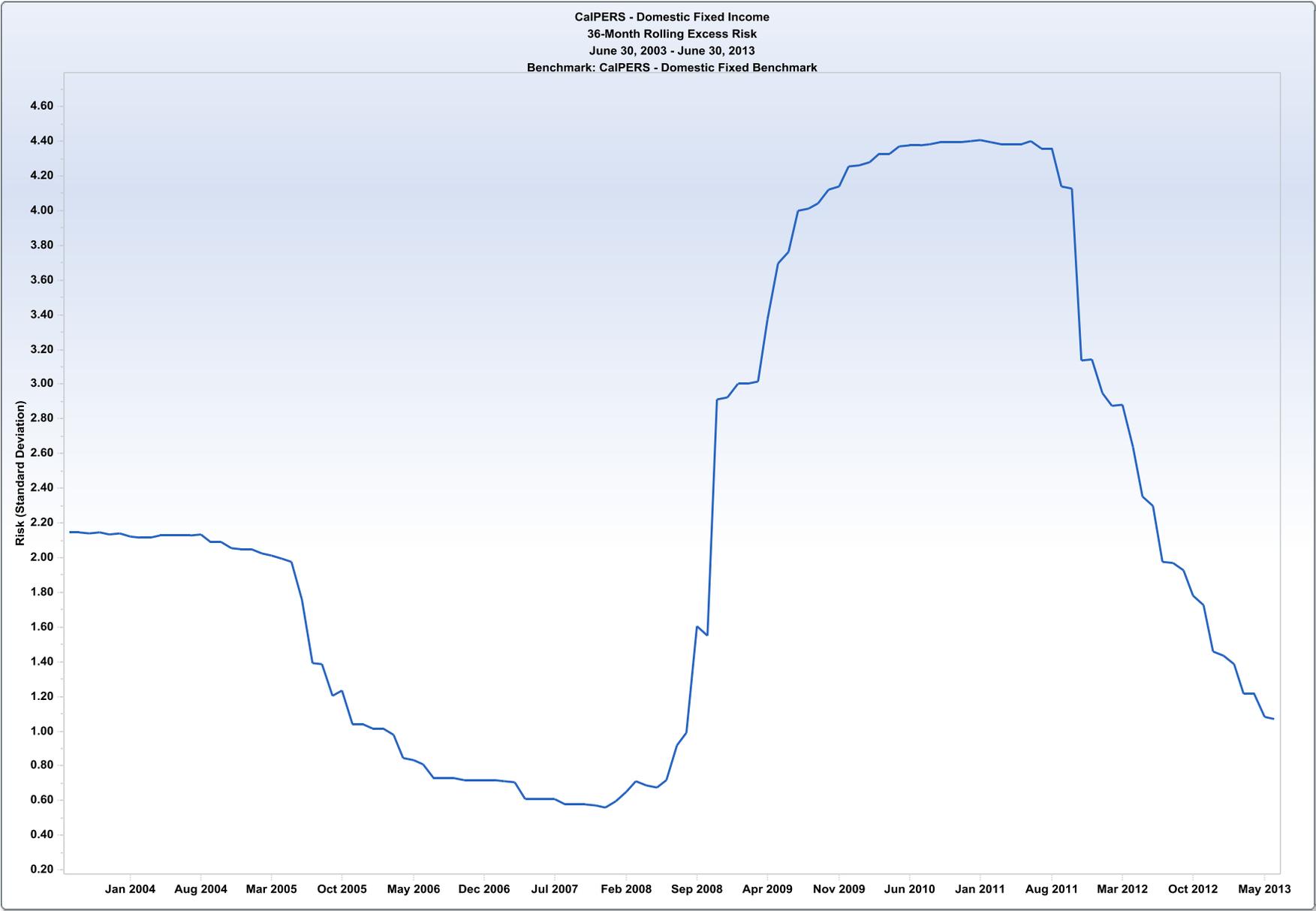


# US Income – Rolling Excess Returns

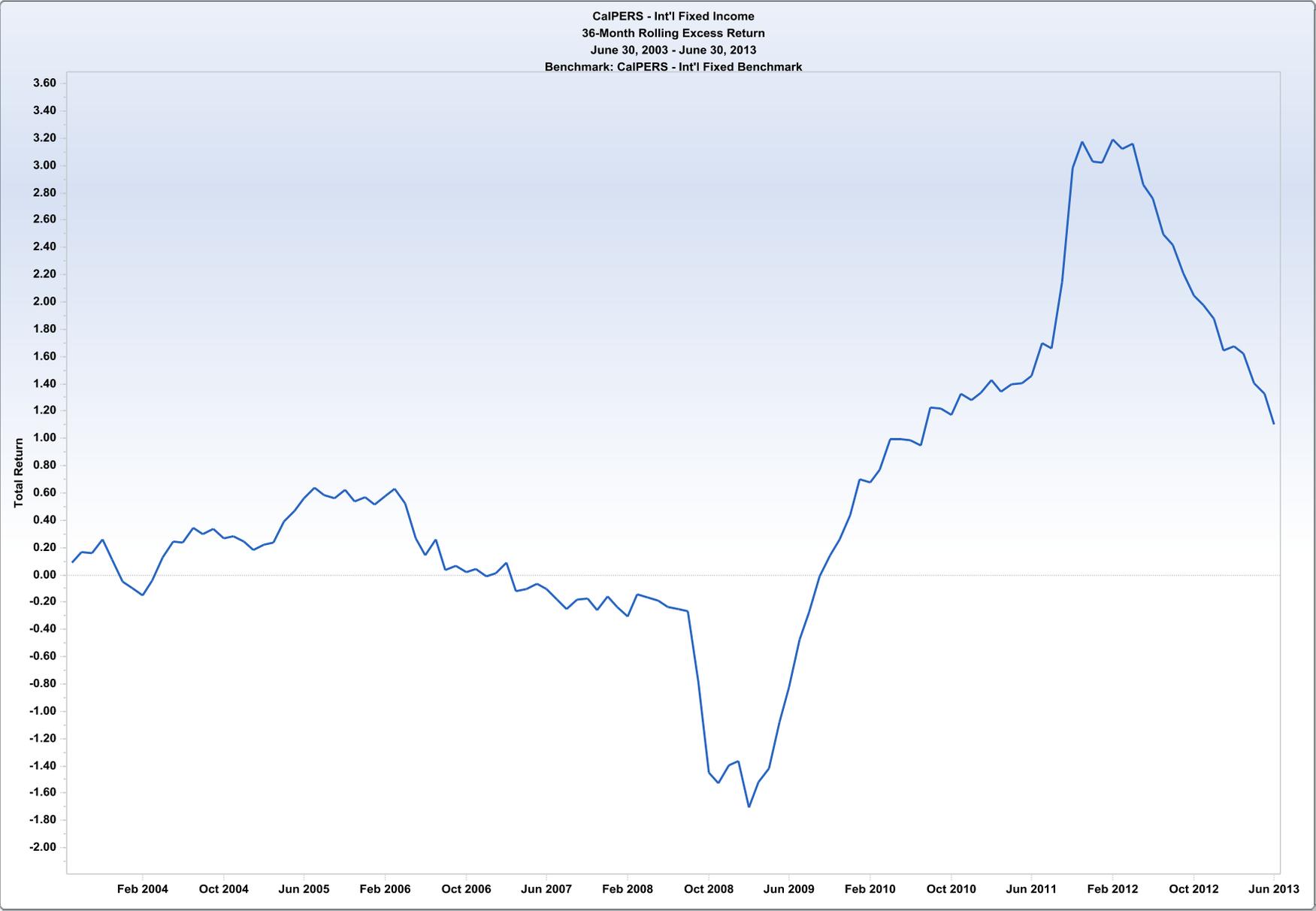




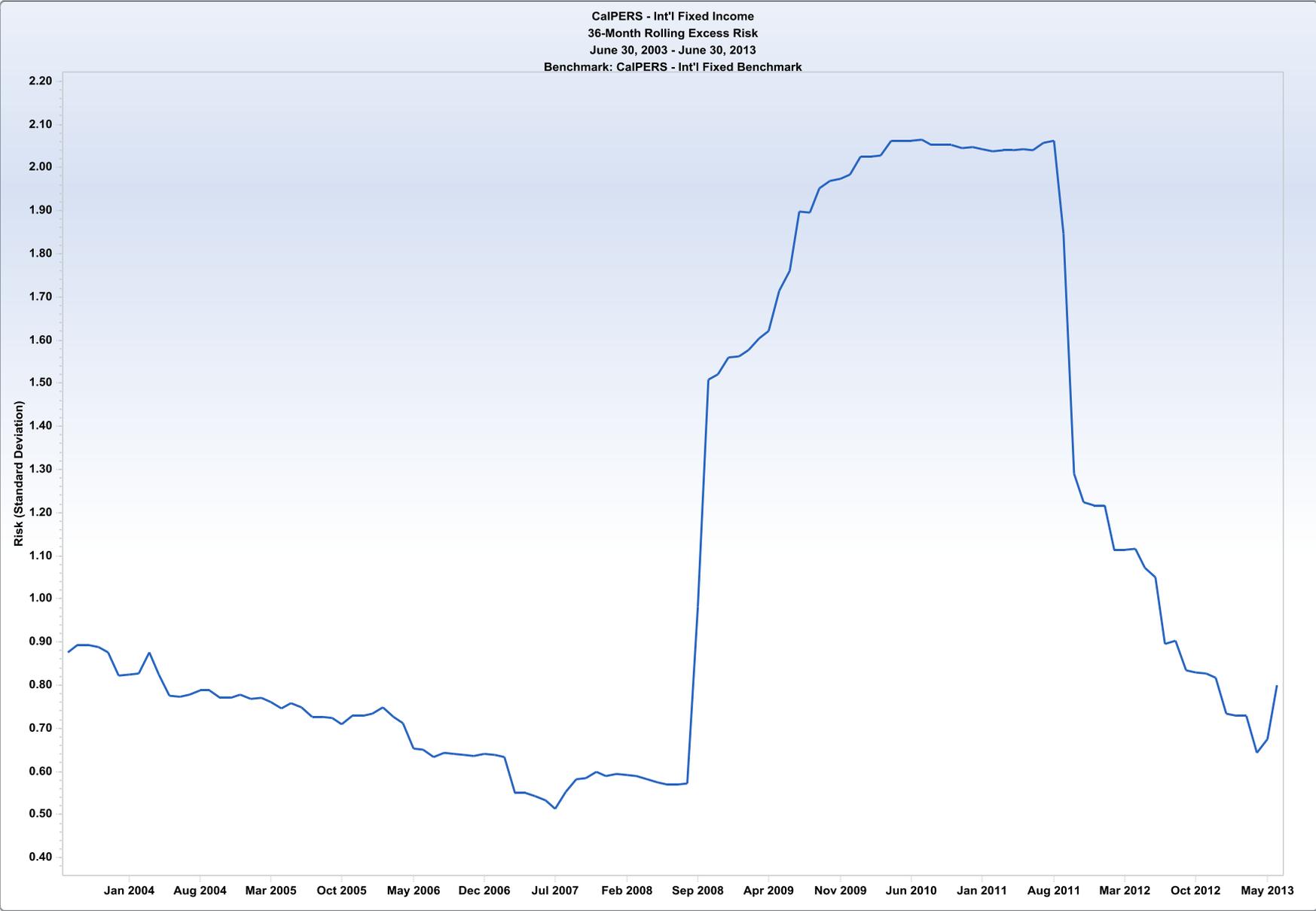
# US Income – Rolling Tracking Error



# International Income – Rolling Excess Returns



# International Income – Rolling Tracking Error



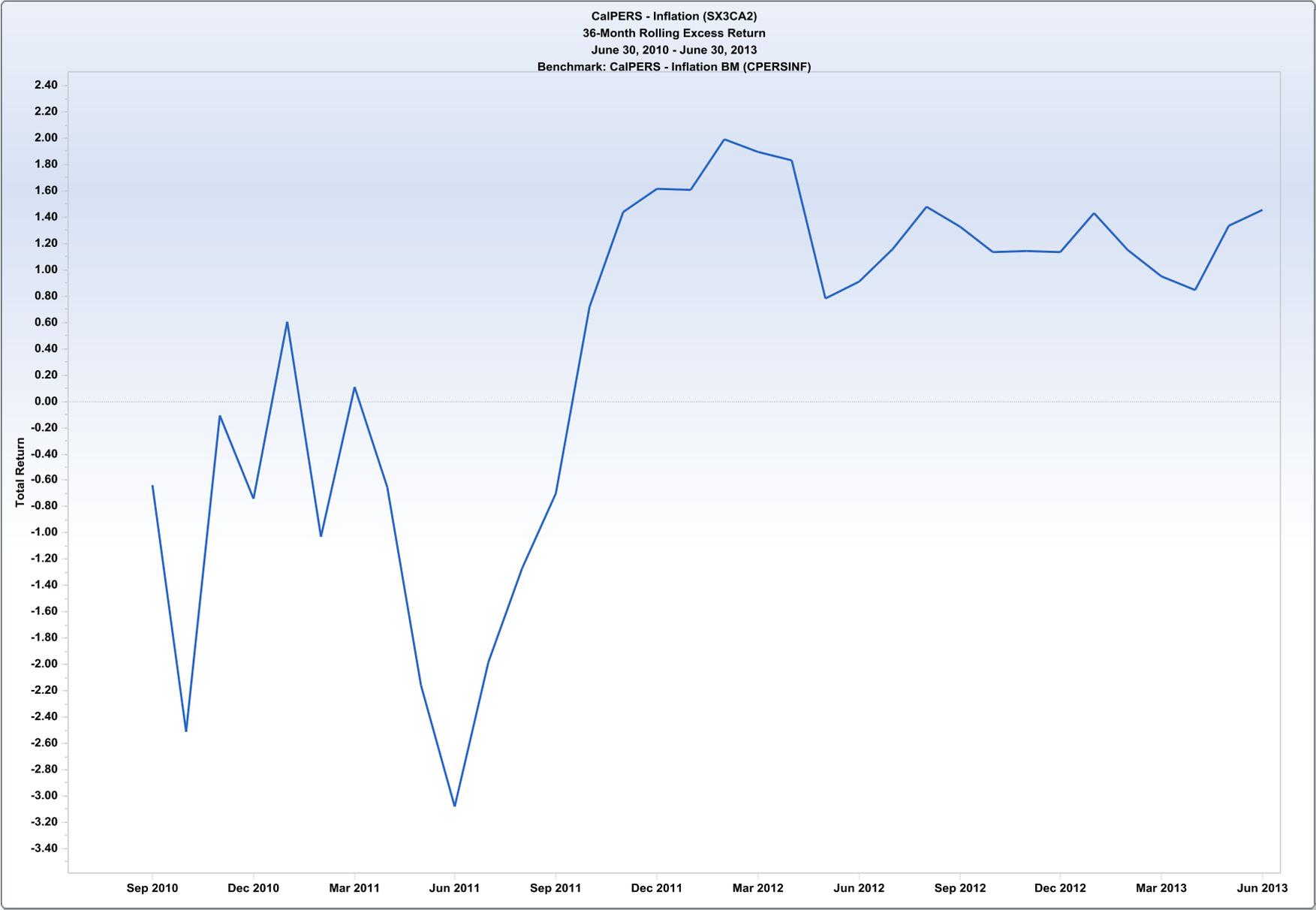


## Inflation – Performance

	<b>Market Value</b>	<b>Qtr</b>	<b>1-Year</b>	<b>3-Year</b>	<b>5-Year</b>	<b>10-Year</b>	<b>VaR</b>	<b>5-year Sharpe Ratio</b>	<b>5-year Info Ratio</b>
<b>INFLATION</b>	<b>9.2</b>	<b>-5.6%</b>	<b>0.2%</b>	<b>6.8%</b>	<b>-3.2%</b>	<b>-.-%</b>	<b>\$0.6 bil</b>	<b>-0.3</b>	<b>-0.5</b>
<i>Inflation Policy Benchmark</i>		-6.1%	-0.9%	5.3%	-1.2%	-.-%		<b>-0.1</b>	<b>0.0</b>
<i>Value Added</i>		0.5%	1.1%	1.5%	-2.0%	-.-%			
<b>Internal Commodities</b>	<b>1.2</b>	<b>-6.0%</b>	<b>1.6%</b>	<b>4.7%</b>	<b>-15.1%</b>	<b>-.-%</b>			
<i>GSCI Total Return Index</i>		-5.9%	2.0%	4.7%	-15.3%	-.-%			
<i>Value Added</i>		-0.1%	-0.4%	0.0%	0.2%	-.-%			
<b>Core Inflation Linked Bonds</b>	<b>5.8</b>	<b>-5.6%</b>	<b>-1.8%</b>	<b>5.9%</b>	<b>3.8%</b>	<b>-.-%</b>			
<i>Custom Benchmark</i>		-6.0%	-2.2%	5.6%	3.6%	-.-%			
<i>Value Added</i>		0.4%	0.4%	0.3%	0.2%	-.-%			
<b>Tactical Commodities</b>	<b>1.6</b>	<b>-5.9%</b>	<b>-.-%</b>	<b>-.-%</b>	<b>-.-%</b>	<b>-.-%</b>			
<i>GSCI Total Return Index</i>		-5.9%	-.-%	-.-%	-.-%	-.-%			
<i>Value Added</i>		0.0%	-.-%	-.-%	-.-%	-.-%			
<b>Tactical TIPS</b>	<b>0.6</b>	<b>-5.9%</b>	<b>-.-%</b>	<b>-.-%</b>	<b>-.-%</b>	<b>-.-%</b>			
<i>CalPERS TIPS</i>		-7.1%	-.-%	-.-%	-.-%	-.-%			
<i>Value Added</i>		1.2%	-.-%	-.-%	-.-%	-.-%			

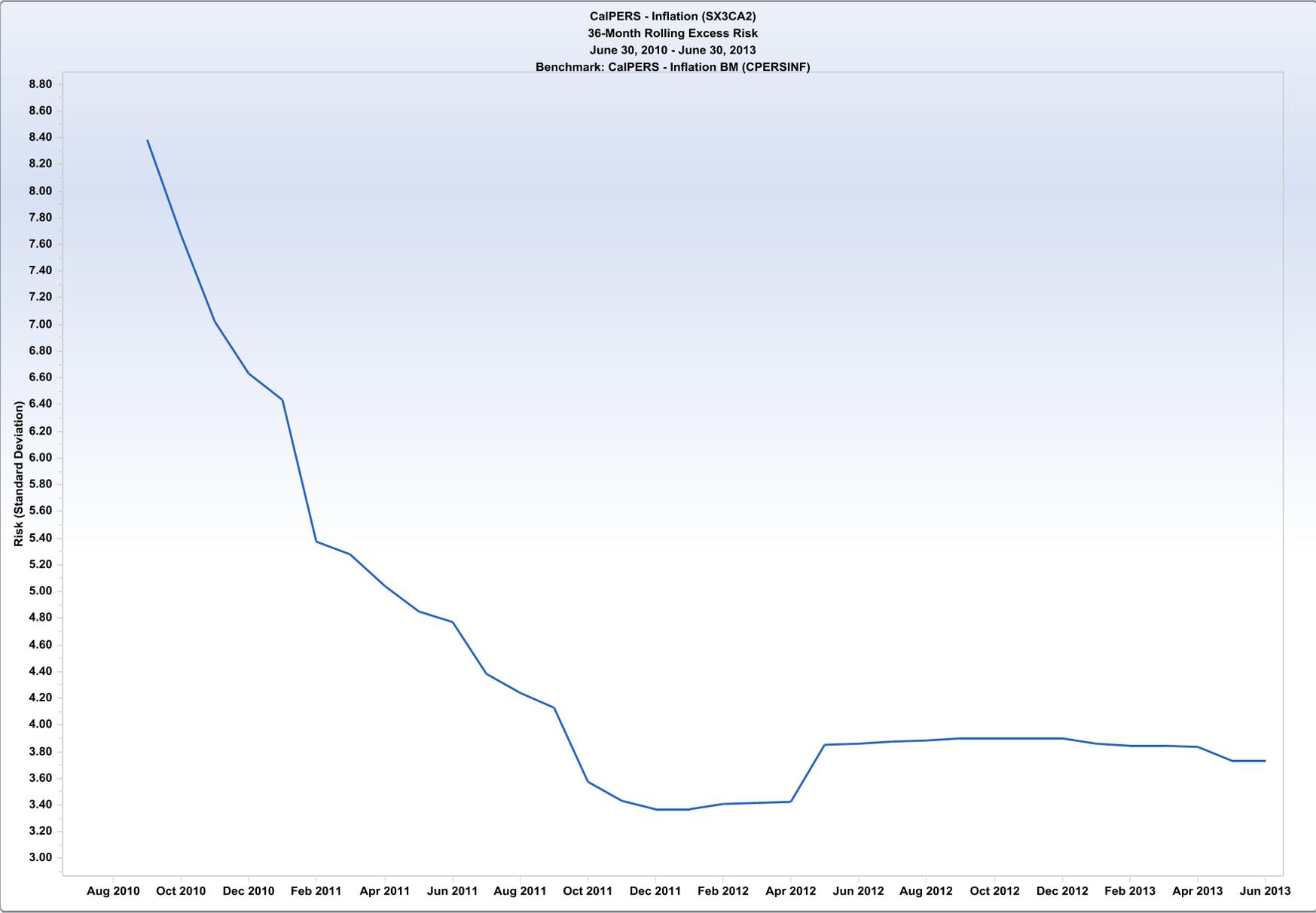


# Inflation – Rolling Excess Returns





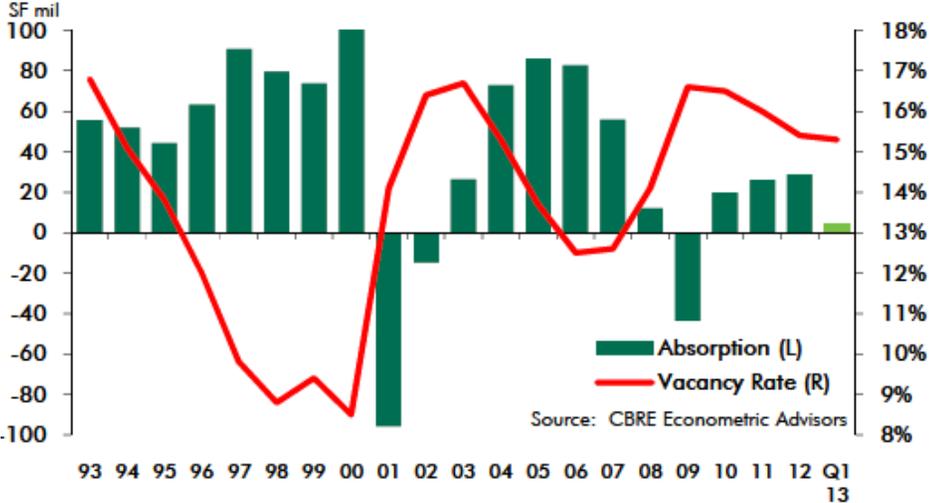
# Inflation – Rolling Tracking Error



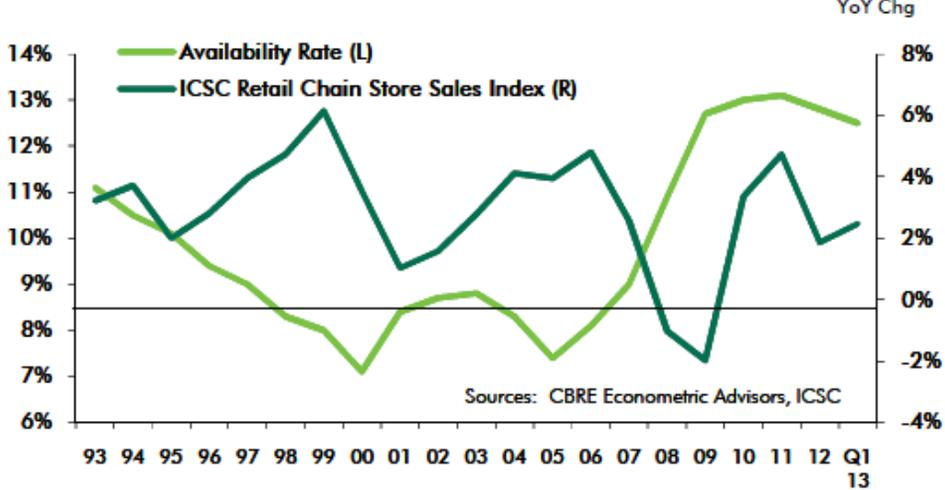


# Commercial Property (As of 1Q2013)

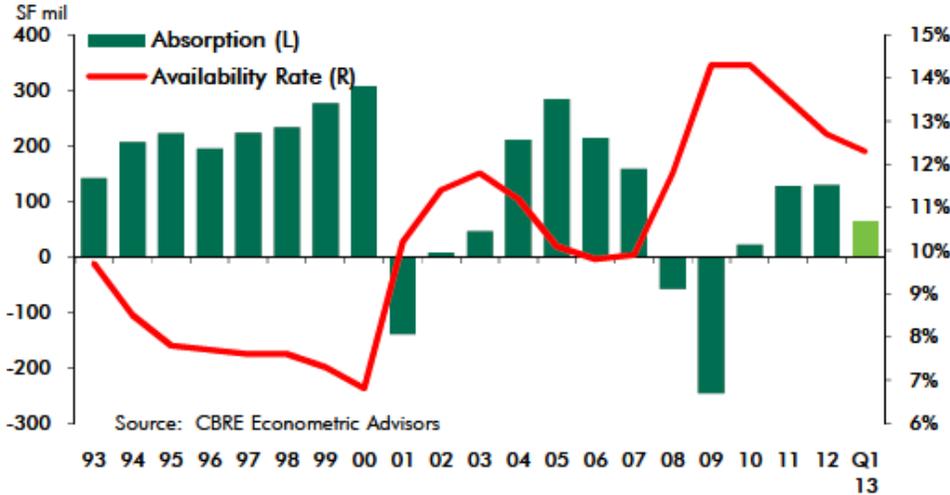
### Office



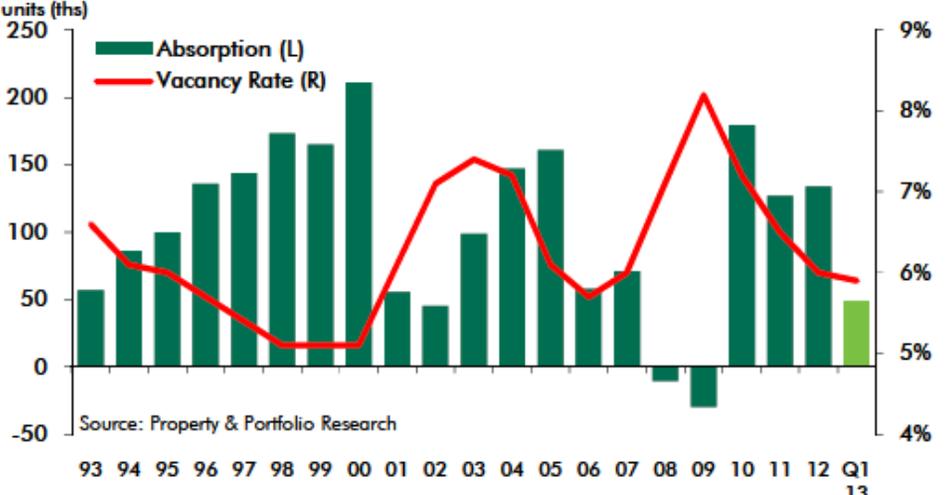
### Retail



### Industrial



### Apartment

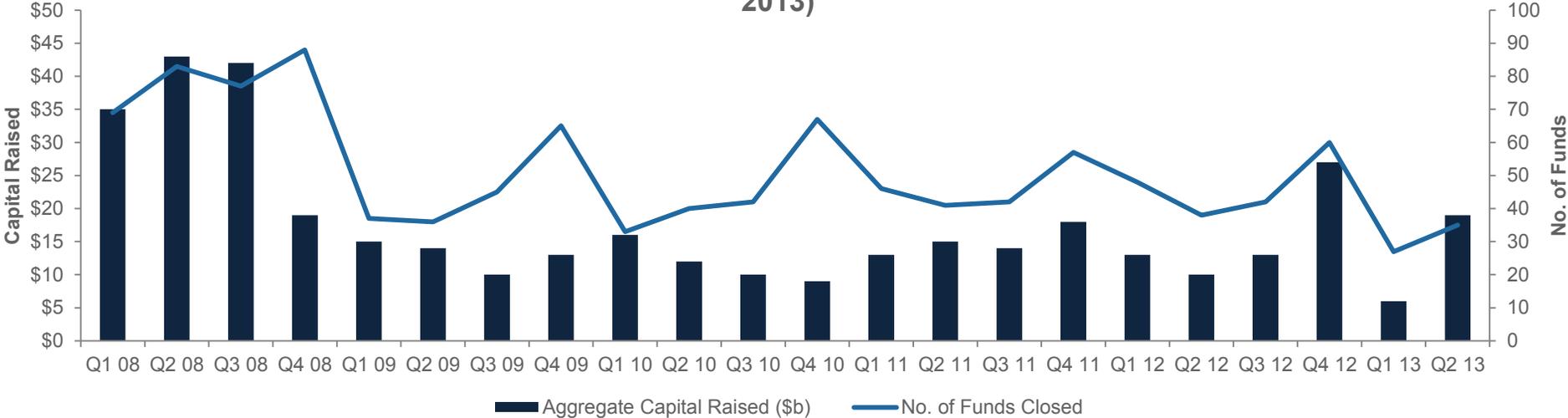


Source: CB Richard Ellis

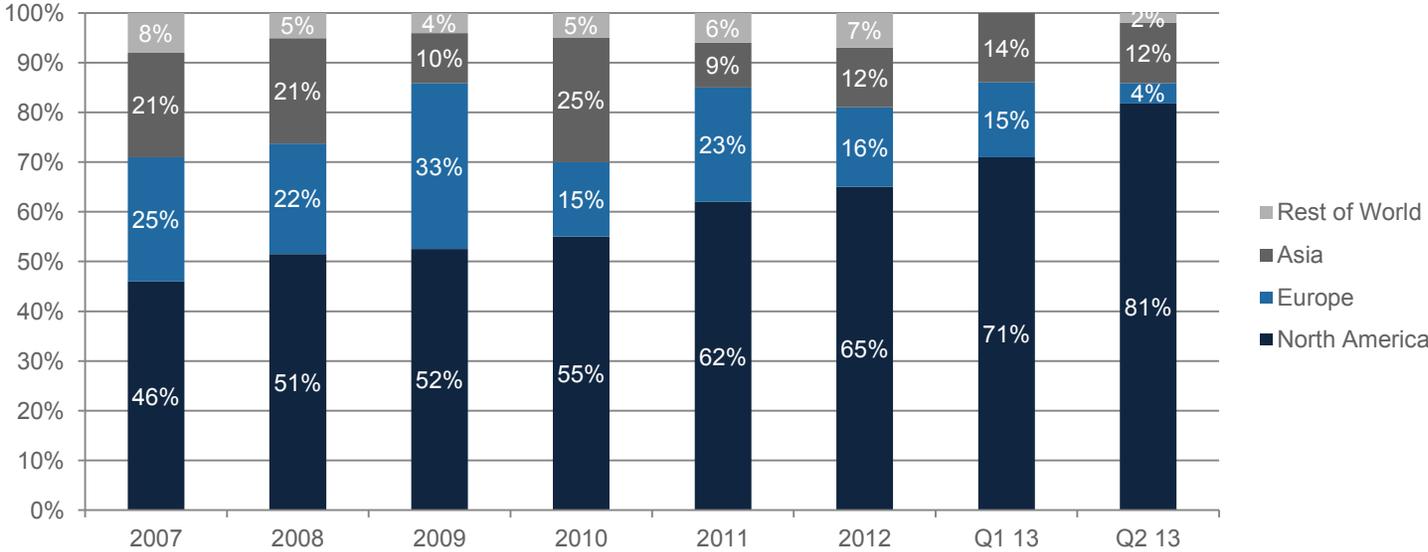


# Real Estate Fundraising

Quarterly Closed-End Private Real Estate Fundraising (Q1 2008 – Q2 2013)



Proportion of Aggregate Capital Raised by Closed-End Private Real Estate Funds by Fund Geographic Focus (2007 – Q2 2013)

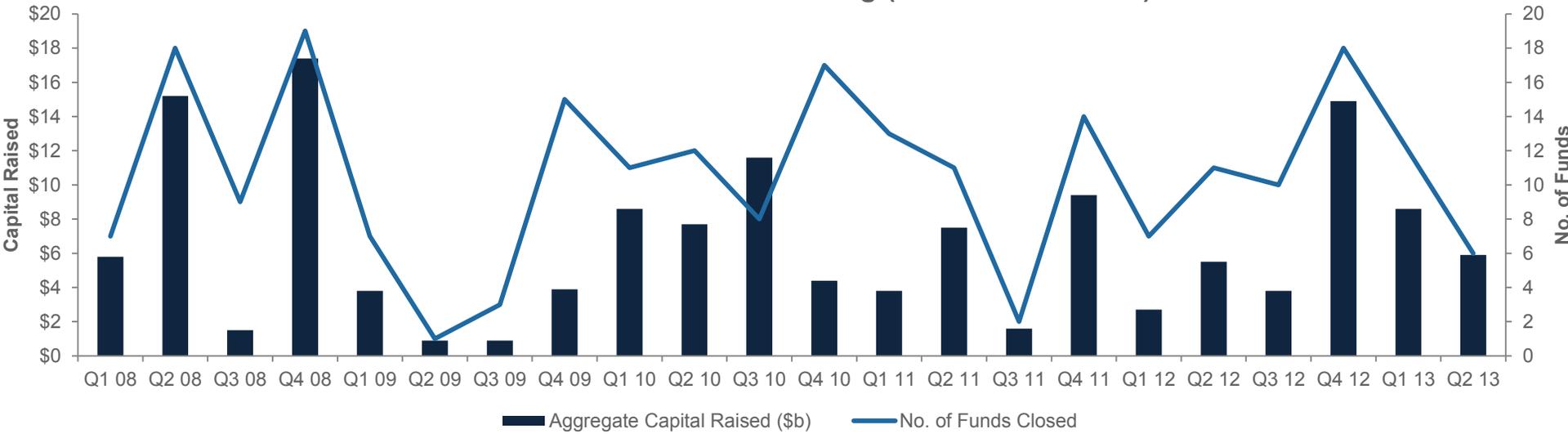


Source: Preqin.

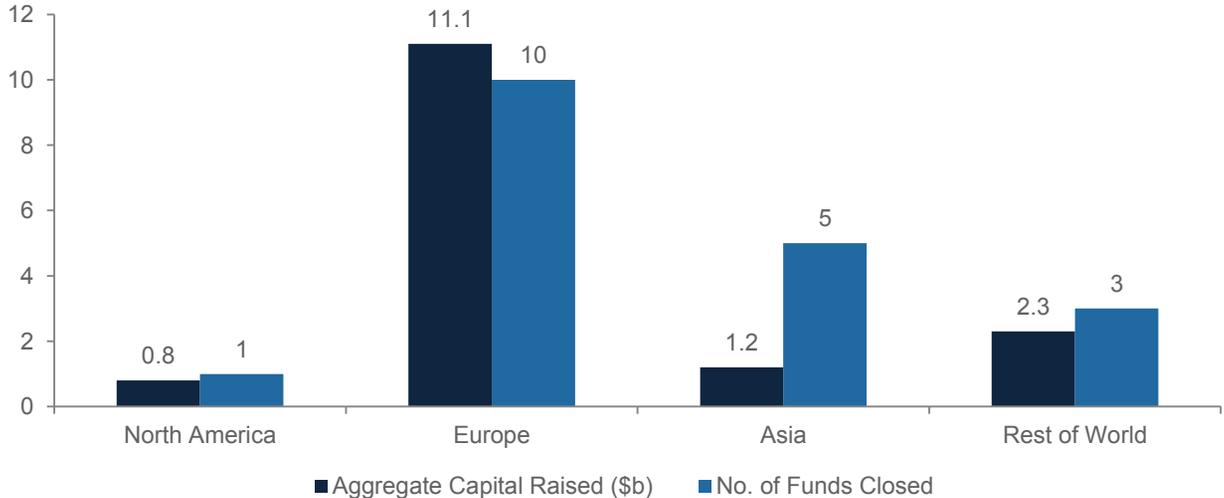


# Infrastructure

Unlisted Infrastructure Fundraising (Q1 2008 – Q2 2013)



Unlisted Infrastructure Fundraising by Primary Geographic Focus (1H 2013)

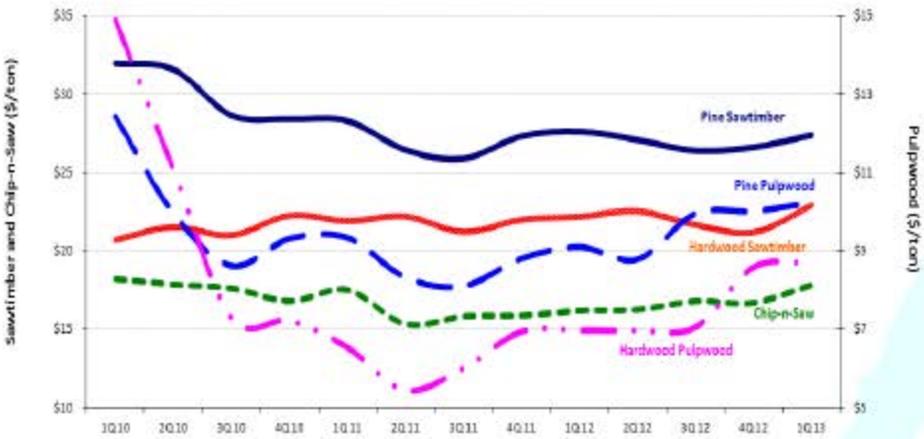


Source: Preqin.



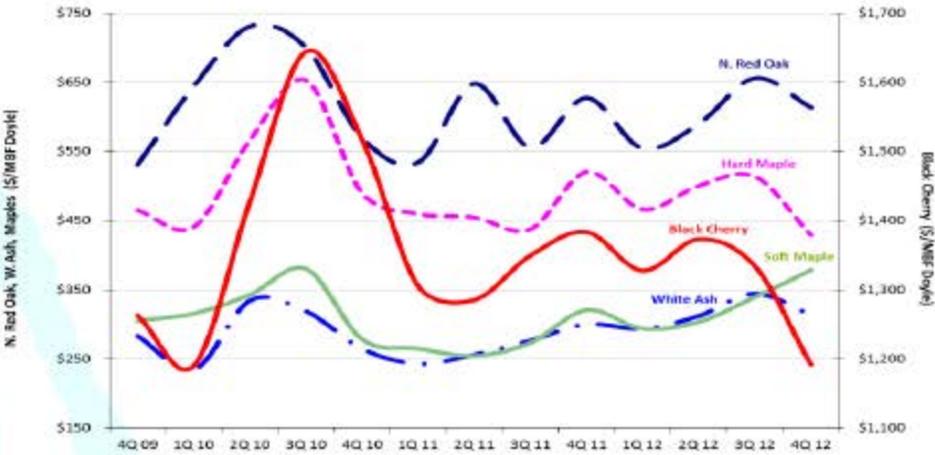
# Timber

## Southeastern Timber Prices



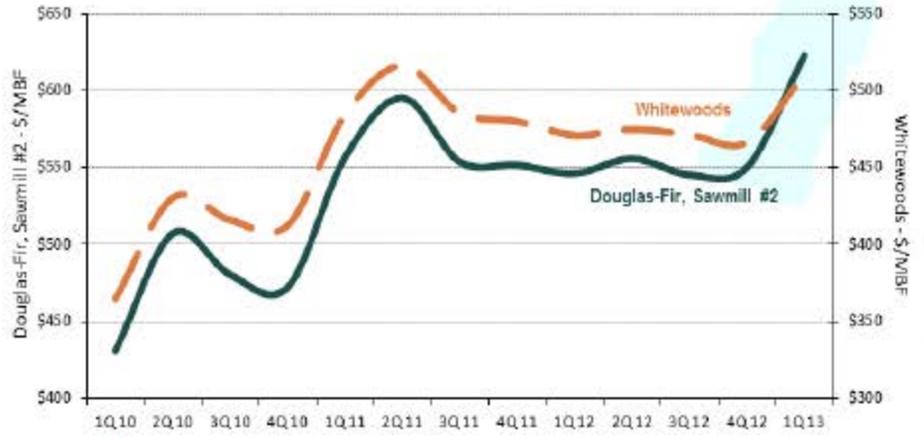
Source: Forest2Market®

## Northeastern Hardwood Timber Prices



Source: Pennsylvania Woodlands Timber Market Report - Northwest Region

## Pacific Northwest Timber Prices



Source: Log Lines®

## Inflation (CPI)



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

Source: Forest Investment Associates



## Real Assets – Performance

	<b>Market Value</b>	<b>Qtr</b>	<b>1-Year</b>	<b>3-Year</b>	<b>5-Year</b>	<b>10-Year</b>	<b>VaR</b>	<b>5-year Sharpe Ratio</b>	<b>5-year Info Ratio</b>
<b>REAL ASSETS</b>	<b>25.8</b>	<b>6.9%</b>	<b>11.2%</b>	<b>11.0%</b>	<b>-9.5%</b>	<b>3.7%</b>	<b>\$3.0 bil</b>	<b>-0.6</b>	<b>-1.0</b>
<i>Real Assets Policy Benchmark</i>		2.4%	9.7%	12.4%	3.2%	8.9%		<b>0.5</b>	<b>0.0</b>
<i>Value Added</i>		4.5%	1.5%	-1.4%	-12.7%	-5.2%			
<b>Real Estate</b>	<b>22.4</b>	<b>7.9%</b>	<b>11.9%</b>	<b>12.6%</b>	<b>-10.6%</b>	<b>3.0%</b>	<b>\$3.1 bil</b>	<b>-0.6</b>	<b>-0.9</b>
<i>Real Estate Policy Benchmark</i>		2.4%	10.3%	14.2%	3.9%	9.4%		<b>0.5</b>	<b>0.0</b>
<i>Value Added</i>		5.5%	1.6%	-1.6%	-14.5%	-6.4%			
<b>Forestland</b>	<b>2.2</b>	<b>-0.4%</b>	<b>6.5%</b>	<b>-2.5%</b>	<b>-1.1%</b>	<b>-.-%</b>			
<i>NCREIF Timberland Index</i>		1.5%	9.0%	3.6%	2.1%	-.-%			
<i>Value Added</i>		-1.9%	-2.5%	-6.1%	-3.2%	-.-%			
<b>Infrastructure</b>	<b>1.1</b>	<b>1.0%</b>	<b>5.7%</b>	<b>17.6%</b>	<b>13.9%</b>	<b>-.-%</b>			
<i>CPI + 400 BPS 1Qtr Lag</i>		2.4%	5.5%	7.0%	6.3%	-.-%			
<i>Value Added</i>		-1.4%	0.2%	10.6%	7.6%	-.-%			

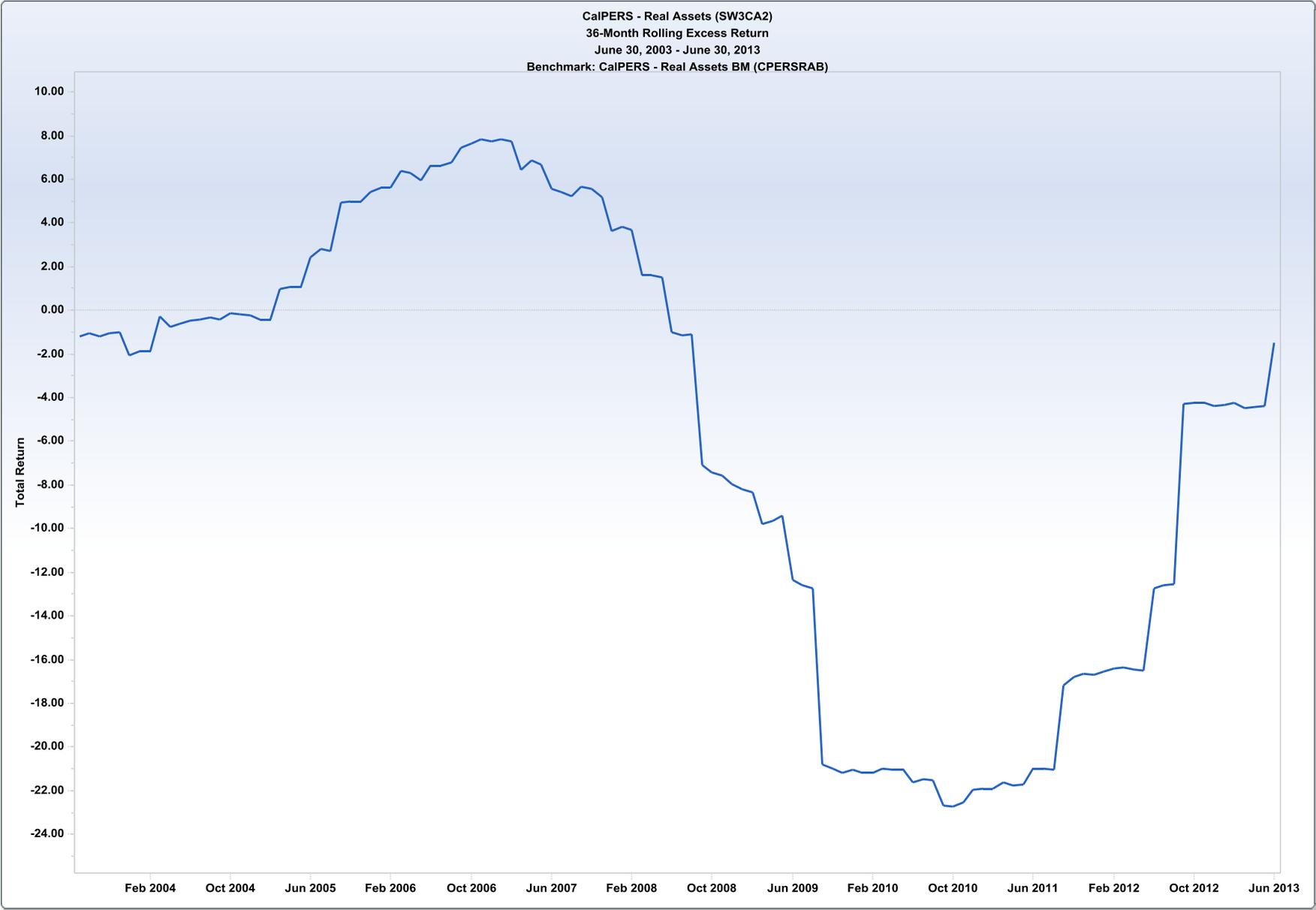


## Real Estate – Performance

	<b>Market Value</b>	<b>Qtr</b>	<b>1-Year</b>	<b>3-Year</b>	<b>5-Year</b>	<b>10-Year</b>	<b>VaR</b>	<b>5-year Sharpe Ratio</b>	<b>5-year Info Ratio</b>
<b>Real Estate</b>	<b>22.4</b>	<b>7.9%</b>	<b>11.9%</b>	<b>12.6%</b>	<b>-10.6%</b>	<b>3.0%</b>	<b>\$3.1 bil</b>	<b>-0.6</b>	<b>-0.9</b>
<i>Real Estate Policy Benchmark</i>		2.4%	10.3%	14.2%	3.9%	9.4%		<b>0.5</b>	<b>0.0</b>
<i>Value Added</i>		5.5%	1.6%	-1.6%	-14.5%	-6.4%			
<b>Strategic Real Estate</b>	<b>15.8</b>	<b>10.9%</b>	<b>13.6%</b>	<b>17.4%</b>	<b>2.8%</b>	<b>15.3%</b>			
<i>Wt. NCREIF ODCE+FTSE EPRA NAREIT</i>		2.4%	10.3%	14.2%	3.9%	9.4%			
<i>Value Added</i>		8.5%	3.3%	3.2%	-1.1%	5.9%			
<b>Legacy Real Estate ex Public</b>	<b>6.6</b>	<b>1.5%</b>	<b>5.8%</b>	<b>6.4%</b>	<b>-17.3%</b>	<b>-1.6%</b>			
<i>Wt. NCREIF ODCE+FTSE EPRA NAREIT</i>		2.4%	10.3%	14.2%	3.9%	9.4%			
<i>Value Added</i>		-0.9%	-4.5%	-7.8%	-21.2%	-11.0%			

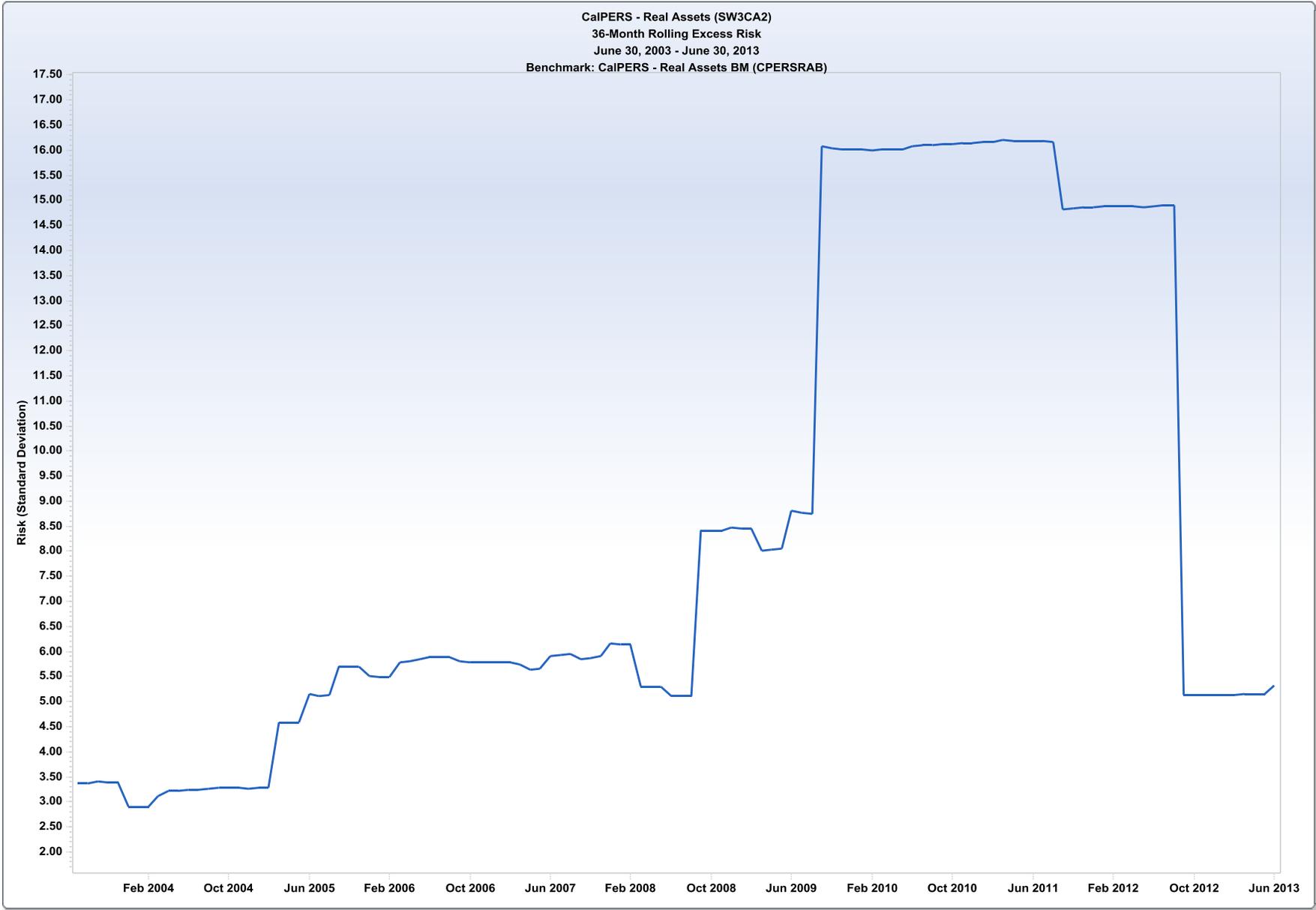


# Real Assets – Rolling Excess Returns



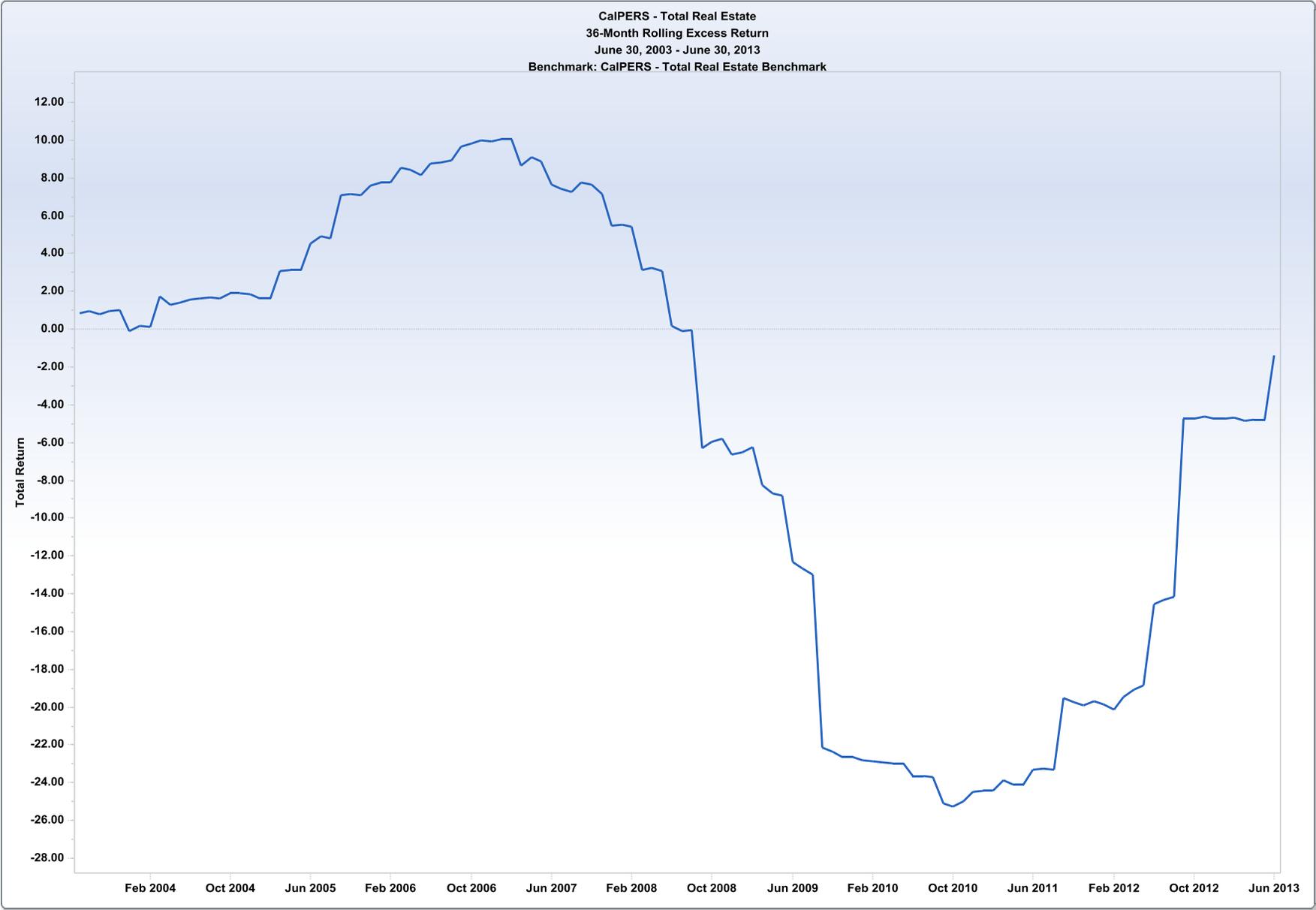


# Real Assets – Rolling Tracking Error



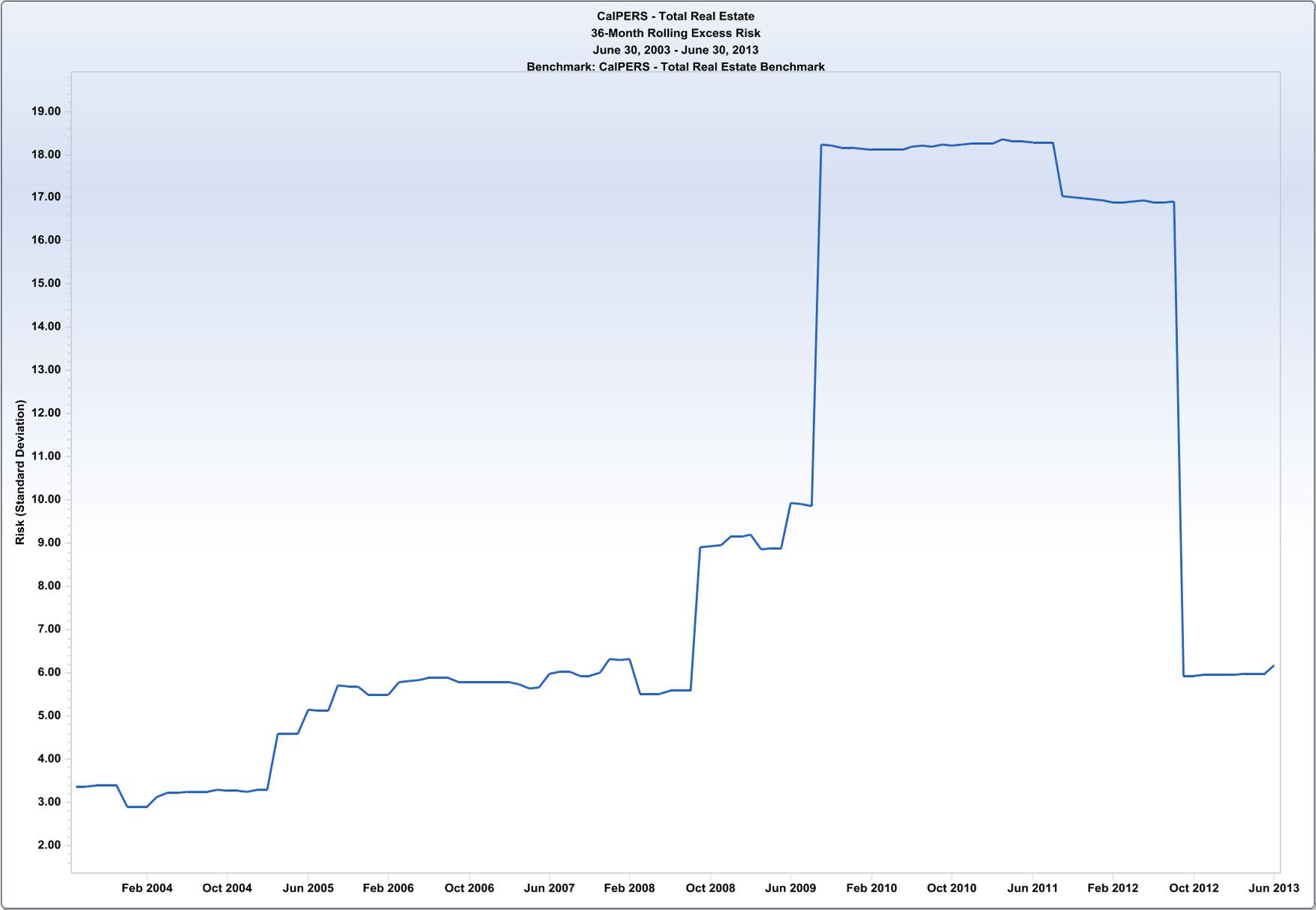


# Real Estate – Rolling Excess Returns





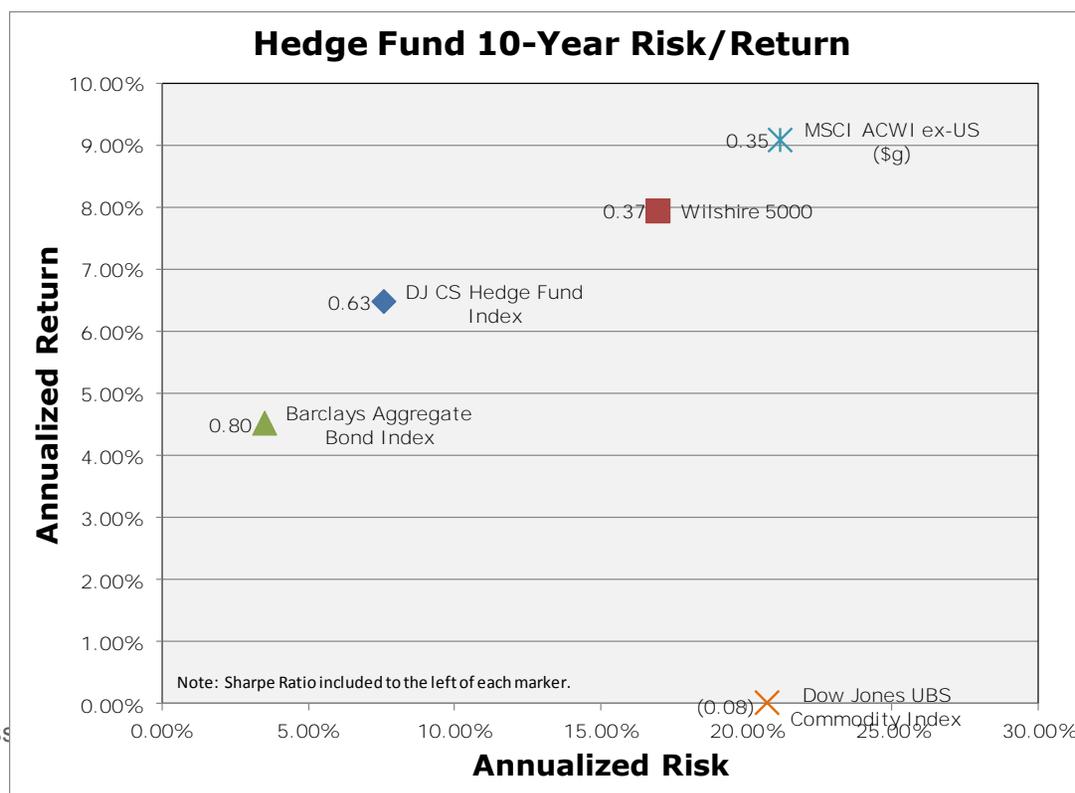
# Real Estate – Rolling Tracking Error





# Hedge Fund Performance

June 30, 2013	Qtr	Ytd	1 Yr	3 Yr	5 Yr	10 Yr
DJ CS Hedge Fund Index	0.1	3.7	9.2	6.3	2.9	6.5
Event Driven Index	2.1	7.0	14.5	6.0	4.0	7.8
Global Macro Index	-0.8	1.3	5.8	7.1	4.5	8.7
Long/Short Equity Index	1.8	7.0	13.3	6.6	2.5	6.9
Multi-Strategy Index	0.7	3.8	10.4	8.5	4.5	6.7
Wilshire 5000	2.8	14.0	21.1	18.5	7.2	8.0
MSCI ACWI ex-US (\$g)	-2.9	0.3	14.1	8.5	-0.3	9.1
Barclays Aggregate Bond Index	-2.3	-2.4	-0.7	3.5	5.2	4.5
Dow Jones UBS Commodity Index	-1.1	-1.1	-3.0	1.4	-7.1	3.7



Data sources: Wilshire Compass



## ARS – Distribution of Performance

	<u>Market</u>						<u>5-Year</u>	<u>5-Year Up</u>	<u>5-Year</u>	<u>5-Year</u>
	<u>Value</u>	<u>Qtr</u>	<u>1-Year</u>	<u>3-Year</u>	<u>5-Year</u>	<u>10-Year</u>	<u>Info</u>	<u>Capture</u>	<u>Sharpe</u>	<u>Sortino</u>
							<u>Ratio</u>	<u>Ratio</u>	<u>Ratio</u>	<u>Ratio</u>
<b>Absolute Return Strategies</b>	<b>5.2</b>	<b>0.6%</b>	<b>7.3%</b>	<b>3.8%</b>	<b>1.4%</b>	<b>5.0%</b>	<b>-0.8</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<i>ARS Policy Benchmark</i>		1.3%	5.3%	5.4%	6.1%	8.0%				
<i>Value Added</i>		-0.7%	2.0%	-1.6%	-4.7%	-3.0%				
<b>Total Direct Investments</b>	<b>3.6</b>	<b>0.0%</b>	<b>6.4%</b>	<b>4.3%</b>	<b>1.9%</b>	<b>5.4%</b>				
<b>Total Funds of Funds</b>	<b>1.6</b>	<b>1.9%</b>	<b>9.5%</b>	<b>2.5%</b>	<b>0.4%</b>					
HFRI Fund of Funds Index		0.0%	7.2%	3.0%	-0.6%	3.4%				



# ARS – Histogram of Monthly Returns

