



NEPC, LLC

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**San Bernardino County
Investment Summary
Quarter Ending June 30, 2016**

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Market Environment Update and Outlook



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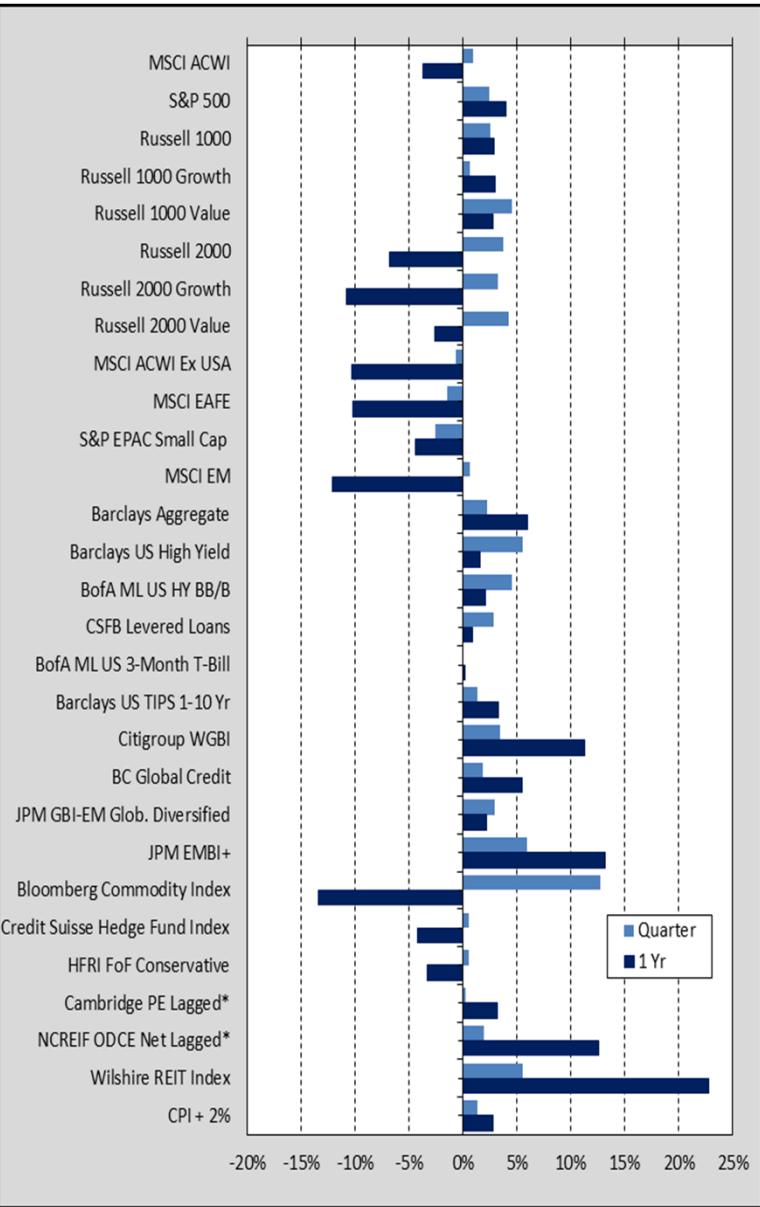
Economic Environment

- **Second quarter GDP growth rate (first estimate) printed at a modest 1.2%.**
 - Retail sales ended May at +1.8% on a year-over-year basis. In the same period last year the YoY growth rate was 1.6%.
 - The inventory-to-sales ratio ended May was flat at 1.4 and has remained relatively flat since early 2010.
 - Corporate profits (ended January) as a percent of GDP increased slightly to 9.3% from 9.9% (in September) and remain elevated relative to historical levels.
 - The U.S. trade deficit widened ending May due to a strong dollar and higher oil prices.
- **The unemployment rate decreased 0.1% to 4.9% in Q2; U-6, a broader measure of unemployment, fell to 9.6% during the second quarter.**
- **The Case-Shiller Home Price Index (ended May) increased to 180.7 from 176.9 in March and is at levels higher than that of pre-financial crisis levels of 150.9.**
- **Rolling 12-month seasonally adjusted CPI saw a meager uptick to 0.8% at the end of June; Capacity Utilization increased to 75.4% in Q2 from 74.8% in Q1.**
- **Fed Funds rate was unchanged at 0.50%. The 10-year Treasury Yield (constant maturity) finished Q2 at 1.6% down from 1.9% in Q1.**
- **The Fed balance sheet decreased slightly during Q2 2016, while the European Central Bank balance sheet continues to increase.**
 - ECB held its benchmark refinance rate at 0%, deposit rates -0.4% and asset purchases at €80 billion per month.
- **S&P valuations increased slightly in Q2 remaining above the 10-year and long-term averages.**
 - Cyclically adjusted Shiller PE ratio (25.83x) is above the long-term average of 16.67x and above the 10-year average of 22.88x.

Market Environment – Q2 2016 Overview

		<u>Qtr.</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
World Equity Benchmarks						
MSCI ACWI	World	1.0%	-3.7%	6.0%	5.4%	4.3%
		<u>Qtr.</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
Domestic Equity Benchmarks						
S&P 500	Large Core	2.5%	4.0%	11.7%	12.1%	7.4%
Russell 1000	Large Core	2.5%	2.9%	11.5%	11.9%	7.5%
Russell 1000 Growth	Large Growth	0.6%	3.0%	13.1%	12.3%	8.8%
Russell 1000 Value	Large Value	4.6%	2.9%	9.9%	11.4%	6.1%
Russell 2000	Small Core	3.8%	-6.7%	7.1%	8.4%	6.2%
Russell 2000 Growth	Small Growth	3.2%	-10.8%	7.7%	8.5%	7.1%
Russell 2000 Value	Small Value	4.3%	-2.6%	6.4%	8.1%	5.2%
		<u>Qtr.</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	-0.6%	-10.2%	1.2%	0.1%	1.9%
MSCI EAFE	Int'l Developed	-1.5%	-10.2%	2.1%	1.7%	1.6%
S&P EPAC Small Cap	Small Cap Int'l	-2.6%	-4.4%	7.6%	5.0%	4.3%
MSCI EM	Emerging Equity	0.7%	-12.1%	-1.6%	-3.8%	3.5%
		<u>Qtr.</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
Domestic Fixed Income Benchmarks						
Barclays Aggregate	Core Bonds	2.2%	6.0%	4.1%	3.8%	5.1%
Barclays US High Yield	High Yield	5.5%	1.6%	4.2%	5.8%	7.6%
BofA ML US HY BB/B	High Yield	4.6%	2.1%	4.6%	5.9%	7.0%
CSFB Levered Loans	Bank Loans	2.9%	0.9%	3.0%	4.0%	4.2%
BofA ML US 3-Month T-Bill	Cash	0.1%	0.2%	0.1%	0.1%	1.0%
Barclays US TIPS 1-10 Yr	Inflation	1.3%	3.3%	1.6%	1.6%	4.0%
		<u>Qtr.</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
Global Fixed Income Benchmarks						
Citigroup WGBI	World Gov. Bonds	3.4%	11.3%	2.6%	1.2%	4.2%
BC Global Credit	Global Bonds	1.9%	5.5%	3.2%	3.1%	4.7%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local)	3.0%	2.2%	-3.5%	-2.2%	5.7%
JPM EMBI+	Em. Mkt. Bonds	6.0%	13.2%	7.1%	6.4%	8.0%
		<u>Qtr.</u>	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u>10 Yr.</u>
Alternative Benchmarks						
Bloomberg Commodity Index	Commodity	12.7%	-13.4%	-10.6%	-10.8%	-5.6%
Credit Suisse Hedge Fund Index	Hedge Fund	0.6%	-4.2%	2.5%	2.9%	4.2%
HFRI FoF Conservative	Fund of Funds	0.5%	-3.3%	1.9%	1.9%	1.4%
Cambridge PE Lagged*	Private Equity	0.3%	3.2%	10.9%	11.4%	10.8%
NCREIF ODCE Net Lagged*	Real Estate	2.0%	12.6%	12.6%	12.2%	5.4%
Wilshire REIT Index	REIT	5.6%	22.8%	13.6%	12.5%	7.0%
CPI + 2%	Inflation/Real Assets	1.3%	2.8%	3.0%	3.3%	3.8%

* As of 3/31/2016



NEPC, LLC

June 30, 2016

Global Equity

- **U.S. equities posted modest gains in the second quarter (+2.5%) amid volatile trading at the end of the quarter as market participants digested news of the Brexit vote.**
- **Small cap stocks outperformed large cap stocks during the quarter, with the Russell 2000 Index returning -3.8% and the Russell 1000 Index returning 2.5%.**
- **International equities underperformed U.S. markets during the quarter, returning -0.6%, as measured by the MSCI ACWI ex-U.S. Index. Emerging markets returned 0.7% as measured by the MSCI Emerging Markets Index in U.S. dollar terms.**
 - Developed international markets returned -1.5% as measured by the MSCI EAFE Index.

Private Equity

- **Private equity fundraising totaled \$104 billion in Q2 2016.**
- **Buyout and Special Situations fundraising totaled \$88 billion in Q2 2016, more than twice the amount contracted in Q1.**
 - While exit volume also increased over the first quarter, the first half total for 2016 is down 33% from the prior year period. The primary driver of slower exit volume is a sharp decrease in IPOs that occurred during the first quarter, which was the slowest quarter for IPOs since 2009.
- **Venture capital fundraising totaled \$16.9 billion.**
 - VC fundraising as a percent of total new PE funds is in line with historical post-dot com levels.
- **Fund of fund and multi-manager co-investment fundraising totaled \$5.6 billion.**
- **Growth equity fundraising totaled \$3.4 billion.**

Fixed Income

- **The yield curve shifted down for maturities greater than 6 months. Intermediate yields decreased 20-29 basis points and long duration yields decreased 31-34 basis points.**
- **The spread between two and 10-year rates decreased to 91 basis points from 105 basis points ended June. Treasury Inflation-Protected Securities, or TIPS, returned +1.3% during the quarter, as measured by the Barclays US TIPS 1-10 Yr Index.**
- **The Barclays Long Duration Credit Index gained +6.65% as the long end of the curve ended the quarter 31 basis points lower.**
- **Long Treasuries gained +6.44% and investment-grade US corporate debt gained 2.21%.**
- **The Barclays 1-3 year Government/ Credit Index returned +0.67%. US high yield bonds gained +5.52% driven by Energy names.**
- **Emerging markets debt gained broadly reversing trend with US denominated issuances gaining relative to Local Currency denominated debt.**
 - US dollar-denominated debt, as measured by the JP Morgan EMBI Index, gained 6.0%; local currency debt gained +3.0%, according to the JP Morgan GBI-EM Index.

Real Assets/Inflation-Linked Assets

- **Massive energy market dislocation.**
 - Seek inflation sensitive asset classes that offer positive yield
 - Oil prices stabilizing and remain low.
 - Private equity and private debt opportunities may be relatively attractive.
 - Potential for public stressed/distressed credit, equity and commodity plays.
- **Select infrastructure opportunities showing signs of being attractive.**
 - Target opportunistic strategies in niche sub-sectors to take advantage of market dislocations.
 - Secular opportunities may exist within the shipping industry as traditional financing sources (both debt and equity) are less abundant
- **Timber opportunities remain elusive.**
 - Income yields (net) are low as assets are predominantly traded between like-minded institutions
 - Private strategies are illiquid and constrain quick entrance/exit (i.e. long-term lock-up)
 - Liquid strategies have limited pure timber exposure (and limited active-play options)
- **Metals & Mining; weakened commodity prices may be the new norm as China growth shifts.**
- **Agriculture; outlook supported by strong demographic trends.**

Market Environment

Commodities

- **Commodities ended quarter with a solid +12.7% as measured by the Bloomberg Commodity Index.**
 - Despite an increase in the value of the US Dollar commodity prices posted strong gains led by a 26% gain in oil.
 - Gold gained 7% in the second quarter and YTD has gained 24%.

Real Estate

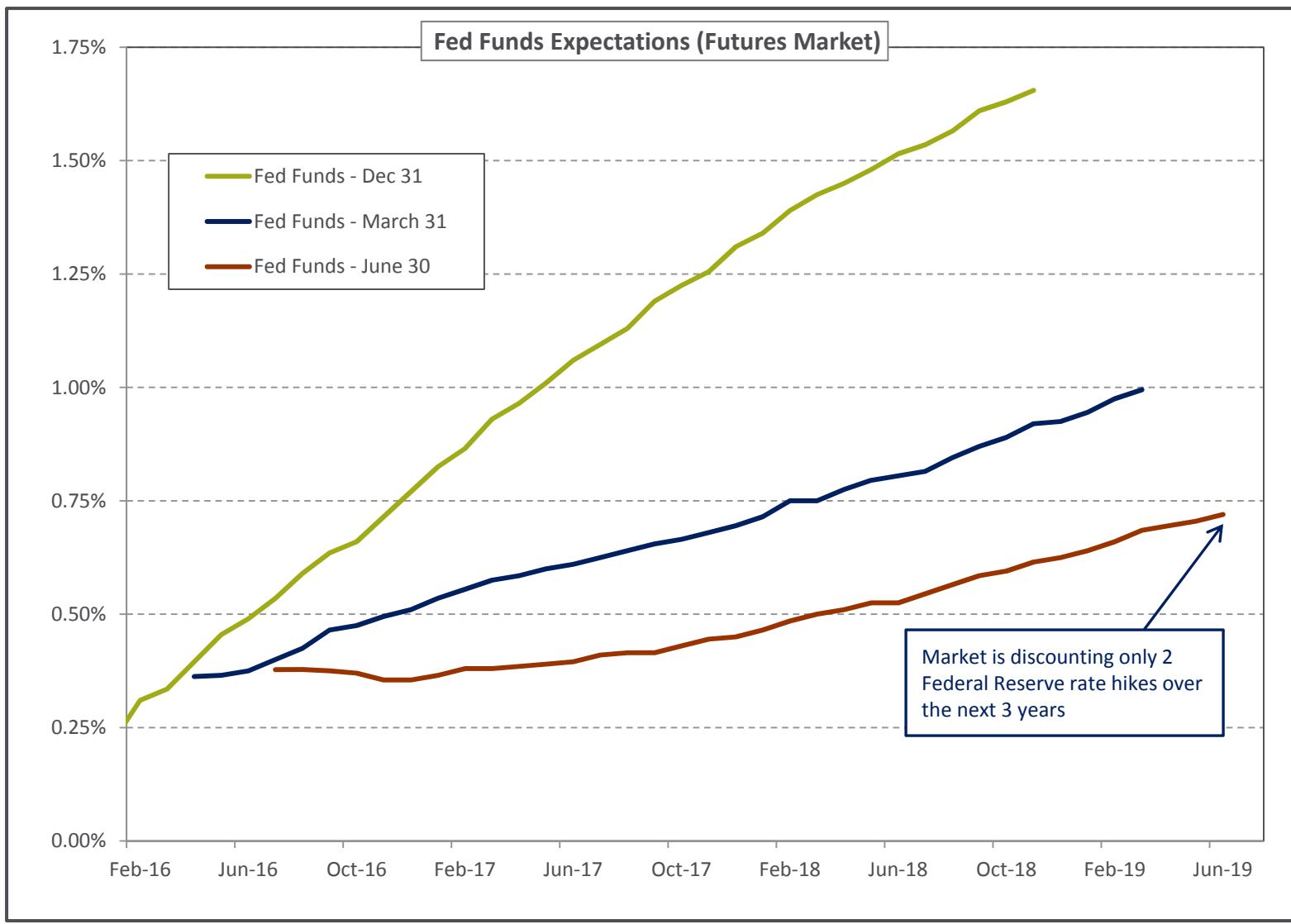
- **NEPC continues to be neutral on core real estate in the US and remains positive on non-core real estate, that is, value-add and opportunistic strategies.**
- **Within U.S. core real estate, strong fundamentals continue to be the story along with attractive income spreads relative to interest rates.**
 - Real estate fundamentals and debt terms are attractive, however valuations are high and the possibility of rising interest rates and the impact on cap rates causes concern.
- **Overall, the non-core real estate investment environment in the U.S. is normalizing; however, select areas remain attractive.**
- **REIT sector has snapped back to NAV (closing out longest time trading below NAV since the Global Financial Crisis) but remain at high FFO multiples.**
- **Europe is viewed as the best place for a marginal dollar of non-core real estate investment.**
 - Current US-dollar denominated investors with currency exposure will feel near-term impact of Brexit, but new investors may benefit from a strong US-dollar. Long-term Brexit implications, however, are unclear.



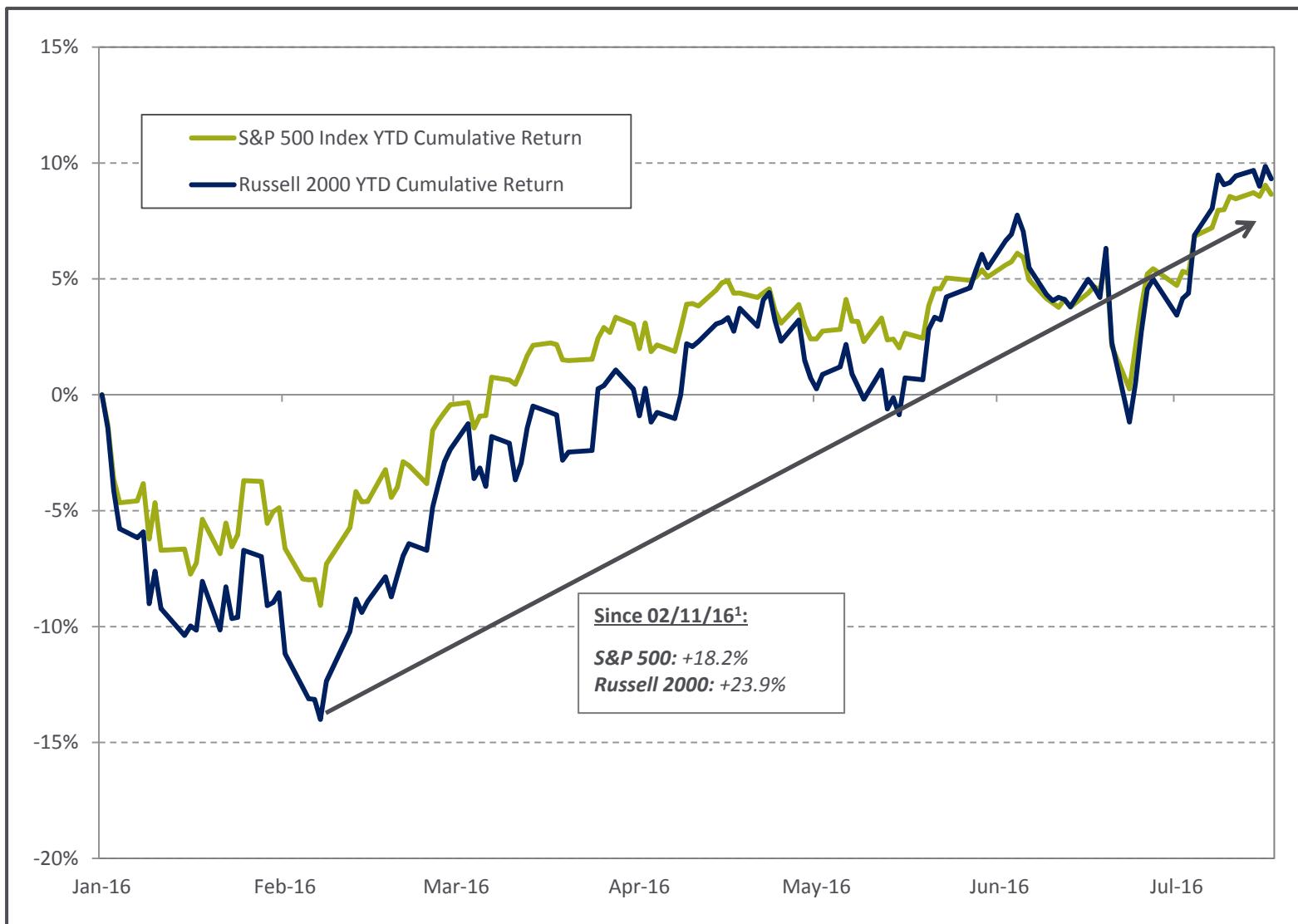
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An Uptick in Fed Funds Expectations of Current Lows is Likely to Fuel Dollar Strength

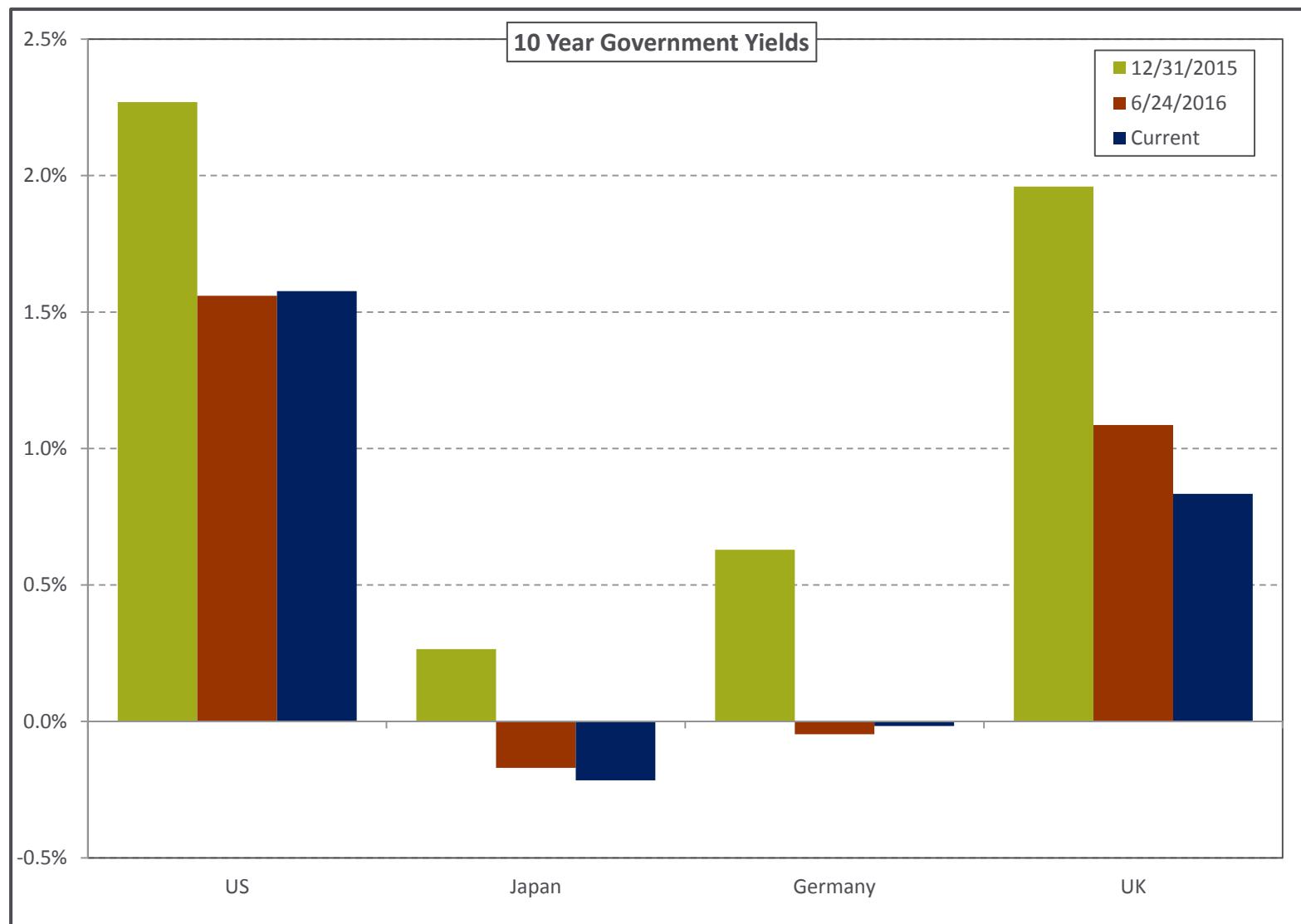


Significant US Equity Gains From February Lows – Remain Disciplined in Rebalancing



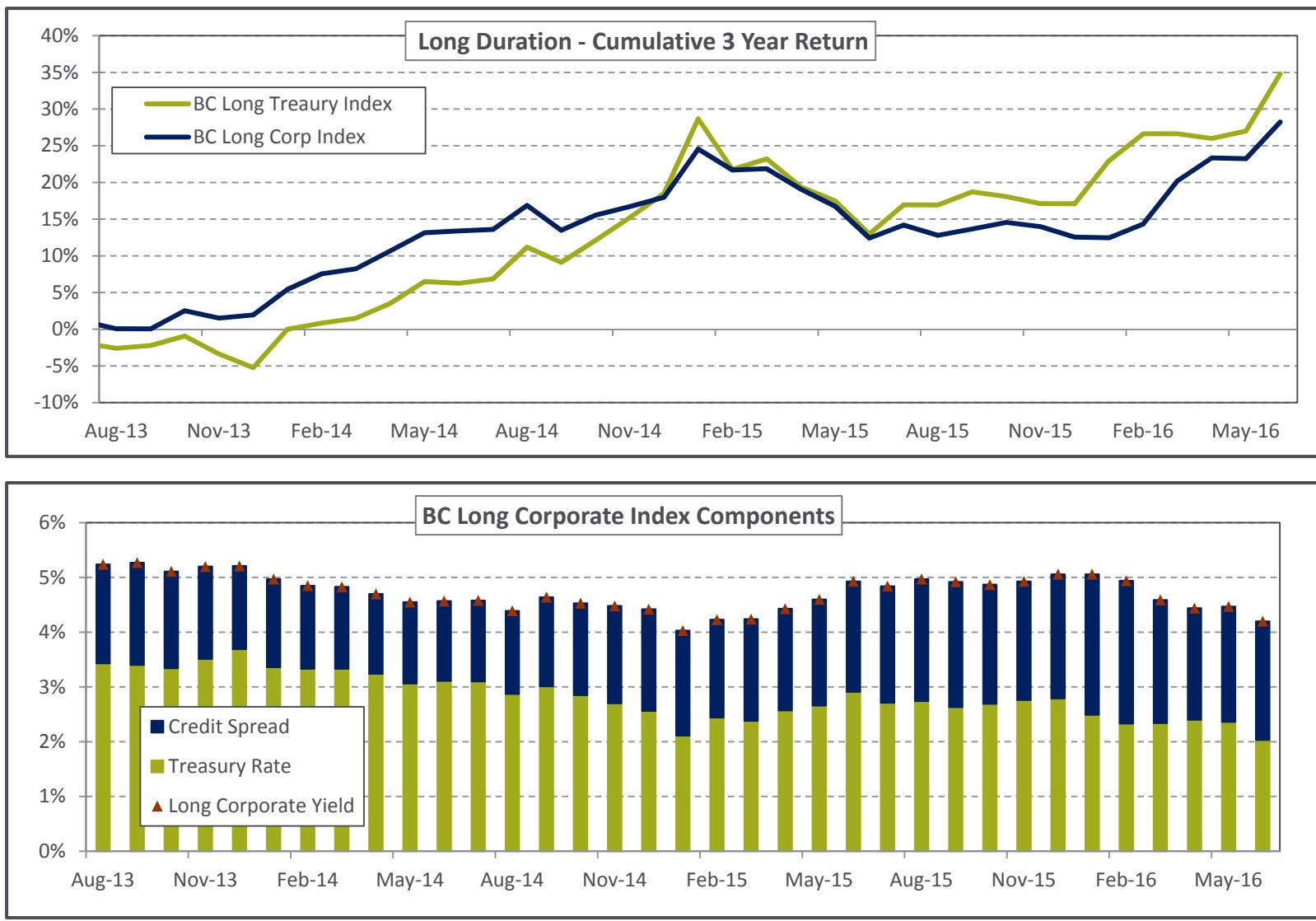
Source: Bloomberg
¹As of July 22, 2016

Global Bond Yields at Record Lows; Re-Evaluate WGBI Exposure



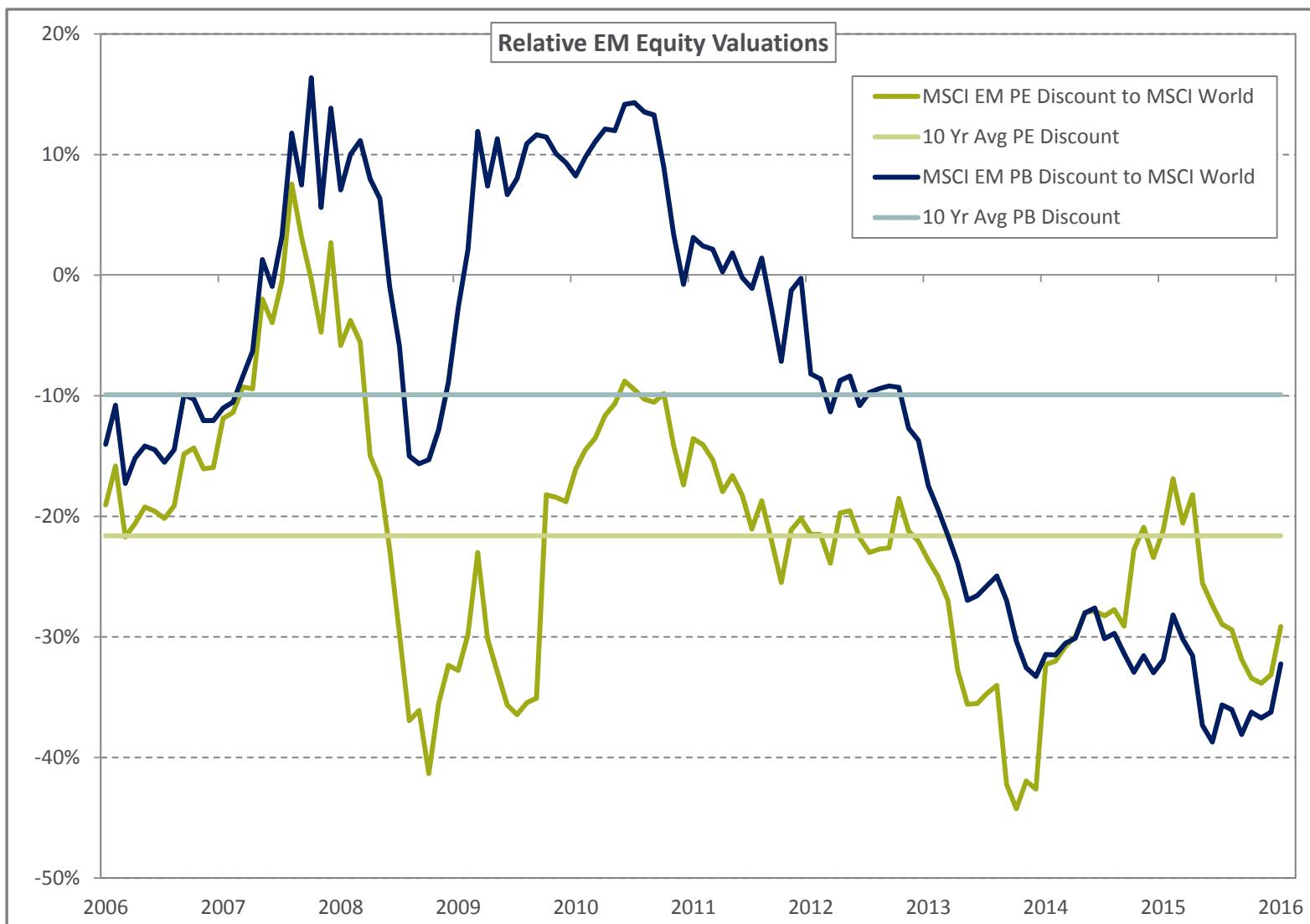
Source: Bloomberg
Results of Brexit vote announced on 06/24/2016

Treasury Exposure Provided Significant Gains – Opportunities for Profit Taking in Long Bonds



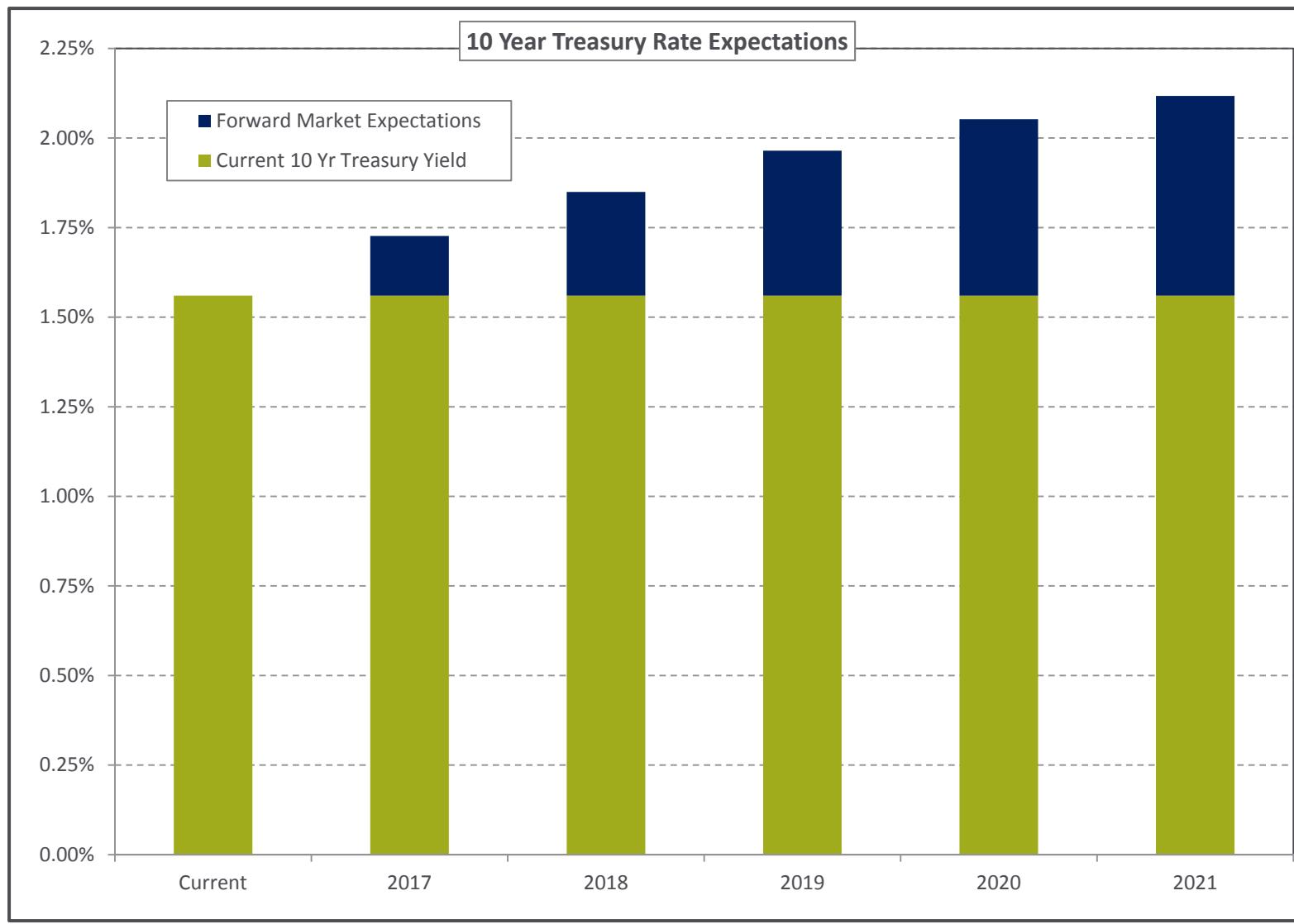
Source: Bloomberg

Emerging Markets Continue to Offer Reasonable Equity Valuations



Source: Bloomberg

Muted Forward Market Expectations Provide Limited Cushion Should Rates Rise More Rapidly



- **Trim US equity exposure as US markets have rebounded significantly**
 - Remain disciplined and look for rebalancing opportunities should equity markets decline
 - Look to capture pockets of value in US high yield with credit spreads in-line with averages
- **Maintain overweight exposure to non-US developed market equities**
 - Central bank support and dollar strength provide a positive economic backdrop
 - A more dramatic expansion of political risk may soften our overweight view
 - Small-cap equity and global equity are preferred implementation approaches
 - These strategies offer the best opportunity to exploit valuation discrepancies among individual stocks that may result from elevated volatility levels
- **Recommend investors continue to hedge developed market currencies**
 - 50% hedge ratio remains an ideal neutral point for developed currency exposure
 - Current US dollar valuation hovers within a neutral band, opportunities to tactically adjust currency hedge ratios may arise should the US dollar significantly strengthen or weaken
- **Recent strength validates commitment to emerging market equities**
 - Valuations and long-term fundamentals suggest an overweight
 - China uncertainty, dollar pressure and idiosyncratic country risks temper excitement
 - Overweight small-cap and consumer focused strategies relative to broad mandates
- **Developed market duration exposure is generally unattractive**
 - Preserve US duration exposure with a bias towards TIPS over core bonds
 - Rebalance long treasuries, long credit, and risk parity following recent outsized gains
 - Look to eliminate WGBI focused global bond strategies with yields at historic lows

NEPC Updates

June 30, 2016

Highlights of Second Quarter Happenings at NEPC

NEPC Research

Recent White Papers

- "Thinking Ahead to Stay Ahead: Strategic Private Equity Investing in Healthcare" (April 2016)
- Market Chatter: "Implications of Brexit" (June 2016)
- Market Chatter: "Brexit... What Now?" (June 2016)
- "The Disease of Doubt" (July 2016)

Webinar

- "Brexit - A Vote for Volatility" (June 2016); Panel provides perspectives on the EU Referendum.

NEPC's 21st Annual Investment Conference

"Excellent breadth of materials, plenty of concurrent sessions, and the speakers were vibrant and humorous!" is just one of many positive reviews from attendees. The conference attracted more than 200 people to the Hynes Convention Center in Boston on May 10-11, 2016.

News from NEPC

We are excited to announce NEPC's active presence on five social media channels: Facebook, Google+, LinkedIn, Twitter and YouTube, and we will continue to post on the Endowments and Foundations Twitter. We will be using these online channels to share company news, information and articles throughout the industry. Those interested in keeping up with the latest news from NEPC can follow our accounts. Company news and industry insights will continue to be available on our website, which has been updated with a new optimized search feature.



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Upcoming Events

NEPC's 22nd Annual Investment Conference will be held on May 9-10, 2017 at the InterContinental Hotel in Boston, MA.

MARK YOUR CALENDAR!

NEPC Client Recognitions

We are pleased to announce that three of NEPC's public fund clients won Institutional Investor (II) Awards.

- **Arn Andrews**, CIO of San Jose Police & Fire, won the award for Chief Investment Officer of the Year.
- **Sam Masoudi**, CIO of Wyoming Retirement System, won the award for Opportunistic Investment Strategies Award.
- **Bob Jacksha**, CIO of New Mexico Employees Retirement Board, won the award for Portfolio Construction.

We are also pleased to announce that two NEPC clients, **San Bernardino County Employees' Retirement System** and **Arizona Public Safety Personnel Retirement System**, were nominated for Institutional Investor magazine's 14th Annual Hedge Fund Industry Awards in the "Public Plan of the Year, Small" category.

Total Fund Performance

San Bernardino County Employees' Retirement Association

Total Fund Performance Summary (Gross)

	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
Total Fund	\$8,107,828,147	2.7%	6	2.7%	64	-0.9%	80	5.0%	92	6.1%	63	4.8%	89
Policy Index		2.4%	11	5.2%	3	3.5%	3	5.9%	69	5.8%	72	5.6%	57
S&P 500		2.5%	10	3.8%	16	4.0%	2	11.7%	1	12.1%	1	7.4%	1
Barclays Aggregate		2.2%	18	5.3%	3	6.0%	1	4.1%	98	3.8%	99	5.1%	77
60% MSCI ACWI (Gross)/40% CITI WGBI		2.1%	26	5.3%	3	2.7%	9	5.2%	88	4.2%	99	4.9%	81
InvestorForce Public DB > \$1B Gross Median		1.8%		2.9%		0.2%		6.6%		6.5%		5.7%	

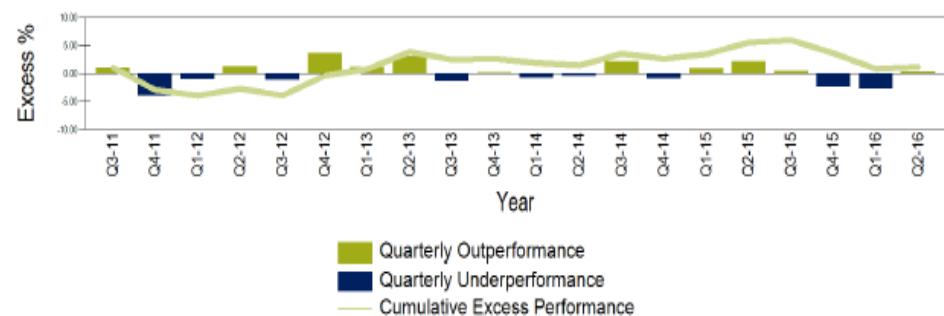
In the year ended June 30, 2016 the Fund returned -0.9% ranking in the 80th percentile of Public Funds > \$1Billion. The Fund's assets totaled \$8.1 billion, a decrease of \$107.9 million from a year ago.

The Fund experienced a net investment loss of \$87.7 million in the year ended June 30, 2016 including a net investment gain of \$217.6 million in the second calendar quarter.

In the three –year period ended June 30, 2016 the Fund returned 5.0% and ranked in the 92nd percentile among its peers. The Sharpe Ratio over this period of 1.3 ranks in the 4th percentile, indicating that the Fund earned a much higher rate of return for each incremental unit of risk taken during the period versus its peers.

In the five-year period ended June 30, 2016 the Fund returned 6.1% per annum and ranked in the 63rd percentile among its peers. On a risk adjusted basis the Fund's Sharpe and Sortino Ratios rank in the 1st and 8th percentile indicating both strong returns per unit of risk taken and strong returns per unit of downside risk experienced when compared to a universe of public fund peers >\$1B.

Quarterly and Cumulative Gross Performance vs. Policy



Statistics Summary

3 Years Ending June 30, 2016

	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	1.3	4	2.4	11
InvestorForce Public DB > \$1B Gross Median	1.0	--	1.7	-

5 Years Ending June 30, 2016

	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	1.3	1	1.8	8
InvestorForce Public DB > \$1B Gross Median	0.8	--	1.3	-



NEPC, LLC

June 30, 2016

San Bernardino County Employees' Retirement Association

Total Fund Performance Summary

Statistics Summary

1 Year Ending June 30, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	-0.9%	80	5.0%	4	-0.2	92	-0.4	96
InvestorForce Public DB > \$1B Gross Median	0.2%	--	8.1%	--	0.0	--	0.0	--

Statistics Summary

3 Years Ending June 30, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	5.0%	92	3.7%	1	1.3	4	2.4	11
InvestorForce Public DB > \$1B Gross Median	6.6%	--	6.8%	--	1.0	--	1.7	--

Statistics Summary

5 Years Ending June 30, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	6.1%	63	4.6%	1	1.3	1	1.8	8
InvestorForce Public DB > \$1B Gross Median	6.5%	--	7.6%	--	0.8	--	1.3	--

Sortino Ratio requires at least two negative points during the time period in order to calculate



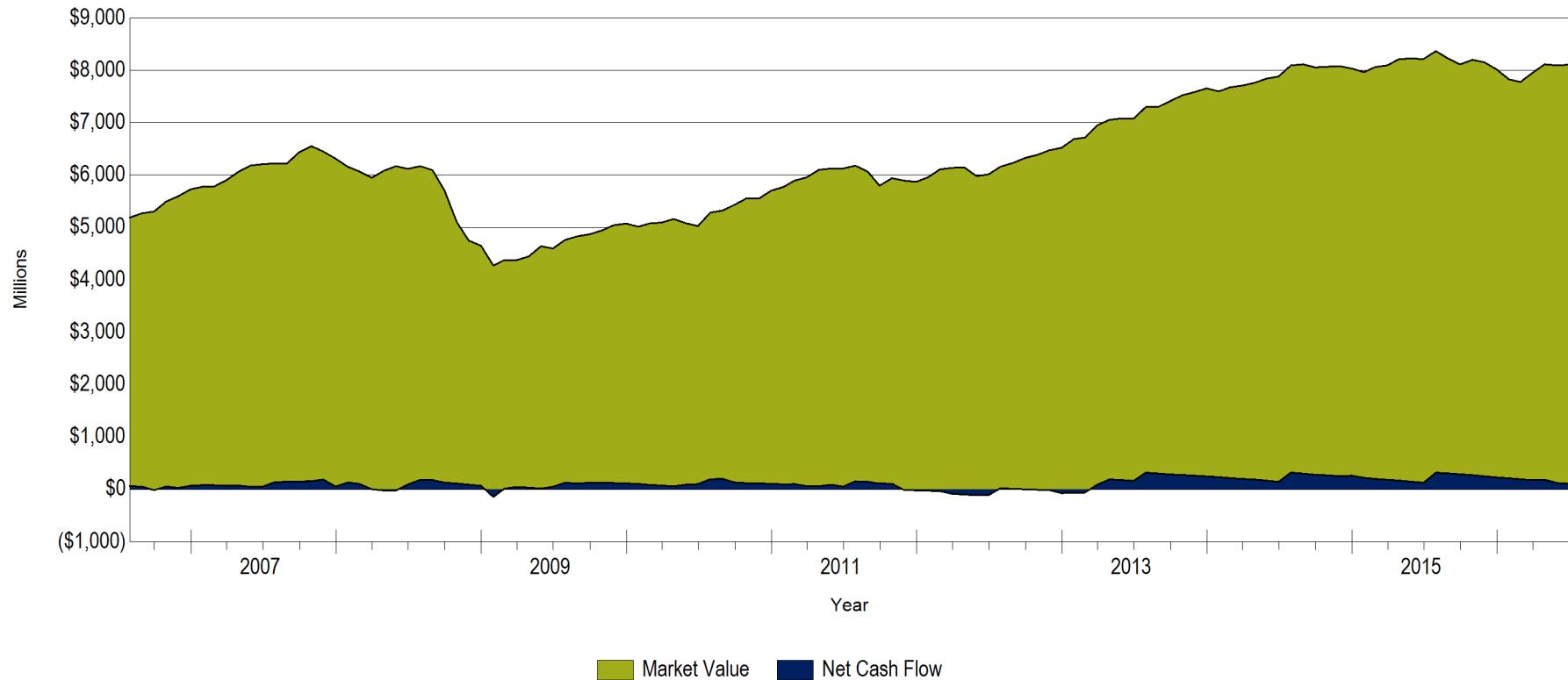
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June 30, 2016

San Bernardino County Employees' Retirement Association

Total Fund Asset Growth Summary

10 Years Ending June 30, 2016



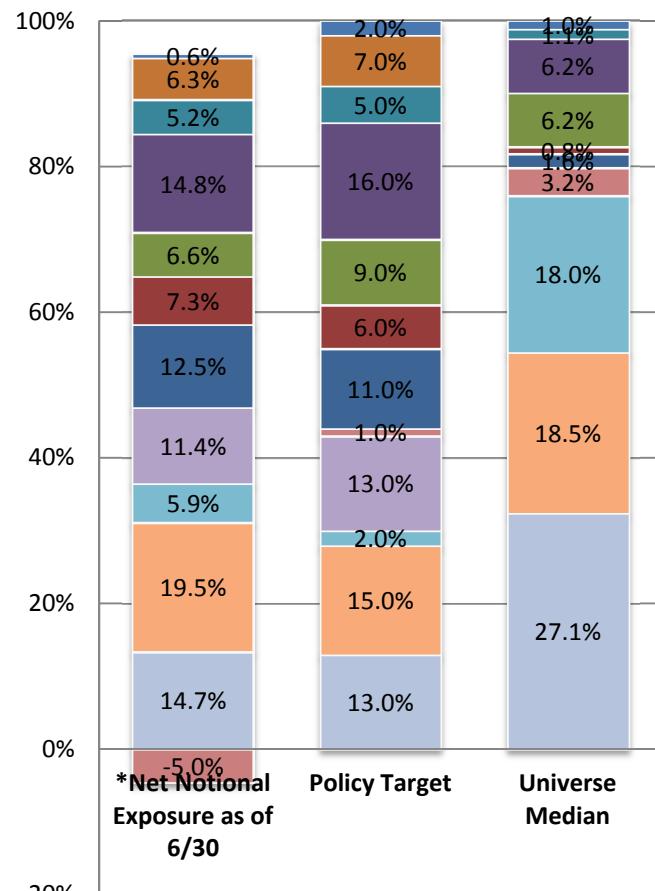
	Last Three Months	One Year	Five Years	Ten Years
Beginning Market Value	\$7,956,959,630	\$8,215,718,262	\$6,125,174,497	\$5,117,543,654
Net Cash Flow	-\$66,757,670	-\$20,143,928	\$56,077,229	\$105,377,676
Net Investment Change	\$217,626,187	-\$87,746,187	\$1,926,576,421	\$2,884,906,816
Ending Market Value	\$8,107,828,147	\$8,107,828,147	\$8,107,828,147	\$8,107,828,147



NEPC, LLC

June 30, 2016

Total Fund Asset Allocation vs. Policy Targets



	*Net Notional Exposure	*Net Notional Exposure as of 6/30	Policy Target	*Difference	Policy Ranges	Within Range
US Equities	1,192,545	14.7%	13.0%	1.7%	8%-18%	Yes
Int'l Equities	1,576,956	19.4%	15.0%	4.4%	10%-20%	Yes
U.S. Core	475,589	5.9%	2.0%	3.9%	-3%-7%	Yes
US Credit	924,321	11.4%	13.0%	-1.6%	8%-18%	Yes
Non-US Core Fixed Income	(402,884)	-5.0%	1.0%	-6.0%	-4%-6%	No
Non-US Credit	1,032,694	12.7%	11.0%	1.7%	6%-16%	Yes
Emerging Market Debt	588,665	7.3%	6.0%	1.3%	1%-11%	Yes
Real Estate	537,009	6.6%	9.0%	-2.4%	4%-14%	Yes
Private Equity	1,200,325	14.8%	16.0%	-1.2%	11%-21%	Yes
Real Assets	422,249	5.2%	5.0%	0.2%	0%-10%	Yes
Absolute Return	508,272	6.3%	7.0%	-0.7%	2%-12%	Yes
Cash	52,187	0.6%	2.0%	-1.4%	0%-10%	Yes
	8,107,928	100.0%	100.0%			

*Net Notional Exposure is the combination of physical exposures as reported by State Street and the synthetic exposures reported by Russell.
 Universe Medians are a quarter lagged due to availability



NEPC, LLC

June 30, 2016

San Bernardino County Employees' Retirement Association

SBCERA Delta Adjusted Asset Summary

Asset Class	Delta Adjusted									
	Physical Exposure		Synthetic Exposure		Net Position		Overlay Target		Policy Target	
Total Market Value	8,216.6	100.0%	0.0	0.0%	8,216.6	100.0%	8,216.6	100.0%	8,216.6	100.00%
Cash	1,638.4	19.94%	-1,243.2	-15.13%	395.2	4.81%	0.0	0.0%	0.0	0.00%
Cash	1,638.4	19.94%	-1,243.2	-15.13%	395.2	4.81%	0.0	0.0%	0.0	0.00%
Equity	1,249.8	15.21%	1,509.5	18.37%	2,759.3	33.58%	3,145.5	38.28%	3,122.3	38.00%
Emerging Markets	230.7	2.81%	399.8	4.87%	630.5	7.67%	662.2	8.06%	657.3	8.00%
Equity Delta Hedge	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.00%
International Developed	204.0	2.48%	732.9	8.92%	936.9	11.4%	993.3	12.09%	986.0	12.00%
US Large Cap	815.0	9.92%	97.6	1.19%	912.6	11.11%	1,200.3	14.61%	1,191.4	14.50%
US Small Cap	0.1	0.0%	279.2	3.4%	279.3	3.4%	289.7	3.53%	287.6	3.50%
Fixed	2,657.8	32.35%	-266.2	-3.24%	2,391.5	29.11%	2,400.5	29.22%	2,382.8	29.00%
B/M High Yield CDX	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.00%
Global ex US Fixed Income	1,705.4	20.76%	-515.4	-6.27%	1,190.0	14.48%	1,200.3	14.61%	1,191.4	14.50%
High Yield **	952.4	11.59%	0.0	0.0%	952.4	11.59%	765.7	9.32%	760.0	9.25%
US Fixed Income	0.0	0.0%	249.2	3.03%	249.2	3.03%	434.6	5.29%	431.4	5.25%
Other	2,670.5	32.5%	0.0	0.0%	2,670.5	32.5%	2,670.5	32.5%	2,711.5	33.00%
Alternatives	204.8	2.49%	0.0	0.0%	204.8	2.49%	204.8	2.49%	205.4	2.50%
Commodities	140.2	1.71%	0.0	0.0%	140.2	1.71%	140.2	1.71%	156.1	1.90%
Infrastructure	62.4	0.76%	0.0	0.0%	62.4	0.76%	62.4	0.76%	65.7	0.80%
Private Equity	1,199.7	14.6%	0.0	0.0%	1,199.7	14.6%	1,199.7	14.6%	1,273.6	15.50%
Real Estate	553.9	6.74%	0.0	0.0%	553.9	6.74%	553.9	6.74%	501.2	6.10%
Tactical Cash	509.4	6.2%	0.0	0.0%	509.4	6.2%	509.4	6.2%	509.4	6.20%

** HY CDX credit spread protection of \$600mm face is not reflected on Asset Summary

For illustrative purposes only.

Source: Russell Investments



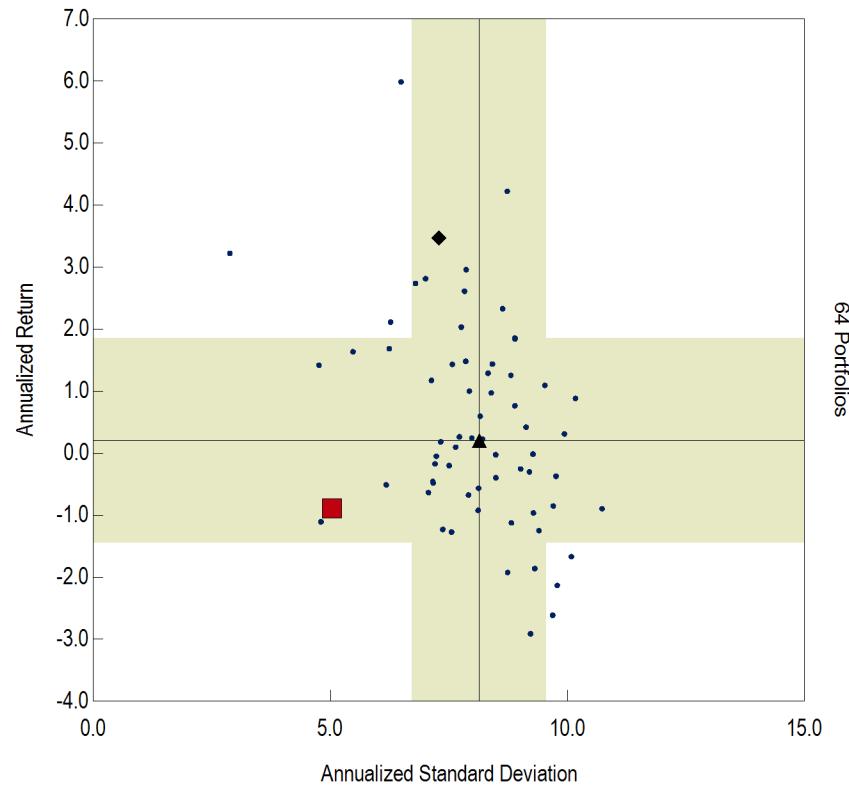
NEPC, LLC

June 30, 2016

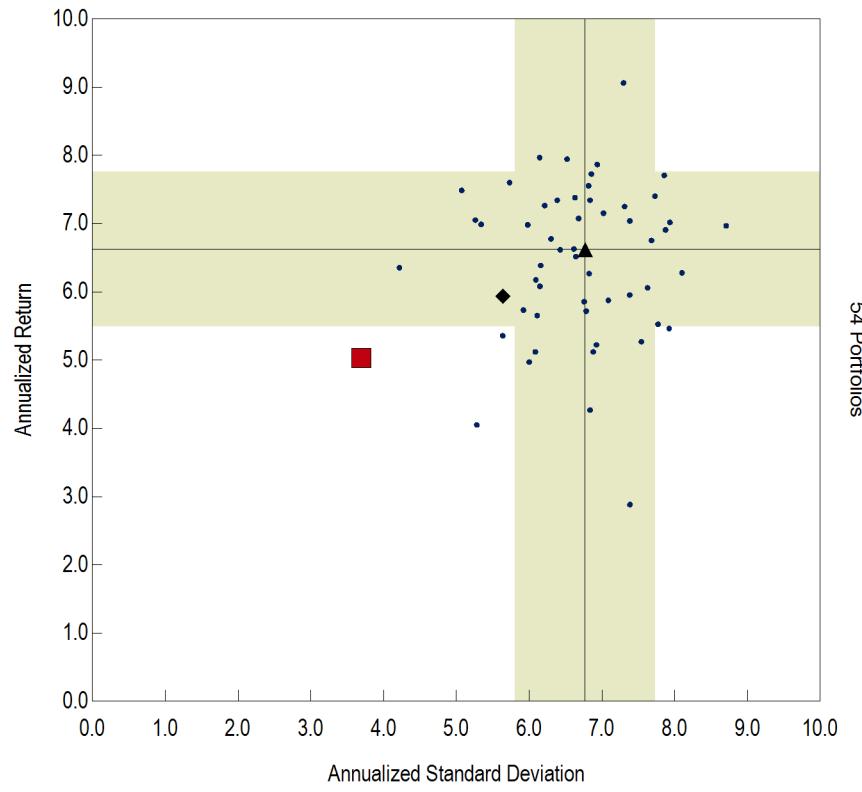
San Bernardino County Employees' Retirement Association

Total Fund Risk/Return

1 Year Ending June 30, 2016



3 Years Ending June 30, 2016



NEPC, LLC

June 30, 2016

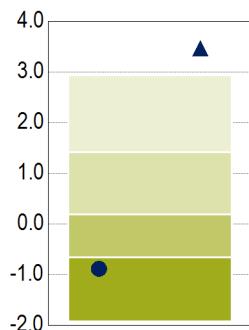
San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics vs. Peer Universe

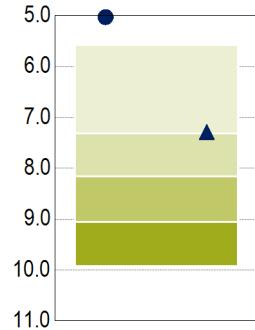
Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)

1 Year

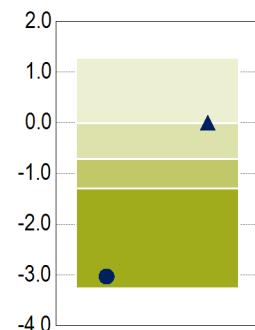
Anlzd Return



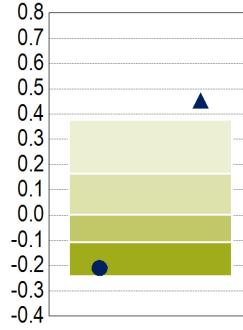
Anlzd Standard Deviation



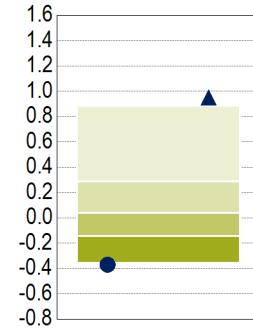
Anlzd Alpha



Sharpe Ratio



Sortino Ratio



● Total Fund

Value -0.9
%tile 80

▲ Policy Index

Value 3.5
%tile 3

Universe

5th %tile 2.9
25th %tile 1.4
Median 0.2
75th %tile -0.6
95th %tile -1.9

● Total Fund

Value 5.0
%tile 4

▲ Policy Index

Value 7.3
%tile 25

Universe

5th %tile 5.6
25th %tile 7.3
Median 8.1
75th %tile 9.0
95th %tile 9.9

● Total Fund

Value -3.0
%tile 94

▲ Policy Index

Value 0.0
%tile 25

Universe

5th %tile 1.3
25th %tile 0.0
Median -0.7
75th %tile -1.3
95th %tile -3.3

● Total Fund

Value -0.2
%tile 92

▲ Policy Index

Value 0.5
%tile 4

Universe

5th %tile 0.4
25th %tile 0.2
Median 0.0
75th %tile -0.1
95th %tile -0.2

● Total Fund

Value -0.4
%tile 96

▲ Policy Index

Value 1.0
%tile 4

Universe

5th %tile 0.9
25th %tile 0.3
Median 0.0
75th %tile -0.1
95th %tile -0.3

Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 31 Portfolios



NEPC, LLC

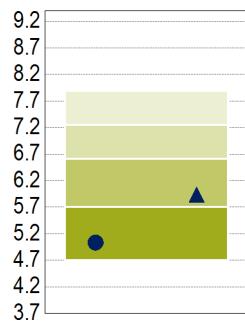
June 30, 2016

San Bernardino County Employees' Retirement Association

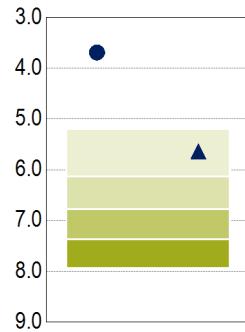
Total Fund Risk Statistics vs. Peer Universe

Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)
3 Years

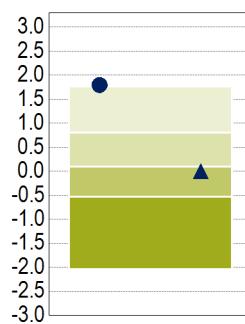
Anlzd Return



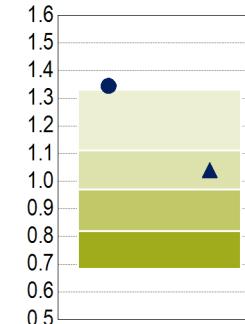
Anlzd Standard Deviation



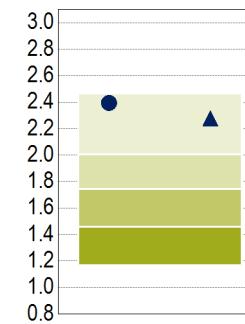
Anlzd Alpha



Sharpe Ratio



Sortino Ratio



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 31 Portfolios



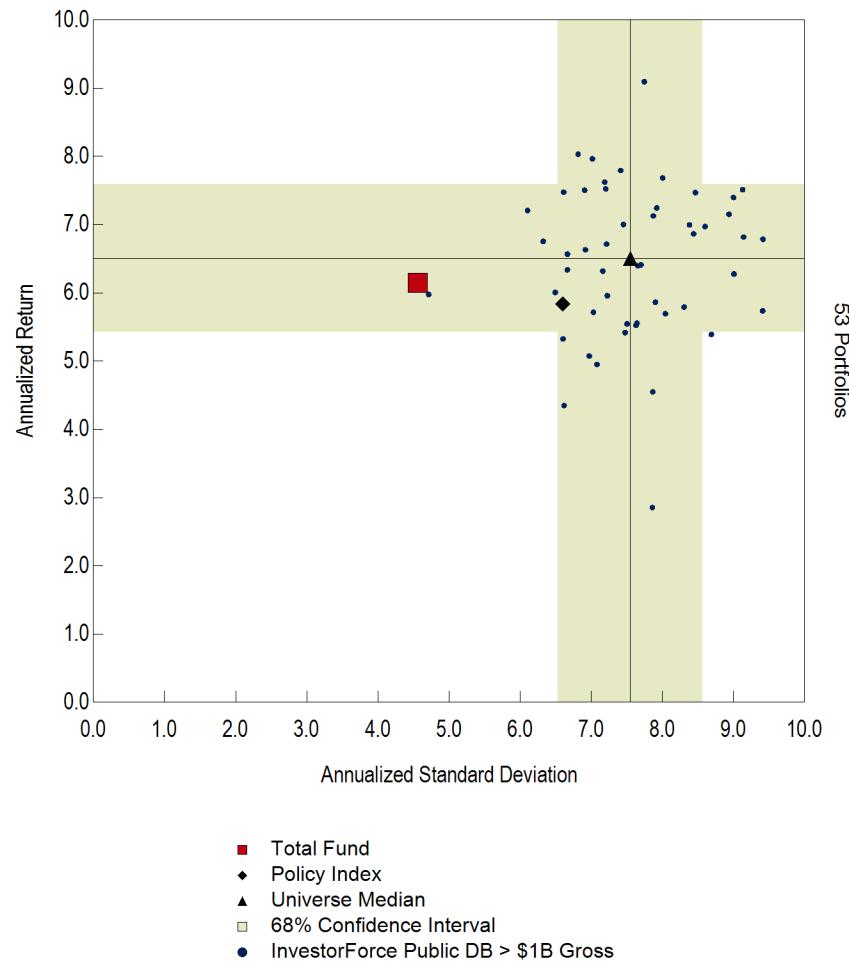
NEPC, LLC

June 30, 2016

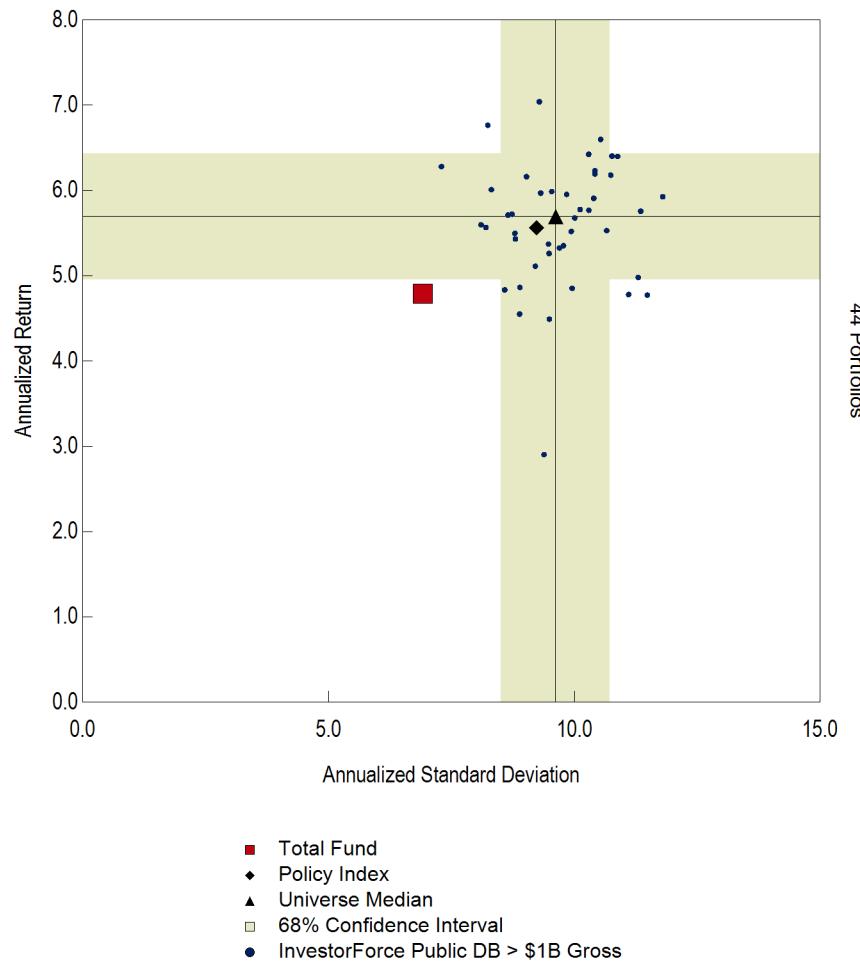
San Bernardino County Employees' Retirement Association

Total Fund Risk/Return

5 Years Ending June 30, 2016



10 Years Ending June 30, 2016



NEPC, LLC

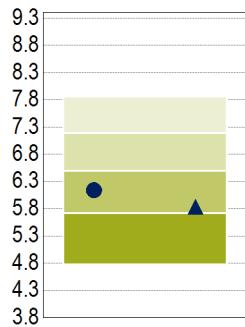
June 30, 2016

San Bernardino County Employees' Retirement Association

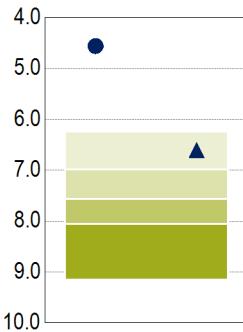
Total Fund Risk Statistics vs. Peer Universe

**Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)
5 Years**

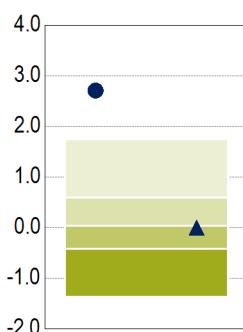
Anlzd Return



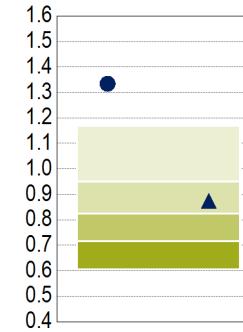
Anlzd Standard Deviation



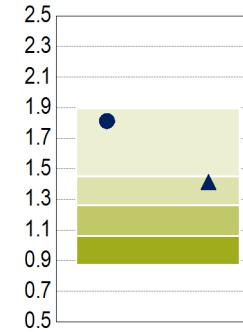
Anlzd Alpha



Sharpe Ratio



Sortino Ratio



● Total Fund
Value 6.1
%tile 63

▲ Policy Index
Value 5.8
%tile 72

Universe
5th %tile 7.9
25th %tile 7.2
Median 6.5
75th %tile 5.7
95th %tile 4.8

● Total Fund
Value 4.6
%tile 1

▲ Policy Index
Value 6.6
%tile 10

Universe
5th %tile 6.2
25th %tile 7.0
Median 7.6
75th %tile 8.0
95th %tile 9.1

● Total Fund
Value 2.7
%tile 1

▲ Policy Index
Value 0.0
%tile 52

Universe
5th %tile 1.7
25th %tile 0.6
Median 0.0
75th %tile -0.4
95th %tile -1.4

● Total Fund
Value 1.3
%tile 1

▲ Policy Index
Value 0.9
%tile 41

Universe
5th %tile 1.2
25th %tile 1.0
Median 0.8
75th %tile 0.7
95th %tile 0.6

● Total Fund
Value 1.8
%tile 8

▲ Policy Index
Value 1.4
%tile 30

Universe
5th %tile 1.9
25th %tile 1.5
Median 1.3
75th %tile 1.1
95th %tile 0.9

Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 31 Portfolios



NEPC, LLC

June 30, 2016

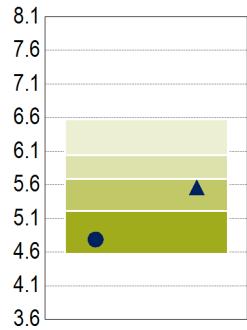
San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics vs. Peer Universe

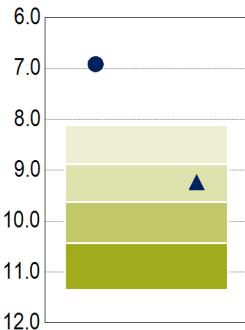
Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)

10 Years

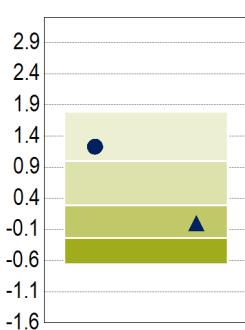
Anlzd Return



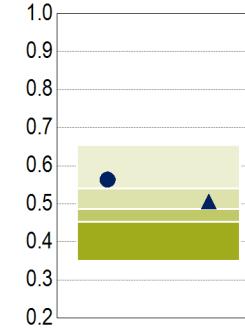
Anlzd Standard Deviation



Anlzd Alpha



Sharpe Ratio



Sortino Ratio



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 31 Portfolios



NEPC, LLC

June 30, 2016

San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics

	3 Years Ending June 30, 2016									
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sortino Ratio	Rank	Info Ratio	Rank	
Total Fund	100.0%	5.0%	92	3.7%	1	2.4	11	-0.3	76	
Policy Index	--	5.9%	69	5.6%	12	2.3	15	--	--	
Domestic Equity	10.0%	-1.6%	99	4.8%	1	-0.6	99	-0.8	79	
Russell 3000	--	11.1%	25	11.5%	48	1.8	33	--	--	
International Developed	2.6%	6.7%	1	24.0%	99	0.4	31	0.3	33	
MSCI EAFE	--	2.1%	52	13.3%	85	0.3	53	--	--	
International Emerging	2.9%	-2.5%	89	13.5%	9	-0.3	93	-0.2	92	
MSCI Emerging Markets	--	-1.6%	69	16.5%	85	-0.2	68	--	--	
U.S. Credit Strategies	11.9%	4.2%	44	2.9%	2	2.7	35	0.1	45	
50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index	--	3.8%	50	3.9%	39	2.0	45	--	--	
Non-U.S. Credit Composite	14.0%	5.1%	20	3.1%	1	3.4	1	0.5	14	
BofA Merrill Lynch Euro High Yield Constrained	--	0.4%	86	10.5%	99	0.1	86	--	--	
Non-U.S. Core Composite	1.0%	-1.0%	94	8.0%	86	-0.2	94	-0.7	94	
Barclays Global Aggregate	--	2.8%	60	4.4%	46	1.1	61	--	--	
Emerging Markets Debt Composite	7.3%	3.0%	57	5.7%	21	0.9	56	0.2	59	
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	1.8%	63	8.7%	70	0.4	63	--	--	
Alpha Pool Composite	19.3%	2.2%	66	3.3%	15	0.8	57	-0.3	67	
91 Day T-Bill + 3%	--	3.1%	29	0.0%	1	--	--	--	--	

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank
Private Equity Composite	14.8%	12.5%	37	4.1%	25	3.0	61
Cambridge Associates Global All PE (Qtr Lag)	--	11.1%	45	6.6%	63	1.7	--
Real Estate Composite	6.7%	12.4%	53	3.6%	39	3.4	49
NCREIF Property Index 1 Qtr Lag	--	11.9%	69	4.8%	61	2.5	--
Real Assets Composite	5.2%	0.4%	56	5.8%	50	0.1	46
Bloomberg Commodity Index	--	-10.6%	87	14.1%	90	-0.8	90

Percent of Total equals 95% because Beta Overlay is not included as these statistics are not relevant for alternative asset classes.



NEPC, LLC

June 30, 2016

San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics

	5 Years Ending June 30, 2016									
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sortino Ratio	Rank	Info Ratio	Rank	
Total Fund	100.0%	6.1%	63	4.6%	1	1.8	8	0.1	55	
Policy Index	--	5.8%	72	6.6%	10	1.4	30	--	--	
Domestic Equity	10.0%	1.4%	99	6.5%	1	0.3	99	-0.8	82	
Russell 3000	--	11.6%	16	12.6%	22	1.5	17	--	--	
International Developed	2.6%	12.7%	1	24.8%	99	0.8	1	0.7	15	
MSCI EAFE	--	1.7%	54	15.4%	83	0.2	53	--	--	
International Emerging	2.9%	-3.4%	65	16.7%	9	-0.3	65	0.1	69	
MSCI Emerging Markets	--	-3.8%	69	18.8%	76	-0.3	69	--	--	
U.S. Credit Strategies	11.9%	5.1%	28	4.3%	22	1.3	42	0.0	28	
50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index	--	5.0%	28	4.4%	29	1.7	30	--	--	
Non-U.S. Credit Composite	14.0%	4.6%	31	5.7%	34	0.8	86	0.2	58	
BofA Merrill Lynch Euro High Yield Constrained	--	1.9%	99	14.2%	99	0.2	99	--	--	
Non-U.S. Core Composite	1.0%	0.2%	91	10.0%	90	0.0	91	-0.2	84	
Barclays Global Aggregate	--	1.8%	72	4.4%	31	0.6	65	--	--	
Emerging Markets Debt Composite	7.3%	1.7%	65	8.0%	38	0.2	65	-0.1	64	
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	2.1%	63	9.6%	65	0.3	62	--	--	
Alpha Pool Composite	19.3%	4.4%	17	3.1%	6	1.7	10	0.4	57	
91 Day T-Bill + 3%	--	3.1%	58	0.0%	1	--	--	--	--	

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank
Private Equity Composite	14.8%	11.0%	36	4.7%	42	2.3	54
Cambridge Associates Global All PE (Qtr Lag)	--	10.4%	40	7.1%	81	1.4	95
Real Estate Composite	6.7%	11.4%	69	4.1%	22	2.8	31
NCREIF Property Index 1 Qtr Lag	--	11.9%	61	4.8%	39	2.5	--
Real Assets Composite	5.2%	2.2%	71	5.5%	61	0.4	57
Bloomberg Commodity Index	--	-10.8%	99	15.1%	99	-0.7	98

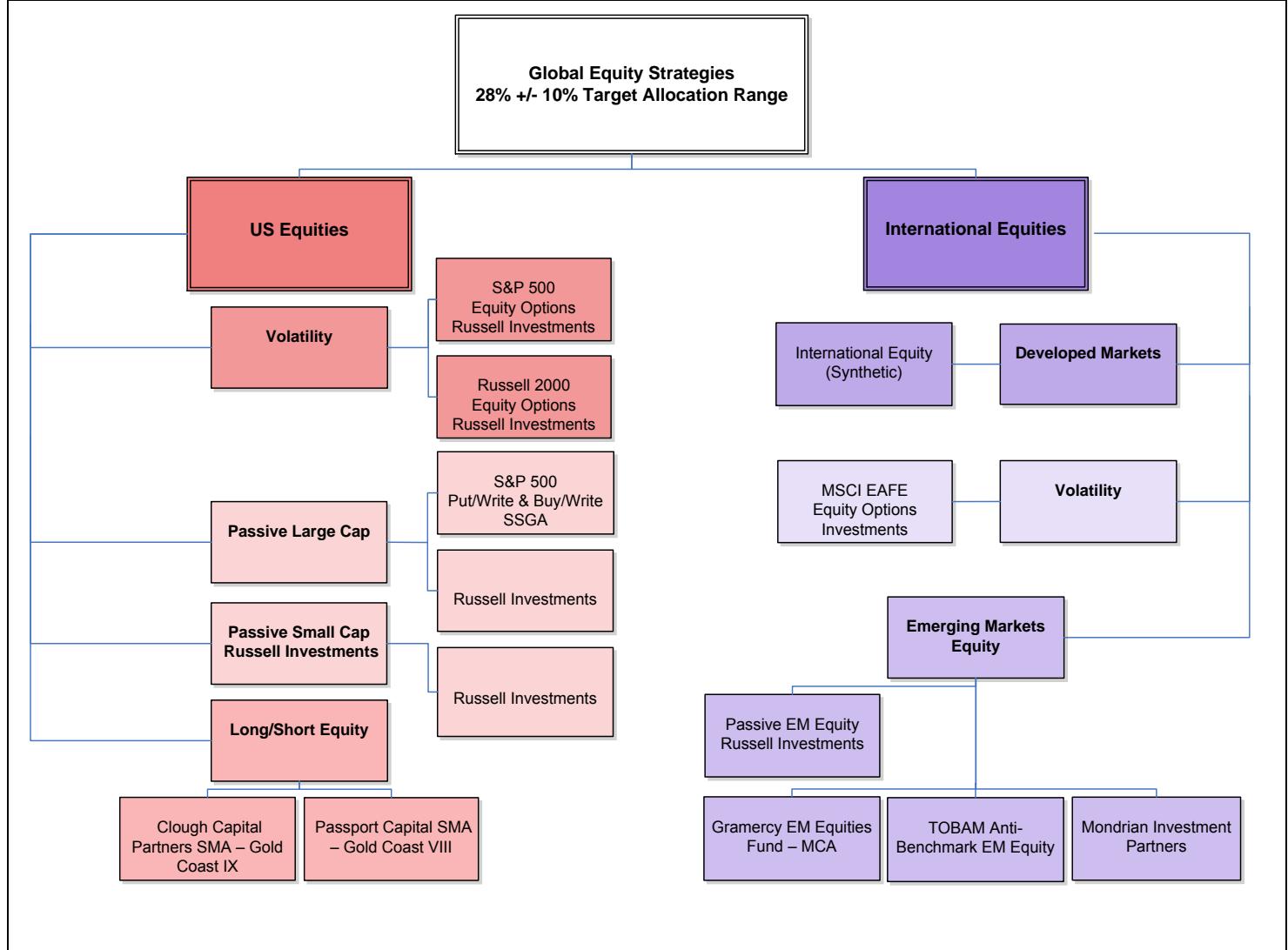
Percent of Total equals 95% because Beta Overlay is not included as these statistics are not relevant for alternative asset classes.



NEPC, LLC

June 30, 2016

Global Equity Portfolio



San Bernardino County Employees' Retirement Association
 Global Equity Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Fund	8,107,828,147	100.0	2.7	6	2.7	64	-0.9	80	5.0	92	6.1	63	4.8	89
Policy Index			<u>2.4</u>	11	<u>5.2</u>	3	<u>3.5</u>	3	<u>5.9</u>	69	<u>5.8</u>	72	<u>5.6</u>	57
Excess Return			0.3		<u>-2.5</u>		<u>-4.4</u>		<u>-0.9</u>		0.3		<u>-0.8</u>	
S&P 500			2.5	10	3.8	16	4.0	2	11.7	1	12.1	1	7.4	1
Barclays Aggregate			2.2	18	5.3	3	6.0	1	4.1	98	3.8	99	5.1	77
60% MSCI ACWI (Gross)/40% CITI WGBI			2.1	26	5.3	3	2.7	9	5.2	88	4.2	99	4.9	81
InvestorForce Public DB > \$1B Gross Median			1.8		2.9		0.2		6.6		6.5		5.7	
Beta Overlay	332,264,347	4.1	0.4	78	-20.4	99	-44.8	99	3.6	51	15.5	1	17.0	1
eA All Global Balanced / TAA Gross Median			1.9		3.3		-0.9		3.6		3.8		5.3	
Total Equity	1,257,515,041	15.5	1.6	46	7.1	1	-0.5	21	0.0	99	2.3	99	--	--
MSCI ACWI			<u>1.0</u>	76	<u>1.2</u>	68	<u>-3.7</u>	69	<u>6.0</u>	80	<u>5.4</u>	97	<u>4.3</u>	95
Excess Return			0.6		5.9		3.2		<u>-6.0</u>		<u>-3.1</u>			
InvestorForce Public DB Total Eq Gross Median			1.5		2.0		-2.3		7.5		7.4		5.2	
Domestic Equity	813,771,996	10.0	0.4	97	1.9	76	1.6	36	-1.6	99	1.4	99	0.1	99
Russell 3000			<u>2.6</u>	47	<u>3.6</u>	43	<u>2.1</u>	29	<u>11.1</u>	25	<u>11.6</u>	16	<u>7.4</u>	38
Excess Return			<u>-2.2</u>		<u>-1.7</u>		<u>-0.5</u>		<u>-12.7</u>		<u>-10.2</u>		<u>-7.3</u>	
InvestorForce Public DB US Eq Gross Median			2.6		3.3		0.5		10.5		10.8		7.2	
Large Cap Equity	637,060,018	7.9	0.1	83	4.0	33	3.8	17	-0.7	99	3.3	99	0.9	99
S&P 500			<u>2.5</u>	47	<u>3.8</u>	35	<u>4.0</u>	16	<u>11.7</u>	27	<u>12.1</u>	24	<u>7.4</u>	61
Excess Return			<u>-2.4</u>		0.2		<u>-0.2</u>		<u>-12.4</u>		<u>-8.8</u>		<u>-6.5</u>	
eA All US Equity Gross Median			2.3		2.3		-1.7		10.0		10.7		7.8	
SsgA S&P500	596,579,030	7.4	2.4	49	1.6	57	2.6	24	6.4	88	6.8	93	3.3	99
S&P 500			<u>2.5</u>	47	<u>3.8</u>	35	<u>4.0</u>	16	<u>11.7</u>	27	<u>12.1</u>	24	<u>7.4</u>	61
Excess Return			<u>-0.1</u>		<u>-2.2</u>		<u>-1.4</u>		<u>-5.3</u>		<u>-5.3</u>		<u>-4.1</u>	
eA All US Equity Gross Median			2.3		2.3		-1.7		10.0		10.7		7.8	
Russell US Large Cap Volatility	40,480,988	0.5	-25.0	99	6.9	15	-2.2	54	-55.3	99	-35.9	99	--	--
S&P 500			<u>2.5</u>	47	<u>3.8</u>	35	<u>4.0</u>	16	<u>11.7</u>	27	<u>12.1</u>	24	<u>7.4</u>	61
Excess Return			<u>-27.5</u>		3.1		<u>-6.2</u>		<u>-67.0</u>		<u>-48.0</u>			
eA All US Equity Gross Median			2.3		2.3		-1.7		10.0		10.7		7.8	
Clough	80,828,147	1.0	3.7	25	-7.0	98	-9.4	88	-0.6	99	1.4	99	--	--
Passport	95,789,591	1.2	0.3	81	2.9	45	2.4	25	5.3	92	6.3	95	--	--

San Bernardino County Employees' Retirement Association

Global Equity Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Small Cap Equity	94,241	0.0	0.1	88	0.2	71	86.9	1	-51.9	99	-33.2	99	--	--
Russell 2000			3.8	37	2.2	54	-6.7	64	7.1	70	8.4	71	6.2	80
Excess Return			-3.7		-2.0		93.6		-59.0		-41.6			
eA US Small Cap Equity Gross Median			2.9		2.7		-5.0		8.5		9.7			7.6
Russell US Small Cap Volatility	94,241	0.0	0.1	83	0.2	70	86.9	1	-51.9	99	-33.2	99	--	--
Russell 2000			3.8	24	2.2	52	-6.7	79	7.1	84	8.4	84	6.2	86
Excess Return			-3.7		-2.0		93.6		-59.0		-41.6			
eA All US Equity Gross Median			2.3		2.3		-1.7		10.0		10.7			7.8
LongShort Equity	176,617,738	2.2	1.8	82	-4.0	99	-8.4	99	0.2	99	0.4	99	--	--
Credit Suisse Long Shrt Eqt USD			-1.2	99	-5.0	99	-5.0	96	4.5	99	4.0	99	4.7	99
Excess Return			3.0		1.0		-3.4		-4.3		-3.6			
InvestorForce Public DB US Eq Gross Median			2.6		3.3		0.5		10.5		10.8			7.2
Clough	80,828,147	1.0	3.7	25	-7.0	98	-9.4	88	-0.6	99	1.4	99	--	--
Passport	95,789,591	1.2	0.3	81	2.9	45	2.4	25	5.3	92	6.3	95	--	--



NEPC, LLC

June 30, 2016

San Bernardino County Employees' Retirement Association

Global Equity Strategies Performance Detail - Gross

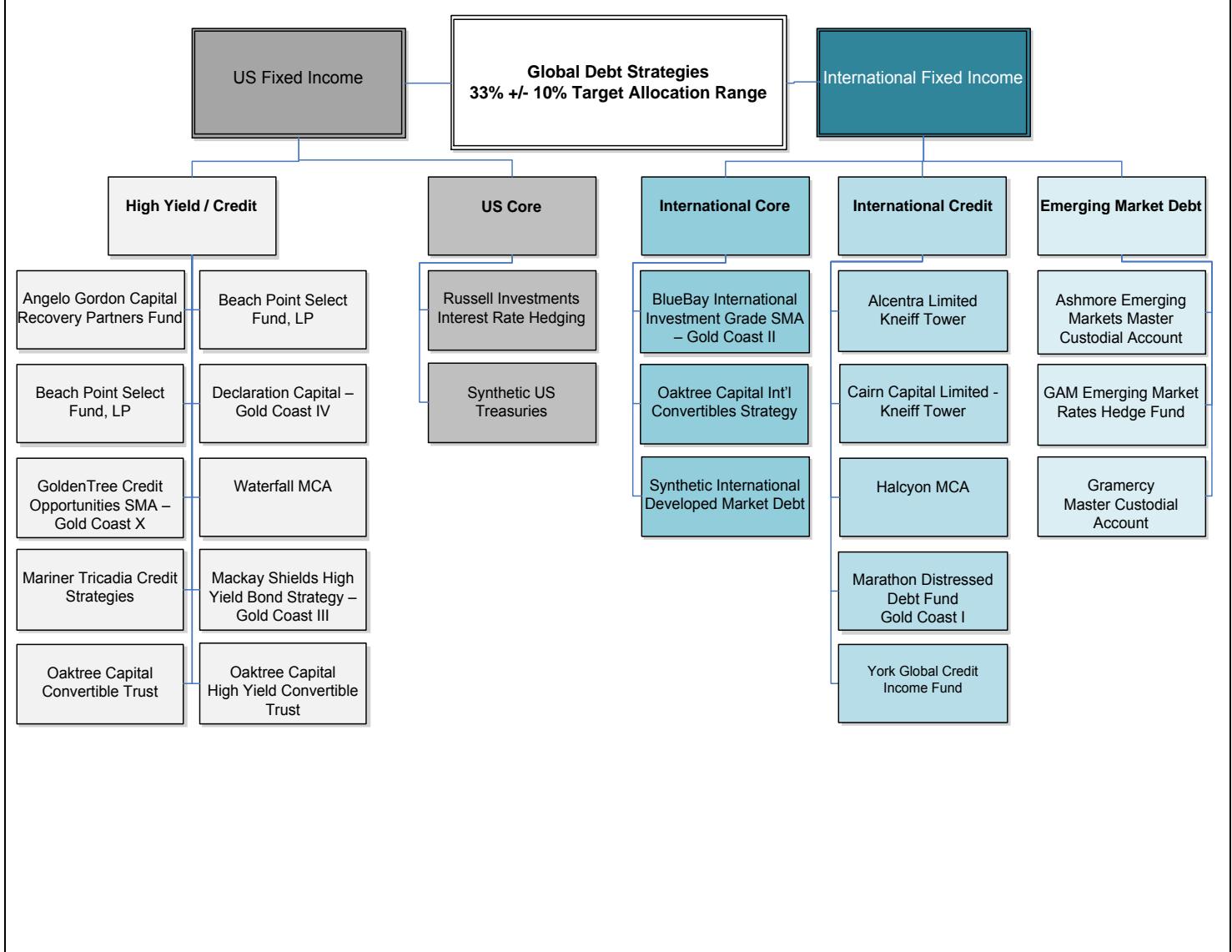
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
International Equity	443,743,045	5.5	3.8	1	17.3	1	-7.2	65	1.5	83	2.9	45	3.7	25
<i>MSCI EAFE</i>			-1.5	92	-4.4	98	-10.2	87	2.1	79	1.7	55	1.6	98
Excess Return			5.3		21.7		3.0		-0.6		1.2		2.1	
<i>InvestorForce Public DB Glbl Eq Gross Median</i>			0.4		0.7		-4.5		6.9		2.3		2.4	
International Developed	211,697,698	2.6	7.1	3	34.1	1	-3.9	13	6.7	1	12.7	1	6.3	1
<i>MSCI EAFE</i>			-1.5	82	-4.4	73	-10.2	42	2.1	52	1.7	54	1.6	64
Excess Return			8.6		38.5		6.3		4.6		11.0		4.7	
<i>InvestorForce Public DB Dev Mkt ex-US Eq Gross Median</i>			-0.8		-2.1		-10.9		2.2		2.1		2.4	
Russell International Volatility	211,697,685	2.6	7.1	1	34.1	1	-3.9	22	6.7	21	8.8	4	--	--
<i>MSCI EAFE</i>			-1.5	50	-4.4	65	-10.2	71	2.1	85	1.7	85	1.6	90
Excess Return			8.6		38.5		6.3		4.6		7.1			
<i>eA All EAFE Equity Gross Median</i>			-1.5		-3.5		-7.9		3.9		3.4		3.3	
International Emerging	232,045,347	2.9	1.0	81	4.7	91	-9.8	62	-2.5	89	-3.4	65	4.2	34
<i>MSCI Emerging Markets</i>			0.7	92	6.4	65	-12.1	82	-1.6	69	-3.8	69	3.5	56
Excess Return			0.3		-1.7		2.3		-0.9		0.4		0.7	
<i>InvestorForce Public DB Emg Mkt Eq Gross Median</i>			1.8		6.9		-9.2		-0.6		-3.1		3.7	
Mondrian	119,892,847	1.5	2.3	39	9.4	22	-7.2	31	-2.1	90	-1.2	43	5.7	38
<i>MSCI Emerging Markets</i>			0.7	78	6.4	51	-12.1	78	-1.6	82	-3.8	87	3.5	84
Excess Return			1.6		3.0		4.9		-0.5		2.6		2.2	
<i>eA Emg Mkts Equity Gross Median</i>			1.9		6.4		-9.2		0.1		-1.8		5.2	
Gramercy Emerging Market Equity	59,984,982	0.7	2.4	37	1.4	94	-9.4	52	--	--	--	--	--	--
<i>MSCI Emerging Markets</i>			0.7	78	6.4	51	-12.1	78	-1.6	82	-3.8	87	3.5	84
Excess Return			1.7		-5.0		2.7							
<i>eA Emg Mkts Equity Gross Median</i>			1.9		6.4		-9.2		0.1		-1.8		5.2	
Tobam	52,068,350	0.6	-3.5	--	--	--	--	--	--	--	--	--	--	--



NEPC, LLC

June 30, 2016

Global Debt Strategies



San Bernardino County Employees' Retirement Association
 Global Debt Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Fixed	2,685,720,958	33.1	3.9	3	3.0	97	2.1	92	4.4	10	4.4	21	--	--
InvestorForce Public DB Total Fix Inc Gross Median			2.3		4.9		4.4		3.3		3.9		5.7	
U.S. Credit Strategies	963,304,657	11.9	2.5	32	0.5	90	-2.1	90	4.2	44	5.1	28	8.6	1
50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index			3.7	5	6.1	59	1.6	81	3.8	50	5.0	28	5.6	24
Excess Return			-1.2		-5.6		-3.7		0.4		0.1		3.0	
BofA Merrill Lynch US High Yield Master II TR			5.9	1	9.3	1	1.7	80	4.2	44	5.7	15	7.4	1
eA Global Credit Fixed Income Gross Median			2.1		6.3		5.5		3.8		3.8		4.6	
AG Capital	3,686,617	0.0	-12.6	99	-13.0	99	-17.5	99	-2.5	98	1.5	86	--	--
Golden Tree Asset Management	347,835,360	4.3	6.4	1	5.8	64	1.6	80	10.4	1	8.3	1	--	--
Beach Point Capital (Formerly Post)	125,990,303	1.6	7.3	1	3.5	81	2.4	71	6.8	6	7.8	1	--	--
Golden Tree Distressed Debt	29,130,288	0.4	-2.0	94	-4.4	99	-1.2	89	17.1	1	13.3	1	--	--
Mackay / Gold Coast	91,922,508	1.1	6.2	1	3.2	81	-2.7	92	2.5	74	5.0	28	7.9	1
Mariner Tricadia	74,969,128	0.9	0.5	76	-3.5	99	-5.6	95	1.2	86	3.4	58	--	--
MD SASS Waterfall Victoria	29,364,028	0.4	5.6	--	3.8	--	--	--	--	--	--	--	--	--
OCM Convertible	15,745,218	0.2	6.2	1	-1.7	96	-9.0	98	2.5	75	3.8	50	--	--
OCM High Income	15,364,184	0.2	8.1	1	2.9	82	1.1	83	4.4	42	4.4	41	--	--
Russell Interest Rate Hedging	-2,177,715	0.0	--	--	--	--	--	--	--	--	--	--	--	--
Stone Tower Credit (Apollo)	74,558,814	0.9	6.0	2	4.2	71	3.7	49	3.9	39	--	--	--	--
Sutherland REIT Holdings	87,861,600	1.1	1.7	--	0.7	--	2.4	--	--	--	--	--	--	--
Waterfall Asset Management	29,212,421	0.4	10.2	--	28.5	--	30.6	--	--	--	--	--	--	--
Waterfall Victoria	39,526,497	0.5	3.7	--	6.0	--	10.9	--	--	--	--	--	--	--



NEPC, LLC

June 30, 2016

San Bernardino County Employees' Retirement Association

Global Debt Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Non-U.S. Fixed Income Composite	1,722,416,301	21.2	4.7	2	4.4	60	4.6	33	4.5	6	3.8	55	5.4	61
Barclays Global Aggregate			2.9	17	9.0	2	8.9	2	2.8	84	1.8	99	4.4	94
Excess Return			1.8		-4.6		-4.3		1.7		2.0		1.0	
InvestorForce Public DB Total Fix Inc Gross Median			2.3		4.9		4.4		3.3		3.9		5.7	
Non-U.S. Credit Composite	1,133,751,317	14.0	4.8	1	2.7	89	4.5	34	5.1	20	4.6	31	--	--
BofA Merrill Lynch Euro High Yield Constrained			-0.8	99	5.9	72	2.2	67	0.4	86	1.9	99	6.2	27
Excess Return			5.6		-3.2		2.3		4.7		2.7			
InvestorForce Public DB Glbl Fix Inc Gross Median			2.2		7.0		3.6		2.9		4.3		6.0	
Marathon/Gold Coast	197,019,417	2.4	3.6	7	-2.8	99	-1.2	89	5.8	24	3.9	48	--	--
Alcentra Core European Credit	314,839,720	3.9	4.7	1	4.1	78	12.5	1	12.0	1	--	--	--	--
Halcyon Asset Management	84,806,222	1.0	4.8	1	5.0	73	--	--	--	--	--	--	--	--
BofA Merrill Lynch Euro High Yield Constrained			-0.8	88	5.9	61	2.2	72	0.4	92	1.9	77	6.2	15
Excess Return			5.6		-0.9									
eA Global Credit Fixed Income Gross Median			2.1		6.3		5.5		3.8		3.8		4.6	
Oaktree Capital	34,843,797	0.4	-1.2	89	0.7	89	-1.8	90	1.3	84	0.8	92	--	--
York Global Credit	128,334,879	1.6	7.3	1	3.0	82	0.0	87	5.4	31	--	--	--	--
BofA Merrill Lynch Euro High Yield Constrained			-0.8	88	5.9	61	2.2	72	0.4	92	1.9	77	6.2	15
Excess Return			8.1		-2.9		-2.2		5.0					
eA Global Credit Fixed Income Gross Median			2.1		6.3		5.5		3.8		3.8		4.6	
Cairn Composite	296,234,606	3.7	7.2	1	4.0	79	4.4	66	1.5	82	1.6	85	--	--
BofA Merrill Lynch Euro High Yield Constrained			-0.8	88	5.9	61	2.2	72	0.4	92	1.9	77	6.2	15
Excess Return			8.0		-1.9		2.2		1.1		-0.3			
eA Global Credit Fixed Income Gross Median			2.1		6.3		5.5		3.8		3.8		4.6	
Non-U.S. Core Composite	77,672,676	1.0	-1.0	93	5.0	65	3.0	56	-1.0	94	0.2	91	--	--
Barclays Global Aggregate			2.9	36	9.0	17	8.9	11	2.8	60	1.8	72	4.4	84
Excess Return			-3.9		-4.0		-5.9		-3.8		-1.6			
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
Bluebay/Goldcoast	77,672,676	1.0	-1.0	93	5.0	65	3.0	56	-1.1	94	0.2	91	--	--
Barclays Global Aggregate			2.9	36	9.0	17	8.9	11	2.8	60	1.8	72	4.4	84
Excess Return			-3.9		-4.0		-5.9		-3.9		-1.6			
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	

San Bernardino County Employees' Retirement Association

Global Debt Strategies Performance Detail - Gross

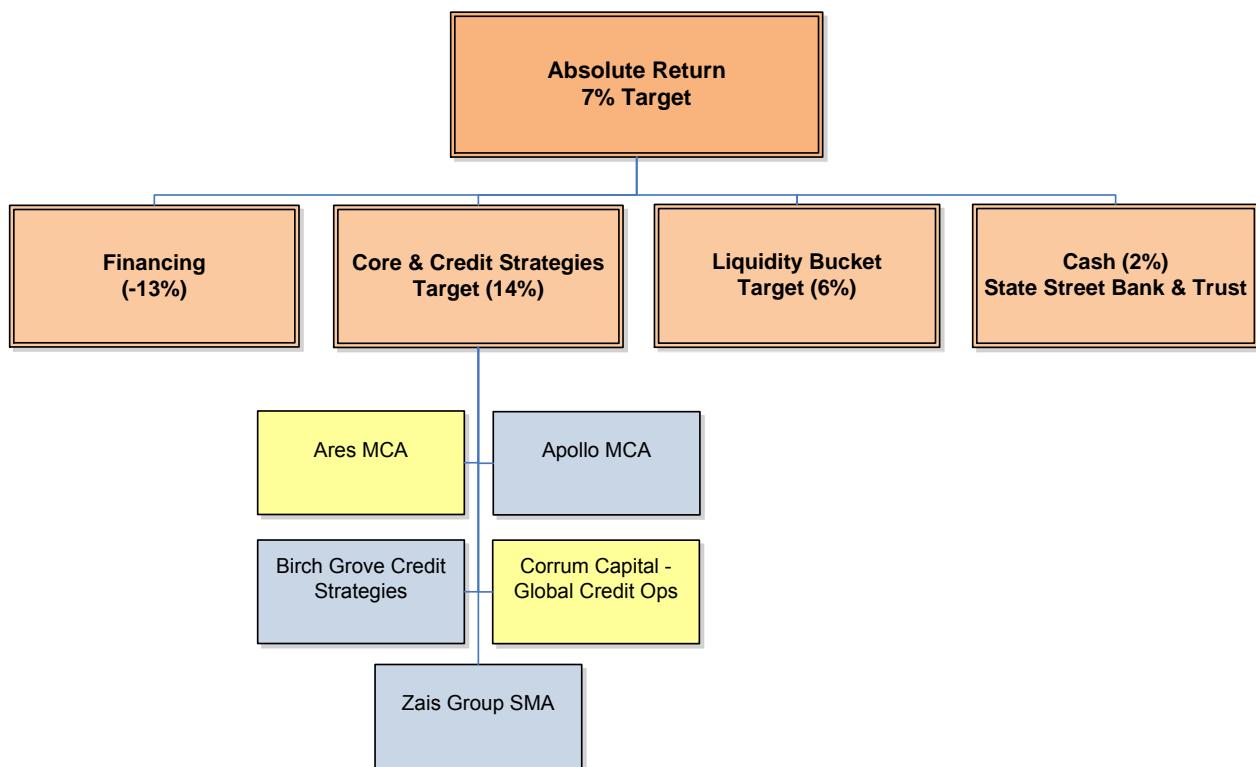
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Emerging Markets Debt Composite	588,664,985	7.3	4.4	53	7.9	86	4.6	60	3.0	57	1.7	65	4.5	95
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified			3.9	65	12.2	32	6.0	45	1.8	63	2.1	63	6.9	77
Excess Return			0.5		-4.3		-1.4		1.2		-0.4		-2.4	
eA All Emg Mkts Fixed Inc Gross Median			4.5		11.1		5.4		4.4		4.4		8.1	
Ashmore Emerging Markets Liquid Investments	133,711,105	1.6	7.3	4	11.0	52	4.9	56	3.4	56	--	--	--	--
JP Morgan GBI - EM Global Diversified Index			2.7	87	14.0	13	2.0	82	-3.6	92	-2.2	89	5.7	85
Excess Return			4.6		-3.0		2.9		7.0					
eA All Emg Mkts Fixed Inc Gross Median			4.5		11.1		5.4		4.4		4.4		8.1	
Ashmore EM HY CRP DB FD I3	0	0.0	6.8	--	8.3	--	-4.2	--	--	--	--	--	--	--
Ashmore Emerging Markets	19,829,693	0.2	10.2	--	2.5	--	-4.8	--	--	--	--	--	--	--
Ashmore Local Currency	99,567,424	1.2	3.5	19	14.1	1	0.7	79	-4.9	99	-3.4	99	--	--
JP Morgan ELM+I			0.3	86	5.8	56	-1.0	86	-3.0	98	-2.9	99	2.7	96
Excess Return			3.2		8.3		1.7		-1.9		-0.5			
JP Morgan EMBI Global Index			5.4	3	10.9	7	10.3	5	6.4	3	6.2	8	7.9	5
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
GAM Emerging Markets Rates	43,102,690	0.5	1.5	97	5.3	98	4.2	61	3.1	57	--	--	--	--
JP Morgan ELM+I			0.3	99	5.8	97	-1.0	97	-3.0	85	-2.9	98	2.7	99
Excess Return			1.2		-0.5		5.2		6.1					
JP Morgan EMBI Global Index			5.4	29	10.9	56	10.3	9	6.4	17	6.2	23	7.9	61
eA All Emg Mkts Fixed Inc Gross Median			4.5		11.1		5.4		4.4		4.4		8.1	
Gramercy Funds Management LLC	232,385,445	2.9	2.4	90	4.6	99	7.2	33	9.1	1	--	--	--	--
JP Morgan ELM+I			0.3	99	5.8	97	-1.0	97	-3.0	85	-2.9	98	2.7	99
Excess Return			2.1		-1.2		8.2		12.1					
JP Morgan EMBI Global Index			5.4	29	10.9	56	10.3	9	6.4	17	6.2	23	7.9	61
eA All Emg Mkts Fixed Inc Gross Median			4.5		11.1		5.4		4.4		4.4		8.1	
Prudential Investment Management	79,898,320	1.0	8.2	1	6.8	94	0.1	94	--	--	--	--	--	--
JP Morgan ELM+I			0.3	99	5.8	97	-1.0	97	-3.0	85	-2.9	98	2.7	99
Excess Return			7.9		1.0		1.1							
JP Morgan EMBI Global Index			5.4	29	10.9	56	10.3	9	6.4	17	6.2	23	7.9	61
eA All Emg Mkts Fixed Inc Gross Median			4.5		11.1		5.4		4.4		4.4		8.1	



NEPC, LLC

June 30, 2016

Absolute Return (Alpha Pool)



San Bernardino County Employees' Retirement Association

Alpha Pool Strategies Performance Detail - Gross

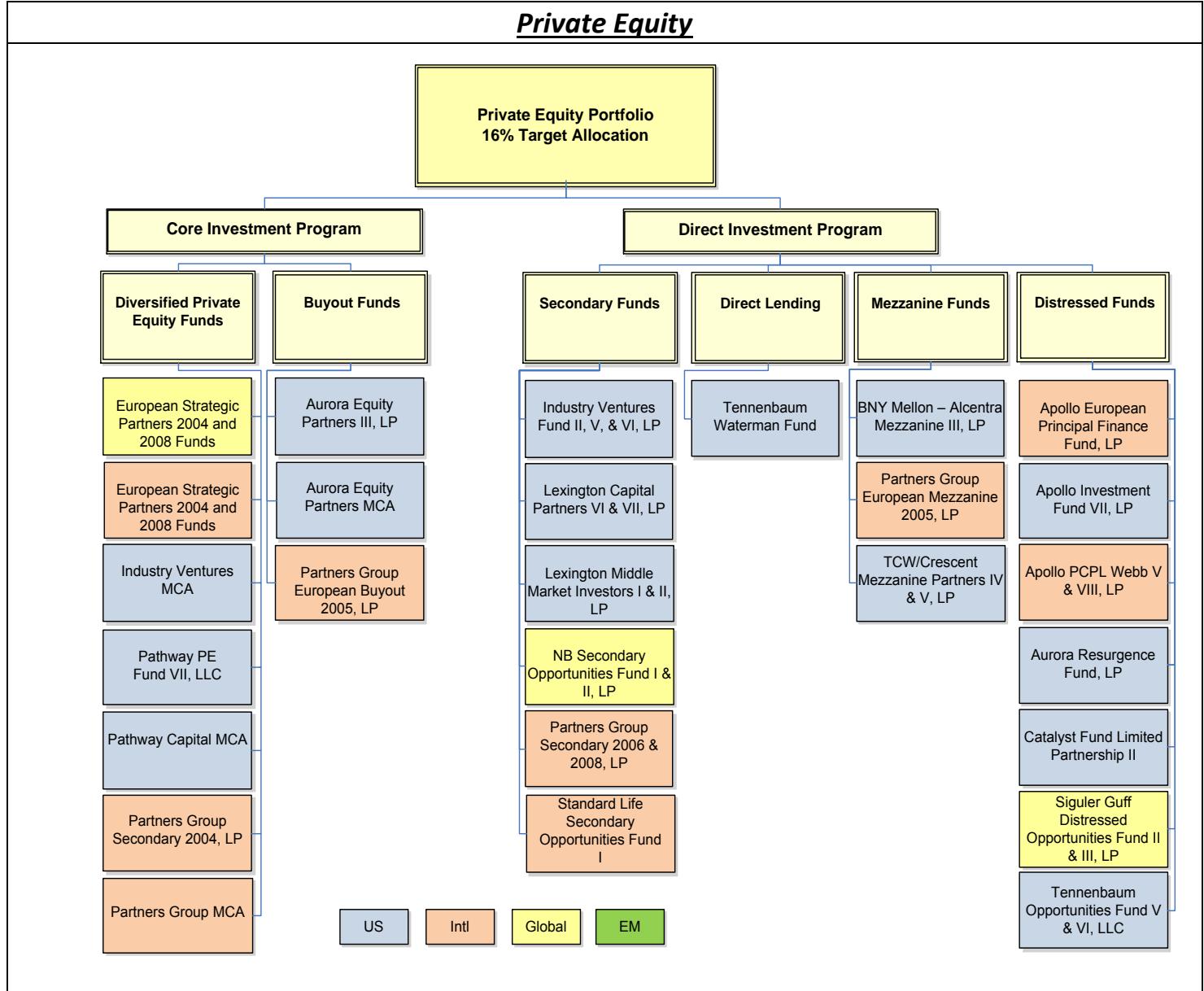
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Alpha Pool Composite	1,561,954,760	19.3	3.7	6	1.1	9	-4.3	33	2.2	66	4.4	17	4.3	33
91 Day T-Bill + 3%			.8	60	1.6	8	3.2	5	3.1	29	3.1	58	3.9	36
Excess Return			2.9		-0.5		-7.5		-0.9		1.3		0.4	
InvestorForce Public DB Hedge Funds Gross Median			1.0		-1.6		-5.1		2.6		3.2		3.2	
Alpha Liquidity (Ssga)	155,341,761	1.9	0.2	87	0.3	91	0.4	80	0.3	88	0.3	90	--	--
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
Apollo Global Management	61,335,141	0.8	4.0	10	2.6	81	5.6	34	--	--	--	--	--	--
Ares Eco Alpha	194,528,133	2.4	-1.0	93	-0.8	94	-8.6	99	-16.0	99	-6.5	99	--	--
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
Ares Strategic Investment	219,884,028	2.7	1.6	69	-0.3	92	-10.9	99	--	--	--	--	--	--
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
Birch Grove Credit Strategies	102,129,144	1.3	-5.3	99	-7.8	99	-7.6	99	--	--	--	--	--	--
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
Sterling Stamos	144,971,483	1.8	1.4	71	0.6	90	0.3	81	3.6	42	2.0	68	--	--
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
Stone Tower Off (Apollo)	371,716,841	4.6	9.5	1	4.2	71	1.9	67	5.2	16	7.6	2	--	--
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
Zais	103,905,836	1.3	8.5	1	-5.3	99	-13.4	99	1.5	78	7.9	1	--	--
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
Zais Group Invest Advisors	185,227,733	2.3	7.9	1	7.9	27	-7.1	99	3.9	39	--	--	--	--
eA All Global Fixed Inc Gross Median			2.2		6.3		3.5		3.2		3.0		5.2	
Zais Zephyr A 6 LP	20,556,836	0.3	4.5	--	--	--	--	--	--	--	--	--	--	--



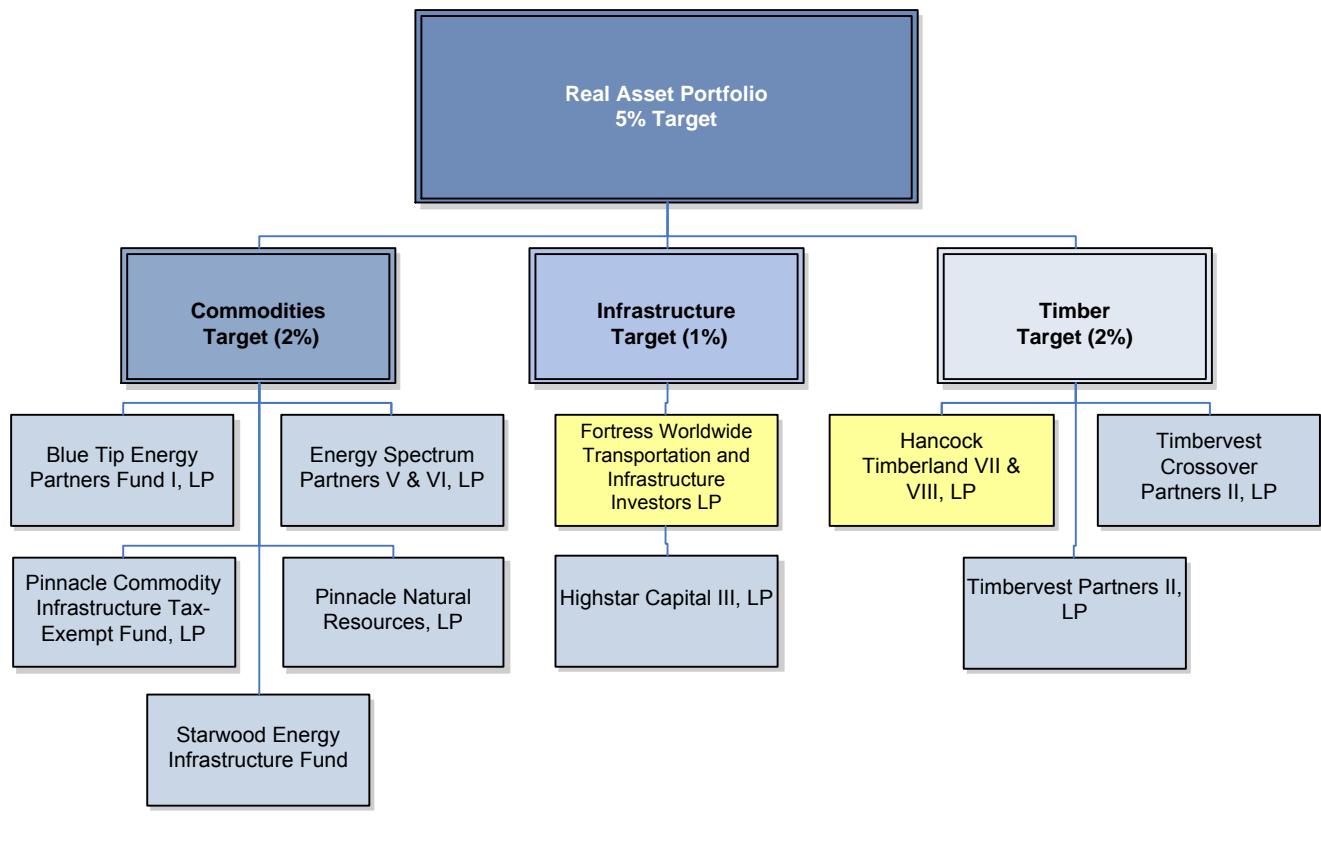
NEPC, LLC

June 30, 2016

Private Equity

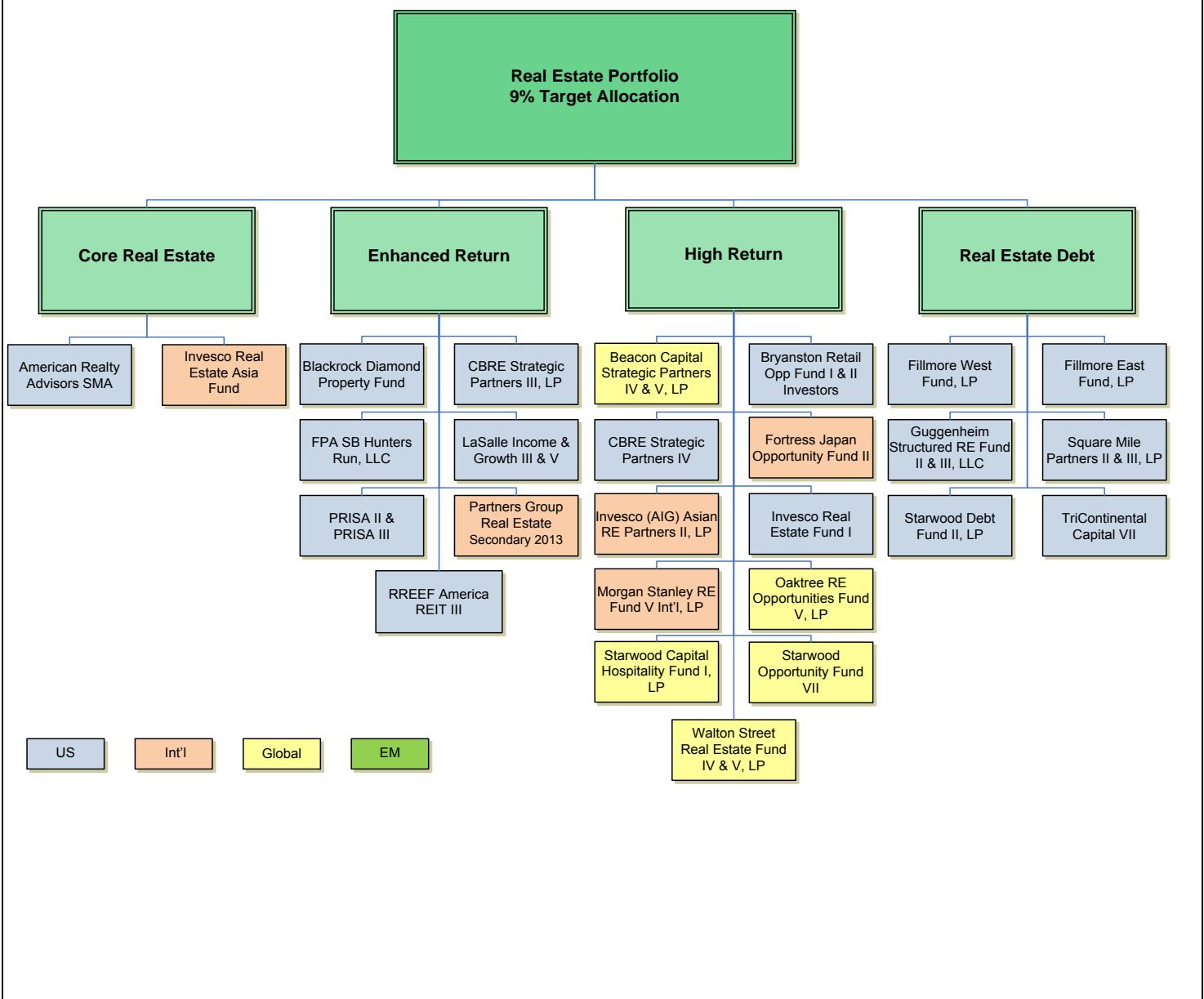


Real Asset Portfolio



Int'l
US
EM
Global

Real Estate



San Bernardino County Employees' Retirement Association

Alternatives Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Private Equity Composite	1,200,325,349	14.8	-0.1	67	3.4	9	6.9	34	12.5	37	11.0	36	9.1	58
Cambridge Associates Global All PE (Qtr Lag)			0.5	33	1.9	35	5.0	53	11.1	45	10.4	40	10.6	32
Excess Return			-0.6		1.5		1.9		1.4		0.6		-1.5	
Russell 3000			2.6	1	3.6	8	2.1	79	11.1	45	11.6	27	7.4	78
Cambridge Associates US All PE (1 Qtr Lag)			0.3	44	0.8	57	3.2	67	10.9	46	11.4	28	10.8	30
InvestorForce Public DB Private Eq Gross Median			0.2		1.0		6.1		10.5		9.6		9.4	
Real Estate Composite	547,125,016	6.7	4.3	8	8.5	6	15.0	10	12.4	53	11.4	69	4.2	89
NCREIF Property Index 1 Qtr Lag			2.2	56	5.2	47	11.8	56	11.9	69	11.9	61	7.6	16
Excess Return			2.1		3.3		3.2		0.5		-0.5		-3.4	
InvestorForce Public DB Real Estate Pub+Priv Gross Median			2.3		5.0		12.0		12.5		12.2		6.0	
Real Assets Composite	422,249,055	5.2	3.6	50	1.8	90	-5.8	66	0.4	56	2.2	71	2.7	99
Bloomberg Commodity Index			12.8	7	13.3	9	-13.3	87	-10.6	87	-10.8	99	-5.6	99
Excess Return			-9.2		-11.5		7.5		11.0		13.0		8.3	
NCREIF Timberland 1 Qtr Lag			-0.3	99	1.6	91	2.9	42	7.7	24	6.6	42	6.6	1
InvestorForce Public DB Real Assets/Commodities Gross Median			3.6		6.0		1.8		2.4		5.1		5.4	
Timber	204,715,200	2.5	5.9	--	5.5	--	2.0	--	5.1	--	5.4	--	3.7	--
NCREIF Timberland 1 Qtr Lag			-0.3	--	1.6	--	2.9	--	7.7	--	6.6	--	6.6	--
Excess Return			6.2		3.9		-0.9		-2.6		-1.2		-2.9	
Infrastructure	62,445,499	0.8	8.2	--	-1.5	--	-24.8	--	-9.8	--	-4.0	--	--	--
Russell 3000			2.6	--	3.6	--	2.1	--	11.1	--	11.6	--	7.4	--
Excess Return			5.6		-5.1		-26.9		-20.9		-15.6			
Commodities	155,088,356	1.9	-1.3	--	-0.7	--	-1.3	--	0.2	--	1.7	--	--	--
Bloomberg Commodity Index			12.8	--	13.3	--	-13.3	--	-10.6	--	-10.8	--	-5.6	--
Excess Return			-14.1		-14.0		12.0		10.8		12.5			



NEPC, LLC

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Appendix: Private Equity and Real Estate Performance



NEPC, LLC

San Bernardino County Employees' Retirement Association
 Private Equity Performance Ending March 31, 2016

Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Cumulative Distributions	Valuation	IRR	TVPI Ratio
Apollo European Principal Finance Fund (Feeder), LP	2009	\$ 53,867,097	\$ 46,286,263	\$ 64,173,532	\$ 5,042,057	11.92%	1.50
Apollo Investment Fund VII, L.P.	2008	\$ 10,000,000	\$ 8,324,297	\$ 14,041,248	\$ 2,988,873	24.60%	2.05
Apollo PCPL Webb V*	2010	\$ 4,844,398	\$ 4,844,398	\$ 5,169,483	\$ 66,467	6.53%	1.08
Apollo PCPL Webb VIII*	2010	\$ 4,734,303	\$ 4,734,303	\$ 12,146,258	\$ 17,322	46.50%	2.57
ARES European Loan Opp Fund	2015	\$ 15,000,000	\$ 8,413,136	\$ -	\$ 8,350,674	-0.74%	0.99
ARES Special Situations Fund IV, LP	2015	\$ 50,000,000	\$ 17,326,733	\$ -	\$ 8,304,946	-58.88%	0.48
Aurora Equity Partners III, L.P.	2005	\$ 25,000,000	\$ 23,544,536	\$ 41,140,682	\$ 2,902,425	14.53%	1.75
Aurora Equity Partners IV, L.P.	2012	\$ 20,000,000	\$ 15,523,201	\$ 1,381,143	\$ 24,324,056	14.90%	1.45
Aurora Resurgence Fund, L.P.	2008	\$ 15,000,000	\$ 5,653,009	\$ 10,350,965	\$ -	17.60%	1.82
Baring Asia Private Equity Fund IV, L.P.	2015	\$ 2,931,918	\$ 2,922,361	\$ 435,400	\$ 2,452,104	-1.16%	0.99
BNY Mellon - Alcentra Mezzanine III*	2012	\$ 25,000,000	\$ 23,254,658	\$ 26,583,881	\$ 57,766	12.52%	1.15
Catalyst Fund II, L.P.	2007	\$ 10,000,000	\$ 9,934,668	\$ 4,033,566	\$ 17,253,233	13.42%	2.13
Catalyst Fund LP IV, L.P.	2015	\$ 8,000,000	\$ 2,300,242	\$ -	\$ 2,228,321	-4.29%	0.97
Charlesbank Equity Fund VIII	2015	\$ 7,500,000	\$ 2,849,099	\$ -	\$ 2,788,558	-3.12%	0.98
DRI II, L.P.*	2009	\$ 20,000,000	\$ 19,917,669	\$ 25,865,694	\$ 427,500	19.68%	1.33
European Strategic Partners 2004	2004	\$ 240,923,669	\$ 219,867,940	\$ 216,942,647	\$ 53,732,726	3.71%	1.23
European Strategic Partners 2008	2010	\$ 31,414,510	\$ 24,371,238	\$ 8,686,129	\$ 19,691,763	5.10%	1.16
Industry Ventures Fund V	2008	\$ 10,000,000	\$ 9,500,000	\$ 20,294,905	\$ 8,785,984	33.79%	3.06
Industry Ventures Fund VI	2011	\$ 20,000,000	\$ 17,890,000	\$ 10,095,633	\$ 13,065,539	11.40%	1.29
Industry Ventures Partnership Holdings Fund II, L.P.	2012	\$ 25,000,000	\$ 21,000,000	\$ 5,231,047	\$ 36,360,908	31.90%	1.98
Industry Ventures Partnership Holdings Fund III, L.P.	2013	\$ 25,000,000	\$ 14,750,000	\$ 789,740	\$ 16,971,538	17.83%	1.20
Industry Ventures Partnership Holdings Fund III-A, L.P.	2014	\$ 12,500,000	\$ 8,875,000	\$ 1,972,074	\$ 8,134,855	12.02%	1.14
Industry Ventures Secondary VII, L.P.	2013	\$ 25,000,000	\$ 15,750,000	\$ 1,307,027	\$ 16,242,249	10.95%	1.11
Insight Venture Partners III Co-Invest	2014	\$ 4,000,000	\$ 3,544,000	\$ -	\$ 3,906,643	6.79%	1.10
Lexington Capital Partners VI-B	2006	\$ 25,000,000	\$ 24,591,319	\$ 26,043,818	\$ 7,791,620	6.87%	1.38
Lexington Capital Partners VII (Offshore)	2011	\$ 25,000,000	\$ 19,425,509	\$ 16,113,834	\$ 13,337,568	17.70%	1.51
Lexington Middle Market I	2005	\$ 25,000,000	\$ 24,771,942	\$ 29,945,546	\$ 8,368,765	11.46%	1.55
Lexington Middle Market II - Offshore	2008	\$ 10,000,000	\$ 9,463,403	\$ 7,280,095	\$ 6,374,176	13.89%	1.44
NB Secondary Opportunities I, LP	2005	\$ 20,000,000	\$ 18,500,843	\$ 20,184,534	\$ 4,635,309	7.15%	1.34
NB Secondary Opportunities II, LP	2008	\$ 20,000,000	\$ 16,771,571	\$ 18,771,688	\$ 7,454,073	16.05%	1.54
Partners Group Access 632, L.P.	2014	\$ 2,782,028	\$ 2,782,028	\$ -	\$ 3,759,939	15.47%	1.34
Partners Group Access 648, L.P.	2014	\$ 4,398,630	\$ 4,028,602	\$ 19,449	\$ 3,511,725	-8.12%	0.88
Partners Group Access 680 L.P.	2015	\$ 7,272,991	\$ 7,272,991	\$ -	\$ 7,371,382	1.35%	1.01
Partners Group Client Access 8 LP	2014	\$ 5,531,585	\$ 5,531,585	\$ -	\$ 12,475,630	45.93%	2.25
Partners Group Direct Investment 2012, L.P.	2013	\$ 18,174,946	\$ 15,611,428	\$ 2,365,041	\$ 16,959,906	14.05%	1.24
Partners Group European Mandate, L.P.	2004	\$ 238,096,312	\$ 196,136,552	\$ 193,021,600	\$ 68,160,332	5.72%	1.33
Partners Group European Mezzanine 2005	2005	\$ 101,076,654	\$ 101,076,654	\$ 99,216,326	\$ 31,127,832	4.19%	1.29
Partners Group Princess Learning IC LTD	2014	\$ 5,070,667	\$ 3,504,697	\$ 1,550,144	\$ 1,854,547	-2.94%	0.97
Partners Group Seabras Holdings, LLC	2015	\$ 4,800,000	\$ 2,053,156	\$ -	\$ 2,053,156	0.00%	1.00
Partners Group Secondary 2006 LP	2006	\$ 54,465,540	\$ 51,077,528	\$ 47,312,702	\$ 13,687,878	3.90%	1.20
Partners Group Secondary 2008, L.P.	2009	\$ 26,646,468	\$ 23,690,725	\$ 21,350,497	\$ 13,393,564	9.67%	1.46
Partners Group Starfrost Limited	2014	\$ 6,278,000	\$ 3,687,483	\$ -	\$ 4,372,117	7.95%	1.19
Pathway Private Equity Fund VII, L.P.*	2004	\$ 904,500,000	\$ 756,341,406	\$ 643,645,348	\$ 541,035,165	9.84%	1.53
Siguler Guff DOF II	2006	\$ 30,000,000	\$ 30,000,000	\$ 39,596,842	\$ 3,281,443	8.94%	1.43
Siguler Guff DOF III	2008	\$ 10,000,000	\$ 9,700,000	\$ 10,882,712	\$ 3,981,938	10.76%	1.53
SI Capital SOF I LP	2014	\$ 25,000,000	\$ 13,238,495	\$ 905,762	\$ 14,536,173	13.07%	1.17
TCW/Crescent Mezzanine IV, L.P.	2006	\$ 40,000,000	\$ 39,590,976	\$ 43,109,680	\$ 1,543,446	2.88%	1.13
TCW/Crescent Mezzanine V, L.P.	2008	\$ 20,000,000	\$ 19,949,723	\$ 21,430,373	\$ 4,863,369	9.73%	1.32
Tennenbaum Opportunities Fund V, L.P.	2007	\$ 10,000,000	\$ 10,000,000	\$ 7,618,243	\$ 5,684,119	4.90%	1.33
Tennenbaum Opportunities Fund VI, L.P.	2011	\$ 20,000,000	\$ 18,237,736	\$ 6,831,996	\$ 16,678,258	8.72%	1.29
Tennenbaum Special Situations Fund IX	2015	\$ 50,000,000	\$ 13,540,097	\$ -	\$ 11,929,882	-19.78%	0.88
Tennenbaum Waterman Fund, LP	2012	\$ 70,000,000	\$ 70,000,000	\$ 14,807,234	\$ 69,464,558	8.86%	1.20
The Resolute Fund III	2014	\$ 8,000,000	\$ 2,325,554	\$ 110,929	\$ 2,583,922	12.79%	1.16
Thoma Bravo XI	2014	\$ 8,000,000	\$ 6,957,468	\$ -	\$ 7,269,263	5.07%	1.04
Total: San Bernardino		\$ 2,460,809,716	\$ 2,051,236,221	\$ 1,742,755,447	\$ 1,163,637,563	8.17%	1.40

Note: all metrics are calculated since inception

* Denotes cash adjusted



NEPC, LLC

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San Bernardino County Employees' Retirement Association
 Real Estate Performance Ending March 31, 2016

Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Cumulative Distributions	Valuation	IRR	TVPI Ratio
American Realty Advisors	1996	\$ 128,009,773	\$ 128,009,773	\$ 98,993,126	\$ 190,519,863	7.65%	2.26
American Realty Value Add	2006	\$ 13,125,215	\$ 13,125,215	\$ 32,065,484	\$ (149,894)	10.81%	2.43
Beacon Capital Strategic Partners IV, L.P.	2006	\$ 39,000,000	\$ 38,000,000	\$ 26,763,990	\$ 4,630,492	-3.33%	0.83
Beacon Capital Strategic Partners V, L.P.	2007	\$ 20,000,000	\$ 18,000,000	\$ 7,924,215	\$ 3,562,268	-7.57%	0.64
BlackRock Diamond Property Fund	2005	\$ 25,000,000	\$ 25,000,000	\$ 14,180,505	\$ 889,178	-9.78%	0.60
Bryanston Real Estate Opportunity Fund II, L.P.	2009	\$ 20,000,000	\$ 8,589,256	\$ 9,103,079	\$ 2,436,030	10.02%	1.34
Bryanston Retail Opportunity Fund, L.P.	2004	\$ 20,000,000	\$ 8,228,165	\$ 18,492,031	\$ 9,503,219	71.27%	3.40
CBRE Strategic Partners III	2003	\$ 10,000,000	\$ 10,000,000	\$ 12,698,783	\$ -	8.02%	1.27
CBRE Strategic Partners IV	2005	\$ 40,000,000	\$ 40,000,000	\$ 1,532,153	\$ 2,285,779	-25.06%	0.10
Fillmore East Fund	2006	\$ 25,000,000	\$ 31,403,818	\$ 20,777,177	\$ -	-9.78%	0.66
Fillmore West Fund	2008	\$ 20,000,000	\$ 19,561,557	\$ 10,238,311	\$ 13,019,131	2.73%	1.19
Fortress Japan Opportunity Fund II	2012	\$ 21,739,130	\$ 10,104,613	\$ 1,663,104	\$ 20,381,108	24.44%	2.19
Invesco Asian Real Estate Partners II (USD), LP	2007	\$ 20,000,000	\$ 8,374,055	\$ 9,171,403	\$ 1,631,679	6.64%	1.29
Invesco High Yield Debt Fund I	2007	\$ 20,000,000	\$ 20,000,000	\$ 8,567,605	\$ -	-35.57%	0.43
Invesco Real Estate Asia Fund	2014	\$ 51,732,500	\$ 51,732,500	\$ -	\$ 58,769,692	7.52%	1.13
INVESCO Real Estate Fund I	2005	\$ 10,000,000	\$ 9,248,390	\$ 8,723,250	\$ 1,305,737	1.57%	1.08
LaSalle Income & Growth Fund IV	2005	\$ 20,000,000	\$ 19,469,417	\$ 13,482,024	\$ -	-5.51%	0.69
Morgan Stanley Real Estate Fund V International	2005	\$ 27,500,000	\$ 27,377,414	\$ 30,979,388	\$ 2,089,214	7.02%	1.21
Oaktree Real Estate Opportunities V	2012	\$ 25,000,000	\$ 25,000,000	\$ 21,850,000	\$ 16,337,964	14.11%	1.52
Partners Group RE Secondary 2013 (USD) A	2014	\$ 65,000,000	\$ 20,540,182	\$ 2,125,103	\$ 29,194,650	48.84%	1.51
Prologis Japan Fund	2005	\$ 25,290,819	\$ 25,290,819	\$ 33,126,118	\$ -	4.81%	1.31
Prudential PRISA II	2004	\$ 91,124,837	\$ 91,124,837	\$ 29,433,173	\$ 100,621,545	8.33%	1.37
Prudential PRISA III	2003	\$ 40,000,000	\$ 40,000,300	\$ 37,320,608	\$ 33,125,358	20.08%	1.65
RREEF America REIT III	2004	\$ 20,000,000	\$ 20,539,309	\$ 23,049,951	\$ 701,154	3.09%	1.16
Square Mile Partners II	2007	\$ 20,000,000	\$ 19,831,232	\$ 4,680,172	\$ 957,383	-18.20%	0.28
Square Mile Partners III LP	2008	\$ 20,000,000	\$ 21,506,020	\$ 26,411,030	\$ 4,717,559	12.52%	1.45
Starwood Capital Hospitality Fund I-2	2006	\$ 30,000,000	\$ 30,000,000	\$ 18,084,672	\$ 12,821,704	0.44%	1.03
Starwood Debt Fund II, LP	2008	\$ 20,000,000	\$ 17,599,882	\$ 21,669,663	\$ 251,475	6.48%	1.25
Starwood Opportunity Fund VII - A	2006	\$ 25,000,000	\$ 25,000,000	\$ 11,011,048	\$ 10,049,567	-2.05%	0.84
Structured Real Estate III, LP (Guggenheim)	2008	\$ 20,000,000	\$ 20,000,000	\$ 16,320,664	\$ -	-4.99%	0.82
Tri Continental Capital VII	2005	\$ 23,000,000	\$ 22,343,057	\$ 1,186,286	\$ 1,972,507	-20.36%	0.14
Tuckerman Multi-Family Development Fund III	2002	\$ 10,000,000	\$ 10,219,311	\$ 16,939,699	\$ -	26.67%	1.66
Walton Street Real Estate Fund IV, LP	2003	\$ 10,000,000	\$ 9,770,890	\$ 15,024,332	\$ 1,050,206	10.90%	1.65
Walton Street Real Estate Fund V, LP	2006	\$ 40,000,000	\$ 40,000,000	\$ 14,352,676	\$ 17,911,460	-2.71%	0.81
Total: San Bernardino		\$ 1,015,522,274	\$ 924,990,012	\$ 617,940,825	\$ 540,586,028	3.96%	1.24

Note: all metrics are calculated since inception



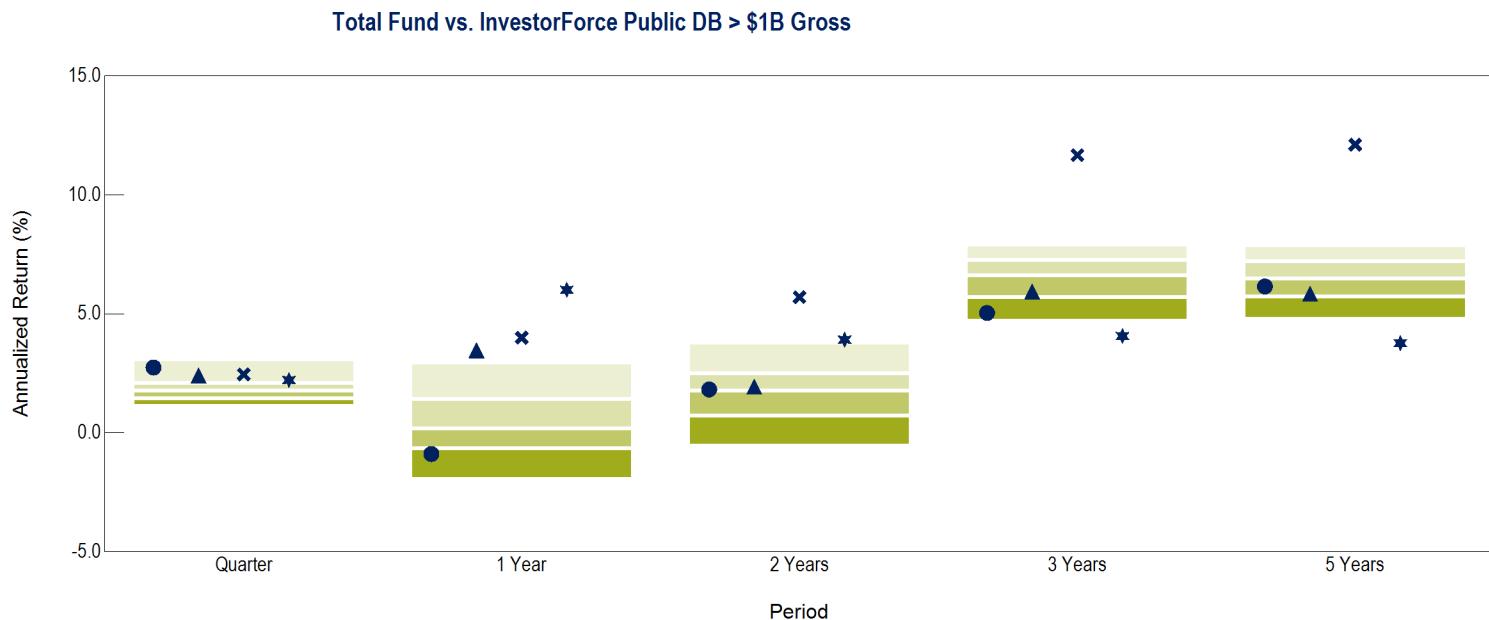
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Appendix: Market Environment

San Bernardino County Employees' Retirement Association

Total Fund Return Summary vs. Peer Universe



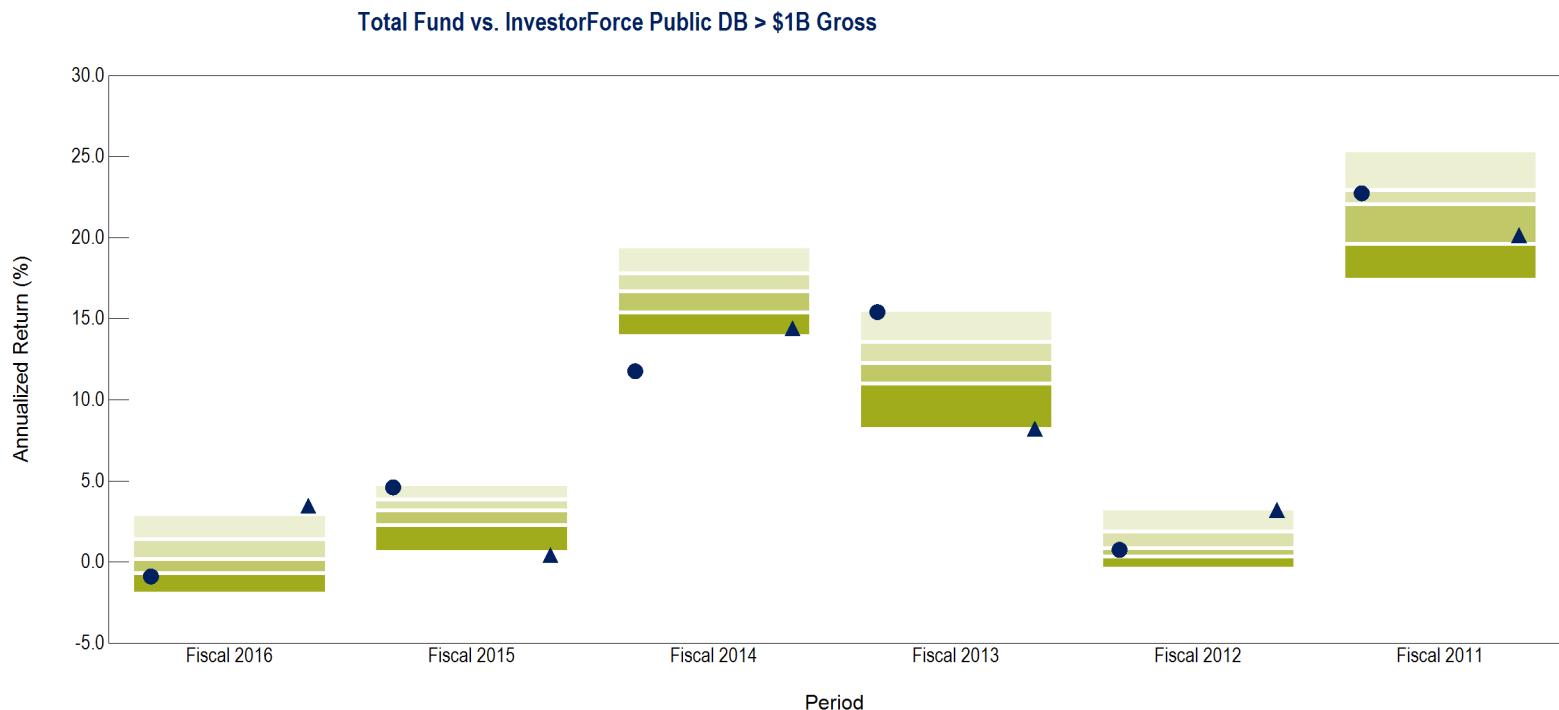
	Return (Rank)							
5th Percentile	3.1	2.9	3.8	7.9	7.9			
25th Percentile	2.1	1.4	2.5	7.3	7.2			
Median	1.8	0.2	1.8	6.6	6.5			
75th Percentile	1.5	-0.6	0.7	5.7	5.7			
95th Percentile	1.1	-1.9	-0.5	4.7	4.8			
# of Portfolios	68	64	56	54	53			
● Total Fund	2.7	(6)	-0.9	(80)	1.8	(49)	5.0	(92)
▲ Policy Index	2.4	(11)	3.5	(3)	1.9	(45)	5.9	(69)
✖ S&P 500	2.5	(10)	4.0	(2)	5.7	(1)	11.7	(1)
* Barclays Aggregate	2.2	(18)	6.0	(1)	3.9	(3)	4.1	(98)
◆ 60% MSCI World (Gross) / 40% CITI WGBI	--	(-)	--	(--)	--	(--)	--	(-)



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San Bernardino County Employees' Retirement Association
 Fiscal Year Ending 6/30 Total Fund Return Summary vs. Peer Universe



	Return (Rank)						
5th Percentile	2.9	4.8	19.4	15.5	3.3	25.4	
25th Percentile	1.4	3.9	17.8	13.6	1.9	22.9	
Median	0.2	3.2	16.7	12.3	0.9	22.1	
75th Percentile	-0.6	2.3	15.4	11.0	0.3	19.6	
95th Percentile	-1.9	0.6	13.9	8.2	-0.4	17.4	
# of Portfolios	64	92	65	78	70	67	
● Total Fund	-0.9	(80)	4.6	(7)	15.4	0.8	22.7
▲ Policy Index	3.5	(3)	0.4	(96)	8.2	(58)	20.2
					(7)	(6)	(32)
					(96)		(71)



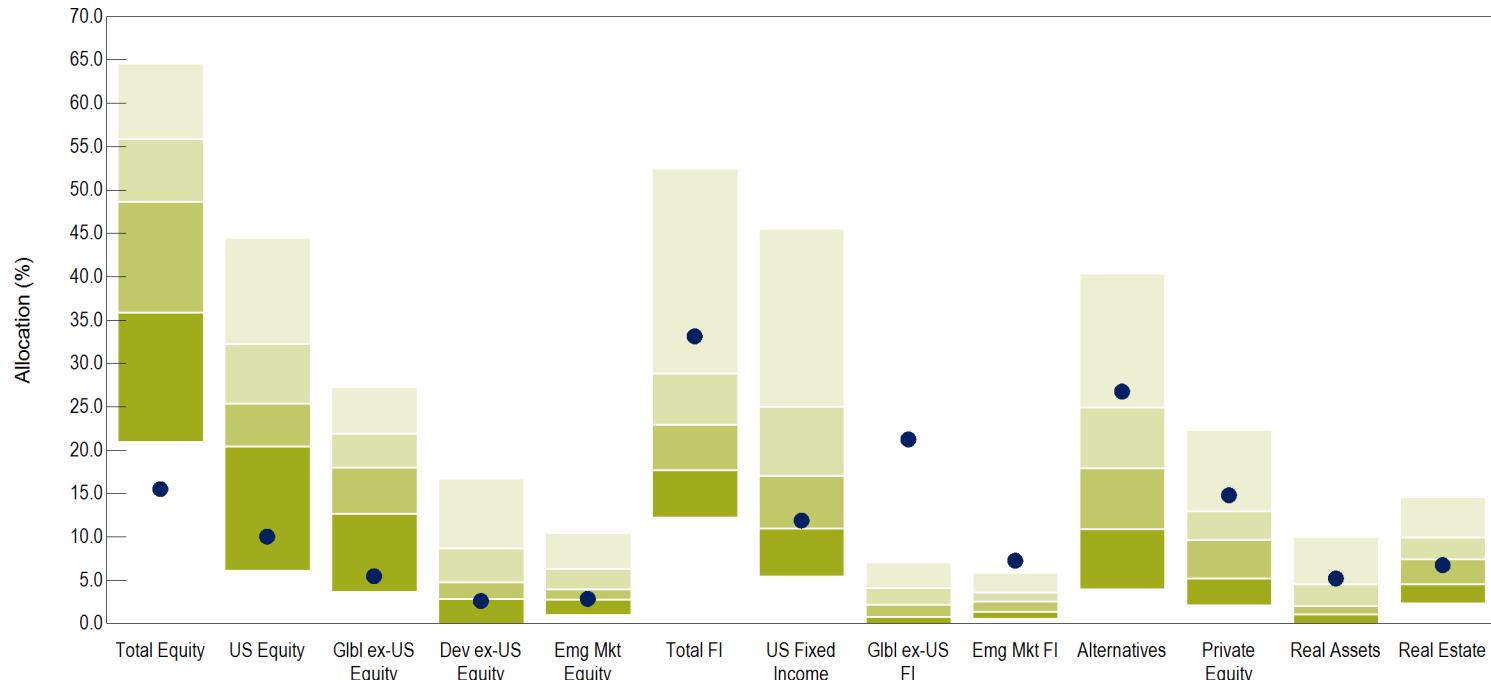
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San Bernardino County Employees' Retirement Association

Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. InvestorForce Public DB > \$1B Gross



Allocation (Rank)

5th Percentile	64.6	44.5	27.3	16.7	10.5	52.5	45.5	7.1	5.9	40.4	22.3	10.0	14.6	--
25th Percentile	56.0	32.3	22.0	8.8	6.4	28.9	25.1	4.1	3.6	25.0	13.1	4.6	10.0	--
Median	48.7	25.5	18.1	4.9	4.1	23.0	17.1	2.2	2.7	18.0	9.7	2.1	7.5	--
75th Percentile	36.0	20.5	12.7	2.9	2.8	17.7	11.0	0.8	1.4	11.0	5.3	1.2	4.6	--
95th Percentile	21.0	6.1	3.7	0.0	1.1	12.3	5.5	0.0	0.6	4.1	2.2	0.0	2.4	--
# of Portfolios	69	63	65	19	31	71	62	40	16	61	35	16	57	--
● Total Fund	15.5	(98)	10.0	(90)	5.5	(93)	2.6	(77)	2.9	(75)	33.1	(10)	11.9	(72)

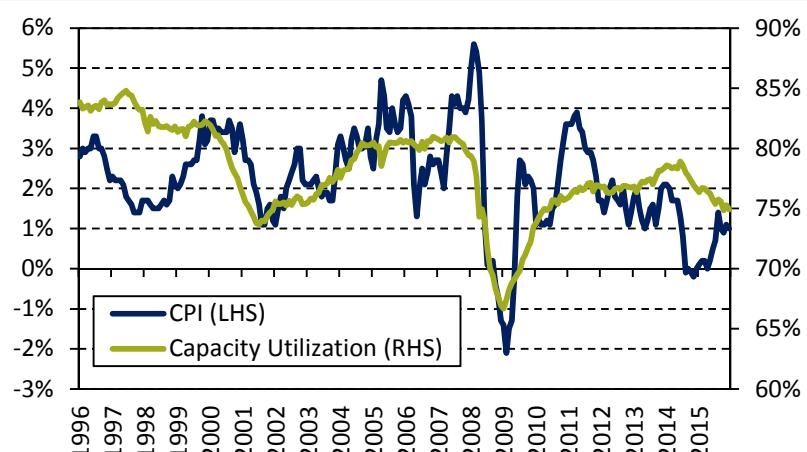


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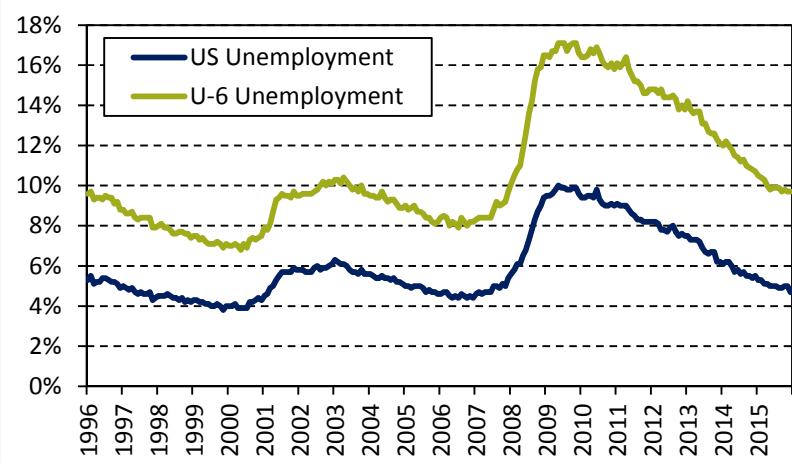
US Economic Indicators

Inflation has increased off lows



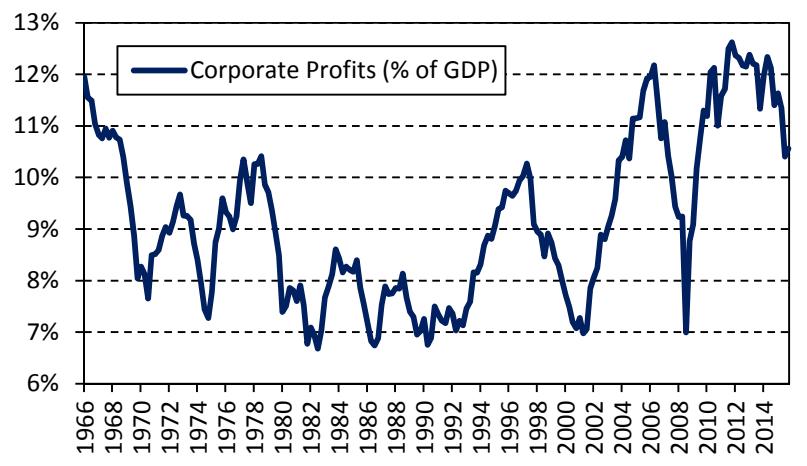
Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics

Unemployment steadily improving



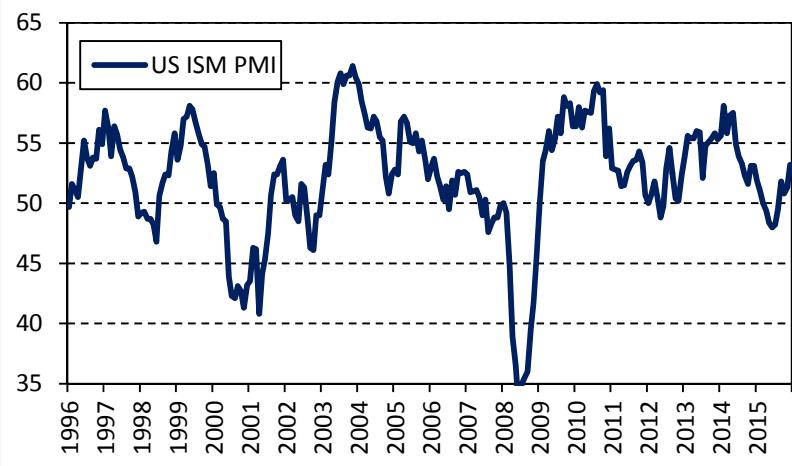
Source: Bloomberg, Bureau of Labor Statistics

Corporate profits lower off cyclical highs



Source: Bloomberg, Bureau of Economic Analysis

Manufacturing trending higher after dip



Source: Bloomberg, Institute for Supply Management

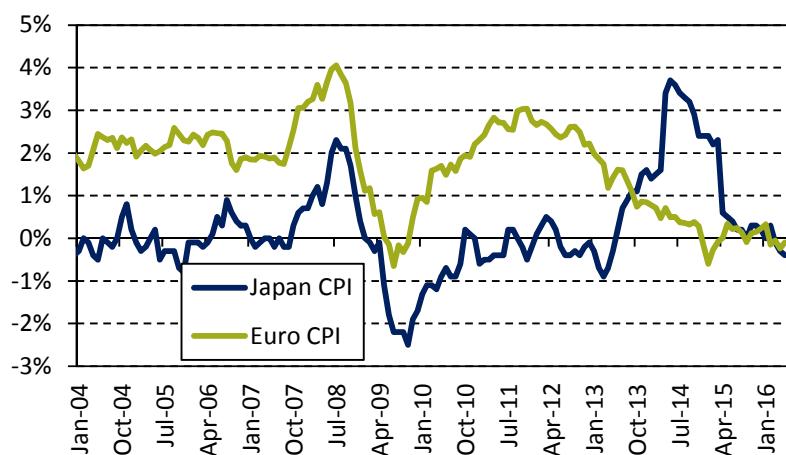


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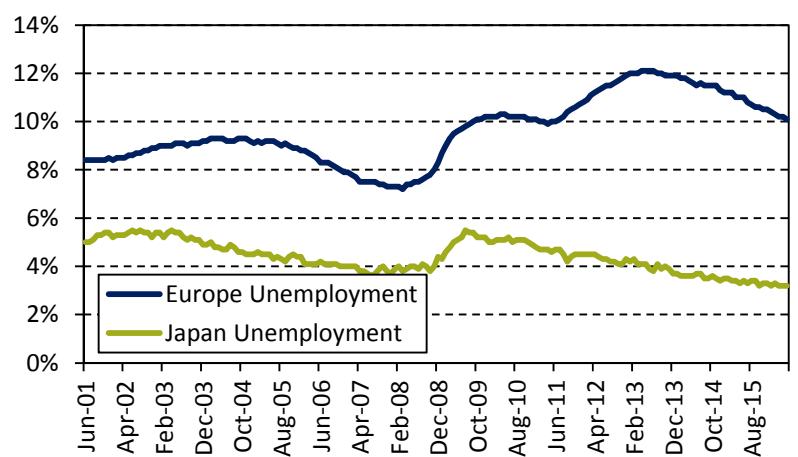
International Economic Indicators

Inflation remains muted



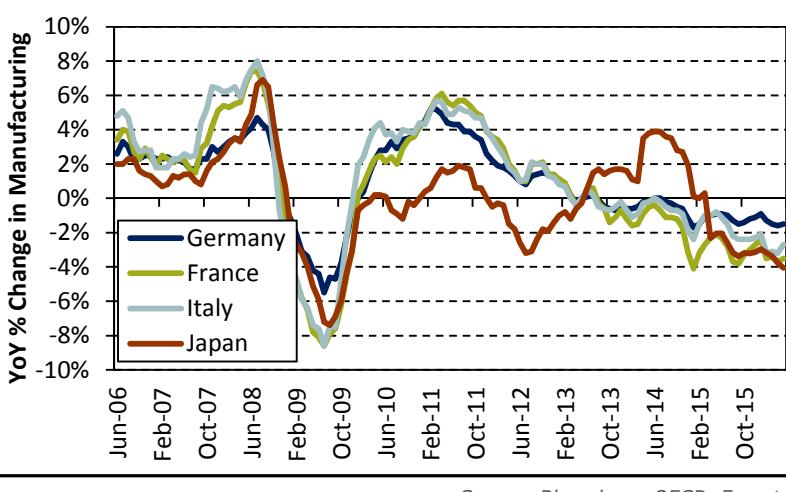
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Europe unemployment trending lower



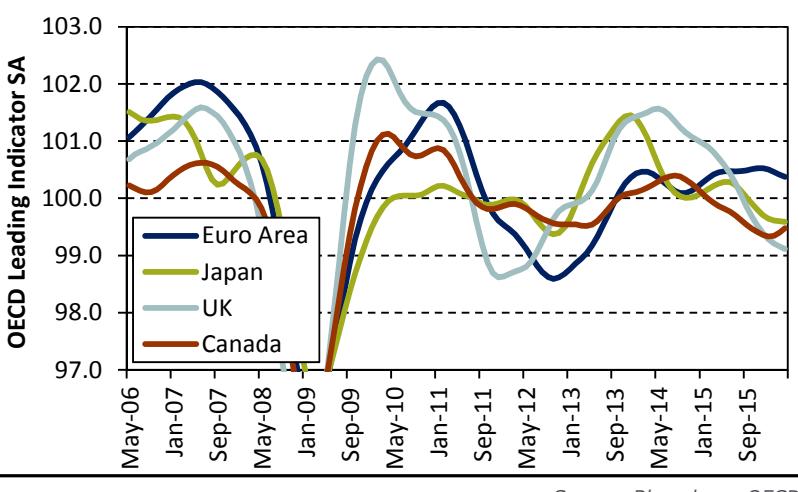
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Manufacturing continues to lag



Source: Bloomberg, OECD, Eurostat

Leading indicators mostly neutral



Source: Bloomberg, OECD

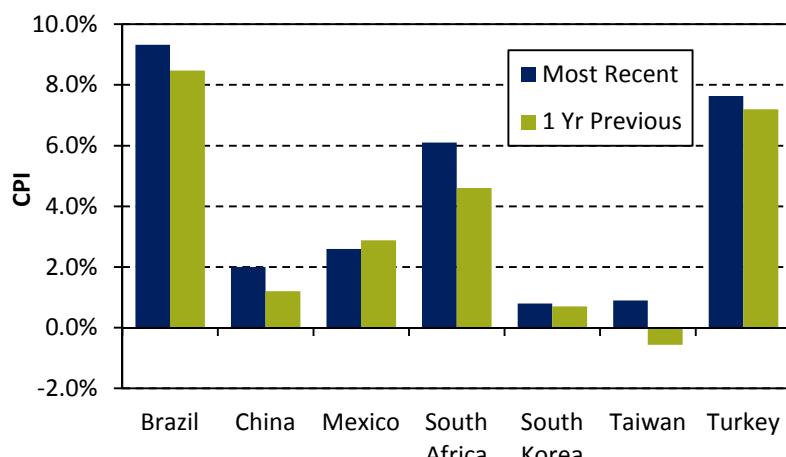


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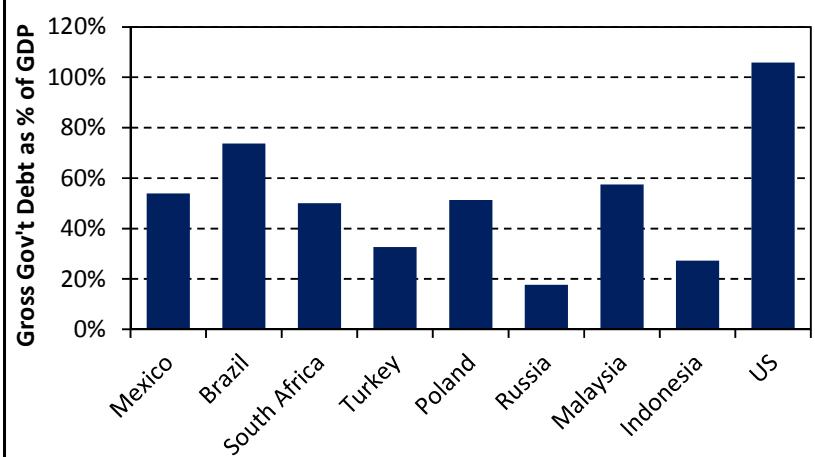
Emerging Market Economic Indicators

EM inflation is varied by country



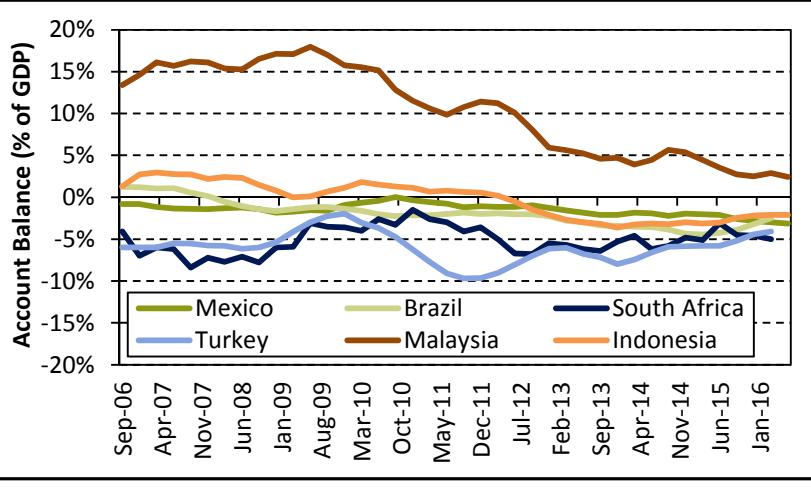
Source: Bloomberg

Relatively healthy Debt/GDP ratios



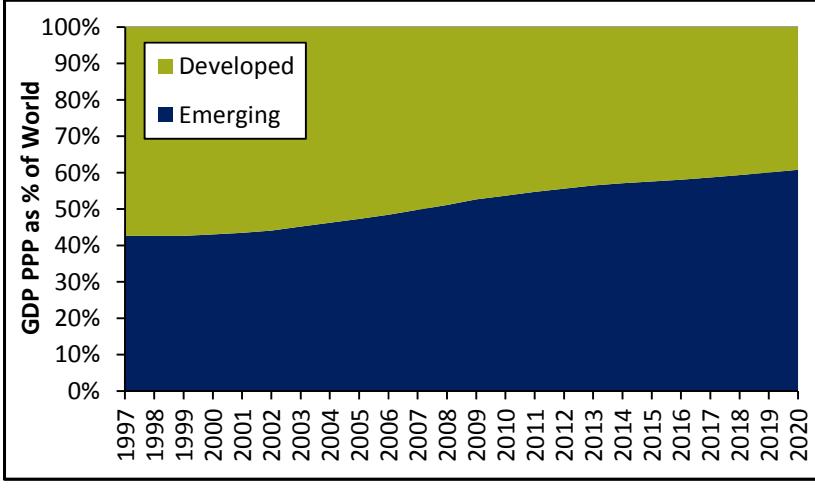
Source: Bloomberg, IMF

Marginal improvement in account balances



Source: Bloomberg

EM is greater than 50% of global output



Source: Bloomberg, IMF

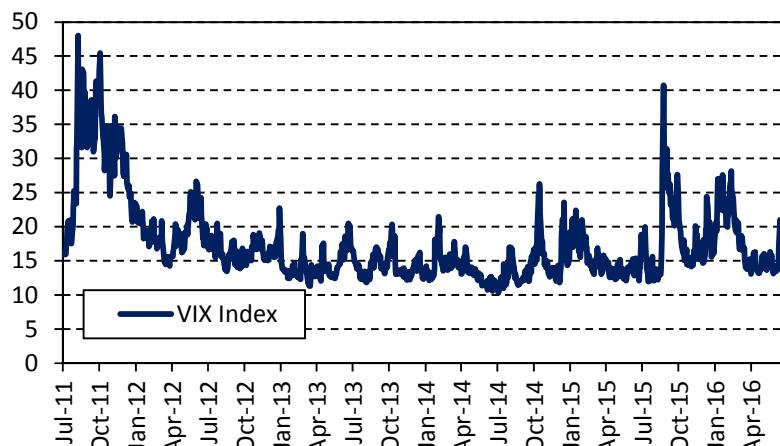


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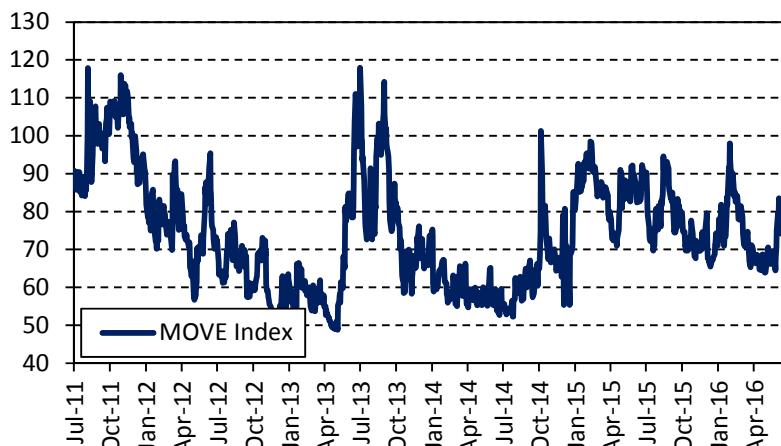
Volatility

Equity volatility seeing recent increase



Source: Bloomberg, CBOE

Treasury volatility has increased recently



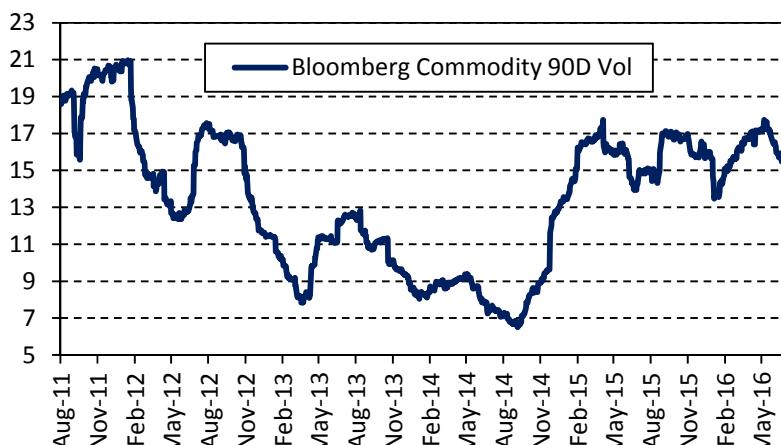
Source: Bloomberg, Merrill Lynch

Currency volatility remains elevated



Source: Bloomberg, Deutsche Bank

Commodity volatility remains elevated



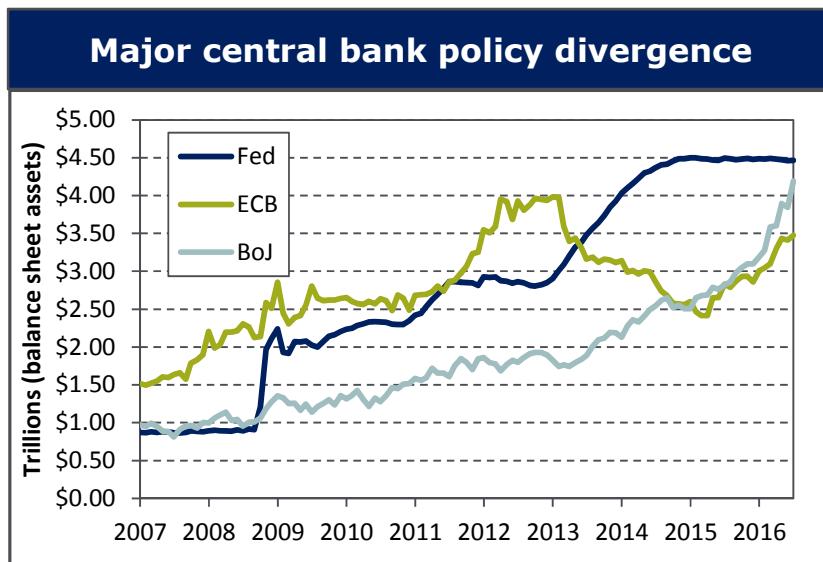
Source: Bloomberg, Merrill Lynch



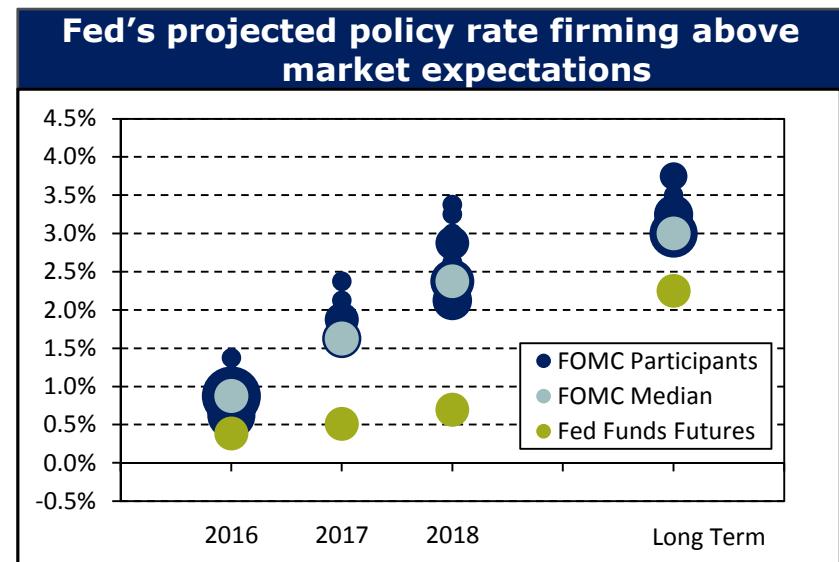
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June 30, 2016

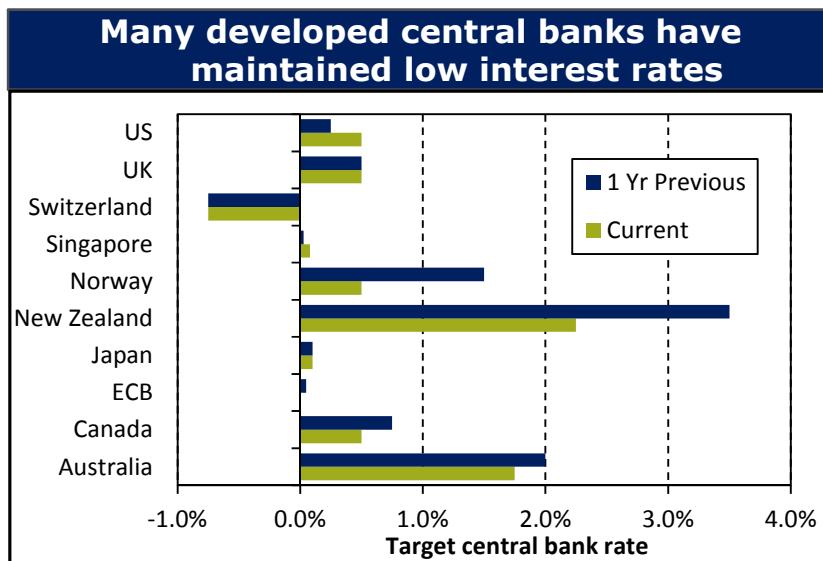
Central Banks



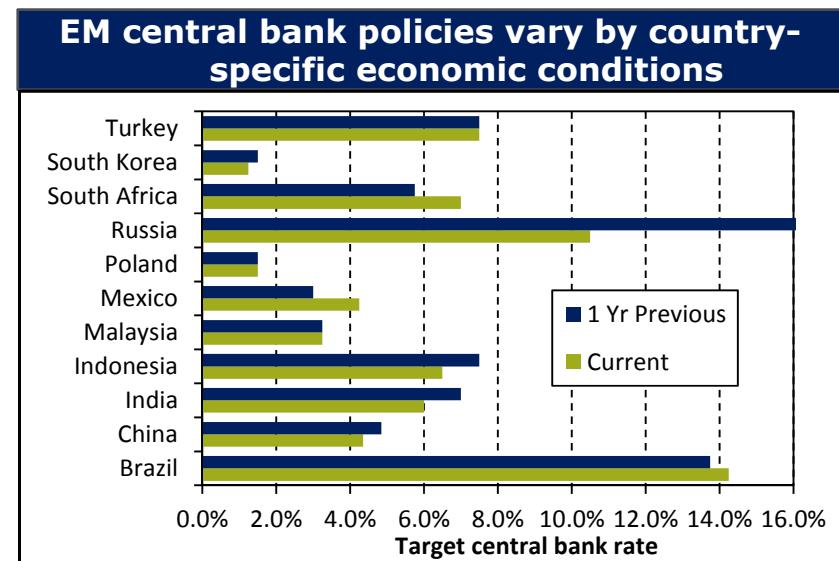
Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC



Source: Bloomberg, Federal Reserve, NEPC



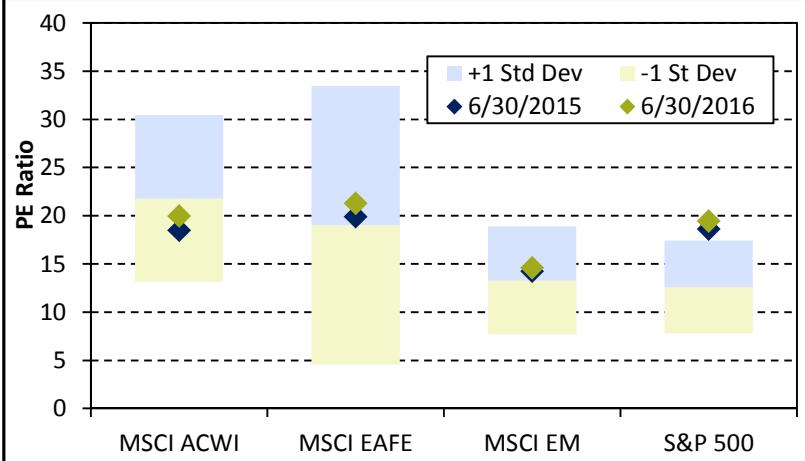
Source: Bloomberg



Source: Bloomberg

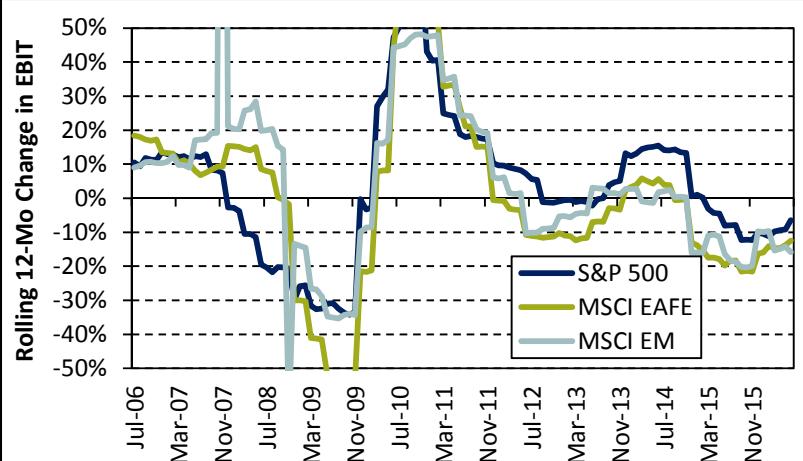
Global Equity

Global valuations are mixed



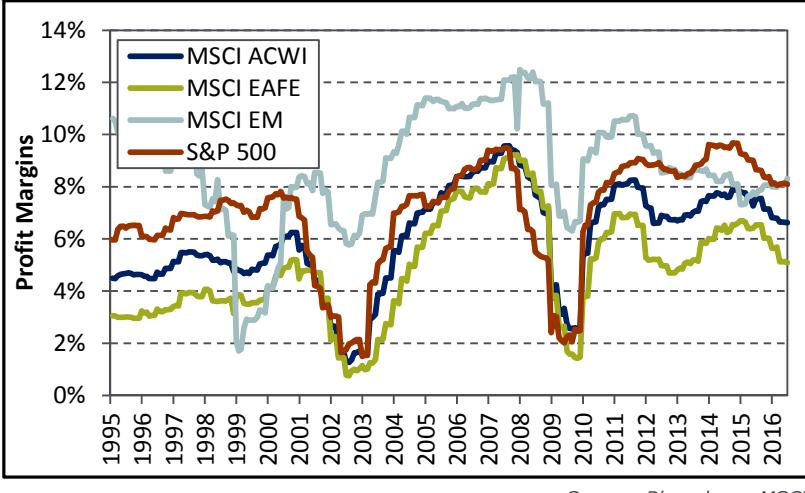
Source: Bloomberg, Standard and Poors, MSCI *MSCI EAFE is ex UK Telecom

Earnings growth has trended lower



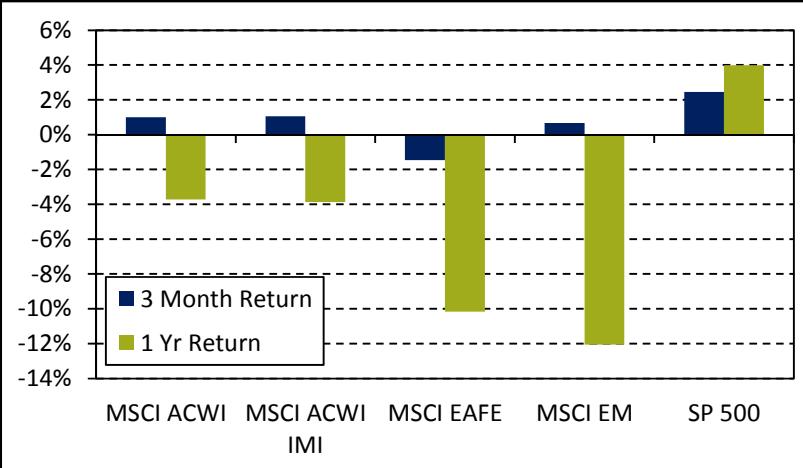
Source: Bloomberg, Standard and Poors, MSCI

Margins declining outside of EM



Source: Bloomberg, MSCI

Global equity returns have been mostly negative over one year



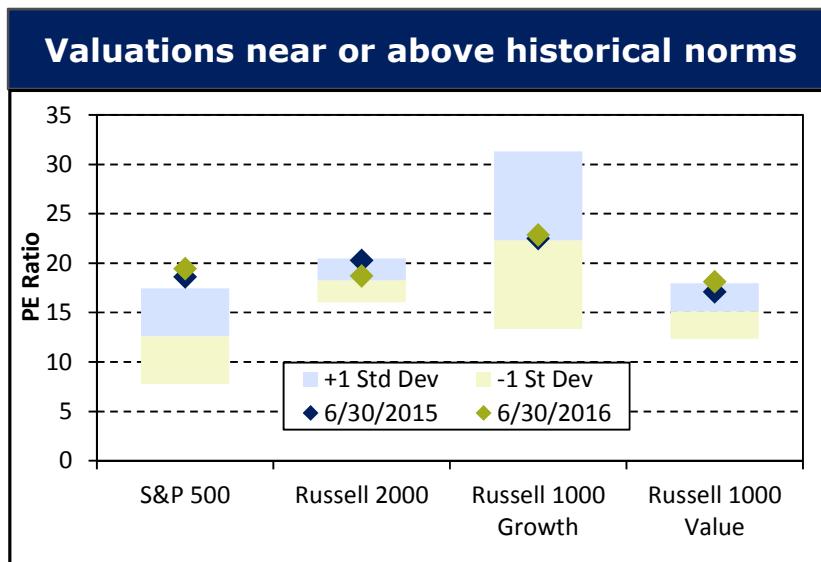
Source: Bloomberg, MSCI



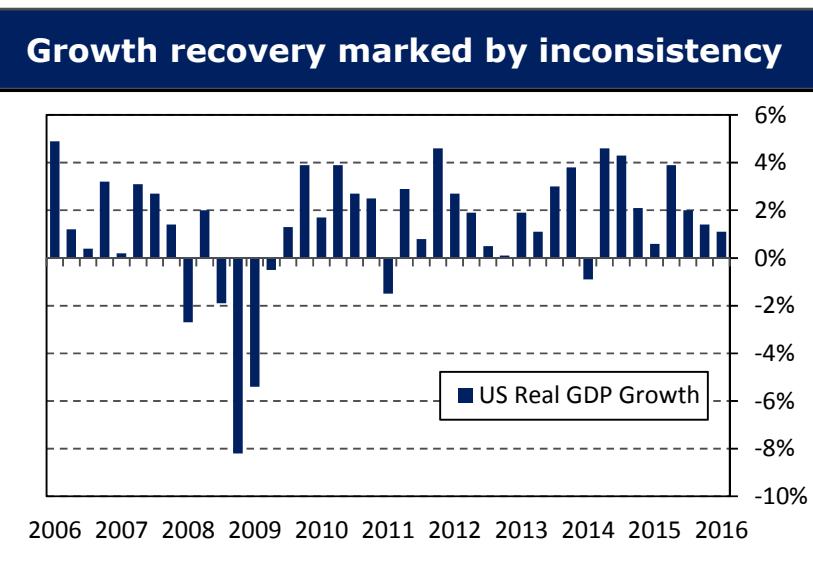
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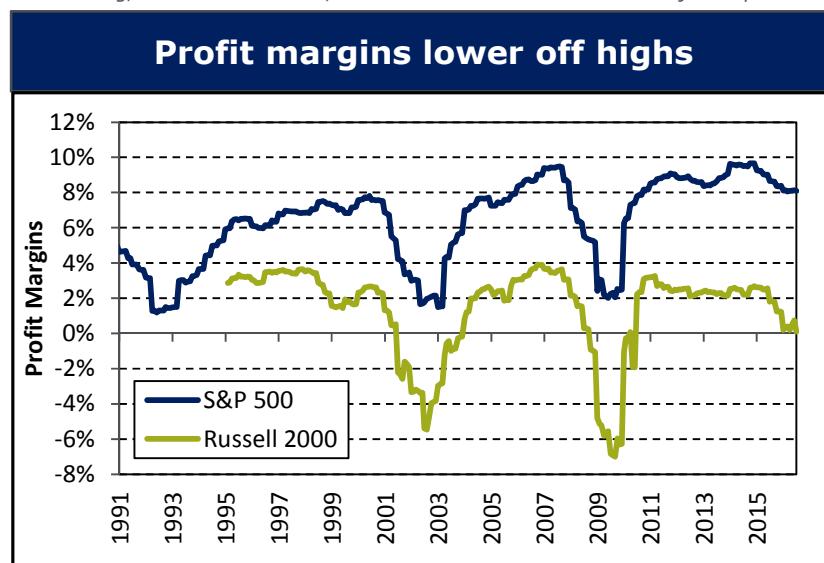
US Equity



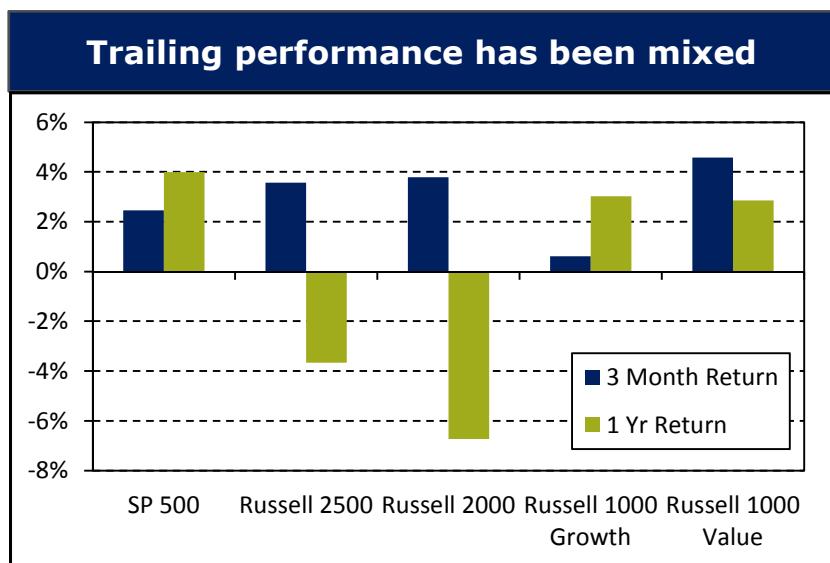
Source: Bloomberg, Standard and Poors, Russell *Russell 2000 PE is index adjusted positive



Source: Bloomberg, Bureau of Economic Analysis



Source: Bloomberg, Standard and Poors, Russell



Source: Bloomberg, Standard and Poors, Russell

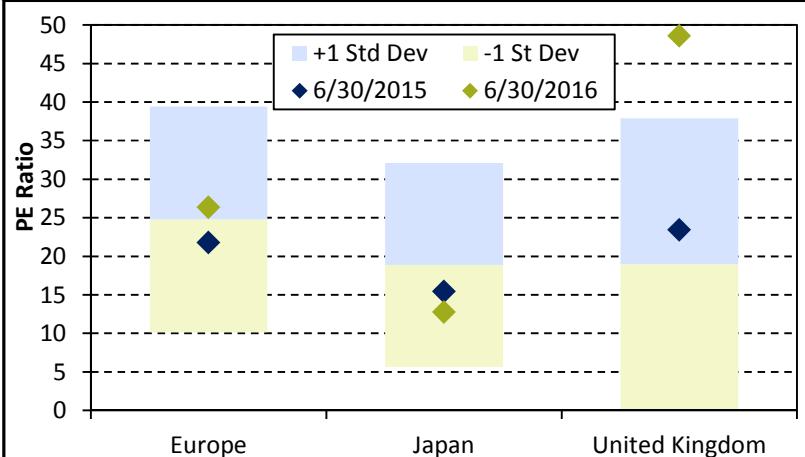


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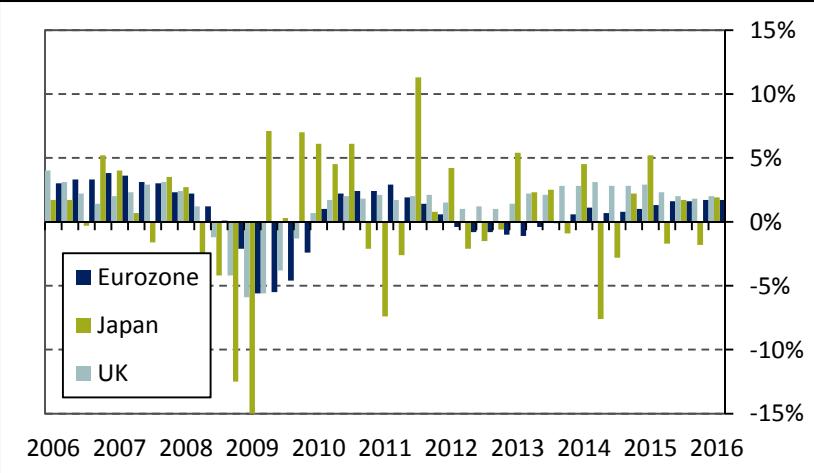
International Equity

PE levels varied by region/country



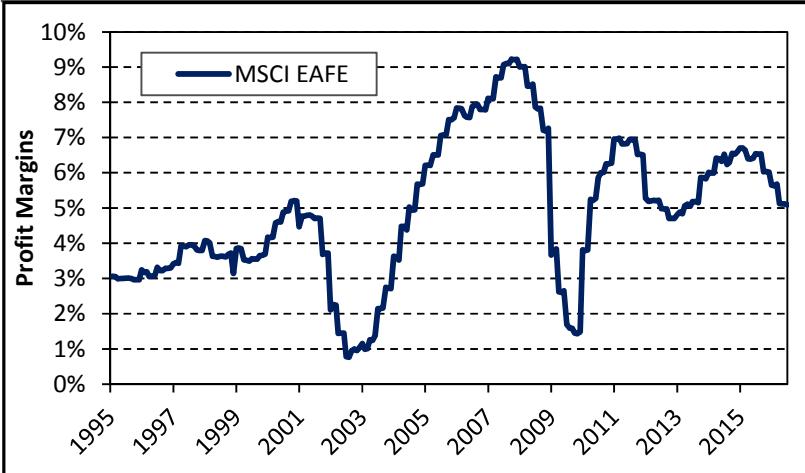
Source: Bloomberg, MSCI, FTSE *UK represented by FTSE 100 Index

Global growth remains subdued



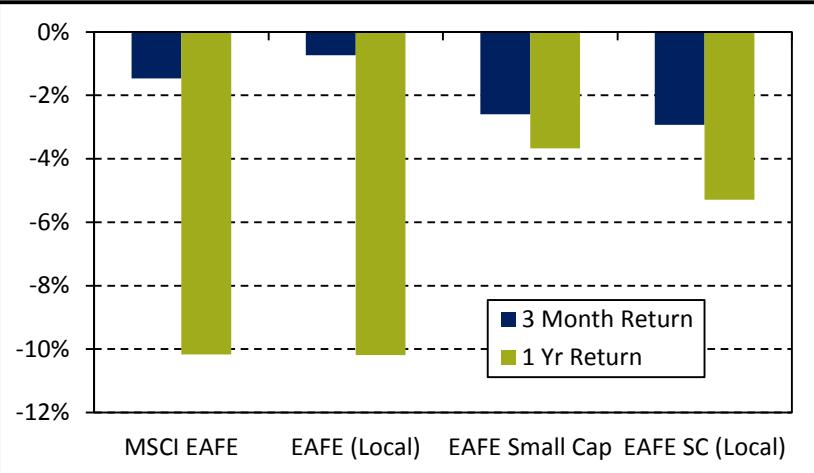
Source: Bloomberg

Margins recently declining



Source: Bloomberg, MSCI

Returns broadly negative



Source: Bloomberg, MSCI

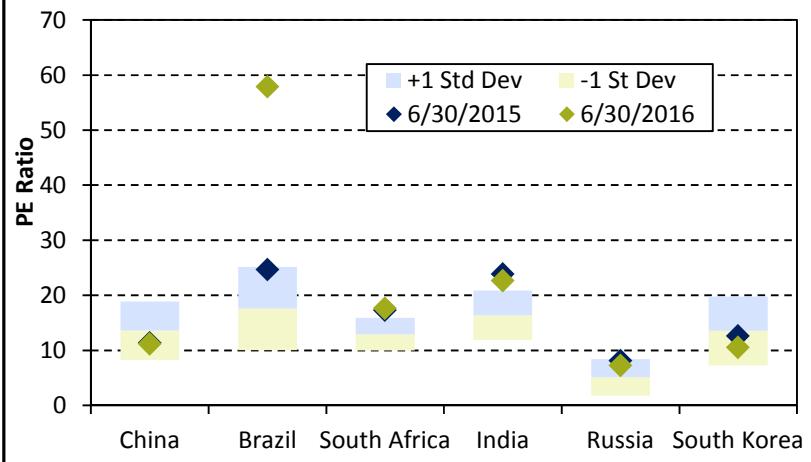


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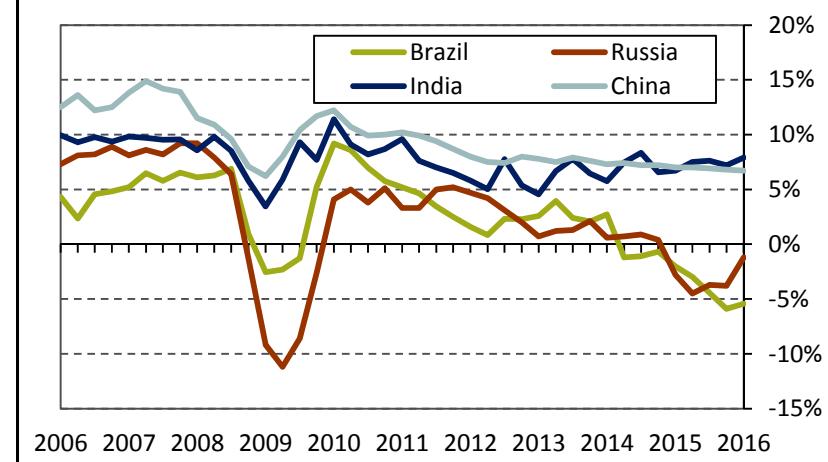
Emerging Markets Equity

Regional valuations show divergence



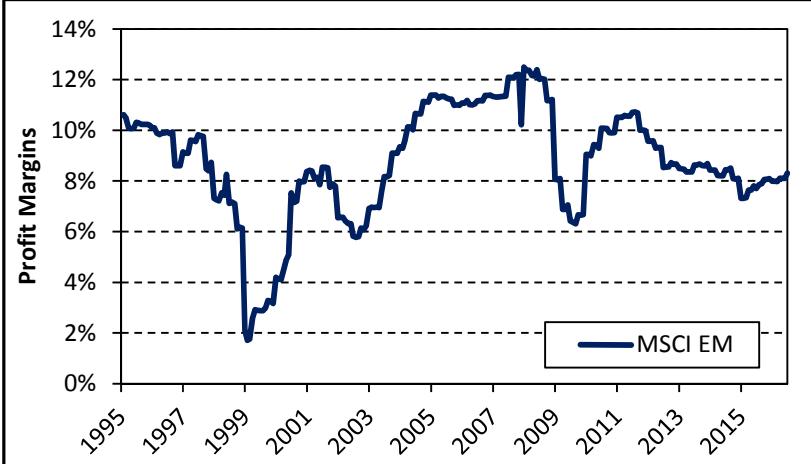
Source: Bloomberg, MSCI

Slowing growth in developed economies



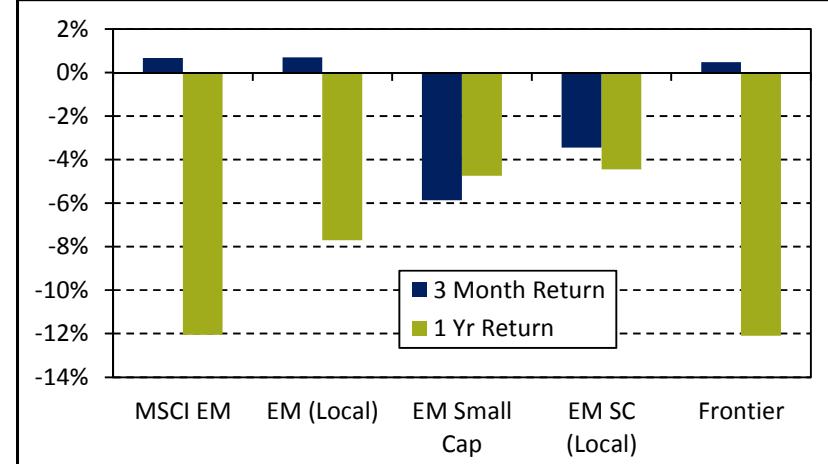
Source: Bloomberg

Profit margins in line with history



Source: Bloomberg, MSCI

Mixed short term returns with EM negative as of one year



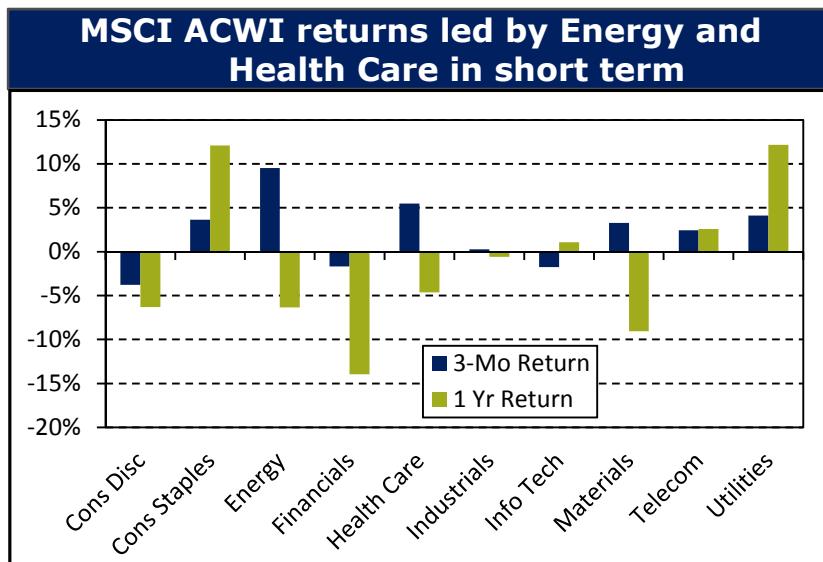
Source: Bloomberg, MSCI



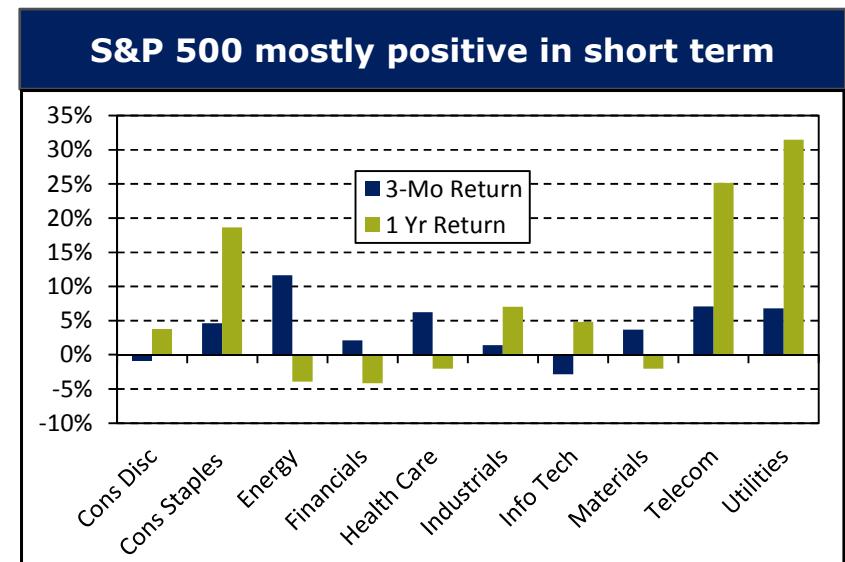
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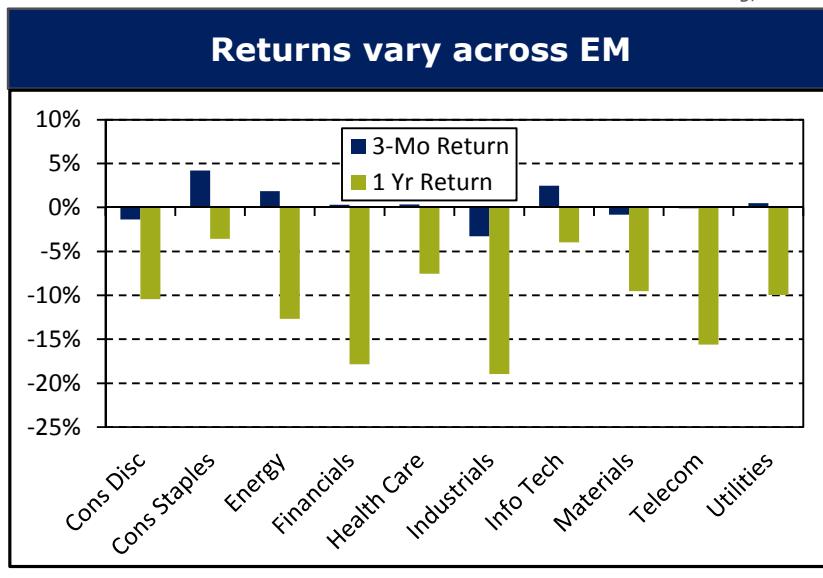
Global Equity by Sector



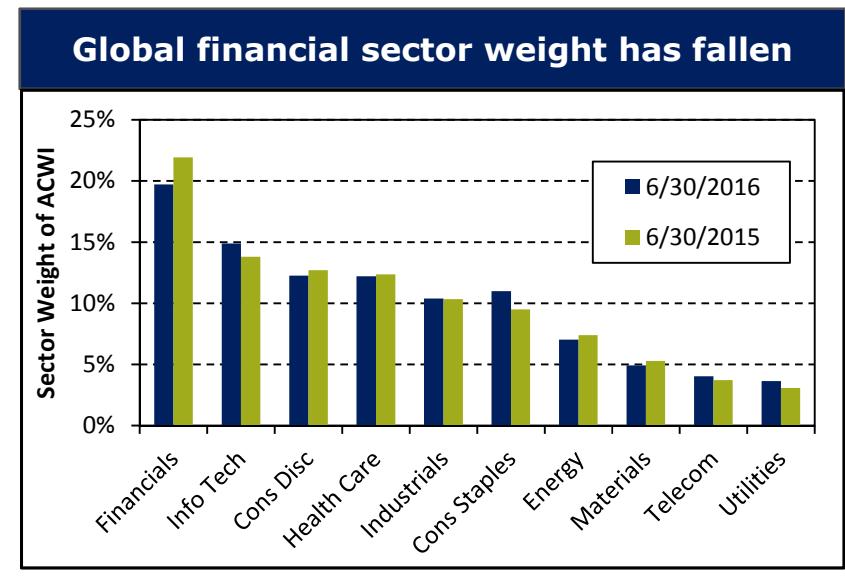
Source: Bloomberg, MSCI



Source: Bloomberg, Standard and Poors



Source: Bloomberg, MSCI



Source: Bloomberg, MSCI

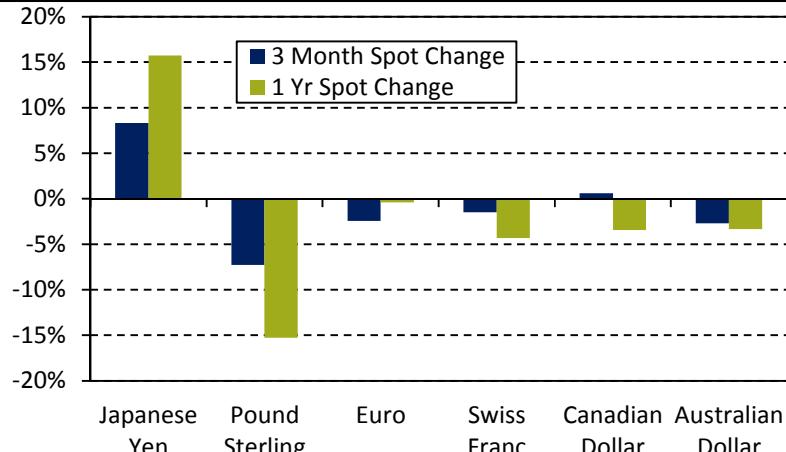


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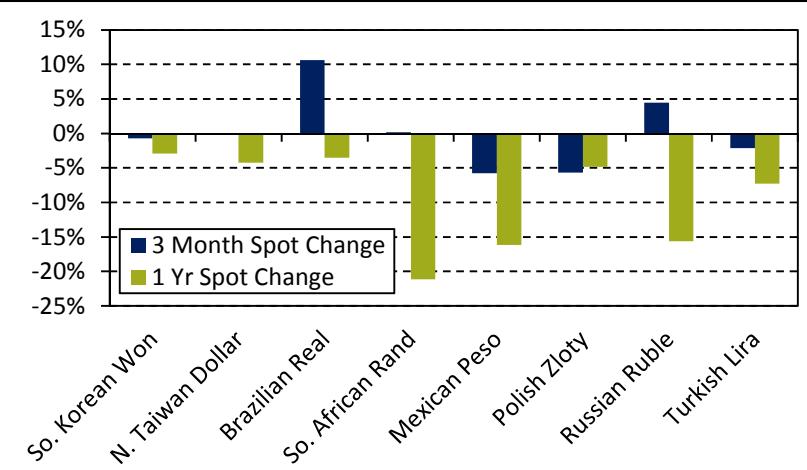
Currencies

Developed currencies declined versus the dollar with the exception of the Yen



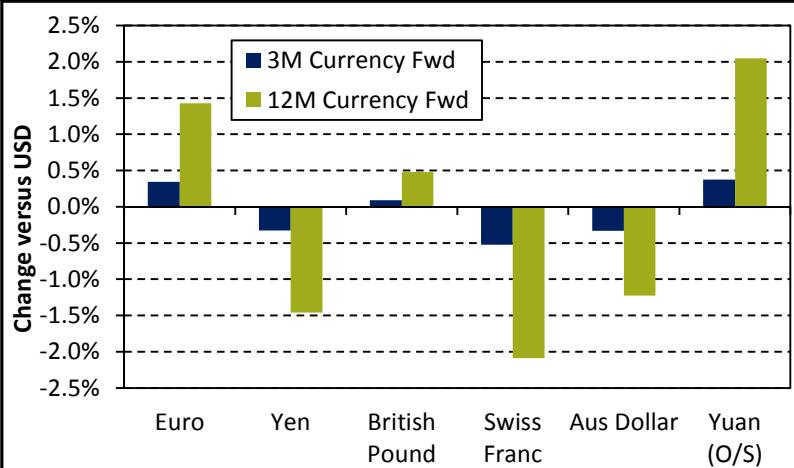
Source: Bloomberg

EM currencies declined over the year as the Real and Ruble posted short term gains



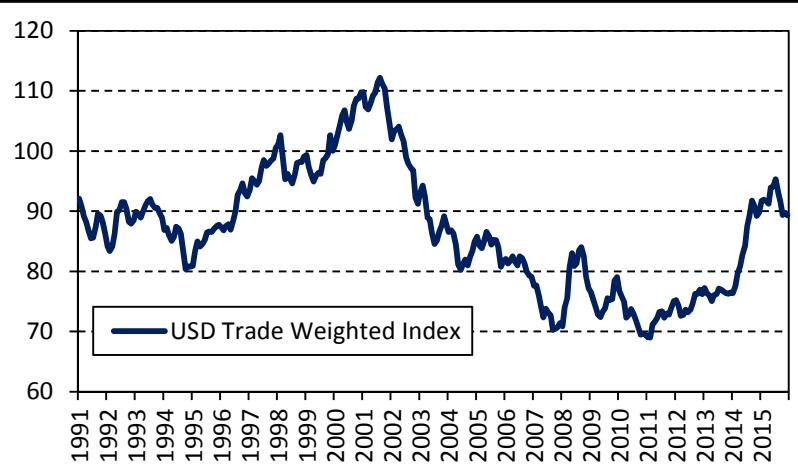
Source: Bloomberg

USD expectations vary across developed markets



Source: Bloomberg

Dollar strength has retreated slightly

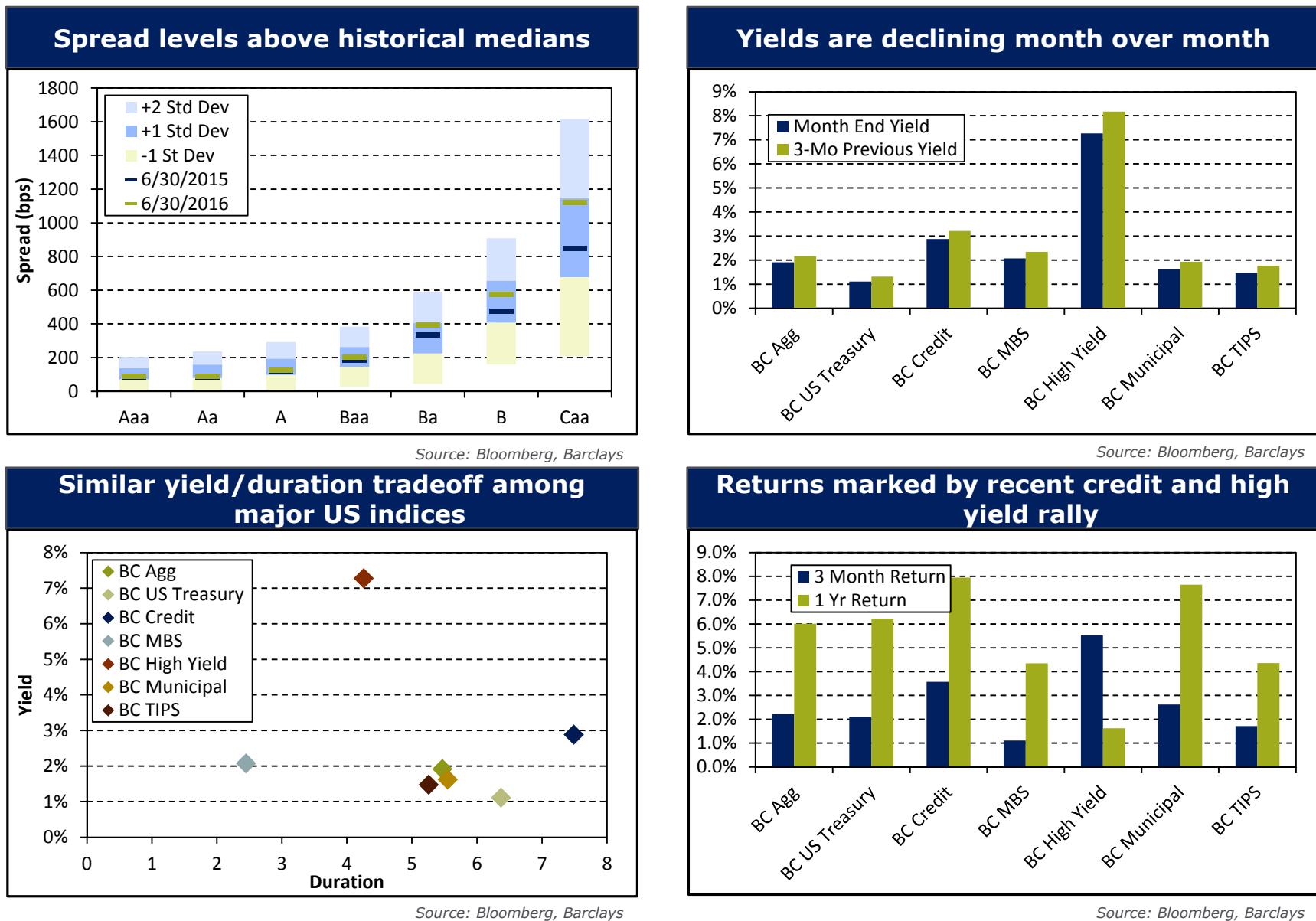


Source: Bloomberg, Federal Reserve



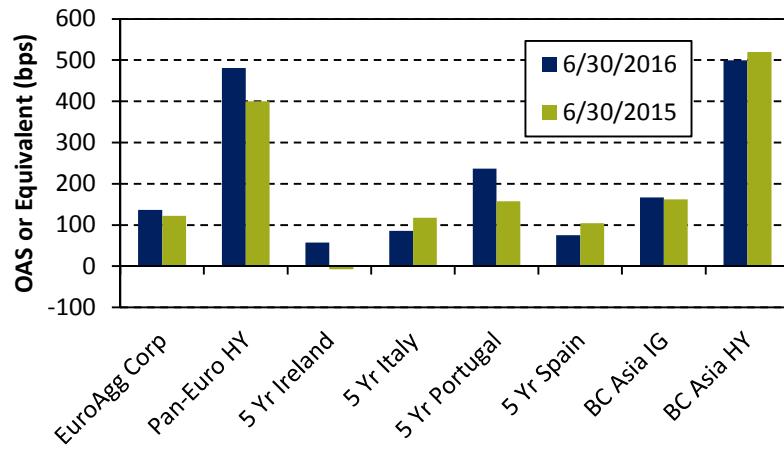
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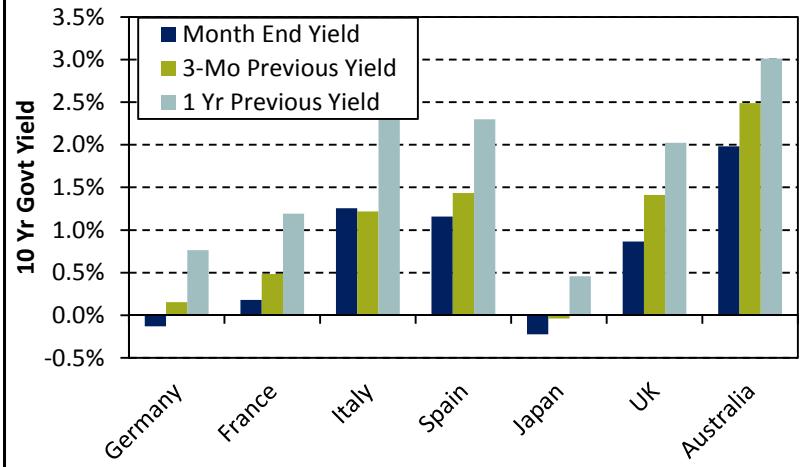


International Developed Fixed Income

European periphery yields at small premium relative to Germany

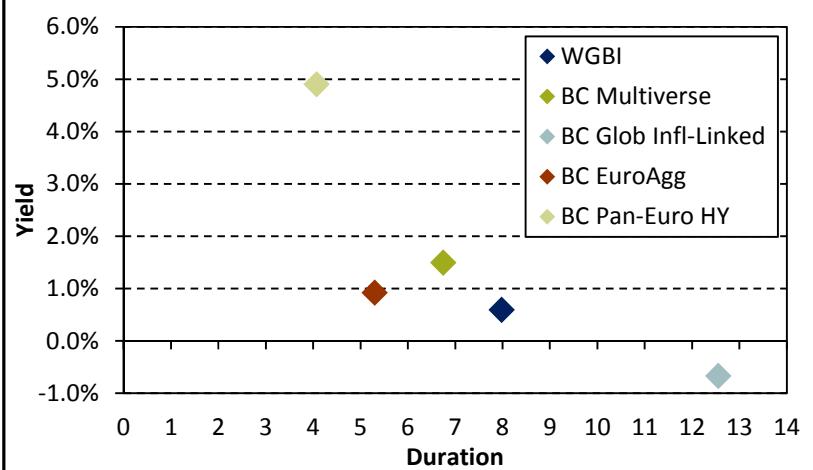


Global yields are at or near historic lows



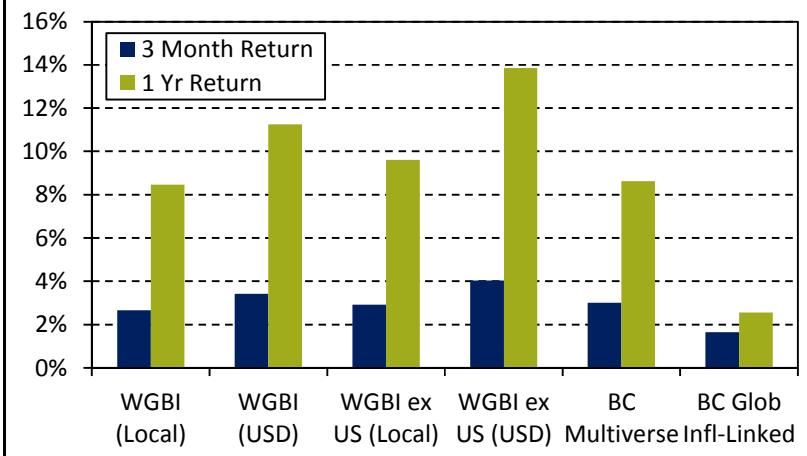
Source: Barclays, Bloomberg, *European periphery spreads are over equivalent German Bund

Low global yields relative to duration



Source: Bloomberg, Citigroup, Barclays

Global bond returns have been positive



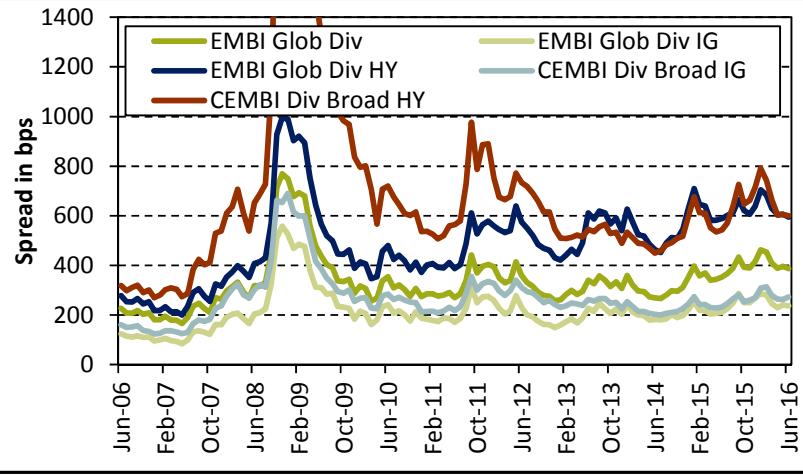
Source: Bloomberg, Citigroup, Barclays



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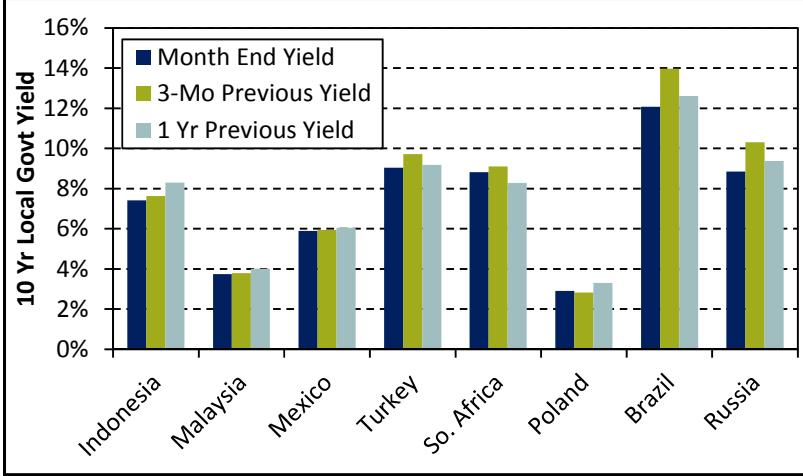
June 30, 2016

Spreads have declined slightly



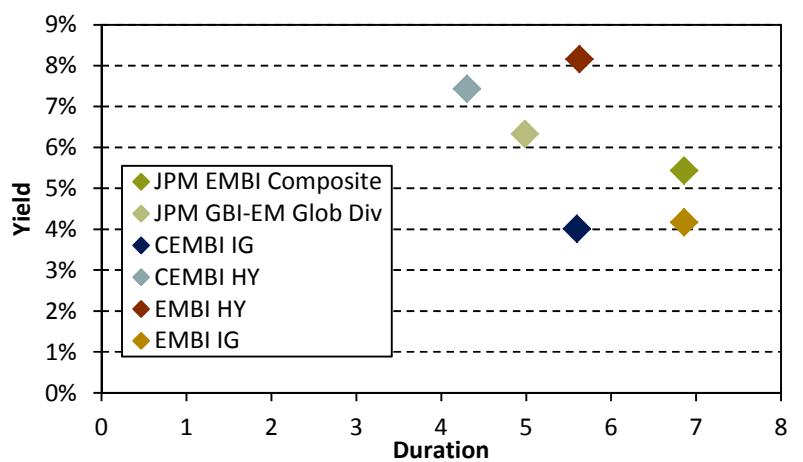
Source: Bloomberg, JP Morgan

EM bond yields nearly unchanged



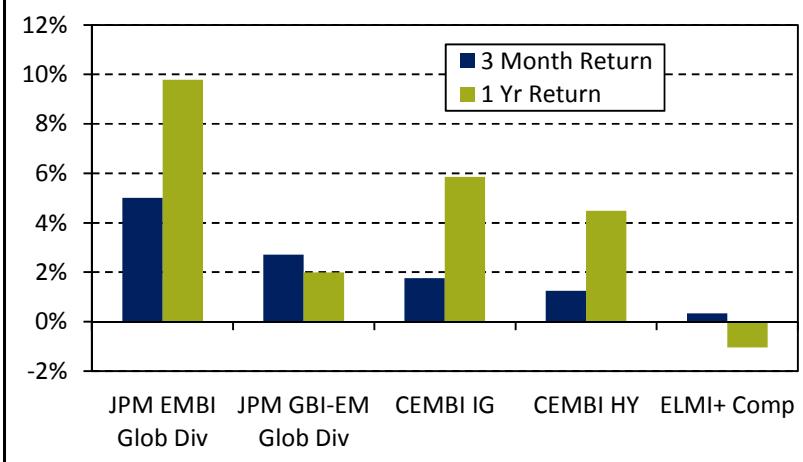
Source: Bloomberg

EM yields higher versus global counterparts



Source: Bloomberg, JP Morgan

Currency effect pronounced in EMD returns



Source: Bloomberg, JP Morgan

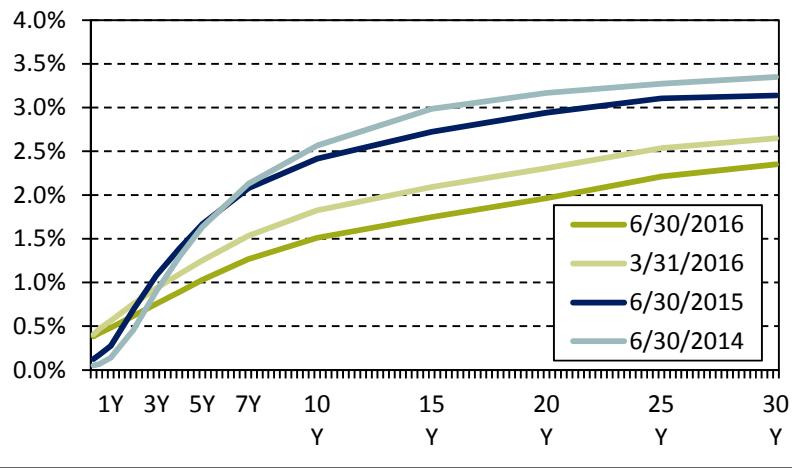


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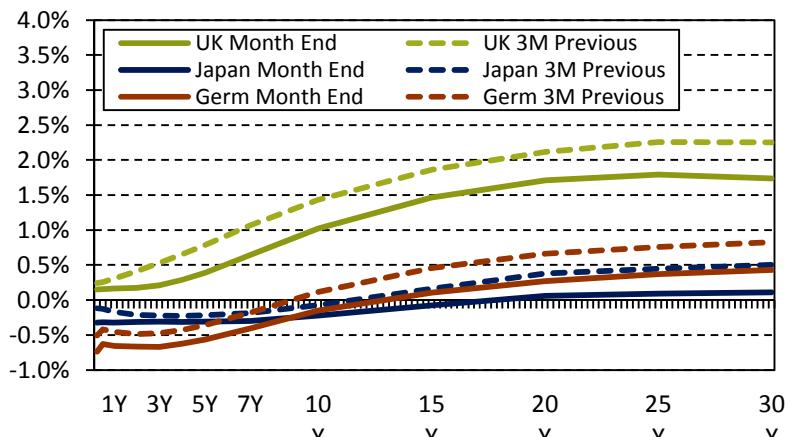
Rates

Treasury yield curve declined with market uncertainty



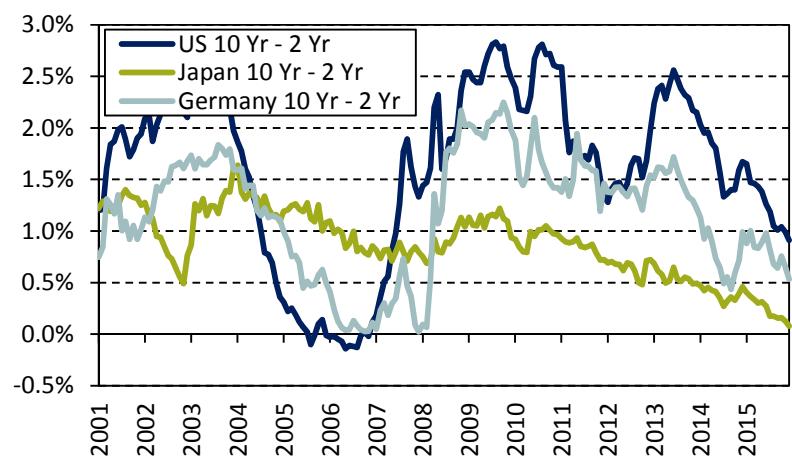
Source: Bloomberg

Lower yields across the board



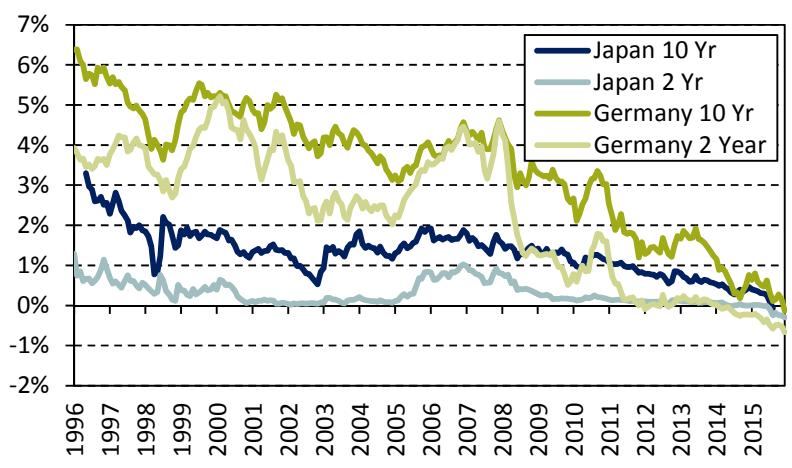
Source: Bloomberg

Global yields nearing lows



Source: Bloomberg

Global yields trending lower over long term



Source: Bloomberg

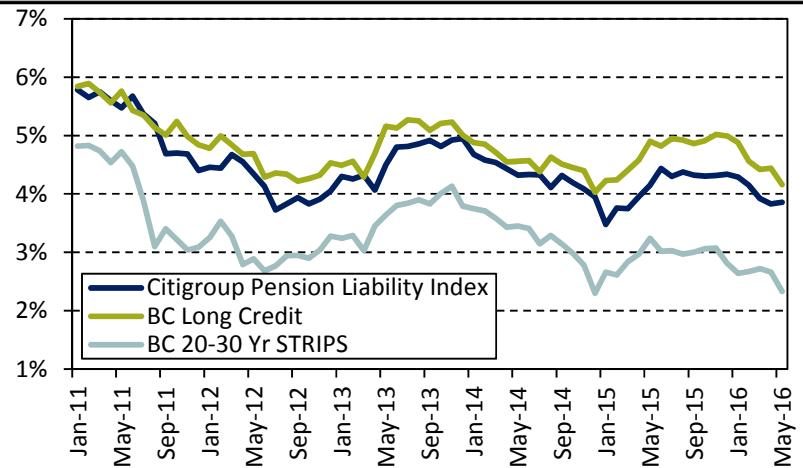


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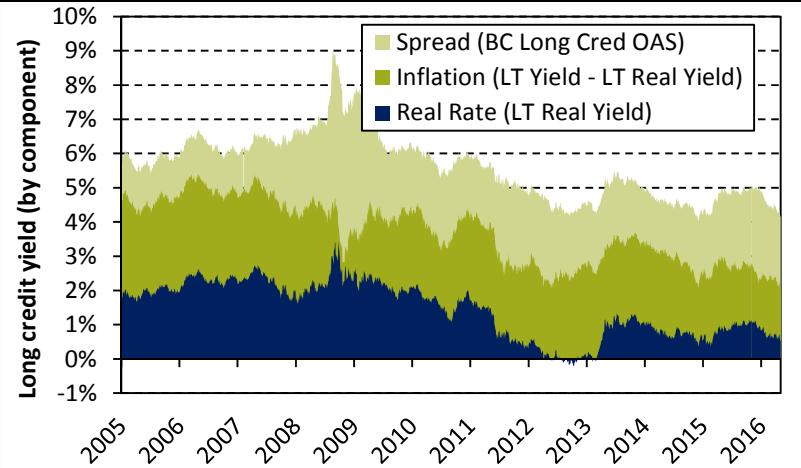
June 30, 2016

Long Rates and Liability

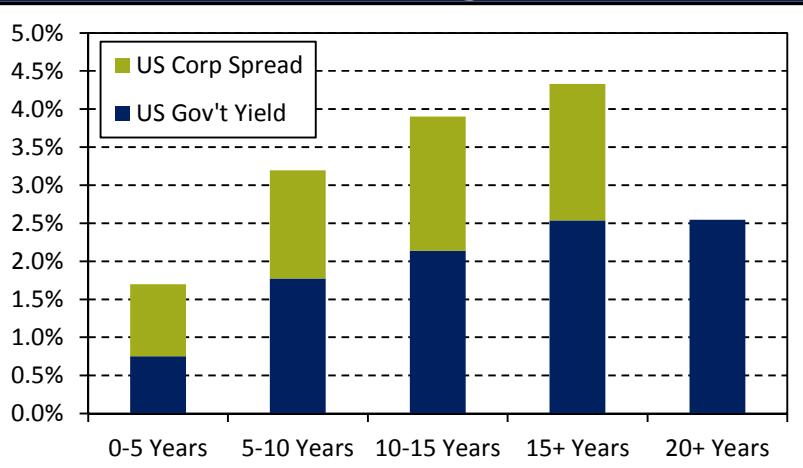
Long duration yields have fallen over last few years



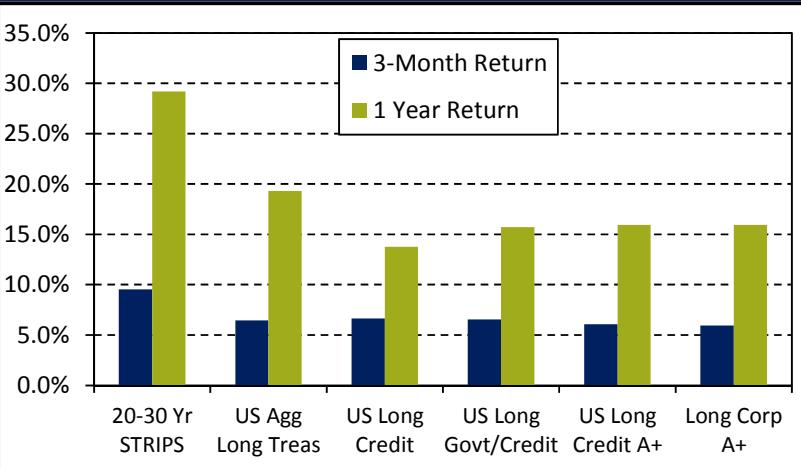
Lower yields driven by low inflation expectations and real rates



Yields are low but spreads above historic averages



Positive returns as investors turn to safer assets

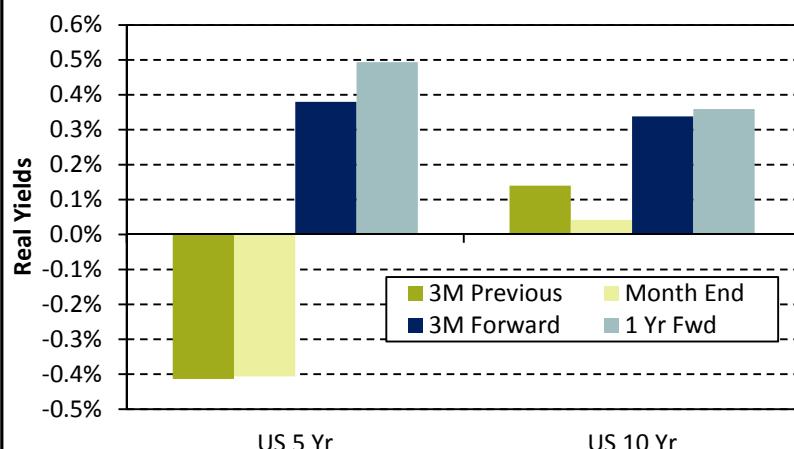


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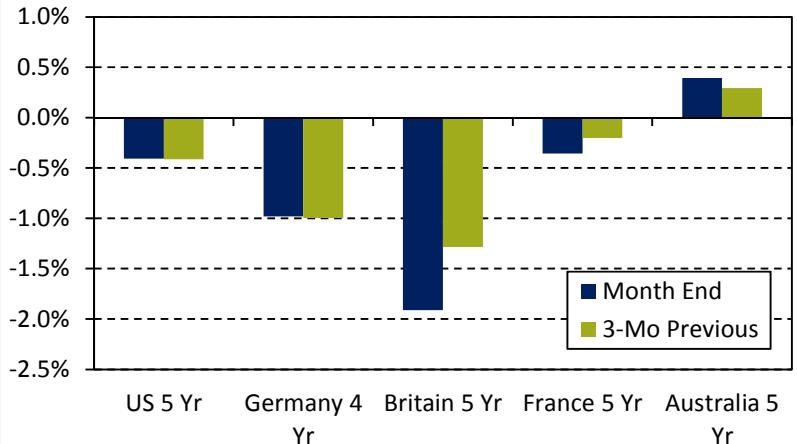
Inflation and Real Rates

US real yields have increased



Source: Bloomberg

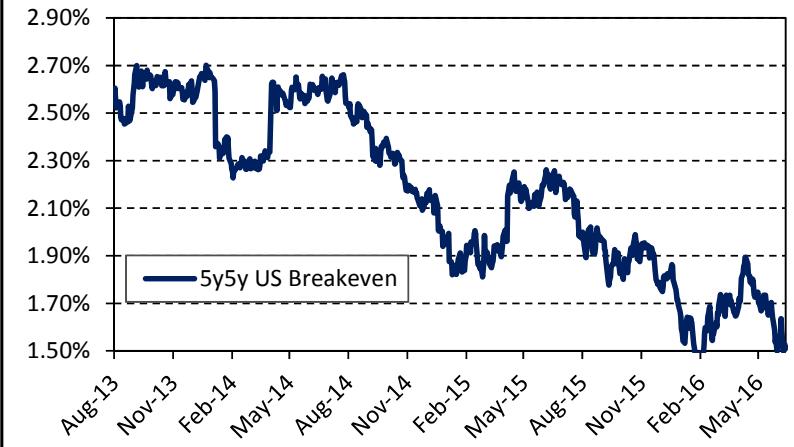
Global real yields mostly negative



*3-Mo data not available for Germany 4 year rate

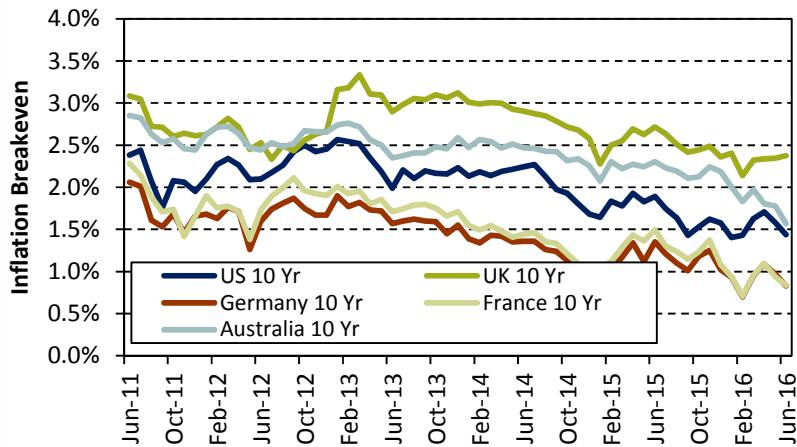
Source: Bloomberg

US inflation expectations remain low



Source: Bloomberg

Global inflation expectations declining with the exception of the UK



Source: Bloomberg

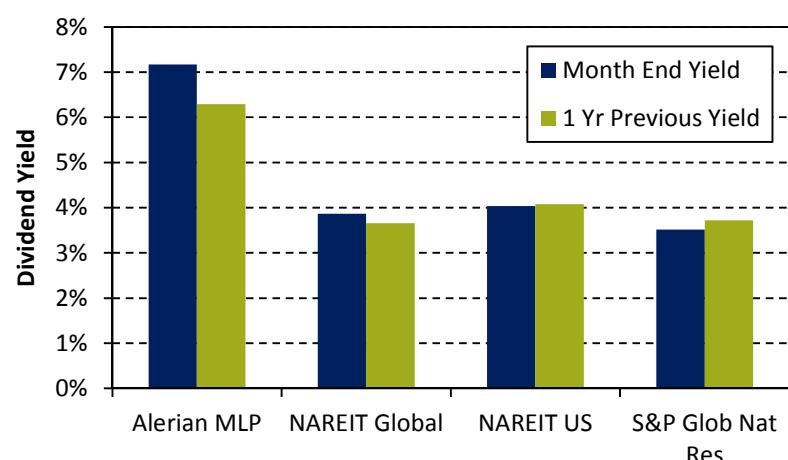


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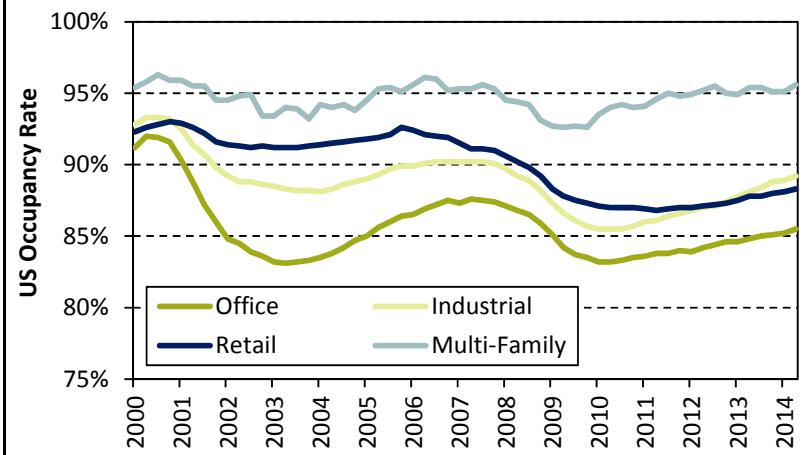
Inflation Sensitive Growth Assets

Similar yields over time



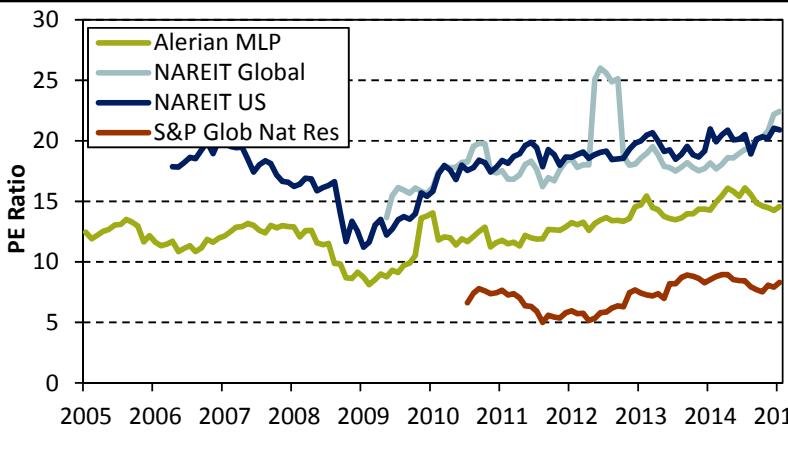
Source: Bloomberg, Alerian, Nareit, Standard and Poors

Gradual recovery in occupancy rates



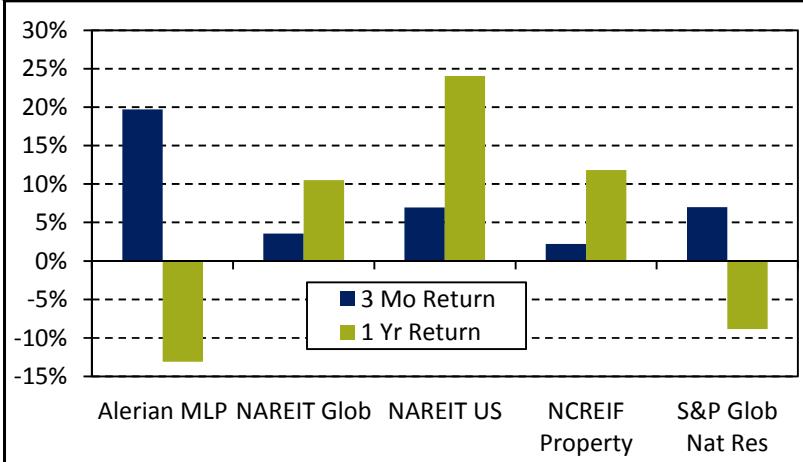
Source: Bloomberg, CB Richard Ellis

PE Ratios near or above averages



Source: Bloomberg, US Census Bureau

MLPs have rebounded after selloff



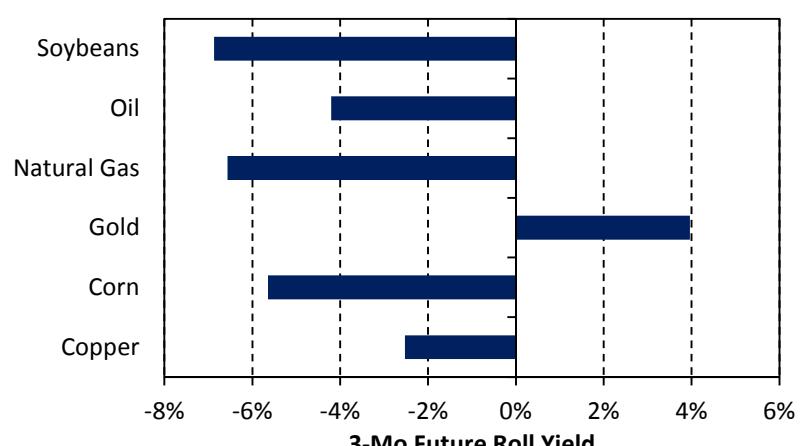
Source: Bloomberg, Alerian, Nareit, Standard and Poors



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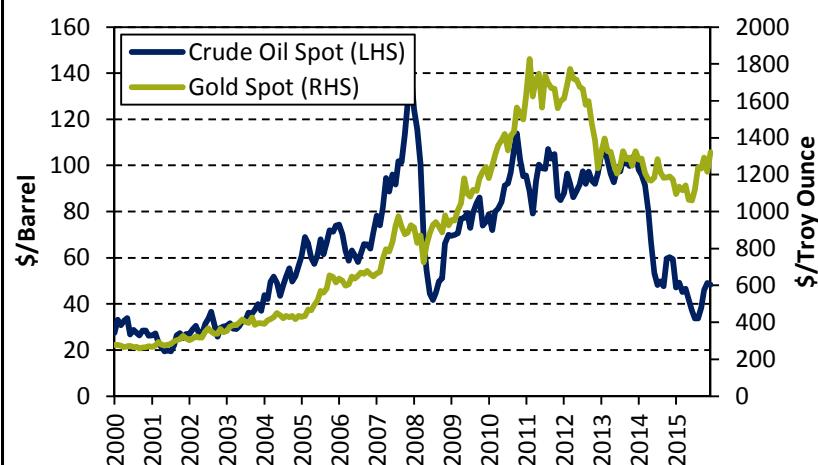
Commodities

Backwardation in major commodity futures with gold positive amid uncertainty



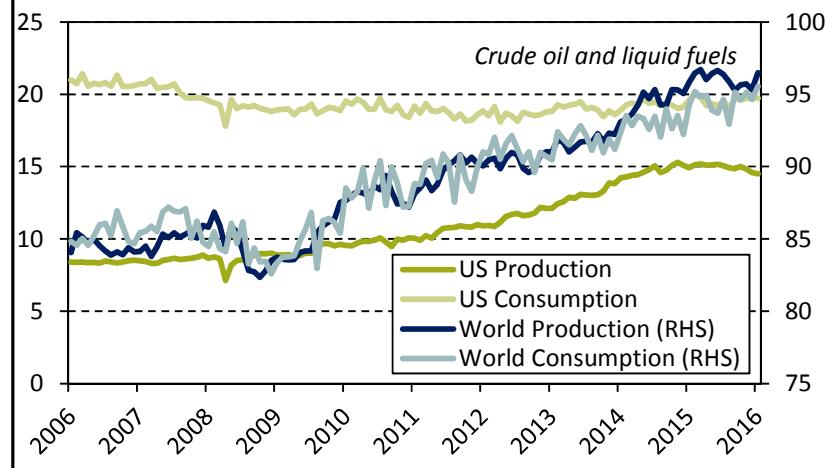
Source: Bloomberg

Oil prices slightly increasing



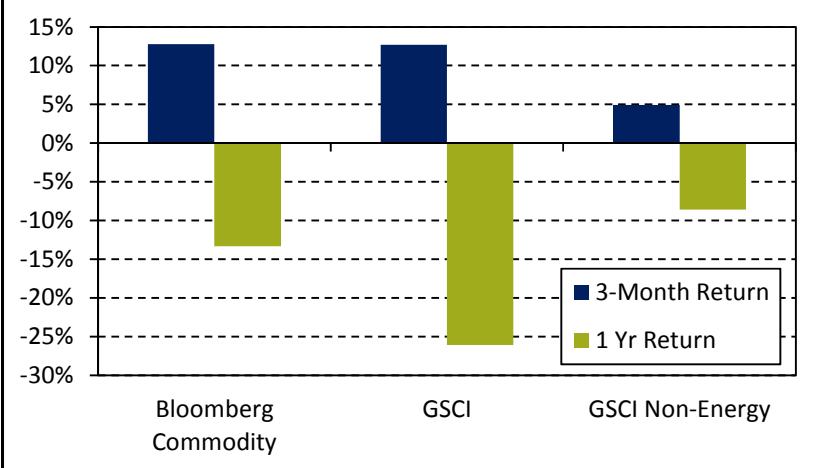
Source: Bloomberg

US fuel production closing gap with consumption



Source: Bloomberg, US Department of Energy *Crude oil and liquid fuels

Commodity indices posting short term gains after last year's sell off



Source: Bloomberg, Standard and Poors



NEPC, LLC

June 30, 2016

Information Disclaimer and Reporting Methodology

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.