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San Bernardino County
Investment Summary
Quarter Ended March 31, 2017

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Market Environment Update and Outlook

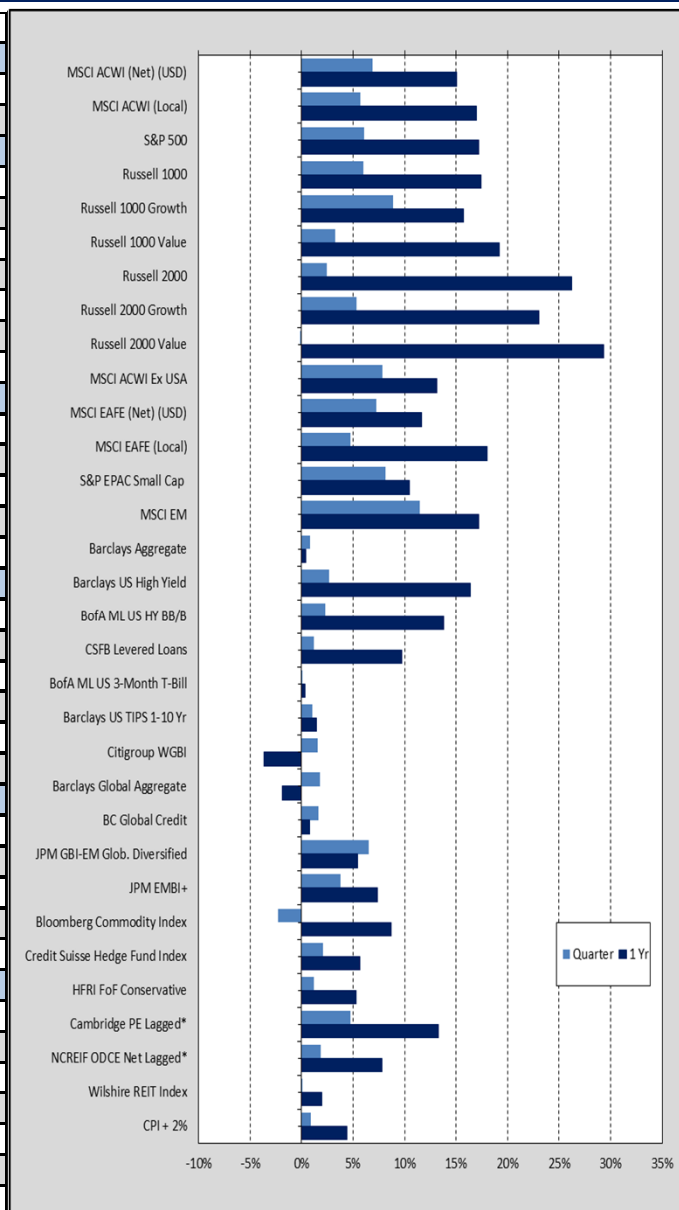


- **Fourth quarter GDP growth rate (third estimate) is estimated to be a modest 2.1%.**
 - Retail sales ended February at +5.3% on a YoY basis. In the same period last year the YoY growth rate was 3.0%.
 - Corporate profits (ended October) as a percent of GDP increased to 9.2% from 9.0% (in July) and remain elevated relative to historical levels.
 - The inventory-to-sales ratio ended February flat at 1.4 and has remained relatively flat since early 2010.
 - The U.S. trade deficit narrowed almost 10% ended February as exports increased and imports decreased.
- **The unemployment rate decreased to 4.5% in Q1 from 4.7% in Q4; U-6, a broader measure of unemployment, decreased to 8.9% during the first quarter from 9.2%.**
- **The Case-Shiller Home Price Index (ended January) increased to 185.51 from 185.06 in October and is at levels higher than that of pre-financial crisis levels of 150.9.**
- **Rolling 12-month seasonally adjusted CPI saw an uptick to 2.4% at the end of March; Capacity Utilization marginally increased to 76.4% in Q1 from 76% ended Q4.**
- **Fed Funds rate was increased +0.25% to a targeted range of 0.75% - to – 1.0%. The 10-year Treasury Yield (constant maturity) finished Q1 at 2.5% flat from Q4.**
- **The Fed balance sheet increased slightly during Q1 2017, 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 of corporate and public securities; announced slowing of bond purchase pace beginning April 2017 to €60 billion.
- **S&P valuations increased slightly in Q4 remaining above the 10-year and long-term averages.**
 - Cyclically adjusted Shiller PE ratio (28.82x) is above the long-term average of 16.74x and above the 10-year average of 22.97x.

San Bernardino County Employees' Retirement Association

Market Environment – Q1 2017 Overview

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI ACWI (Net) (USD)	World	6.9%	15.0%	5.1%	8.4%	4.0%
MSCI ACWI (Local)	World (Local Currency)	5.7%	17.0%	8.1%	10.7%	4.6%
Domestic Equity Benchmarks						
S&P 500	Large Core	6.1%	17.2%	10.4%	13.3%	7.5%
Russell 1000	Large Core	6.0%	17.4%	10.0%	13.3%	7.6%
Russell 1000 Growth	Large Growth	8.9%	15.8%	11.3%	13.3%	9.1%
Russell 1000 Value	Large Value	3.3%	19.2%	8.7%	13.1%	5.9%
Russell 2000	Small Core	2.5%	26.2%	7.2%	12.4%	7.1%
Russell 2000 Growth	Small Growth	5.3%	23.0%	6.7%	12.1%	8.1%
Russell 2000 Value	Small Value	-0.1%	29.4%	7.6%	12.5%	6.1%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	7.9%	13.1%	0.6%	4.4%	1.4%
MSCI EAFE (Net) (USD)	Int'l Developed	7.2%	11.7%	0.5%	5.8%	1.1%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	4.7%	18.0%	7.3%	10.7%	2.3%
S&P EPAC Small Cap	Small Cap Int'l	8.1%	10.5%	3.8%	9.4%	3.3%
MSCI EM	Emerging Equity	11.4%	17.2%	1.2%	0.8%	2.7%
Domestic Fixed Income Benchmarks						
Barclays Aggregate	Core Bonds	0.8%	0.4%	2.7%	2.3%	4.3%
Barclays US High Yield	High Yield	2.7%	16.4%	4.6%	6.8%	7.5%
BofA ML US HY BB/B	High Yield	2.3%	13.8%	4.6%	6.6%	6.9%
CSFB Levered Loans	Bank Loans	1.2%	9.7%	3.7%	4.9%	4.3%
BofA ML US 3-Month T-Bill	Cash	0.1%	0.4%	0.2%	0.1%	0.7%
Barclays US TIPS 1-10 Yr	Inflation	1.1%	1.5%	1.5%	0.6%	3.6%
Global Fixed Income Benchmarks						
Citigroup WGBI	World Gov. Bonds	1.6%	-3.7%	-1.2%	-0.6%	3.0%
Barclays Global Aggregate	Global Core Bonds	1.8%	-1.9%	-0.4%	0.4%	3.3%
BC Global Credit	Global Bonds	1.6%	0.7%	0.7%	2.2%	3.9%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	6.5%	5.5%	-2.7%	-1.6%	4.1%
JPM EMBI+	Em. Mkt. Bonds	3.8%	7.4%	5.9%	5.0%	6.7%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodities	-2.3%	8.7%	-13.9%	-9.5%	-6.2%
Credit Suisse Hedge Fund Index	Hedge Fund	2.1%	5.7%	2.0%	4.0%	3.6%
HFRI FoF Conservative	Fund of Hedge Funds	1.2%	5.3%	1.8%	3.2%	1.1%
Cambridge PE Lagged*	Private Equity	4.7%	13.3%	9.9%	13.0%	10.0%
NCREIF ODCE Net Lagged*	Real Estate	1.9%	7.8%	11.0%	11.2%	4.8%
Wilshire REIT Index	REIT	0.0%	2.0%	10.2%	9.8%	4.4%
CPI + 2%	Inflation/Real Assets	0.9%	4.4%	3.1%	3.3%	3.8%



* As of 12/31/2016

Global Equity

- **U.S. equities as measured by the S&P 500 posted strong gains in the first quarter (+6.1%). Volatility related to geopolitics and economic uncertainty continued in the quarter.**
- **Small cap stocks reversed course and underperformed large cap stocks during the quarter, with the Russell 2000 Index returning 2.5% and the Russell 1000 Index returning 6.0%.**
- **International equities outperformed U.S. markets during the quarter, returning 7.9%, as measured by the MSCI ACWI ex-U.S. Index. Emerging markets returned 11.4% as measured by the MSCI Emerging Markets Index in U.S. dollar terms.**
 - Developed international markets returned 7.2% in USD terms, while in local currency terms returned 4.7% as measured by the MSCI EAFE Index.

Private Equity

- **Record capital commitments were recorded in Q1 2017.**
- **Private equity fundraising totaled \$89 billion in Q1 2017.**
 - North America focused private equity funds raised a record \$62 billion.
 - Asia focused private equity funds raised \$13 billion.
 - Europe focused private equity fundraising momentum slowed raising \$12 billion.
- **Private equity dry powder continued its increase to \$842 billion ended Q1 up from \$821 billion in Q4.**

Fixed Income

- **The nominal yield curve flattened in Q1. Intermediate –to- long term yields stayed flat while short term yields increased 18 –to- 30 basis points.**
- **The spread between two and 10-year rates decreased to 113 basis points from 125 basis points in Q4. Treasury Inflation-Protected Securities, or TIPS, returned 1.1% during the quarter, as measured by the BBg Barclays US TIPS 1-10 Yr Index.**
- **The BBg Barclays Long Duration Credit Index gained 1.36%.**
- **Long Treasuries gained 1.41% and investment-grade US corporate debt gained 0.8%.**
- **The BBg Barclays 1-3 year Government/ Credit Index returned 0.41%. US high yield bonds gained 2.3% driven by tighter spreads.**
- **Emerging markets debt had moderate –to- strong gains.**
 - US dollar-denominated debt, as measured by the JP Morgan EMBI Index, gained 3.8%; local currency debt gained 6.5%, according to the JP Morgan GBI-EM BD Index.

Real Assets/Inflation-Linked Assets

- **Energy remains attractive despite volatile oil prices.**
 - Private equity and debt opportunities are attractive.
 - Fire sale prices never materialized but focusing on assets outside of the hottest zip codes provides potential for strong returns as market normalizes.

- **Infrastructure – select opportunities to access growth markets.**
 - High quality assets are receiving premium bids from direct investors (Pension Funds and Sovereigns) with low costs of capital and long hold horizons; focus on mismanaged or niche opportunities.

- **Metals & Mining – have commodity prices bottomed?**
 - Peak capex occurred in 2012, lagging commodity price drops that began in 2011.
 - Diverse demand drivers for underlying commodity prices.

- **Timber – low return potential and limited opportunity for outperformance.**

- **Agriculture – near-term slowdown in price appreciation creates opportunity to invest in a strong (very) long term outlook supported by demographic trends.**

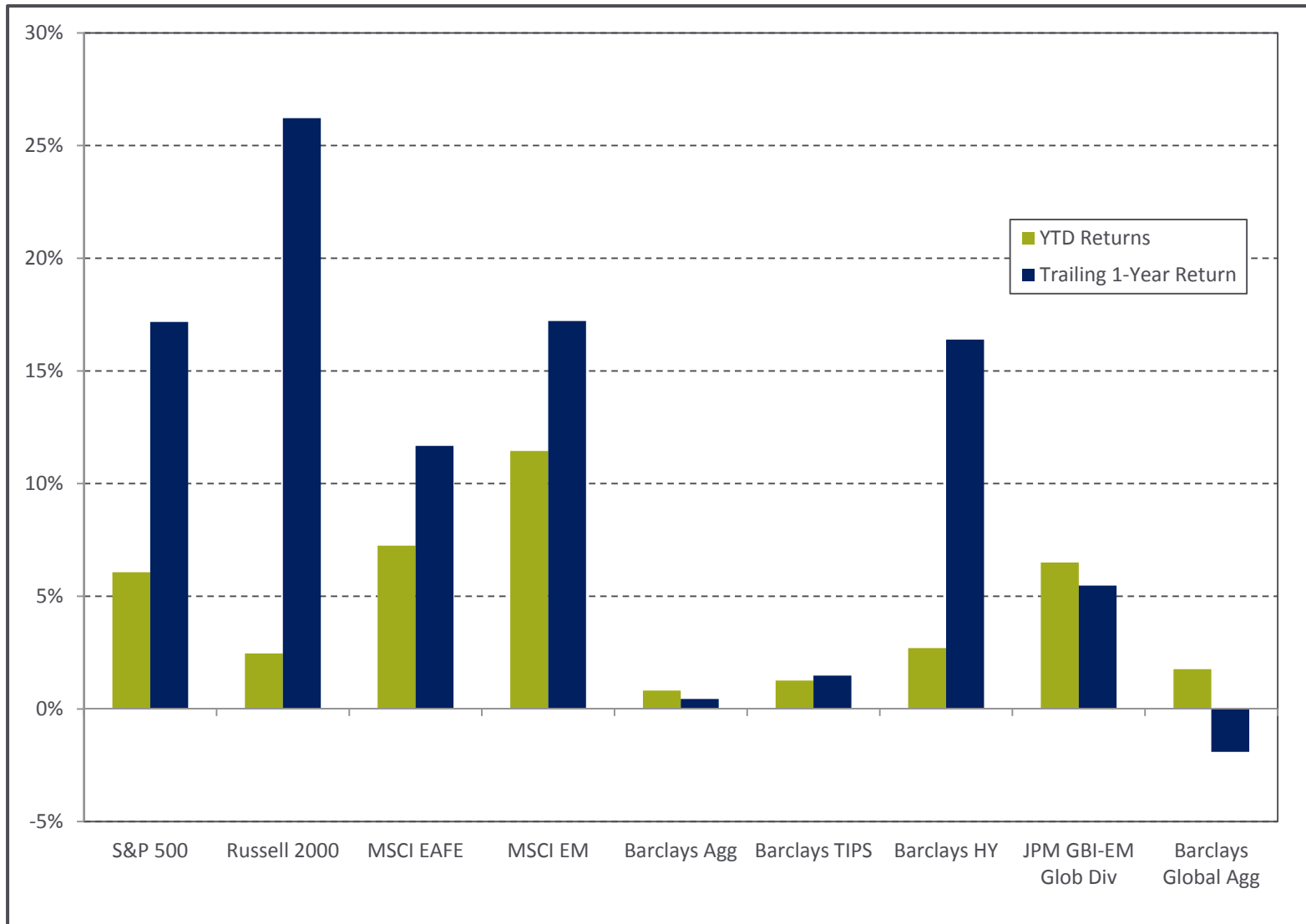
Commodities

- **Commodities ended the quarter down 2.3% as measured by the Bloomberg Commodity Index.**
 - Commodity price momentum shifted from Energy to Metals led by aluminum (+16%) and gold (+8.4%).

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.**
- **Real estate fundamentals (rent growth, occupancy, net absorption) remain strong; however, valuations are high on an absolute and relative basis.**
 - Rising interest rates have been baked into existing valuations but excess cap rate expansion (beyond general expectations) will reset valuations.
- **Overall, the non-core real estate investment environment in the U.S. is normalizing; however, select areas remain attractive.**
- **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 and broader European political instability, however, are unclear.

San Bernardino County Employees' Retirement Association
Year to Date Performance: All Assets Have Moved Higher



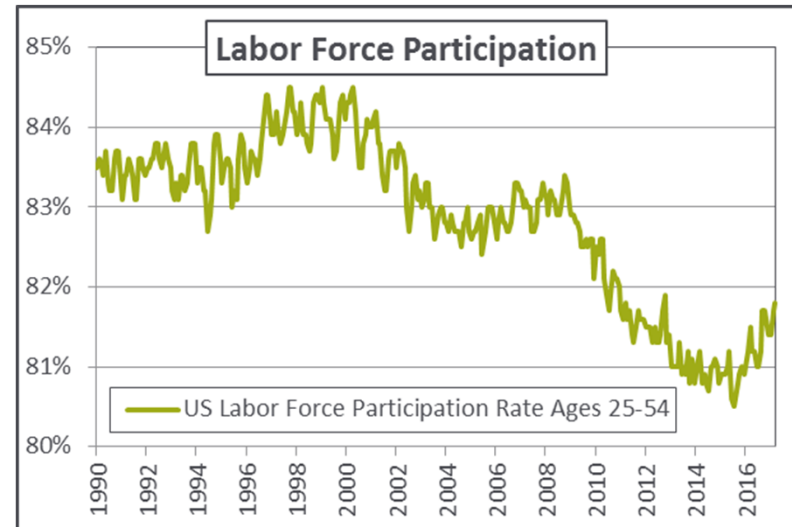
Source: S&P, Russell, MSCI, Barclays, JPM, Bloomberg
 As of 03/31/2017

Extended US Economic Cycle

US recession concerns are muted

The US economy is likely to experience slow and steady growth as excess capacity is gradually absorbed by the economy

The labor market recovery has been robust but excess capacity remains as many have yet to return to the workforce

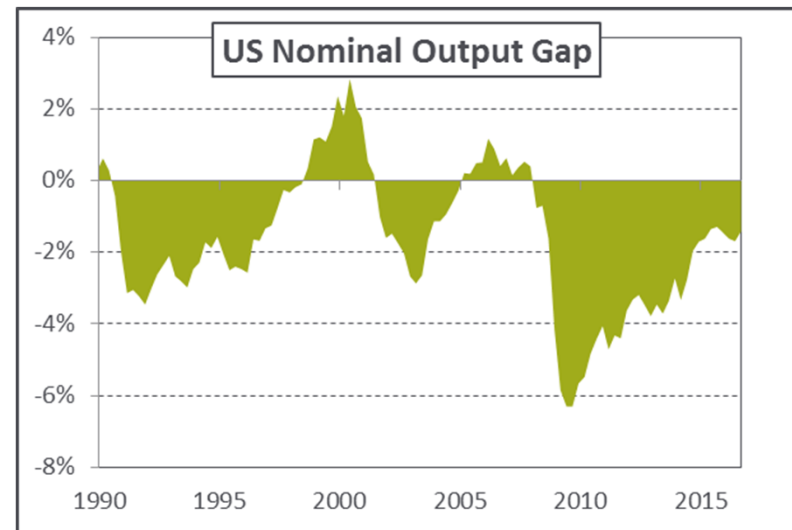


Source: FRED

Outlook for fiscal stimulus is cloudy and any potential growth benefit unlikely to be seen in 2017 or 2018

Tax cuts and infrastructure spending modestly improve the US growth profile but face a prolong path through Congress

US dollar strength and corporate profitability trends are the primary sources of concern for potential weakness



Source: Congressional Budget Office, Bloomberg

Federal Reserve Gradualism

The Federal Reserve is expected to slowly increase interest rates

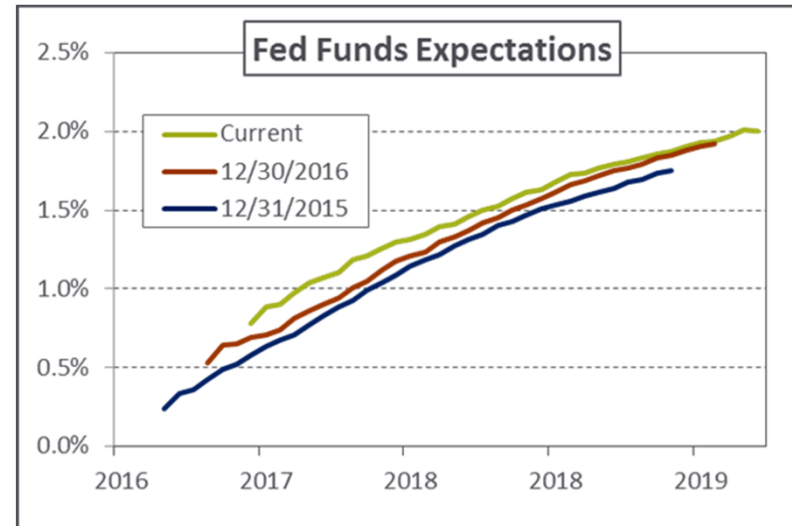
Expected path of Fed policy through 2019 matters more than timing of the next hike

A relatively accommodative Fed is likely to continue, unless there is a dramatic acceleration in inflation

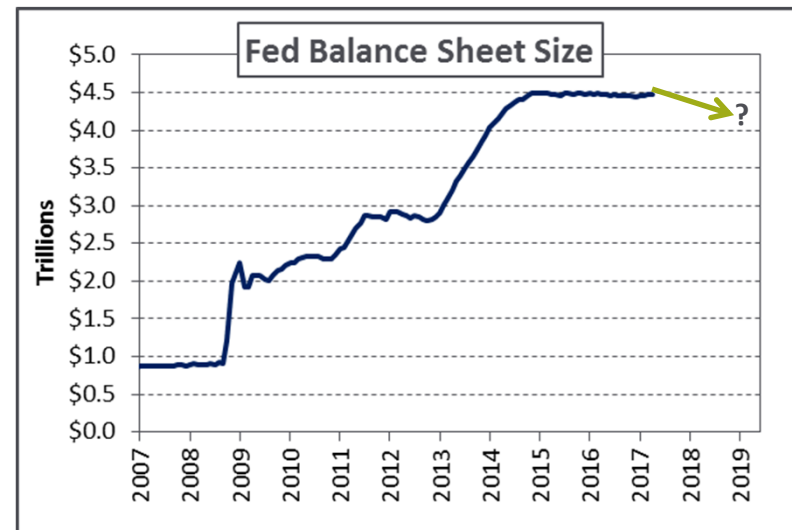
2017 is likely to be a year of greater uncertainty for Fed policy

Fed's plan to reduce the size of its balance sheet will be closely watched as they look to avoid market taper fears

Politics will intersect with Fed policy as speculation builds whether Janet Yellen will continue as Chair past her term expiring in February 2018



Source: Bloomberg



Source: Fed, Bloomberg

China Transitions

China is the global growth engine but faces fundamental transitions

As the rural population moves to urban centers, fixed investment is required to sustain the production based economy

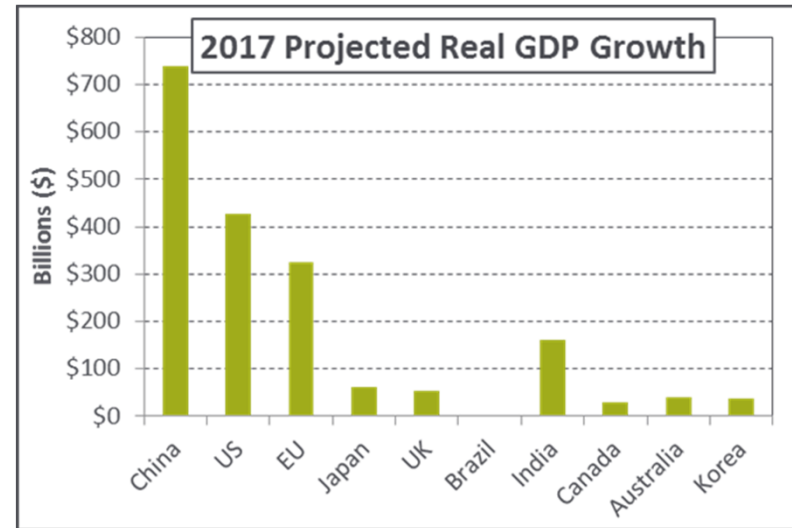
China's economic transition is pivoting away from manufacturing to a service and consumption based economy

Any disruption to these transitions will have global repercussions due to China's size and role in the global economy

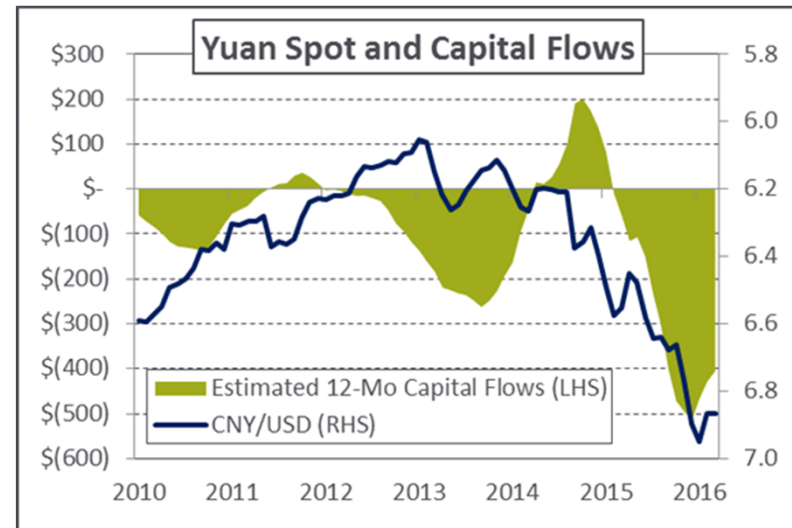
The PBOC is balancing the risks of a more open market with currency declines and capital outflows

Concerns of capital outflows have forced greater intervention from the central bank to limit currency declines

Desire for a weaker currency to support the production based economy is offset by fears of capital fleeing the country and destabilizing credit markets



Source: IMF, Bloomberg



Source: SAFE, Bloomberg

Globalization Backlash

Uneven economic growth and wage gains have fueled political discontent in the developed world

Political uncertainty intensifies currency volatility but currency depreciation can stimulate local equity markets (e.g. UK)

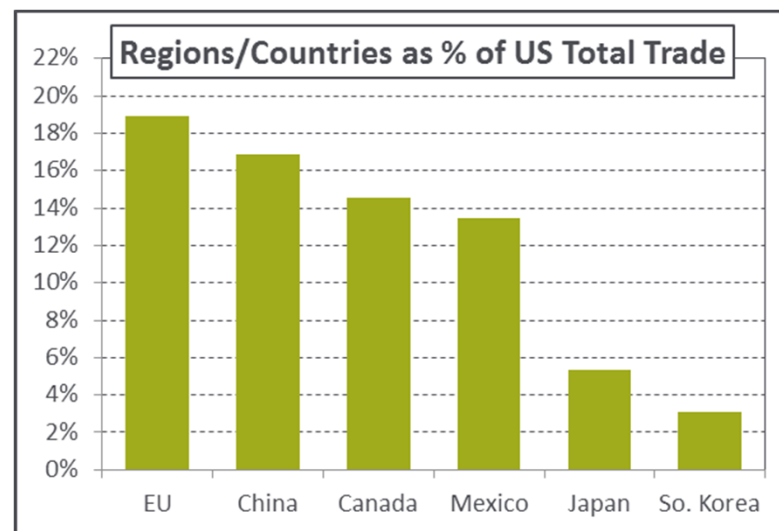
However, a shift away from political orthodoxy heightens lower probability political tail-risks such as a US-China trade war or a dissolution of the euro

Have we reached "Peak Trade"?

A secular transition is underway and a shift from free trade policies in the West may reduce long-term economic growth

A strong US pivot away from global trade is a tail-risk for the global economy and would likely impact capital markets negatively in the emerging world

Election	Main Candidates	Dates
France Presidential Election	Marine Le Pen <i>National Front</i> Emmanuel Macron <i>En Marche!</i>	May 7 th
UK General Election	Theresa May <i>Conservative Party</i> Jeremy Corbyn <i>Labour Party</i>	June 8 th
Italy General Election	Matteo Orfini <i>Democratic Party</i> Beppe Grillo <i>5-Star Movement</i>	Potential 2017 snap election



Source: IMF, Bloomberg

Highlights of First Quarter Happenings at NEPC

March 31, 2017

NEPC Insights

- Will a Higher Fed Funds Rate Raise Long-Term Rates? (January 2017)
- 2016 4th Quarter Market Thoughts (January 2017)
- 2016 Q4 Endowment & Foundation Survey Results and Infographic (February 2017)
- The Times Are a Changin': NEPC's 2017 Annual Asset Allocation Letter (February 2017)
- NEPC's 2017 Healthcare Operating Fund Universe & Infographic (March 2017)
- The Fed's Masterful Move (March 2017)
- Fossil Fuel Divestment: Considerations for Institutional Portfolios (March 2017)
- Globalization Backlash – Europe's Political Roadmap (March 2017)
- Are Loose Personal Trading Policies at Hedge Funds A Red Flag? (March 2017)



MARK YOUR CALENDAR!



Upcoming Events

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

This year's conference will focus on opportunities and threats in these uncertain political and economic times. In addition to the messages delivered by our exceptional keynote speakers, attendees will learn about asset allocation and investment ideas across the market spectrum. **Register today!**

<http://info.nepc.com/nepc-22nd-annual-investment-conference>

Webinar Replays

- NEPC 2017 Market Outlook (January 2017)

To download NEPC's recent insights and webinar replays, visit: www.NEPC.com/insights

Recent Updates

- Expanded Private Wealth business with two new NEPC Partners and three senior hires
- Opened new Private Wealth office in Portland, OR
- Launched updated NEPC website
- Collaborated with RiskFirst's Pension Risk Analytics platform, Pfaroe, to improve effectiveness of asset-liability strategies and ongoing monitoring
- **Named a "Greenwich Quality Leader" by Greenwich Associates. See Greenwich.com for more information.**



NEPC Gives Back

Basketball teams made up of Boston's working professionals, Year Up students and alumni including two NEPC teams, participated in the Annual Year Up Basketball Tournament fundraising event. Year Up, is a nonprofit connecting low-income young adults with companies looking for talent. The program is a one-year, intensive training program providing hands-on skills development, coursework eligible for college credit, corporate internships, and wraparound support.

Total Fund Performance

Total Fund Performance Summary (Gross)

	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
Total Fund	\$9,032,099,324	3.5%	99	10.8%	18	14.1%	1	5.8%	37	8.3%	44	4.5%	95
<i>Policy Index</i>		3.5%	99	5.1%	99	7.6%	99	4.1%	92	6.0%	97	4.8%	80
<i>S&P 500</i>		6.1%	2	14.4%	1	17.2%	1	10.4%	1	13.3%	1	7.5%	1
<i>BBgBarc US Aggregate TR</i>		0.8%	99	-1.7%	99	0.4%	99	2.7%	99	2.3%	99	4.3%	96
<i>60% MSCI ACWI (Gross)/40% CITI WGBI</i>		4.8%	29	5.4%	99	7.6%	99	3.0%	99	5.2%	99	4.3%	96
<i>InvestorForce Public DB > \$1B Gross Median</i>		4.5%		9.7%		11.7%		5.6%		8.1%		5.3%	

In the year ended March 31, 2017 the Fund returned 14.1% ranking in the 1st percentile of Public Funds > \$1Billion. The Fund's assets totaled \$9.03 billion, an increase of \$1.08 billion from a year ago.

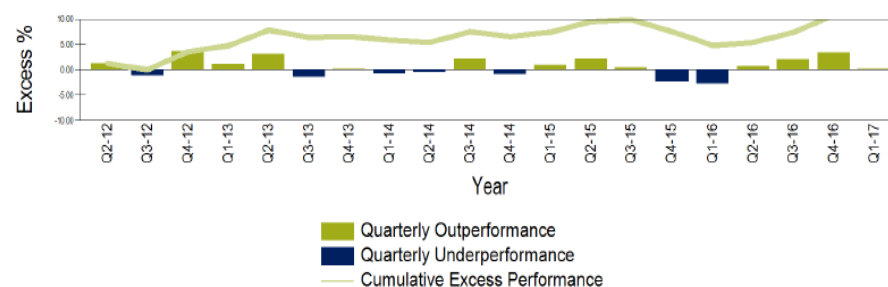
The Fund experienced a net investment gain of \$1.13 billion in the year ended March 31, 2017 including a net investment gain of \$305.5 million in the first calendar quarter.

In the three –year period ended March 31, 2017 the Fund returned 5.8% and ranked in the 37th percentile among its peers. The Sharpe Ratio over this period of 1.6 ranks in the 1st 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 March 31, 2017 the Fund returned 8.3% per annum and ranked in the 44th percentile among its peers. On a risk adjusted basis the Fund's Sharpe and Sortino Ratios rank in the 1st 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.

Note: InvestorForce Public Funds >\$1B Gross of Fee preliminary universe contains 23 portfolios with \$154.6b in assets

Quarterly and Cumulative Gross Performance vs. Policy



Statistics Summary

3 Years Ending March 31, 2017

	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	1.6	1	2.7	1
InvestorForce Public DB > \$1B Gross Median	0.8	--	1.3	--

5 Years Ending March 31, 2017

	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	2.2	1	3.3	1
InvestorForce Public DB > \$1B Gross Median	1.1	--	1.7	--

Total Fund Performance Summary

Statistics Summary

1 Year Ending March 31, 2017

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	14.1%	1	1.7%	1	8.0	1	--	--
InvestorForce Public DB > \$1B Gross Median	11.7%	--	3.4%	--	3.2	--	6.1	--

Statistics Summary

3 Years Ending March 31, 2017

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	5.8%	37	3.6%	1	1.6	1	2.7	1
InvestorForce Public DB > \$1B Gross Median	5.6%	--	6.5%	--	0.8	--	1.3	--

Statistics Summary

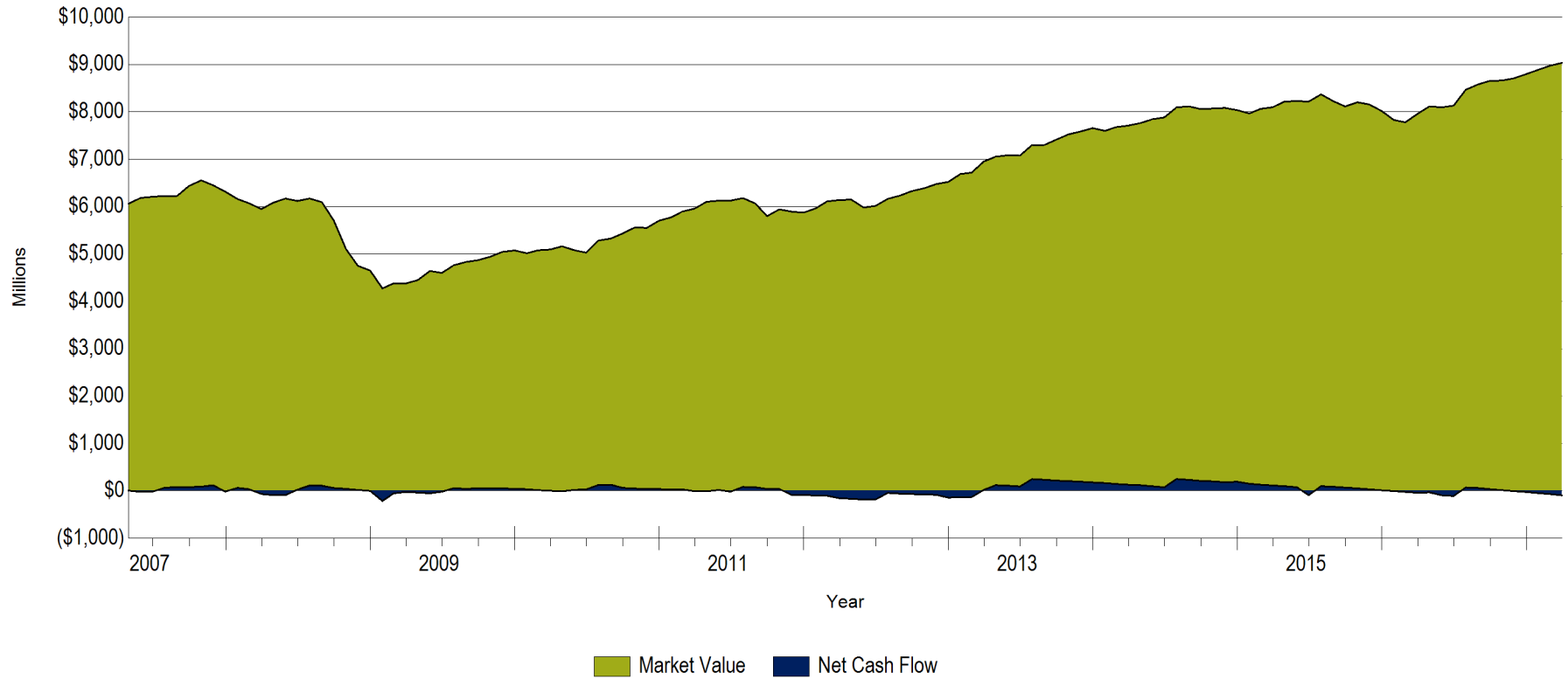
5 Years Ending March 31, 2017

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	8.3%	44	3.7%	1	2.2	1	3.3	1
InvestorForce Public DB > \$1B Gross Median	8.1%	--	6.6%	--	1.1	--	1.7	--

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

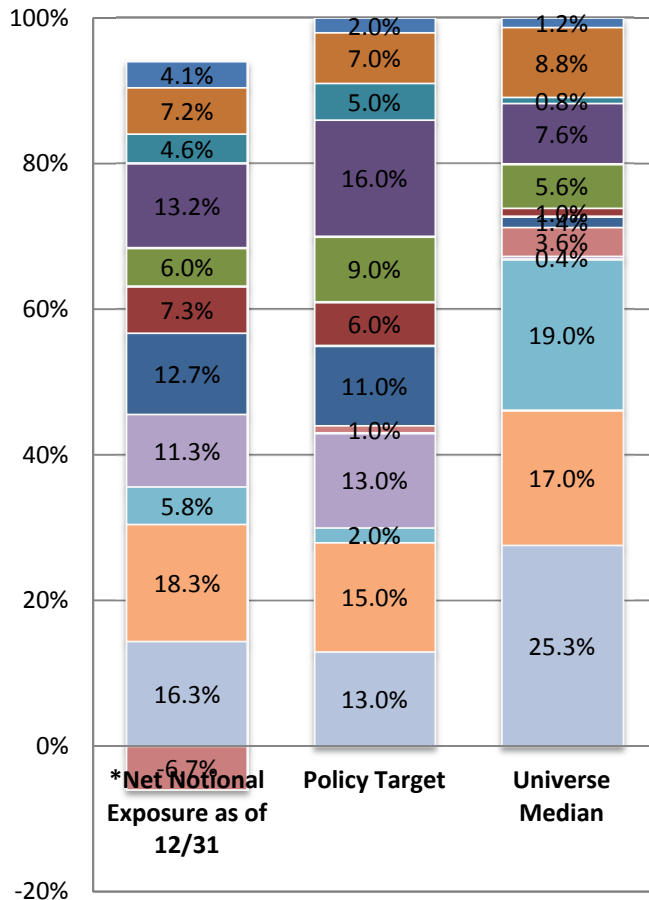
Total Fund Asset Growth Summary

10 Years Ending March 31, 2017



	Last Three Months	One Year	Five Years	Ten Years
Beginning Market Value	\$8,796,477,524	\$7,956,959,630	\$6,137,331,566	\$5,899,587,002
Net Cash Flow	-\$69,873,233	-\$53,338,391	\$61,078,678	-\$95,507,278
Net Investment Change	\$305,495,034	\$1,128,478,085	\$2,833,689,080	\$3,228,019,600
Ending Market Value	\$9,032,099,324	\$9,032,099,324	\$9,032,099,324	\$9,032,099,324

Total Fund Asset Allocation vs. Policy Targets



	*Net Notional Exposure	*Net Notional Exposure as of 5/31	Policy Target	*Difference	Policy Ranges	Within Range
US Equities	1,476,169	16.3%	13.0%	3.3%	8%-18%	Yes
Int'l Equities	1,651,531	18.3%	15.0%	3.3%	10%-20%	Yes
U.S. Core Fixed Income	521,686	5.8%	2.0%	3.8%	-3%-7%	Yes
US Credit	1,018,227	11.3%	13.0%	-1.7%	8%-18%	Yes
Non-US Core Fixed Income	(361,858)	-4.0%	1.0%	-5.0%	-4%-6%	Yes
Non-US Credit	1,149,501	12.7%	11.0%	1.7%	6%-16%	Yes
Emerging Market Debt	409,961	4.5%	6.0%	-1.5%	1%-11%	Yes
Real Estate	537,822	6.0%	9.0%	-3.0%	4%-14%	Yes
Private Equity	1,191,232	13.2%	16.0%	-2.8%	11%-21%	Yes
Real Assets	415,426	4.6%	5.0%	-0.4%	0%-10%	Yes
Absolute Return	651,424	7.2%	7.0%	0.2%	2%-12%	Yes
Cash	370,979	4.1%	2.0%	2.1%	0%-10%	Yes
	9,032,099	100.0%	100.0%			

- US Equities
- U.S. Core Fixed Income
- Non-US Core Fixed Income
- Emerging Market Debt
- Private Equity
- Absolute Return
- Int'l Equities
- US Credit
- Non-US Credit
- Real Estate
- Real Assets
- Cash

*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

San Bernardino County Employees' Retirement Association

SBCERA Delta Adjusted Asset Summary

Asset Class	Physical Exposure		Delta Adjusted Synthetic Exposure		Net Position		Overlay Target		Policy Target	
Total Market Value	8,807.4	100.0%	-0.0	0.0%	8,807.4	100.0%	8,807.4	100.0%	8,807.4	100.00%
Cash	1,600.3	18.17%	-1,502.0	-17.05%	98.3	1.12%	0.0	0.0%	0.0	0.00%
Cash	1,600.3	18.17%	-1,502.0	-17.05%	98.3	1.12%	0.0	0.0%	0.0	0.00%
Equity	1,252.4	14.22%	1,874.8	21.29%	3,127.3	35.51%	3,226.5	36.63%	3,258.7	37.00%
Emerging Markets	449.6	5.11%	219.8	2.5%	669.5	7.6%	697.6	7.92%	704.6	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	123.3	1.4%	851.0	9.66%	974.3	11.06%	959.2	10.89%	968.8	11.00%
US Large Cap	679.4	7.71%	502.1	5.7%	1,181.6	13.42%	1,264.5	14.36%	1,277.1	14.50%
US Small Cap	0.1	0.0%	301.9	3.43%	302.0	3.43%	305.2	3.47%	308.3	3.50%
Fixed	2,793.7	31.72%	-372.9	-4.23%	2,420.9	27.49%	2,419.9	27.48%	2,444.1	27.75%
EM 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	1,777.2	20.18%	-645.6	-7.33%	1,131.6	12.85%	1,133.6	12.87%	1,145.0	13.00%
High Yield **	1,016.5	11.54%	0.0	0.0%	1,016.5	11.54%	828.4	9.41%	836.7	9.50%
US Fixed Income	0.0	0.0%	272.7	3.1%	272.7	3.1%	457.8	5.2%	462.4	5.25%
Other	3,161.0	35.89%	0.0	0.0%	3,161.0	35.89%	3,161.0	35.89%	3,104.6	35.25%
Alternatives	197.2	2.24%	0.0	0.0%	197.2	2.24%	197.2	2.24%	193.8	2.20%
Commodities	133.9	1.52%	0.0	0.0%	133.9	1.52%	133.9	1.52%	149.7	1.70%
Infrastructure	74.2	0.84%	0.0	0.0%	74.2	0.84%	74.2	0.84%	70.5	0.80%
Private Equity	1,090.7	12.38%	0.0	0.0%	1,090.7	12.38%	1,090.7	12.38%	1,118.5	12.70%
Real Estate	594.9	6.75%	0.0	0.0%	594.9	6.75%	594.9	6.75%	502.0	5.70%
Tactical Cash	1,070.1	12.15%	0.0	0.0%	1,070.1	12.15%	1,070.1	12.15%	1,070.1	12.15%

** HY CDX credit spread protection of \$700mm face is not reflected on Asset Summary

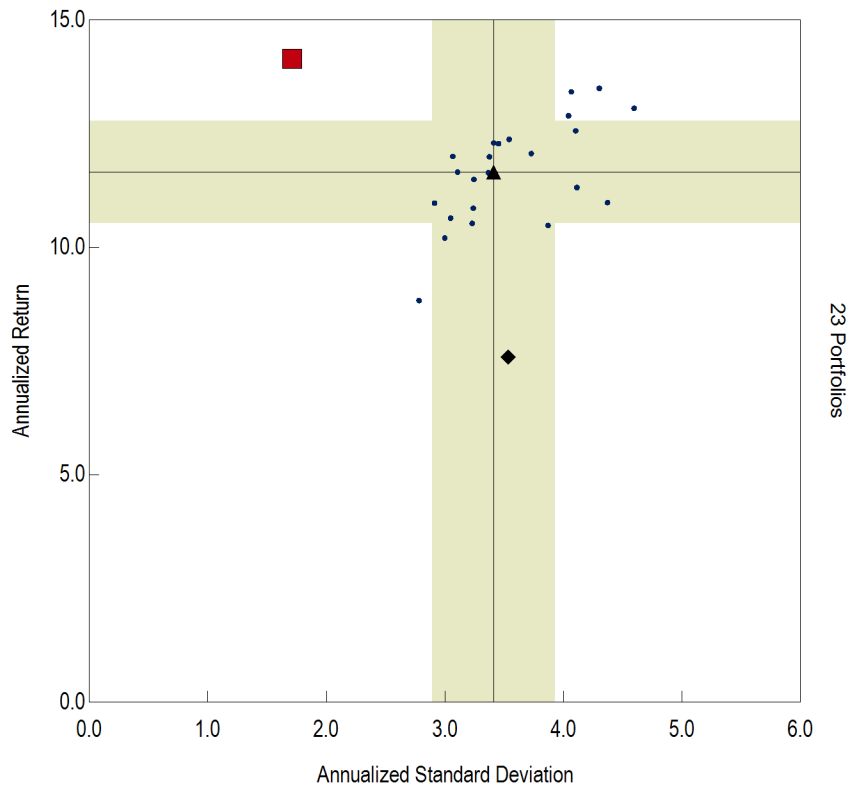
Source: Russell Investments



March 31, 2017

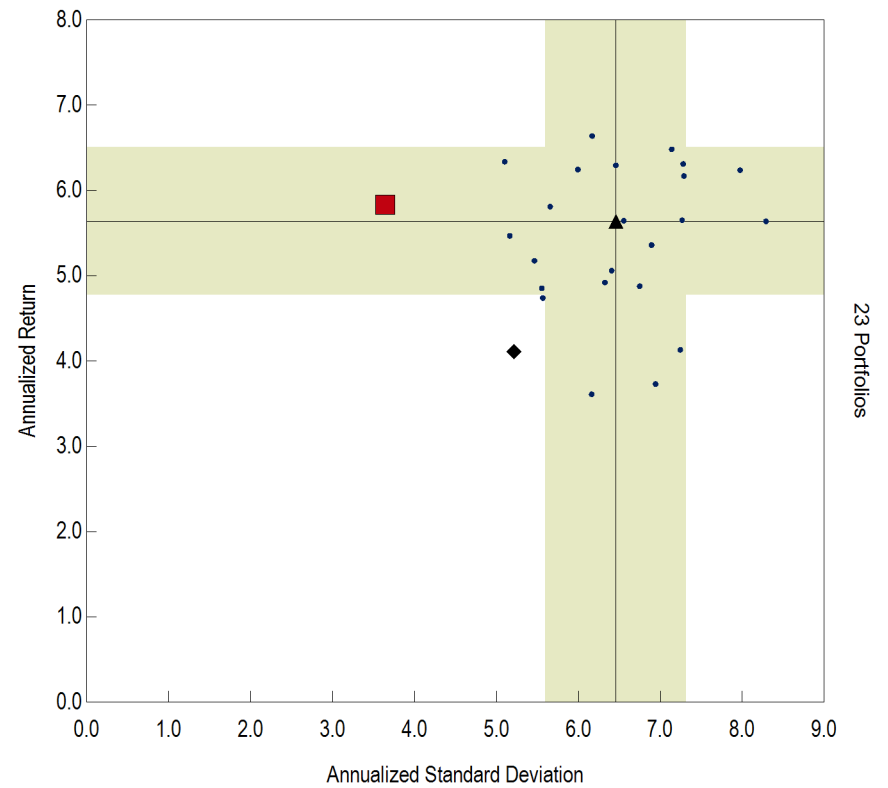
Total Fund Risk/Return

1 Year Ending March 31, 2017



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

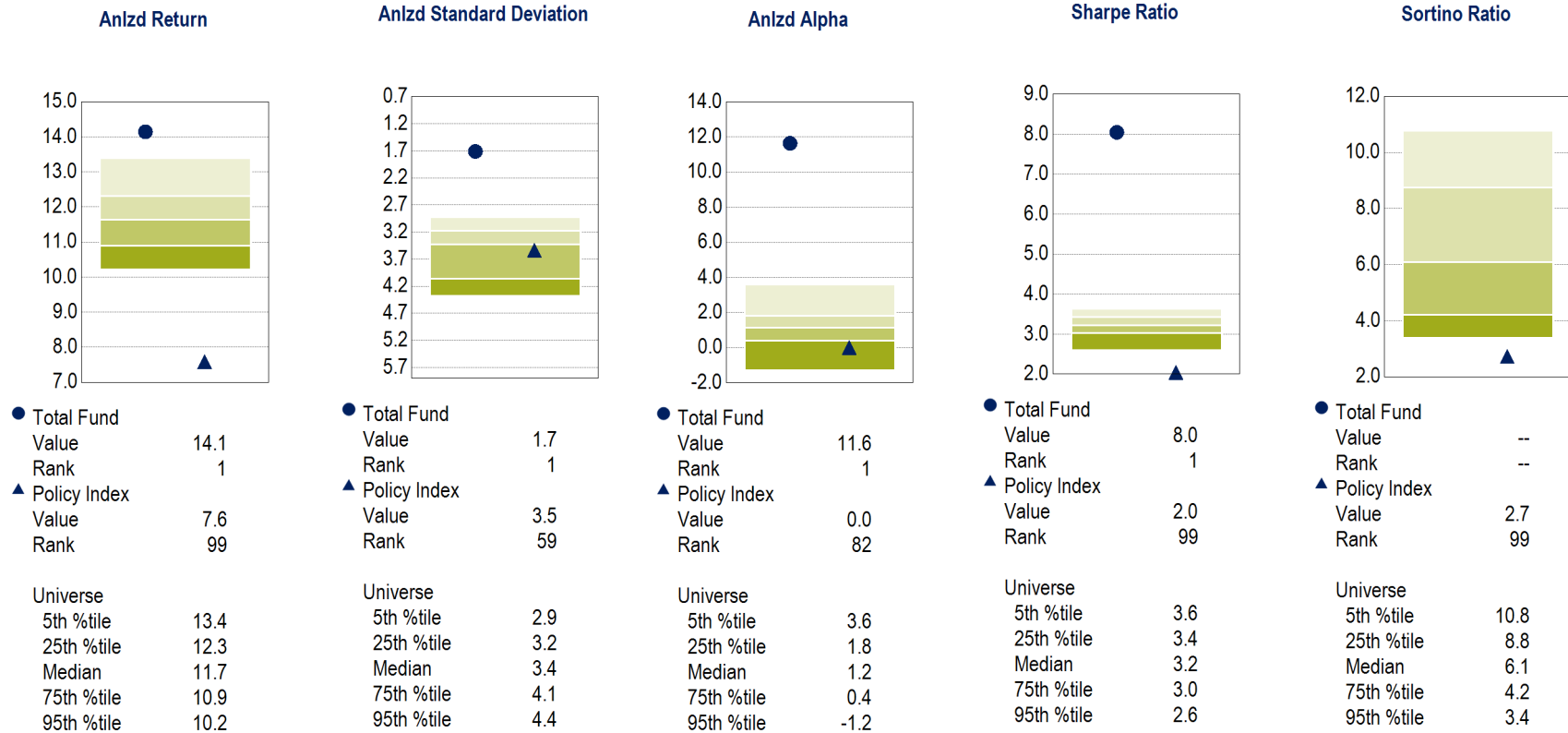
3 Years Ending March 31, 2017



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

Total Fund Risk Statistics vs. Peer Universe

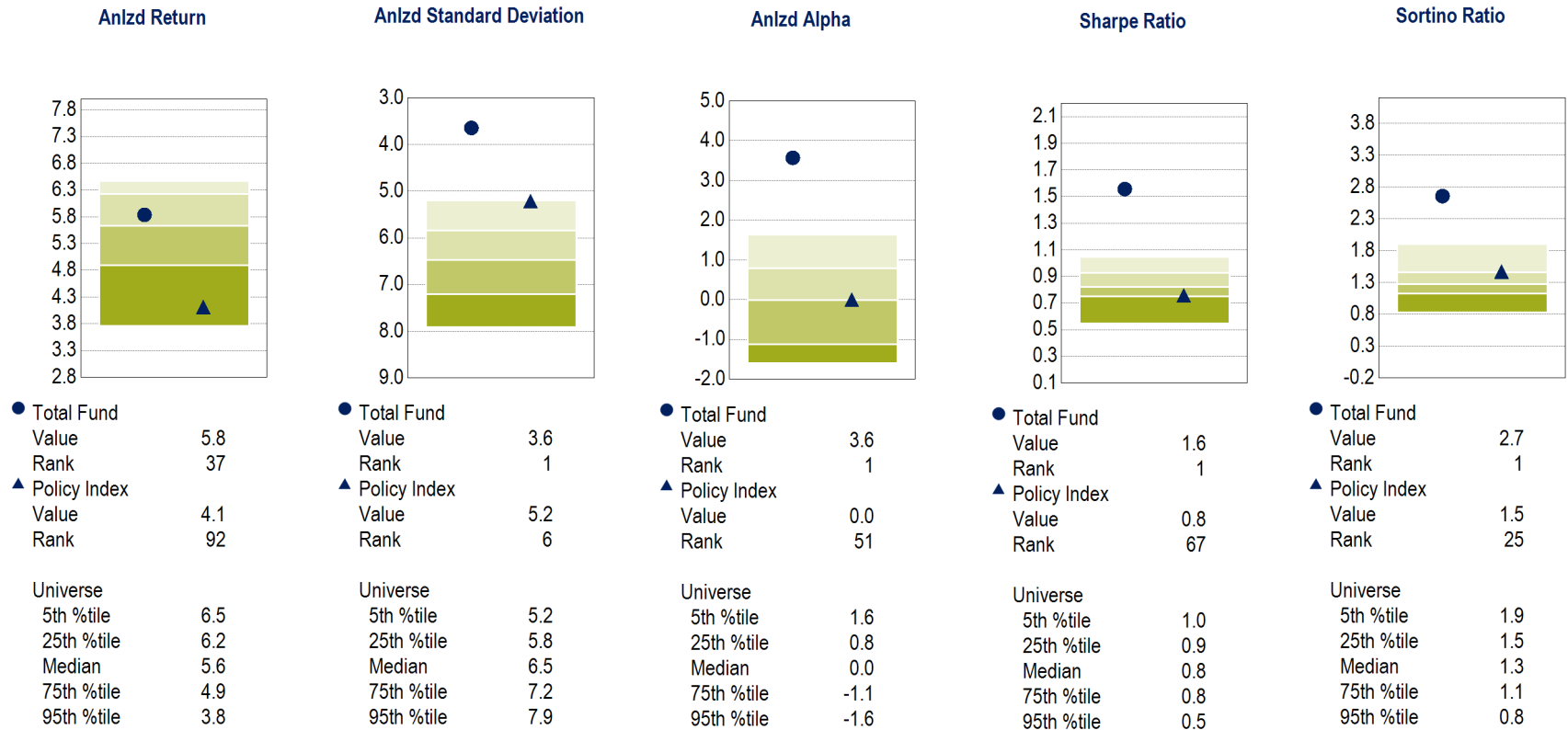
**Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)
1 Year**



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 22 Portfolios

Total Fund Risk Statistics vs. Peer Universe

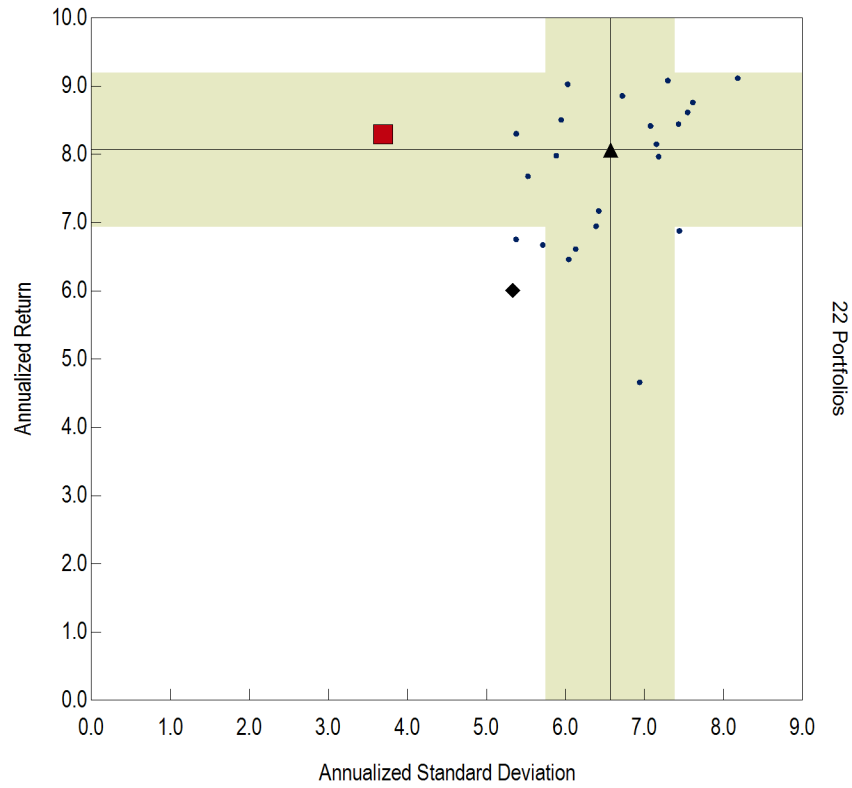
Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)
3 Years



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 22 Portfolios

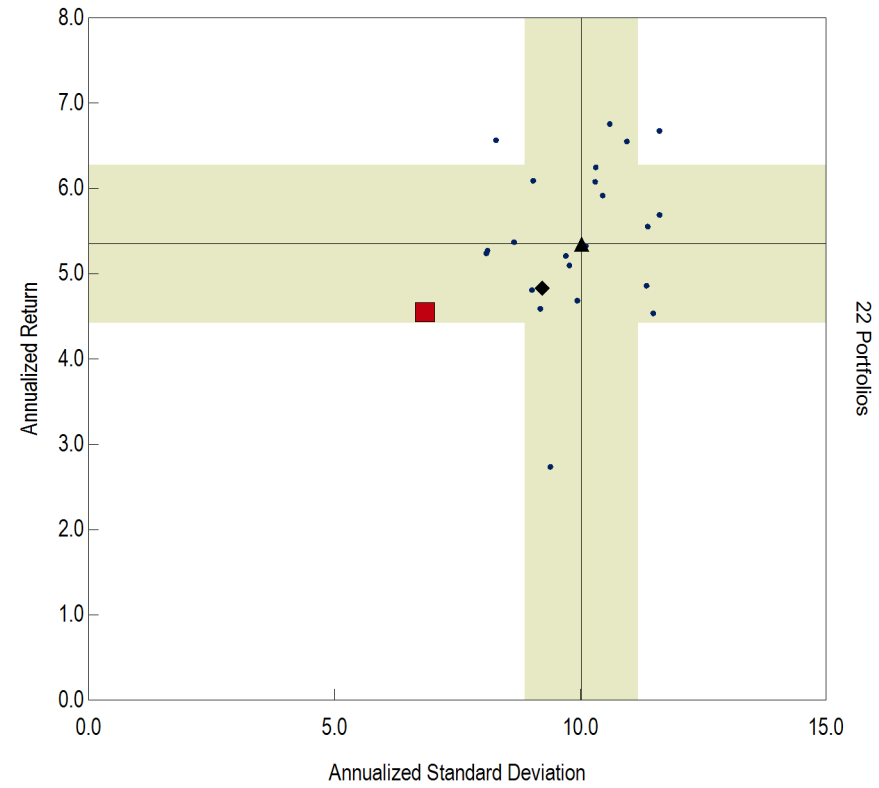
Total Fund Risk/Return

5 Years Ending March 31, 2017



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

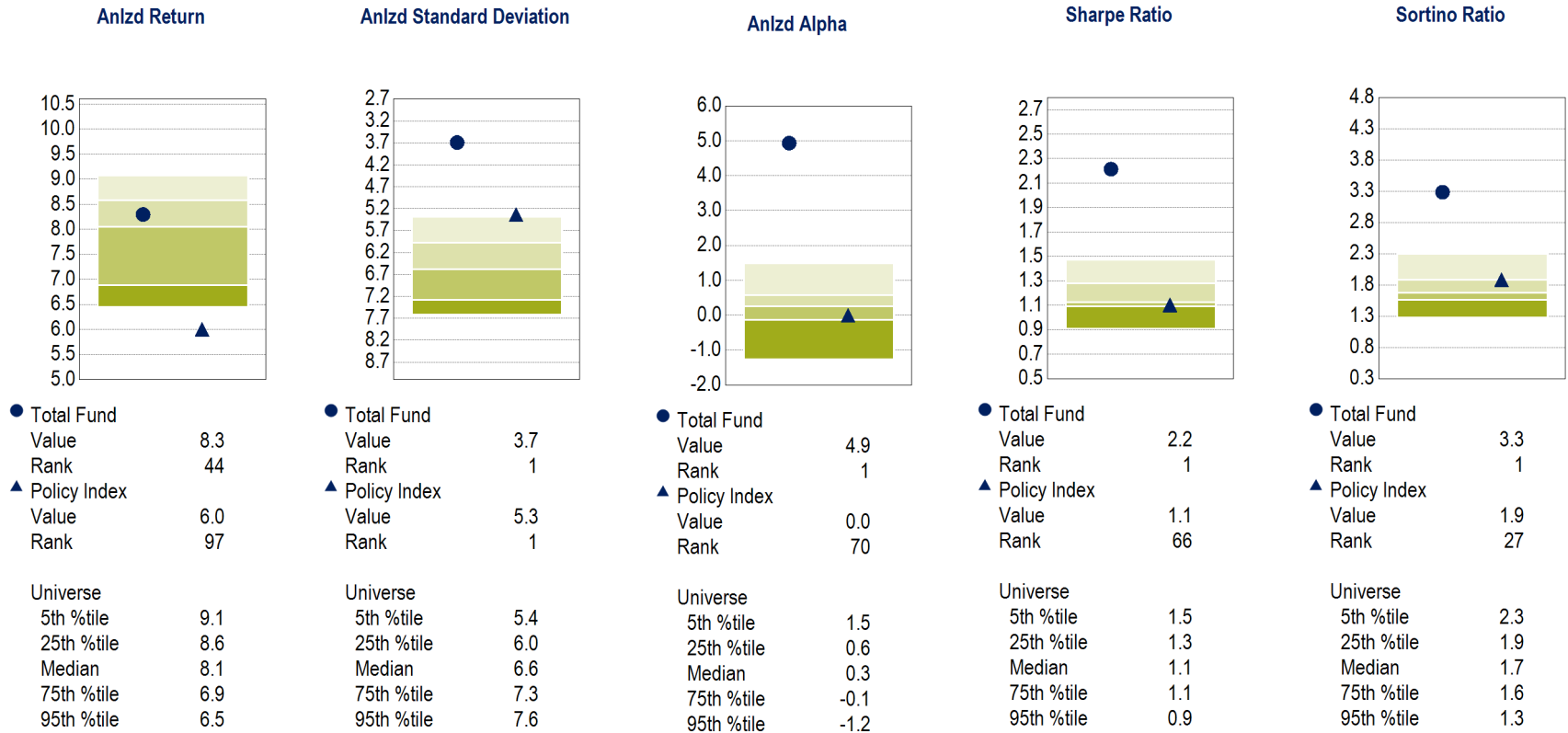
10 Years Ending March 31, 2017



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

Total Fund Risk Statistics vs. Peer Universe

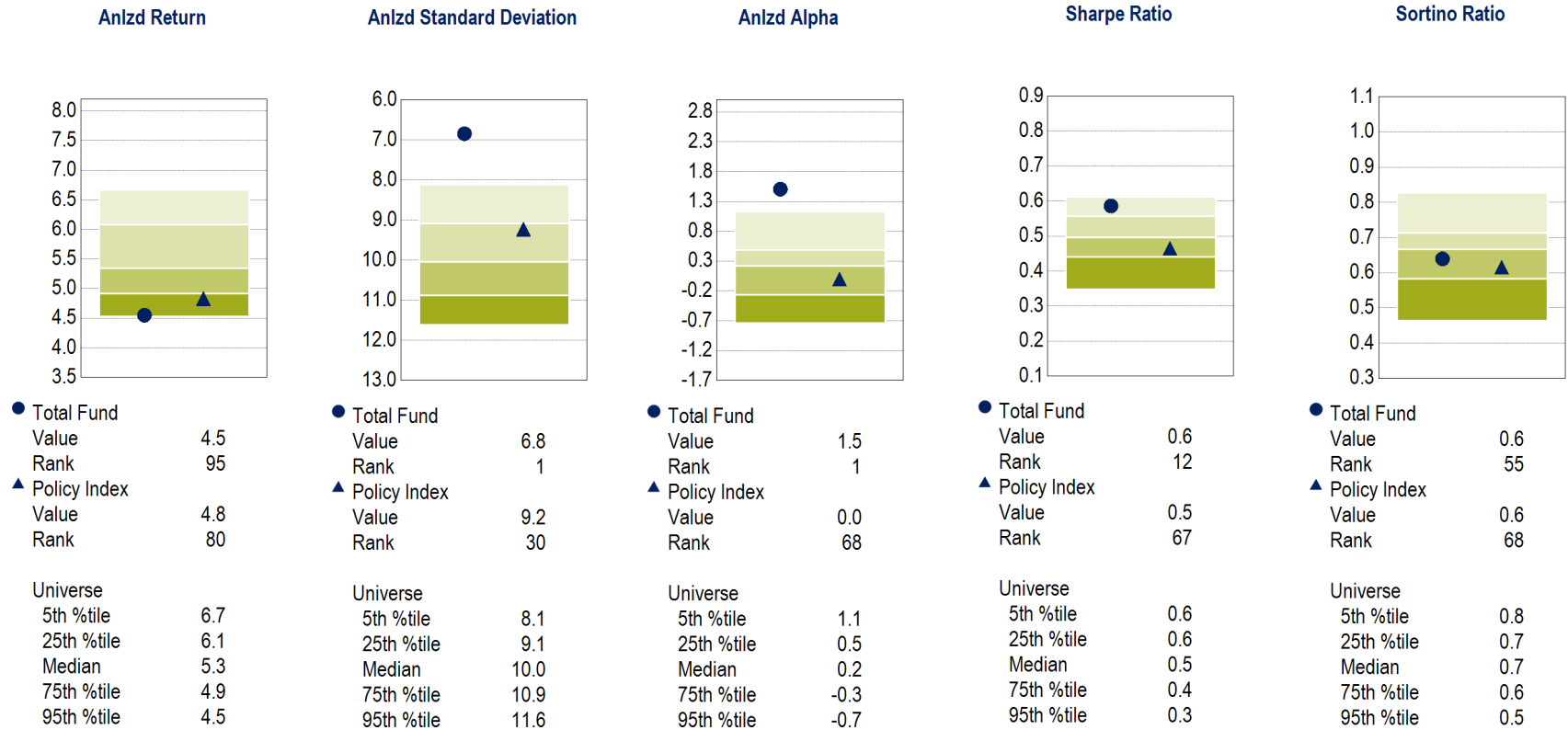
Total Fund vs. InvestorForce Public DB > \$1B Gross (USD)
5 Years



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 22 Portfolios

Total Fund Risk Statistics vs. Peer Universe

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



Sortino Ratio requires at least two negative points during the time period in order to calculate
Sample size is 22 Portfolios

San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics

1 Years Ending March 31, 2017

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Tracking Error	Info Ratio	Rank
Domestic Equity	7.5%	1.6%	99	3.2%	1	7.1%	-2.3	99
Russell 3000	--	18.1%	51	6.7%	40	0.0%	--	--
International Developed	1.4%	12.6%	41	8.2%	61	11.1%	0.1	26
MSCI EAFE	--	11.7%	67	9.0%	75	0.0%	--	--
International Emerging	5.1%	8.7%	--	9.1%	--	3.4%	-2.5	--
MSCI Emerging Markets	--	17.2%	--	10.8%	--	0.0%	--	--
U.S. Credit Strategies	11.8%	15.4%	1	2.6%	4	3.8%	0.9	1
50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index	--	11.7%	3	2.7%	5	0.0%	--	--
Non-U.S. Credit Composite	12.9%	15.1%	--	3.3%	--	9.0%	1.4	--
BofA Merrill Lynch Euro High Yield Constrained	--	2.3%	--	7.8%	--	0.0%	--	--
Non-U.S. Core Composite	0.0%	-2.3%	87	7.1%	83	4.0%	-0.1	86
BBgBarc Global Aggregate TR	--	-1.9%	85	6.5%	75	0.0%	--	--
Emerging Markets Debt Composite	7.3%	14.5%	12	6.8%	46	7.1%	1.0	34
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	7.3%	75	9.1%	73	0.0%	--	--
Alpha Pool Composite	19.2%	16.7%	3	2.9%	45	2.9%	4.6	1
91 Day T-Bill + 3%	--	3.4%	99	0.0%	1	0.0%	--	--

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Private Equity Composite	13.2%	8.0%	--	3.3%	--
Cambridge Associates Global All PE (Qtr Lag)	--	9.9%	--	4.8%	--
Real Estate Composite	6.0%	9.7%	11	2.3%	40
NCREIF Property Index 1 Qtr Lag	--	8.0%	39	3.3%	70
Real Assets Composite	4.6%	6.4%	--	4.8%	--
Bloomberg Commodity Index	--	8.7%	--	12.1%	--

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

San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics

3 Years Ending March 31, 2017

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Tracking Error	Info Ratio	Rank
Domestic Equity	7.5%	-1.2%	99	4.7%	1	14.1%	-0.8	76
Russell 3000	--	9.8%	25	10.7%	53	0.0%	--	--
International Developed	1.4%	3.4%	8	23.7%	99	17.5%	0.2	25
MSCI EAFE	--	0.5%	40	12.2%	86	0.0%	--	--
International Emerging	5.1%	-1.0%	--	12.6%	--	5.3%	-0.4	--
MSCI Emerging Markets	--	1.2%	--	16.1%	--	0.0%	--	--
U.S. Credit Strategies	11.8%	6.1%	4	3.2%	5	3.8%	0.5	5
50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index	--	4.2%	33	3.9%	44	0.0%	--	--
Non-U.S. Credit Composite	12.9%	5.1%	--	3.3%	--	10.2%	0.9	--
BofA Merrill Lynch Euro High Yield Constrained	--	-3.9%	--	10.0%	--	0.0%	--	--
Non-U.S. Core Composite	0.0%	-5.0%	97	8.1%	86	5.4%	-0.9	98
BBgBarc Global Aggregate TR	--	-0.4%	79	5.0%	52	0.0%	--	--
Emerging Markets Debt Composite	7.3%	5.0%	45	6.1%	29	5.3%	0.6	51
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	1.8%	66	8.4%	66	0.0%	--	--
Alpha Pool Composite	19.2%	3.7%	26	3.9%	52	3.9%	0.1	32
91 Day T-Bill + 3%	--	3.2%	29	0.1%	1	0.0%	--	--

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Private Equity Composite	13.2%	11.3%	--	4.2%	--
Cambridge Associates Global All PE (Qtr Lag)	--	8.9%	--	5.1%	--
Real Estate Composite	6.0%	11.3%	67	3.0%	40
NCREIF Property Index 1 Qtr Lag	--	11.0%	79	4.5%	55
Real Assets Composite	4.6%	-0.2%	--	5.5%	--
Bloomberg Commodity Index	--	-13.9%	--	13.6%	--

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

San Bernardino County Employees' Retirement Association

Total Fund Risk Statistics

5 Years Ending March 31, 2017

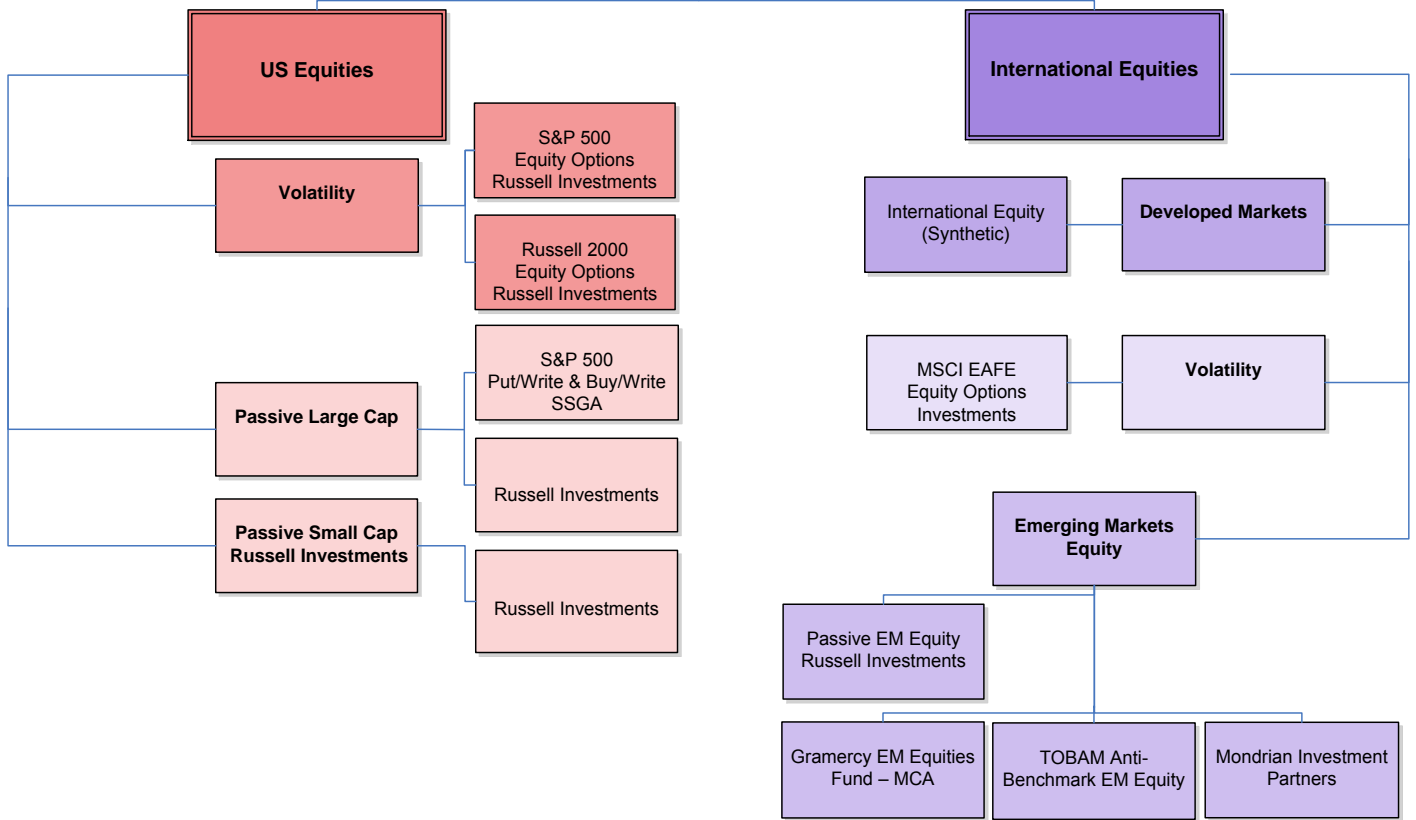
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Tracking Error	Info Ratio	Rank
Domestic Equity	7.5%	1.6%	99	4.9%	1	12.5%	-0.9	91
Russell 3000	--	13.2%	21	10.5%	35	0.0%	--	--
International Developed	1.4%	15.4%	1	23.0%	99	16.4%	0.6	5
MSCI EAFE	--	5.8%	53	13.2%	81	0.0%	--	--
International Emerging	5.1%	-0.9%	--	13.4%	--	4.4%	-0.4	--
MSCI Emerging Markets	--	0.8%	--	15.3%	--	0.0%	--	--
U.S. Credit Strategies	11.8%	8.2%	3	2.9%	1	3.8%	0.6	3
50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index	--	5.8%	15	3.5%	7	0.0%	--	--
Non-U.S. Credit Composite	12.9%	8.3%	--	3.7%	--	9.8%	0.5	--
BofA Merrill Lynch Euro High Yield Constrained	--	3.3%	--	10.9%	--	0.0%	--	--
Non-U.S. Core Composite	0.0%	0.5%	79	8.4%	87	6.3%	0.0	80
BBgBarc Global Aggregate TR	--	0.4%	81	4.6%	44	0.0%	--	--
Emerging Markets Debt Composite	7.3%	3.7%	59	6.6%	28	5.1%	0.3	61
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	2.1%	67	8.9%	66	0.0%	--	--
Alpha Pool Composite	19.2%	6.0%	10	3.2%	5	3.2%	0.9	20
91 Day T-Bill + 3%	--	3.1%	94	0.0%	1	0.0%	--	--

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Private Equity Composite	13.2%	12.3%	--	4.2%	--
Cambridge Associates Global All PE (Qtr Lag)	--	11.9%	--	6.4%	--
Real Estate Composite	6.0%	10.3%	86	3.3%	32
NCREIF Property Index 1 Qtr Lag	--	10.9%	84	4.4%	35
Real Assets Composite	4.6%	2.6%	--	5.4%	--
Bloomberg Commodity Index	--	-9.5%	--	13.2%	--

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

Global Equity Portfolio

Global Equity Strategies
28% +/- 10% Target Allocation Range



San Bernardino County Employees' Retirement Association

Global Equity Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Equity	1,254,047,567	13.9	3.6	99	3.6	99	5.3	99	0.2	99	3.5	99	--	--
MSCI ACWI			6.9	26	13.9	69	15.0	82	5.1	82	8.4	86	4.0	99
Excess Return			-3.3		-10.3		-9.7		-4.9		-4.9			
InvestorForce Public DB Total Eq Gross Median			6.6		14.5		16.6		6.4		9.9		5.3	
Domestic Equity	674,031,519	7.5	0.7	99	1.1	99	1.6	99	-1.2	99	1.6	99	-1.0	99
Russell 3000			5.7	32	15.0	49	18.1	51	9.8	25	13.2	21	7.5	63
Excess Return			-5.0		-13.9		-16.5		-11.0		-11.6		-8.5	
InvestorForce Public DB US Eq Gross Median			5.4		14.9		18.1		9.2		12.8		7.7	
Large Cap Equity	673,914,359	7.5	1.4	88	3.4	98	3.5	99	0.3	99	2.8	99	0.0	99
S&P 500			6.1	36	14.4	65	17.2	59	10.4	24	13.3	42	7.5	68
Excess Return			-4.7		-11.0		-13.7		-10.1		-10.5		-7.5	
eA All US Equity Gross Median			5.0		16.0		18.2		8.8		13.0		8.1	
SsgA S&P500	660,034,854	7.3	3.8	68	8.1	95	10.7	94	5.9	85	7.3	99	2.8	99
S&P 500			6.1	36	14.4	65	17.2	59	10.4	24	13.3	42	7.5	68
Excess Return			-2.3		-6.3		-6.5		-4.5		-6.0		-4.7	
eA All US Equity Gross Median			5.0		16.0		18.2		8.8		13.0		8.1	
Russell US Large Cap Volatility	13,879,505	0.2	-51.1	99	-65.7	99	-74.3	99	-60.5	99	-46.3	99	--	--
S&P 500			6.1	36	14.4	65	17.2	59	10.4	24	13.3	42	7.5	68
Excess Return			-57.2		-80.1		-91.5		-70.9		-59.6			
eA All US Equity Gross Median			5.0		16.0		18.2		8.8		13.0		8.1	

San Bernardino County Employees' Retirement Association

Global Equity Strategies Performance Detail - Gross

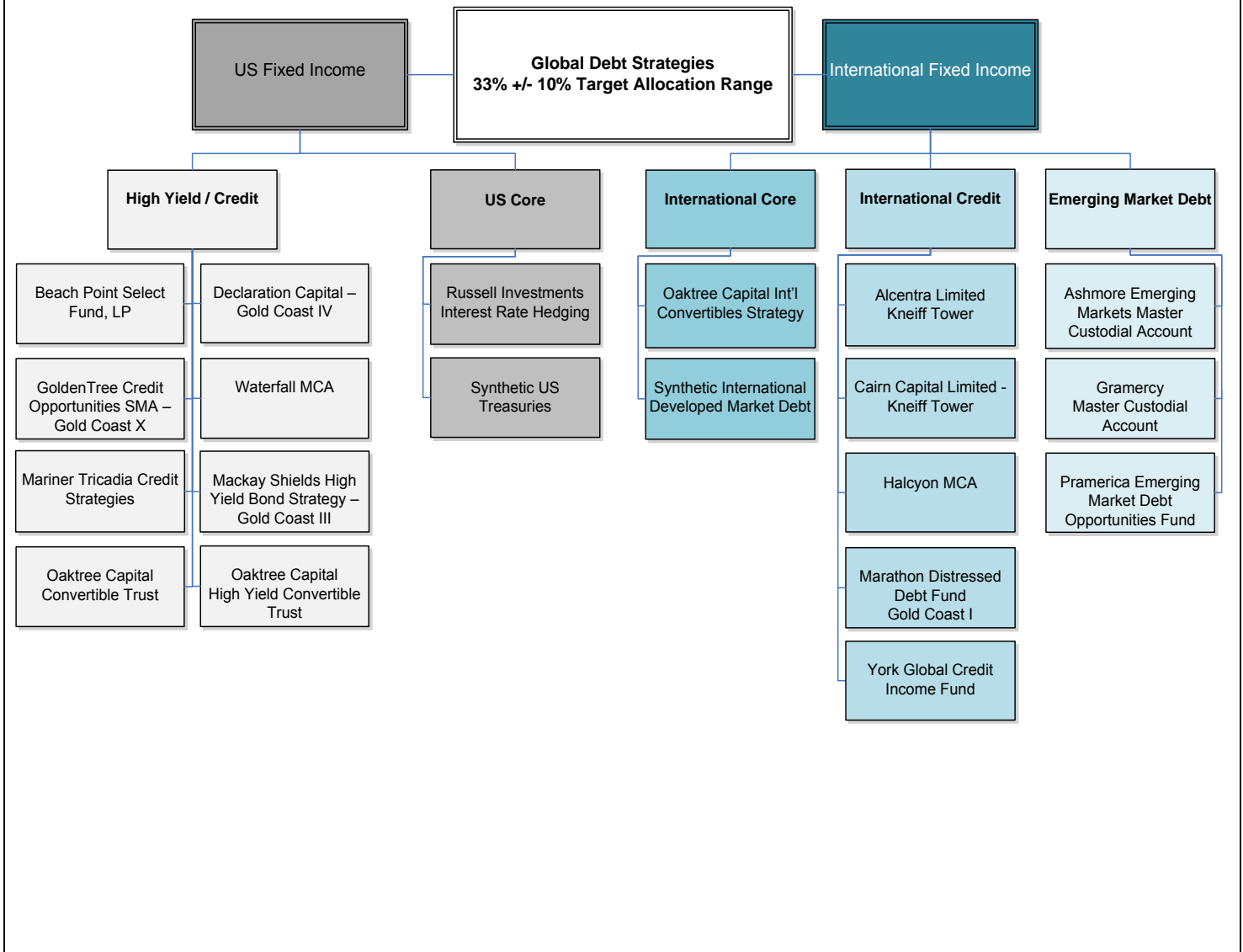
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Small Cap Equity	94,681	0.0	0.2	81	0.5	99	0.6	99	-15.7	99	-32.9	99	--	--
<i>Russell 2000</i>			<u>2.5</u>	53	<u>21.6</u>	41	<u>26.2</u>	32	<u>7.2</u>	63	<u>12.4</u>	68	<u>7.1</u>	81
Excess Return			-2.3		-21.1		-25.6		-22.9		-45.3			
<i>eA US Small Cap Equity Gross Median</i>			2.7		20.7		24.0		8.0		13.4		8.4	
Russell US Small Cap Volatility	94,681	0.0	0.2	93	0.5	99	0.6	99	-15.7	99	-32.9	99	--	--
<i>Russell 2000</i>			<u>2.5</u>	81	<u>21.6</u>	17	<u>26.2</u>	12	<u>7.2</u>	74	<u>12.4</u>	63	<u>7.1</u>	76
Excess Return			-2.3		-21.1		-25.6		-22.9		-45.3			
<i>eA All US Equity Gross Median</i>			5.0		16.0		18.2		8.8		13.0		8.1	
LongShort Equity	22,479	0.0	-6.7	99	-11.8	99	-10.2	99	-6.9	99	-0.3	99	--	--
<i>Credit Suisse Long Shrt Eq USD</i>			<u>3.5</u>	99	<u>5.2</u>	99	<u>3.9</u>	99	<u>2.4</u>	99	<u>5.4</u>	99	<u>4.0</u>	99
Excess Return			-10.2		-17.0		-14.1		-9.3		-5.7			
<i>InvestorForce Public DB US Eq Gross Median</i>			5.4		14.9		18.1		9.2		12.8		7.7	
Passport	22,479	0.0	-6.1	99	-15.2	99	-15.0	99	-4.2	99	3.4	99	--	--

San Bernardino County Employees' Retirement Association

Global Equity Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
International Equity	580,016,048	6.4	7.5	88	7.1	99	11.2	78	1.2	99	5.6	84	2.4	1
MSCI EAFE			<u>7.2</u>	90	<u>13.3</u>	64	<u>11.7</u>	75	<u>0.5</u>	99	<u>5.8</u>	81	<u>1.1</u>	99
Excess Return			0.3		-6.2		-0.5		0.7		-0.2		1.3	
InvestorForce Public DB Gbl Eq Gross Median			8.4		15.8		15.7		8.3		12.5		1.4	
International Developed	122,004,261	1.4	0.2	99	5.2	88	12.6	41	3.4	8	15.4	1	5.0	6
MSCI EAFE			<u>7.2</u>	83	<u>13.3</u>	44	<u>11.7</u>	67	<u>0.5</u>	40	<u>5.8</u>	53	<u>1.1</u>	60
Excess Return			-7.0		-8.1		0.9		2.9		9.6		3.9	
InvestorForce Public DB Dev Mkt ex-US Eq Gross Median			8.4		13.0		12.4		0.1		5.9		1.5	
Russell International Volatility	122,004,261	1.4	0.2	99	5.2	95	12.6	37	3.4	29	14.1	2	--	--
MSCI EAFE			<u>7.2</u>	67	<u>13.3</u>	50	<u>11.7</u>	51	<u>0.5</u>	83	<u>5.8</u>	86	<u>1.1</u>	89
Excess Return			-7.0		-8.1		0.9		2.9		8.3			
eA All EAFE Equity Gross Median			7.7		13.3		11.7		2.1		7.4		2.9	
International Emerging	458,011,787	5.1	9.6	--	7.7	--	8.7	--	-1.0	--	-0.9	--	2.4	--
MSCI Emerging Markets			<u>11.4</u>	--	<u>16.4</u>	--	<u>17.2</u>	--	<u>1.2</u>	--	<u>0.8</u>	--	<u>2.7</u>	--
Excess Return			-1.8		-8.7		-8.5		-2.2		-1.7		-0.3	
Mondrian	131,440,655	1.5	10.9	80	9.7	88	12.2	86	0.1	88	0.4	92	4.2	46
MSCI Emerging Markets			<u>11.4</u>	70	<u>16.4</u>	50	<u>17.2</u>	63	<u>1.2</u>	79	<u>0.8</u>	88	<u>2.7</u>	78
Excess Return			-0.5		-6.7		-5.0		-1.1		-0.4		1.5	
eA Emg Mkts Equity Gross Median			12.2		16.3		18.8		3.0		2.9		4.1	
Gramercy Emerging Market Equity	69,642,215	0.8	9.2	95	16.1	53	18.9	50	3.9	34	--	--	--	--
MSCI Emerging Markets			<u>11.4</u>	70	<u>16.4</u>	50	<u>17.2</u>	63	<u>1.2</u>	79	<u>0.8</u>	88	<u>2.7</u>	78
Excess Return			-2.2		-0.3		1.7		2.7					
eA Emg Mkts Equity Gross Median			12.2		16.3		18.8		3.0		2.9		4.1	
Tobam	256,829,750	2.8	9.1	95	4.9	97	1.3	99	--	--	--	--	--	--
MSCI Emerging Markets			<u>11.4</u>	70	<u>16.4</u>	50	<u>17.2</u>	63	<u>1.2</u>	79	<u>0.8</u>	88	<u>2.7</u>	78
Excess Return			-2.3		-11.5		-15.9							
eA Emg Mkts Equity Gross Median			12.2		16.3		18.8		3.0		2.9		4.1	

Global Debt Strategies



San Bernardino County Employees' Retirement Association

Global Debt Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Fixed	2,884,310,842	31.9	4.0	1	9.9	1	15.0	1	5.5	1	7.4	1	--	--
<i>InvestorForce Public DB Total Fix Inc Gross Median</i>			1.3		0.9		2.9		2.8		3.1		5.1	
U.S. Credit Strategies	1,063,304,298	11.8	4.0	5	10.2	2	15.4	1	6.1	4	8.2	3	8.7	1
<i>50% Credit Suisse Leveraged Loan Index / 50% BofA ML US HY BB-B Rated Constrained Index</i>			<u>1.7</u>	58	<u>7.7</u>	4	<u>11.7</u>	3	<u>4.2</u>	33	<u>5.8</u>	15	<u>5.6</u>	31
<i>Excess Return</i>			2.3		2.5		3.7		1.9		2.4		3.1	
<i>BofA Merrill Lynch US High Yield Master II TR</i>			2.7	15	10.4	2	16.9	1	4.6	17	6.8	5	7.3	13
<i>eA Global Credit Fixed Income Gross Median</i>			1.8		1.0		4.2		1.8		3.6		4.6	
AG Capital	2,147,017	0.0	0.0	99	16.1	1	1.4	82	-0.8	84	6.5	7	--	--
Golden Tree Asset Management	378,664,696	4.2	7.6	1	14.4	1	21.7	1	11.3	1	12.4	1	--	--
Beach Point Capital (Formerly Post)	141,574,648	1.6	2.4	19	12.4	1	20.5	1	7.4	1	10.8	1	--	--
Golden Tree Distressed Debt	26,974,768	0.3	0.0	99	-1.0	87	-3.0	93	10.5	1	13.6	1	--	--
Mackay / Gold Coast	101,840,064	1.1	5.0	4	10.8	1	17.7	1	3.7	42	6.9	5	7.9	5
Mariner Tricadia	67,471,948	0.7	3.2	10	4.6	12	5.1	38	1.2	67	5.2	24	--	--
MD SASS Waterfall Victoria	28,253,215	0.3	-0.4	--	5.8	--	11.7	--	--	--	--	--	--	--
OCM Convertible	17,050,148	0.2	2.9	14	8.3	3	15.0	1	0.9	74	6.5	7	--	--
OCM High Income	17,030,544	0.2	3.7	6	10.8	1	19.9	1	5.6	6	7.0	4	--	--
Russell Interest Rate Hedging	28,583,420	0.3	-9.5	99	21.2	1	4.4	44	-23.7	99	-22.4	99	--	--
Stone Tower Credit (Apollo)	80,623,883	0.9	2.1	47	8.1	15	14.6	6	3.9	26	7.0	7	--	--
Sutherland REIT Holdings	92,307,841	1.0	1.9	--	5.0	--	6.9	--	--	--	--	--	--	--
Waterfall Asset Management	38,663,861	0.4	6.2	--	6.4	--	17.2	--	--	--	--	--	--	--
Waterfall Victoria	41,788,311	0.5	1.0	--	5.7	--	9.7	--	--	--	--	--	--	--

San Bernardino County Employees' Retirement Association

Global Debt Strategies Performance Detail - Gross

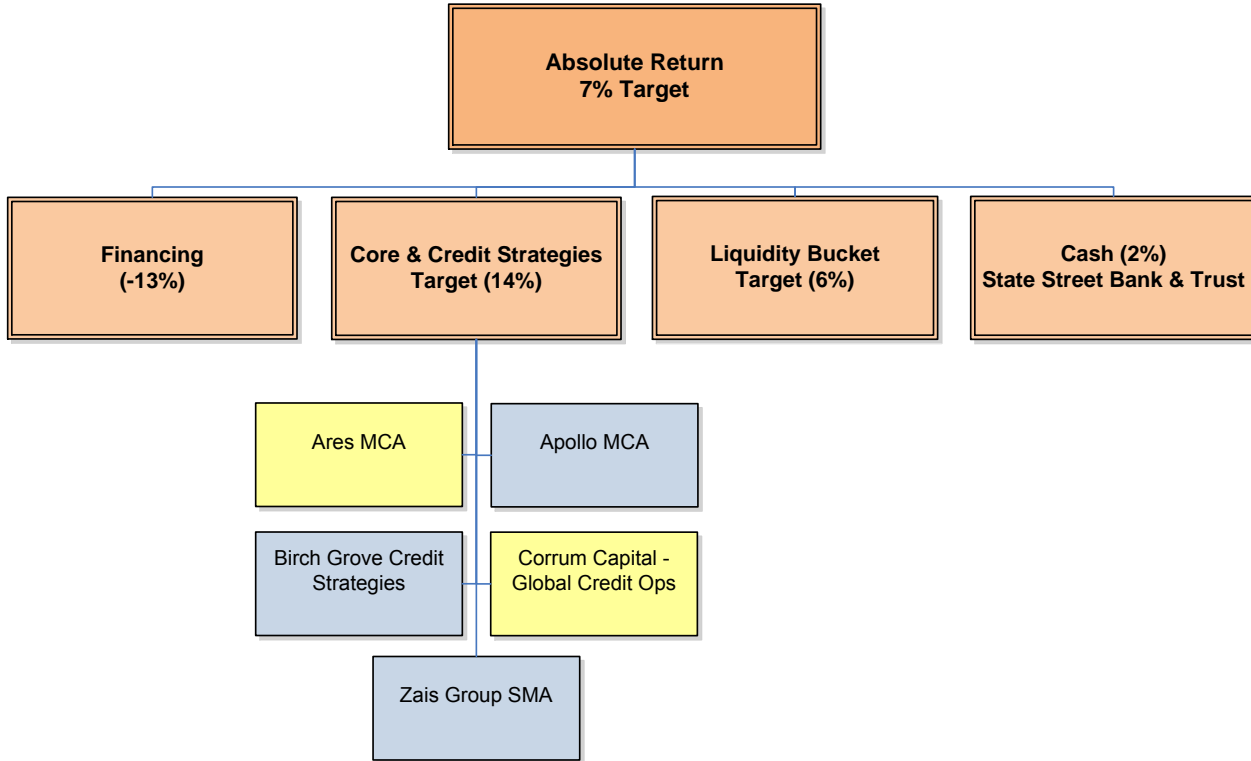
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Non-U.S. Fixed Income Composite	1,821,006,544	20.2	4.0	1	9.7	1	14.8	1	5.1	1	6.9	1	5.5	24
<i>BBgBarc Global Aggregate TR</i>			<u>1.8</u>	35	<u>-4.7</u>	99	<u>-1.9</u>	99	<u>-0.4</u>	99	<u>0.4</u>	99	<u>3.3</u>	99
Excess Return			2.2		14.4		16.7		5.5		6.5		2.2	
<i>InvestorForce Public DB Total Fix Inc Gross Median</i>			1.3		0.9		2.9		2.8		3.1		5.1	
Non-U.S. Credit Composite	1,164,299,590	12.9	5.4	--	9.8	--	15.1	--	5.1	--	8.3	--	--	--
<i>BofA Merrill Lynch Euro High Yield Constrained</i>			<u>3.1</u>	--	<u>3.1</u>	--	<u>2.3</u>	--	<u>-3.9</u>	--	<u>3.3</u>	--	<u>5.3</u>	--
Excess Return			2.3		6.7		12.8		9.0		5.0		--	
Marathon/Gold Coast	191,736,931	2.1	4.0	5	9.7	2	13.7	1	5.8	5	9.2	2	--	--
Alcentra Core European Credit	369,155,344	4.1	6.8	3	12.4	1	17.7	1	11.1	1	15.7	1	--	--
Halcyon Asset Management	114,246,243	1.3	6.0	3	24.5	1	30.4	1	--	--	--	--	--	--
<i>BofA Merrill Lynch Euro High Yield Constrained</i>			<u>3.1</u>	12	<u>3.1</u>	24	<u>2.3</u>	64	<u>-3.9</u>	94	<u>3.3</u>	58	<u>5.3</u>	34
Excess Return			2.9		21.4		28.1							
<i>eA Global Credit Fixed Income Gross Median</i>			1.8		1.0		4.2		1.8		3.6		4.6	
Oaktree Capital	36,179,020	0.4	3.2	10	3.8	18	2.6	61	-1.0	85	3.0	68	--	--
York Global Credit	145,080,667	1.6	5.1	4	13.0	1	21.3	1	6.3	3	--	--	--	--
<i>BofA Merrill Lynch Euro High Yield Constrained</i>			<u>3.1</u>	12	<u>3.1</u>	24	<u>2.3</u>	64	<u>-3.9</u>	94	<u>3.3</u>	58	<u>5.3</u>	34
Excess Return			2.0		9.9		19.0		10.2					
<i>eA Global Credit Fixed Income Gross Median</i>			1.8		1.0		4.2		1.8		3.6		4.6	
Caim Composite	307,084,958	3.4	5.3	4	4.8	11	12.3	3	1.7	55	4.1	47	--	--
<i>BofA Merrill Lynch Euro High Yield Constrained</i>			<u>3.1</u>	12	<u>3.1</u>	24	<u>2.3</u>	64	<u>-3.9</u>	94	<u>3.3</u>	58	<u>5.3</u>	34
Excess Return			2.2		1.7		10.0		5.6		0.8			
<i>eA Global Credit Fixed Income Gross Median</i>			1.8		1.0		4.2		1.8		3.6		4.6	
Non-U.S. Core Composite	816,427	0.0	2.7	29	-1.3	73	-2.3	87	-5.0	97	0.5	79	--	--
<i>BBgBarc Global Aggregate TR</i>			<u>1.8</u>	61	<u>-4.7</u>	90	<u>-1.9</u>	85	<u>-0.4</u>	79	<u>0.4</u>	81	<u>3.3</u>	85
Excess Return			0.9		3.4		-0.4		-4.6		0.1			
<i>eA All Global Fixed Inc Gross Median</i>			2.0		1.4		3.1		1.9		2.9		4.5	
Bluebay/Goldcoast	816,427	0.0	2.7	29	-1.3	73	-2.3	87	-5.0	97	0.4	80	--	--
<i>BBgBarc Global Aggregate TR</i>			<u>1.8</u>	61	<u>-4.7</u>	90	<u>-1.9</u>	85	<u>-0.4</u>	79	<u>0.4</u>	81	<u>3.3</u>	85
Excess Return			0.9		3.4		-0.4		-4.6		0.0			
<i>eA All Global Fixed Inc Gross Median</i>			2.0		1.4		3.1		1.9		2.9		4.5	

San Bernardino County Employees' Retirement Association

Global Debt Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Emerging Markets Debt Composite	656,706,955	7.3	1.5	99	9.7	7	14.5	12	5.0	45	3.7	59	4.0	91
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified			5.2	41	3.2	84	7.3	75	1.8	66	2.1	67	5.6	69
Excess Return			-3.7		6.5		7.2		3.2		1.6		-1.6	
eA All Emg Mkts Fixed Inc Gross Median			4.6		5.1		9.7		4.6		4.6		7.0	
Ashmore Emerging Markets Liquid Investments	162,264,528	1.8	5.2	41	3.2	84	7.3	75	1.8	66	2.1	67	5.6	69
JP Morgan GBI - EM Global Diversified Index			6.5	24	2.7	89	5.5	89	-2.7	94	-1.6	95	4.1	89
Excess Return			-1.3		0.5		1.8		4.5		3.7		1.5	
eA All Emg Mkts Fixed Inc Gross Median			4.6		5.1		9.7		4.6		4.6		7.0	
Ashmore Local Currency	85,748,959	0.9	6.7	1	6.2	23	9.9	19	-1.9	89	-1.9	98	--	--
JP Morgan ELMI+			5.2	3	2.9	40	3.3	49	-2.4	92	-1.4	97	1.9	96
Excess Return			1.5		3.3		6.6		0.5		-0.5			
JP Morgan EMBI Global Index			3.9	9	3.2	38	8.8	21	5.7	4	5.3	22	6.9	11
eA All Global Fixed Inc Gross Median			2.0		1.4		3.1		1.9		2.9		4.5	
GAM Emerging Markets Rates	0	0.0	2.9	91	4.4	62	5.9	86	3.3	58	--	--	--	--
JP Morgan ELMI+			5.2	41	2.9	87	3.3	98	-2.4	91	-1.4	91	1.9	99
Excess Return			-2.3		1.5		2.6		5.7					
JP Morgan EMBI Global Index			3.9	71	3.2	84	8.8	59	5.7	28	5.3	39	6.9	54
eA All Emg Mkts Fixed Inc Gross Median			4.6		5.1		9.7		4.6		4.6		7.0	
Gramercy Funds Management LLC	318,796,027	3.5	-3.0	99	12.5	3	15.2	8	9.6	1	--	--	--	--
JP Morgan ELMI+			5.2	41	2.9	87	3.3	98	-2.4	91	-1.4	91	1.9	99
Excess Return			-8.2		9.6		11.9		12.0					
JP Morgan EMBI Global Index			3.9	71	3.2	84	8.8	59	5.7	28	5.3	39	6.9	54
eA All Emg Mkts Fixed Inc Gross Median			4.6		5.1		9.7		4.6		4.6		7.0	
Prudential Investment Management	89,897,440	1.0	9.5	1	12.5	3	21.7	3	--	--	--	--	--	--
JP Morgan ELMI+			5.2	41	2.9	87	3.3	98	-2.4	91	-1.4	91	1.9	99
Excess Return			4.3		9.6		18.4							
JP Morgan EMBI Global Index			3.9	71	3.2	84	8.8	59	5.7	28	5.3	39	6.9	54
eA All Emg Mkts Fixed Inc Gross Median			4.6		5.1		9.7		4.6		4.6		7.0	

Absolute Return (Alpha Pool)

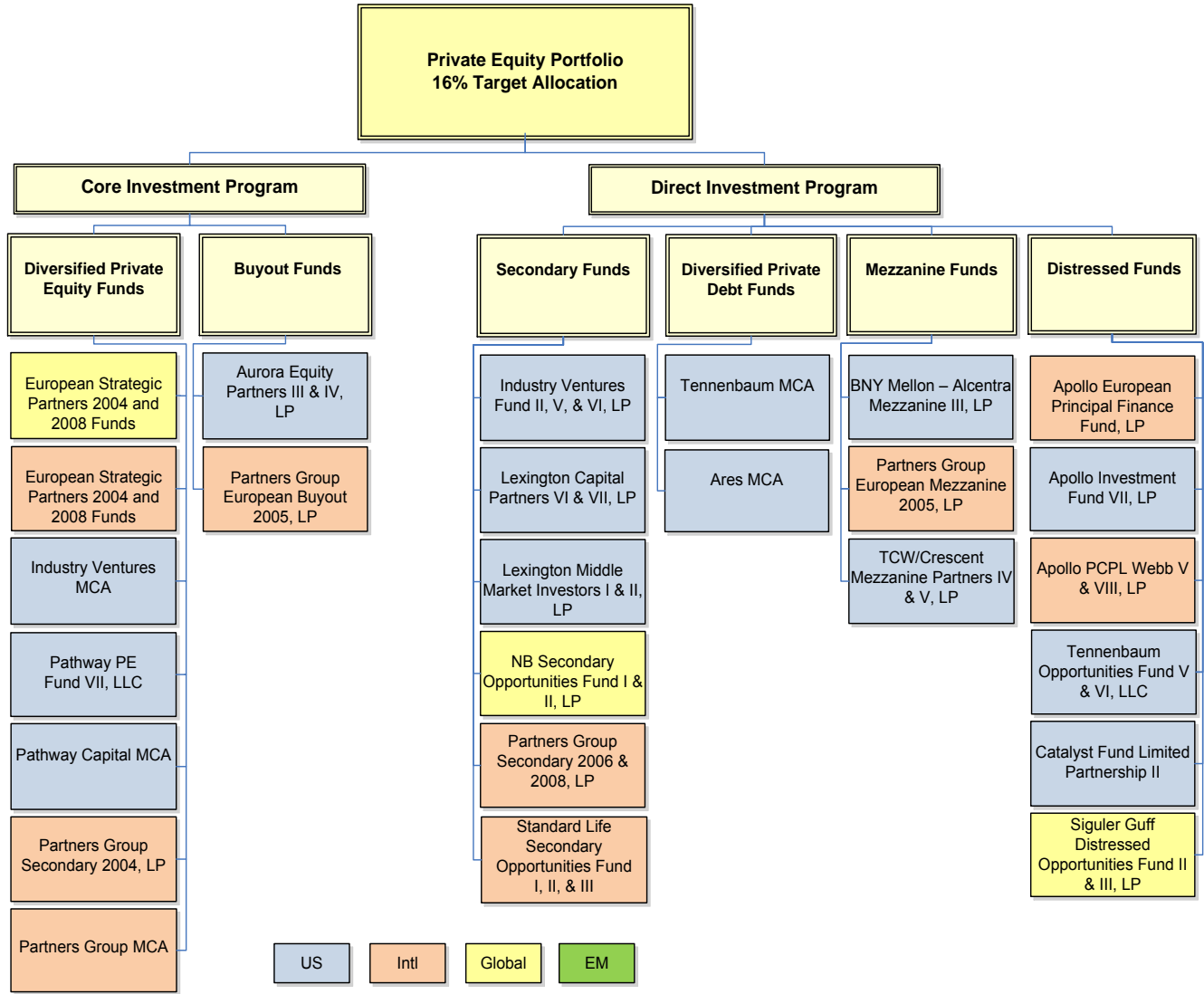


San Bernardino County Employees' Retirement Association

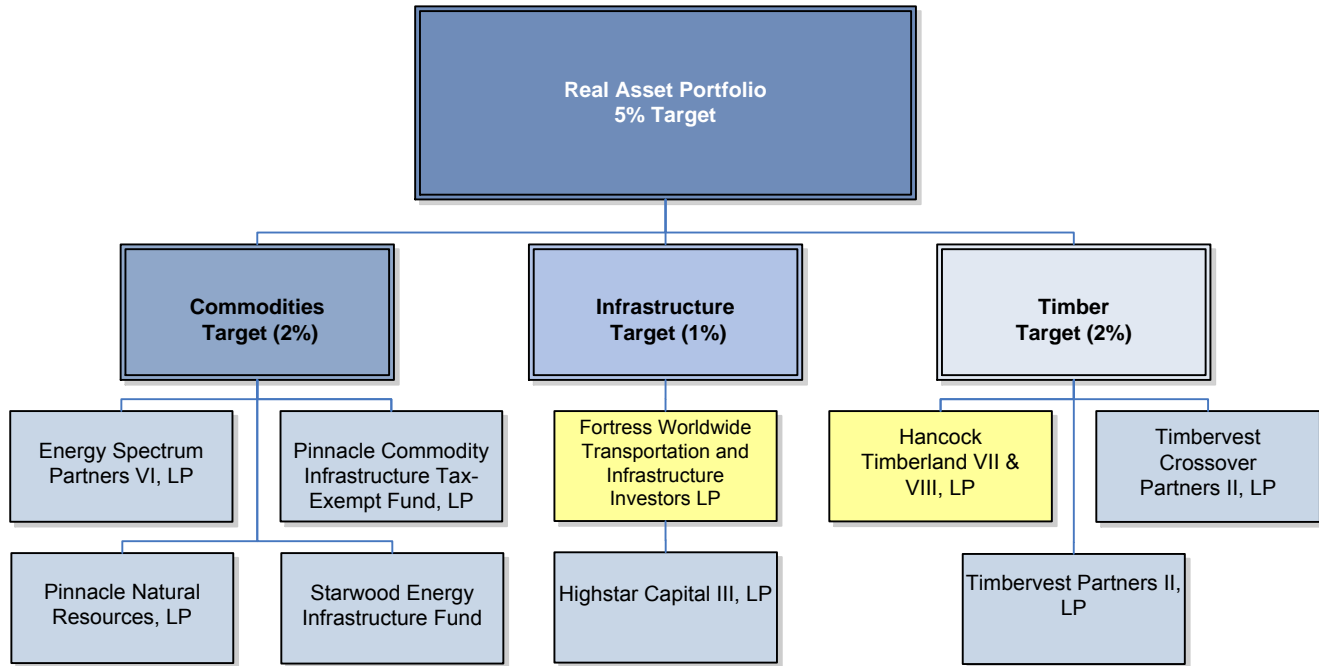
Alpha Pool Strategies Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Alpha Pool Composite	1,738,385,994	19.2	3.4	10	12.5	7	16.7	3	3.7	26	6.0	10	4.3	1
<i>91 Day T-Bill + 3%</i>			<u>0.9</u>	84	<u>2.6</u>	99	<u>3.4</u>	99	<u>3.2</u>	29	<u>3.1</u>	94	<u>3.6</u>	1
Excess Return			2.5		9.9		13.3		0.5		2.9		0.7	
Alpha Liquidity (Ssga)	156,120,902	1.7	0.2	99	0.5	57	0.7	68	0.4	66	0.4	81	--	--
Apollo Global Management	11,526,998	0.1	14.6	1	34.5	1	40.9	1	--	--	--	--	--	--
Apollo SCRF III	32,478,034	0.4	3.2	--	--	--	--	--	--	--	--	--	--	--
Ares Eco Master Fund II	214,029,804	2.4	7.1	1	--	--	--	--	--	--	--	--	--	--
Ares Strategic Investment	231,467,878	2.6	2.0	50	8.0	15	9.7	19	--	--	--	--	--	--
Birch Grove Credit Strategies	115,347,627	1.3	-0.3	99	12.9	1	6.9	31	4.3	21	--	--	--	--
Sterling Stamos	181,419,985	2.0	3.6	13	10.9	3	12.4	12	5.5	5	5.5	19	2.3	94
Stone Tower Off (Apollo)	377,054,846	4.2	2.3	43	7.8	15	18.0	1	5.9	2	7.9	3	--	--
Zais	127,845,666	1.4	6.5	2	23.0	1	33.5	1	6.4	2	9.6	1	--	--
Zais Group Invest Advisors	232,591,634	2.6	6.5	2	26.7	1	36.7	1	8.8	1	9.5	1	--	--
Zais Zephyr A 6 LP	29,207,942	0.3	-0.7	--	13.5	--	18.6	--	--	--	--	--	--	--
Apollo Accord	3,000,000	0.0	--	--	--	--	--	--	--	--	--	--	--	--

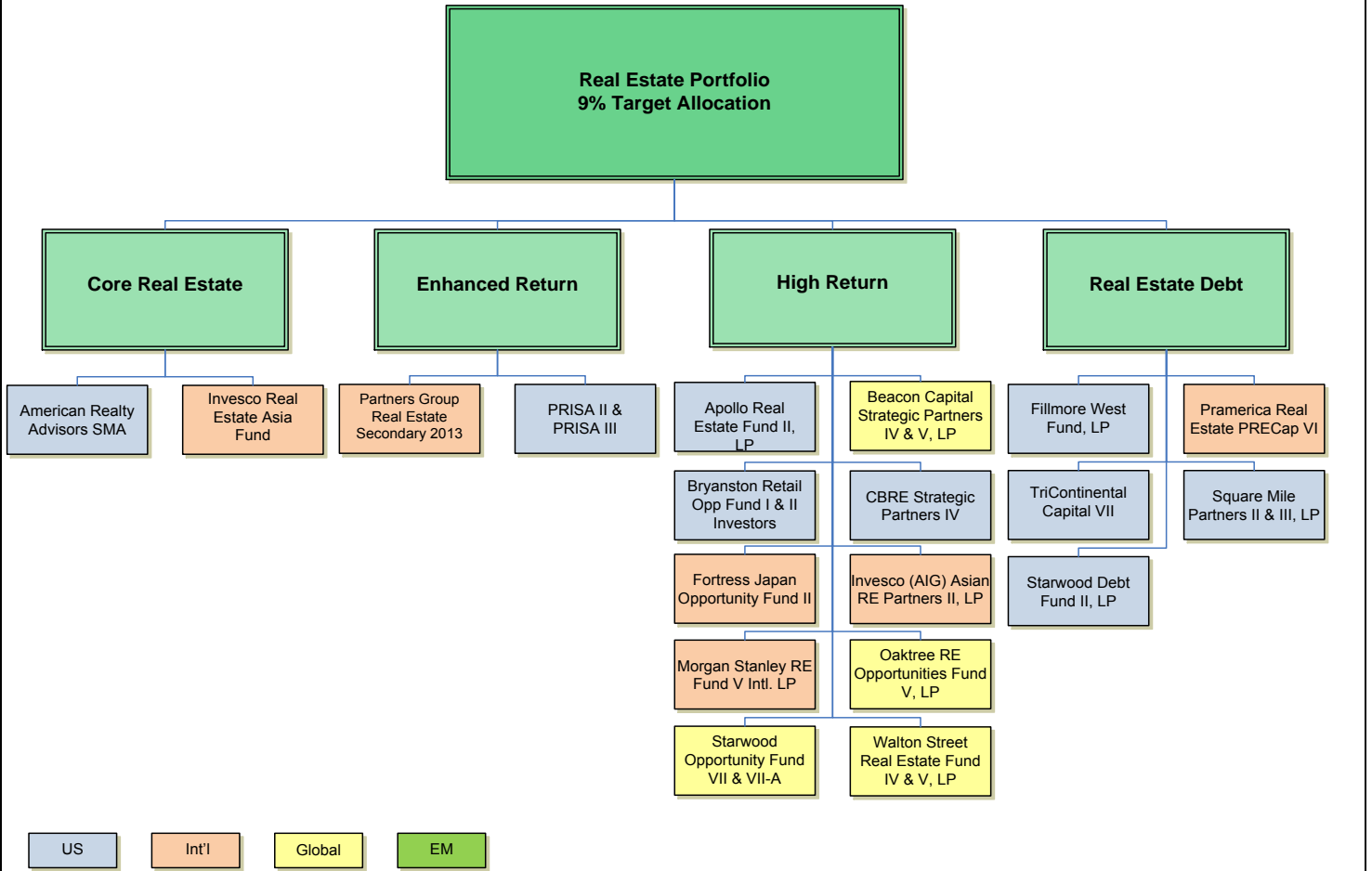
Private Equity



Real Asset Portfolio



Real Estate



San Bernardino County Employees' Retirement Association

Alternatives Performance Detail - Gross

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Private Equity Composite	1,191,232,146	13.2	2.1	--	8.1	--	8.0	--	11.3	--	12.3	--	8.7	--
Cambridge Associates Global All PE (Qtr Lag)			<u>2.8</u>	--	<u>9.3</u>	--	<u>9.9</u>	--	<u>8.9</u>	--	<u>11.9</u>	--	<u>9.1</u>	--
Excess Return			-0.7		-1.2		-1.9		2.4		0.4		-0.4	
Russell 3000			5.7	--	15.0	--	18.1	--	9.8	--	13.2	--	7.5	--
Cambridge Associates US All PE (1 Qtr Lag)			4.7	--	13.0	--	13.3	--	9.9	--	13.0	--	10.0	--
Real Estate Composite	537,821,614	6.0	1.1	78	5.2	31	9.7	11	11.3	67	10.3	86	2.8	99
NCREIF Property Index 1 Qtr Lag			<u>1.7</u>	51	<u>5.6</u>	30	<u>8.0</u>	39	<u>11.0</u>	79	<u>10.9</u>	84	<u>6.9</u>	1
Excess Return			-0.6		-0.4		1.7		0.3		-0.6		-4.1	
InvestorForce Public DB Real Estate Pub+Priv Gross Median			1.7		4.4		7.6		11.5		11.6		5.6	
Pramerica Real Estate Capital VI	7,572,934	0.1	9.3	--	--	--	--	--	--	--	--	--	--	--
FPA SB Hunter	78,885	0.0	-9.3	99	--	--	--	--	--	--	--	--	--	--
eA US REIT Gross Median			0.9		-2.7		3.1		10.6		10.2		5.7	
Real Assets Composite	415,426,114	4.6	-0.1	--	2.7	--	6.4	--	-0.2	--	2.6	--	1.9	--
Bloomberg Commodity Index			-2.3	--	-3.6	--	8.7	--	-13.9	--	-9.5	--	-6.2	--
Excess Return			2.2		6.3		-2.3		13.7		12.1		8.1	
NCREIF Timberland 1 Qtr Lag			1.2	--	3.0	--	2.7	--	6.0	--	7.1	--	5.8	--
Timber	197,187,212	2.2	0.0	--	-0.9	--	5.0	--	2.0	--	5.7	--	2.6	--
NCREIF Timberland 1 Qtr Lag			<u>1.2</u>	--	<u>3.0</u>	--	<u>2.7</u>	--	<u>6.0</u>	--	<u>7.1</u>	--	<u>5.8</u>	--
Excess Return			-1.2		-3.9		2.3		-4.0		-1.4		-3.2	
Infrastructure	73,305,629	0.8	4.7	--	27.6	--	38.0	--	-0.9	--	0.0	--	--	--
Russell 3000			<u>5.7</u>	--	<u>15.0</u>	--	<u>18.1</u>	--	<u>9.8</u>	--	<u>13.2</u>	--	<u>7.5</u>	--
Excess Return			-1.0		12.6		19.9		-10.7		-13.2		--	
Commodities	144,933,273	1.6	-2.4	--	-2.4	--	-3.6	--	-1.7	--	0.5	--	--	--
Bloomberg Commodity Index			-2.3	--	-3.6	--	8.7	--	-13.9	--	-9.5	--	-6.2	--
Excess Return			-0.1		1.2		-12.3		12.2		10.0		--	

Appendix: Private Equity and Real Estate Performance

San Bernardino County Employees' Retirement Association

Real Estate Performance Ending December 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	\$ 104,398,126	\$ 195,273,610	7.63%	2.34
American Realty Value Add	2006	\$ 13,125,215	\$ 13,125,215	\$ 32,065,484	\$ 78,885	10.94%	2.45
Apollo US Real Estate Fund II*	2015	\$ 20,000,000	\$ 11,671,912	\$ 1,779,664	\$ 11,025,687	13.38%	1.09
Beacon Capital Strategic Partners IV, L.P.	2006	\$ 39,000,000	\$ 38,000,000	\$ 30,085,408	\$ 1,526,980	-3.16%	0.83
Beacon Capital Strategic Partners V, L.P.	2007	\$ 20,000,000	\$ 18,000,000	\$ 10,230,884	\$ 992,218	-7.84%	0.62
BlackRock Diamond Property Fund	2005	\$ 25,000,000	\$ 25,000,000	\$ 15,093,876	\$ 82,936	-9.45%	0.61
Bryanston Real Estate Opportunity Fund II, L.P.	2009	\$ 20,000,000	\$ 8,589,256	\$ 9,103,079	\$ 2,820,819	10.50%	1.39
Bryanston Retail Opportunity Fund, L.P.	2004	\$ 20,000,000	\$ 8,228,165	\$ 18,492,031	\$ 9,249,050	71.06%	3.37
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	\$ 2,432,836	\$ 1,386,122	-23.72%	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	\$ 12,230,384	\$ 9,715,712	1.72%	1.12
Fortress Japan Opportunity Fund II	2012	\$ 21,739,130	\$ 8,237,703	\$ 4,953,358	\$ 18,401,351	24.47%	2.83
Invesco Asian Real Estate Partners II (USD), LP	2007	\$ 20,000,000	\$ 8,393,368	\$ 9,645,314	\$ 1,364,904	6.87%	1.31
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	\$ 4,047,516	\$ 57,731,124	7.14%	1.18
INVESCO Real Estate Fund I	2005	\$ 10,000,000	\$ 9,248,390	\$ 10,000,208	\$ 19,626	1.54%	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	\$ 31,743,090	\$ 1,621,164	7.18%	1.22
Oaktree Real Estate Opportunities V	2012	\$ 25,000,000	\$ 25,000,000	\$ 29,375,000	\$ 9,479,665	13.58%	1.54
Partners Group RE Secondary 2013 (USD) A	2014	\$ 65,000,000	\$ 29,540,619	\$ 4,000,194	\$ 36,013,253	24.39%	1.35
Prologis Japan Fund	2005	\$ 25,290,819	\$ 25,290,819	\$ 33,126,118	\$ -	4.81%	1.31
Prudential PRISA II	2004	\$ 100,000,441	\$ 100,000,441	\$ 33,334,593	\$ 113,708,902	8.44%	1.40
Prudential PRISA III	2003	\$ 40,000,300	\$ 40,104,439	\$ 39,167,157	\$ 34,498,406	19.63%	1.70
RREEF America REIT III	2004	\$ 20,000,000	\$ 20,539,309	\$ 23,555,134	\$ 111,570	3.01%	1.15
Square Mile Partners II	2007	\$ 20,000,000	\$ 19,831,232	\$ 5,247,159	\$ 372,005	-17.93%	0.28
Square Mile Partners III LP	2008	\$ 20,000,000	\$ 19,721,680	\$ 25,971,268	\$ 3,349,837	12.22%	1.49
Starwood Capital Hospitality Fund I-2	2006	\$ 30,000,000	\$ 30,000,000	\$ 23,563,726	\$ 6,255,587	-0.09%	0.99
Starwood Debt Fund II, LP	2008	\$ 20,000,000	\$ 17,599,882	\$ 21,858,788	\$ 59,202	6.46%	1.25
Starwood Opportunity Fund VII - A	2006	\$ 25,000,000	\$ 25,000,000	\$ 11,822,588	\$ 7,848,671	-2.76%	0.79
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	\$ 1,586,367	\$ 1,554,119	-19.43%	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	\$ 1,046,721	10.83%	1.64
Walton Street Real Estate Fund V, LP	2006	\$ 40,000,000	\$ 40,000,000	\$ 16,858,149	\$ 15,258,308	-2.63%	0.80
Total: San Bernardino		\$ 1,044,398,178	\$ 951,010,166	\$ 669,577,784	\$ 540,846,435	4.07%	1.26

Note: all metrics are calculated since inception

* Denotes cash adjusted

San Bernardino County Employees' Retirement Association

Private Equity Performance Ending December 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	\$ 53,347,685	\$ 46,315,663	\$ 67,831,006	\$ 1,375,930	11.83%	1.49
Apollo Investment Fund VII, L.P.	2008	\$ 10,000,000	\$ 8,414,489	\$ 14,544,839	\$ 2,759,001	24.23%	2.06
Apollo PCPL Webb V	2010	\$ 4,844,398	\$ 4,844,398	\$ 5,196,757	\$ 49,569	6.63%	1.08
Apollo PCPL Webb VIII	2010	\$ 4,734,303	\$ 4,734,303	\$ 12,146,258	\$ 2,280	46.47%	2.57
Ares European Loan Funding, S.L.P.	2016	\$ 15,803,400	\$ -	\$ -	\$ -	N/A	0.00
ARES European Loan Opp Fund	2015	\$ 15,000,000	\$ 8,413,136	\$ 7,613,498	\$ -	-6.02%	0.90
Ares Special Situations Fund IV, LP	2015	\$ 50,000,000	\$ 14,884,488	\$ 58,672	\$ 9,877,452	-19.24%	0.67
Aurora Equity Partners III, L.P.	2005	\$ 25,000,000	\$ 23,544,536	\$ 41,219,765	\$ 2,048,068	14.14%	1.72
Aurora Equity Partners IV, L.P.	2012	\$ 20,000,000	\$ 15,882,665	\$ 4,234,999	\$ 28,770,265	19.45%	1.81
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	\$ 526,859	\$ 2,506,473	2.25%	1.04
BNY Mellon - Alcentra Mezzanine III*	2012	\$ 25,000,000	\$ 23,254,658	\$ 26,583,881	\$ 40,180	12.45%	1.14
Catalyst Fund II, L.P.*	2007	\$ 10,000,000	\$ 9,934,668	\$ 4,033,566	\$ 17,420,538	12.36%	2.15
Catalyst Fund LP IV, L.P.*	2015	\$ 8,000,000	\$ 2,382,999	\$ -	\$ 2,489,747	3.02%	1.04
Charlesbank Equity Fund VIII	2015	\$ 7,500,000	\$ 4,395,496	\$ 422,938	\$ 4,244,313	6.24%	1.06
DRI II, L.P.	2009	\$ 20,000,000	\$ 19,917,669	\$ 26,302,807	\$ -	19.64%	1.33
European Strategic Partners 2004	2004	\$ 239,487,713	\$ 220,262,355	\$ 239,627,950	\$ 31,592,743	3.64%	1.23
European Strategic Partners 2008	2010	\$ 30,996,729	\$ 26,044,272	\$ 11,103,043	\$ 20,168,442	5.59%	1.19
Industry Ventures Direct, LP*	2016	\$ 25,000,000	\$ 3,250,000	\$ -	\$ 3,088,561	-4.95%	0.95
Industry Ventures Fund V	2008	\$ 10,000,000	\$ 9,500,000	\$ 20,712,664	\$ 8,238,301	32.52%	3.05
Industry Ventures Fund VI	2011	\$ 20,000,000	\$ 18,000,000	\$ 11,719,097	\$ 12,605,293	11.33%	1.35
Industry Ventures Partnership Holdings Fund II, L.P.*	2012	\$ 25,000,000	\$ 24,710,978	\$ 5,231,047	\$ 41,483,015	26.05%	1.89
Industry Ventures Partnership Holdings Fund III, L.P.*	2013	\$ 25,000,000	\$ 17,613,146	\$ 1,916,596	\$ 19,128,231	11.63%	1.19
Industry Ventures Partnership Holdings Fund III-A, L.P.*	2014	\$ 12,500,000	\$ 10,000,000	\$ 3,352,672	\$ 8,199,625	9.64%	1.16
Industry Ventures Partnership Holdings IV, LP	2016	\$ 25,000,000	\$ 2,125,000	\$ -	\$ 2,082,204	-3.04%	0.98
Industry Ventures Secondary VII, L.P.	2013	\$ 25,000,000	\$ 18,750,000	\$ 1,681,314	\$ 20,908,912	12.87%	1.20
Insight Venture Partners III Co-Invest	2014	\$ 4,000,000	\$ 3,544,000	\$ -	\$ 4,476,940	11.00%	1.26
Lexington Capital Partners VI-B	2006	\$ 25,000,000	\$ 24,591,319	\$ 27,741,319	\$ 6,212,787	6.74%	1.38
Lexington Capital Partners VII (Offshore)	2011	\$ 25,000,000	\$ 19,643,557	\$ 18,847,943	\$ 11,201,089	16.38%	1.52
Lexington Middle Market I	2005	\$ 25,000,000	\$ 24,771,942	\$ 32,558,021	\$ 6,319,835	11.42%	1.57
Lexington Middle Market II - Offshore	2008	\$ 10,000,000	\$ 9,773,736	\$ 8,895,826	\$ 5,521,132	13.53%	1.47
NB Secondary Opportunities I, LP	2005	\$ 20,000,000	\$ 18,500,843	\$ 21,507,194	\$ 3,312,283	6.98%	1.34
NB Secondary Opportunities II, LP	2008	\$ 20,000,000	\$ 16,928,365	\$ 20,775,282	\$ 5,986,245	15.58%	1.55
Partners Group Access 632, L.P.	2014	\$ 2,782,028	\$ 2,782,028	\$ -	\$ 4,282,437	16.37%	1.53
Partners Group Access 648, L.P.	2014	\$ 4,344,869	\$ 4,028,602	\$ 19,449	\$ 3,013,643	-11.59%	0.75
Partners Group Access 680 L.P.	2015	\$ 7,271,777	\$ 7,206,011	\$ -	\$ 7,411,111	2.67%	1.03
Partners Group CA Infrastructure, LP Inc	2016	\$ 6,246,500	\$ 878,461	\$ -	\$ 875,800	-0.74%	1.00
Partners Group Client Access 8 LP	2014	\$ 5,531,585	\$ 5,531,585	\$ 6,978,396	\$ 14,108,739	64.66%	3.81
Partners Group Direct Equity 2016 USD A	2016	\$ 20,000,000	\$ 5,192,424	\$ -	\$ 4,738,791	-10.50%	0.91
Partners Group Direct Investment 2012, L.P.	2013	\$ 18,065,377	\$ 16,509,621	\$ 7,235,860	\$ 15,038,543	15.32%	1.35
Partners Group European Mandate, L.P.	2004	\$ 235,215,364	\$ 196,136,552	\$ 213,008,091	\$ 46,520,294	5.45%	1.32
Partners Group European Mezzanine 2005	2005	\$ 101,076,654	\$ 101,076,654	\$ 107,970,072	\$ 17,814,961	3.58%	1.25
Partners Group Princess Learning IC LTD	2014	\$ 8,298,103	\$ 5,814,832	\$ 1,550,144	\$ 4,064,561	-3.11%	0.97
Partners Group Seabras Holdings, LLC	2015	\$ 4,800,000	\$ 2,753,156	\$ -	\$ 2,766,400	0.44%	1.00
Partners Group Secondary 2006 LP	2006	\$ 54,232,920	\$ 51,077,528	\$ 50,128,084	\$ 9,517,851	3.35%	1.17
Partners Group Secondary 2008, L.P.	2009	\$ 26,443,527	\$ 23,690,725	\$ 27,631,409	\$ 6,506,039	8.81%	1.43
Partners Group Starfrost Limited	2014	\$ 6,103,102	\$ 3,736,806	\$ -	\$ 4,891,080	9.56%	1.31
Pathway Private Equity Fund VII, L.P.*	2004	\$ 904,500,000	\$ 775,739,313	\$ 763,519,645	\$ 482,353,077	9.90%	1.57
Siguler Guff DOF II	2006	\$ 30,000,000	\$ 30,000,000	\$ 41,009,594	\$ 1,384,706	8.67%	1.42
Siguler Guff DOF III	2008	\$ 10,000,000	\$ 9,700,000	\$ 11,826,971	\$ 3,223,958	10.63%	1.55
SL Capital SOF I LP	2014	\$ 25,000,000	\$ 17,863,660	\$ 2,097,958	\$ 18,824,777	11.05%	1.17
TCW/Crescent Mezzanine IV, L.P.	2006	\$ 40,000,000	\$ 39,590,976	\$ 43,109,680	\$ 1,557,144	2.88%	1.13
TCW/Crescent Mezzanine V, L.P.	2008	\$ 20,000,000	\$ 19,949,723	\$ 23,513,604	\$ 2,930,615	9.62%	1.33
Tennenbaum Energy Opportunities Fund, LP	2016	\$ 20,000,000	\$ 3,876,158	\$ 653,107	\$ 4,073,319	20.03%	1.22
Tennenbaum Opportunities Fund V, L.P.	2007	\$ 10,000,000	\$ 10,000,000	\$ 9,315,667	\$ 4,491,897	5.26%	1.38
Tennenbaum Opportunities Fund VI, L.P.	2011	\$ 20,000,000	\$ 13,822,641	\$ 7,835,352	\$ 12,624,292	9.17%	1.48
Tennenbaum Special Situations Fund IX	2015	\$ 50,000,000	\$ 21,837,087	\$ 934,870	\$ 22,180,181	6.51%	1.06
Tennenbaum Waterman Fund, LP	2012	\$ 70,000,000	\$ 70,000,000	\$ 20,827,234	\$ 73,265,884	11.09%	1.34
The Resolute Fund II	2016	\$ 1,720,184	\$ 1,392,524	\$ 195,639	\$ 1,275,634	6.38%	1.06
The Resolute Fund III	2014	\$ 8,000,000	\$ 3,240,189	\$ 52,120	\$ 4,006,183	15.53%	1.25
Thoma Bravo XI	2014	\$ 8,000,000	\$ 7,845,858	\$ -	\$ 9,392,494	12.61%	1.20
Total: San Bernardino		\$ 2,571,778,136	\$ 2,114,777,164	\$ 1,986,149,721	\$ 1,065,243,865	8.24%	1.43

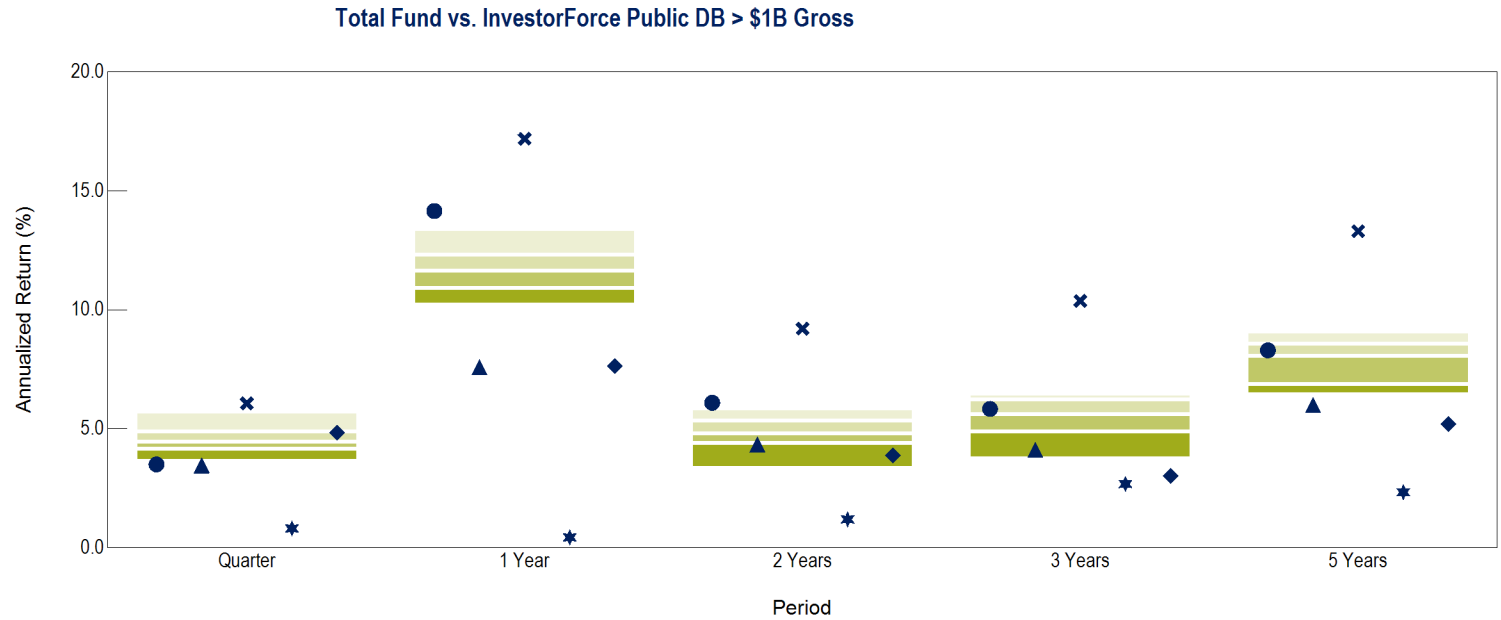
Note: all metrics are calculated since inception

* Denotes Cash adjusted value

Appendix: Market Environment



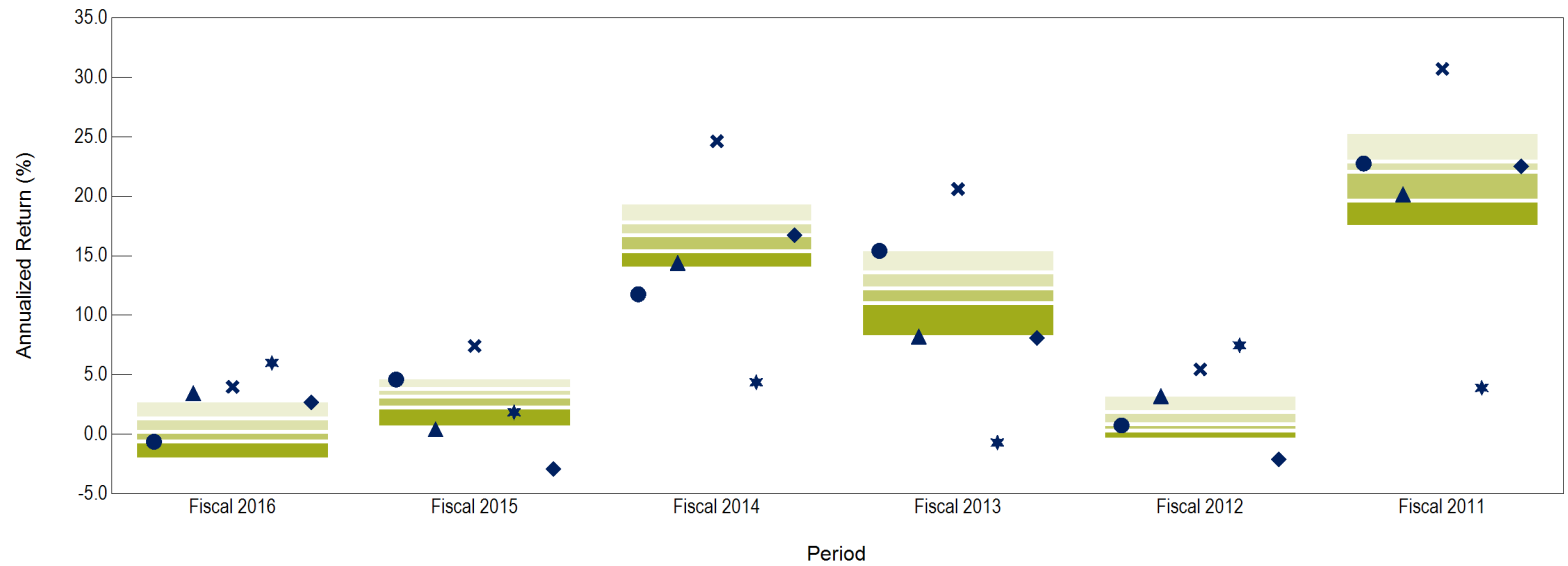
Total Fund Return Summary vs. Peer Universe



	Return (Rank)									
5th Percentile	5.7		13.4		5.8		6.5		9.1	
25th Percentile	4.9		12.3		5.4		6.2		8.6	
Median	4.5		11.7		4.8		5.6		8.1	
75th Percentile	4.2		10.9		4.4		4.9		6.9	
95th Percentile	3.7		10.2		3.4		3.8		6.5	
# of Portfolios	23		23		23		23		22	
● Total Fund	3.5	(99)	14.1	(1)	6.1	(2)	5.8	(37)	8.3	(44)
▲ Policy Index	3.5	(99)	7.6	(99)	4.3	(78)	4.1	(92)	6.0	(97)
× S&P 500	6.1	(2)	17.2	(1)	9.2	(1)	10.4	(1)	13.3	(1)
* BBgBarc US Aggregate TR	0.8	(99)	0.4	(99)	1.2	(99)	2.7	(99)	2.3	(99)
◆ 60% MSCI ACWI (Gross)/40% CITI WGBI	4.8	(29)	7.6	(99)	3.9	(82)	3.0	(99)	5.2	(99)

Fiscal Year Ending 6/30 Total Fund Return Summary vs. Peer Universe

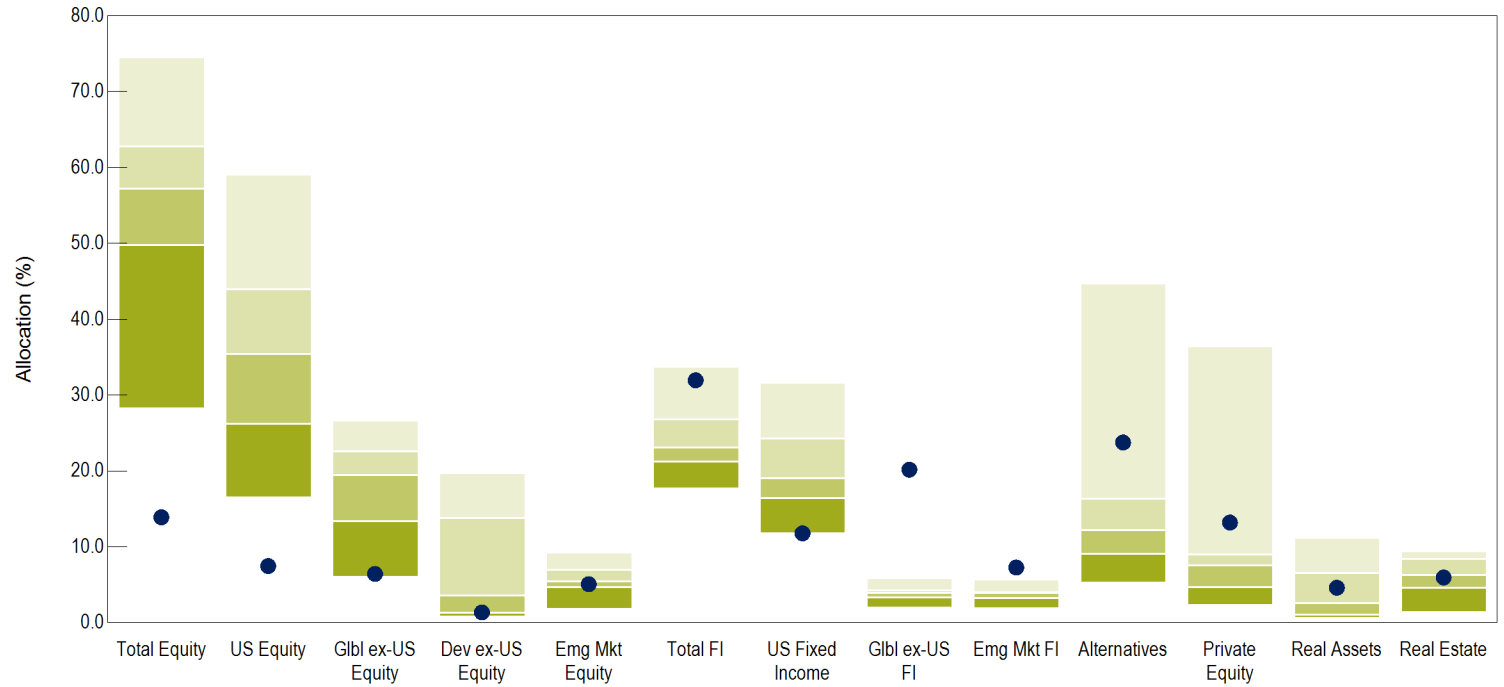
Total Fund vs. InvestorForce Public DB > \$1B Gross



	Fiscal 2016		Fiscal 2015		Fiscal 2014		Fiscal 2013		Fiscal 2012		Fiscal 2011	
	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)
5th Percentile	2.8		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	0.3		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	-2.1		0.6		13.9		8.2		-0.4		17.4	
# of Portfolios	91		92		65		78		70		67	
● Total Fund	-0.6	(77)	4.6	(7)	11.8	(99)	15.4	(7)	0.8	(58)	22.7	(32)
▲ Policy Index	3.5	(3)	0.4	(96)	14.4	(87)	8.2	(96)	3.2	(6)	20.2	(71)
× S&P 500	4.0	(2)	7.4	(1)	24.6	(1)	20.6	(1)	5.4	(1)	30.7	(1)
* BBgBarc US Aggregate TR	6.0	(1)	1.9	(87)	4.4	(99)	-0.7	(99)	7.5	(1)	3.9	(99)
◆ 60% MSCI ACWI (Gross)/40% CITI WGBI	2.7	(8)	-2.9	(99)	16.7	(51)	8.1	(96)	-2.1	(99)	22.5	(38)

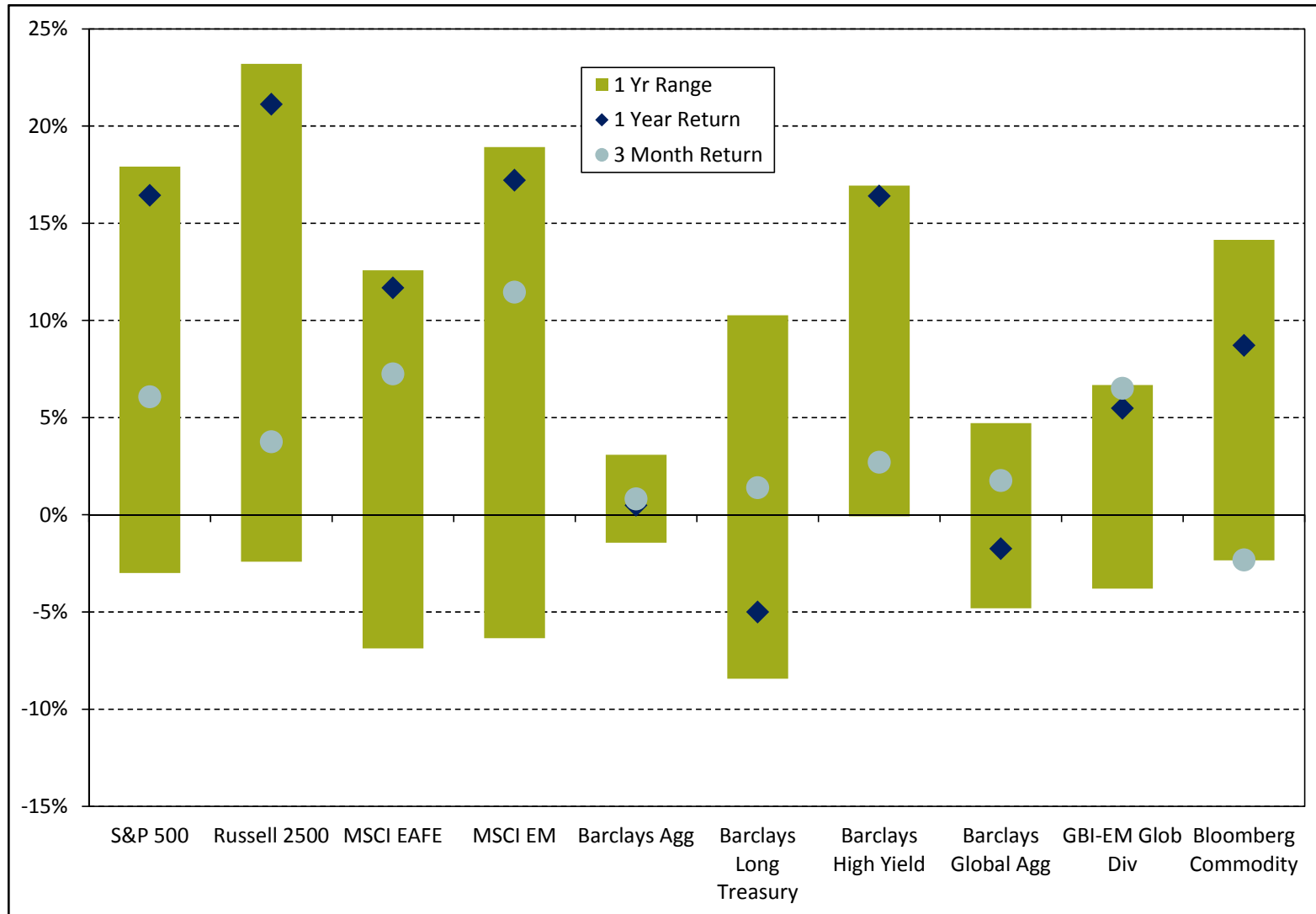
Total Fund Allocations vs. Peer Universe

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



	Allocation (Rank)													
5th Percentile	74.5	59.0	26.6	19.7	9.2	33.7	31.6	5.9	5.7	44.7	36.4	11.2	9.4	--
25th Percentile	62.8	44.0	22.7	13.9	7.0	26.9	24.3	4.4	4.1	16.4	9.1	6.6	8.5	--
Median	57.3	35.5	19.5	3.7	5.5	23.1	19.1	4.0	4.0	12.3	7.6	2.6	6.3	--
75th Percentile	49.8	26.3	13.5	1.4	4.8	21.3	16.5	3.4	3.3	9.2	4.8	1.1	4.7	--
95th Percentile	28.3	16.6	6.1	0.9	1.9	17.8	11.9	2.1	2.0	5.3	2.4	0.7	1.5	--
# of Portfolios	18	16	16	6	12	19	18	8	7	13	12	6	14	--
● Total Fund	13.9 (99)	7.5 (99)	6.4 (94)	1.4 (76)	5.1 (55)	31.9 (8)	11.8 (96)	20.2 (1)	7.3 (1)	23.7 (13)	13.2 (9)	4.6 (35)	6.0 (52)	--

Near Term Broad Market Performance Summary as of 03/31/2017



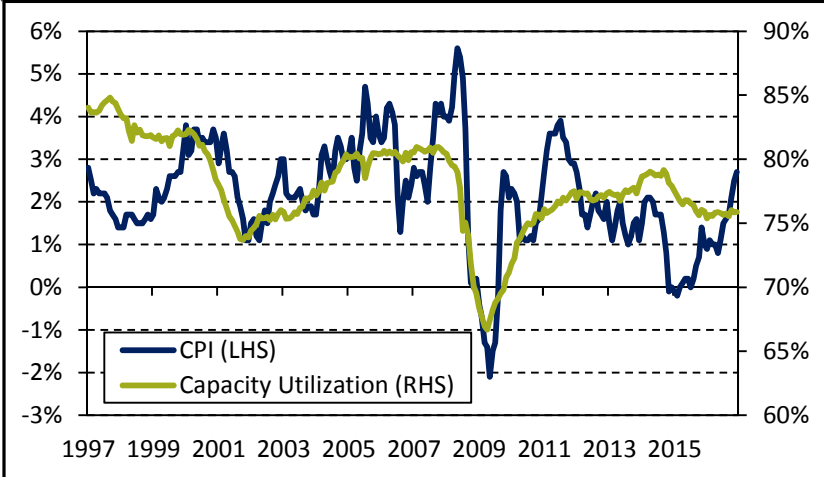
Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, JP Morgan
 *1 Yr Range: Represents range of cumulative high/low daily index returns for an investment made one year ago

Long Term Broad Market Performance Summary as of 03/31/2017



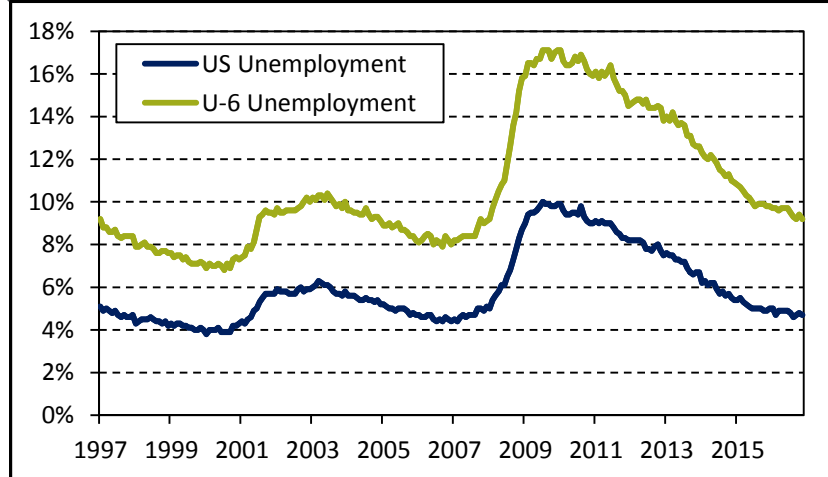
Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, JP Morgan

Inflation continues rising



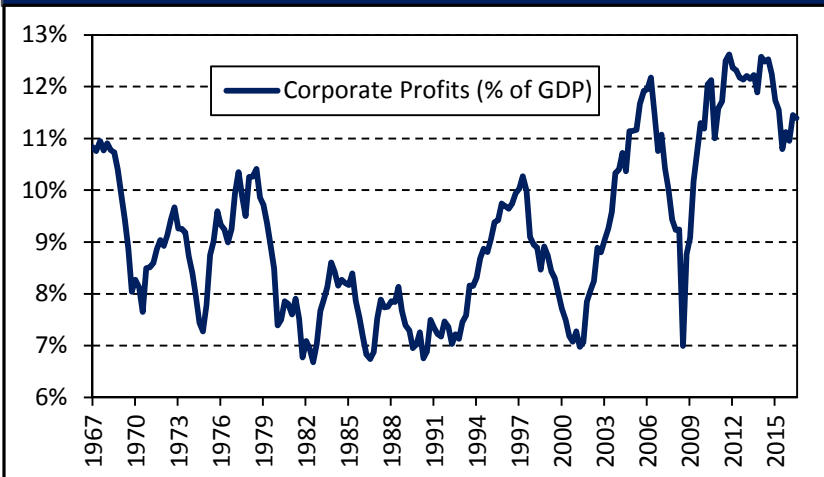
Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics

Unemployment has steadied



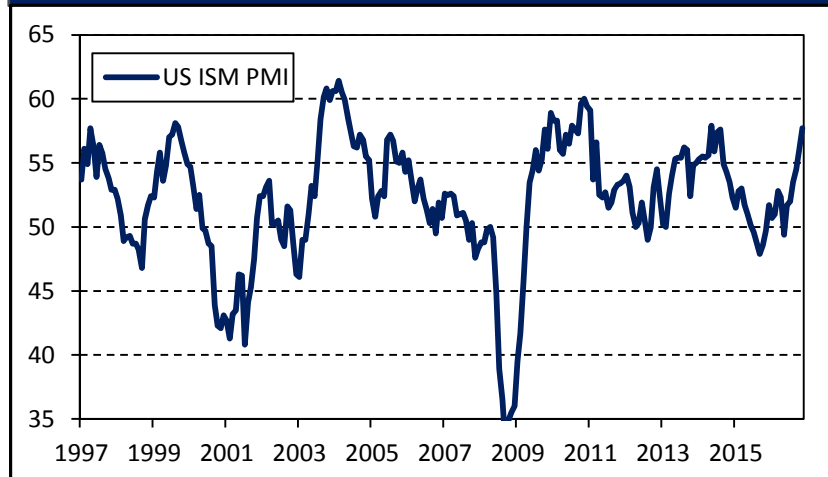
Source: Bloomberg, Bureau of Labor Statistics

Corporate profits experience an uptick



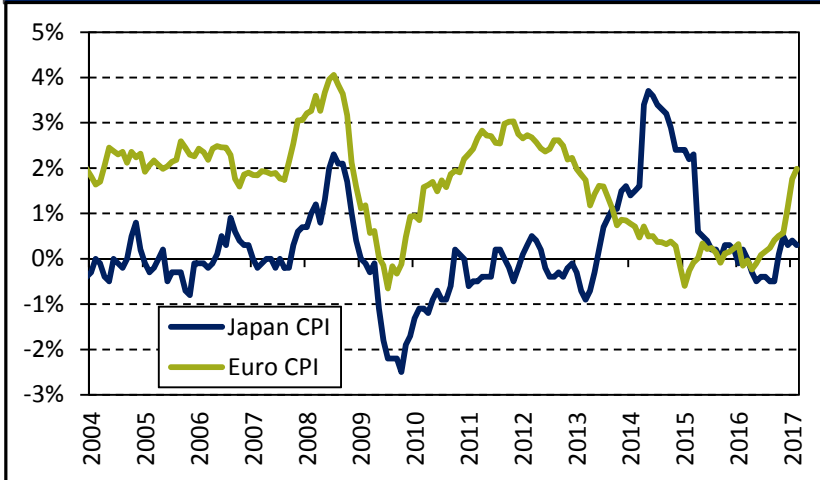
Source: Bloomberg, Bureau of Economic Analysis

Manufacturing shows continued strength



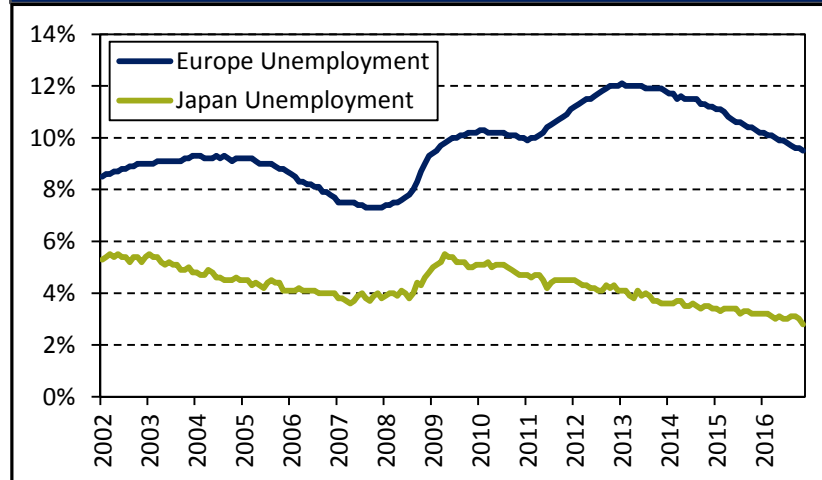
Source: Bloomberg, Institute for Supply Management

Eurozone inflation continues to rise



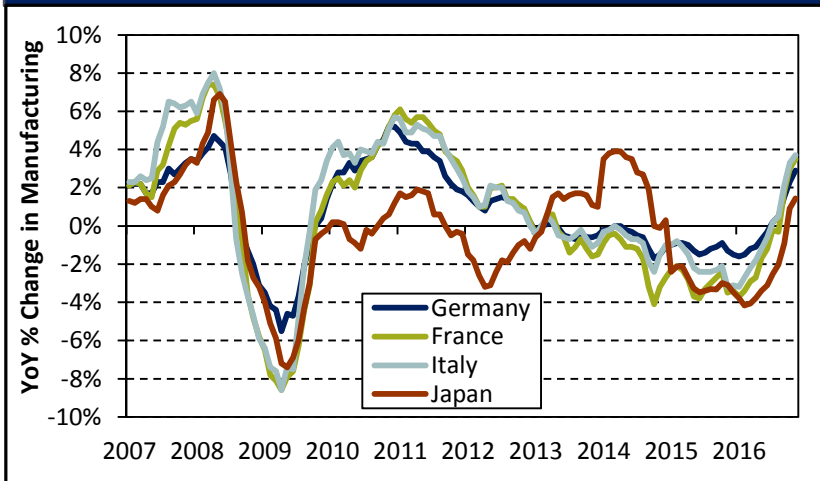
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Europe unemployment edges lower



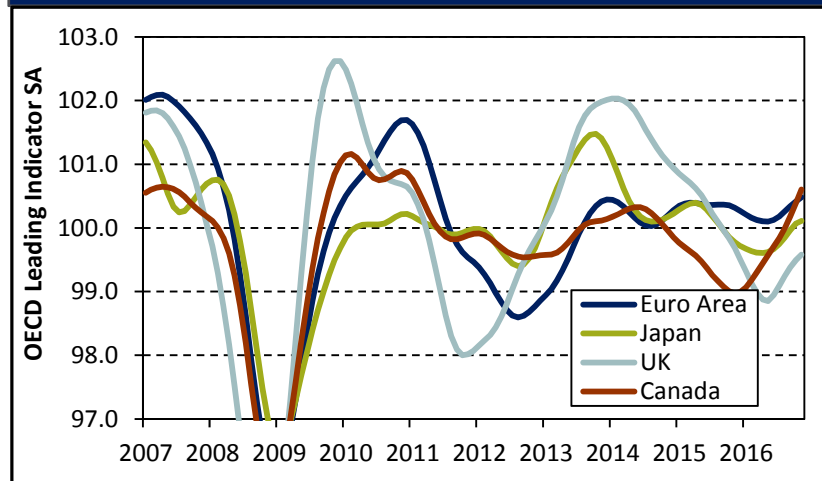
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Manufacturing shows continued strength



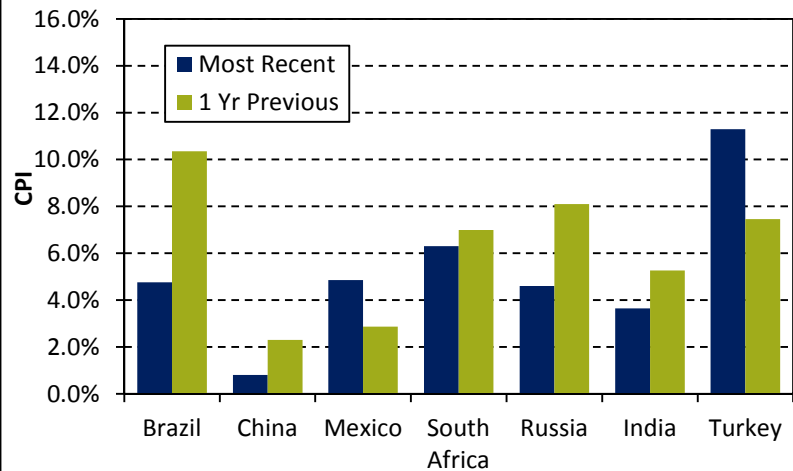
Source: Bloomberg, OECD, Eurostat

Leading indicators are trending higher



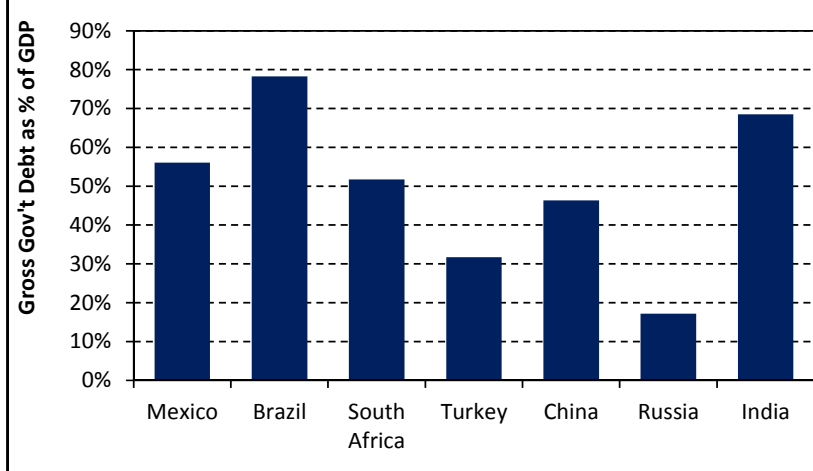
Source: Bloomberg, OECD

EM inflation varies by country



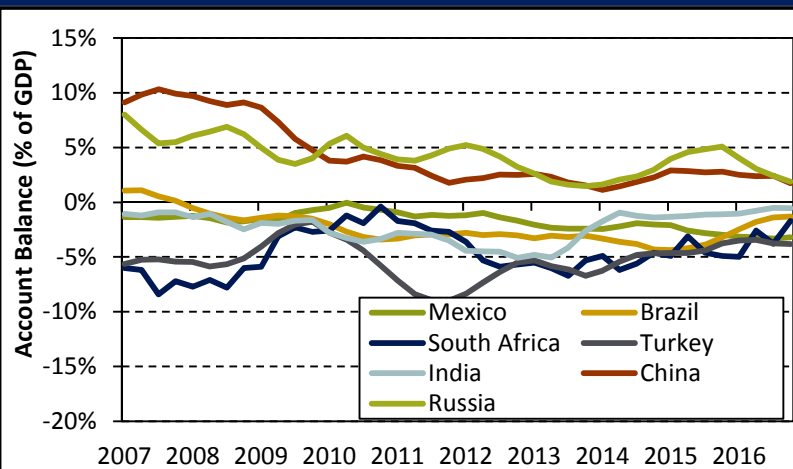
Source: Bloomberg

Relatively healthy Debt/GDP ratios



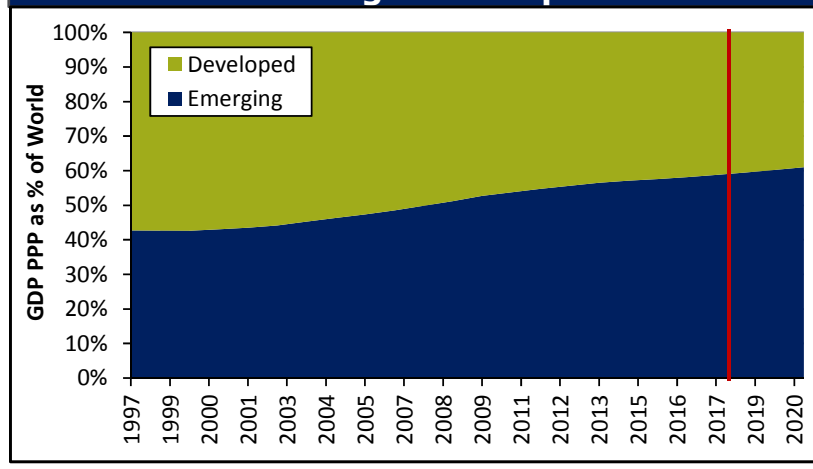
Source: Bloomberg, IMF

Account balances remain steady



Source: Bloomberg

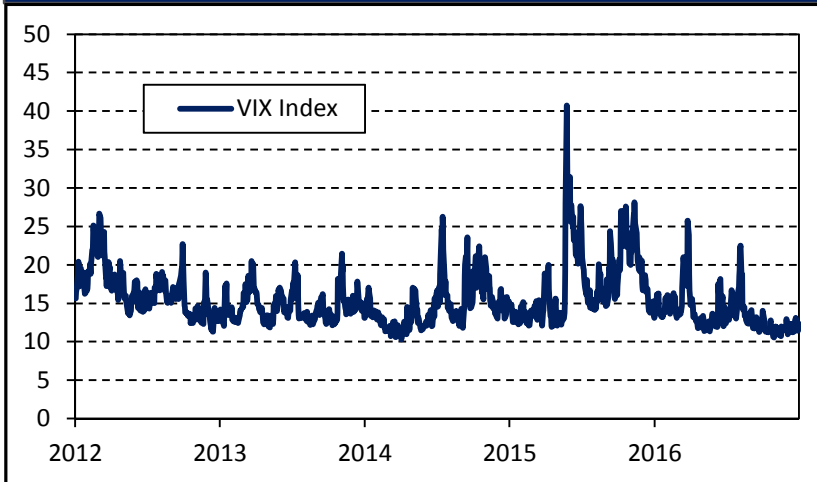
EM continues trending higher as a percent of global output



Source: Bloomberg, IMF

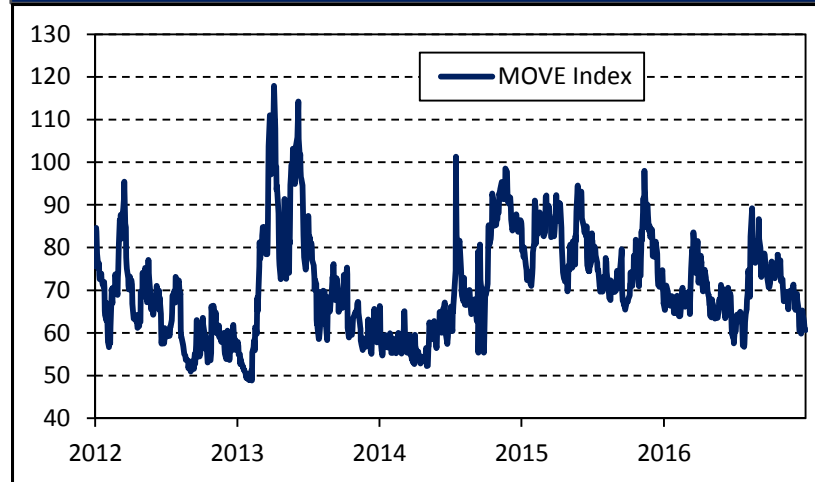
Volatility

Equity volatility remains low



Source: Bloomberg, CBOE

Treasury volatility has recently subsided



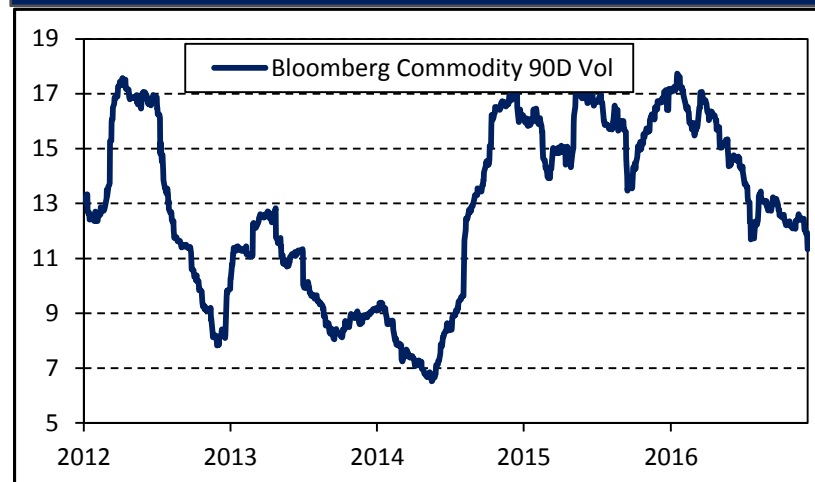
Source: Bloomberg, Merrill Lynch

Currency volatility remains elevated



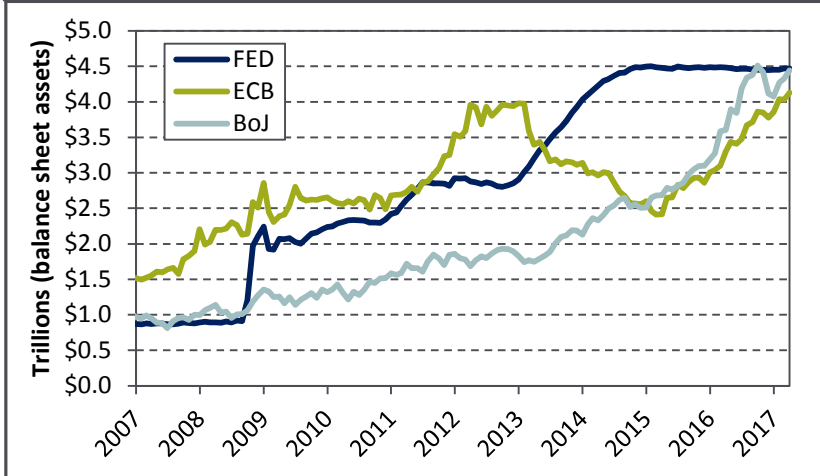
Source: Bloomberg, Deutsche Bank

Commodity volatility continues to decline



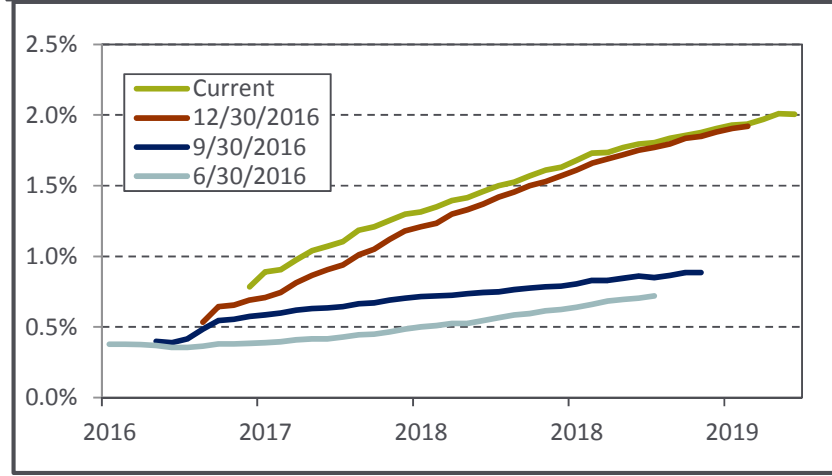
Source: Bloomberg, Merrill Lynch

Currency movement continues impacting the value of the BoJ's balance sheet



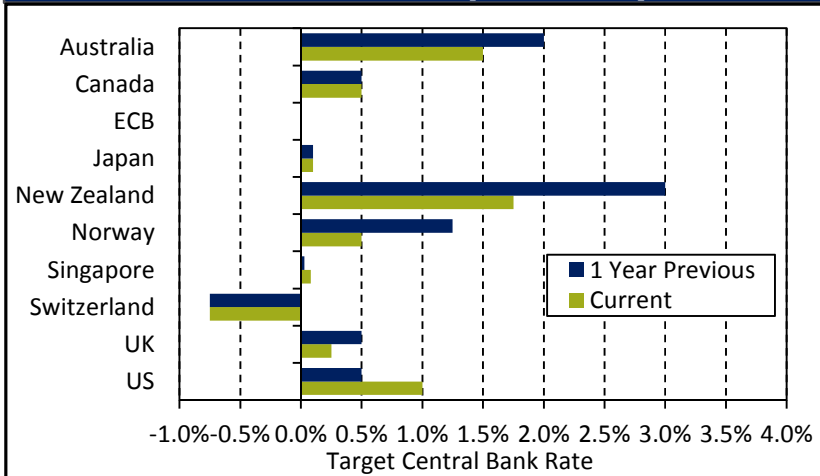
Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC

Post-election yield curve has increased slightly with the Fed rate hike



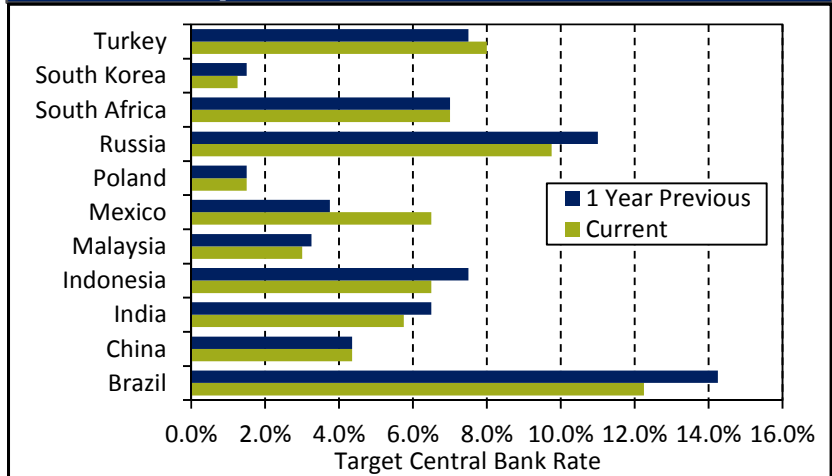
Source: Bloomberg, Federal Reserve

Ex- US developed market interest rates are lower than the previous year



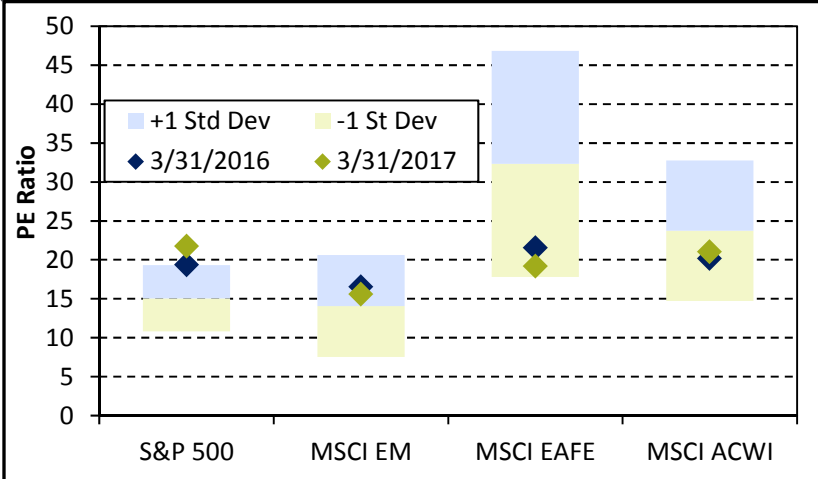
Source: Bloomberg

EM central bank policies vary by country-specific economic conditions



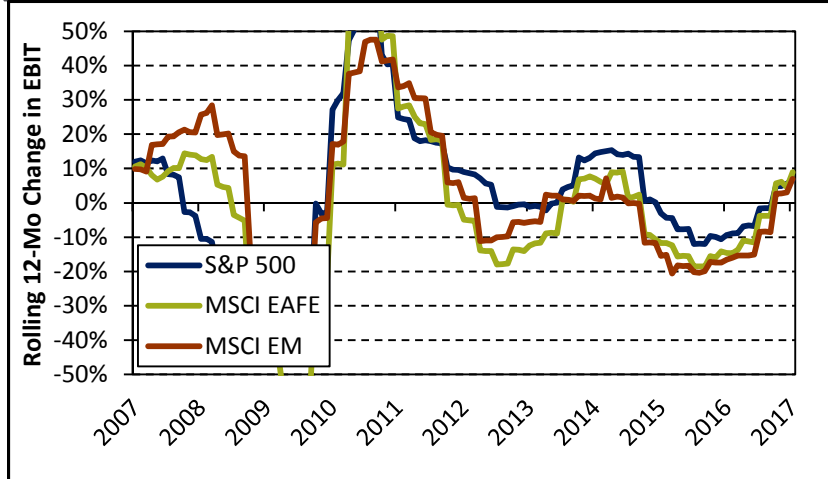
Source: Bloomberg

EM and EAFE valuations remain lower than the previous year



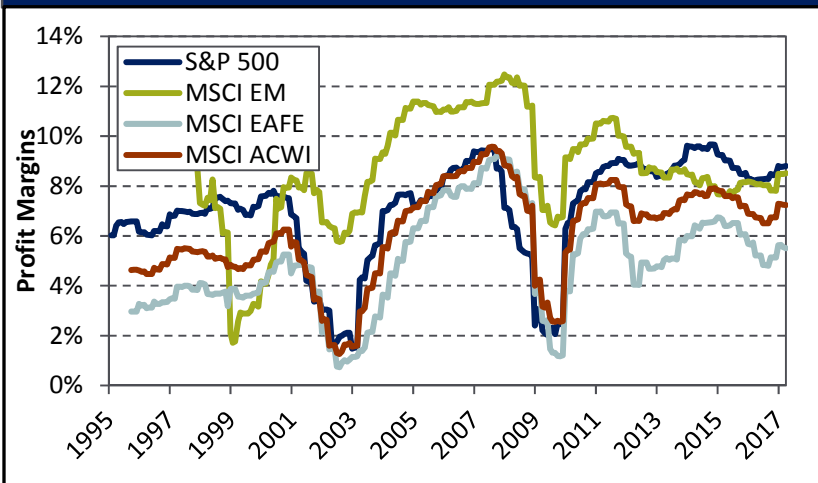
Source: Bloomberg, Standard and Poors, MSCI *MSCI EAFE is ex UK Telecom
 *Standard deviation calculations on 20 years of data except S&P 500 (30 years)

Rolling annual earnings growth continues trending upward off contraction



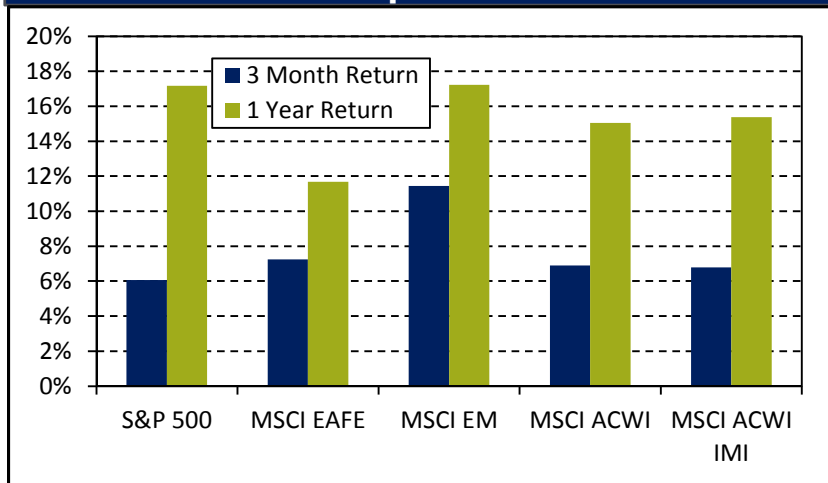
Source: Bloomberg, Standard and Poors, MSCI

Profit margins continue to increase



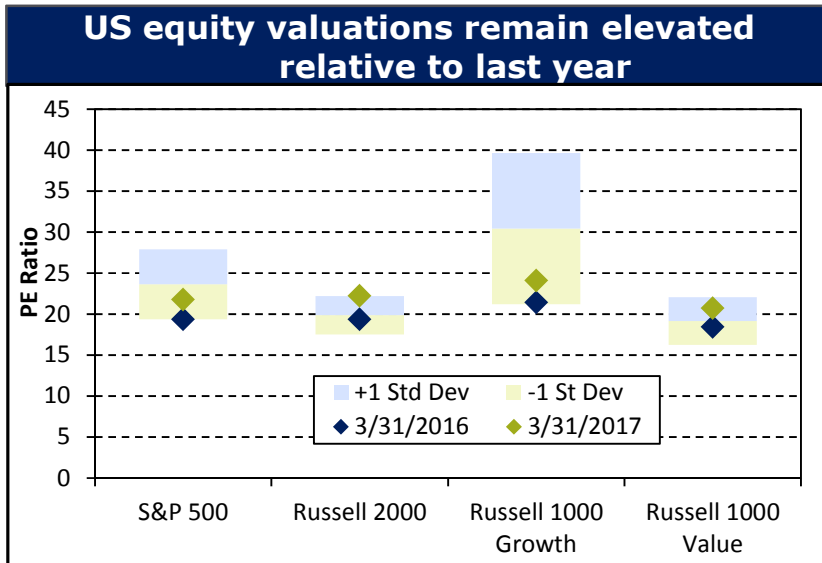
Source: Bloomberg, MSCI

Equities have experienced positive short-term performance

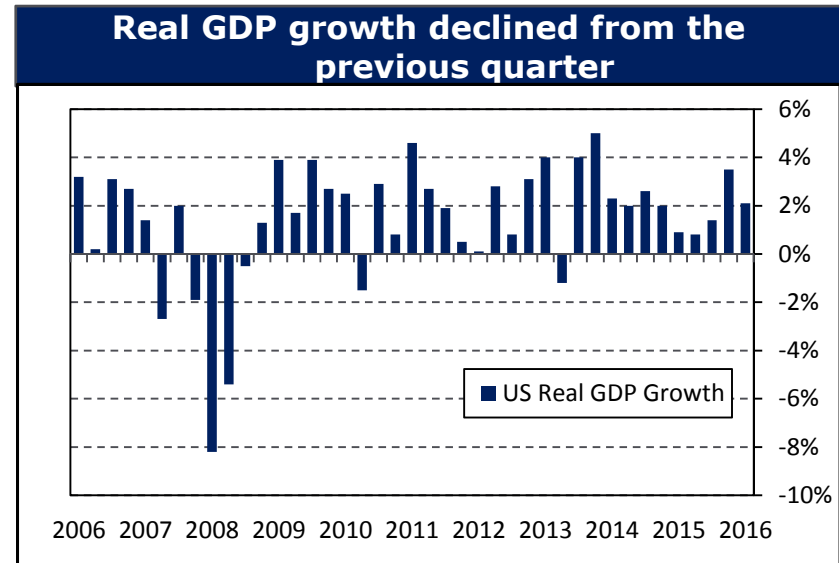


Source: Bloomberg, MSCI

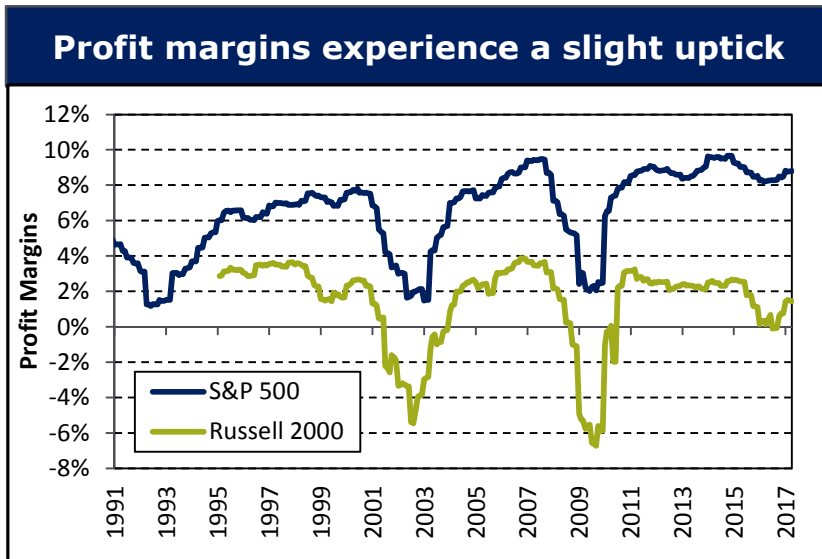
US Equity



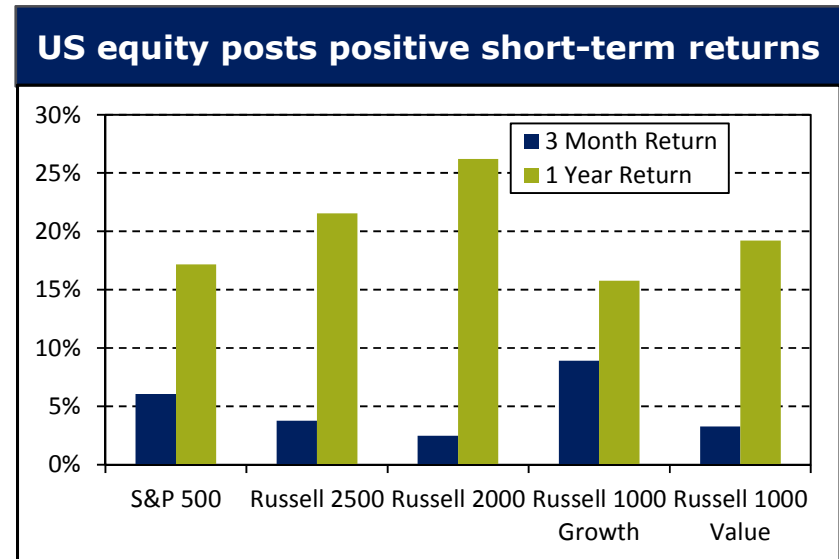
Source: Bloomberg, Standard and Poors, Russell *Russell 2000 PE is index adjusted positive* Standard deviation calculations based on 20 years of data



Source: Bloomberg, Bureau of Economic Analysis

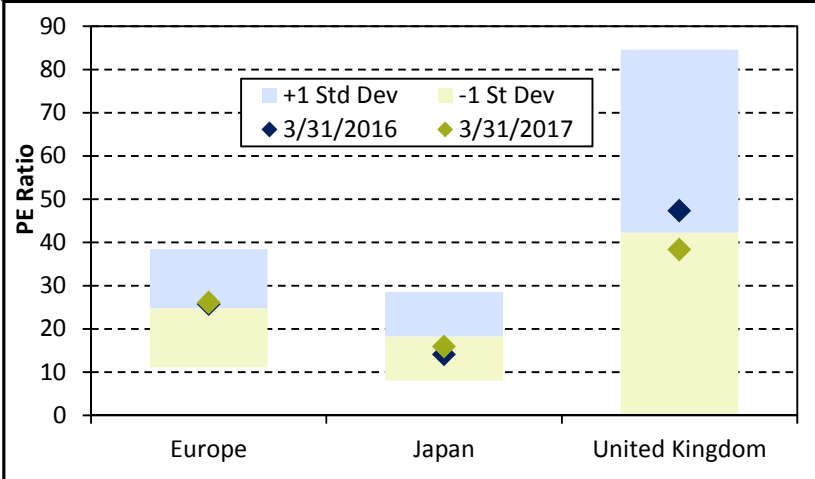


Source: Bloomberg, Standard and Poors, Russell



Source: Bloomberg, Standard and Poors, Russell

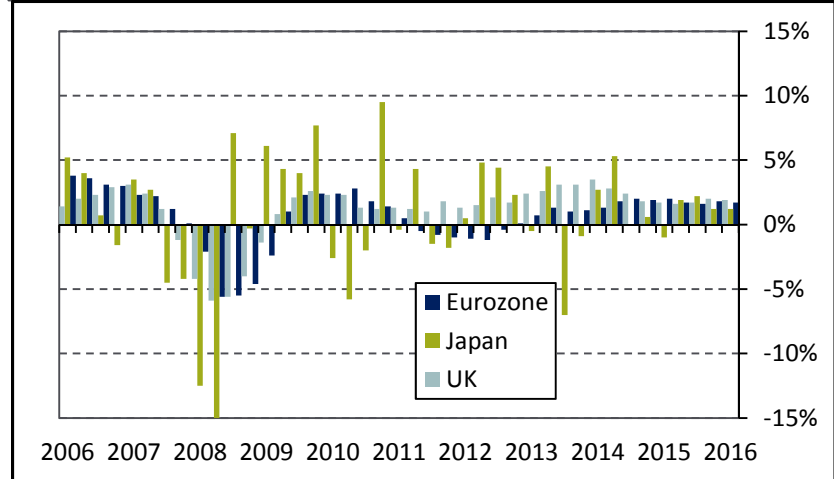
UK valuation falls below previous year level



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

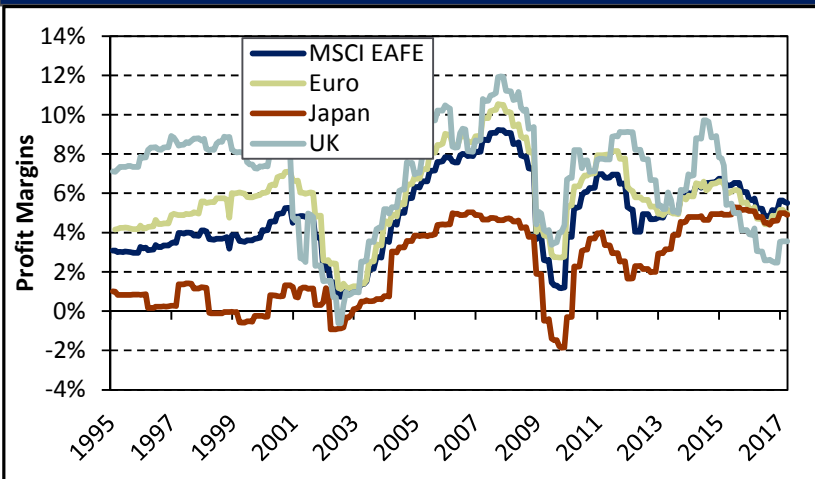
*Standard deviation calculations based on 20 years of data, with Europe since 12/1998

International growth has steadied



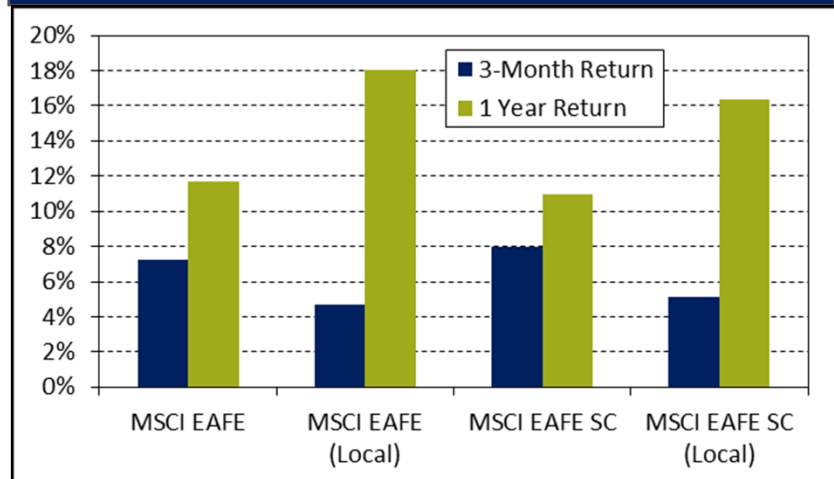
Source: Bloomberg

Profit margins continue trending higher



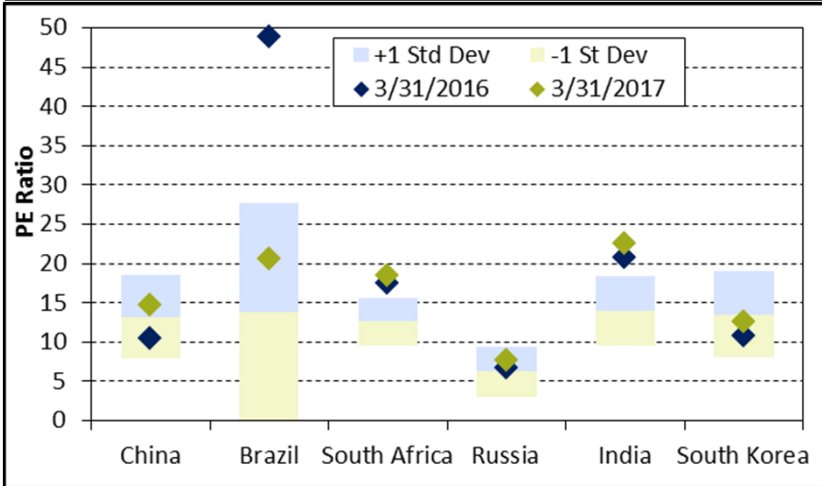
Source: Bloomberg, MSCI

Strong short-term performance for EAFE



Source: Bloomberg, MSCI

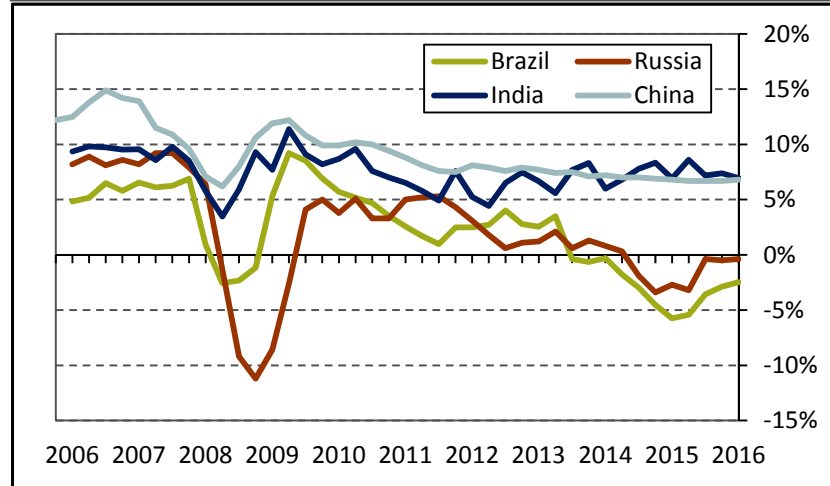
Ex-Brazil, current year valuations remain higher than the previous year



Source: Bloomberg, MSCI

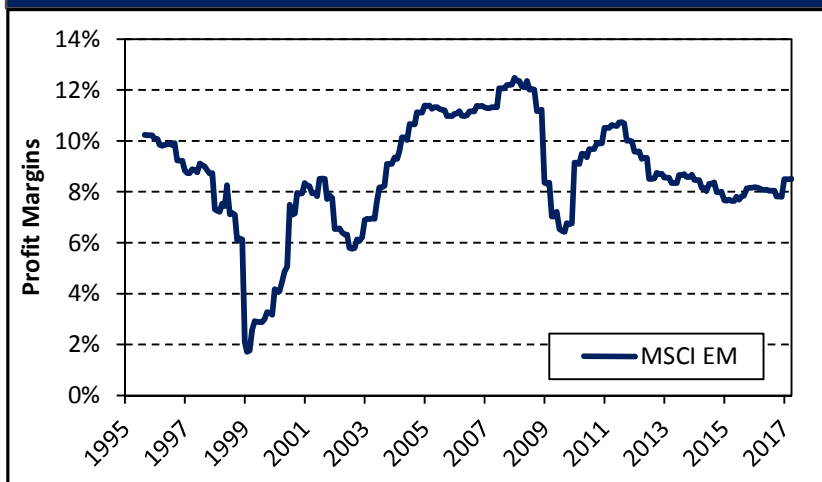
*Standard deviation calculations based on 20 years of data, with Russia since 01/1998

Brazil continues to rebound off earnings contraction



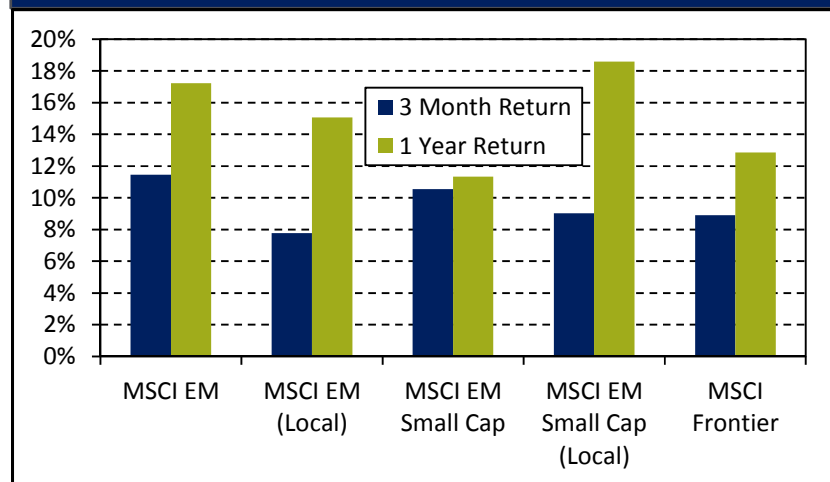
Source: Bloomberg

Profit margins experience slight uptick



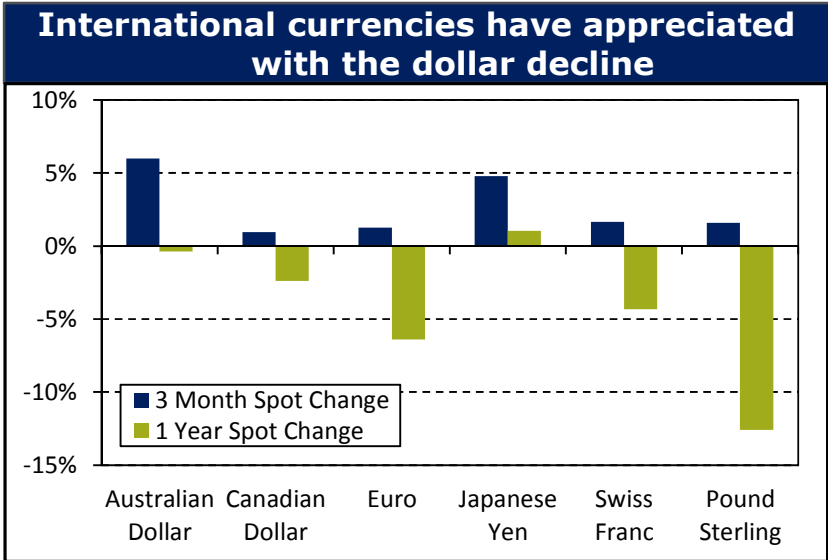
Source: Bloomberg, MSCI

EM posts strong short-term returns

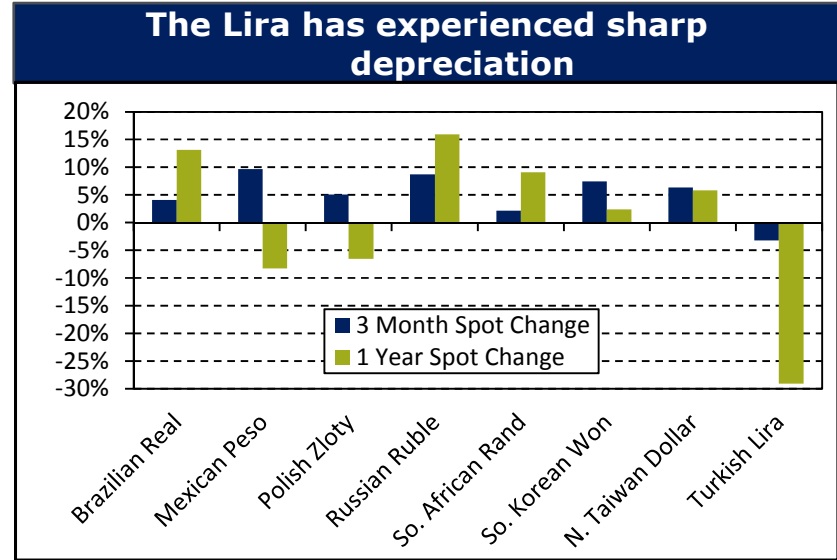


Source: Bloomberg, MSCI

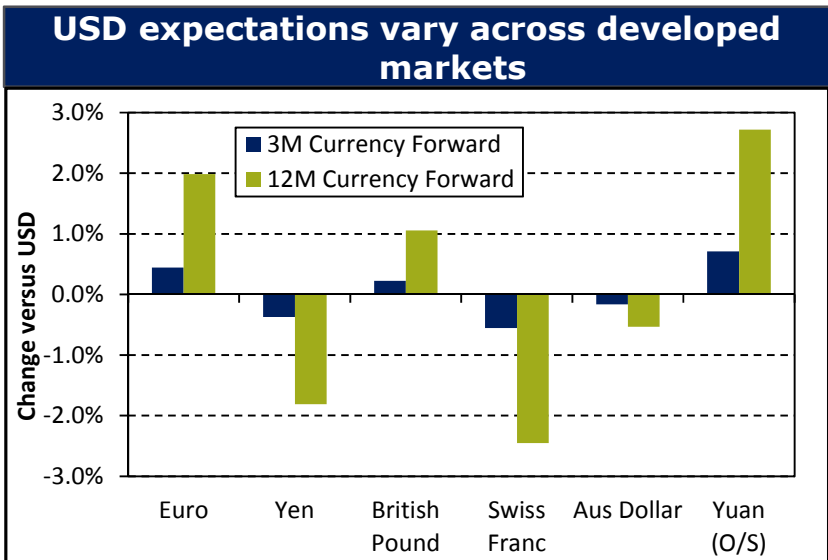
Currencies



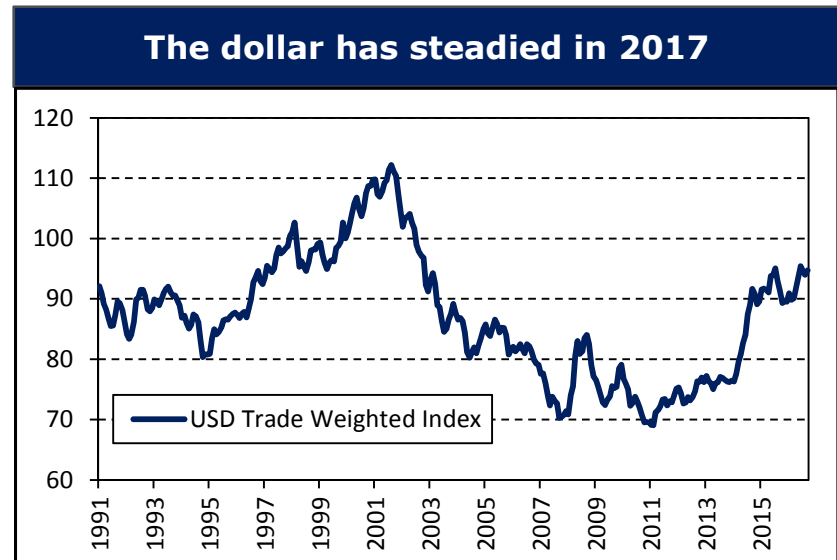
Source: Bloomberg



Source: Bloomberg

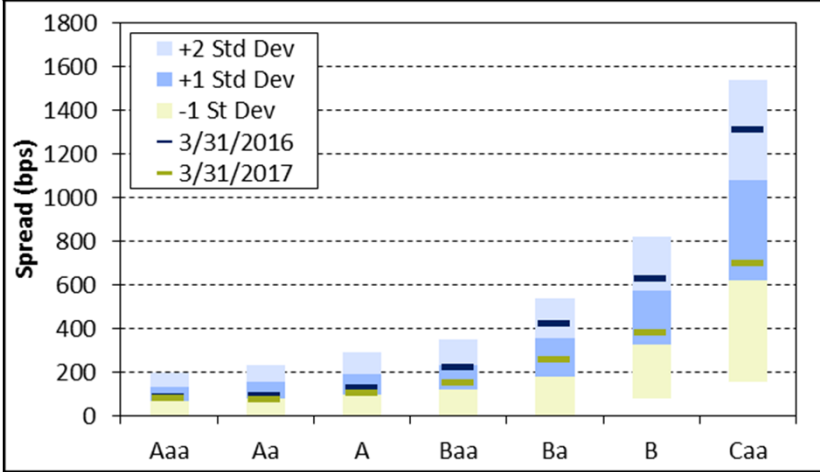


Source: Bloomberg



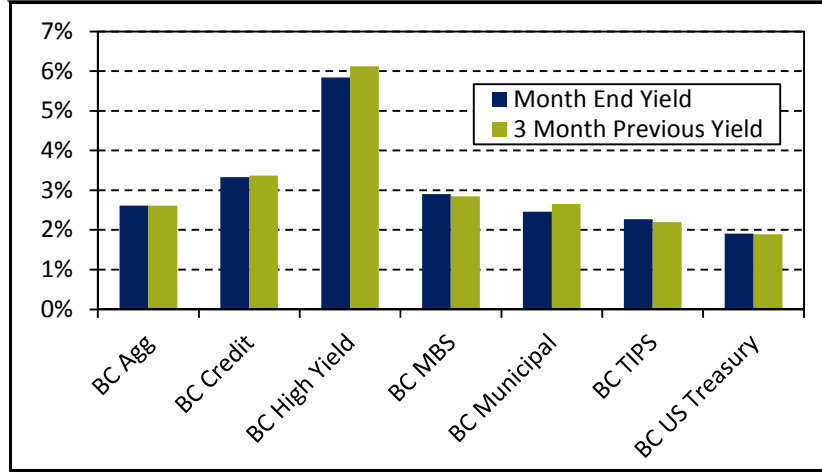
Source: Bloomberg, Federal Reserve

Spreads remain lower than the previous year



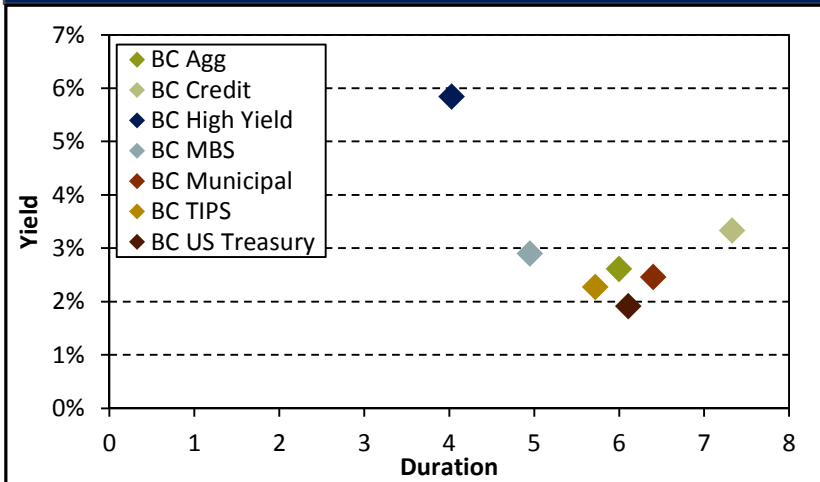
Source: Bloomberg, Barclays
 *Standard deviation calculations based on 20 years of data

Yields are similar to three months prior



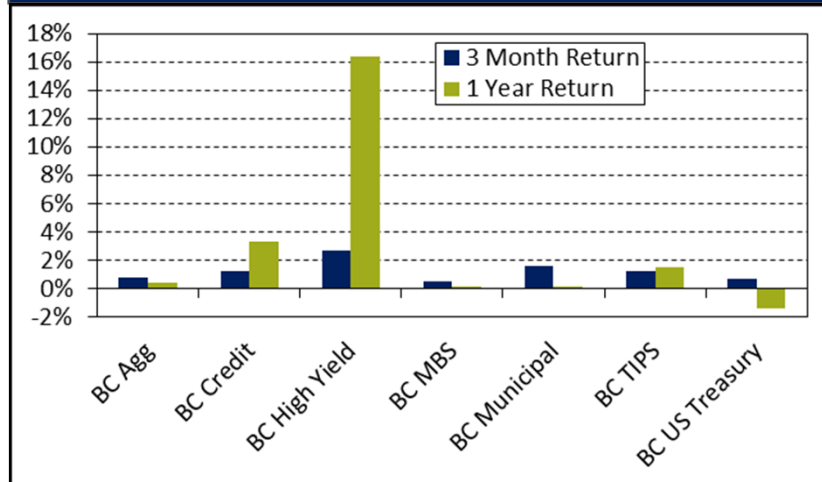
Source: Bloomberg, Barclays

Similar duration/yield profiles among core indices



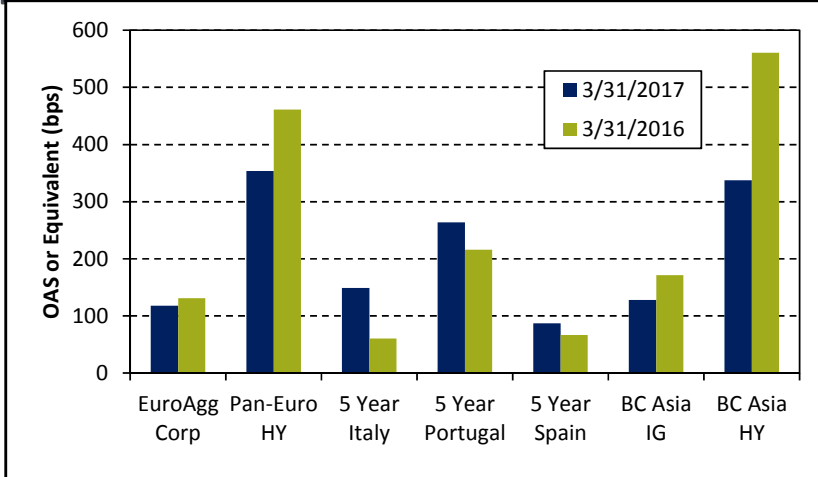
Source: Bloomberg, Barclays

High yield continues to outperform other fixed income indices



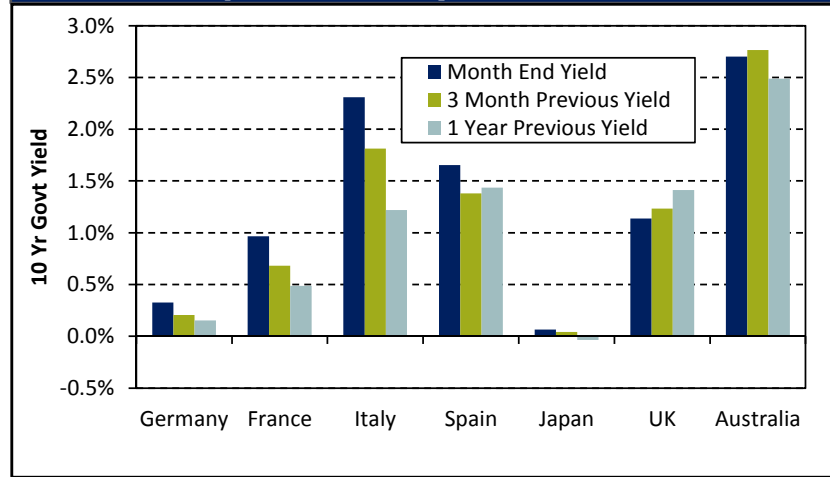
Source: Bloomberg, Barclays

European periphery yields vary relative to Germany



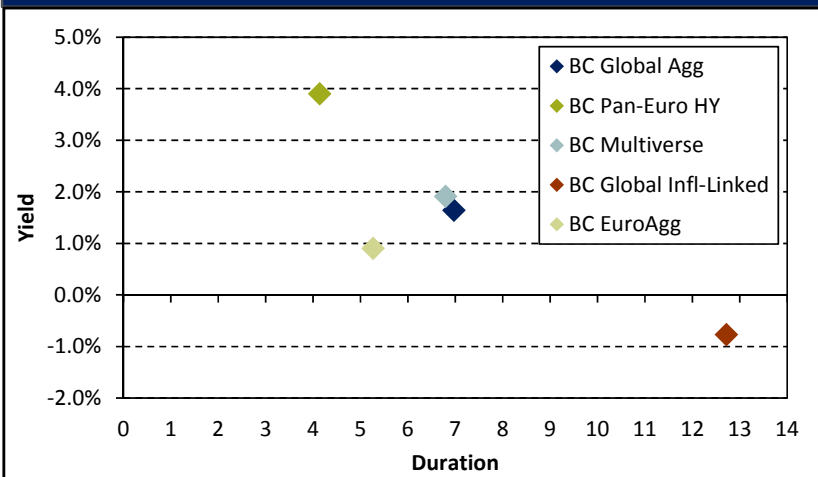
Source: Barclays, Bloomberg, *European periphery spreads are over equivalent German Bund

Ex the UK and Australia, international developed market yields have increased



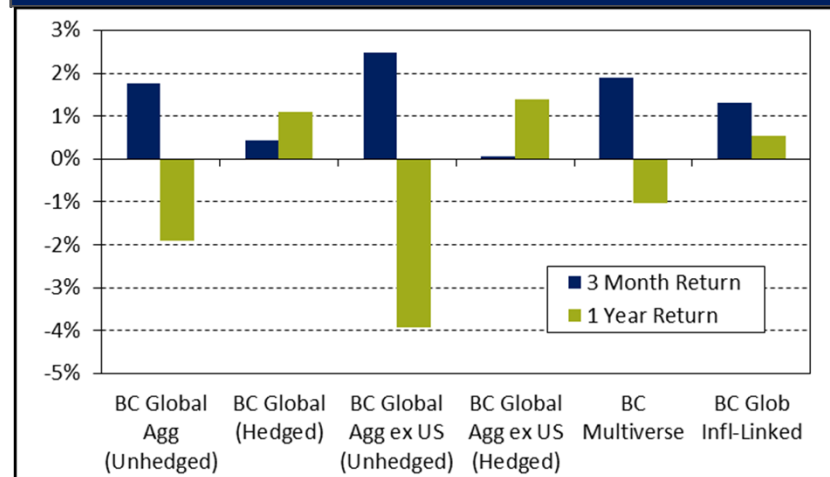
Source: Bloomberg

Low yields persist in global bond universe



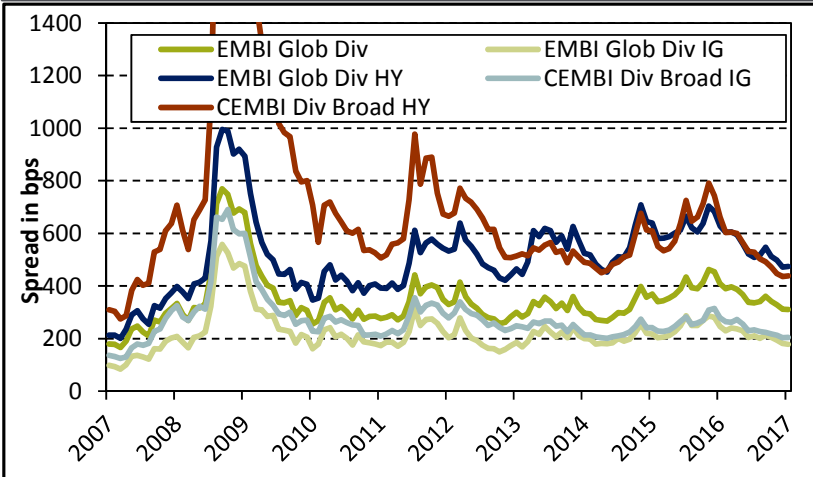
Source: Bloomberg, Citigroup, Barclays

Global bonds post relatively strong short-term returns



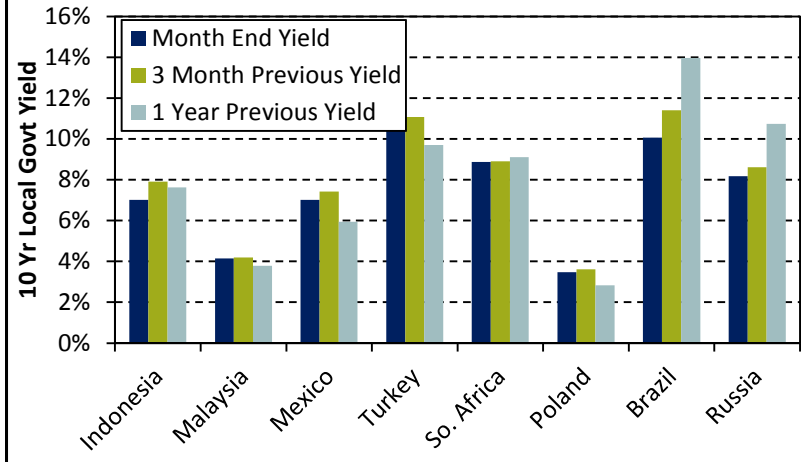
Source: Bloomberg, Citigroup, Barclays

Spreads continue to decline



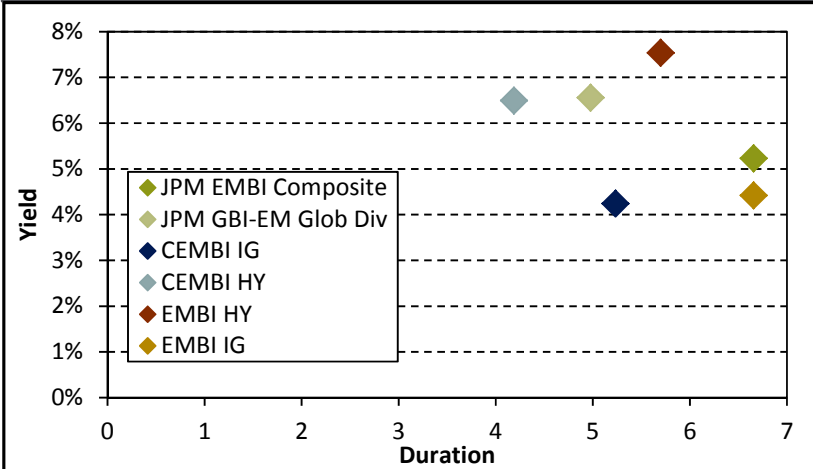
Source: Bloomberg, JP Morgan

Ex Russia and Brazil, EM local bond yields remain largely unchanged for the year



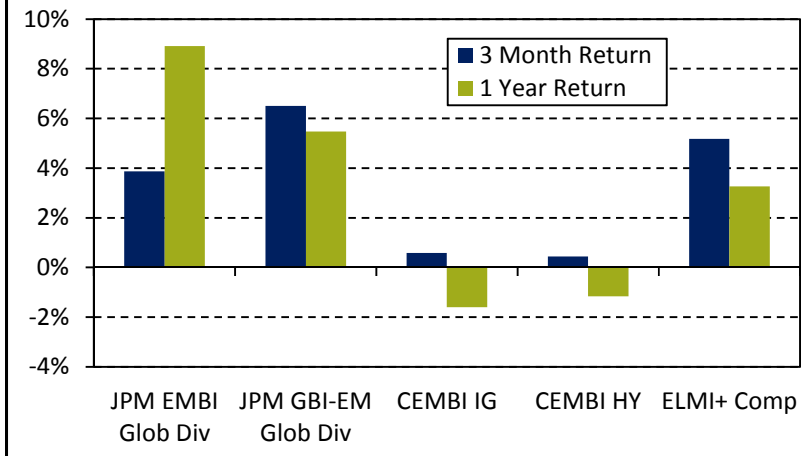
Source: Bloomberg

EM yields remain attractive versus global counterparts



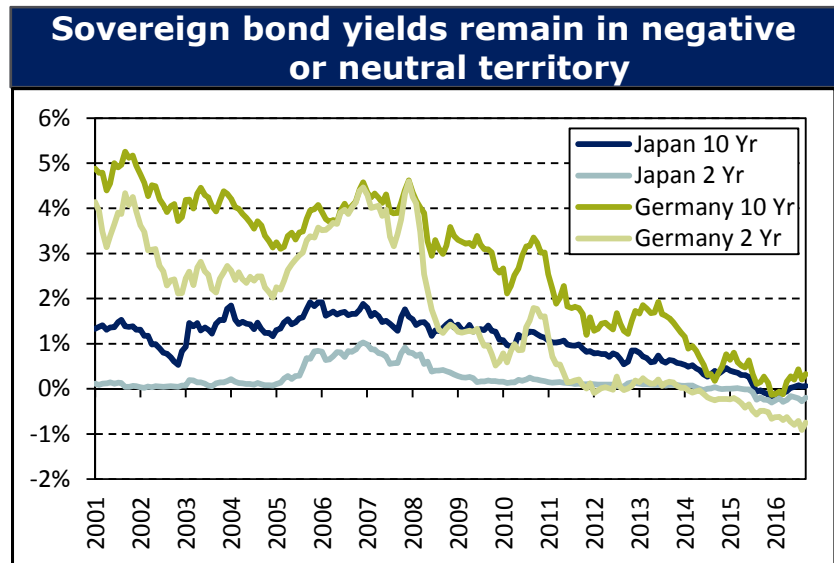
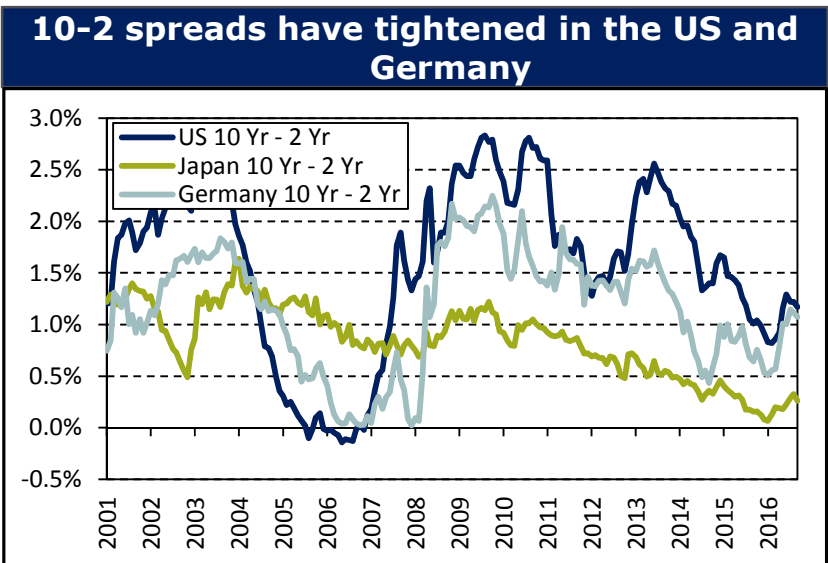
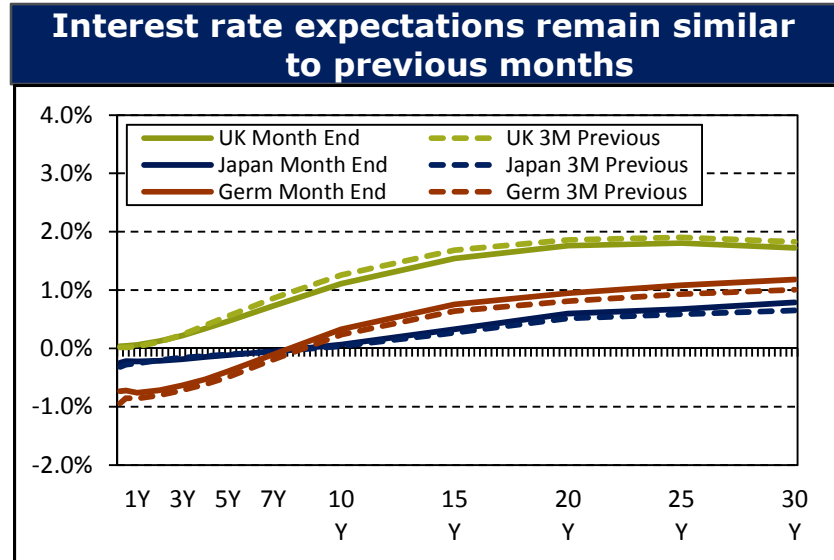
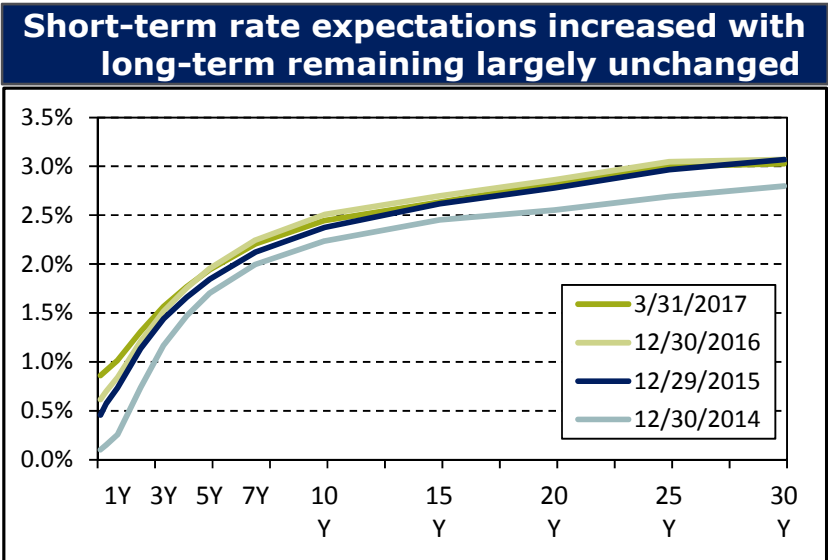
Source: Bloomberg, JP Morgan

EM debt posts strong positive short-term returns

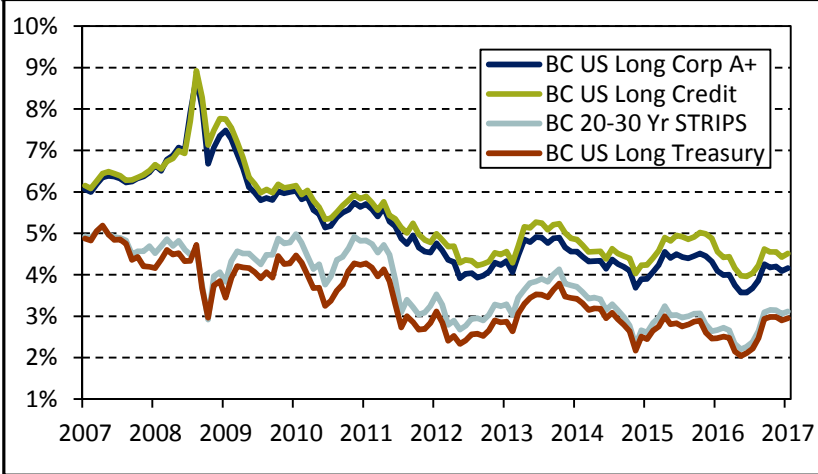


Source: Bloomberg, JP Morgan

Rates

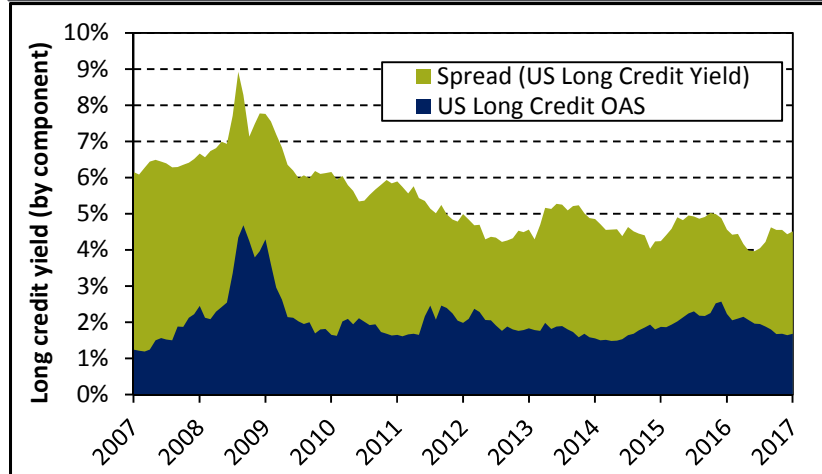


Long duration yields have steadied



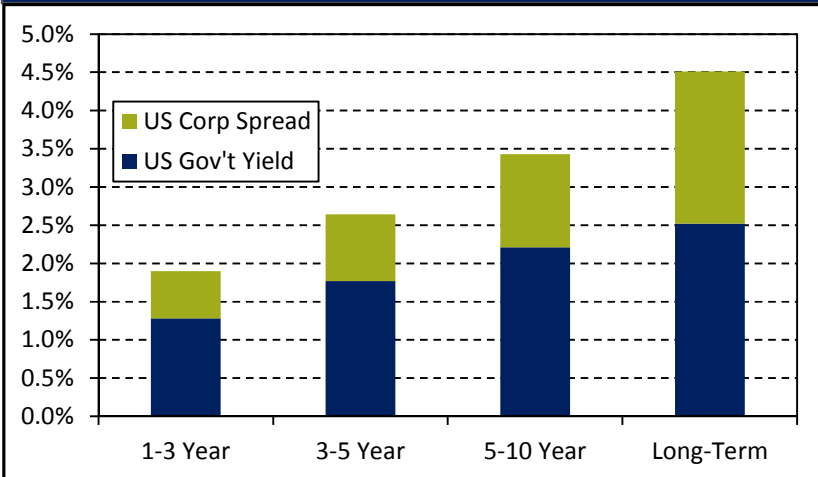
Source: Bloomberg, Citigroup, Barclays

Long credit yield remains in line with previous years



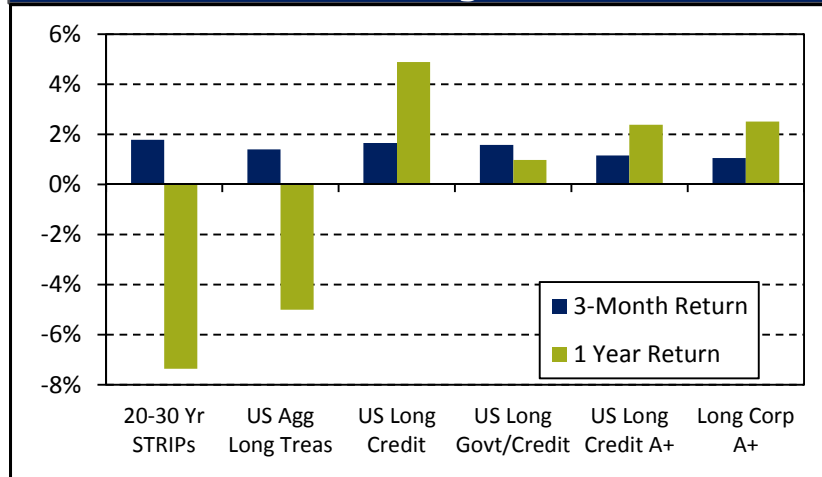
Source: Bloomberg, US Treasury, Barclays, NEPC

Yield and spread components continue to offer modest returns



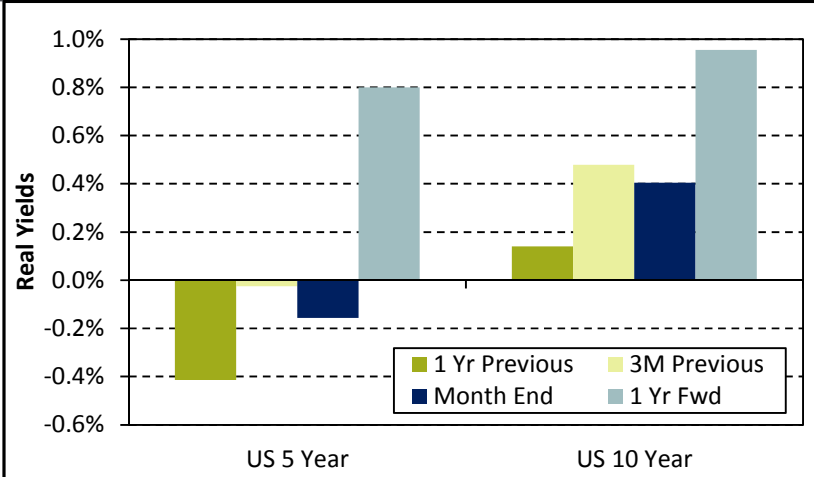
Source: Bloomberg, Barclays

Long duration fixed income posts short-term gains



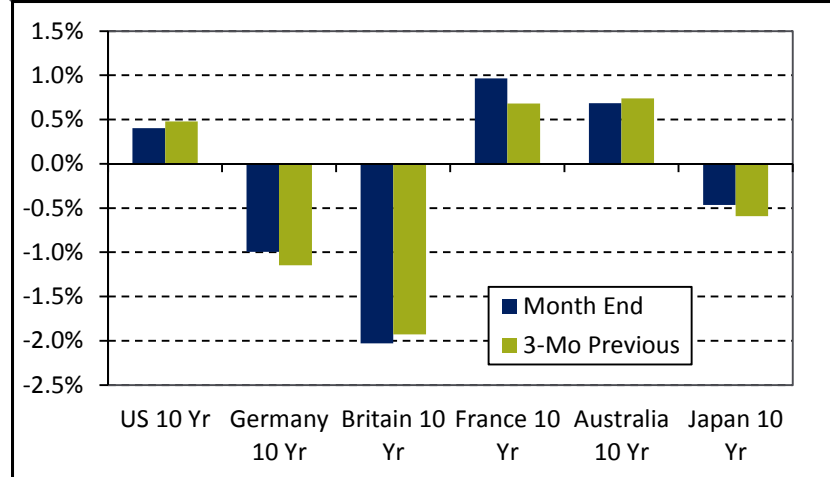
Source: Bloomberg, Barclays

US 5 and 10 year real yields decreased from three months prior



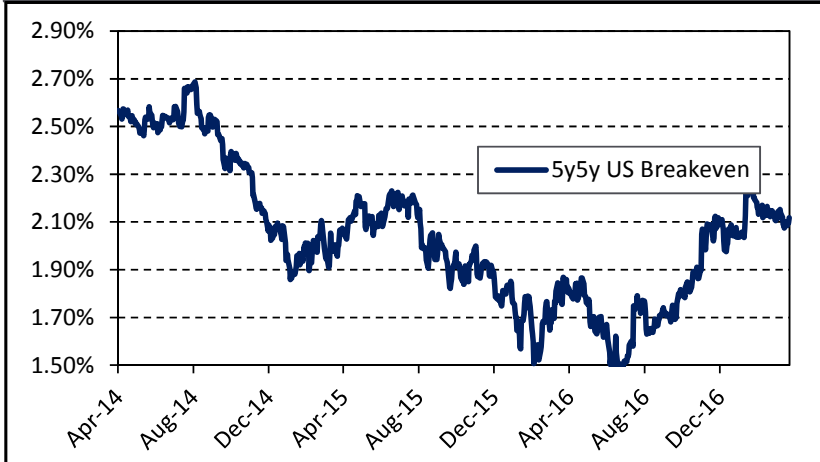
Source: Bloomberg

France's yield has increased with election uncertainty



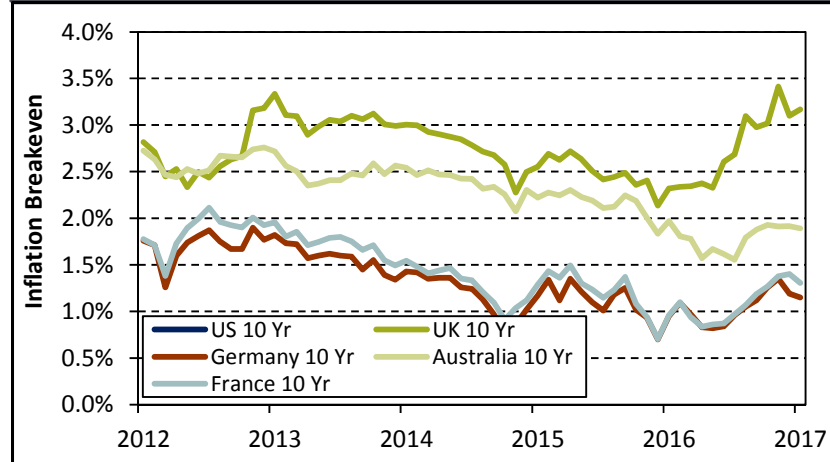
Source: Bloomberg

US inflation expectations have decreased off of post US election highs



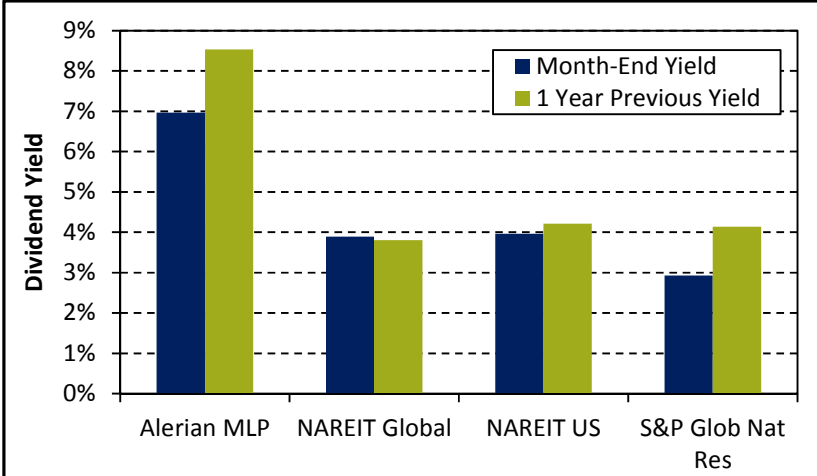
Source: Bloomberg

Germany and France inflation expectations have begun to fall



Source: Bloomberg

MLP yields remain similar to the previous year



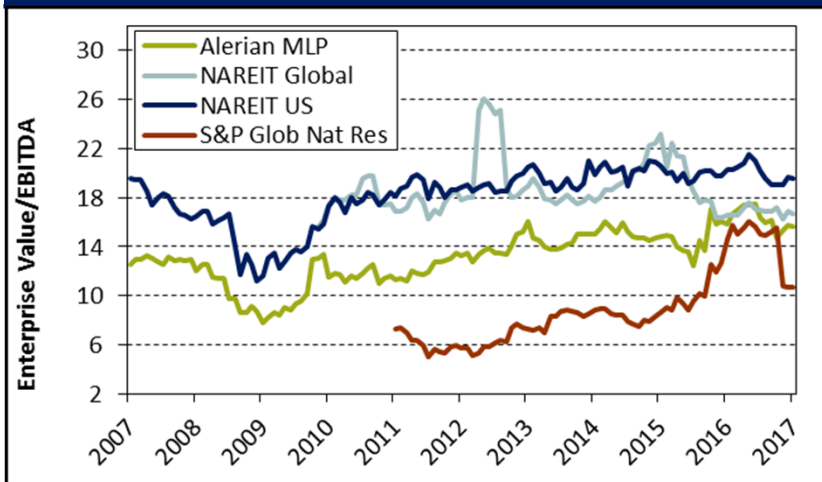
Source: Bloomberg, Alerian, Nareit, Standard and Poors

Sustained recovery in commercial real estate occupancy rates



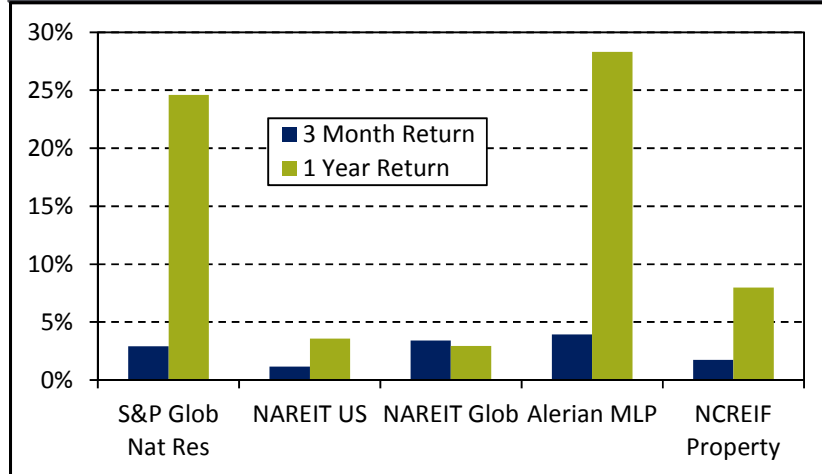
Source: NCREIF

US REIT valuations have steadied



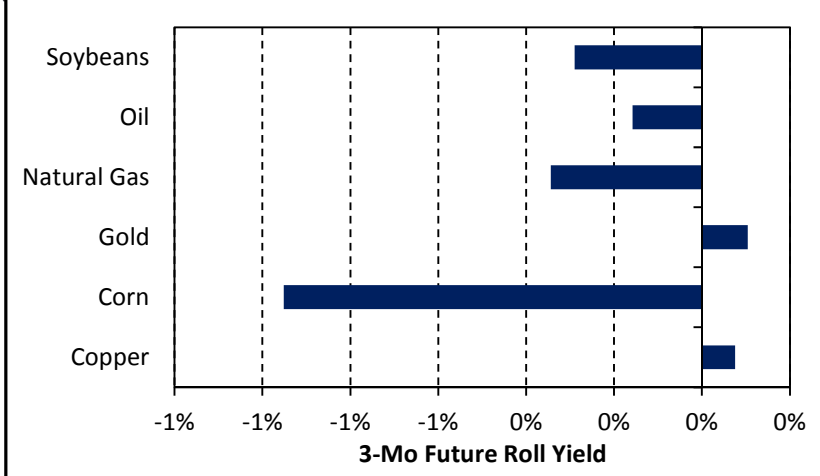
Source: Bloomberg, US Census Bureau

Positive short-term performance for inflation-sensitive growth assets



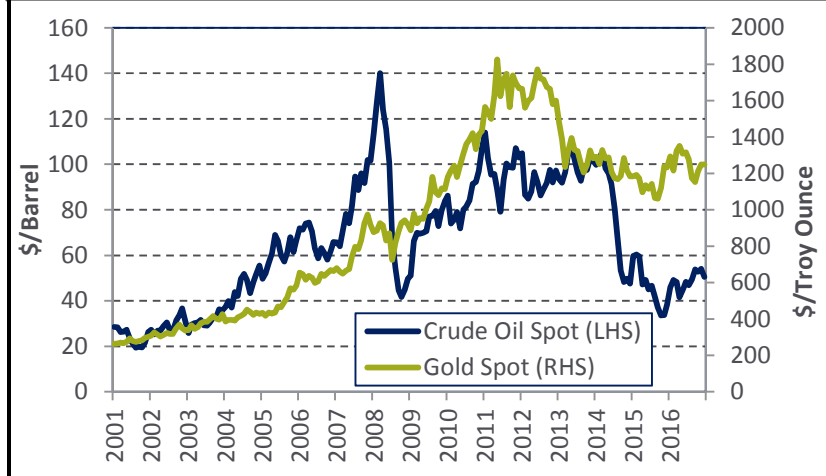
Source: Bloomberg, Alerian, Nareit, Standard and Poors

Negative roll yields remain a hurdle for investing directly in oil and natural gas



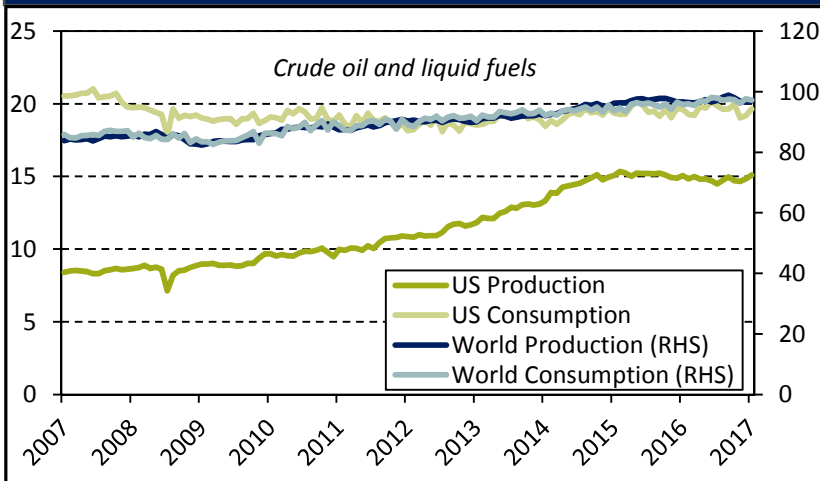
Source: Bloomberg

Oil has slightly declined for the month



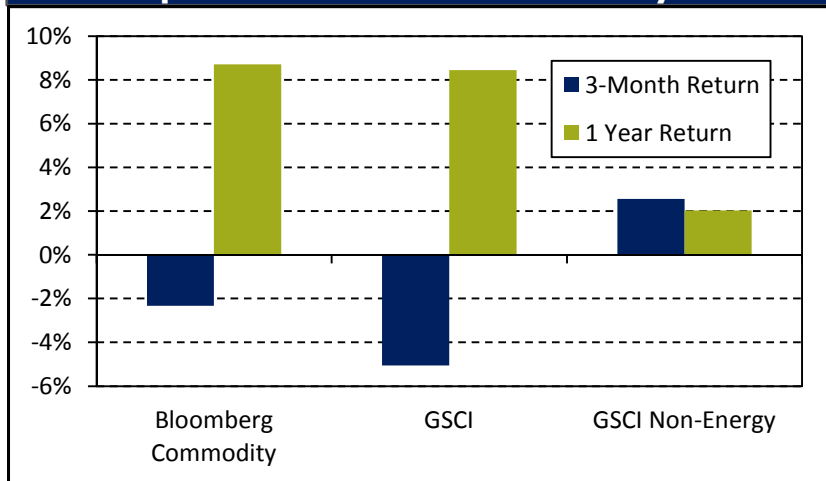
Source: Bloomberg

Oil production and consumption has steadied



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

Non-energy commodities have outperformed broad commodity indices



Source: Bloomberg, Standard and Poors

Information Disclaimer and Reporting Methodology

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- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
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- 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.