

# New Jersey Division of Investment

Director's Report

March 21, 2013

State Investment Council Meeting

***“The mission of the New Jersey Division of Investment is to achieve the best possible return at an acceptable level of risk using the highest fiduciary standards.”***

# Updates Since Last SIC Meeting through 2-28-13

Asset Class (through Feb 28 2013)	Jan%	Feb%	CYTD %	FYTD %	1 Year	No.
Risk Mitigation	1.22	1.26	2.50	3.29	3.99	1
Liquidity	(1.09)	0.25	(0.85)	1.33	4.07	2
Income	(0.39)	1.32	0.93	6.05	10.10	3
Real Return	1.00	1.49	2.50	5.73	7.90	4
Global Growth	3.65	0.36	4.02	13.18	10.34	5
Total Pension Fund ex P&F	2.05	0.69	2.76	9.63*	9.56	6
FY2013 Total Policy Benchmark	2.60	0.32	2.93	10.73	8.37	7
FY2012 Total Policy Benchmark			2.57	9.96	7.62	8
Current Assets	<b><u>\$72.5 billion</u></b>					9

\*Due to lag reporting from Alternative funds we believe the Pension fund is positive 10% to 10.25%.

	Feb 28th, 2013	MTD %	CYTD %	FYTD %	1 Yr %	3 Yrs %	5 Yrs %	10 Yrs %	No.
Domestic Equity	S&P 500	1.36	6.61	12.95	13.46	13.46	4.94	8.24	10
	Russell 2000	1.10	7.43	15.17	14.02	14.67	7.35	11.19	11
International Equity	MCSI EAFE	(0.92)	4.32	18.97	10.38	7.33	(0.77)	9.87	12
	MSCI EMF	(1.24)	0.14	14.09	0.62	6.90	0.64	17.26	13
Bond	Barclays Agg	0.50	(0.20)	1.61	3.13	5.47	5.53	5.01	14
	Barclays HY	0.51	1.86	9.97	11.83	12.01	11.34	10.33	15
	Barclays US TIPS	0.03	(0.65)	2.16	4.25	8.50	6.18	6.11	16
Commodity	DJUBS Com	(4.09)	(1.79)	0.91	(7.66)	0.77	(8.44)	2.80	17

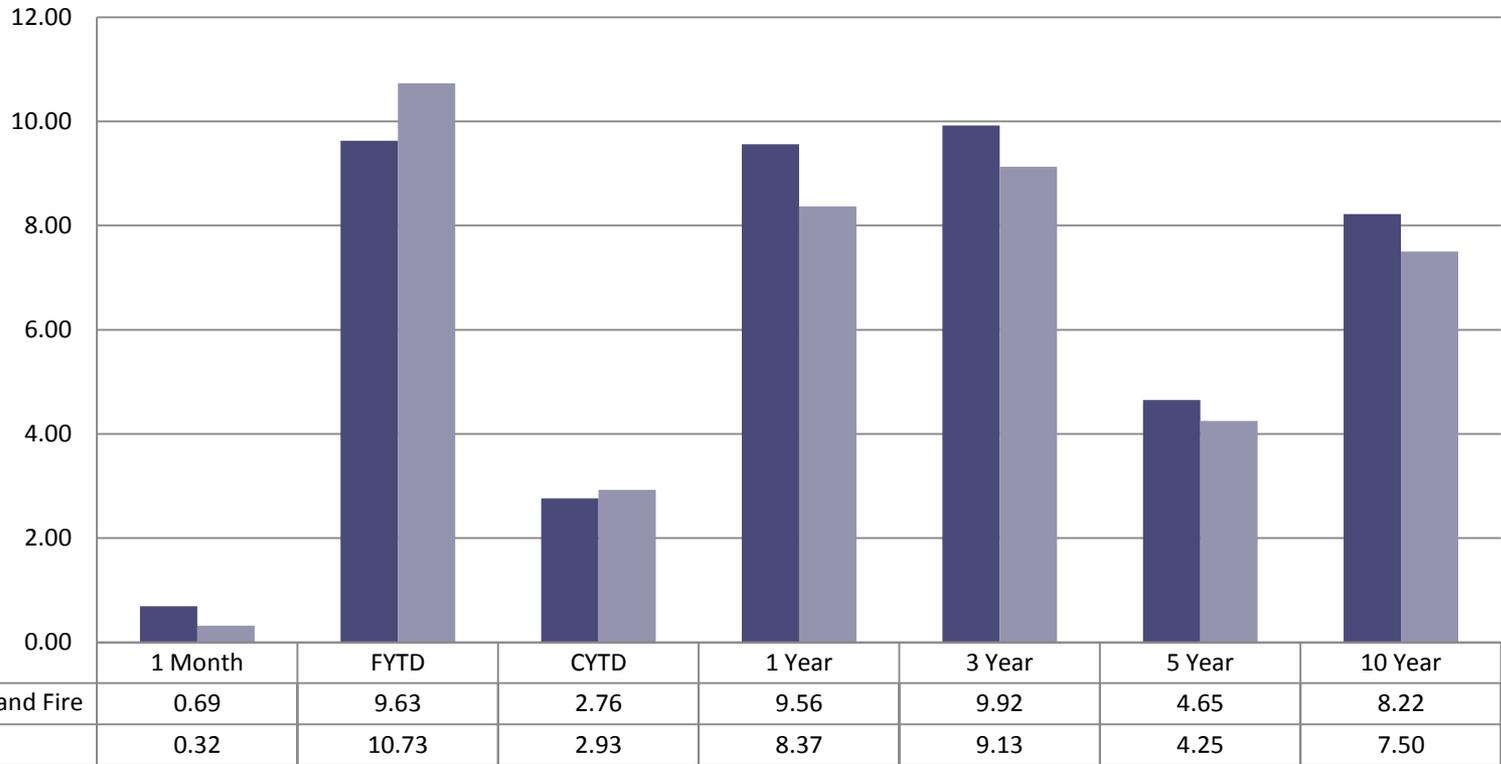
# February 28<sup>th</sup> 2013 Asset Allocation

The decision to decrease the Investment Grade allocation at the start of the FY has generated approximately **\$175 million** of increased value for the Fund.

As of February 28, 2013

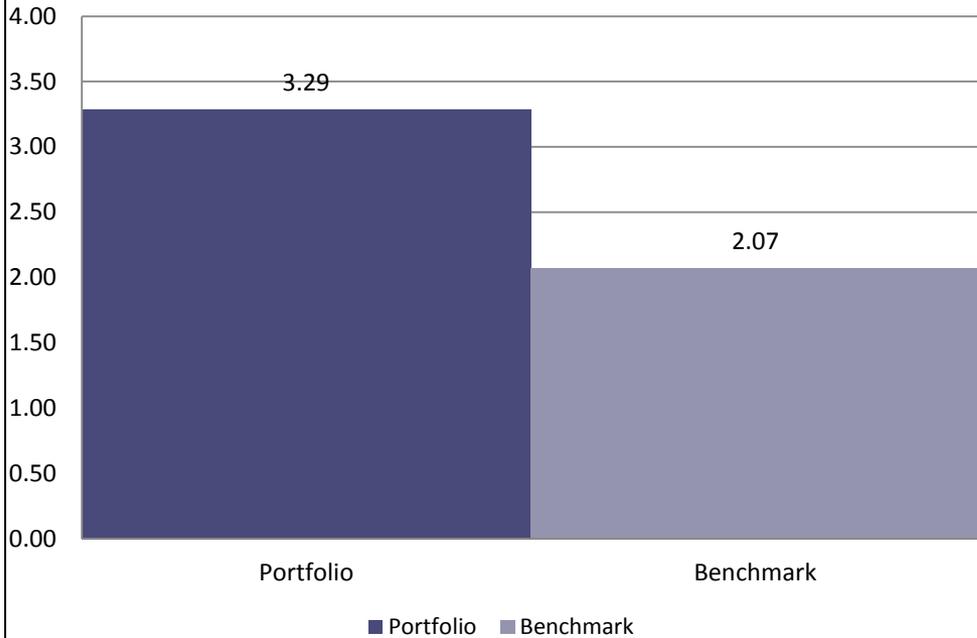
Asset Class	Sub-Category	Current Allocation	Lower Limit	FY 2013 Target	Long Term Target	Upper Limit	Over/Under Weight	Current Assets	FY 2013 Target \$	Over/Under Weight \$	No.
RISK MITIGATION	Absolute Return HF's	2.6%	0.0%	4.0%	3.5%	4.5%	-1.41%	1,880,435,972	2,899,384,769	(1,018,948,797)	1
		2.6%		4.0%	3.5%		-1.41%	1,880,435,972	2,899,384,769	(1,018,948,797)	2
LIQUIDITY	Cash Equivalents	6.9%	1.0%	6.5%	6.5%	9.5%	0.36%	4,971,279,215	4,711,500,250	259,778,965	3
		3.5%		1.5%	2.0%		1.95%	2,502,000,000	1,087,269,288	1,414,730,712	4
		2.5%		2.5%	2.8%		-0.04%	1,783,005,185	1,812,115,481	(29,110,296)	5
		0.9%		2.5%	1.7%		-1.55%	686,274,030	1,812,115,481	(1,125,841,451)	6
INCOME		24.6%	22.0%	26.0%	28.1%	32.0%	-1.44%	17,799,976,712	18,846,000,998	(1,046,024,286)	7
	Investment Grade Credit	15.1%		13.0%	20.5%		2.11%	10,949,681,397	9,423,000,499	1,526,680,898	8
	High Yield Fixed Income	4.4%		6.0%	2.5%		-1.62%	3,171,468,812	4,349,077,153	(1,177,608,341)	9
	Credit-Oriented HF's	2.7%		4.0%	3.5%		-1.25%	1,989,904,517	2,899,384,769	(909,480,252)	10
	Debt-Related PE	1.1%		1.5%	1.6%		-0.42%	780,491,410	1,087,269,288	(306,777,878)	11
	P&F Mortgage	1.3%		1.5%	0.0%		-0.25%	908,430,576	1,087,269,288	(178,838,712)	12
REAL RETURN		7.8%	7.5%	9.5%	11.3%	17.5%	-1.67%	5,678,602,660	6,886,038,826	(1,207,436,166)	13
	Commodities/RA	2.8%		4.0%	4.2%		-1.18%	2,043,835,236	2,899,384,769	(855,549,533)	14
	Real Estate	5.0%		5.5%	7.1%		-0.49%	3,634,767,424	3,986,654,057	(351,886,633)	15
GLOBAL GROWTH		58.1%	49.0%	54.0%	50.6%	59.0%	4.11%	42,120,881,200	39,141,694,381	2,979,186,819	16
	US Equity	26.2%		23.8%	18.3%		2.43%	19,014,661,967	17,251,339,375	1,763,322,592	17
	Non-US Dev Market Eq	13.4%		12.5%	14.2%		0.90%	9,711,468,783	9,060,577,403	650,891,380	18
	Emerging Market Eq	7.4%		7.0%	4.8%		0.36%	5,333,321,334	5,073,923,346	259,397,988	19
	Equity-Oriented HF's	4.0%		4.5%	7.0%		-0.49%	2,909,299,788	3,261,807,865	(352,508,077)	20
	Buyouts/Venture Cap	7.1%		6.2%	6.3%		0.91%	5,152,129,328	4,494,046,392	658,082,936	21
OTHER	Other Assets	0.0%		0.0%	0.0%		0.05%	33,443,465	0	33,443,465	22
<b>Total Fund</b>								<b>72,484,619,224</b>			

## Total Fund ex Police and Fire Mortgages Performance as of Feb 28, 2013



- The Total Fund ex Police and Fire Mortgages returned 0.69% in February to bring the Fiscal Year to Date return to 9.63% and the Calendar Year return to 2.76%. The Fund has produced a positive return in 7 of 8 months this fiscal year, with the only exception being a -0.11% return in October.
- The Fund is ahead of the benchmark for the 1, 3, 5 and 10 year return.
- The Fund has underperformed the FY13 benchmark by 110 basis points for the fiscal year, however, when adjusting the Fund's return to account for performance reporting lags, the Division estimates the underperformance is 50 to 75 basis points. When compared to the FY12 benchmark and adjusting for lags, the Fund has outperformed by an estimated 15 basis points.

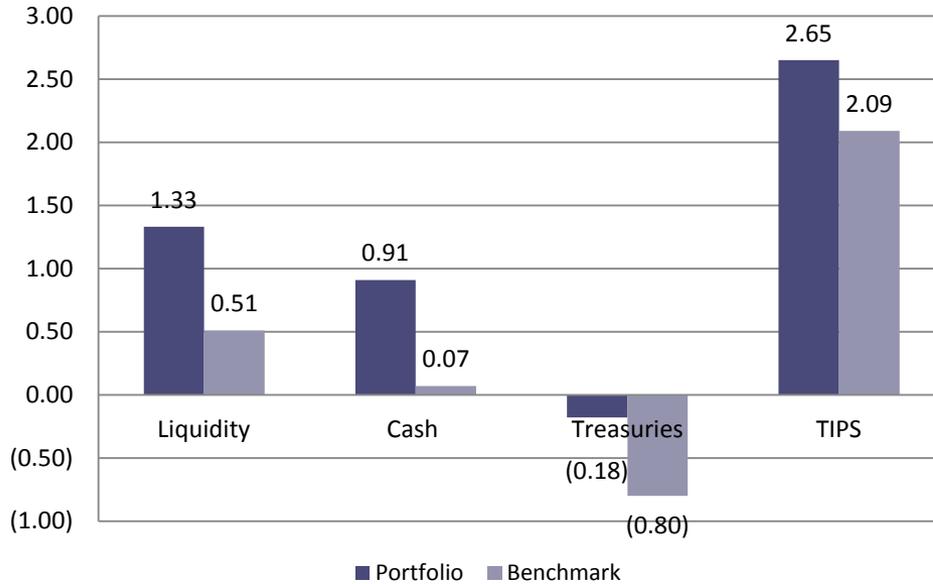
### Risk Mitigation FYTD Performance as of Feb 28, 2013



Returns as of Feb 28, 2013	1 Month	CYTD 3 Month	FYTD 1 Year		
Absolute Return Hedge Funds	1.26	2.50	2.77	3.29	3.99
Fund of Fund Lag	2.13	3.30	3.69	5.55	5.08
<i>Difference</i>	<i>(0.87)</i>	<i>(0.81)</i>	<i>(0.92)</i>	<i>(2.26)</i>	<i>(1.08)</i>

- The Risk Mitigation return is composed of the returns of the Absolute Return Hedge Funds. The returns are generally reported on a one month lag for direct funds and one to two months for fund of funds.
- The Absolute Return Hedge Funds as a group have returned 3.29% FYTD and 2.50% CYTD in what has been a challenging environment for macro oriented managers. While the return is below the HFRI Fund of Funds Index, the portfolio has outperformed the HFRI Macro Index.
- The Fund's underweight to the Risk Mitigation category has positively contributed to performance as equities and credit have outperformed.

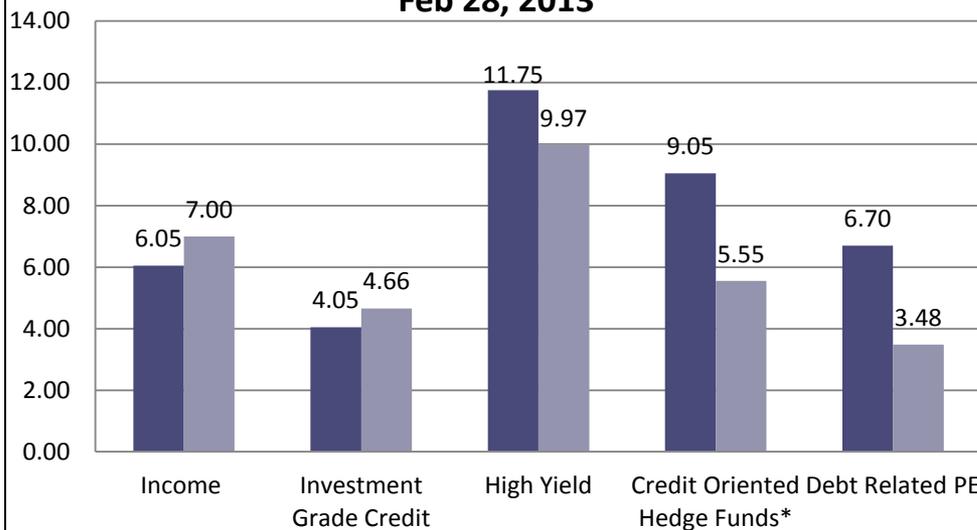
### Liquidity FYTD Performance as of Feb 28, 2013



Returns as of Feb 28, 2013	1 Month	CYTD	3 Month	FYTD	1 Year
Cash Equivalents	0.11	0.18	0.31	0.91	2.37
91 Day Treasury Bill (Daily)	0.00	0.00	0.02	0.07	0.11
<i>Difference</i>	<i>0.11</i>	<i>0.18</i>	<i>0.30</i>	<i>0.83</i>	<i>2.26</i>
Common B High Grade US Treasuries	1.48	(1.08)	(2.52)	(0.18)	5.34
Custom US Treasuries Benchmark	0.77	(0.94)	(1.87)	(0.80)	0.99
<i>Difference</i>	<i>0.71</i>	<i>(0.14)</i>	<i>(0.65)</i>	<i>0.62</i>	<i>4.34</i>
TIPS	(0.03)	(1.52)	(2.39)	2.65	7.80
Custom TIPS Benchmark	(0.20)	(2.13)	(3.44)	2.09	4.35
<i>Difference</i>	<i>0.17</i>	<i>0.61</i>	<i>1.05</i>	<i>0.56</i>	<i>3.44</i>

- The Liquidity portfolio has outperformed the benchmark by 82 basis points FYTD as all three components of the portfolio have outperformed their respective benchmarks.
- An underweight to Treasuries has helped performance as TIPS and Cash have outperformed, however, an overweight to the Liquidity asset class has detracted from Total Fund performance as equities and credit have outperformed.
- Over a trailing one-year period, all segments of the portfolio are well ahead of their respective benchmarks. The Treasuries and TIPS portfolios have benefited from having a longer duration than the benchmark.

### Income FYTD Performance as of Feb 28, 2013



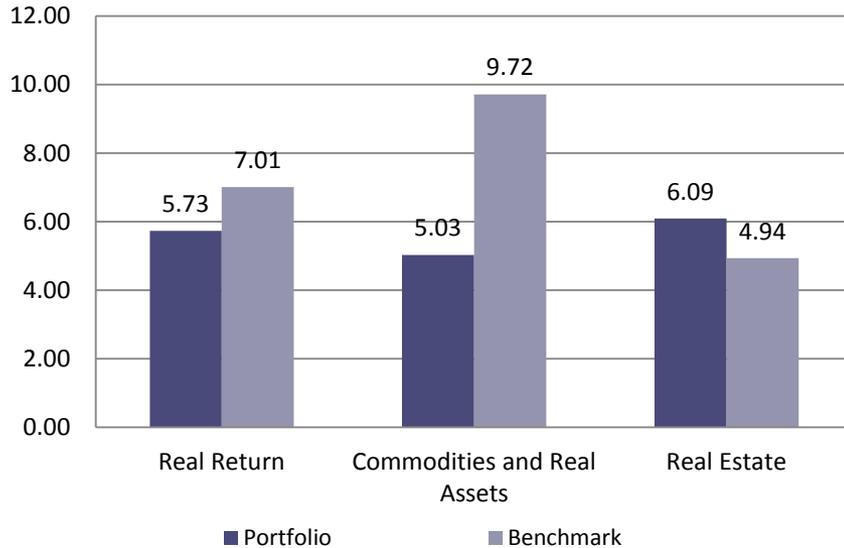
\*Reported on a 1 month lag    ■ Portfolio    ■ Benchmark

Returns as of Feb 28, 2013	1 Month	CYTD 3 Month	FYTD	1 Year	
Investment Grade Credit	1.06	(0.16)	(0.68)	4.05	7.04
Custom Investment Grade Credit	0.77	(0.57)	(0.76)	4.66	6.39
<i>Difference</i>	<i>0.29</i>	<i>0.40</i>	<i>0.08</i>	<i>(0.61)</i>	<i>0.66</i>
High Yield	1.53	3.34	4.50	11.75	20.68
Barclays Corp High Yield (Daily)	0.51	1.86	3.46	9.97	11.83
<i>Difference</i>	<i>1.02</i>	<i>1.49</i>	<i>1.04</i>	<i>1.78</i>	<i>8.85</i>
Credit-Oriented Hedge Funds*	3.03	3.53	4.45	9.05	13.29
Fund of Fund Lag	2.13	3.30	3.69	5.55	5.08
<i>Difference</i>	<i>0.90</i>	<i>0.22</i>	<i>0.76</i>	<i>3.50</i>	<i>8.21</i>
Debt-Related Private Equity	(0.12)	0.92	1.51	6.70	17.97
Cambridge Associates Private Equity 1 Qtr Lag	0.00	0.00	3.60	3.48	14.87
<i>Difference</i>	<i>(0.12)</i>	<i>0.92</i>	<i>(2.09)</i>	<i>3.22</i>	<i>3.11</i>

- The Income portfolio has underperformed by 95 basis points FYTD. It is important to note that approximately 20% of the assets in this portfolio are reported on a lag. The high yield, credit oriented hedge fund and debt related PE portfolios are all effected by this lag and the Division believes the return shown for all is negatively impacted by this.
- The Division has reduced the overweight to the Investment Grade Credit portfolio by approximately \$3.5 billion through the end of February and increased the High Yield exposure by almost \$1 billion.
- The Investment Grade Credit portfolio has underperformed the benchmark FYTD as the portfolio has lower-beta, higher quality securities and very minimal exposure to the financial sector.
- Both traditional high yield and alternative high yield portfolios have performed well FYTD, up in excess of 11%.

\*Reported on a one month lag

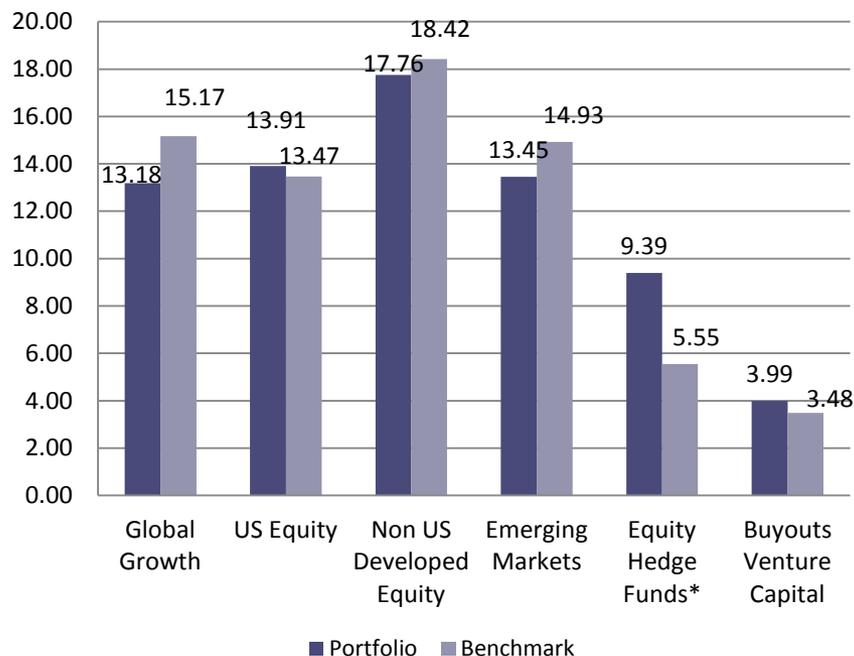
### Real Return FYTD Performance as of Feb 28, 2013



Returns as of Feb 28, 2013	1 Month	CYTD	3 Month	FYTD	1 Year
Commodities & Real Assets	(1.13)	(0.06)	(0.06)	5.03	(2.26)
SIS Real Return Index	(1.66)	3.82	3.72	9.72	(1.55)
<i>Difference</i>	<i>0.53</i>	<i>(3.88)</i>	<i>(3.78)</i>	<i>(4.69)</i>	<i>(0.71)</i>
Real Estate	3.06	4.03	5.33	6.09	12.32
NCREIF Property Index	0.00	0.00	2.54	4.94	10.55
<i>Difference</i>	<i>3.06</i>	<i>4.03</i>	<i>2.78</i>	<i>1.15</i>	<i>1.77</i>

- The Real Return portfolio underperformed by 128 basis points FYTD, however, since the bulk of the portfolio is reported on a lag, the Division believes the performance of the portfolio is understated.
- The portion of the Commodities and Real Assets portfolio that is daily valued has outperformed the commodities markets by over 132 basis points FYTD.
- Recent performance of the Real Estate Portfolio has been strong relative to the benchmark based on some valuation increases as of year end.
- The Global REIT portfolio is up over 21% FYTD, exceeding the benchmark return by over 500 basis points.

## Global Growth FYTD Performance as of Feb 28, 2013



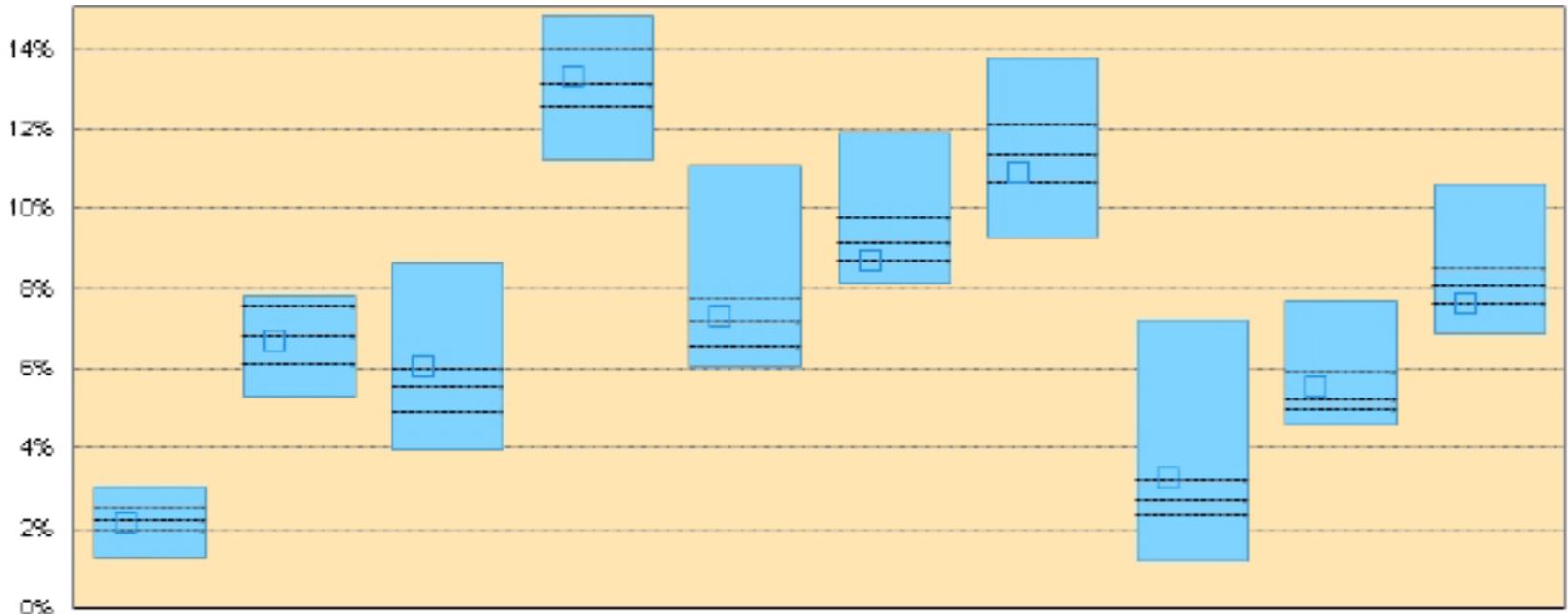
Returns as of Feb 28, 2013	1 Month	CYTD	3 Month	FYTD	1 Year
Domestic Equity	1.15	6.36	7.78	13.91	13.01
S&P 1500 Super Composite (Daily)	1.33	6.77	7.94	13.47	13.59
<i>Difference</i>	<i>(0.17)</i>	<i>(0.41)</i>	<i>(0.17)</i>	<i>0.44</i>	<i>(0.58)</i>
Non-US Dev Market Eq	(0.70)	4.03	7.10	17.76	9.18
NJDI Iran + Sudan Free EAFE + Canada	(0.75)	4.11	7.19	18.42	9.32
<i>Difference</i>	<i>0.04</i>	<i>(0.08)</i>	<i>(0.10)</i>	<i>(0.65)</i>	<i>(0.14)</i>
Emerging Market Eq	(1.37)	(0.71)	5.39	13.45	1.90
NJDI Iran + Sudan Free EM Index	(1.00)	0.56	5.34	14.93	2.48
<i>Difference</i>	<i>(0.37)</i>	<i>(1.27)</i>	<i>0.05</i>	<i>(1.48)</i>	<i>(0.57)</i>
Total Equity Oriented Hedge Funds*	2.80	4.67	5.15	9.39	12.26
HFRI fund of funds lag	2.13	3.30	3.69	5.55	5.08
<i>Difference</i>	<i>0.66</i>	<i>1.37</i>	<i>1.46</i>	<i>3.84</i>	<i>7.18</i>
Buyouts-Venture Capital	(0.07)	0.31	1.02	3.99	11.55
Cambridge Associates PE 1 Qtr Lag	0.00	0.00	3.60	3.48	14.87
<i>Difference</i>	<i>(0.07)</i>	<i>0.31</i>	<i>(2.58)</i>	<i>0.51</i>	<i>(3.32)</i>

- The Global Growth portfolio has underperformed the benchmark by 199 basis points FYTD. It is important to note that approximately 20% of the assets in this portfolio are reported on a lag. The equity hedge funds and buyouts/VC are affected by this lag and the Division believes the return shown for both is negatively impacted by this.
- The Fund's overweight to Global Growth, in particular US and Developed non-US equity, has positively impacted Total Fund performance FYTD as publically traded equities have been the best performing segment of the portfolio.
- The Domestic Equity portfolio is now ahead of the benchmark by 44 basis points FYTD while the Developed Market Non US equity portfolio is behind the benchmark by 65 basis points FYTD, as the actively managed portfolio has underperformed.
- The Emerging Markets portfolio trails the benchmark by 127 basis points FYTD as the Adviser portfolios have outperformed by 179 basis points while the ETF portfolio underperformed by 353 basis points.
- The Equity Oriented hedge fund portfolio continues to perform well relative to the HFRI Fund of Fund Index.

\*Reported on a one month lag

# Performance Comparison

Total Returns of Master Trusts- Public:Plans > \$10 Billion  
Cumulative Periods Ending: December 31, 2012



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
9th	3.03	7.81	8.63	14.85	11.09	11.88	13.77	7.22	7.67	10.63
25th	2.52	7.59	5.99	14.04	7.77	9.77	12.09	3.19	5.89	8.47
50th	2.20	6.79	5.54	13.13	7.18	9.15	11.36	2.71	5.25	8.06
75th	1.93	6.08	4.91	12.57	6.55	8.68	10.66	2.32	4.98	7.65
95th	1.26	5.30	3.95	11.25	6.07	8.12	9.32	1.17	4.60	6.87
No. Of Obs	38	38	38	38	38	37	37	37	37	36
■ Total Pension Fund ex Wilshire TUCS(TM)	2.14 (55)	6.69 (58)	6.03 (22)	13.32 (44)	7.34 (36)	8.71 (72)	10.91 (63)	3.26 (20)	5.53 (27)	7.65 (75)

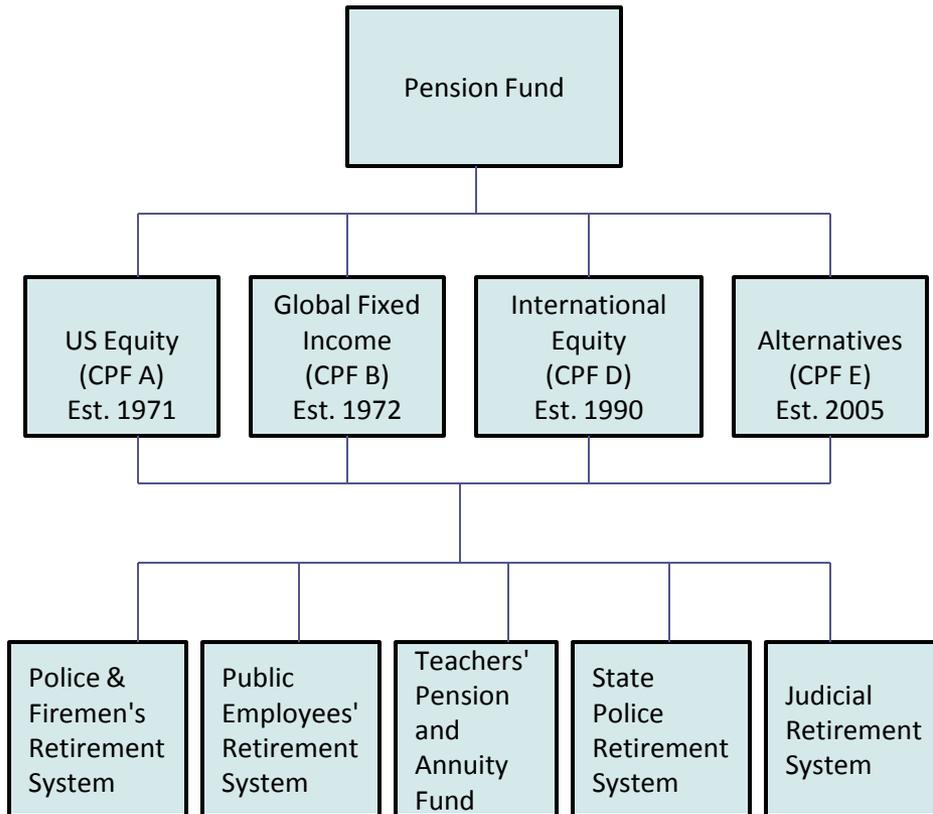
NJDOI ranks above median for 1,2,5 & 7 years.

# Highlights / Upcoming Activity

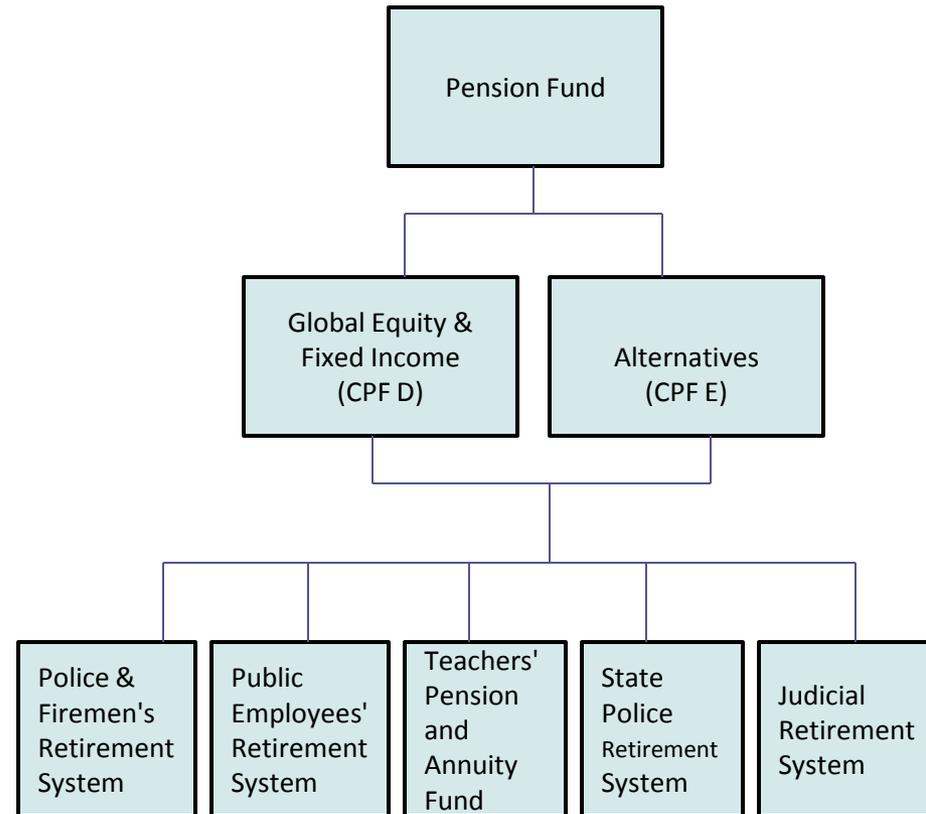
- Fixed income duration is back to 2008 levels. Investment grade credit is only \$1.5 billion over target. US Treasuries holdings lowest in over 30 years.
- Investment return assumptions are being reduced from 7.95% to 7.90% in Pension and Benefits actuarial reports.
- In March and April, we expect to receive approximately \$1.5 billion from the municipalities. In June, we expect to receive approximately \$1 billion from the state contribution.
- Real Estate Secondary Sale Update.
- State Investment Council Regulation Re-adoption
  - Every seven years we must examine and re-adopt the Regulations.
  - We have had one preliminary discussion with the IPC and will have another prior to the May meeting.
  - The full package will be presented to the SIC for adoption at the May meeting.

# Pension Fund Investment Structure after Proposed Reg Re-adoption

## Current



## Proposed



## Simplified Structure Should have Investment Benefits

Company	Background	Headquartered	Domiciled	Benchmark	Have owned in CPF A or D?	Currently Owned?	Comments
Delphi	Former GM Supplier	UK	Jersey Island	S&P 1500	both	no	65% of sales non- US
InBev	Budweiser	Belgium	Belgium	MSCI Europe	both	yes in D	77% of sales in Americas
Lululemon	Women's sport clothing	Vancouver	US	NASDAQ	never	no	96% of sales in US & Canada. (Stock up 75% last two years*)
Michael Kors	Handbags, shoes	Hong Kong	Virgin Islands	Russell 1000	never	no	90% of sales in North America. (Stock up 196% last two years*)

\*As of 2-28-13

## The Last Time the Dow was Here...

	Then (Oct 9, 2007)	Now (Mar 5, 2013)
Regular Gasoline per gallon	\$2.77	\$3.74
Size of Fed's Balance Sheet	\$0.89 trillion	\$3.01 trillion
Total US Debt Outstanding	\$9.008 trillion	\$16.43 trillion
US Household Debt	\$13.5 trillion	\$12.87 trillion
S&P Rating of the US	AAA	AA+
10 Year Treasury Yield	4.64%	1.89%
Gold per ounce	\$748	\$1,583
30- Year Mortgage Rate	6.40%	3.51%
Federal Funds Rate	4.75%	0.25%
Inflation Rate	3.50%	1.60%

	Annualized Returns 10/9/2007 to 3/5/2013
Dow Jones-DIA	2.66%
S&P 500 (SPY)	1.70%
Developed International (EFA)	(3.28)%
Emerging Equity (EEM)	(1.56)%
Long Treasury Index (TLT)	9.59%
Apple	19.30%
Nestle	12.72%
P&G	4.61%
Exxon	1.77%

# In the News



**Need a Mortgage?  
2.500% RATE / 2.815 APR**

**5/5 Adjustable Rate Mortgage**  
*Adjusts only once every 5 years*

Months	Rate	Points	APR	Payment*
First 60	2.500%	0.875	2.732%	\$1,580.48
Next 300	2.750%	0.875	2.732%	\$1,625.21

\*Payments shown do not include taxes or insurance, actual payments may be greater. Example based on \$400,000 loan. For new applications only, for a limited time. Restrictions apply to existing PenFed borrowers. Other restrictions apply. Rate is variable and can increase by no more than 2 percentage points every 5 years with a lifetime maximum adjustment of 5% (7.500% for this example). Since the index in the future is unknown, the First Adjusted Payments displayed are based on the current index plus margin (fully indexed rate) as of March 05, 2013.



PenFed is the Pentagon Federal Credit Union

Rates for up to a \$4 Million loan.

## Notable Dividend Increases

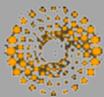
1. Coca-Cola	+10%
2. Applied Materials	+11%
3. Walmart	+18%
4. Occidental	+19%
5. Texas Instruments	+33%
6. EADS	+33%
7. Home Depot	+34%
8. Bayer	+38%
9. Qualcomm	+40%
10. AB InBev	+42%

Avg

**+28%**

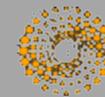
Stock prices for these 10 companies are +13% ytd versus +8% for the S&P. That is, CEOs are seeing that dividend hikes seem to be rewarded.

ISI 3-6-13



**REUTERS**

**Buffett, Brazil's 3G team up  
for \$23 billion Heinz buyout  
-Feb 2013**

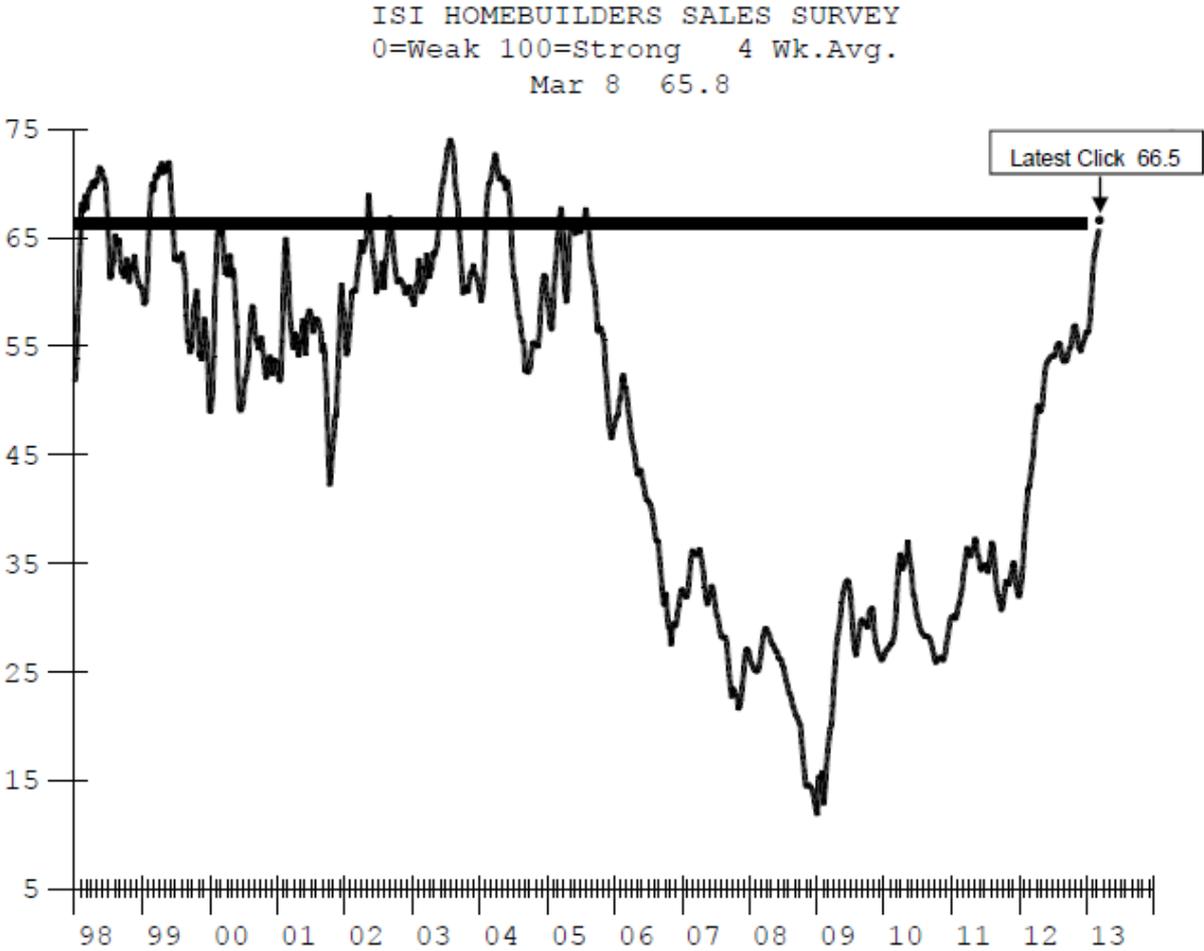


**REUTERS**

**Michael Dell coughs up \$750  
million cash to buy out Dell  
-Feb 2013**

# Can't Go Much Higher

“ISI’s homebuilders survey held onto last week’s gain to remain at a very strong 66.5. This incredible strength provides a significant lift to the economy.”



# Asset Allocation Discussion

- The SIC typically approves an annual asset allocation plan prior to the start of each fiscal year.
- The Division has begun work with the IPC to develop the FY14 Annual Investment Plan.
- The IPC will be holding a full day off site meeting in late April/early May to discuss the asset allocation.
- The proposed FY14 Asset Allocation Plan will be presented to the SIC in May.
- Other topics to be discussed as part of asset allocation review:
  - Replacing the Long Term Asset Allocation targets with Long Term Ranges
  - Appropriate Duration target for fixed income portfolio

# Asset Allocation Changes: Feb2012- Feb2013

Asset Class	Sub-Category	Feb-12 Allocation	Feb-13 Allocation	Allocation Difference	Feb-12 Assets	Feb-13 Assets	Asset Difference	No.
RISK MITIGATION		1.4%	2.6%	1.2%	971,500,209	1,880,435,972	908,935,763	1
	Absolute Return HF's	1.4%	2.6%	1.2%	971,500,209	1,880,435,972	908,935,763	2
LIQUIDITY		6.6%	6.9%	0.3%	4,582,275,811	4,971,279,215	389,003,404	3
	Cash Equivalents	1.9%	3.5%	1.6%	1,310,000,000	2,502,000,000	1,192,000,000	4
	TIPS	2.6%	2.5%	-0.1%	1,817,996,257	1,783,005,185	(34,991,072)	5
	US Treasuries	2.1%	0.9%	-1.2%	1,454,279,554	686,274,030	(768,005,524)	6
INCOME		28.2%	24.6%	-3.6%	19,847,828,822	17,799,976,712	(2,047,852,110)	7
	Investment Grade Credit	20.6%	15.1%	-5.5%	14,534,034,410	10,949,681,397	(3,584,353,013)	8
	High Yield Fixed Income	3.0%	4.4%	1.4%	2,094,268,446	3,171,468,812	1,077,200,366	9
	Credit-Oriented HF's	2.2%	2.7%	0.5%	1,543,449,421	1,989,904,517	446,455,096	10
	Debt-Related PE	0.9%	1.1%	0.2%	635,298,575	780,491,410	145,192,835	11
	P&F Mortgage	1.5%	1.3%	-0.2%	1,040,777,970	908,430,576	(132,347,394)	12
REAL RETURN		6.7%	7.8%	1.1%	4,764,583,576	5,678,602,660	914,019,084	13
	Commodities/RA	2.5%	2.8%	0.3%	1,781,275,665	2,043,835,236	262,559,571	14
	Real Estate	4.2%	5.0%	0.8%	2,983,307,911	3,634,767,424	651,459,513	15
GLOBAL GROWTH		57.2%	58.1%	0.9%	40,294,698,408	42,120,881,200	1,826,182,792	16
	US Equity	26.1%	26.2%	0.1%	18,368,052,863	19,014,661,967	646,609,104	17
	Non-US Dev Market Eq	16.0%	13.4%	-2.6%	11,279,737,040	9,711,468,783	(1,568,268,257)	18
	Emerging Market Eq	5.9%	7.4%	1.5%	4,168,663,725	5,333,321,334	1,164,657,609	19
	Equity-Oriented HF's	3.1%	4.0%	0.9%	2,162,503,778	2,909,299,788	746,796,010	20
	Buyouts/Venture Cap	6.1%	7.1%	1.0%	4,315,741,002	5,152,129,328	836,388,326	21
OTHER	Other Assets	0.1%	0.0%	-0.1%	49,840,278	33,443,465	(16,396,813)	22
				<b>TOTAL FUND</b>	<b>70,510,727,104</b>	<b>72,484,619,224</b>	<b>1,973,892,120</b>	

# TIPS

- Treasury Inflation Protected Securities are bonds, backed by the full faith and credit of the United States Treasury, whose value is partially tied to rises and falls in consumer prices.
- Today the TIPS market is over \$800 billion.
- TIPS returns are comprised of coupon and inflation components.
- The breakeven rate is the difference in yield between a TIPS issue and a regular Treasury bond of similar maturity.
- TIPS have outperformed nominal treasuries in eight of the past ten years.
- Division currently owns \$1.8 billion in TIPS (neutral versus the asset allocation target) and owns under \$700 million in nominal treasuries (underweight versus the asset allocation target.)

Through 12-31-12	TIPS Performance	Nominal Treasuries Performance	Difference
2003	8.4%	2.2%	6.2%
2004	8.5%	3.5%	5.0%
2005	2.8%	2.8%	0.0%
2006	0.4%	3.1%	(2.7)%
2007	11.6%	9.0%	2.6%
2008	(2.4)%	13.7%	(16.1)%
2009	11.4%	(3.6)%	15.0%
2010	6.3%	5.9%	0.4%
2011	13.6%	9.8%	3.8%
2012	7.0%	2.0%	5.0%
Cumulative	90.4%	59.0%	31.4%
Annualized	6.7%	4.7%	2.0%

# 20 Years TIPS Breakeven Rate

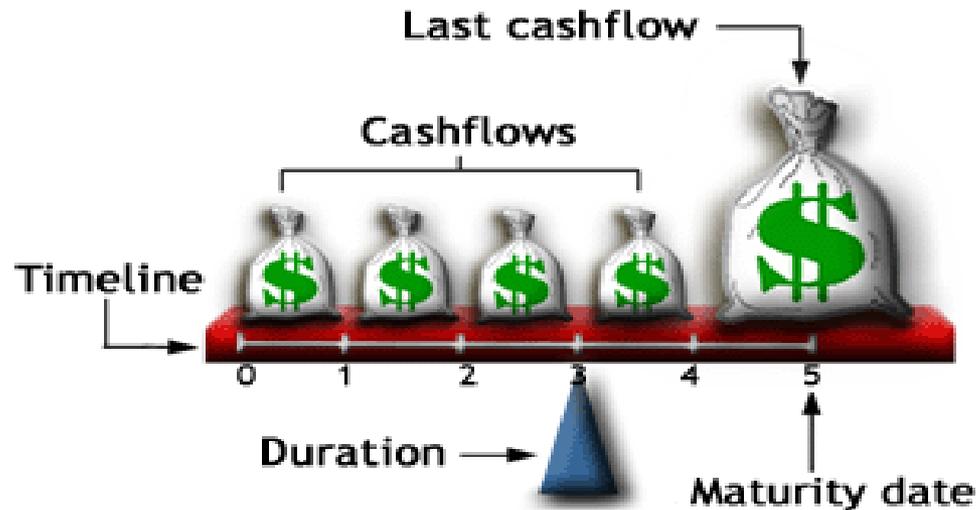


Source: Bloomberg

# Bond Duration

**Definition #1:** Measurement of how long (in years) it takes for the price of a bond to be repaid by its internal cash flows.

**Definition #2:** A measure of the sensitivity of the price (the value of principal) of a fixed-income investment to a change in interest rates.



# Bond Duration Components

These factors affect duration:

- Time to Maturity
- Price/Yield
- Coupon Rate

Bond With 8% coupon at Par	
Maturity (Years)	Duration (Years)
1	0.93
2	1.78
3	2.59
5	3.99
7	5.21
10	6.71
30	11.26

Bond With 4% coupon at Par	
Maturity (Years)	Duration (Years)
1	0.95
2	1.92
3	2.84
5	4.61
7	6.35
10	8.51
30	16.74

NJ is here at 9.1yrs

These are hypothetical examples for illustrative purposes only. They are not intended to reflect the actual performance of any security.

# Most Importantly....

- Duration tells you how sensitive a bond will be to changes in interest rates

If Rates Move Up ...	2-Year Bond Performance	10-Year Bond Performance	30-Year Bond Performance
1.00%	(1.0)%	(6.9)%	(13.7)%
2.00%	(1.9)%	(13.2)%	(24.7)%
3.00%	(2.8)%	(19.0)%	(33.6)%

As a general rule, bond prices fall as rates rise. The longer the bond, the more the price will drop.

These are hypothetical examples for illustrative purposes only. They are not intended to reflect the actual performance of any security.

# NJDOI Fixed Income Portfolio Duration

Duration  
in Years



Yellow boxes indicate 10 year US Treasury yield

The decline in benchmark duration was a policy change

# How the Division looks at International Equity

- **1992** - NJDOI started International Equities as an Asset class
- **2003** - added some emerging markets
- **2007** - hired advisers for emerging market investing



## NJDOI International Equity

	<u>Total</u> (in billions)	<u>Active</u>	<u>Passive</u>
Developed Markets <ul style="list-style-type: none"><li>• 554 companies</li><li>• From 23 countries</li></ul>	\$9.7	\$1.6	\$8.1
Emerging Markets <ul style="list-style-type: none"><li>• 284 companies</li><li>• From 21 + countries</li></ul>	\$5.3	\$2.3	\$3.0

# Developed or Emerging?



Made by  
Samsung Electronics Co. Ltd  
Based: in Seoul, Korea  
Market Cap: \$200 billion  
Sales: \$125 billion per year

Samsung  
GALAXY SIV

Developed?

(FTSE considers it Developed)

Emerging?

(MSCI considers it Emerging)

# The Country of Greece



GDP: \$300 billion  
Athens Exchange Index  
No. of stocks in index: 60  
Market Cap: \$31.67 billion

Developed?

(MSCI and FTSE consider it Developed)

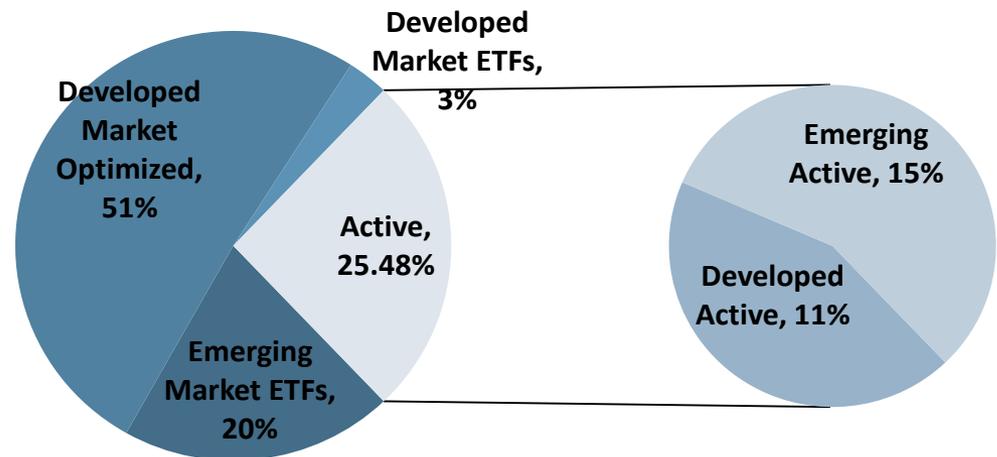
Emerging?

(Russell considers it Emerging)

# NJDOI International Equity: Combination of Active and Passive?

- Active 25%
  - Internal DOI Portfolio Manager
  - Adviser Assistance

- Passive 75%
  - Optimized portfolio
  - ETFs



# ETF – What and Why

## What

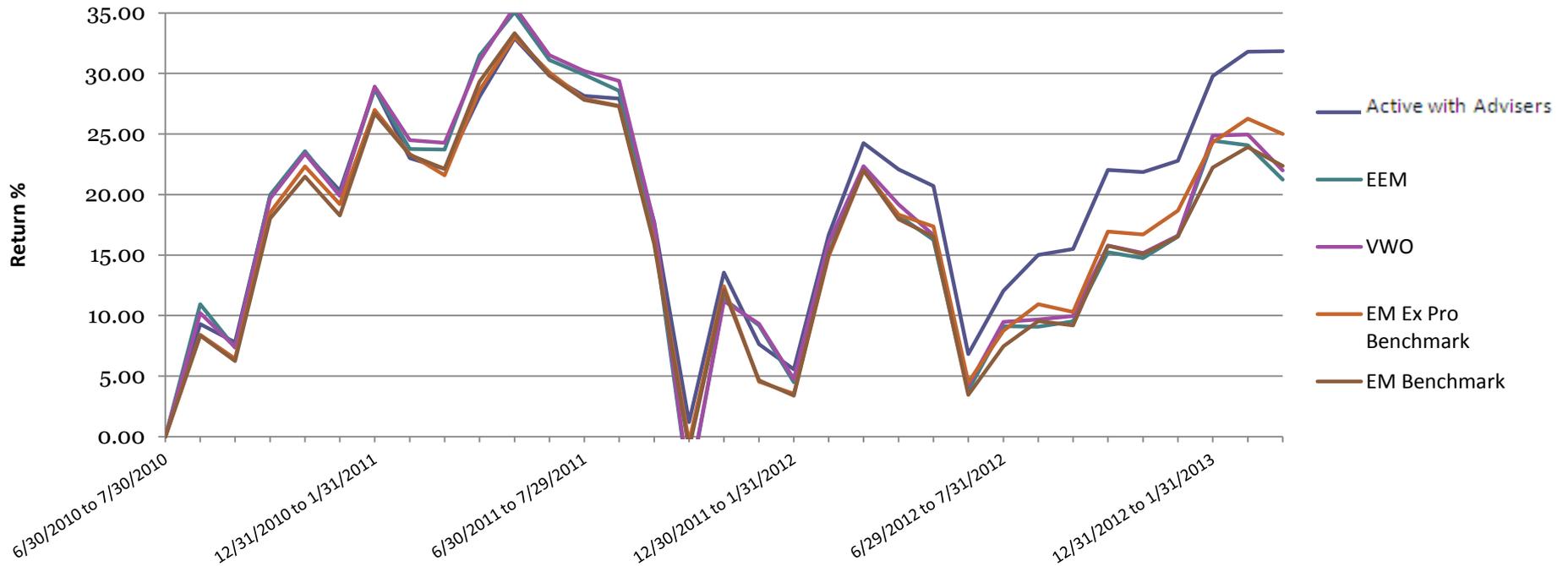
- Investment vehicle
- Intended to track an underlying benchmark or index
- Diversified portfolio of securities
- Majority are index-based
- Traded Intraday - the same as a stock

## Why

- Diversification or exposure
- Liquidity
- Access (to asset classes and markets)
- Cash equitization

# Emerging Markets Advisers' Advantage in Returns to the ETFs

## Cumulative Returns of Active Portfolio, ETFs, and EM Benchmarks July 1, 2010 - February 28, 2013



Returns 7-1-10 to 2-28-13	Cumulative	Annualized
Active with Advisers	31.85%	10.96%
Vanguard EM ETF (VWO)	21.99%	7.74%
iShares EM ETF (EEM)	21.23%	7.49%
EM Ex Pro Benchmark	25.00%	8.73%
EM Benchmark	22.36%	7.86%

The fund would have made approximately \$100 million more if the Division had \$1 billion more invested in the active portfolios as opposed to the ETFs.

# Emerging Markets Equity

- The Division's Emerging Market Equity portfolio is made up of:
  - Approximately \$3 billion of exposure through ETFs
  - Approximately \$2 billion of exposure through actively managed portfolios for which the Division receives investment advice from external investment advisers
- The Division believes it is appropriate to increase its exposure to actively managed portfolios in the emerging markets asset class
  - Emerging Markets Equity is an inefficient asset class where active management can add alpha over the benchmarks
  - The Division's actively managed portfolios where we receive advice from advisers has historically outperformed the benchmark.
    - Fiscal Year to date these portfolios have outperformed by almost 300 basis points.
  - The ETFs have underperformed the benchmark
- The Division intends to move \$1 billion from the ETF portfolio to the active portfolios
  - Up to \$500 million will go to the Lazard advised portfolio and up to \$700 million to the Morgan Stanley advised portfolio. The aggregate amount allocated to the two portfolios will not exceed \$1 billion.
  - Both advisers have agreed to lower their respective fees based on the increased assets to 60 basis points

# Risk Primer

# US Equity Portfolio Profile

## TOP 10 HOLDINGS

*Apple*

*Exxon Mobil*

*General Electric*

*JP Morgan Chase*

*Wells Fargo*

*Microsoft*

*Pfizer*

*Merck*

*Google*

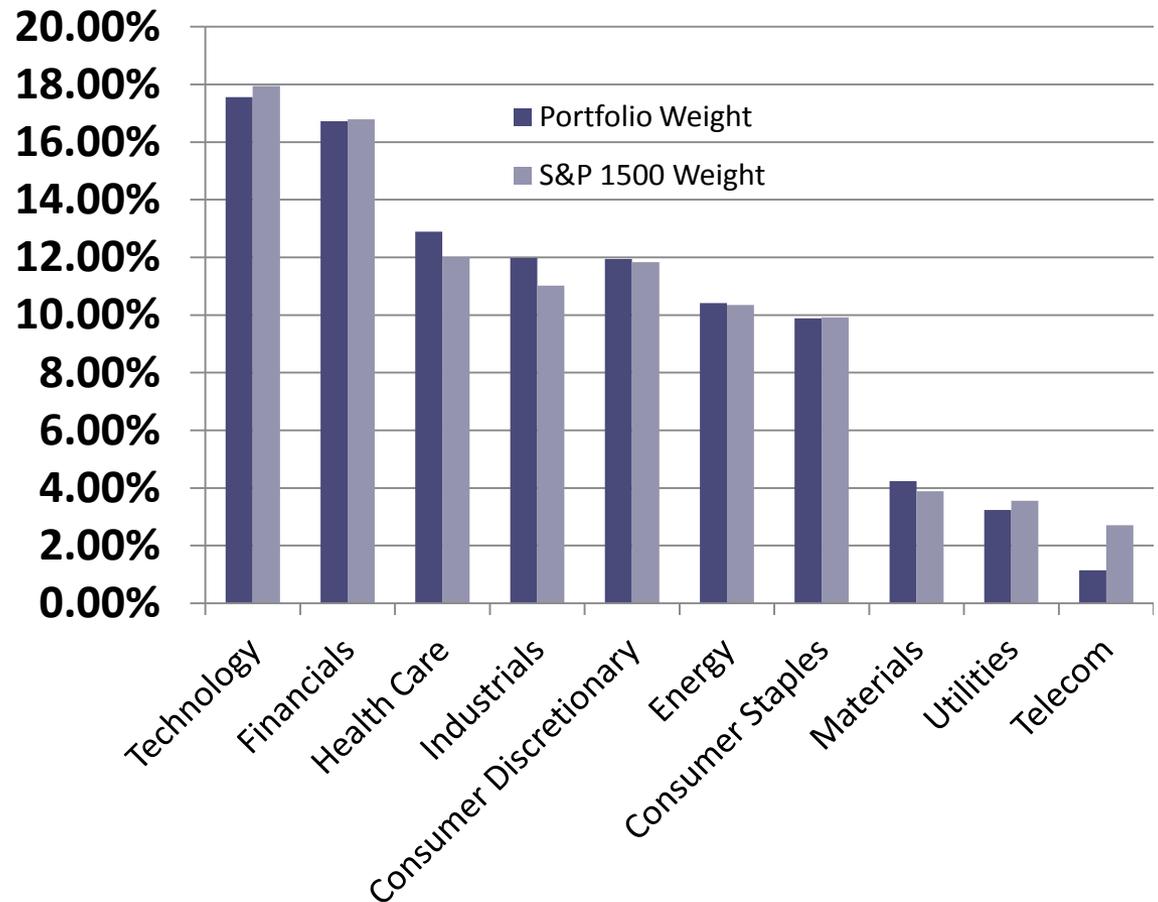
*Procter & Gamble*

**Comprise 19% of the  
Portfolio**

- Total position value: \$19 Billion
- Number of stocks held: 834
- Stocks in Benchmark: 1500
- Average Weighted Market Cap: \$92.7 billion
- Benchmark Average Weighted Market Cap: \$93.8 billion
- Beta: 1.06
- Portfolio Volatility: 17.74%
- Benchmark Volatility: 16.76%
- Tracking Error: 1.46%

# Sector Weightings

Out of the ten Sectors that comprise the US Equity Portfolio, Technology is the largest weighting (at 17.5%), while Industrials is the largest overweight by about 1%. The largest underweight is Telecoms, at 1.6%.



**Overall, the US Equity Portfolio's risk exposures are in line with tolerance levels**

# Stocks Versus Bonds

Historically, stocks have offered higher returns but with greater risk

	US Equities (S&P 500 Index)		30-year Bonds (US Treasuries)	
Time Period (As of 12-31-12)	Annualized Return	Risk*	Annualized Return	Risk*
1992 to present (20 years)	8.10%	18.90%	6.70%	9.60%
1962 to present (50 years)	9.70%	16.80%	6.80%	9.30%
1928 to present (84 years)	9.30%	20.00%	5.10%	7.70%

Risk is defined as standard deviation of annual returns (not inflation adjusted).

Source: Goldman Sachs Securities Division. Federal Reserve of St. Louis.

# Stress Test Example – US Fiscal Cliff

Asset Class	Profit & Loss
Equities	(10.93)%
Fixed Income	0.39%
Private Equity	(14.14)%
Hedge Funds	(2.63)%
Real Estate	(4.53)%
Commodities	(6.82)%
<b>HYPOTHETICAL PENSION FUND RETURN</b>	<b>(6.64)%</b>

## Stress Factor Parameters:

- An 11% decline of the US equity market
- A widening of US credit spreads; a negative shift in the US Treasury curve
- Oil price decline

The model uses historical statistical relationships among equities, bonds, and commodities globally to determine what the impact on the Pension Fund would be assuming the stress factor parameters actually occurred.