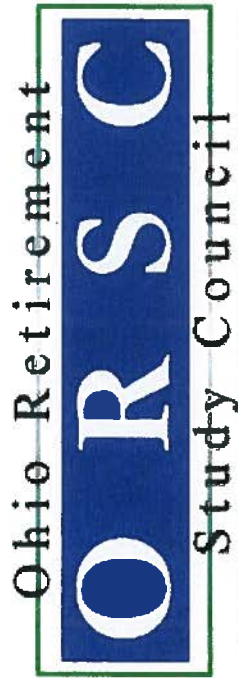


**Performance Data**

Period ending

June 30, 2013



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## Investment Performance Summary

**PERIOD ENDING June 30, 2013**

### Systems Performance Summary

All six of the Retirement Systems had positive results for the six months ending June 30, 2013, and performance of the Systems over the trailing six months was good relative to other public pension plans, and all but one of the Systems outperformed their index benchmarks. Over the trailing ten years, the performance of the retirement systems is close to their index benchmarks, and rank well versus peers.

Two of the six Retirement Systems have met their actuarial interest rates (the return target used by the System's actuaries to ensure all benefit payments can be made) over the trailing ten years. STRS had a 10-year return of 8.2% compared to 7.75% for their actuarial rate, and OP&F returned 8.4% compared to 8.25%. The following plans trailed their actuarial rates, PERS DB returned 7.7% compared to 8.0%. SERS had a return of 7.2% compared to 7.75%. PERS HC had a 7-year return of 5.2% compared to 6.7% for their actuarial rate. HPRS had a return of 7.0% compared to 8.0%. None of the Systems beat their actuarial interest rates over the trailing five-year period, but over the trailing three-year period, all plans were above their respective actuarial interest rates.

Below please see the actuarial rates of the various retirement systems:

<b>Systems 10-Year Returns vs. Actuarial Rates</b>		
Plan	Actuarial Rate	Return
<b>PERS DB</b>	8.00	7.7
<b>PERS HC*</b>	6.70	5.2
<b>STRS</b>	7.75	8.2
<b>OP&amp;F</b>	8.25	8.4
<b>SERS</b>	7.75	7.2
<b>HPRS</b>	8.00	7.0

\*Performance for PERS HC is a 7 year return, the plan does not have 10 years of return history

## **COMPARATIVE PERFORMANCE STUDY**

### **PERIOD ENDING JUNE 30, 2013**

#### **Introduction**

Milliman, Inc is pleased to present to the Council the most recent results of our ongoing, semi-annual comparative study of the performance of the six Ohio Statewide funds. The purpose of this comparative report is to provide the framework for dialogue with the retirement systems and to assist the Council in meeting its oversight responsibilities. As is our practice, this report reflects investment performance for all of the retirement systems over the ten-year period beginning July 1, 2003 and ending June 30, 2013.

An important value of this type of report is its ability to provide an “apples to apples” comparison of the systems’ investment results. Such a comparison is possible, since all of the systems are subject to the same investment standards and restrictions and have been so from their inception. In light of the fact that rate of return calculations are extremely sensitive to time period differences, it is critical that any comparative study be done with a consistent time frame, as was done in this report.

As is common practice when examining pension fund results, we make reference throughout the report to such things as quartile rankings and universe comparisons. The universes used for comparative purposes in the body of the report are those of the InvestorForce Performance Measurement Platform. The comparisons are formulated by pooling data from a wide range of investment consulting firms and they provide a statistically valid measure of results relative to a large sample. Milliman uses the InvestorForce Plan Universes, as compared to the BNY Mellon Plan Universes used by Evaluation Associates in previous reports. With over 3,000 plans and \$4 trillion in assets under advisement on the InvestorForce platform, the InvestorForce plan universes are the most robust and timely universes available in the industry.

While the entire measurement period for this report, as mentioned above, is ten years, certain exhibits contained within the report refer to shorter periods. When a shorter period is used for comparison purposes it is because that particular exhibit refers to a standard comparative reference period such as the past three or five years.

In order to put performance in the proper context, it is important to understand the historical evolution of the investment restrictions imposed on the funds by statute. Prior to 1993 and the passage of S.B. 43, the investment authority of the funds was severely limited. Only 35% of each fund’s assets could be invested in common stock and individual stock purchases were limited to domestic securities specified by a legal list. S.B. 43 expanded the legal list to include American Depository Receipts (ADRs), commingled stock investment funds, derivative instruments and real estate investment trusts (REITs). More importantly, the act permitted the funds to invest up to 50% of their total assets in U.S. stock and 10% in foreign stocks, bonds, and other obligations.

In March 1997, S.B. 82 abolished the legal list and adopted the “prudent person rule.” The funds’ investment authority under this act is expanded to allow any individual investment, so long as the overall portfolio is diversified. This allows for responses to changes in the economy and investment markets and reliance on professional investment managers and economic advisors to guide the decision-making process. Along with this expansion of investment authority, however, comes the requirement of prudence and diligence in the development of guidelines, benchmarks, and objectives, and importantly, mandates ongoing monitoring by those with fiduciary responsibility.

The majority of pension assets, in both the public and private sector, are managed with “prudent person” guidelines, which is to say largely without minimums or maximums placed on individual asset classes or securities. This approach, currently in place in the Ohio systems, is the optimal way to manage fund assets. It gives each fund the ability to develop an asset allocation strategy that is likely to maximize expected return while minimizing risk, all relative to the need to fund future obligations. Such an approach is fully consistent with the primary mandate of any pension fund – management that is in the best interest of plan participants.

Each of the Ohio systems has established separate investment policies and investment programs for its plan. The State Teachers Retirement System of Ohio (STRS) manages approximately 75% of total assets internally; Ohio Public Employees Retirement System (PERS) manages approximately 60% of total assets internally, while the OP&F, SERS, and HPRS investment programs employ external managers for 100% of their assets.

As of January 1, 2005, the Public Employees Retirement System (PERS) implemented a new structure for its assets. Approximately \$11 billion was segregated into a new fund (with a separate asset allocation policy) solely for the purpose of funding health care obligations.

The policy target (asset allocation) for the remaining pension assets was also modified, reflecting the different risk and return objectives of the newly segregated health care fund. Our report reflects these changes by separating the two PERS asset pools whenever appropriate. Additionally, the PERS DB and HC Plans now report their fixed income portfolios in aggregate. Where appropriate, the segments of each fixed income portfolio are shown separately.

Our findings may be summarized as follows:

- The first half of 2013 was a very strong period for the financial markets. As a gauge of the marketplace, the Russell 3000 returned 14.1% and the MSCI EAFE returned 4.1% for the two quarters ending June 30, 2013. Despite concerns about a potential reduction of stimulus by the Federal Reserve, the US stock market rose modestly on improving economic data and steady growth in corporate earnings. The Federal Reserve announced that it would continue its securities purchases (“QE3”) at the current rate of \$85 billion per month and keep short term interest rates low until unemployment falls below 6.5% -- the first time it has tied rates to an economic milestone.

- The Ohio Statewide fund returns for the six-month period ranged from 2.9% (PERS HC) to 6.9% (HPRS). Three of the six systems outperformed its respective policy index for the six-month period, and two of the systems matched their respective policy and one system underperformed their policy. STRS 6.6% and HPRS 6.9% were the best absolute performers. However, STRS trailed its benchmark by 30 basis points. The best relative performers were HPRS (+1.3%) and PERS HC (+0.5%). PERS DB returned 4.4% and beat its benchmark by 0.2%. OP&F returned 4.7% and matched its benchmark, and SERS at 5.3% also matched its benchmark.
- In comparison to a broad universe of other public retirement systems (the InvestorForce All Public Defined Benefit Universe), three of the plans ranked above the median for the six-month period ending June 30, 2013. HPRS ranked in the 13<sup>th</sup> percentile, STRS ranked in the 18<sup>th</sup> percentile, and SERS ranked in the 43<sup>rd</sup> percentile. The following plans ranked below the median, OP&F ranked in the 58<sup>th</sup> percentile and PERS DB ranked in the 65<sup>th</sup> percentile, while PERS HC ranked in the 83<sup>rd</sup> percentile.
- For the one-year period ending June 30, 2013, SERS (+13.7%) outperformed its benchmark by 160 basis points. HPRS (+13.2%) outperformed its benchmark by 90 basis points. PERS DB (+12.7%) outperformed its benchmark by 100 basis points, PERS HC (+10.6%) outperformed its benchmark by 90 basis points, and OP&F (+ 13.0%) outperformed its benchmark by 60 basis points. STRS (+13.9%) underperformed its benchmark by 30 basis points. Against their peers in the InvestorForce All Public Defined Benefit Universe, five of six plans placed above the median. STRS ranked in the 15<sup>th</sup> percentile, SERS ranked in the 16<sup>th</sup> percentile, HPRS ranked in the 21<sup>st</sup> percentile, OP&F ranked in the 28<sup>th</sup> percentile and PERS DB placing in the 31<sup>st</sup> percentile among its peers. PERS HC was below the median ranked in the 69<sup>th</sup> percentile amongst its peers.
- On a three-year basis, OP&F, SERS, and PERS DB were the best relative performers, with SERS leading its benchmark by 120 basis points, and PERS DB and OP&F beating their benchmarks by 70, and 60 basis points, respectively. PERS HC beat its benchmark by 50 basis points, and STRS beat its benchmark by 20 basis points. HPRS was 160 basis points behind its benchmark over the trailing three year period. Comparing the three-year returns of the systems to the InvestorForce All Public Defined Benefit Universe, only one plan ranked below the median. OP&F ranked in the 1<sup>st</sup> percentile, STRS ranked in the 6<sup>th</sup> percentile, PERS DB ranked in the 19<sup>th</sup> percentile, PERS HC plan ranked in the 43<sup>th</sup> percentile, SERS ranked in the 60<sup>th</sup> percentile, and HPRS ranked in the 57<sup>th</sup> percentile.
- For the five-year period, only three of the six systems outpaced their respective policy benchmarks, with OP&F outperforming its benchmark by 50 basis points, and PERS HC outperforming its benchmark by 30 basis points, follow by PERS DB outperforming by 20 basis points. In comparison to the InvestorForce All Public Defined Benefit Universe, OP&F (+5.7%) ranked in the 35<sup>th</sup> percentile, PERS HC (+5.2%) ranked in the 57<sup>th</sup> percentile, PERS DB (+5.1%) ranked in the 60<sup>th</sup> percentile, STRS (+5.0%) ranked in the 61<sup>st</sup> percentile while HPRS (+4.5%) and SERS (+4.0%) ranked in the fourth quartile.

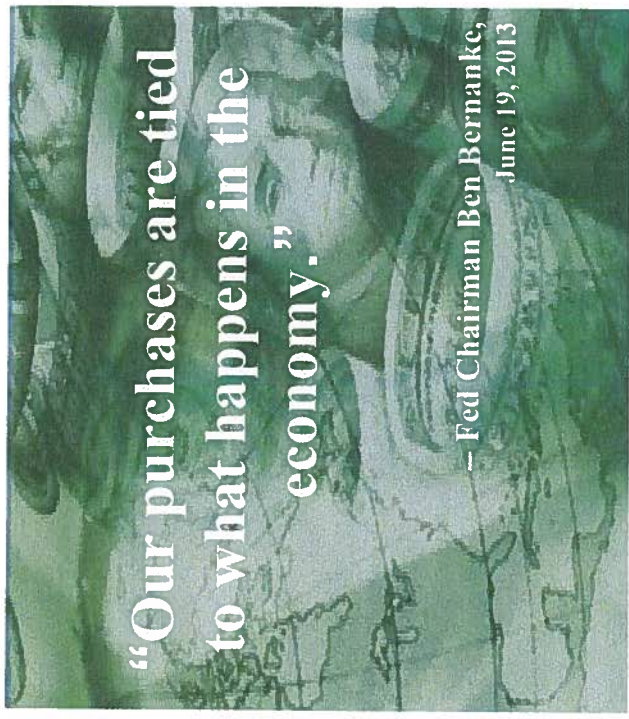
- Over the ten-year period, four of the five plans outperformed their policy benchmarks. OP&F (+8.4%) exceeded its policy benchmark by 60 basis points, STRS (+8.2%) was 50 basis points above its benchmark, and PERS DB (+7.7%) was above its benchmark by 30 basis points. SERS (+7.2%) beat its benchmark by 10 basis points, while HPRS (+7.0%) trailed its benchmark by 80 basis points. Relative to the peer group universe, OP&F ranked in the 2<sup>nd</sup> percentile, STRS ranked in the 4<sup>th</sup> percentile, and PERS DB ranked in the 19<sup>th</sup> percentile over the trailing ten-year period. SERS ranked in the 36<sup>th</sup> percentile, and HPRS ranked in the 48<sup>th</sup> percentile over the same period.
- Please note that comparing investment performance relative to the plans' actuarial interest rates and policy benchmarks are of primary importance, while peer group comparisons, although useful, should be of secondary importance in the performance evaluation process. Please also note that the asset allocation and size of the Plan play a significant role in performance. In addition, since the plans have long-term funding schedules and investment time horizons, more emphasis should be placed on evaluating performance over longer holding periods.
- The following observations are based on a review of the systems' asset allocation in comparison to the InvestorForce All Public Defined Benefit Universe:
  1. The actual (38.2%) and target (35.0%) domestic equity allocation of HPRS was above the median plan's allocation to domestic equity (35.4%) in the InvestorForce All Public Defined Benefit Universe. For OP&F, the target allocation to domestic equities (31.6%) was below the median, as was the actual allocation (28.5%). STRS actual (33.7%) was below the median, but target (36.0%) is above the median allocation to domestic equities. The actual (24.8%) and target (22.5%) allocation of SERS, the actual (21.0%) and target (21.8%) allocation of PERS DB, as well as the actual (22.4%) and target (23.2%) allocation of PERS HC domestic equity were all below that of the median plan.
  2. Five of the six systems' actual asset allocations to fixed income were well below the median plan (29.2%) of the InvestorForce All Public Defined Benefit Universe. PERS HC has a target (33.5%) above the median, but an actual allocation (31.4%) slightly below target, but above the universe median.
  3. The median plan allocation of the InvestorForce All Public Defined Benefit Universe to non-U.S. equity as of June 30, 2013 was 13.6%. The target allocations for all plans were significantly above the median, with the actual allocations following suit.
  4. The universe median allocation to real estate in the InvestorForce All Public Defined Benefit Universe was 9.7% as of June 30, 2013. The target allocation of each of the systems, with the exception of HPRS (5.0%) and PERS HC (6.0%), is above the median allocation.



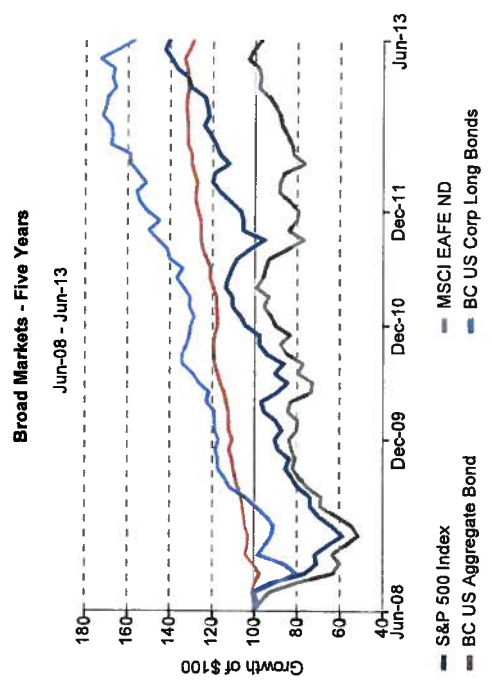
5. The universe median allocation to alternatives in the InvestorForce All Public Defined Benefit Universe was 9.4% as of June 30, 2013. The target allocation of each of the systems, with the exception of OP&F (5.3%) and PERS HC (8.1%), is above the median allocation.
6. PERS DB and PERS HC added to two new asset classes Risk Parity and GTAA during the first half of 2013. The actual allocations for PERS DB (1.8%) Risk Parity and (1.9%) GTAA. PERS HC actual allocations (1.8%) Risk Parity and (1.8%) GTAA. The target allocation is 2.0% for each asset class.
7. OP&F added a new asset class Master Limited Partnerships (MLPs) during the first half of 2013. The target allocation is 5.0%.

- Overall, we believe this report provides the ORSC with a consolidated source of valuable information to assist in its oversight of the six Ohio Statewide funds and ensure that investment policies are effectively implemented. While the report does not provide very specific underlying portfolio detail, it does provide the necessary information to allow the ORSC to ask the right questions and act as an early indicator of potential issues that should be delved into in more detail. Any modifications to the report will only serve to enhance that ability.
- For performance reporting purposes, the asset allocation benchmarks in this report are generally consistent with investment policy asset allocations for all plans. As we previously stated, one of the primary purposes of this report is to provide an accurate representation of plan performance of the Ohio Retirement Systems and to provide an “apples to apples” comparison of the Retirement Systems’ investment results. In order for this performance report to fulfill this purpose, it is necessary that each plan provide accurate information. In light of the increased complexity of the plans’ portfolios, we have divided the “alternative investment” performance table into separate and distinct categories including private equity, hedge funds, and “other.” We will continue to review current performance benchmarking practices and make recommendations to ensure consistent and transparent reporting for all plans in subsequent performance reports.
- The Systems’ investment policies are changing and we will, of course, continue to review any changes and proposed changes to the Systems’ investment policies and report them to the ORSC in subsequent performance reports.

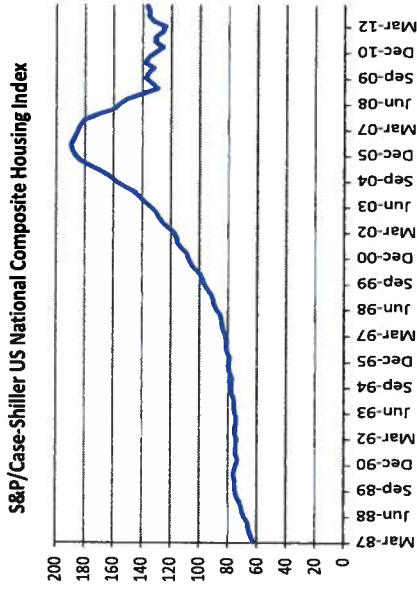
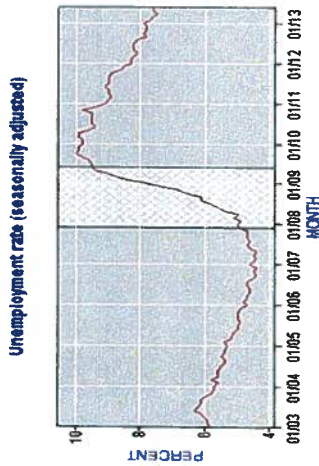
# Market Commentary - 2nd Quarter 2013



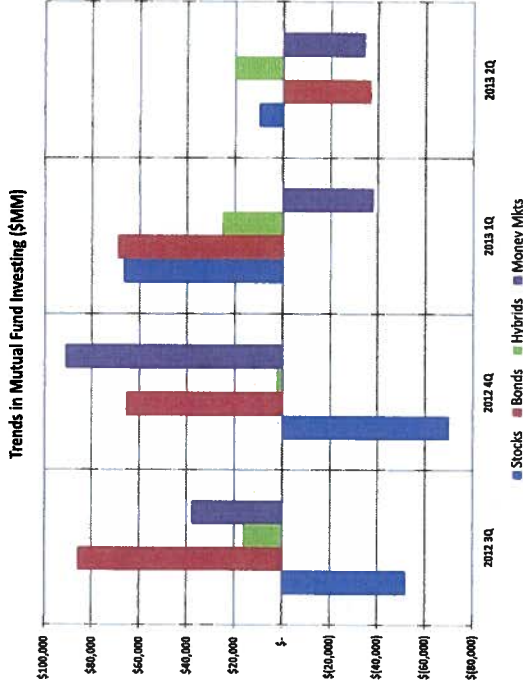
	Qtr	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
S&P 500 Index	2.91	13.82	20.60	18.45	7.01	7.30
Russell 1000 Index	2.65	13.91	21.24	18.63	7.12	7.67
Russell 1000 Value Index	3.20	15.90	25.32	18.51	6.67	7.79
Russell 1000 Growth Index	2.06	11.80	17.07	18.68	7.47	7.40
Russell 2000 Index	3.08	15.86	24.21	18.67	8.77	9.53
Russell 2000 Value Index	2.47	14.39	24.76	17.33	8.59	9.30
Russell 2000 Growth Index	3.74	17.44	23.67	19.97	8.89	9.62
MSCI EAFE ND	-0.98	4.10	18.62	10.04	-0.63	7.67
MSCI EAFE Small Cap ND	-2.52	5.69	20.88	11.88	2.48	10.38
MSCI Europe ND	-0.51	2.18	18.86	10.53	-1.35	7.50
MSCI Japan ND	4.40	16.55	22.25	8.62	-0.14	6.24
MSCI EM ND	-8.08	-9.57	2.87	3.38	-0.43	13.66
DJ World Real Estate	-5.01	1.49	14.83	15.12	4.34	10.45
DJ US Select REIT Index	-1.29	5.65	7.69	18.08	6.97	10.68
DJ-UBS US Commodity Index	-9.45	-10.47	-8.01	-0.26	-11.61	2.39
ML 3-month T-Bill	0.02	0.04	0.11	0.11	0.29	1.72
BC US Gov 1-3Y Bonds	-0.11	0.02	0.34	0.86	2.06	2.69
BC US Gov/Corp Bonds	-2.51	-2.67	-0.62	3.88	5.29	4.43
BC US Aggregate Bond	-2.32	-2.44	-0.69	3.51	5.19	4.52
BC US Gov Long Bonds	-5.71	-7.84	-8.18	6.18	7.50	6.08
BC US Corp Long Bonds	-5.74	-7.48	-1.35	7.47	9.37	6.17
BC US High Yield Bonds	-1.44	1.42	9.49	10.74	10.94	8.91
BC TIPS	-7.05	-7.39	-4.78	4.63	4.41	5.19



# Market Commentary - 2nd Quarter 2013



The S&P/Case-Shiller Home Price Indices are calculated monthly using a three-month moving average and published with a two month lag. Base Year 2000 = 100.

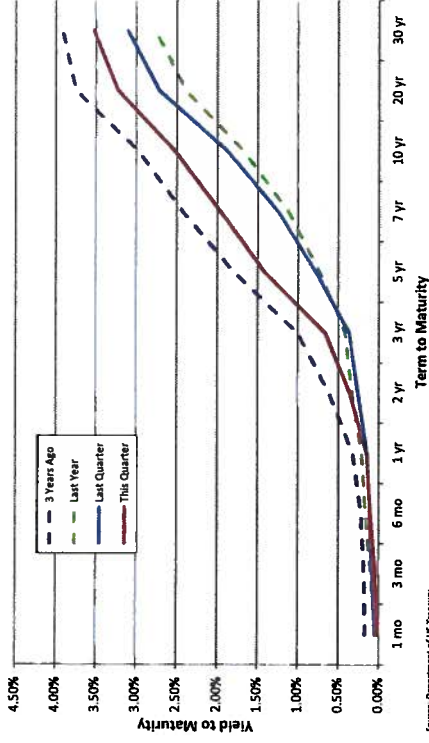


## Market Commentary

- Despite concerns about a potential reduction of stimulus by the Federal Reserve (“the Fed”), the U.S. stock market rose modestly on improving U.S. economic data and steady growth in corporate earnings.
- The international equity markets fell on worries about the recession in Europe, the prospect of reduced stimulus by the Fed, and slower growth in most emerging markets economies.
- The Fed announced it would continue its securities purchases at the current rate of \$85 billion per month and keep short-term interest rates low until unemployment falls below 6.5%. However, the Fed stated it could start reducing, or “tapering,” its securities purchases later this year.
- As the quarter ended, mutual fund investors decreased their holdings in bonds and increased their holdings in stocks. For the quarter, bond funds had net outflows of \$36.9 billion, while stock funds had net inflows of \$9.9 billion. Total money market mutual fund assets decreased by \$34.4 billion to \$2.594 trillion.
- The unemployment rate was unchanged at 7.6%, as total employment increased by 589,000 jobs.
- The price of oil was unchanged at \$97 per barrel.
- For the three months ending June 30, 2013, annualized seasonally adjusted CPI – U was 1.0%. Rising prices for apparel drove the increase.

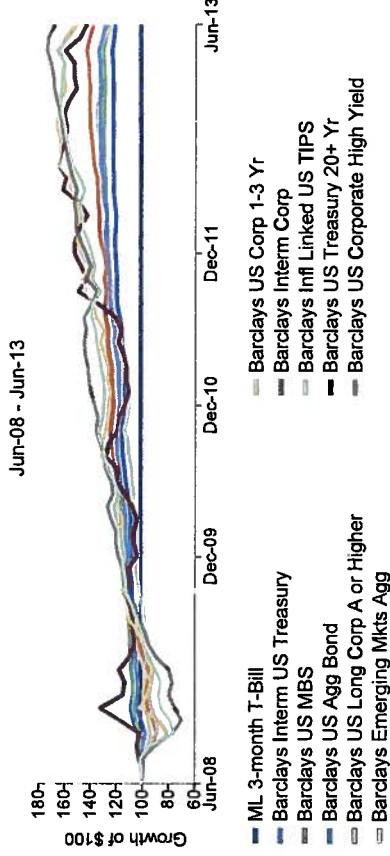
# Market Commentary - 2nd Quarter 2013

U.S. Treasury Yield Curve

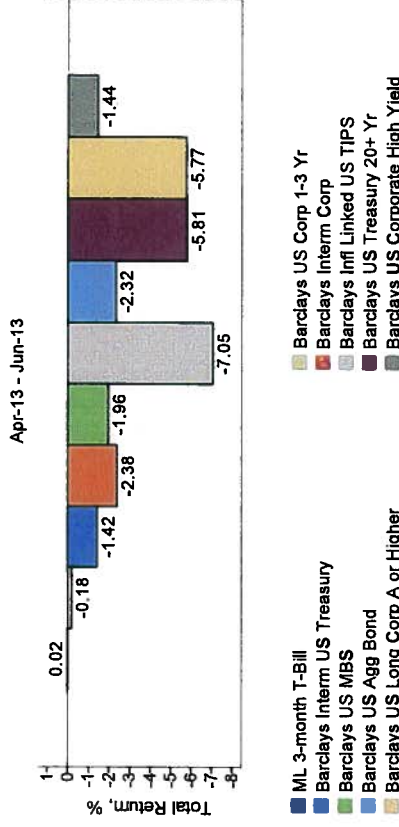


Source: Department of US Treasury

US Fixed Income - Five Years



US Fixed Income Quarterly Returns



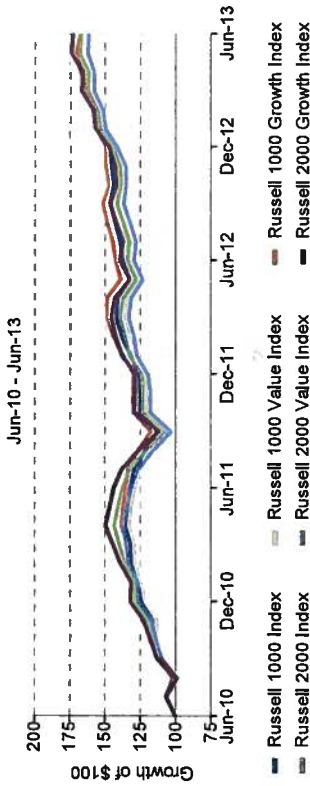
	Qtr	YTD	1 Yr	3 Yrs	5 Yrs
ML 3-month T-Bill	0.02	0.04	0.11	0.11	0.29
Barclays US Corp 1-3 Yr	-0.18	0.31	2.40	2.85	4.29
Barclays Interm US Treasury	-1.42	-1.28	-0.66	2.46	3.85
Barclays Interm Corp	-2.38	-1.82	2.38	5.14	6.63
Barclays US MBS	-1.96	-2.01	-1.10	2.51	4.84
Barclays Infl Linked US TIPS	-7.05	-7.39	-4.78	4.63	4.41
Barclays US Agg Bond	-2.32	-2.44	-0.69	3.51	5.19
Barclays US Treasury 20+ Yr	-5.81	-8.52	-9.33	6.41	7.56
Barclays US Long Corp A or Higher	-5.77	-7.90	-3.51	6.78	8.50
Barclays US Corporate High Yield	-1.44	1.42	9.49	10.74	10.94
Barclays Emerging Mkts Agg	-5.14	-6.52	3.09	8.00	8.82

## US Bond Market

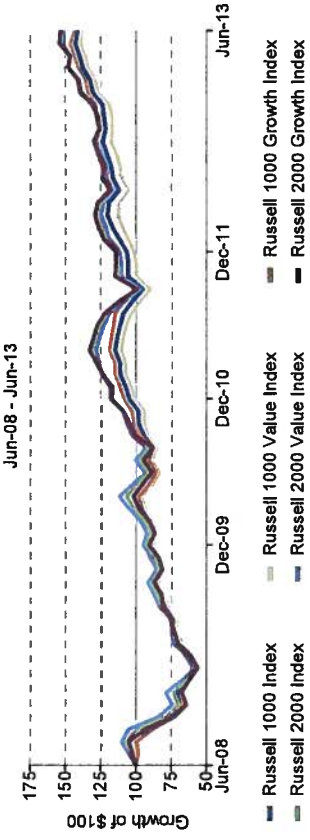
- The broad fixed income market fell 2.32% in the 2nd quarter, as the negative impact from a 0.49% rise in interest rates more than offset the coupon return of 0.80%.
- The short end of the yield curve remained unchanged as the Fed maintained its near-zero interest rate policy.
- Interest rates increased significantly for the 5- to the 30-year Treasury rates.
- 3-month T-Bills were the best performing sector this quarter, up 0.02%, as short-term rates remained near 0%.
- Long-term corporate bonds were down 5.77% due to widening spreads and rising yields on the long end of the curve.
- TIPS were the worst performing sector this quarter, down 7.05%, hurt by rising yields and declining inflation expectations.

# Market Commentary - 2nd Quarter 2013

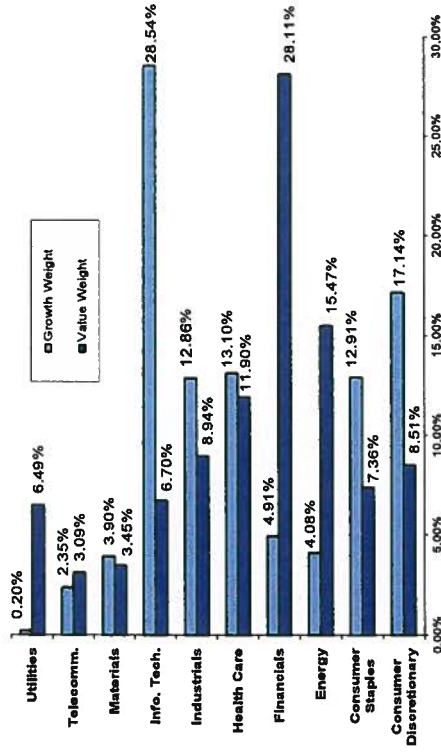
Russell Indices - Three Years



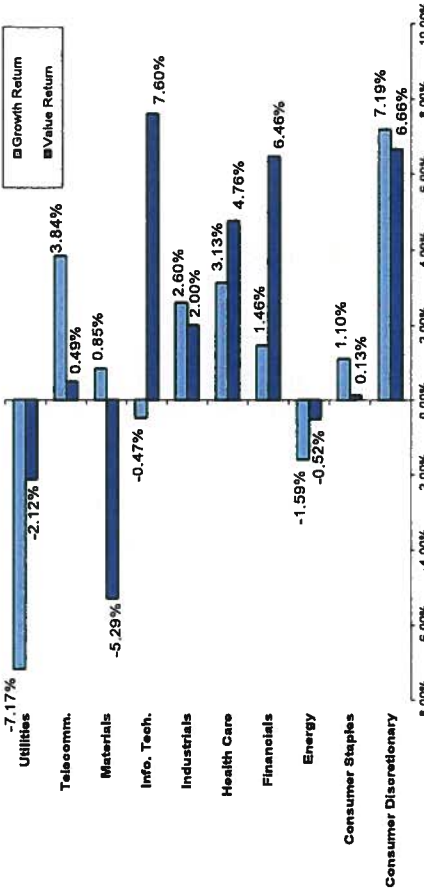
Russell Indices - Five Years



Russell 1000 Index Sector Weights



Russell 1000 Index Sector Quarterly Returns



Source: Russell Investments

## US Stock Market

- Most major domestic equity indices posted a gain for the quarter. The small-cap Russell 2000 Growth Index had the best return, up 3.74%.
- In terms of capitalization, small-cap stocks outperformed large-cap stocks.
- In comparing styles, value outperformed growth in the large-cap area of the market, while growth beat value in the small-cap area.
- In a reversal from last quarter, REITs fell 4.55% due to rising interest rates and the potential negative impact on the commercial real estate market. The worst performing sectors were infrastructure and industrials.
- Consumer discretionary was the best performing sector, up 7.00%, with strong gains in automakers and auto-related stocks.
- Materials were the worst performing sector, falling 2.22%, on lower commodity prices.

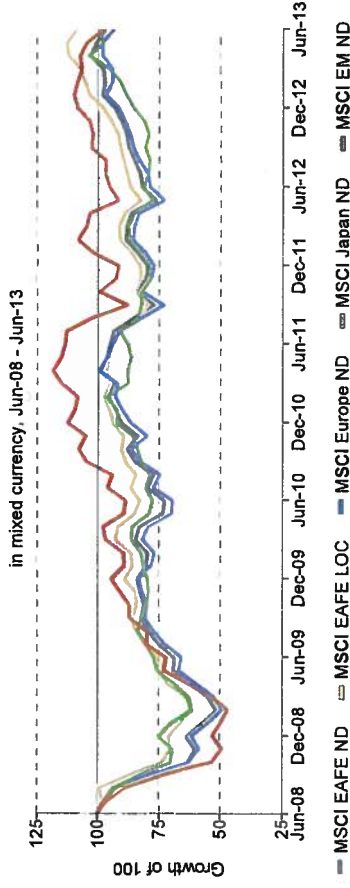
# Market Commentary - 2nd Quarter 2013

## Currency Exchange Rates

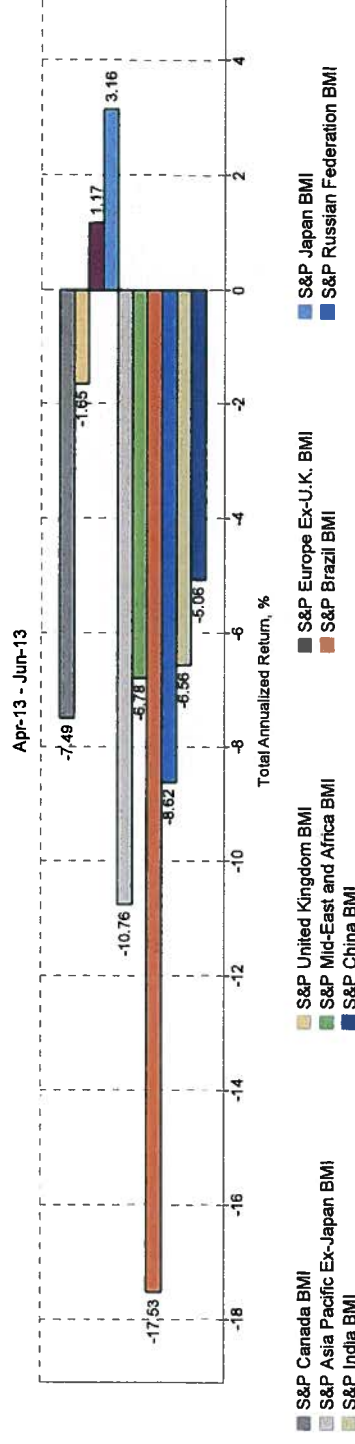
	Units per US Dollar		
	This Quarter	Last Quarter	% Change
Brazil Reals	2.23	2.02	10.39%
Canadian Dollar	1.05	1.02	3.40%
China Yuan Renminbi	6.14	6.21	-1.13%
Euro	0.77	0.78	-1.44%
India Rupees	59.53	54.28	9.65%
Japan Yen	99.19	94.22	5.28%
Mexico Pesos	12.95	12.31	5.18%
Russia Rubles	32.84	31.06	5.73%
United Kingdom Pounds	0.66	0.66	-0.03%

Source: www.xe.com

## International - Five Years



## Regional Performance - Quarter



## International Markets

- The dollar was down against the euro and pound, but up against the yen.
- For the quarter, the EAFE Index was down 0.98%, and Emerging Markets were down 8.08%. Local currency returns for the EAFE Index and Emerging Markets were 1.21% and -4.42%, respectively.
- Among the major international regions, Japanese stocks had the highest return, up 3.16%, on enthusiasm for the Bank of Japan's aggressive stimulus plans and stronger-than-expected economic data.
- Stocks in Brazil had the lowest return, down 17.53%, as a result of political instability, disappointing economic growth, and lower commodity prices.
- Small-cap stocks, down 2.5%, underperformed large-cap stocks.

# **Index Definitions and Modern Portfolio Theory Definitions**

# Ohio Retirement Study Council

## INDEX DEFINITIONS

**Russell 1000** – Made up of the 1000 largest companies within the Russell 3000 index. It is also known as the Market-Oriented Index because it represents the group of stocks from which most active money managers choose.

**Russell 2000** – A small-cap index consisting of the smallest 2000 companies in the Russell 3000 index, representing approximately 8% of the Russell 3000 total market capitalization.

**Russell 2500** – A small-cap index consisting of the smallest 2500 companies in the Russell 3000 index, representing approximately 20% of the Russell 3000 total market capitalization.

**Russell 3000** – An index composed of 3000 large U.S. companies, as determined by market capitalization. This portfolio of securities represents approximately 98% of the investable U.S. equity market.

**S&P 500** – The Standard & Poors 500 is a commonly used benchmark of the U.S. equities market. This market capitalization-weighted index includes 500 leading companies in leading industries of the U.S. economy.

**S&P 500 Equal Weighted** – An index of the same stocks as those in the S&P 500, but with equal dollar investments in each issue.

**S&P 600 Small Cap** – An index designed to measure the performance of the small capitalization sector of the U.S. equities market. This index consists of 600 domestic stocks chosen for market size, liquidity, (bid-asked spread, ownership, share turnover and number of no trade days) and industry group representation.

**S&P MidCap 400** – An index designed to measure the performance of the middle capitalization sector of the U.S. equities market. This market capitalization weighted index was created in June of 1991 and consists of 400 domestic stocks from the NYSE, NASDAQ and AMEX chosen for market size, liquidity and industry group representation. Each stock added to the index must represent a viable enterprise and must be representative of the industry group to which it is assigned. The market price of each security in the index must be responsive to changes in industry affairs. Aggregate market value of the stock and its trading activity are important considerations in the selection process.

**Wilshire 5000** – Measures the performance of all U.S. common equity securities, and so serves as an index of all stock trades in the United States.



# Ohio Retirement Study Council

**MSCI EAFE** – The index is listed for foreign stock funds (EAFE refers to Europe, Australasia, and Far East). Widely accepted as a benchmark for international stock performance, the EAFE index is an aggregate of 21 individual country indexes that collectively represent many of the major markets of the world.

**MSCI Emerging Markets** – A capitalization-weighted index of stocks from 25 emerging markets that only includes issues that may be traded by foreign investors. Consists of equities from emerging markets in Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Turkey and Thailand.

**MSCI World Ex-US** – An index that measures the performance of the developed stock markets of the following developed countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom.

**Citigroup Broad Investment Grade** – An index that spans the “available” market for U.S. Treasury/agency securities, investment grade corporate bonds (BBB or better) and mortgage pass-through securities.

**Barclays Capital U.S. Aggregate** – An index that includes fixed rate debt issues rated investment grade or higher by Moody’s Investor’s Service, Standard and Poor’s Corporation, or Fitch Investor’s Service, in that order. (It also includes Commercial Mortgage Backed Securities.) Bonds or securities included must be fixed rate, although they can carry a coupon that steps up or changes according to a predetermined schedule; must be dollar-denominated and nonconvertible; and must be publicly issued.

**Barclays Capital Mortgage-Backed** – An index that includes 15 and 30 year fixed rate securities backed by mortgage pools of the Government National Mortgage Association (GNMA), Federal Home Loan Mortgage Corporation (FHLMC), and Federal National Mortgage Association (FNMA).

**Barclays Capital 1-3 Yr US Government** – An index that includes securities issued by the U.S. Government (i.e., Treasury and Agency Securities) with a maturity from one year up to but not including three years.

**Barclays Capital U.S. Tips** – An index that consists of Inflation-Protection securities issued by the U.S. Treasury.

**NCREIF Property** – An index that is also known as the NPI or Combined Index. It consists of both equity and leveraged properties, but the leveraged properties are reported on an unleveraged basis. So, the index is completely unleveraged. The universe of properties includes: existing properties only – no development projects; only investment-grade, non-agricultural, income-producing properties: apartment, industrial, office and retail; the database increases quarterly as participants execute transactions and as new members join NCREIF and submit data; sold properties are removed from the index in the quarter the sale takes place but the historical information remains in the database; each property’s market value is determined by real estate appraisal methodology, consistently applied.

# Ohio Retirement Study Council

## MODERN PORTFOLIO THEORY DEFINITIONS

**Alpha** – risk-adjusted measure of an investment manager's skill. It measures the difference between a portfolio's actual return and the results one would expect from an average portfolio with the same level of market risk, as measured by beta.

**Beta** – measures a portfolio's sensitivity to changes in the market. Here the market is the benchmark selected for the study. A portfolio's Beta is computed by regressing the portfolio excess returns over the excess returns of the benchmark.

**Down-Market Capture Ratio** – measures what portion of the market performance (benchmark) was captured by the manager over a period where the benchmark posted a negative return.

**Information Ratio** – measure of return per unit of risk. It measures a portfolio's risk-adjusted return by subtracting the *benchmark return* from the portfolio's return, divided by the standard deviation of the excess return (tracking error).

**R-Squared** – calculates how well the variability of returns of a portfolio is explained by movements in the benchmark.

**Returns-Based Style Analysis** – method used to examine the performance of a manager in relation to a number of benchmarks. Style analysis does not show the actual holdings of the portfolio. The return behavior of an account is measured and attributed to any number of style benchmarks.

**Sharpe Ratio** – measure of return per unit of risk. It measures a portfolio's risk-adjusted return by subtracting the *risk-free rate* of return from the portfolio's return, divided by the portfolio's standard deviation of returns.

**Standard Deviation** – measure of total risk. It measures the variability of a portfolio's returns around the portfolio's expected return.

**Tracking Error** – measures the standard deviation of the portfolio's excess return over the benchmark. It indicates the extent to which period-to-period returns vary about the average return of the entire period.

**Up-Market Capture Ratio** – measures what portion of the market performance (benchmark) was captured by the manager over a period where the benchmark posted a positive return.

# Asset Class Comparison

## Ending 6/30/13

	Comparison of Actual Asset Allocation						
	Global ex-US			Public/Private			
	US Equity	Equity	Fixed Income	Real Estate	Alternatives	Cash	Others
PERS DB	21.0	21.4	21.8	10.3	17.4	4.4	3.7
PERS HC	22.4	24.5	31.4	6.0	8.1	4.0	3.6
STRS	33.7	22.5	18.4	9.8	11.1	4.5	0.0
OP&F	28.5	23.6	26.8	9.5	5.0	0.8	5.9
SERS	24.8	24.4	16.4	10.1	23.1	1.3	0.0
HPRS	38.2	18.6	18.4	5.0	18.6	1.1	0.0
<b>IF Public DB Median</b>	<b>35.4</b>	<b>13.6</b>	<b>29.2</b>	<b>9.7</b>	<b>9.4</b>	<b>1.0</b>	

	Comparison of Target Asset Allocation						
	Global ex-US			Public/Private			
	US Equity	Equity	Fixed Income	Real Estate	Alternatives	Cash	Others
PERS DB	21.8	22.2	24.5	10.0	17.5	0.0	4.0
PERS HC	23.2	24.9	33.5	6.0	8.4	0.0	4.0
STRS	36.0	24.0	18.0	10.0	11.0	1.0	0.0
OP&F	31.6	21.7	31.5	10.0	5.3	0.0	0.0
SERS	22.5	22.5	19.0	10.0	25.0	1.0	0.0
HPRS	35.0	20.0	22.5	5.0	17.5	0.0	0.0
<b>IF Public DB Median</b>	<b>35.4</b>	<b>13.6</b>	<b>29.2</b>	<b>9.7</b>	<b>9.4</b>	<b>1.0</b>	

	Investor Force All Public Defined Benefit Asset Allocation						
	Global ex-US			Public/Private			
	US Equity	Equity	Fixed Income	Real Estate	Alternatives	Cash	Others
5th Percentile	52.9	25.0	62.1	21.0	27.3	7.5	
25th Percentile	43.0	16.9	38.5	13.4	13.7	2.2	
<b>Median</b>	<b>35.4</b>	<b>13.6</b>	<b>29.2</b>	<b>9.7</b>	<b>9.4</b>	<b>1.0</b>	
75th Percentile	25.6	9.8	21.6	5.6	5.0	0.4	
95th Percentile	13.4	4.9	12.6	3.0	1.2	0.0	

## Systems Total Fund Performance

Ending June 30, 2013

	Since 12/31/12	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
<b>Public Employees Retirement System (DB)</b>	<b>4.4%</b>	<b>65</b>	<b>12.7%</b>	<b>31</b>	<b>12.1%</b>	<b>19</b>	<b>5.1%</b>	<b>60</b>	<b>7.7%</b>	<b>19</b>
PERS (DB) Total Fund Benchmark	4.2%	69	11.7%	46	11.4%	31	4.9%	64	7.4%	28
Over/Under	0.2%		1.0%		0.7%		0.2%		0.3%	

	Since 12/31/12	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
<b>Public Employees Retirement System (HC)</b>	<b>2.9%</b>	<b>83</b>	<b>10.6%</b>	<b>69</b>	<b>10.9%</b>	<b>43</b>	<b>5.2%</b>	<b>57</b>	<b>--</b>	<b>--</b>
PERS (HC) Total Fund Benchmark	2.4%	89	9.7%	83	10.4%	56	4.9%	64	--	--
Over/Under	0.5%		0.9%		0.5%		0.3%			

	Since 12/31/12	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
<b>State Teachers Retirement System</b>	<b>6.6%</b>	<b>18</b>	<b>13.9%</b>	<b>15</b>	<b>12.7%</b>	<b>6</b>	<b>5.0%</b>	<b>61</b>	<b>8.2%</b>	<b>4</b>
STRS Total Fund Benchmark	6.9%	13	14.2%	14	12.5%	9	5.1%	58	7.7%	18
Over/Under	-0.3%		-0.3%		0.2%		-0.1%		0.5%	

	Since 12/31/12	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
<b>Ohio Police &amp; Fire</b>	<b>4.7%</b>	<b>58</b>	<b>13.0%</b>	<b>28</b>	<b>13.5%</b>	<b>1</b>	<b>5.7%</b>	<b>35</b>	<b>8.4%</b>	<b>2</b>
OPF Total Fund Benchmark	4.7%	59	12.4%	34	12.9%	6	5.2%	55	7.8%	15
Over/Under	0.0%		0.6%		0.6%		0.5%		0.6%	

	Since 12/31/12	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
<b>School Employees Retirement System</b>	<b>5.3%</b>	<b>43</b>	<b>13.7%</b>	<b>16</b>	<b>11.5%</b>	<b>30</b>	<b>4.0%</b>	<b>88</b>	<b>7.2%</b>	<b>36</b>
SERS Total Fund Benchmark	5.3%	43	12.1%	39	10.3%	57	4.4%	78	7.1%	40
Over/Under	0.0%		1.6%		1.2%		-0.4%		0.1%	

	Since 12/31/12	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
<b>Highway Patrol Retirement System</b>	<b>6.9%</b>	<b>13</b>	<b>13.2%</b>	<b>21</b>	<b>10.3%</b>	<b>57</b>	<b>4.5%</b>	<b>78</b>	<b>7.0%</b>	<b>48</b>
HPRS Total Fund Benchmark	5.6%	35	12.3%	35	11.9%	21	5.6%	37	7.8%	15
Over/Under	1.3%		0.9%		-1.6%		-1.1%		-0.8%	

All total fund returns are reported gross of fees.

All returns are for periods ending 06/30/2013. Returns for periods longer than one year are annualized. Rankings are derived from placement in the InvestorForce All Public Defined Benefit Universe.

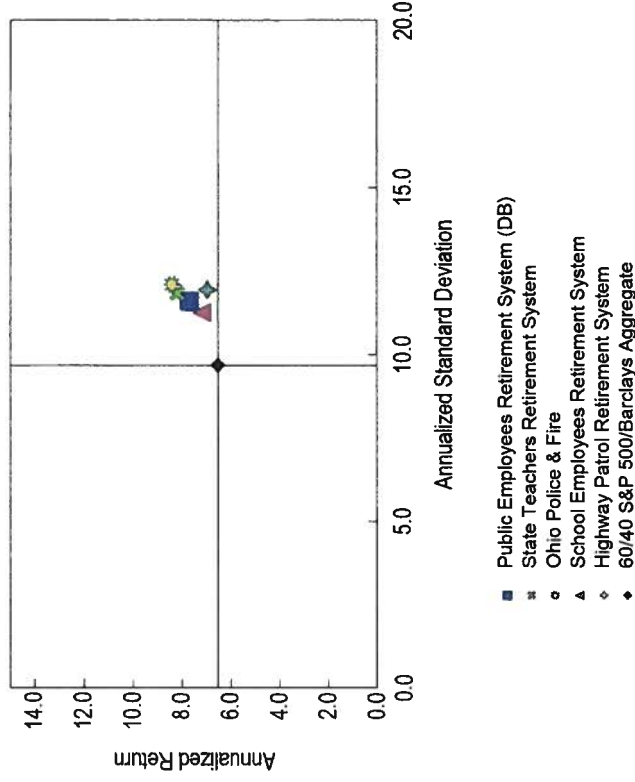
# Systems Total Plans

## Risk Analysis - Last 10 Years

### Statistics Summary 10 Years Ending June 30, 2013

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio
Public Employees Retirement System (DB)	7.69%	11.59%	0.52	0.32
PERS (DB) Total Fund Benchmark	7.40%	11.62%	0.50	-
State Teachers Retirement System	8.22%	11.84%	0.56	0.66
STRS Total Fund Benchmark	7.73%	11.82%	0.52	-
Ohio Police & Fire	8.42%	12.11%	0.56	0.68
OPF Total Fund Benchmark	7.84%	11.92%	0.52	-
School Employees Retirement System	7.21%	11.25%	0.50	0.06
SERS Total Fund Benchmark	7.11%	10.30%	0.53	-
Highway Patrol Retirement System	6.96%	11.95%	0.45	-0.52
HPRS Total Fund Benchmark	7.84%	11.01%	0.57	-

Annualized Return vs. Annualized Standard Deviation  
10 Years Ending June 30, 2013



On an absolute basis, the STRS and HPRS Plans outperformed all other Plans in the ORSC for the two quarters ending June 30, 2013. SERS returned 5.3%, followed by OP&F 4.7%. On a relative basis, the HPRS Plan outperformed all other Plans in the ORSC, beating its benchmark of 5.6% for the two quarters ending June 30, 2013.

The tables above display the annualized ten-year risk statistics for the Plans. The Ohio Police and Fire Plan generated the highest risk-adjusted annualized returns over the ten-year period (as measured by the Sharpe Ratio), followed by STRS, PERS DB, SERS and HPRS. HPRS and OP&F exhibited marginally higher risk (volatility) while SERS had the lowest risk among all plans. While the Sharpe Ratio provides a good tool for analysis, the number alone is not particularly meaningful, but when comparing two or more funds as is the case in this study, the higher Sharpe Ratio is the better risk-adjusted return. Additionally, the Information Ratio measures risk relative to a Plan's benchmark. A higher information ratio indicates that a Plan is getting better returns than its respective benchmark at a similar level of risk. The OP&F Plan had the highest information ratio, followed by STRS, PERS DB, SERS and HPRS.

## Systems Domestic Equity

Ending June 30, 2013

	Since 12/31/12	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
<b>ORSC Domestic Equity</b>										
PERS(DB) Domestic Equity	13.8%	53	21.6%	51	18.7%	44	7.1%	64	7.7%	77
Russell 3000	<u>14.1%</u>	50	<u>21.5%</u>	53	<u>18.6%</u>	46	<u>7.2%</u>	61	<u>7.8%</u>	75
Over/Under	-0.3%		0.1%		0.1%		-0.1%		-0.1%	
PERS(HC) Domestic Equity	13.8%	53	21.6%	51	18.7%	44	7.1%	64	--	--
Russell 3000	<u>14.1%</u>	50	<u>21.5%</u>	53	<u>18.6%</u>	46	<u>7.2%</u>	61	<u>7.8%</u>	75
Over/Under	-0.3%		0.1%		0.1%		-0.1%			
STRS Domestic Equity	13.3%	62	20.2%	64	18.3%	53	7.3%	61	7.6%	80
STRS Domestic Equity Benchmark	<u>14.1%</u>	50	<u>21.5%</u>	53	<u>18.6%</u>	46	<u>7.2%</u>	61	<u>7.8%</u>	75
Over/Under	-0.8%		-1.3%		-0.3%		0.1%		-0.2%	
OP&F Domestic Equity	12.5%	70	20.6%	60	18.7%	44	8.1%	48	8.6%	63
Wisshire 5000	<u>14.0%</u>	51	<u>21.1%</u>	55	<u>18.4%</u>	50	<u>7.2%</u>	62	<u>8.0%</u>	72
Over/Under	-1.5%		-0.5%		0.3%		0.9%		0.6%	
SERS Domestic Equity	14.0%	50	23.3%	42	18.9%	40	7.6%	54	7.7%	77
Russell 3000	<u>14.1%</u>	50	<u>21.5%</u>	53	<u>18.6%</u>	46	<u>7.2%</u>	61	<u>7.8%</u>	75
Over/Under	-0.1%		1.8%		0.3%		0.4%		-0.1%	
HPRS Domestic Equity	15.5%	34	23.4%	41	18.3%	53	8.1%	47	8.9%	58
HPRS Domestic Equity Benchmark	<u>14.1%</u>	50	<u>21.5%</u>	53	<u>19.0%</u>	40	<u>7.8%</u>	51	<u>8.4%</u>	66
Over/Under	1.4%		1.9%		-0.7%		0.3%		0.5%	

All domestic equity returns are reported gross of fees.

All returns are for periods ending 06/30/2013. Returns for periods longer than one year are annualized. Differences may exist due to rounding.

Domestic equity returns were positive for the two quarters ending June 30, 2013. HPRS had the best absolute and relative domestic equity returns for the six month period, with a return of 15.5%. Over the trailing year, HPRS also led performance on an absolute basis and a relative basis. Over the five-year and ten-year periods, OP&F generated the highest relative return.

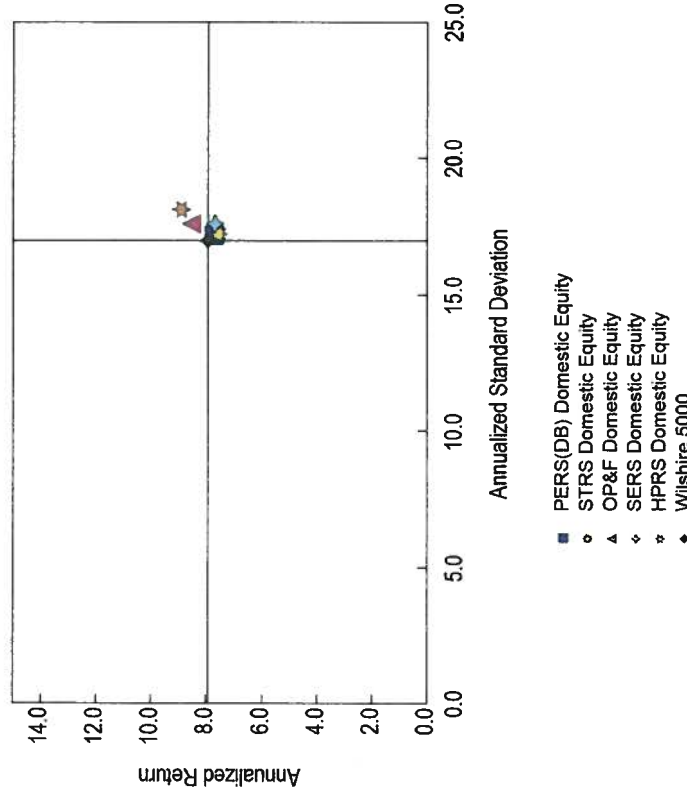
The domestic equity segments of the Plans are ranked in the InvestorForce US Equity Universe. This universe includes all actively managed domestic equity portfolios.

# Systems Domestic Equity

## Statistics Summary 10 Years Ending June 30, 2013

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio
PERS(DB) Domestic Equity	7.73%	17.19%	0.36	-0.19
Russell 3000	7.81%	17.08%	0.36	-
PERS(HC) Domestic Equity	-	-	-	-
Russell 3000	-	-	-	-
STRS Domestic Equity	7.57%	17.24%	0.35	-0.27
STRS Domestic Equity Benchmark	7.79%	17.08%	0.36	-
OP&F Domestic Equity	8.55%	17.61%	0.39	0.36
Wilshire 5000	7.95%	16.98%	0.37	-
SERS Domestic Equity	7.69%	17.61%	0.35	-0.10
Russell 3000	7.81%	17.08%	0.36	-
HPRS Domestic Equity	8.91%	18.12%	0.40	0.32
HPRS Domestic Equity Benchmark	8.37%	17.42%	0.39	-

Annualized Return vs. Annualized Standard Deviation  
10 Years Ending June 30, 2013



The analysis above represents a risk/return of the domestic equity portfolios for all of the plans. HPRS and OP&F experienced the highest risk-adjusted equity results over the annualized ten-year period (as measured by the Sharpe Ratio), followed by PERS DB, STRS and SERS. Please note that information ratios in the above tables are specific to the Plans' current policies, and indicate that OP&F and HPRS are adding value relative to the risk in their equity portfolios, while PERS DB, STRS, and SERS have negative information ratios, indicating that these portfolios are not being rewarded for the risk taken in the portfolios, relative to the benchmarks.

\*Benchmark shown in the above risk-reward chart may not be specific to the Plan's current policy.

## Systems Fixed Income

Ending June 30, 2013

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>PERS Combined (DB+HC) Total Fixed Income</b>	-1.4%	3.9%	-	-	-
Barclays U.S. Universal	-2.3%	0.2%	4.1%	5.5%	4.8%
Over/Under	0.9%	3.7%			

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>STRS Fixed Income</b>	-2.0%	0.8%	4.5%	6.3%	5.4%
Barclays U.S. Universal	-2.3%	0.2%	4.1%	5.5%	4.8%
Over/Under	0.3%	0.6%	0.4%	0.8%	0.6%

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>OP&amp;F Fixed Income</b>	-3.4%	3.0%	9.1%	9.1%	7.2%
Barclays Aggregate	-2.4%	-0.7%	3.5%	5.2%	4.5%
Over/Under	-1.0%	3.7%	5.6%	3.9%	2.7%

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>SERS Global Fixed</b>	-1.7%	2.7%	6.0%	7.8%	5.7%
Barclays Aggregate	-2.4%	-0.7%	3.5%	5.2%	4.5%
Over/Under	0.7%	3.4%	2.5%	2.6%	1.2%

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>HPRS Global Fixed Income</b>	-2.0%	1.1%	4.8%	6.0%	5.4%
Barclays Aggregate	-2.4%	-0.7%	3.5%	5.2%	4.5%
Over/Under	0.4%	1.8%	1.3%	0.8%	0.9%



## Systems Fixed

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All fixed income returns are reported gross of fees.

All returns are for periods ending 06/30/2013. Returns for periods longer than one year are annualized.

Please note that PERS DB and PERS HC provide a fixed income return for their combined plans. For two quarters ending June 30, 2013, the combined PERS DB & PERS HC had the highest absolute fixed income return, which was -1.4%, and was followed by the SERS fixed income return of -1.7%. On a relative basis, the combined PERS DB & PERS HC had the best fixed income return, outperforming its benchmark by 0.9%, followed by the SERS fixed income return, which outperformed its benchmark by 0.7%.

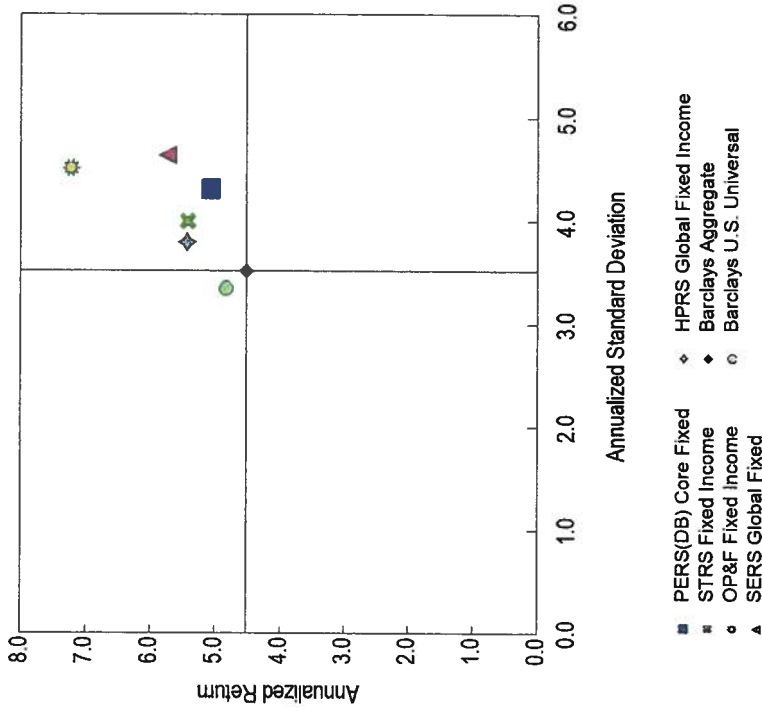
# Systems Fixed Income

## Statistics Summary

10 Years Ending June 30, 2013

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio	Information Ratio
PERS(DB) Core Fixed	5.07%	4.32%	0.80	0.28
Barclays Aggregate	4.52%	3.52%	0.83	--
PERS(HC) Core Fixed	--	--	--	--
Barclays Aggregate	4.52%	3.52%	0.83	--
STRS Fixed Income	5.43%	4.00%	0.95	0.30
Barclays U.S. Universal	4.84%	3.35%	0.96	--
OP&F Fixed Income	7.23%	4.52%	1.25	0.73
Barclays Aggregate	4.52%	3.52%	0.83	--
SERS Global Fixed	5.74%	4.64%	0.89	0.33
Barclays Aggregate	4.52%	3.52%	0.83	--
HPRS Global Fixed Income	5.43%	3.79%	1.01	0.38
Barclays Aggregate	4.52%	3.52%	0.83	--

Annualized Return vs. Annualized Standard Deviation  
10 Years Ending June 30, 2013



The analysis above represents the risk return comparison of the fixed income portfolios for all of the Plans. OP&F experienced the highest risk-adjusted fixed income results over the annualized ten-year period (as measured by the Sharpe Ratio), followed by HPRS, STRS, SERS and PERS DB. Please note that information ratios in the above tables are specific to the Plans' current policies, and indicate that all Plans are performing well on a risk adjusted basis compared to their benchmarks.

\*Benchmark shown in chart above may not be specific to the Plan's current policy.  
Benchmarks shown in statistics summary are specific to the Plan's current policy.

# Systems Real Estate

Ending June 30, 2013

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>PERS(DB) Real Estate</b>					
PERS(DB) Private RE	7.2%	13.1%	14.0%	1.2%	7.6%
NCREIF Property Index LAG	5.2%	10.5%	13.3%	2.3%	8.5%
Over/Under	2.0%	2.6%	0.7%	-1.1%	-0.9%
<b>PERS(HC) Real Estate</b>					
PERS (HC) REIT Benchmark	5.7%	8.1%	18.5%	7.2%	-
Over/Under	0.0%	0.4%	0.5%	0.4%	-
<b>OP&amp;F Real Estate</b>					
OPF Real Estate Benchmark	6.2%	12.6%	15.9%	-2.2%	8.3%
Over/Under	1.6%	2.9%	2.7%	-4.5%	-0.2%
<b>STRS Real Estate</b>					
STRS RE Blended Benchmark	5.1%	12.1%	16.4%	2.8%	12.3%
Over/Under	-0.6%	1.5%	2.3%	-1.5%	3.1%
<b>SERS Real Estate</b>					
SERS Total Real Estate Benchmark	4.3%	10.7%	14.3%	-3.0%	5.8%
Over/Under	-0.9%	0.2%	1.0%	-6.3%	-3.3%
<b>HPRS Real Estate</b>					
NCREIF Property Index	6.9%	15.7%	5.5%	-2.6%	1.6%
Over/Under	1.4%	5.0%	-7.6%	-5.4%	-7.0%

## Systems Real Estate

---

All real estate returns are reported gross of fees.

All returns are for periods ending 06/30/2013. Returns for periods longer than one year are annualized. Differences may exist due to rounding.

For the real estate returns for the two quarters ending June 30, 2013, HPRS had the highest returns, gaining 6.9%, and OP&F 6.2% had the second highest performance. HPRS returned 15.7% over the trailing year, outperforming all other plans. PERS DB and PERS HC had the highest absolute performance over a five-year period, returning -1.1% and 0.4%, respectively. Please note that PERS HC real estate is composed entirely of REITs, which are equity securities.

## International Equity

Ending June 30, 2013

	Since 12/31/12	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
<b>PERS(DB) International Equity</b>	1.0%	66	15.0%	71	8.8%	71	-0.3%	88	9.1%	69
<i>PERS Total International Equity Benchmark</i>	-1.2%	71	12.4%	74	7.7%	79	-1.0%	93	8.5%	84
Over/Under	2.2%		2.6%		1.1%		0.7%		0.6%	
<b>PERS(HC) International Equity</b>	1.0%	66	15.0%	71	8.8%	71	-0.3%	88	-	-
<i>PERS Total International Equity Benchmark</i>	-1.2%	71	12.4%	74	7.7%	79	-1.0%	93	8.5%	84
Over/Under	2.2%		2.6%		1.1%		0.7%			
<b>STRS International Equity</b>	4.1%	45	17.8%	64	9.0%	70	1.1%	66	9.9%	55
<i>STRS International Blended Benchmark</i>	3.0%	52	16.4%	67	8.1%	75	0.5%	77	9.0%	72
Over/Under	1.1%		1.4%		0.9%		0.6%		0.9%	
<b>OP&amp;F International Equity</b>	3.1%	51	17.8%	64	11.0%	51	1.1%	65	10.0%	54
<i>OPF International Benchmark</i>	4.1%	45	18.1%	62	9.5%	67	0.0%	81	9.1%	69
Over/Under	-1.0%		-0.3%		1.5%		1.1%		0.9%	
<b>SERS International Equity</b>	2.5%	56	16.6%	67	9.0%	70	0.9%	68	9.7%	60
<i>SERS Intl Equity Benchmark</i>	2.7%	55	16.2%	67	8.3%	74	0.7%	71	8.7%	82
Over/Under	-0.2%		0.4%		0.7%		0.2%		1.0%	
<b>HPRS International Equity</b>	2.3%	57	15.7%	70	9.1%	70	-0.8%	91	7.8%	92
<i>HPRS International Benchmark</i>	0.3%	67	14.1%	71	8.5%	73	-0.3%	88	8.5%	84
Over/Under	2.0%		1.6%		0.6%		-0.5%		-0.7%	

All international equity returns are reported gross of fees.

All returns are for periods ending 06/30/2013. Returns for periods longer than one year are annualized. Differences may exist due to rounding.

On an absolute basis, as of June 30, 2013, STRS 4.1% had the highest absolute return for the two quarters for international equity, PERS DB & PERS HC had the highest relative performance gaining 2.2% against its benchmark. Over the one-year period, STRS and OP&F 17.8% led the group with the best absolute performance. PERS DB & PERS HC had the highest relative performance gaining 2.6% over the trailing year. Over the three-year period, OP&F 11.0% had the highest absolute returns and the highest relative performance. Over the trailing ten-year period, OP&F had the highest absolute returns, while SERS had the highest relative returns of 1.0% for the period.

# International Equity

## Statistics Summary

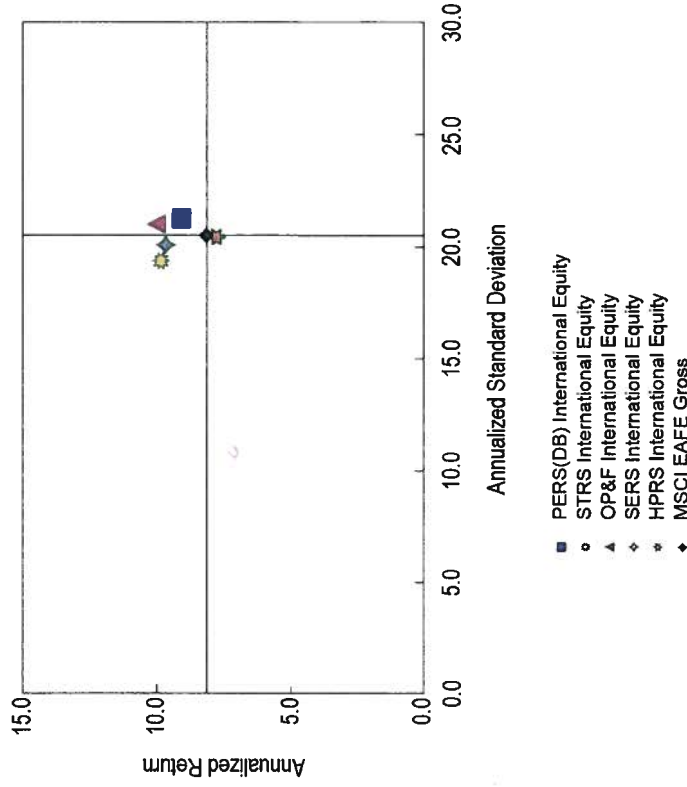
10 Years Ending June 30, 2013

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio	Information Ratio
PERS(DB) International Equity	9.10%	21.28%	0.35	0.65
PERS Total International Equity Benchmark	8.53%	21.27%	0.33	--
STRS International Equity	9.86%	19.36%	0.43	0.87
STRS International Blended Benchmark	9.00%	19.34%	0.38	--
OP&F International Equity	10.04%	21.01%	0.40	0.55
OPF International Benchmark	9.08%	21.12%	0.35	--
SERS International Equity	9.69%	20.08%	0.40	0.52
SERS Intl Equity Benchmark	8.70%	19.13%	0.37	--
HPRS International Equity	7.79%	20.43%	0.30	-0.27
HPRS International Benchmark	8.54%	21.08%	0.33	--

The analysis above represents a risk/return comparison of the international equity portfolios for all of the plans. All plans with the exception of HPRS have demonstrated risk-adjusted results (as measured by their Sharpe Ratios) greater than the non-U.S. equity market as defined by the MSCI EAFE Index, over the annualized ten-year period. Over this period, STRS had the highest risk-adjusted returns, followed by SERS, OP&F, PERS DB, and HPRS, as measured by their Sharpe Ratios.

Additionally, the Information Ratio measures risk relative to a Plan's benchmark. A higher information ratio indicates that a Plan is getting better returns than its respective benchmark at a similar level of risk. The STRS Plan had the highest information ratio, followed by OP&F, SERS, PERS DB. The negative information ratio of the HPRS Plan's international equities indicates underperformance versus its benchmark.

Annualized Return vs. Annualized Standard Deviation  
10 Years Ending June 30, 2013



\*Benchmark shown in chart above may not be specific to the Plan's current policy.  
Benchmarks shown in statistics summary are specific to the Plan's current policy.

# Systems Alternatives

Ending June 30, 2013

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>PERS(DB) Alternatives</b>					
PERS(DB) Private Equity	7.2%	16.5%	18.2%	8.5%	16.0%
PERS Private Equity Benchmark (QTR LAG)	12.4%	16.9%	15.9%	9.2%	12.3%
Over/Under	-5.2%	-0.4%	2.3%	-0.7%	3.7%
PERS(DB) Hedge Funds	4.1%	8.3%	6.1%	3.9%	-
PERS (DB) Hedge Fund Benchmark	3.4%	7.0%	6.5%	4.8%	-
Over/Under	0.7%	1.3%	-0.4%	-0.9%	-
PERS(DB) Opportunistic	-4.0%	-0.2%	-	-	-
PERS FI Opportunistic Benchmark	-2.5%	1.8%	-	-	-
Over/Under	-1.5%	-2.0%	-	-	-
<b>PERS(HC) Alternatives</b>					
PERS(HC) Private Equity	8.5%	18.0%	9.6%	-7.7%	-
PERS Private Equity Benchmark (QTR LAG)	12.4%	16.9%	15.9%	9.2%	12.3%
Over/Under	-3.9%	1.1%	-6.3%	-16.9%	-
PERS(HC) Hedge Funds	4.1%	8.3%	6.2%	7.5%	-
PERS (HC) Hedge Benchmark	3.4%	7.0%	6.5%	-	-
Over/Under	0.7%	1.3%	-0.3%	-	-
PERS(HC) Commodities	-5.2%	2.3%	4.5%	-	-
Goldman Sachs GSCI Total	-5.4%	2.0%	4.7%	-15.2%	1.4%
Over/Under	0.2%	0.3%	-0.2%	-	-
PERS(HC) Opportunistic	-4.0%	-0.2%	-	-	-
PERS FI Opportunistic Benchmark	-2.5%	1.8%	-	-	-
Over/Under	-1.5%	-2.0%	-	-	-

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>STRS Alternatives</b>					
STRS Private Equity	9.4%	14.4%	14.8%	6.2%	12.3%
STRS Private Equity Benchmark	14.6%	22.7%	21.4%	10.1%	10.9%
Over/Under	-5.2%	-8.3%	-6.6%	-3.9%	1.4%
STRS Hedge Funds	12.2%	14.6%	8.1%	2.7%	9.3%
HFRI Fund of Funds Composite Index	3.4%	7.3%	3.0%	-0.6%	3.4%
Over/Under	8.8%	7.3%	5.1%	3.3%	5.9%
STRS Opportunistic	9.2%	14.6%	10.8%	-	-
STRS Opportunistic Benchmark	13.5%	20.3%	17.5%	-	-
Over/Under	-4.3%	-5.7%	-6.7%	-	-

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>OP&amp;F Alternatives</b>					
OP&F Private Equity	4.1%	7.1%	12.1%	4.2%	10.5%
OPF Private Equity Benchmark	12.7%	17.6%	16.2%	9.5%	13.1%
Over/Under	-8.6%	-10.5%	-4.1%	-5.3%	-2.6%
Timber	4.3%	6.5%	-	-	-
OPF Timber Benchmark	4.2%	6.8%	-	-	-
Over/Under	0.1%	-0.3%	-	-	-

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>SERS Alternatives</b>					
SERS Private Equity	6.4%	12.3%	13.1%	5.2%	8.3%
SERS PE Benchmark	10.5%	17.0%	15.7%	8.9%	11.6%
Over/Under	-4.1%	-4.7%	-2.6%	-3.7%	-3.3%
SERS Hedge Funds	4.0%	9.2%	5.7%	3.6%	-
SERS Hedge Fund Benchmark	3.4%	7.3%	3.0%	1.4%	-
Over/Under	0.6%	1.9%	2.7%	2.2%	-

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>HPRS Alternatives</b>					
HPRS Private Equity	3.0%	1.8%	0.5%	0.4%	-
HPRS Private Equity Benchmark	13.2%	18.0%	16.3%	11.5%	-
Over/Under	-10.2%	-16.2%	-15.8%	-11.1%	-
HPRS Hedge Funds	4.8%	9.2%	4.3%	2.4%	-
HFRF Fund of Funds Composite Index	3.4%	7.3%	3.0%	-0.6%	3.4%
Over/Under	1.4%	1.9%	1.3%	3.0%	-

Returns for all alternatives portfolios are shown net of fees.

### Private Equity

STRS (+9.4) had the highest private equity return for the six months ending June 30, 2013 on an absolute basis, followed by PERS HC (+8.5%). The PERS DB private equity was third best with a six month absolute return of (+7.2%), followed by SERS (+6.4), OP&F (+4.1) and HPRS (+3.0%).

### Hedge Funds

STRS (+12.2%) had the highest hedge fund return for the six months ending June 30, 2013, followed by HPRS (+4.8%), PERS (HC) and PERS (DB), which both returned (+4.1%), and SERS (+4.0%).



# Cash

## Ending June 30, 2013

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>PERS(DB) Cash</b>	0.1%	0.2%	0.2%	0.7%	2.0%
91 Day T-Bills	0.0%	0.1%	0.1%	0.2%	1.6%
Over/Under	0.1%	0.1%	0.1%	0.5%	0.4%
<b>PERS(HC) Cash</b>	0.1%	0.2%	0.2%	0.6%	-
91 Day T-Bills	0.0%	0.1%	0.1%	0.2%	1.6%
Over/Under	0.1%	0.1%	0.1%	0.4%	
<b>STRS Liquidity Reserves</b>	0.1%	0.1%	0.2%	0.5%	1.9%
91 Day T-Bills	0.0%	0.1%	0.1%	0.2%	1.6%
Over/Under	0.1%	0.0%	0.1%	0.3%	0.3%
<b>OP&amp;F Cash</b>	0.1%	0.2%	0.2%	0.4%	1.8%
91 Day T-Bills	0.0%	0.1%	0.1%	0.2%	1.6%
Over/Under	0.1%	0.1%	0.1%	0.2%	0.2%
<b>SERS Cash</b>	0.1%	0.2%	0.2%	0.7%	2.1%
SERS Short-Term Benchmark	0.0%	0.1%	0.1%	0.2%	1.5%
Over/Under	0.1%	0.1%	0.1%	0.5%	0.6%
<b>HPRS Cash</b>	0.0%	0.0%	0.0%	0.3%	2.1%
91 Day T-Bills	0.0%	0.1%	0.1%	0.2%	1.6%
Over/Under	0.0%	-0.1%	-0.1%	0.1%	0.5%

## Fee Comparison for Plan Segments

**Asset Class Fee Comparison**  
(annualized fees shown in basis points)

	Domestic Equity	International Equity	Fixed Income	Real estate	Alternatives	Private Equity	Hedge Funds
PERS DB & HC	10.6	33.8	13.9	73.8		44.2	182.2
STRS	10.4	20.1	8.3	53.8	149.4		
OP&F	32	44	38	207		76.5	
SERS	44	52	23	116		93	174
HPRS	39	67	32	127	100		

\*Annualized basis point fees are estimates and are relative to asset allocation as of 6/30/2013.

\*Private Equity are based on actual \$/average committed capital.

\*SERS does not aggregate Net of fees and Gross of fees performance of their "alternative" classes, therefore each is reported separately.

# Public Employees Retirement System (DB) (PERS DB)

# Public Employees Retirement System (DB)

Actuarial Rate: 8.0%

	Ending June 30, 2013				
	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Public Employees Retirement System (DB)</b>					
<i>PERS (DB) Total Fund Benchmark</i>					
Over/Under	4.4%	12.7%	12.1%	5.1%	7.7%
	4.2%	11.7%	11.4%	4.9%	7.4%
	0.2%	1.0%	0.7%	0.2%	0.3%
<b>PERS(DB) Domestic Equity</b>					
Russell 3000	13.8%	21.6%	18.7%	7.1%	7.7%
Over/Under	14.1%	21.5%	18.6%	7.2%	7.8%
	-0.3%	0.1%	0.1%	-0.1%	-0.1%
<b>PERS(DB) International Equity</b>					
PERS Total International Equity Benchmark	1.0%	15.0%	8.8%	-0.3%	9.1%
Over/Under	-1.2%	12.4%	7.7%	-1.0%	8.5%
	2.2%	2.6%	1.1%	0.7%	0.6%
<b>PERS(DB) Fixed</b>					
<b>PERS(DB) Core Fixed</b>					
Barclays Aggregate	-1.9%	0.2%	4.5%	6.1%	5.1%
Over/Under	-2.4%	-0.7%	3.5%	5.2%	4.5%
	0.5%	0.9%	1.0%	0.9%	0.6%
<b>PERS(DB) High Yield</b>					
Barclays High Yield	2.0%	10.1%	-	-	-
Over/Under	1.4%	9.5%	10.7%	10.9%	8.9%
	0.6%	0.6%			
<b>PERS(DB) EMD</b>					
PERS Emerging Market Debt Benchmark	-6.7%	3.6%	-	-	-
Over/Under	-7.7%	1.3%	-	-	-
	1.0%	2.3%			
<b>PERS(DB) Floating Rate Debt</b>					
PERS Floating Rate Debt Benchmark	2.9%	-	-	-	-
Over/Under	2.8%	-	-	-	-
	0.1%				
<b>PERS(DB) TIPS</b>					
Barclays US TIPS	-	-	-	-	-
Over/Under	-7.4%	-4.8%	4.6%	4.4%	5.2%
<b>PERS(DB) Real Estate</b>					
PERS(DB) Private RE	7.2%	13.1%	14.0%	1.2%	7.6%
NCREIF Property Index LAG	5.2%	10.5%	13.3%	2.3%	8.5%
Over/Under	2.0%	2.6%	0.7%	-1.1%	-0.9%

# Public Employees Retirement System (DB)

Actuarial Rate: 8.0%

	Ending June 30, 2013				
	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>PERS(DB) Alternatives</b>					
PERS(DB) Hedge Funds					
PERS (DB) Hedge Fund Benchmark	4.1%	8.3%	6.1%	3.9%	-
Over/Under	3.4%	7.0%	6.5%	4.8%	-
	0.7%	1.3%	-0.4%	-0.9%	
PERS(DB) Private Equity					
PERS Private Equity Benchmark (QTR LAG)	7.2%	16.5%	18.2%	8.5%	16.0%
Over/Under	12.4%	16.9%	15.9%	9.2%	12.3%
	-5.2%	-0.4%	2.3%	-0.7%	3.7%
PERS(DB) Commodities					
Goldman Sachs GSCI Total	-	-	-	-	-
Over/Under	-5.4%	2.0%	4.7%	-15.2%	1.4%
PERS(DB) Opportunistic					
PERS FI Opportunistic Benchmark	-4.0%	-0.2%	-	-	-
Over/Under	-2.5%	1.8%	-	-	-
	-1.5%	-2.0%			
<b>PERS(DB) Risk Parity</b>					
PERS(DB) Risk Parity					
PERS Risk Parity Benchmark	-	-	-	-	-
Over/Under	-	-	-	-	-
<b>PERS(DB) GTAA</b>					
PERS(DB) GTAA					
PERS GTAA Benchmark	-	-	-	-	-
Over/Under					
PERS(DB) Cash					
91 Day T-Bills	0.1%	0.2%	0.2%	0.7%	2.0%
Over/Under	0.0%	0.1%	0.1%	0.2%	1.6%
	0.1%	0.1%	0.1%	0.5%	0.4%
PERS(DB) Rebalancing					
PERS Rebalancing Benchmark	1.8%	7.1%	-	-	-
Over/Under	0.0%	0.1%	-	-	-
	1.8%	7.0%			

# Public Employees Retirement System (DB)

## Asset Allocation by Segment

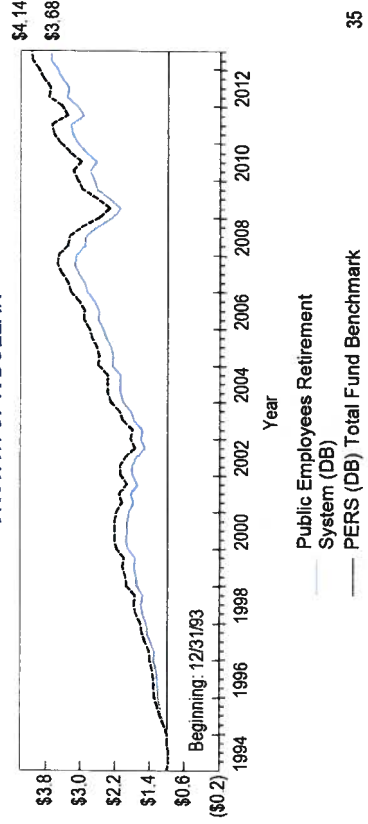
As Of June 30, 2013

	Total Market Value	% of Portfolio	US Equity	Non-US Equity	US Fixed Income	Non-US Fixed Income	Alternatives	Real Estate	Cash	Other
PERS(DB) Domestic Equity	\$14,547,891,230	21.0%	\$14,547,891,230							
PERS(DB) International Equity	\$14,791,034,942	21.4%		\$14,791,034,942						
PERS(DB) Fixed					\$6,497,502,966					
PERS(DB) Core Fixed	\$3,422,215,291	4.9%			\$3,422,215,291					
PERS(DB) High Yield	\$1,896,398,552	2.7%				\$1,896,398,552				
PERS(DB) EMD	\$690,597,868	1.0%			\$690,597,868					
PERS(DB) Securitized Debt	\$1,025,006,843	1.5%				\$1,025,006,843				
PERS(DB) Global High Yield	\$580,492,442	0.8%			\$580,492,442					
PERS(DB) Floating Rate Debt	\$667,408,908	1.0%			\$667,408,908					
PERS(DB) TIPS										
PERS(DB) Real Estate							\$7,120,267,323			
PERS(DB) Private RE		10.3%					\$7,120,267,323			
PERS(DB) Alternatives										\$3,868,797,221
PERS(DB) Hedge Funds	\$7,531,118,683	10.9%								\$7,531,118,683
PERS(DB) Private Equity	\$670,135,248	1.0%								\$670,135,248
PERS(DB) Commodities	\$288,750,759	0.4%								\$288,750,759
PERS(DB) Opportunistic										
PERS(DB) Risk Parity										
PERS(DB) Risk Parity	\$1,237,597,110	1.8%								\$1,237,597,110
PERS(DB) GTAA										
PERS(DB) GTAA	\$1,322,423,743	1.9%								\$1,322,423,743
PERS(DB) Cash	\$1,661,316,696	2.4%						\$1,661,316,696		
PERS(DB) Rebalancing	\$1,375,244,517	2.0%						\$1,375,244,517		
<b>Total</b>	<b>\$69,194,200,342</b>	<b>100.0%</b>	<b>\$14,547,891,230</b>	<b>\$14,791,034,942</b>	<b>\$11,858,217,475</b>	<b>\$2,921,405,395</b>	<b>\$12,358,801,911</b>	<b>\$7,120,267,323</b>	<b>\$3,036,561,213</b>	<b>\$2,560,020,853</b>

PERS(DB)

	Actual	Target	Difference
US Equity	21.0	21.8	-0.8
Intl Equity	21.4	22.2	-0.8
Alternatives	17.4	17.5	-0.1
Risk Parity	1.8	2.0	-0.2
GTAA	1.9	2.0	-0.1
<b>Total Equity</b>	<b>63.5</b>	<b>65.5</b>	<b>-2.0</b>
Fixed Income	21.8	24.5	-2.7
Real Estate	10.3	10.0	0.3
Short Term Investments	4.4	0.0	4.4
<b>Total Debt</b>	<b>36.5</b>	<b>34.5</b>	<b>2.0</b>
	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

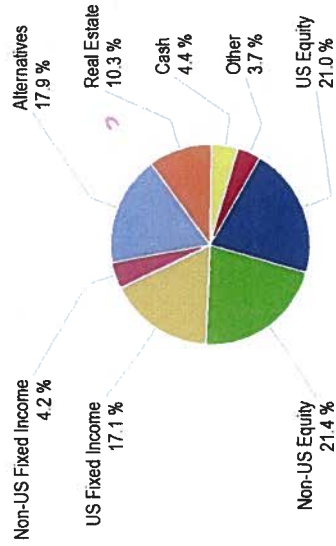
## GROWTH OF A DOLLAR



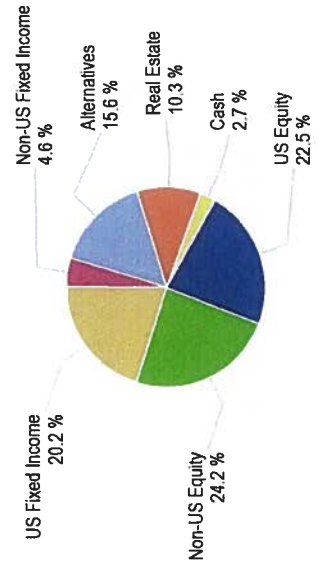
\*Totals may not add up to 100% due to rounding.

# Public Employees Retirement System (DB) Asset Allocation

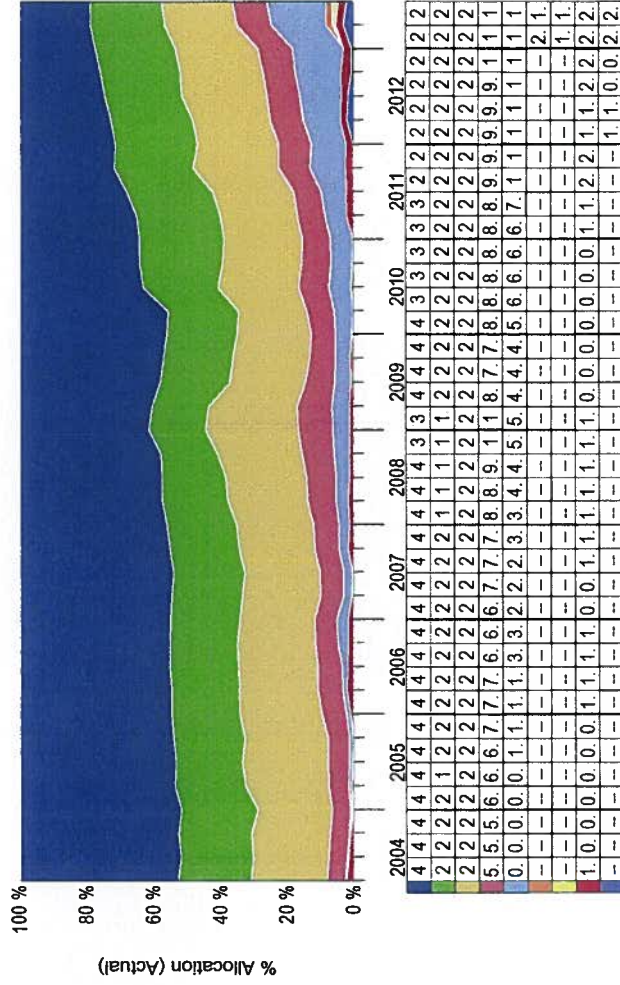
**Current Allocation  
June 30, 2013**



**Previous Allocation  
December 31, 2012**



**Asset Allocation History  
9 Years 3 Months Ending June 30, 2013**



- PERS(DB) Domestic Equity
- PERS(DB) International Equity
- PERS(DB) Fixed
- PERS(DB) Real Estate
- PERS(DB) Alternatives
- PERS(DB) Risk Parity
- PERS(DB) GTAA
- PERS(DB) Cash
- PERS(DB) Rebalancing

# Public Employees Retirement System (DB)

## 10 Year Risk Statistics

### RISK RETURN STATISTICS

July 01, 2003 Through June 30, 2013

Public Employees Retirement System (DB)  
PERS (DB) Total Fund Benchmark

RETURN SUMMARY STATISTICS	Public Employees Retirement System (DB)	PERS (DB) Total Fund Benchmark
Number of Periods	40	40
Maximum Return	12.34	13.12
Minimum Return	-13.81	-13.86
Annualized Return	7.69	7.40
Total Return	109.73	104.16
Annualized Excess Return Over Risk Free	6.08	5.79
Annualized Excess Return	0.29	0.00

### RISK SUMMARY STATISTICS

Beta	0.99	1.00
Upside Deviation	6.44	6.66
Downside Deviation	9.14	9.36

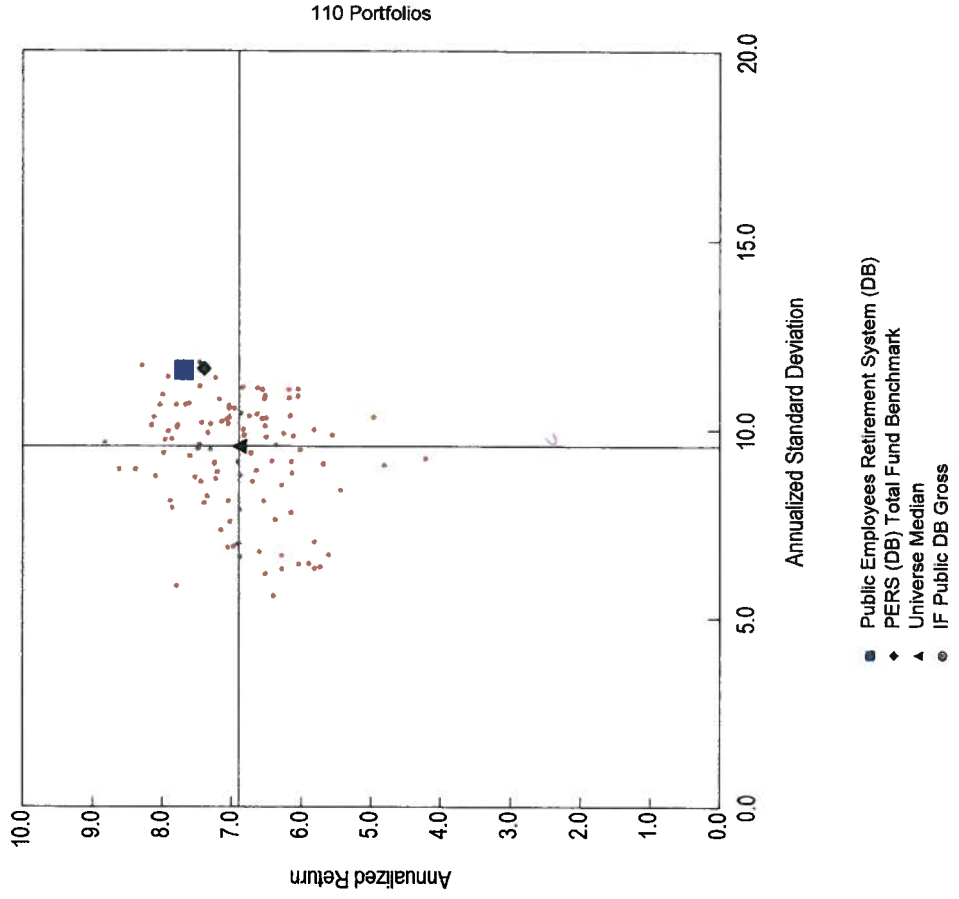
### RISK/RETURN SUMMARY STATISTICS

Annualized Standard Deviation	11.59	11.62
Alpha	0.08	0.00
Sharpe Ratio	0.52	0.50
Excess Return Over Market / Risk	0.02	0.00
Tracking Error	0.90	0.00
Information Ratio	0.32	--

### CORRELATION STATISTICS

R-Squared	0.99	1.00
Correlation	1.00	1.00

Annualized Return vs. Annualized Standard Deviation  
10 Years Ending June 30, 2013





## Public Employees Retirement System Defined Benefit Plan Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Jan-13	Mar-13	21.6	Russell 3000
			11.5	Barclays Capital U.S. Aggregate
			3.0	Emerging Market Debt
			5.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			24.0	Custom Non-US Equity Benchmark*
			10.0	Russell 3000 + 3% (1 Qtr arrears)
			10.0	NCREIF Property (Quarter lag)
			5.3	3 mo. LIBOR + 4% bps (2 mo. lag)
			0.5	Opportunistic
			1.0	Credit Suisse Leveraged Loan Index
			1.0	Barclays CMBS ERISA Eligible + 2%
			1.5	Barclays Global High Yield
			1.0	Barclays Capital U.S. Tips
			0.6	S&P GS Commodity Total Return
			2.0	Custom Risk Parity Benchmark
	Apr-13	Jun-13	21.8	Russell 3000
			10.0	Barclays Capital U.S. Aggregate
			3.0	Emerging Market Debt
			5.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			22.2	Custom Non-US Equity Benchmark*
			10.0	Russell 3000 + 3% (1 Qtr arrears)
			10.0	NCREIF Property (Quarter lag)
			6.0	3 mo. LIBOR + 4% bps (2 mo. lag)
			0.5	Opportunistic
			1.0	Credit Suisse Leveraged Loan Index
			1.0	Barclays CMBS ERISA Eligible + 2%
			1.5	Barclays Global High Yield
			1.0	Barclays Capital U.S. Tips
			1.0	S&P GS Commodity Total Return
			2.0	Custom Risk Parity Benchmark
			2.0	Custom GTAA Benchmark

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Jan-13	Mar-13	21.6	Russell 3000
			11.5	Barclays Capital U.S. Aggregate
			3.0	Emerging Market Debt
			5.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			24.0	Custom Non-US Equity Benchmark*
			10.0	Russell 3000 + 3% (1 Qtr arrears)
			10.0	NCREIF Property (Quarter lag)
			5.3	3 mo. LIBOR + 4% bps (2 mo. lag)
			0.5	Opportunistic
			1.0	Credit Suisse Leveraged Loan Index
			1.0	Barclays CMBS ERISA Eligible + 2%
			1.5	Barclays Global High Yield
			1.0	Barclays Capital U.S. Tips
			0.6	S&P GS Commodity Total Return
			2.0	Custom Risk Parity Benchmark
	Apr-13	Jun-13	21.8	Russell 3000
			10.0	Barclays Capital U.S. Aggregate
			3.0	Emerging Market Debt
			5.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			22.2	Custom Non-US Equity Benchmark*
			10.0	Russell 3000 + 3% (1 Qtr arrears)
			10.0	NCREIF Property (Quarter lag)
			6.0	3 mo. LIBOR + 4% bps (2 mo. lag)
			0.5	Opportunistic
			1.0	Credit Suisse Leveraged Loan Index
			1.0	Barclays CMBS ERISA Eligible + 2%
			1.5	Barclays Global High Yield
			1.0	Barclays Capital U.S. Tips
			1.0	S&P GS Commodity Total Return
			2.0	Custom Risk Parity Benchmark
			2.0	Custom GTAA Benchmark

In February 2012 of 2012, the PERS Plans moved to monthly re-weighting the Policy Benchmarks. Shown above are the benchmarks at the end of each quarter.  
\*56.5% MSCI World Index ex U.S., 31% MSCI Emerging Markets, 10% MSCI World Index ex U.S. Small Cap, and 2.5% MSCI Emerging Markets Small Cap.

**Custom Benchmark**

**Public Employees Retirement System**  
**Defined Benefit Plan**  
**Quarter Ending 06/30/2013**

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Dec-11	Mar-12	28.6	Russell 3000
			16.9	Barclays Capital U.S. Aggregate
			1.0	Emerging Market Debt
			5.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			24.5	MSCI AC World Ex-US (Net)
			8.9	Russell 3000 + 3% (1 Qtr arrears)
			10.0	NCREIF Property (Quarter lag)
			2.1	3 mo. LIBOR + 4% bps (2 mo. lag)
			1.0	Securitized Debt
			28.9	Russell 3000
			16.9	Barclays Capital U.S. Aggregate
			0.1	Emerging Market Debt
5.0	Barclays Capital High Yield			
2.0	91-Day Treasury Bill			
24.6	MSCI AC World Ex-US (Net)			
9.3	Russell 3000 + 3% (1 Qtr arrears)			
10.0	NCREIF Property (Quarter lag)			
2.2	3 mo. LIBOR + 4% bps (2 mo. lag)			
1.0	Securitized Debt			

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Jul-12	Sep-12	24.9	Russell 3000
			13.9	Barclays Capital U.S. Aggregate
			3.0	Emerging Market Debt
			5.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			24.0	Custom Non-US Equity Benchmark*
			9.9	Russell 3000 + 3% (1 Qtr arrears)
			10.0	NCREIF Property (Quarter lag)
			3.5	3 mo. LIBOR + 4% bps (2 mo. lag)
			0.7	Opportunistic
			0.5	Barclays US Corp Investment Grade
			0.1	Credit Suisse Leveraged Loan Index
			1.0	Barclays CMBS ERISA Eligible + 2%
			1.5	Barclays Global High Yield
			23.6	Russell 3000
			13.3	Barclays Capital U.S. Aggregate
			3.0	Emerging Market Debt
5.0	Barclays Capital High Yield			
2.0	91-Day Treasury Bill			
24.0	Custom Non-US Equity Benchmark*			
10.0	Russell 3000 + 3% (1 Qtr arrears)			
10.0	NCREIF Property (Quarter lag)			
4.7	3 mo. LIBOR + 4% bps (2 mo. lag)			
0.7	Opportunistic			
0.5	Barclays US Corp Investment Grade			
0.7	Credit Suisse Leveraged Loan Index			
1.0	Barclays CMBS ERISA Eligible + 2%			
1.5	Barclays Global High Yield			

**Public Employees Retirement System**  
**Defined Benefit Plan**  
**Quarter Ending 06/30/2013**

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Sep-09	Dec-09	42.4	Russell 3000
			24.0	BC Universal/BC Long G/C
			20.0	MSCI AC World Ex-US (Net)
			7.0	Real Estate
			1.0	Wilshire Resi Full Cap
			5.0	Russell 3000 + 3% (1 Qtr arrears)
	0.6	BC Bellweather 3Mth T-Bill		
	Jan-10	Mar-10	42.2	Russell 3000
			12.3	Barclays Capital U.S. Aggregate
			9.4	Barclays Capital Long Gov/Credit
			0.8	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			20.5	MSCI AC World Ex-US (Net)
Apr-10	Jun-10	4.2	Russell 3000 + 3% (1 Qtr arrears)	
		8.0	NCREIF Property (Quarter Lag)	
		0.6	3 mo. LIBOR + 4% bps (2 mo. lag)	
		39.6	Russell 3000	
		12.6	Barclays Capital U.S. Aggregate	
		9.0	Barclays Capital Long Gov/Credit	
1.6	Barclays Capital High Yield			
2.0	91-Day Treasury Bill			
22.0	MSCI AC World Ex-US (Net)			
4.3	Russell 3000 + 3% (1 Qtr arrears)			
7.9	NCREIF Property (Quarter lag)			
1.0	3 mo. LIBOR + 4% bps (2 mo. lag)			

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Jul-10	Sep-10	36.3	Russell 3000
			11.5	Barclays Capital U.S. Aggregate
			9.0	Barclays Capital Long Gov/Credit
			2.5	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			23.5	MSCI AC World Ex-US (Net)
			5.1	Russell 3000 + 3% (1 Qtr arrears)
			9.0	NCREIF Property (Quarter lag)
			1.1	3 mo. LIBOR + 4% bps (2 mo. lag)
	Oct-10	Dec-11	29.5	Russell 3000
			12.4	Barclays Capital U.S. Aggregate
			5.6	Barclays Capital Long Gov/Credit
			5.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			24.6	MSCI AC World Ex-US (Net)
			7.9	Russell 3000 + 3% (1 Qtr arrears)
			9.6	NCREIF Property (Quarter lag)
			3.4	3 mo. LIBOR + 4% bps (2 mo. lag)

**Public Employees Retirement System**  
**Defined Benefit Plan**  
**Quarter Ending 06/30/2013**

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Dec-07	Mar-08	44.9	Russell 3000
			24.0	BC Universal/BC Long G/C
			20.0	MSCI AC World Ex-US (Net)
			6.7	Real Estate
			1.0	Wilshire Resi Full Cap
	Mar-08	Jun-08	3.2	Russell 3000 + 3% (1 Qtr arrears)
			0.2	BC Bellweather 3Mth T-Bill
			44.9	Russell 3000
	Mar-08	Jun-08	24.0	BC Universal/BC Long G/C
			20.0	MSCI AC World Ex-US (Net)
			6.7	Real Estate
			1.0	Wilshire Resi Full Cap
			3.2	Russell 3000 + 3% (1 Qtr arrears)
Jun-08	Sep-08	0.2	BC Bellweather 3Mth T-Bill	
		43.9	Russell 3000	
		24.0	BC Universal/BC Long G/C	
Jun-08	Sep-08	20.0	MSCI AC World Ex-US (Net)	
		7.0	Real Estate	
		1.0	Wilshire Resi Full Cap	
		3.8	Russell 3000 + 3% (1 Qtr arrears)	
		0.3	BC Bellweather 3Mth T-Bill	

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Sep-08	Dec-08	43.4	Russell 3000
			24.0	BC Universal/BC Long G/C
			20.0	MSCI AC World Ex-US (Net)
			7.0	Real Estate
			1.0	Wilshire Resi Full Cap
	Mar-09	Mar-09	4.4	Russell 3000 + 3% (1 Qtr arrears)
			0.2	BC Bellweather 3Mth T-Bill
			42.4	Russell 3000
	Mar-09	Mar-09	24.0	BC Universal/BC Long G/C
			20.0	MSCI AC World Ex-US (Net)
			7.0	Real Estate
			1.0	Wilshire Resi Full Cap
			5.0	Russell 3000 + 3% (1 Qtr arrears)
Jun-09	Jun-09	0.6	BC Bellweather 3Mth T-Bill	
		42.3	Russell 3000	
		24.0	BC Universal/BC Long G/C	
Jun-09	Jun-09	20.0	MSCI AC World Ex-US (Net)	
		7.0	Real Estate	
		1.0	Wilshire Resi Full Cap	
		5.0	Russell 3000 + 3% (1 Qtr arrears)	
		0.7	BC Bellweather 3Mth T-Bill	

**Public Employees Retirement System**  
**Defined Benefit Plan**  
**Quarter Ending 06/30/2013**

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Jun-06	Sep-06	45.4	Russell 3000
			24.8	Barclays Universal
			20.0	MSCI AC World Ex-US (Net)
			6.3	Real Estate
			1.0	Wilshire Resi Full Cap
	1.6	Russell 3000 + 3% (1 Qtr arrears)		
	1.0	BC Bellweather 3Mth T-Bill		
	Sep-06	Dec-06	45.2	Russell 3000
			25.4	Barclays Universal
			20.0	MSCI AC World Ex-US (Net)
			5.6	Real Estate
			1.0	Wilshire Resi Full Cap
	1.8	Russell 3000 + 3% (1 Qtr arrears)		
1.0	BC Bellweather 3Mth T-Bill			
Dec-06	Mar-07	46.0	Russell 3000	
		25.3	BC Universal/BC Long G/C	
		20.0	MSCI AC World Ex-US (Net)	
		5.7	Real Estate	
		1.0	Wilshire Resi Full Cap	
0.1	Russell 3000 + 3% (1 Qtr arrears)			
2.0	BC Bellweather 3Mth T-Bill			

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Mar-07	Jun-07	45.7	Russell 3000
			25.2	BC Universal/BC Long G/C
			20.0	MSCI AC World Ex-US (Net)
			5.8	Real Estate
			1.0	Wilshire Resi Full Cap
	0.1	Russell 3000 + 3% (1 Qtr arrears)		
	2.3	BC Bellweather 3Mth T-Bill		
	Jun-07	Sep-07	45.6	Russell 3000
			25.2	BC Universal/BC Long G/C
			20.0	MSCI AC World Ex-US (Net)
			6.8	Real Estate
			2.3	Wilshire Resi Full Cap
	0.1	Russell 3000 + 3% (1 Qtr arrears)		
0.0	BC Bellweather 3Mth T-Bill			
Sep-07	Dec-07	45.1	Russell 3000	
		24.6	BC Universal/BC Long G/C	
		20.0	MSCI AC World Ex-US (Net)	
		7.4	Real Estate	
		2.8	Wilshire Resi Full Cap	
0.2	Russell 3000 + 3% (1 Qtr arrears)			
0.0	BC Bellweather 3Mth T-Bill			

**Public Employees Retirement System**  
**Defined Benefit Plan**  
**Quarter Ending 06/30/2013**

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Dec-04	Mar-05	46.3	Russell 3000
			26.2	Barclays Universal
			20.0	MSCI AC World Ex-US (Net)
			5.8	Custom Real Estate
			0.7	Russell 3000 + 3% (1 Qtr arrears)
	1.0	BC Bellweather 3Mth T-Bill		
	Mar-05	Jun-05	46.1	Russell 3000
			26.0	Barclays Universal
			20.0	MSCI AC World Ex-US (Net)
			6.0	Custom Real Estate
			0.9	Russell 3000 + 3% (1 Qtr arrears)
	1.0	BC Bellweather 3Mth T-Bill		
	Jun-05	Sep-05	46.1	Russell 3000
25.8			Barclays Universal	
20.0			MSCI AC World Ex-US (Net)	
			6.2	Custom Real Estate
			0.9	Russell 3000 + 3% (1 Qtr arrears)
			1.0	BC Bellweather 3Mth T-Bill

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Sep-05	Dec-05	46.0	Russell 3000
			25.6	Barclays Universal
			20.0	MSCI AC World Ex-US (Net)
			6.4	Custom Real Estate
			1.0	Russell 3000 + 3% (1 Qtr arrears)
	1.0	BC Bellweather 3Mth T-Bill		
	Dec-05	Mar-06	45.7	Russell 3000
			24.4	Barclays Universal
			20.0	MSCI AC World Ex-US (Net)
			7.6	Custom Real Estate
			1.3	Russell 3000 + 3% (1 Qtr arrears)
	1.0	BC Bellweather 3Mth T-Bill		
	Mar-06	Jun-06	45.6	Russell 3000
24.7			Barclays Universal	
20.0			MSCI AC World Ex-US (Net)	
			7.3	Custom Real Estate
			1.4	Russell 3000 + 3% (1 Qtr arrears)
			1.0	BC Bellweather 3Mth T-Bill

**Public Employees Retirement System**  
**Defined Benefit Plan**  
**Quarter Ending 06/30/2013**

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Sep-99	Mar-02	36.1	SB Broad Inv Grade
			35.0	Standard & Poors 500
			16.9	MSCI World Ex-US (Net)
	Mar-02	Mar-02	6.6	NCREIF
			2.2	NAREIT
			2.2	Gilberto-Levy Mortgage
	Mar-02	Mar-02	1.0	BC Bellweather 3Mth T-Bill
			34.3	S&P 1500
			31.8	SB Broad Inv Grade
	Jun-02	Sep-02	18.9	MSCI World Ex-US (Net)
			5.7	NCREIF
			3.0	Russell 3000
	Jun-02	Sep-02	2.3	BC Bellweather 3Mth T-Bill
1.9			NAREIT	
1.9			Gilberto-Levy Mortgage	
Jun-02	Sep-02	0.2	Standard & Poors 500	
		34.7	S&P 1500	
		29/2	SB Broad Inv Grade	
Jun-02	Sep-02	19.3	MSCI World Ex-US (Net)	
		5.8	Russell 3000	
		5.6	NCREIF	
Jun-02	Sep-02	1.9	NAREIT	
		1.9	Gilberto-Levy Mortgage	
		1.5	BC Bellweather 3Mth T-Bill	
Jun-02	Sep-02	0.2	Standard & Poors 500	

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Sep-02	Sep-02	44.7	Russell 3000
			25.6	SB Broad Inv Grade
			19.7	MSCI World Ex-US (Net)
	Sep-02	Sep-02	5.5	NCREIF
			1.8	NAREIT
			1.8	Gilberto-Levy Mortgage
	Sep-02	Sep-02	0.7	BC Bellweather 3Mth T-Bill
			0.2	Standard & Poors 500
			47.0	Russell 3000
	Dec-02	Dec-02	23.0	SB Broad Inv Grade
			20.0	MSCI World Ex-US (Net)
			5.4	NCREIF
	Dec-02	Dec-02	1.8	NAREIT
1.8			Gilberto-Levy Mortgage	
0.6			BC Bellweather 3Mth T-Bill	
Mar-03	Dec-04	0.4	Standard & Poors 500	
		46.0	Russell 3000	
		23.0	Barclays Universal	
Mar-03	Dec-04	20.0	MSCI AC World Ex-US (Net)	
		8.1	NCREIF	
		0.9	Wilshire Real Estate Securities	
Mar-03	Dec-04	1.0	BC Bellweather 3Mth T-Bill	
		1.0	Russell 3000 + 3% (1 Qtr arrears)	

**Public Employees Retirement System**  
**Defined Benefit Plan**  
**Quarter Ending 06/30/2013**

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Mar-94	Jun-95	68.0	SB Broad Inv Grade
			17.0	Standard & Poors 500
			8.0	91-Day Treasury Bill
			7.0	NCREIF
	Sep-95	Dec-95	59.0	SB Broad Inv Grade
			26.0	Standard & Poors 500
			8.0	NCREIF
			6.0	91-Day Treasury Bill
			1.0	MSCI EAFE (Net)
	Mar-96	Dec-96	62.5	SB Broad Inv Grade
			23.0	Standard & Poors 500
			8.0	NCREIF
			4.5	91-Day Treasury Bill
Mar-97	Dec-97	56.5	SB Broad Inv Grade	
		27.0	Standard & Poors 500	
		8.0	NCREIF	
		4.5	91-Day Treasury Bill	
		4.0	MSCI EAFE (Net)	
Mar-98	Dec-98	51.0	SB Broad Inv Grade	
		30.5	Standard & Poors 500	
		8.0	NCREIF	
		6.0	MSCI EAFE (Net)	
		4.5	91-Day Treasury Bill	

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Dec-98	Dec-98	51.0	SB Broad Inv Grade
			30.5	Russell 3000
			6.0	MSCI World Ex-US (Net)
			4.8	NCREIF
			4.5	91-Day Treasury Bill
			1.6	NAREIT
			1.6	Gilberto-Levy Mortgage
	Mar-99	Mar-99	45.4	SB Broad Inv Grade
			35.0	Standard & Poors 500
			7.6	MSCI World Ex-US (Net)
			6.6	NCREIF
			2.2	NAREIT
			2.2	Gilberto-Levy Mortgage
Jun-99	Jun-99	40.1	SB Broad Inv Grade	
		35.0	Standard & Poors 500	
		12.9	MSCI World Ex-US (Net)	
		6.6	NCREIF	
		2.2	NAREIT	
		2.2	Gilberto-Levy Mortgage	
		1.0	91-Day Treasury Bill	



# Public Employees Retirement System (HC) (PERS HC)

# Public Employees Retirement System (HC)

Actuarial Rate: 6.7%

	Ending June 30, 2013						
	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	7 Yrs		
<b>Public Employees Retirement System (HC)</b>							
PERS (HC) Total Fund Benchmark	2.9%	10.6%	10.9%	5.2%	5.2%	5.2%	5.2%
Over/Under	2.4%	9.7%	10.4%	4.9%	4.9%	4.9%	5.3%
	0.5%	0.9%	0.5%	0.3%	0.3%	0.3%	-0.1%
PERS(HC) Domestic Equity	13.8%	21.6%	18.7%	7.1%	7.1%	7.1%	5.7%
Russell 3000	14.1%	21.5%	18.6%	7.2%	7.2%	7.2%	5.8%
Over/Under	-0.3%	0.1%	0.1%	-0.1%	-0.1%	-0.1%	-0.1%
PERS(HC) International Equity	1.0%	15.0%	8.8%	-0.3%	-0.3%	-0.3%	2.6%
PERS Total International Equity Benchmark	-1.2%	12.4%	--	--	--	--	--
Over/Under	2.2%	2.6%					
<b>PERS(HC) Fixed</b>							
PERS(HC) Core Fixed	-1.9%	0.2%	4.6%	4.6%	4.6%	4.6%	5.0%
Barclays Aggregate	-2.4%	-0.7%	3.5%	5.2%	5.2%	5.2%	5.6%
Over/Under	0.5%	0.9%	1.1%	-0.6%	-0.6%	-0.6%	-0.6%
PERS(HC) TIPS	-7.4%	-4.7%	--	--	--	--	--
Barclays US TIPS	-7.4%	-4.8%	4.6%	4.4%	4.4%	4.4%	5.8%
Over/Under	0.0%	0.1%					
PERS(HC) High Yield	2.0%	10.1%	--	--	--	--	--
Barclays High Yield	1.4%	9.5%	10.7%	10.9%	10.9%	10.9%	9.0%
Over/Under	0.6%	0.6%					
PERS(HC) EMD	-6.7%	3.6%	--	--	--	--	--
PERS Emerging Market Debt Benchmark	-7.7%	1.3%	--	--	--	--	--
Over/Under	1.0%	2.3%					
PERS (HC) Floating Rate Debt	2.9%	--	--	--	--	--	--
PERS Floating Rate Debt Benchmark	2.8%	--	--	--	--	--	--
Over/Under	0.1%						
<b>PERS(HC) Real Estate</b>							
PERS(HC) REITs	5.7%	8.1%	18.5%	7.2%	7.2%	7.2%	4.3%
PERS (HC) REIT Benchmark	5.7%	7.7%	18.0%	6.8%	6.8%	6.8%	4.0%
Over/Under	0.0%	0.4%	0.5%	0.4%	0.4%	0.4%	0.3%

# Public Employees Retirement System (HC)

Actuarial Rate: 6.7%

	Ending June 30, 2013				
	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	7 Yrs
<b>PERS(HC) Alternatives</b>					
PERS(HC) Private Equity	8.5%	18.0%	9.6%	-7.7%	-
PERS Private Equity Benchmark (QTR LAG)	12.4%	16.9%	15.9%	9.2%	8.1%
Over/Under	-3.9%	1.1%	-6.3%	-16.9%	-
<b>PERS(HC) Hedge Funds</b>					
PERS (HC) Hedge Benchmark	4.1%	8.3%	6.2%	7.5%	-
Over/Under	0.7%	1.3%	-0.3%	-	-
<b>PERS(HC) Commodities</b>					
Goldman Sachs GSCI Total	-5.2%	2.3%	4.5%	-	-
Over/Under	-5.4%	2.0%	4.7%	-15.2%	-5.7%
<b>PERS(HC) Opportunistic</b>					
PERS FI Opportunistic Benchmark	-4.0%	-0.2%	-	-	-
Over/Under	-2.5%	1.8%	-	-	-
<b>PERS(HC) Risk Parity</b>					
PERS (HC) Risk Parity	-	-	-	-	-
PERS Risk Parity Benchmark	-	-	-	-	-
Over/Under	-	-	-	-	-
<b>PERS(HC) GTAA</b>					
PERS (HC) GTAA	-	-	-	-	-
PERS GTAA Benchmark	-	-	-	-	-
Over/Under	0.1%	0.2%	0.2%	0.6%	1.7%
PERS(HC) Cash	0.0%	0.1%	0.1%	0.2%	1.2%
91 Day T-Bills	0.1%	0.1%	0.1%	0.4%	0.5%
Over/Under	7.9%	11.7%	-	-	-
PERS(HC) Rebalancing	0.0%	0.1%	-	-	-
PERS Rebalancing Benchmark	7.9%	11.6%	-	-	-
Over/Under	-	-	-	-	-

# Public Employees Retirement System (HC)

## Asset Allocation by Segment

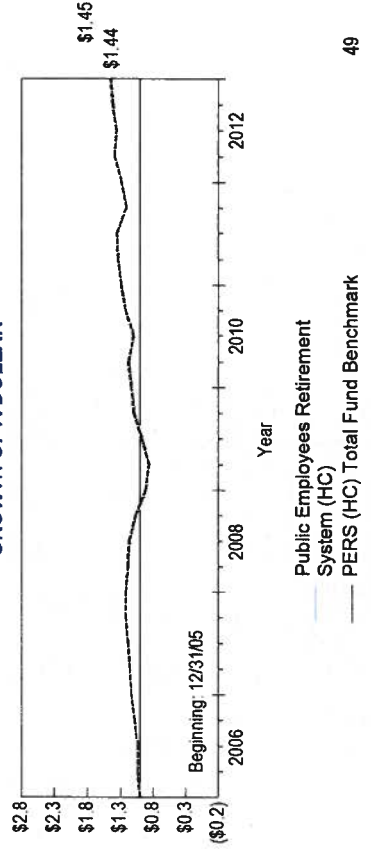
As Of June 30, 2013

	Total Market Value	% of Portfolio	US Equity	Non-US Equity	US Fixed Income	Non-US Fixed Income	Alternatives	Real Estate	Cash	Other
PERS(HC) Domestic Equity	\$2,819,694,941	22.4%	\$2,819,694,941							
PERS(HC) International Equity	\$3,090,110,869	24.5%		\$3,090,110,869						
<b>PERS(HC) Fixed</b>										
PERS(HC) Core Fixed	\$2,111,768,565	16.8%			\$2,111,768,565					
PERS(HC) TIPS	\$425,200,374	3.4%			\$425,200,374					
PERS(HC) High Yield	\$257,287,663	2.0%			\$257,287,663					
PERS(HC) EMD	\$599,355,668	4.8%				\$599,355,668				
PERS(HC) Securitized Debt	\$125,320,797	1.0%			\$125,320,797					
PERS(HC) Global High Yield	\$253,192,689	2.0%				\$253,192,689				
PERS(HC) Floating Rate Debt	\$124,690,264	1.0%			\$124,690,264					
<b>PERS(HC) Real Estate</b>										
PERS(HC) REITs	\$758,867,237	6.0%					\$758,867,237			
<b>PERS(HC) Alternatives</b>										
PERS(HC) Private Equity	\$98,935,419	0.8%					\$98,935,419			
PERS(HC) Hedge Funds	\$658,478,280	5.2%					\$658,478,280			
PERS(HC) Commodities	\$257,286,879	2.0%					\$257,286,879			
PERS(HC) Opportunistic	\$52,312,922	0.4%					\$52,312,922			
<b>PERS(HC) Risk Parity</b>										
PERS(HC) Risk Parity	\$228,521,353	1.8%							\$228,521,353	
<b>PERS(HC) GTAA</b>										
PERS(HC) GTAA	\$232,225,771	1.8%							\$232,225,771	
PERS(HC) Cash	\$310,649,282	2.5%						\$310,649,282		
PERS(HC) Rebalancing	\$198,261,600	1.6%						\$198,261,600		
<b>Total</b>	<b>\$12,602,160,573</b>	<b>100.0%</b>	<b>\$2,819,694,941</b>	<b>\$3,090,110,869</b>	<b>\$3,044,267,663</b>	<b>\$852,548,357</b>	<b>\$1,067,013,500</b>	<b>\$758,867,237</b>	<b>\$508,910,882</b>	<b>\$460,747,124</b>

PERS(HC)

	Actual	Target	Difference
US Equity	22.4	23.2	-0.8
Intl Equity	24.5	24.9	-0.4
REITs	6.0	6.0	0.0
Alternatives	8.1	8.4	-0.3
Risk Parity	1.8	2.0	-0.2
GTAA	1.8	2.0	-0.2
<b>Total Equity</b>	<b>64.6</b>	<b>66.5</b>	<b>-1.9</b>
Fixed Income	31.4	33.5	-2.1
Short Term Investments	4.0	0.0	4.0
<b>Total Debt</b>	<b>35.4</b>	<b>33.5</b>	<b>1.9</b>
	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

## GROWTH OF A DOLLAR



\*Totals may not add up to 100% due to rounding.

Public Employees Retirement System (HC)  
PERS (HC) Total Fund Benchmark



# Public Employees Retirement System (HC) 7 Year Risk Statistics

## RISK RETURN STATISTICS

July 01, 2006 Through June 30, 2013

Public Employees Retirement System (HC)  
PERS (HC) Total Fund Benchmark

RETURN SUMMARY STATISTICS	Public Employees Retirement System (HC)	PERS (HC) Total Fund Benchmark
Number of Periods	28	28
Maximum Return	12.96	13.93
Minimum Return	-14.68	-14.49
Annualized Return	5.22	5.29
Total Return	42.83	43.49
Annualized Excess Return Over Risk Free	3.98	4.05
Annualized Excess Return	-0.07	0.00

## RISK SUMMARY STATISTICS

Beta	1.00	1.00
Upside Deviation	7.00	7.30
Downside Deviation	9.25	9.47

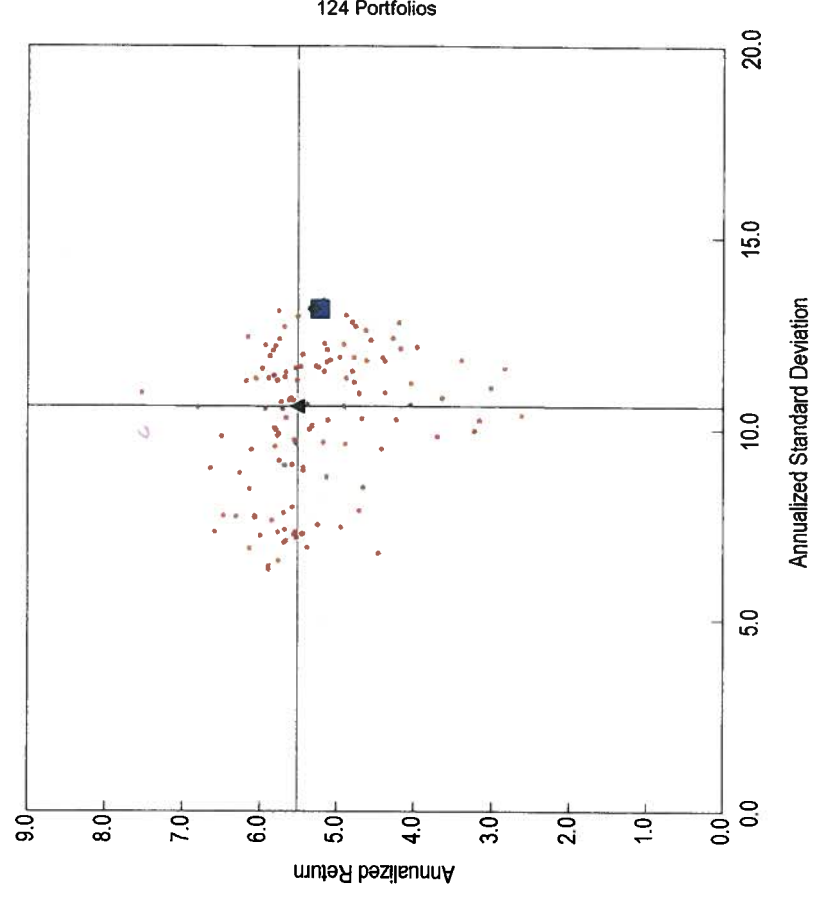
## RISK/RETURN SUMMARY STATISTICS

Annualized Standard Deviation	13.12	13.14
Alpha	-0.01	0.00
Sharpe Ratio	0.30	0.31
Excess Return Over Market / Risk	-0.01	0.00
Tracking Error	0.92	0.00
Information Ratio	-0.08	-

## CORRELATION STATISTICS

R-Squared	1.00	1.00
Correlation	1.00	1.00

Annualized Return vs. Annualized Standard Deviation  
7 Years Ending June 30, 2013



■ Public Employees Retirement System (HC)  
◆ PERS (HC) Total Fund Benchmark  
▲ Universe Median  
● IF Public DB Gross

# Public Employees Retirement System

Health Care Plan

Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Oct-12	Dec-12	24.6	Russell 3000
			18.8	Barclays Capital U.S. Aggregate
			5.0	Emerging Market Debt
			2.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			27.0	Custom Non-US Equity Benchmark*
			0.5	Russell 3000 + 3% (1 Qtr arrears)
			6.0	DJ Wilshire Resi Full Cap
			4.2	3 mo. LIBOR + 4% bps (2 mo. lag)
			0.7	Opportunistic
			1.0	Barclays US Corp Investment Grade
			1.0	Credit Suisse Leveraged Loan Index
			0.7	Barclays CMBS ERISA Eligible + 2%
			2.0	Barclays Global High Yield
			3.5	Barclays Capital U.S. TIPS
			1.0	S&P GS Commodity Total Return
	Jan-13	Mar-13	23.3	Russell 3000
			17.5	Barclays Capital U.S. Aggregate
			5.0	Emerging Market Debt
			2.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			27.0	Custom Non-US Equity Benchmark*
			0.5	Russell 3000 + 3% (1 Qtr arrears)
			6.0	DJ Wilshire Resi Full Cap
			4.7	3 mo. LIBOR + 4% bps (2 mo. lag)
			0.5	Opportunistic
			1.0	Barclays US Corp Investment Grade
			1.0	Barclays CMBS ERISA Eligible + 2%
			2.0	Barclays Global High Yield
			3.5	Barclays Capital U.S. TIPS
			2.0	S&P GS Commodity Total Return
			2.0	Custom Risk Parity Benchmark

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Apr-13	Jun-13	23.2	Russell 3000
			17.0	Barclays Capital U.S. Aggregate
			5.0	Emerging Market Debt
			2.0	Barclays Capital High Yield
			2.0	91-Day Treasury Bill
			24.9	Custom Non-US Equity Benchmark*
			0.5	Russell 3000 + 3% (1 Qtr arrears)
			6.0	DJ Wilshire Resi Full Cap
			5.4	3 mo. LIBOR + 4% bps (2 mo. lag)
			0.5	Opportunistic
			1.0	Barclays US Corp Investment Grade
			1.0	Barclays CMBS ERISA Eligible + 2%
			2.0	Barclays Global High Yield
			3.5	Barclays Capital U.S. TIPS
			2.0	S&P GS Commodity Total Return
			2.0	Custom Risk Parity Benchmark
			2.0	Custom GTAA Benchmark

In February 2012 of 2012, the PERS Plans moved to monthly re-weighting the Policy Benchmarks. Shown above are the benchmarks at the end of each quarter.  
 \*56.5% MSCI World Index ex U.S., 31% MSCI Emerging Markets, 10% MSCI World Index ex U.S. Small Cap, and 2.5% MSCI Emerging Markets Small Cap.

# Public Employees Retirement System

## Health Care Plan

### Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description			
Policy Index	--	Dec-11	28.8	Russell 3000			
			21.5	Barclays Capital U.S. Aggregate			
			3.5	Barclays Capital U.S. TIPS			
			2.0	Barclays High Yield			
			2.0	91-Day Treasury Bill			
			5.0	Custom Emerging Markets Debt			
			27.3	MSCI ACWI Ex-US (Net)			
			0.3	Custom Private Equity			
			6.0	DJ Wilshire Resi Full Cap			
			2.0	LIBOR + 400 bps (2 mo. lag)			
			1.6	S&P GS Commodity Total Return			
			Policy Index	Dec-12	Mar-12	29.5	Russell 3000
						20.5	Barclays Capital U.S. Aggregate
						3.5	Barclays Capital U.S. TIPS
						2.0	Barclays High Yield
2.0	91-Day Treasury Bill						
5.0	Custom Emerging Markets Debt						
27.1	MSCI ACWI Ex-US (Net)						
0.5	Custom Private Equity						
6.0	DJ Wilshire Resi Full Cap						
1.9	LIBOR + 400 bps (2 mo. lag)						
1.0	S&P GS Commodity Total Return						
1.0	Securitized Debt						

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Mar-12	Jun-12	26.2	Russell 3000
			20.2	Barclays Capital U.S. Aggregate
			3.5	Barclays Capital U.S. TIPS
			2.0	Barclays High Yield
			2.0	91-Day Treasury Bill
			5.0	Custom Emerging Markets Debt
			27.1	Custom Non-US Equity Benchmark*
			0.5	Russell 3000 + 3% (1 Qtr arrears)
			6.0	DJ Wilshire Resi Full Cap
			3.2	LIBOR + 400 bps (2 mo. lag)
			1.0	S&P GS Commodity Total Return
			1.0	Securitized Debt
			1.0	Barclays US Corp Investment Grade
			1.3	Barclays Global High Yield
			Policy Index	Jul-12
19.4	Barclays Capital U.S. Aggregate			
5.0	Emerging Market Debt			
2.0	Barclays Capital High Yield			
2.0	91-Day Treasury Bill			
27.0	Custom Non-US Equity Benchmark*			
0.5	Russell 3000 + 3% (1 Qtr arrears)			
6.0	DJ Wilshire Resi Full Cap			
3.2	3 mo. LIBOR + 4% bps (2 mo. lag)			
0.7	Opportunistic			
1.0	Barclays US Corp Investment Grade			
1.0	Credit Suisse Leveraged Loan Index			
0.1	Barclays CMBS ERISA Eligible + 2%			
2.0	Barclays Global High Yield			
3.5	Barclays Capital U.S. TIPS			
1.0	S&P GS Commodity Total Return			



# Public Employees Retirement System

## Health Care Plan

### Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Dec-08	Mar-09	29.0	Russell 3000
			10.3	Barclays Universal
			20.2	Barclays U.S. TIPS
			11.5	Barclays 1-3 Yr Gov't
			23.0	MSCI ACWI Ex-US (Net)
			6.0	Wilshire Resi Full Cap
	Mar-09	Dec-09	28.4	Russell 3000
			10.0	Barclays Universal
			20.0	Barclays U.S. TIPS
			10.0	Barclays 1-3 Yr Gov't
			24.5	MSCI ACWI Ex-US (Net)
			6.0	Wilshire Resi Full Cap
	Jan-10	Mar-10	0.1	Russell 3000 + 3% (1 Qtr arrears)
			1.0	BC Bellweather 3 Mth T-Bill
			30.3	Russell 3000
			17.6	Barclays Capital U.S. Aggregate
			13.3	Barclays Capital U.S. TIPS
			0.5	Barclays High Yield
			2.0	91-Day Treasury Bill
			3.1	Custom Emerging Markets Debt
			25.0	MSCI ACWI Ex-US (Net)
			0.1	Custom Private Equity
			6.0	DJ Wilshire Resi Full Cap
			1.1	LIBOR + 400 bps (2 mo. lag)
			1.0	S&P GS Commodity Total Return

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Apr-10	Jun-10	31.9	Russell 3000
			18.2	Barclays Capital U.S. Aggregate
			8.2	Barclays Capital U.S. TIPS
			0.6	Barclays High Yield
			2.0	91-Day Treasury Bill
			5.0	Custom Emerging Markets Debt
			26.0	MSCI ACWI Ex-US (Net)
			0.1	Custom Private Equity
			6.0	DJ Wilshire Resi Full Cap
			1.0	LIBOR + 400 bps (2 mo. lag)
	1.0	S&P GS Commodity Total Return		
	Jul-10	Sep-10	31.0	Russell 3000
			20.5	Barclays Capital U.S. Aggregate
			5.5	Barclays Capital U.S. TIPS
			1.0	Barclays High Yield
2.0			91-Day Treasury Bill	
			5.0	Custom Emerging Markets Debt
			26.7	MSCI ACWI Ex-US (Net)
			0.2	Custom Private Equity
			6.0	DJ Wilshire Resi Full Cap
			1.2	LIBOR + 400 bps (2 mo. lag)
			1.0	S&P GS Commodity Total Return

# Public Employees Retirement System

## Health Care Plan

### Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Dec-04	Jun-05	47.5	Russell 3000
			22.0	Barclays Universal
			22.0	MSCI ACWI Ex-US (Net)
			4.0	Wilshire Resi Full Cap
			2.5	Barclays US Tips
			2.0	Barclays 1-3 Yr Gov't
Policy Index	Jun-05	Dec-05	42.5	Russell 3000
			20.0	Barclays Universal
			20.0	MSCI ACWI Ex-US (Net)
			4.2	Wilshire Resi Full Cap
			7.5	Barclays US Tips
			5.8	Barclays 1-3 Yr Gov't
Policy Index	Dec-05	Jun-06	37.5	Russell 3000
			18.0	Barclays Universal
			18.0	MSCI ACWI Ex-US (Net)
			4.5	Wilshire Resi Full Cap
			12.5	Barclays US Tips
			9.5	Barclays 1-3 Yr Gov't
Policy Index	Jun-06	Dec-06	32.5	Russell 3000
			18.0	Barclays Universal
			16.0	MSCI ACWI Ex-US (Net)
			4.8	Wilshire Resi Full Cap
			17.5	Barclays US Tips
			13.2	Barclays 1-3 Yr Gov't

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Dec-06	Dec-07	30.0	Russell 3000
			15.0	Barclays Universal
			15.0	MSCI ACWI Ex-US (Net)
			5.0	Wilshire Resi Full Cap
			20.0	Barclays US Tips
			15.0	Barclays 1-3 Yr Gov't
Policy Index	Dec-07	Jun-08	29.6	Russell 3000
			14.8	Barclays Universal
			16.4	MSCI ACWI Ex-US (Net)
			4.1	Wilshire Resi Full Cap
			20.8	Barclays US Tips
			14.3	Barclays 1-3 Yr Gov't
Policy Index	Jun-08	Sep-08	28.8	Russell 3000
			9.7	Barclays Universal
			22.6	MSCI ACWI Ex-US (Net)
			5.6	Wilshire Resi Full Cap
			21.0	Barclays US Tips
			12.3	Barclays 1-3 Yr Gov't
Policy Index	Sep-08	Dec-08	28.8	Russell 3000
			9.7	Barclays Universal
			22.6	MSCI ACWI Ex-US (Net)
			5.6	Wilshire Resi Full Cap
			21.0	Barclays US Tips
			12.3	Barclays 1-3 Yr Gov't

# State Teachers Retirement System (STRS)

# State Teachers Retirement System

Actuarial Rate: 7.75%

Ending June 30, 2013

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>State Teachers Retirement System</b>	<b>6.6%</b>	<b>13.9%</b>	<b>12.7%</b>	<b>5.0%</b>	<b>8.2%</b>
STRS Total Fund Benchmark	6.9%	14.2%	12.5%	5.1%	7.7%
Over/Under	-0.3%	-0.3%	0.2%	-0.1%	0.5%
STRS Domestic Equity	13.3%	20.2%	18.3%	7.3%	7.6%
STRS Domestic Equity Benchmark	14.1%	21.5%	18.6%	7.2%	7.8%
Over/Under	-0.8%	-1.3%	-0.3%	0.1%	-0.2%
STRS Fixed Income	-2.0%	0.8%	4.5%	6.3%	5.4%
Barclays U.S. Universal	-2.3%	0.2%	4.1%	5.5%	4.8%
Over/Under	0.3%	0.6%	0.4%	0.8%	0.6%
STRS International Equity	4.1%	17.8%	9.0%	1.1%	9.9%
STRS International Blended Benchmark	3.0%	16.4%	8.1%	0.5%	9.0%
Over/Under	1.1%	1.4%	0.9%	0.6%	0.9%
<b>STRS Real Estate</b>	<b>5.1%</b>	<b>12.1%</b>	<b>16.4%</b>	<b>2.8%</b>	<b>12.3%</b>
STRS RE Blended Benchmark	5.7%	10.6%	14.1%	4.3%	9.2%
Over/Under	-0.6%	1.5%	2.3%	-1.5%	3.1%
<b>STRS Alternatives</b>					
STRS Private Equity	9.4%	14.4%	14.8%	6.2%	12.3%
STRS Private Equity Benchmark	14.6%	22.7%	21.4%	10.1%	10.9%
Over/Under	-5.2%	-8.3%	-6.6%	-3.9%	1.4%
STRS Hedge Funds	12.2%	14.6%	8.1%	2.7%	9.3%
HFRI Fund of Funds Composite Index	3.4%	7.3%	3.0%	-0.6%	3.4%
Over/Under	8.8%	7.3%	5.1%	3.3%	5.9%
STRS Opportunistic	9.2%	14.6%	10.8%	-	-
STRS Opportunistic Benchmark	13.5%	20.3%	17.5%	-	-
Over/Under	-4.3%	-5.7%	-6.7%		
STRS Liquidity Reserves	0.1%	0.1%	0.2%	0.5%	1.9%
91 Day T-Bills	0.0%	0.1%	0.1%	0.2%	1.6%
Over/Under	0.1%	0.0%	0.1%	0.3%	0.3%

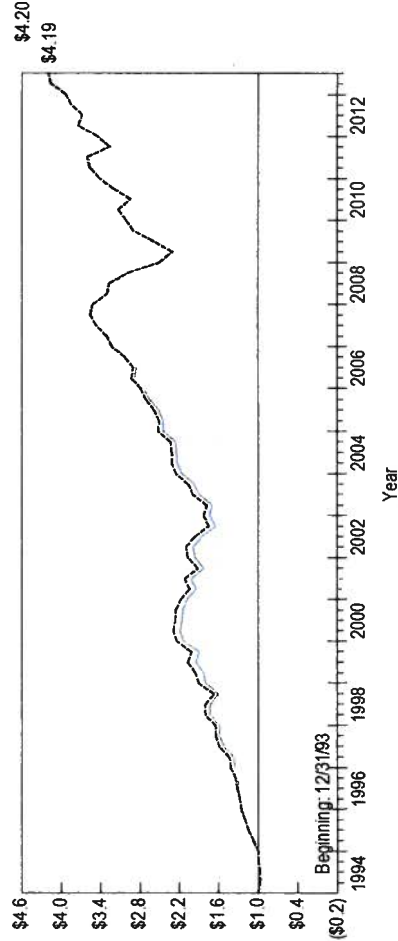
# State Teachers Retirement System

## Asset Allocation by Segment

As Of June 30, 2013

	Total Market Value	% of Portfolio	US Equity	Non-US Equity	US Fixed Income	Alternatives	Real Estate	Cash
STRS Domestic Equity	\$22,925,482,319	33.7%	\$22,925,482,319					
STRS Fixed Income	\$12,516,277,900	18.4%			\$12,516,277,900			
STRS International Equity	\$15,297,643,467	22.5%		\$15,297,643,467				
<b>STRS Real Estate</b>							\$6,692,267,700	
STRS Real Estate	\$6,692,267,700	9.8%					\$6,692,267,700	
<b>STRS Alternatives</b>						\$4,385,809,630		
STRS Private Equity	\$4,385,809,630	6.5%				\$4,385,809,630		
STRS Hedge Funds								
STRS Opportunistic	\$3,122,467,678	4.6%				\$3,122,467,678		
STRS Liquidity Reserves	\$3,042,491,917	4.5%						\$3,042,491,917
<b>Total</b>	<b>\$67,982,440,611</b>	<b>100.0%</b>	<b>\$22,925,482,319</b>	<b>\$15,297,643,467</b>	<b>\$12,516,277,900</b>	<b>\$7,508,277,308</b>	<b>\$6,692,267,700</b>	<b>\$3,042,491,917</b>

## GROWTH OF A DOLLAR



STRS

	Actual	Target	Difference
US Equity	33.7	36.0	-2.3
Intl Equity	22.5	24.0	-1.5
Alternatives	11.1	11.0	0.1
<b>Total Equity</b>	<b>67.3</b>	<b>71.0</b>	<b>-3.7</b>
Fixed Income	18.4	18.0	0.4
Real Estate	9.8	10.0	-0.2
Short Term Investments	4.5	1.0	3.5
<b>Total Debt</b>	<b>32.7</b>	<b>29.0</b>	<b>3.7</b>
	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

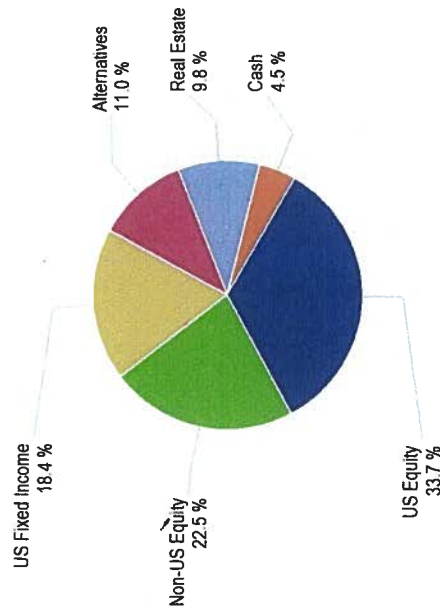
\*Totals may not add up to 100% due to rounding.

State Teachers Retirement System  
 STRS Total Fund Benchmark

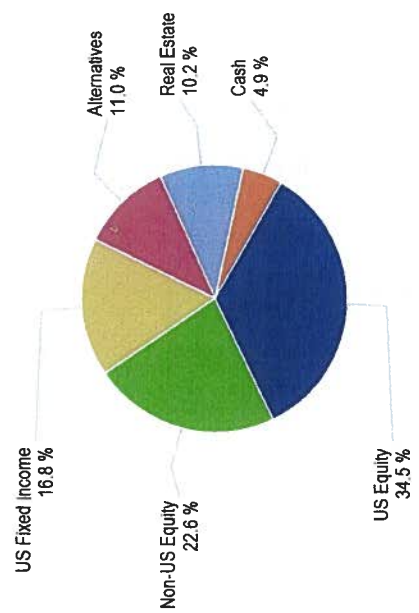
# State Teachers Retirement System

## Asset Allocation

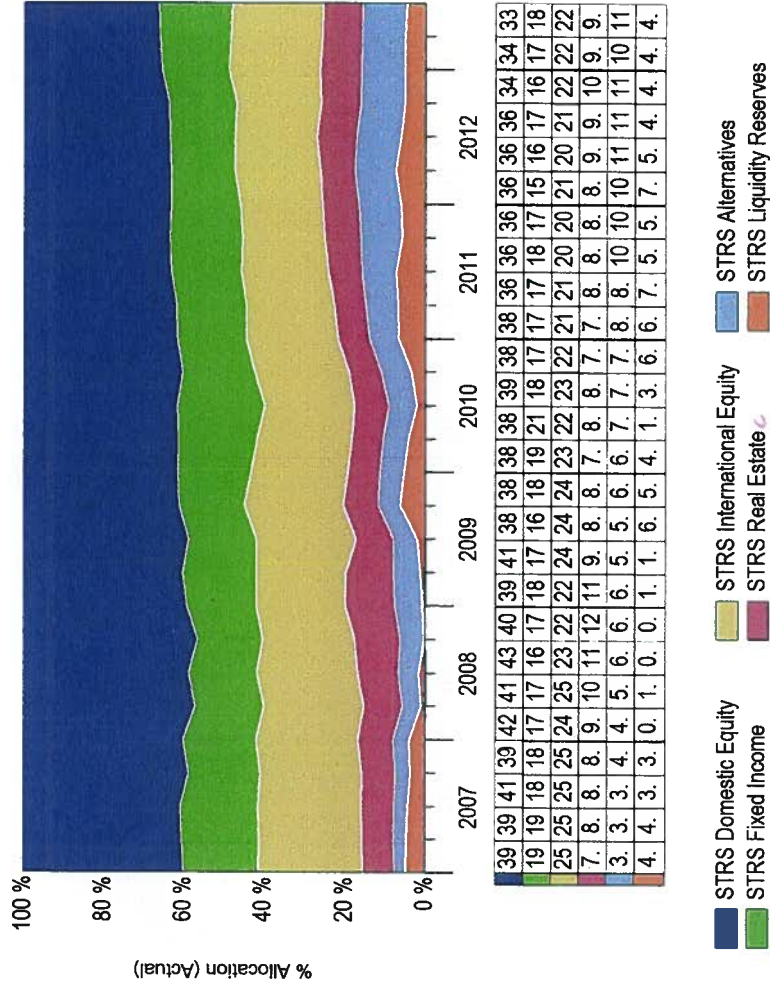
**Current Allocation**  
June 30, 2013



**Previous Allocation**  
December 31, 2012



**Asset Allocation History**  
6 Years 6 Months Ending June 30, 2013



# State Teachers Retirement System 10 Year Risk Statistics

## RISK RETURN STATISTICS July 01, 2003 Through June 30, 2013

	State Teachers Retirement System	STRS Total Fund Benchmark
<b>RETURN SUMMARY STATISTICS</b>		
Number of Periods	40	40
Maximum Return	12.29	12.72
Minimum Return	-15.96	-15.95
Annualized Return	8.22	7.73
Total Return	120.27	110.53
Annualized Excess Return Over Risk Free	6.61	6.12
Annualized Excess Return	0.49	0.00

### RISK SUMMARY STATISTICS

Beta	1.00	1.00
Upside Deviation	6.15	6.08
Downside Deviation	9.94	9.96

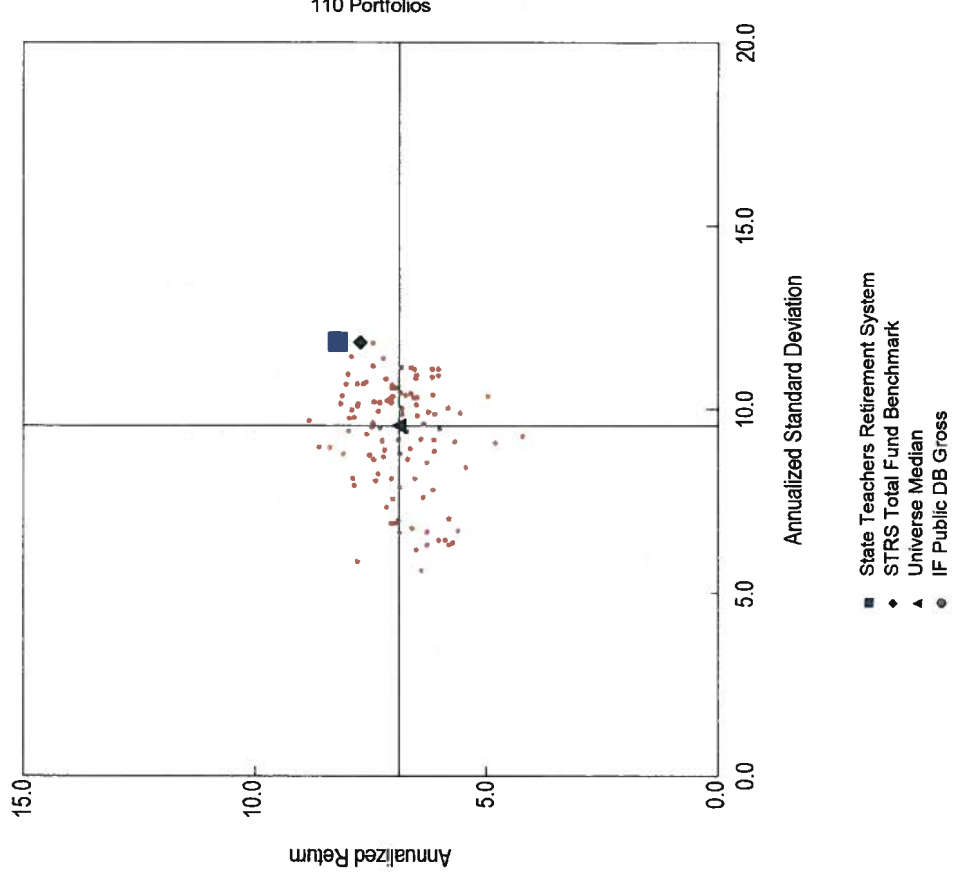
### RISK/RETURN SUMMARY STATISTICS

Annualized Standard Deviation	11.84	11.82
Alpha	0.12	0.00
Sharpe Ratio	0.56	0.52
Excess Return Over Market / Risk	0.04	0.00
Tracking Error	0.74	0.00
Information Ratio	0.66	--

### CORRELATION STATISTICS

R-Squared	1.00	1.00
Correlation	1.00	1.00

Annualized Return vs. Annualized Standard Deviation  
10 Years Ending June 30, 2013



# State Teachers Retirement System

Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Jun-09	Jun-10	39.0	Russell 3000
			20.0	Barclays Universal
			18.4	MSCI World Ex-US 50% hedged (net)
			10.0	Real Estate Blended Benchmark
	Jul-10	Jun-11	4.6	MSCI Em Mkts Free (Gross)
			7.0	Alt. Investment Actual Return
			1.0	91-Day Treasury Bill
			39.0	Russell 3000
	Sep-11	Jun-12	19.0	Barclays Universal
			18.4	MSCI World Ex-US 50% hedged (net)
			10.0	Real Estate Blended Benchmark
			4.6	MSCI Em Mkts Free (Gross)
	Sep-12	Dec-12	8.0	Alt. Investment Actual Return*
			1.0	91-Day Treasury Bill
39.0			Russell 3000	
18.0			Barclays Universal	
		18.4	MSCI World Ex-US 50% hedged (net)	
		10.0	Real Estate Blended Benchmark	
		4.6	MSCI Em Mkts Free (Gross)	
		9.0	Alt. Investment Actual Return*	
		1.0	91-Day Treasury Bill	
		38.0	Russell 3000	
		18.0	Barclays Universal	
		18.4	MSCI World Ex-US 50% hedged (net)	
		10.0	Real Estate Blended Benchmark	
		4.6	MSCI Em Mkts Free (Gross)	
		10.0	Alt. Investment Actual Return*	
		10.0	91-Day Treasury Bill	

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Jan-13	Jun-13	36.0	Russell 3000
			18.0	Barclays Universal
			19.2	MSCI World Ex-US 50% hedged (net)
			10.0	Real Estate Blended Benchmark
			4.8	MSCI Em Mkts Free (Gross)
			11.0	Alt. Investment Actual Return*
			1.0	91-Day Treasury Bill

\*For calculating the Total Fund Blended Benchmark, the actual Alternative Investment asset class return is used. The Alternative Investment Blended Benchmark is used for the asset class relative performance and is in two parts by policy: Private Equity is currently the Russell 3000 Index plus 100 bps and Opportunistic/Diversified is the Russell 3000 Index minus 100 bps. The Alternative Investment Blended Benchmark is based on the policy weights of Private Equity and Opportunistic/Diversified during the respective periods.



# State Teachers Retirement System

## Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Sep-02	Dec-02	45.0	S&P 1500
			23.0	Barclays Universal
			15.0	MSCI EAFE 50% Hedged
			9.0	Real Estate Blended Benchmark
			5.0	MSCI Em Mkts Free (Gross)
	2.0	Alt. Investment Actual Return		
	1.0	91-Day Treasury Bill		
	Mar-03	Jun-03	45.0	S&P/Russell Hybrid
			23.0	Barclays Universal
			15.0	MSCI EAFE 50% Hedged
			9.0	Real Estate Blended Benchmark
			5.0	MSCI Em Mkts Free (Gross)
2.0	Alt. Investment Actual Return			
1.0	91-Day Treasury Bill			
Sep-03	Dec-05	45.0	Russell 3000	
		23.0	Barclays Universal	
		15.0	MSCI World Ex-US 50% hedged (net)	
		9.0	Real Estate Blended Benchmark	
		5.0	MSCI Em Mkts Free (Gross)	
2.0	Alt. Investment Actual Return			
1.0	91-Day Treasury Bill			
Mar-06	Jun-06	42.0	Russell 3000	
		21.0	Barclays Universal	
		20.0	MSCI World Ex-US 50% hedged (net)	
		9.0	Real Estate Blended Benchmark	
		5.0	MSCI Em Mkts Free (Gross)	
3.0	Alt. Investment Actual Return			
0.0	91-Day Treasury Bill			

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Sep-06	Jun-07	42.0	Russell 3000
			20.5	Barclays Universal
			20.0	MSCI World Ex-US 50% hedged (net)
			9.5	Real Estate Blended Benchmark
			5.0	MSCI Em Mkts Free (Gross)
	3.0	Alt. Investment Actual Return		
	0.0	91-Day Treasury Bill		
	Sep-07	Sep-07	42.0	Russell 3000
			20.0	Barclays Universal
			20.0	MSCI World Ex-US 50% hedged (net)
			10.0	Real Estate Blended Benchmark
			5.0	MSCI Em Mkts Free (Gross)
3.0	Alt. Investment Actual Return			
0.0	91-Day Treasury Bill			
Dec-07	Mar-09	42.0	Russell 3000	
		20.0	Barclays Universal	
		20.0	MSCI World Ex-US 50% hedged (net)	
		9.5	Real Estate Blended Benchmark	
		5.0	MSCI Em Mkts Free (Gross)	
3.5	Alt. Investment Actual Return			
0.0	91-Day Treasury Bill			
Apr-09	Jun-09	40.0	Russell 3000	
		20.0	Barclays Universal	
		19.2	MSCI World Ex-US 50% hedged (net)	
		10.0	Real Estate Blended Benchmark	
		4.8	MSCI Em Mkts Free (Gross)	
6.0	Alt. Investment Actual Return			
0.0	91-Day Treasury Bill			

# State Teachers Retirement System

Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Mar-94	Dec-94	40.0	Standard & Poors 500
			45.0	Barclays Govt./Corp.
			9.0	Real Estate Blended Benchmark
			3.0	MSCI EAFE (Net)
			3.0	91-Day Treasury Bill
	Mar-95	Dec-95	46.0	Standard & Poors 500
			35.0	BC Aggregate
			9.0	Real Estate Blended Benchmark
			6.0	MSCI EAFE (Net)
			2.0	MSCI Em Mkts Free (Gross)
			2.0	91-Day Treasury Bill
	Mar-96	Dec-96	45.0	Standard & Poors 500
35.0			BC Aggregate	
9.0			Real Estate Blended Benchmark	
6.8			MSCI EAFE (Net)	
		2.3	MSCI Em Mkts Free (Gross)	
		2.0	91-Day Treasury Bill	
Mar-97	Jun-97	45.0	Standard & Poors 500	
		34.0	BC Aggregate	
		9.0	Real Estate Blended Benchmark	
		6.0	MSCI EAFE (Net)	
		4.0	MSCI Em Mkts Free (Gross)	
		2.0	91-Day Treasury Bill	

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (Cont.)	Sep-97	Dec-97	45.0	Standard & Poors 500
			24.0	BC Aggregate
			12.0	MSCI EAFE (Net)
			9.0	Real Estate Blended Benchmark
			8.0	MSCI Em Mkts Free (Gross)
			2.0	91-Day Treasury Bill
	Mar-98	Sep-98	45.0	S&P 1500
			24.0	BC Aggregate
			12.0	MSCI EAFE 50% Hedged
			9.0	Real Estate Blended Benchmark
			8.0	MSCI Em Mkts Free (Gross)
			2.0	91-Day Treasury Bill
Dec-98	Sep-00	45.0	S&P 1500	
		24.0	BC Aggregate	
		14.0	MSCI EAFE 50% Hedged	
		9.0	Real Estate Blended Benchmark	
		6.0	MSCI Em Mkts Free (Gross)	
		2.0	91-Day Treasury Bill	
Dec-00	Jun-02	45.0	S&P 1500	
		25.0	Barclays Universal	
		15.0	MSCI EAFE 50% Hedged	
		9.0	Real Estate Blended Benchmark	
		5.0	MSCI Em Mkts Free (Gross)	
		1.0	91-Day Treasury Bill	

**Ohio Police & Fire  
(OP&F)**

# Ohio Police & Fire

## Actuarial Rate: 8.25%

	Ending June 30, 2013				
	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Ohio Police &amp; Fire</b>	<b>4.7%</b>	<b>13.0%</b>	<b>13.5%</b>	<b>5.7%</b>	<b>8.4%</b>
<i>OPF Total Fund Benchmark</i>	<i>4.7%</i>	<i>12.4%</i>	<i>12.9%</i>	<i>5.2%</i>	<i>7.8%</i>
Over/Under	0.0%	0.6%	0.6%	0.5%	0.6%
<b>OP&amp;F Domestic Equity</b>	<b>12.5%</b>	<b>20.6%</b>	<b>18.7%</b>	<b>8.1%</b>	<b>8.6%</b>
<i>Wilshire 5000</i>	<i>14.0%</i>	<i>21.1%</i>	<i>18.4%</i>	<i>7.2%</i>	<i>8.0%</i>
Over/Under	-1.5%	-0.5%	0.3%	0.9%	0.6%
<b>OP&amp;F International Equity</b>	<b>3.1%</b>	<b>17.8%</b>	<b>11.0%</b>	<b>1.1%</b>	<b>10.0%</b>
<i>OPF International Benchmark</i>	<i>4.1%</i>	<i>18.1%</i>	<i>9.5%</i>	<i>0.0%</i>	<i>9.1%</i>
Over/Under	-1.0%	-0.3%	1.5%	1.1%	0.9%
<b>OP&amp;F Fixed Income</b>	<b>-3.4%</b>	<b>3.0%</b>	<b>9.1%</b>	<b>9.1%</b>	<b>7.2%</b>
<i>Barclays Aggregate</i>	<i>-2.4%</i>	<i>-0.7%</i>	<i>3.5%</i>	<i>5.2%</i>	<i>4.5%</i>
Over/Under	-1.0%	3.7%	5.6%	3.9%	2.7%
<b>OP&amp;F Core Fixed</b>	<b>-1.8%</b>	<b>1.2%</b>	<b>4.5%</b>	<b>6.4%</b>	<b>5.1%</b>
<i>Barclays Aggregate</i>	<i>-2.4%</i>	<i>-0.7%</i>	<i>3.5%</i>	<i>5.2%</i>	<i>4.5%</i>
Over/Under	0.6%	1.9%	1.0%	1.2%	0.6%
<b>OP&amp;F Mortgages</b>	<b>0.5%</b>	<b>1.3%</b>	<b>6.3%</b>	<b>5.6%</b>	<b>5.2%</b>
<b>OP&amp;F High Yield</b>	<b>0.9%</b>	<b>9.1%</b>	<b>10.8%</b>	<b>10.9%</b>	<b>8.9%</b>
<i>OPF High Yield Benchmark</i>	<i>1.5%</i>	<i>9.2%</i>	<i>10.3%</i>	<i>10.1%</i>	<i>8.6%</i>
Over/Under	-0.6%	-0.1%	0.5%	0.8%	0.3%
<b>Global Inflation Protected Securities</b>	<b>-11.0%</b>	<b>-2.1%</b>	<b>15.2%</b>	<b>11.2%</b>	<b>-</b>
<i>OPF GIPS Benchmark</i>	<i>-11.1%</i>	<i>-4.2%</i>	<i>8.7%</i>	<i>7.1%</i>	<i>-</i>
Over/Under	0.1%	2.1%	6.5%	4.1%	-

# Ohio Police & Fire

Actuarial Rate: 8.25%

	Ending June 30, 2013				
	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>OP&amp;F Real Estate</b>	<b>6.2%</b>	<b>12.6%</b>	<b>15.9%</b>	<b>-2.2%</b>	<b>8.3%</b>
OPF Real Estate Benchmark	<u>4.6%</u>	<u>9.7%</u>	<u>13.2%</u>	<u>2.3%</u>	<u>8.5%</u>
Over/Under	1.6%	2.9%	2.7%	-4.5%	-0.2%
<b>OP&amp;F Alternatives</b>					
OP&F Private Equity	4.1%	7.1%	12.1%	4.2%	10.5%
OPF Private Equity Benchmark	<u>12.7%</u>	<u>17.6%</u>	<u>16.2%</u>	<u>9.5%</u>	<u>13.1%</u>
Over/Under	-8.6%	-10.5%	-4.1%	-5.3%	-2.6%
Timber					
OPF Timber Benchmark	4.3%	6.5%	-	-	-
Over/Under	4.2%	6.8%	-	-	-
	0.1%	-0.3%			
OP&F Cash	0.1%	0.2%	0.2%	0.4%	1.8%
91 Day T-Bills	<u>0.0%</u>	<u>0.1%</u>	<u>0.1%</u>	<u>0.2%</u>	<u>1.6%</u>
Over/Under	0.1%	0.1%	0.1%	0.2%	0.2%

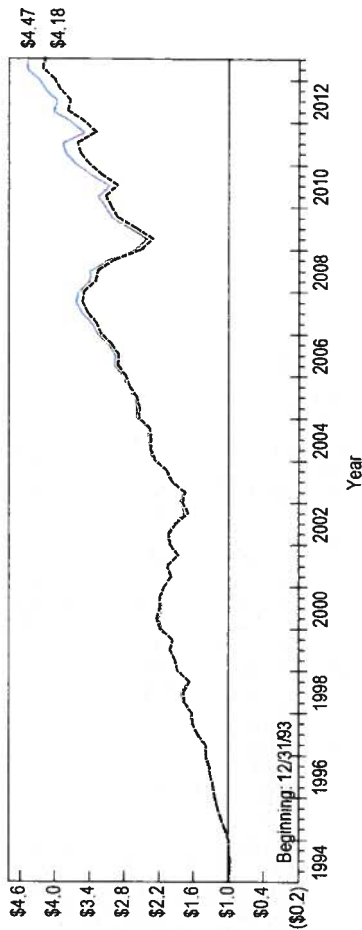
# Ohio Police & Fire

## Asset Allocation by Segment

As Of June 30, 2013

	Total Market Value	% of Portfolio	US Equity	Non-US Equity	US Fixed Income	Non-US Fixed Income	Alternatives	Real Estate	Cash	Other
OP&F Domestic Equity	\$3,685,580,412	28.5%	\$3,685,580,412							
OP&F International Equity	\$3,057,159,711	23.6%		\$3,057,159,711						
<b>OP&amp;F Fixed Income</b>										
OP&F Core Fixed	\$1,334,561,685	10.3%	\$1,334,561,685							
OP&F Mortgages	\$35,642,981	0.3%	\$35,642,981							
OP&F High Yield	\$1,228,982,977	9.5%	\$1,228,982,977							
Global Inflation Protected Securities	\$870,271,253	6.7%			\$870,271,253					
<b>OP&amp;F Real Estate</b>										
OP&F Real Estate	\$1,227,759,157	9.5%					\$1,227,759,157			
<b>OP&amp;F Alternatives</b>										
OP&F Private Equity	\$565,151,534	4.4%					\$565,151,534			
Timber	\$75,920,559	0.6%					\$75,920,559			
MLPs	\$767,453,175	5.9%								\$767,453,175
OP&F Cash	\$100,116,245	0.8%						\$100,116,245		
<b>Total</b>	<b>\$12,948,999,689</b>	<b>100.0%</b>	<b>\$3,685,580,412</b>	<b>\$3,057,159,711</b>	<b>\$2,599,187,643</b>	<b>\$870,271,253</b>	<b>\$641,072,093</b>	<b>\$1,227,759,157</b>	<b>\$100,116,245</b>	<b>\$767,453,175</b>

## GROWTH OF A DOLLAR



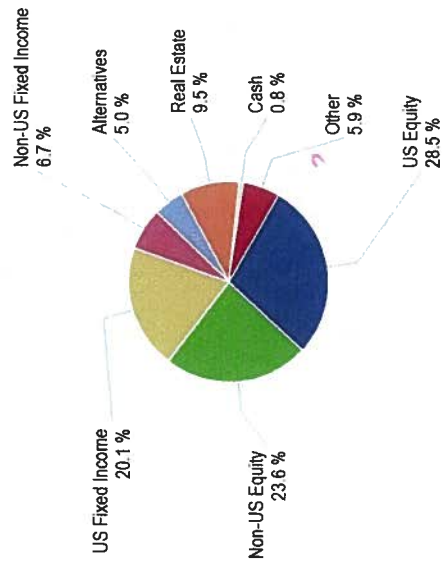
	Actual	Target	Difference
US Equity	28.5	31.6	-3.1
Intl Equity	23.6	21.7	1.9
Alternatives	5.0	5.3	-0.3
<b>Total Equity</b>	<b>57.1</b>	<b>58.6</b>	<b>-1.5</b>
Fixed Income	26.8	31.5	-4.7
Real Estate	9.5	10.0	-0.5
Short Term Investments	6.7	0.0	6.7
<b>Total Debt</b>	<b>43.0</b>	<b>41.5</b>	<b>1.6</b>
	<b>100.1</b>	<b>100.0</b>	<b>0.1</b>

\*Totals may not add up to 100% due to rounding.

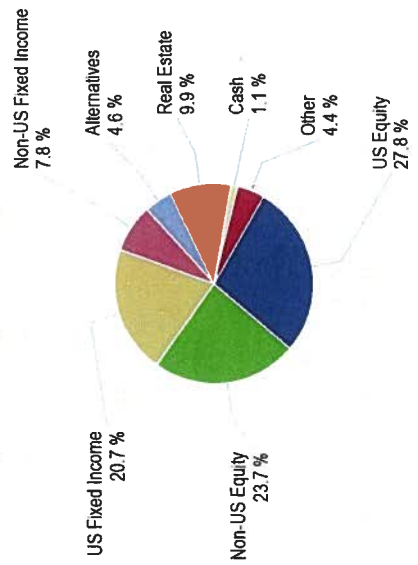
# Ohio Police & Fire

## Asset Allocation

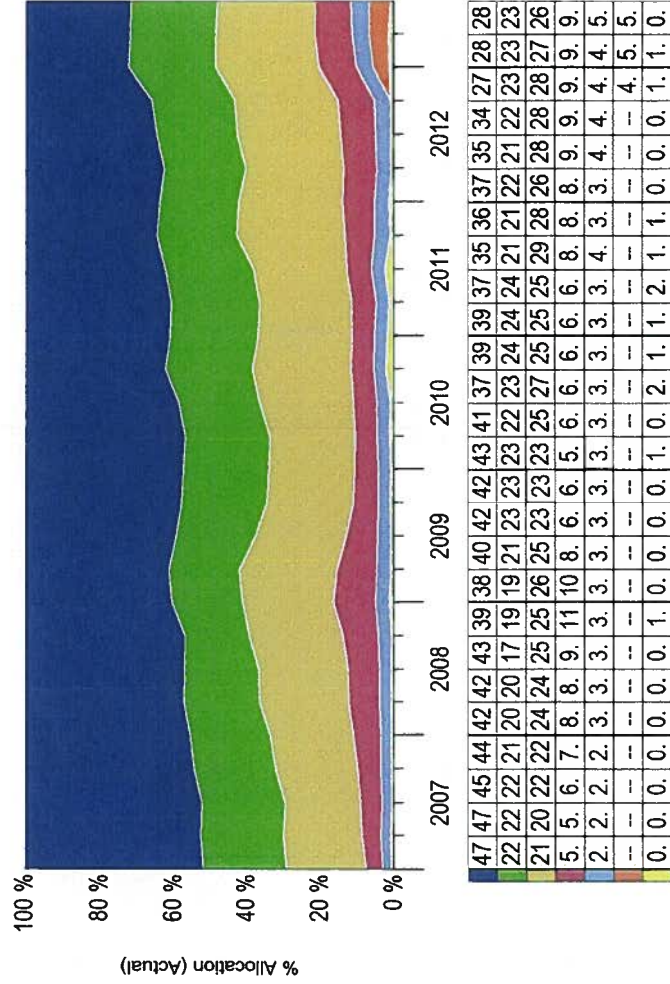
**Current Allocation**  
June 30, 2013



**Previous Allocation**  
December 31, 2012



**Asset Allocation History**  
6 Years 6 Months Ending June 30, 2013



- OP&F Domestic Equity
- OP&F International Equity
- OP&F Fixed Income
- OP&F Real Estate
- OP&F Alternatives
- MLPs
- OP&F Cash

# Ohio Police & Fire 10 Year Risk Statistics

## RISK RETURN STATISTICS

July 01, 2003 Through June 30, 2013

Ohio Police & Fire  
OPF Total Fund Benchmark

RETURN SUMMARY STATISTICS	Ohio Police & Fire	OPF Total Fund Benchmark
Number of Periods	40	40
Maximum Return	13.00	12.98
Minimum Return	-15.45	-15.69
Annualized Return	8.42	7.84
Total Return	124.34	112.68
Annualized Excess Return Over Risk Free	6.81	6.23
Annualized Excess Return	0.58	0.00

## RISK SUMMARY STATISTICS

Beta	1.01	1.00
Upside Deviation	6.54	6.57
Downside Deviation	10.00	9.87

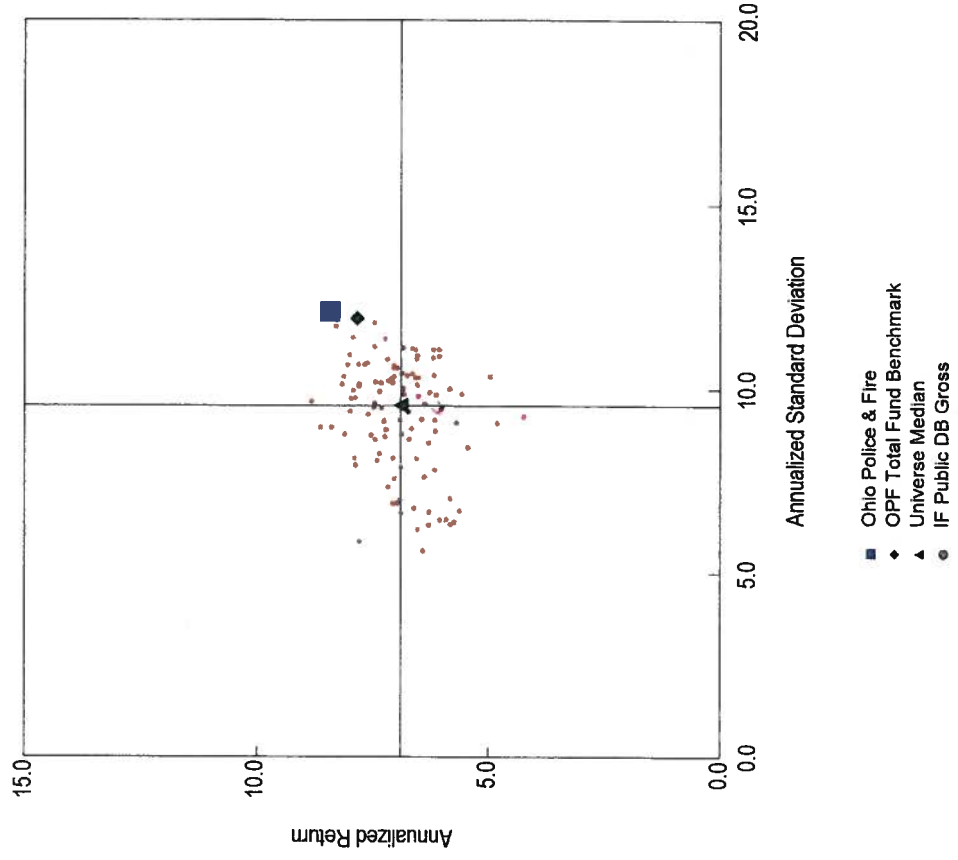
## RISK/RETURN SUMMARY STATISTICS

Annualized Standard Deviation	12.11	11.92
Alpha	0.11	0.00
Sharpe Ratio	0.56	0.52
Excess Return Over Market / Risk	0.05	0.00
Tracking Error	0.85	0.00
Information Ratio	0.68	--

## CORRELATION STATISTICS

R-Squared	1.00	1.00
Correlation	1.00	1.00

Annualized Return vs. Annualized Standard Deviation  
10 Years Ending June 30, 2013





# Police & Fire Pension Fund

## Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (Cont)	Jan-12	Jun-12	15.0	CS Developed Countries HY
			6.5	Bridgewater Custom GIPS
			10.0	NCREIF ODCE NOF 1 Mo Lag
			4.0	Wilshire 5000+3% Qtr. Lagged
			1.0	CPI + 5%
	Jul-12	Sep-12	21.7	OP&F MSCI ex-US I/S Free IMI
			10.0	Barclays Aggregate
			31.9	Wilshire 5000
			15.0	CS Developed Countries HY
			10.0	NCREIF ODCE NOF 1 Mo Lag
	Oct-12	Jun-13	21.7	OP&F MSCI ex-US I/S Free IMI
			15.0	CS Developed Countries HY
			10.0	NCREIF ODCE NOF 1 Mo Lag
			1.3	CPI + 5%
			6.5	Bridgewater Custom GIPS
			31.6	Wilshire 5000
			4.0	Wilshire 5000+3% Qtr. Lagged
			10.0	Barclays Aggregate

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (Cont)				

OP&F's custom policy index is shown above.

# Police & Fire Pension Fund

## Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description	
Policy Index	Jan-09	Mar-09	3.0	Wishire 5000+3% Qtr. Lagged	
			6.0	CS Developed Countries HY	
			11.0	BC Aggregate	
				22.0	MSCI ACWI X US (N)
				43.0	Wishire 5000
				6.0	Bridgewater Custom GIPS
	Apr-09	Jun-09	9.0	NCREIF ODCE NOF 1 Mo Lag	
			6.0	Bridgewater Custom GIPS	
			42.0	Wishire 5000	
				22.0	MSCI ACWI X US (N)
				11.0	BC Aggregate
				6.0	CS Developed Countries HY
	Jul-09	Sep-09	4.0	Wishire 5000+3% Qtr. Lagged	
			9.0	NCREIF ODCE NOF 1 Mo Lag	
			40.0	Wishire 5000	
			23.0	MSCI ACWI X US (N)	
			10.0	BC Aggregate	
			7.0	CS Developed Countries HY	
Oct-09	Jun-10	6.0	Bridgewater Custom GIPS		
		4.0	Wishire 5000+3% Qtr. Lagged		
		10.0	NCREIF ODCE NOF 1 Mo Lag		
			39.0	Wishire 5000	
			24.0	MSCI ACWI X US (N)	
			10.0	BC Aggregate	
			7.0	CS Developed Countries HY	
			6.0	Bridgewater Custom GIPS	
			4.0	Wishire 5000+3% Qtr. Lagged	
			10.0	NCREIF ODCE NOF 1 Mo Lag	

Label	Quarter Start	Quarter End	Percent	Description	
Policy Index (cont.)	Jul-10	Dec-10	4.0	Wishire 5000+3% Qtr. Lagged	
			6.5	Bridgewater Custom GIPS	
			9.7	CS Developed Countries HY	
			10.0	BC Aggregate	
			23.0	MSCI ACWI X US (N)	
				36.9	Wishire 5000
				10.0	NCREIF ODCE NOF 1 Mo Lag
	Jan-11	Jun-11	4.0	Wishire 5000+3% Qtr. Lagged	
			6.5	Bridgewater Custom GIPS	
			11.4	CS Developed Countries HY	
			9.8	BC Aggregate	
			22.3	MSCI ACWI X US (N)	
				36.0	Wishire 5000
				10.0	NCREIF ODCE NOF 1 Mo Lag
	Jul-11	Dec-11	36.0	Wishire 5000	
9.5			BC Aggregate		
12.0			CS Developed Countries HY		
6.5			Bridgewater Custom GIPS		
4.0			Wishire 5000+3% Qtr. Lagged		
			10.0	NCREIF ODCE NOF 1 Mo Lag	
			22.0	OP&F MSCI ex-US I/S Free IMI	

# Police & Fire Pension Fund

Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Apr-88	Sep-97	41.0	Wilshire 5000
			39.0	BC Aggregate
			10.0	MSCI EAFE Index (Net)
			9.0	Wilshire Real Estate Fund
			1.0	S&P 500 + 5%
	Oct-97	Mar-01	41.0	Wilshire 5000
			35.0	BC Aggregate
			10.0	MSCI EAFE Index (Net)
			8.0	Wilshire Real Estate Fund
			5.0	MSCI Em Mkts Index (Gross)
			1.0	S&P 500 + 5%
	Apr-01	Jun-01	41.0	Wilshire 5000
			35.0	BC Aggregate
			10.0	MSCI EAFE Index (Net)
			8.0	Wilshire Real Estate Fund
Jul-01	Mar-02	46.0	Wilshire 5000	
		18.0	BC Aggregate	
		17.0	MSCI EAFE Index (Net)	
		8.0	Wilshire Real Estate Fund	
		5.0	CS Developed Countries HY	
		3.0	MSCI Em Mkts Index (Gross)	
		3.0	Wilshire 5000+3% Ctr. Lagged	

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Apr-02	Sep-04	17.0	MSCI EAFE Index (N)
			5.0	CS Developed Countries HY
			3.0	MSCI EM Index (G)
			1.0	Wilshire 5000+5% Lagged
			18.0	BC Aggregate
			48.0	Wilshire 5000
			8.0	NCREIF ODCE NOF 1 Mo Lag
	Oct-04	Dec-04	100.0	OPF TF Policy
	Jan-05	Dec-06	46.0	Wilshire 5000
			5.0	CS Developed Countries HY
			20.0	MSCI ACWI X US (N)
			3.0	Wilshire 5000+5% Lagged
			18.0	BC Aggregate
			8.0	NCREIF ODCE NOF 1 Mo Lag
	Jan-07	Sep-08	46.0	Wilshire 5000
		5.0	CS Developed Countries HY	
		20.0	MSCI ACWI X US (N)	
		3.0	Wilshire 5000+3% Ctr. Lagged	
		18.0	BC Aggregate	
		8.0	NCREIF ODCE NOF 1 Mo Lag	
Oct-08	Dec-08	12.0	BC Aggregate	
		21.0	MSCI ACWI X US (N)	
		45.0	Wilshire 5000	
		3.0	Wilshire 5000+3% Ctr. Lagged	
		6.0	Bridgewater Custom GIPS	
		5.0	CS Developed Countries HY	
		8.0	NCREIF ODCE NOF 1 Mo Lag	

School Employees Retirement System  
(SERS)

# School Employees Retirement System

Actuarial Rate: 7.75%

Ending June 30, 2013

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>School Employees Retirement System</b>					
SERS Total Fund Benchmark	5.3%	13.7%	11.5%	4.0%	7.2%
Over/Under	5.3%	12.1%	10.3%	4.4%	7.1%
SERS Domestic Equity	0.0%	1.6%	1.2%	-0.4%	0.1%
Russell 3000	14.0%	23.3%	18.9%	7.6%	7.7%
Over/Under	14.1%	21.5%	18.6%	7.2%	7.8%
SERS International Equity	-0.1%	1.8%	0.3%	0.4%	-0.1%
SERS Intl Equity Benchmark	2.5%	16.6%	9.0%	0.9%	9.7%
Over/Under	2.7%	16.2%	8.3%	0.7%	8.7%
SERS Global Fixed	-0.2%	0.4%	0.7%	0.2%	1.0%
Barclays Aggregate	-1.7%	2.7%	6.0%	7.8%	5.7%
Over/Under	-2.4%	-0.7%	3.5%	5.2%	4.5%
0.7%	3.4%	2.5%	2.6%	1.2%	
<b>SERS Real Estate</b>					
SERS Real Estate	4.3%	10.7%	14.3%	-3.0%	5.8%
SERS Total Real Estate Benchmark	5.2%	10.5%	13.3%	3.3%	9.1%
Over/Under	-0.9%	0.2%	1.0%	-6.3%	-3.3%
<b>SERS Alternatives</b>					
SERS Private Equity	6.4%	12.3%	13.1%	5.2%	8.3%
SERS PE Benchmark	10.5%	17.0%	15.7%	8.9%	11.6%
Over/Under	-4.1%	-4.7%	-2.6%	-3.7%	-3.3%
SERS Hedge Funds	4.0%	9.2%	5.7%	3.6%	-
SERS Hedge Fund Benchmark	3.4%	7.3%	3.0%	1.4%	-
Over/Under	0.6%	1.9%	2.7%	2.2%	
SERS Opportunistic	-	-	-	-	-
SERS Opportunistic Benchmark	5.3%	-	-	-	-
Over/Under	0.1%	0.2%	0.2%	0.7%	2.1%
SERS Cash	0.0%	0.1%	0.1%	0.2%	1.5%
SERS Short-Term Benchmark	0.1%	0.1%	0.1%	0.5%	0.6%
Over/Under					

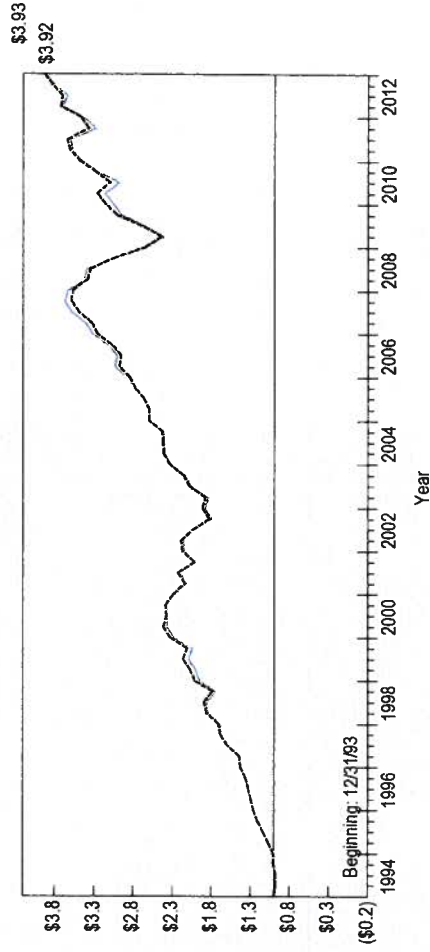
# School Employees Retirement System

## Asset Allocation by Segment

As Of June 30, 2013

	Total Market Value	% of Portfolio	US Equity	Non-US Equity	US Fixed Income	Alternatives	Real Estate	Cash
SERS Domestic Equity	\$2,805,699,200	24.8%	\$2,805,699,200					
SERS International Equity	\$2,756,846,087	24.4%		\$2,756,846,087				
SERS Global Fixed	\$1,855,497,428	16.4%			\$1,855,497,428			
SERS Real Estate	\$1,140,636,312	10.1%				\$1,140,636,312		
SERS Alternatives	\$1,058,334,825	9.4%				\$1,058,334,825		
SERS Private Equity	\$1,536,051,346	13.6%				\$1,536,051,346		
SERS Hedge Funds	\$13,240,000	0.1%				\$13,240,000		
SERS Opportunistic	\$144,219,375	1.3%					\$144,219,375	
SERS Cash	\$11,310,524,573	100.0%	\$2,805,699,200	\$2,756,846,087	\$1,855,497,428	\$2,607,626,172	\$1,140,636,312	\$144,219,375

## GROWTH OF A DOLLAR



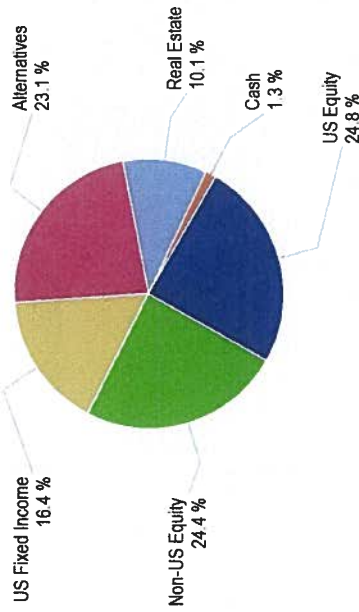
	Actual	Target	Difference
US Equity	24.8	22.5	2.3
Intl Equity	24.4	22.5	1.9
Alternatives	23.1	25.0	-1.9
<b>Total Equity</b>	<b>72.3</b>	<b>70.0</b>	<b>2.3</b>
Fixed Income	16.4	19.0	-2.6
Real Estate	10.1	10.0	0.1
Short Term Investments	1.3	1.0	0.3
<b>Total Debt</b>	<b>27.8</b>	<b>30.0</b>	<b>-2.2</b>
	<b>100.1</b>	<b>100.0</b>	<b>0.1</b>

\*Totals may not add up to 100% due to rounding.

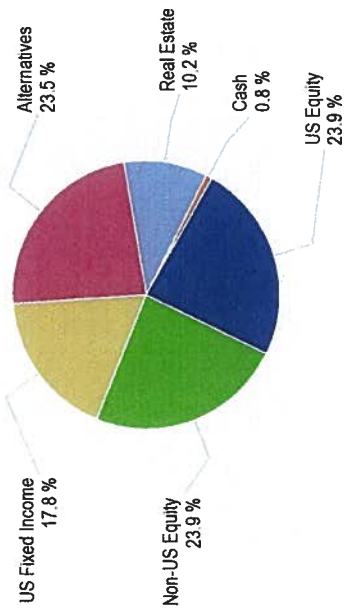
School Employees Retirement System  
SERS Total Fund Benchmark

# School Employees Retirement System Asset Allocation

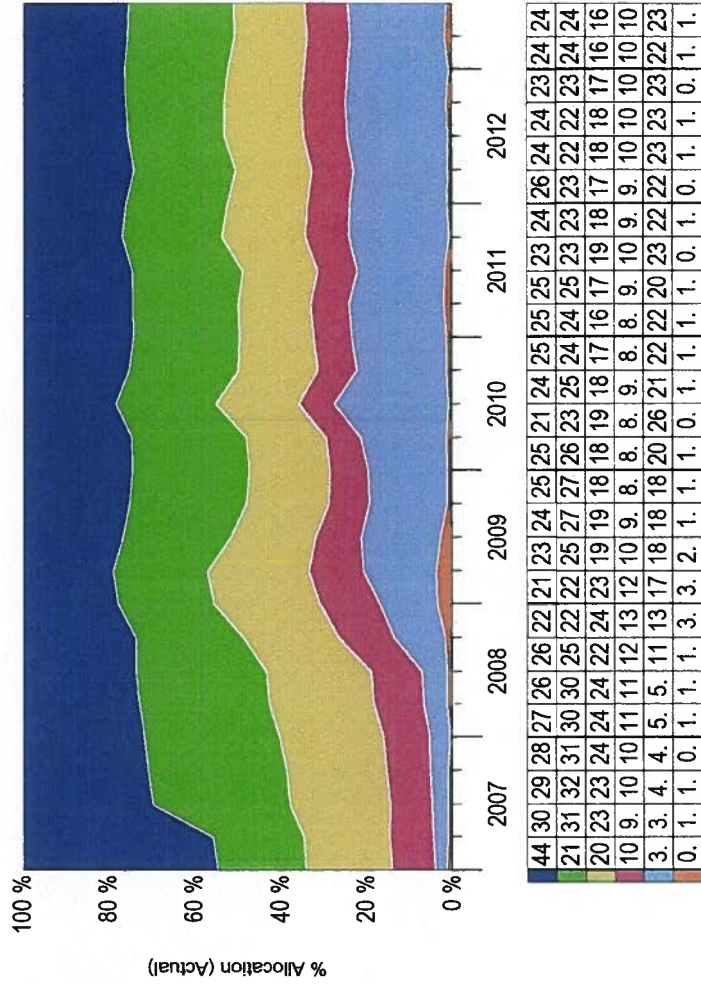
**Current Allocation  
June 30, 2013**



**Previous Allocation  
December 31, 2012**



**Asset Allocation History  
6 Years 6 Months Ending June 30, 2013**



- SERS Domestic Equity
- SERS International Equity
- SERS Global Fixed
- SERS Real Estate
- SERS Alternatives
- SERS Cash

# School Employees Retirement System

## 10 Year Risk Statistics

### RISK RETURN STATISTICS

July 01, 2003 Through June 30, 2013

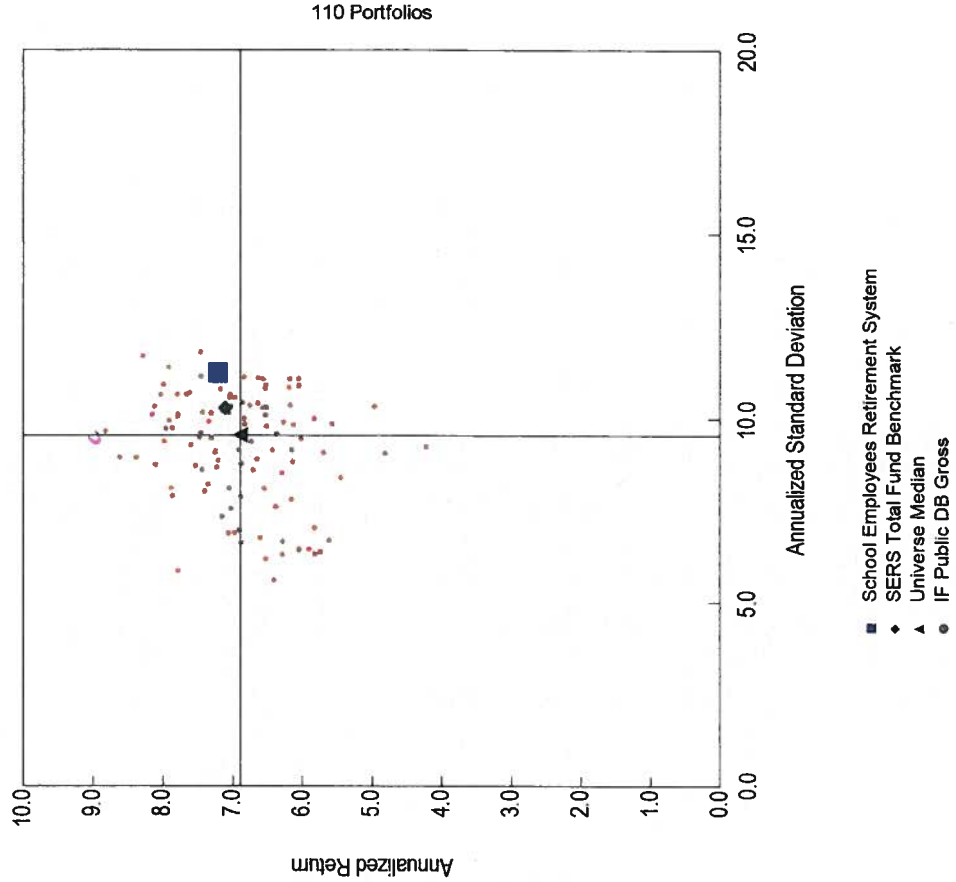
Annualized Return vs. Annualized Standard Deviation  
10 Years Ending June 30, 2013

RETURN SUMMARY STATISTICS		SERS Total Fund Benchmark
Number of Periods	40	40
Maximum Return	11.01	11.81
Minimum Return	-13.65	-12.85
Annualized Return	7.21	7.11
Total Return	100.56	98.72
Annualized Excess Return Over Risk Free	5.60	5.50
Annualized Excess Return	0.10	0.00

RISK SUMMARY STATISTICS	
Beta	1.08
Upside Deviation	5.60
Downside Deviation	9.36

RISK/RETURN SUMMARY STATISTICS	
Annualized Standard Deviation	11.25
Alpha	-0.10
Sharpe Ratio	0.50
Excess Return Over Market / Risk	0.01
Tracking Error	1.80
Information Ratio	0.06
	--

CORRELATION STATISTICS	
R-Squared	0.98
Correlation	0.99





# School Employees Retirement System

Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Mar-07*	Dec-07	30.0	Russell 3000
			24.0	BC Aggregate
			30.0	MSCI ACWI ex US (Developed - 50% Hdg)
			10.0	80% NCREIF (arrears), 20% NAREIT
			5.0	S&P 500 (1Qtr arrears) + 3%
	1.0	Citigroup 30 Day T-Bill		
	Dec-07	Jan-09	29.8	Russell 3000
			24.0	BC Aggregate
			29.8	MSCI ACWI ex US (Developed - 50% Hdg)
			10.0	80% NCREIF (arrears), 20% NAREIT
			5.4	S&P 500 (1Qtr arrears) + 3%
	1.0	Citigroup 30 Day T-Bill		
	Feb-09	Jun-10	27.5	Russell 3000
			24.0	BC Aggregate
			27.5	MSCI ACWI ex US (Developed - 50% Hdg)
10.0			80% NCREIF (arrears), 20% NAREIT	
10.0			S&P 500 (1Qtr arrears) + 3%	
1.0	Citigroup 30 Day T-Bill			
Jul-10	Jun-13	22.5	Russell 3000	
		22.5	MSCI ACWI ex US (Developed - 50% Hdg)	
		19.0	Barclays Capital U.S. Aggregate Bond	
		10.0	NCREIF Property Index (one quarter in arrears)	
		10.0	S&P 500 (1Qtr arrears) + 3%	
15.0	HFRI Fund of Funds Composite			
1.0	Citigroup 30 Day T-Bill			

\*The SERS custom policy index calculation was implemented on May 31, 2007.

SERS custom policy index is shown above.

# School Employees Retirement System

Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Mar-94	Sep-94	45.0	Standard & Poors 500
			28.0	ML Domestic Master Bond Idx
			10.0	MSCI EAFE (Net)
			10.0	NCREIF Classic Ppty Idx (1 Qtr arrear)
	Dec-94	Dec-94	5.0	Citigroup 30 Day T-Bill
			2.0	S&P 500 + 5%
			45.0	Standard & Poors 500
			28.0	ML Domestic Master Bond Idx
	Mar-95	Jun-95	10.0	MSCI EAFE 50% Hedged
			10.0	NCREIF Classic Ppty Idx (1 Qtr arrear)
			5.0	Citigroup 30 Day T-Bill
			2.0	S&P 500 + 5%
Sep-95	Mar-97	45.0	Russell 3000	
		28.0	ML Domestic Master Bond Idx	
		10.0	MSCI EAFE 50% Hedged	
		10.0	NCREIF Classic Ppty Idx (1 Qtr arrear)	
Jun-97	Jun-97	5.0	Citigroup 30 Day T-Bill	
		2.0	S&P 500 + 5%	
		45.0	Russell 3000	
		28.0	BC Aggregate	
			15.0	MSCI EAFE 50% Hedged
			10.0	NCREIF Classic Ppty Idx (1 Qtr arrear)
			1.0	Citigroup 30 Day T-Bill
			1.0	S&P 500 + 5%

Label	Quarter Start	Quarter End	Percent	Description
Policy Index (cont.)	Sep-97	Jun-99	45.0	Russell 3000
			28.0	BC Aggregate
			14.5	MSCI EAFE 50% Hedged
			0.5	MSCI Em Mkts Free
	Sep-99	Dec-99	10.0	NCREIF
			1.0	Citigroup 30 Day T-Bill
			1.0	S&P 500 +5%
			45.0	Russell 3000
	Mar-00	Jun-01	28.0	BC Aggregate
			14.0	MSCI EAFE 50% Hedged
			1.0	MSCI Em Mkts Free
			10.0	NCREIF
Sep-01	Jun-02	1.0	Citigroup 30 Day T-Bill	
		1.0	S&P 500 +5%	
		48.0	Russell 3000	
		23.0	BC Aggregate	
			16.0	MSCI ACWI ex US (Developed - 50% Hdg)
			10.0	NCREIF
			1.0	S&P 500 +5%
			2.0	Citigroup 30 Day T-Bill
Sep-02	Mar-07	47.0	Russell 3000	
		23.0	BC Aggregate	
		16.0	MSCI ACWI ex US (Developed - 50% Hdg)	
		10.0	NCREIF	
			2.0	Private Equity (0% return arrears switch)
			2.0	Citigroup 30 Day T-Bill
			46.0	Russell 3000
			23.0	BC Aggregate
			16.0	MSCI ACWI ex US (Developed - 50% Hdg)
			10.0	80% NCREIF (arrears), 20% NAREIT
			3.0	S&P 500 (1Qtr arrears) + 3%
			2.0	Citigroup 30 Day T-Bill

## Highway Patrol Retirement System (HPRS)

# Highway Patrol Retirement System

Actuarial Rate: 8.0%

Ending June 30, 2013

	Since 12/31/12	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Highway Patrol Retirement System</b>	<b>6.9%</b>	<b>13.2%</b>	<b>10.3%</b>	<b>4.5%</b>	<b>7.0%</b>
HPRS Total Fund Benchmark	<u>5.6%</u>	<u>12.3%</u>	<u>11.9%</u>	<u>5.6%</u>	<u>7.8%</u>
Over/Under	1.3%	0.9%	-1.6%	-1.1%	-0.8%
HPRS Domestic Equity	15.5%	23.4%	18.3%	8.1%	8.9%
HPRS Domestic Equity Benchmark	<u>14.1%</u>	<u>21.5%</u>	<u>19.0%</u>	<u>7.8%</u>	<u>8.4%</u>
Over/Under	1.4%	1.9%	-0.7%	0.3%	0.5%
HPRS International Equity	2.3%	15.7%	9.1%	-0.8%	7.8%
HPRS International Benchmark	<u>0.3%</u>	<u>14.1%</u>	<u>8.5%</u>	<u>-0.3%</u>	<u>8.5%</u>
Over/Under	2.0%	1.6%	0.6%	-0.5%	-0.7%
HPRS Global Fixed Income	-2.0%	1.1%	4.8%	6.0%	5.4%
Barclays Aggregate	<u>-2.4%</u>	<u>-0.7%</u>	<u>3.5%</u>	<u>5.2%</u>	<u>4.5%</u>
Over/Under	0.4%	1.8%	1.3%	0.8%	0.9%
<b>HPRS Real Estate</b>	<b>6.9%</b>	<b>15.7%</b>	<b>5.5%</b>	<b>-2.6%</b>	<b>1.6%</b>
NCREIF Property Index	<u>5.5%</u>	<u>10.7%</u>	<u>13.1%</u>	<u>2.8%</u>	<u>8.6%</u>
Over/Under	1.4%	5.0%	-7.6%	-5.4%	-7.0%
<b>HPRS Alternatives</b>					
HPRS Private Equity	3.0%	1.8%	0.5%	0.4%	-
HPRS Private Equity Benchmark	<u>13.2%</u>	<u>18.0%</u>	<u>16.3%</u>	<u>11.5%</u>	-
Over/Under	-10.2%	-16.2%	-15.8%	-11.1%	-
HPRS Hedge Funds	4.8%	9.2%	4.3%	2.4%	-
HFRF Fund of Funds Composite Index	<u>3.4%</u>	<u>7.3%</u>	<u>3.0%</u>	<u>-0.6%</u>	<u>3.4%</u>
Over/Under	1.4%	1.9%	1.3%	3.0%	-
HPRS Cash	0.0%	0.0%	0.0%	0.3%	2.1%
91 Day T-Bills	<u>0.0%</u>	<u>0.1%</u>	<u>0.1%</u>	<u>0.2%</u>	<u>1.6%</u>
Over/Under	0.0%	-0.1%	-0.1%	0.1%	0.5%

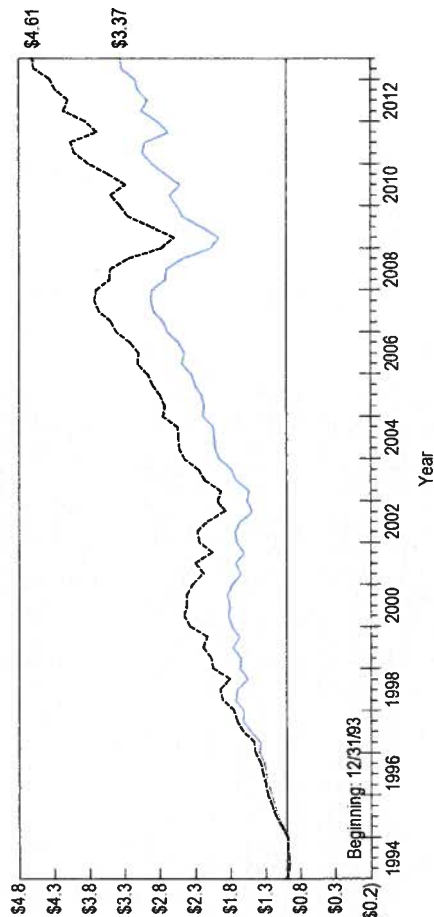
# Highway Patrol Retirement System

## Asset Allocation by Segment

As Of June 30, 2013

	Total Market Value	% of Portfolio	US Equity	Non-US Equity	US Fixed Income	Alternatives	Real Estate	Cash
HPRS Domestic Equity	\$285,023,645	38.2%	\$285,023,645					
HPRS International Equity	\$138,976,339	18.6%		\$138,976,339				
HPRS Global Fixed Income	\$137,387,495	18.4%			\$137,387,495			
<b>HPRS Real Estate</b>								
HPRS Real Estate	\$37,555,607	5.0%				\$37,555,607		
<b>HPRS Alternatives</b>								
HPRS Private Equity	\$75,336,499	10.1%				\$75,336,499		
HPRS Hedge Funds	\$63,373,356	8.5%				\$63,373,356		
HPRS Cash	\$8,176,503	1.1%					\$8,176,503	
<b>Total</b>	<b>\$745,829,444</b>	<b>100.0%</b>	<b>\$285,023,645</b>	<b>\$138,976,339</b>	<b>\$137,387,495</b>	<b>\$138,709,855</b>	<b>\$37,555,607</b>	<b>\$8,176,503</b>

## GROWTH OF A DOLLAR



HPRS

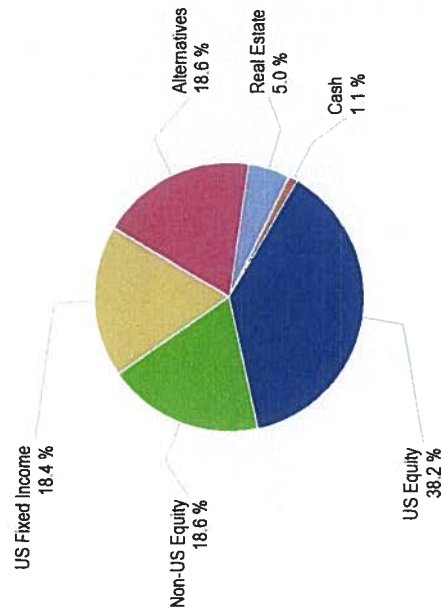
	Actual	Target	Difference
US Equity	38.2	35.0	3.2
Intl Equity	18.6	20.0	-1.4
Alternatives	18.6	17.5	1.1
<b>Total Equity</b>	<b>75.4</b>	<b>72.5</b>	<b>2.9</b>
Fixed Income	18.4	22.5	-4.1
Real Estate	5.0	5.0	0.0
Short Term Investments	1.1	0.0	1.1
<b>Total Debt</b>	<b>24.5</b>	<b>27.5</b>	<b>-3.0</b>
	<b>99.9</b>	<b>100.0</b>	<b>-0.1</b>

\*Totals may not add up to 100% due to rounding.

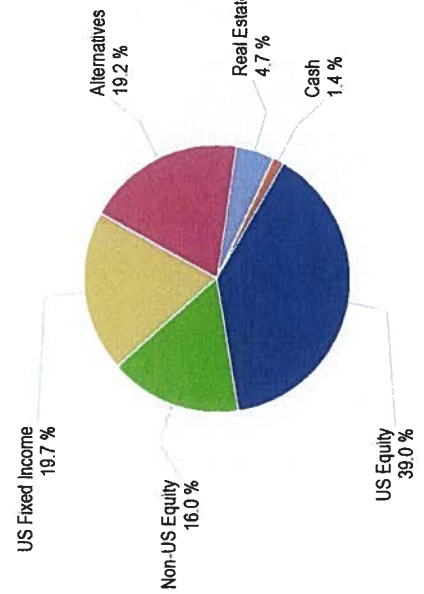
# Highway Patrol Retirement System

## Asset Allocation

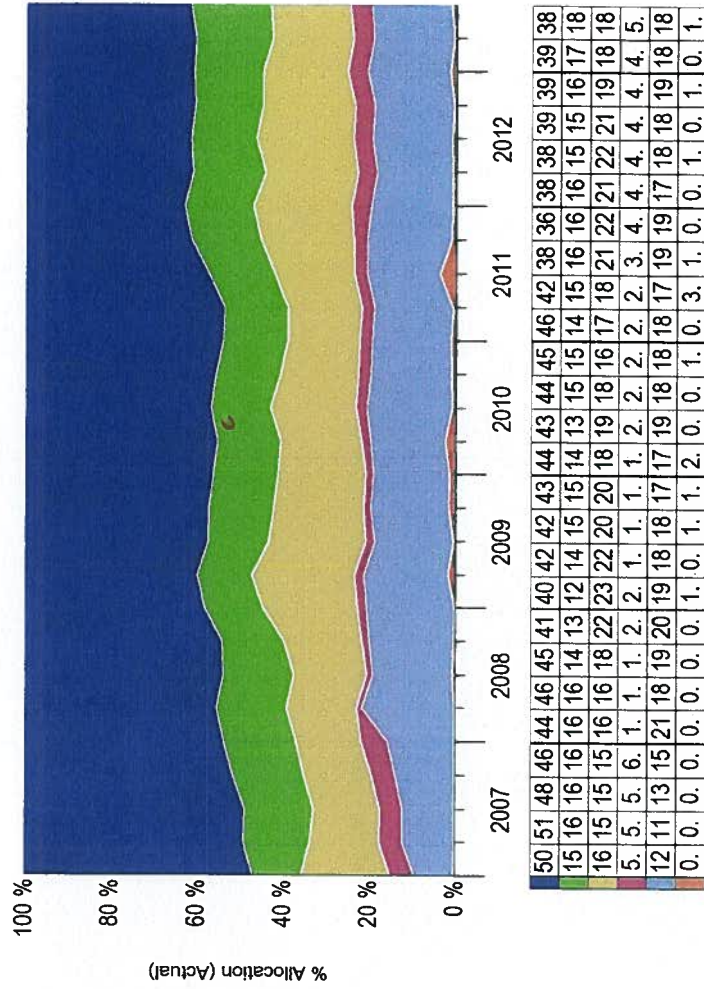
**Current Allocation**  
June 30, 2013



**Previous Allocation**  
December 31, 2012



**Asset Allocation History**  
6 Years 6 Months Ending June 30, 2013



# Highway Patrol Retirement System 10 Year Risk Statistics

## RISK RETURN STATISTICS July 01, 2003 Through June 30, 2013

	Highway Patrol Retirement System	HPRS Total Fund Benchmark
<b>RETURN SUMMARY STATISTICS</b>		
Number of Periods	40	40
Maximum Return	12.56	12.45
Minimum Return	-16.16	-14.32
Annualized Return	6.96	7.84
Total Return	95.97	112.69
Annualized Excess Return Over Risk Free	5.35	6.23
Annualized Excess Return	-0.88	0.00

### RISK SUMMARY STATISTICS

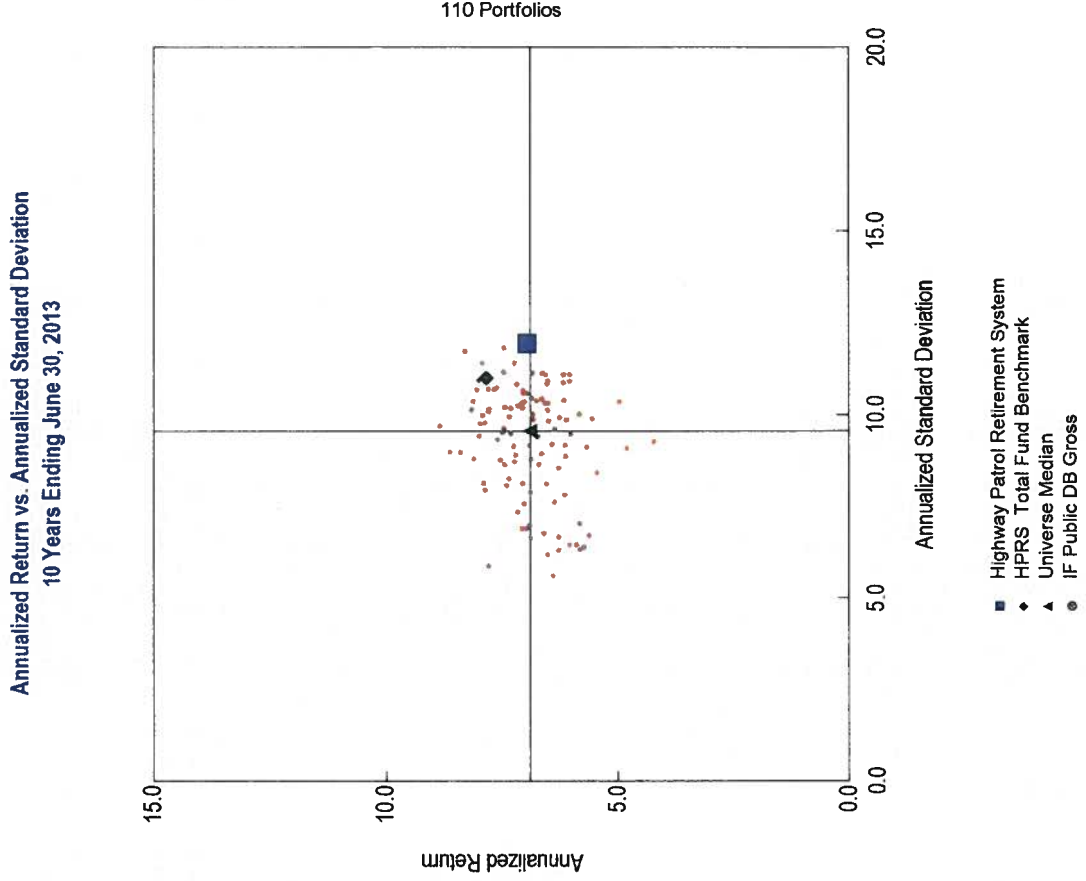
Beta	1.08	1.00
Upside Deviation	6.52	6.26
Downside Deviation	9.94	8.99

### RISK/RETURN SUMMARY STATISTICS

Annualized Standard Deviation	11.95	11.01
Alpha	-0.34	0.00
Sharpe Ratio	0.45	0.57
Excess Return Over Market / Risk	-0.07	0.00
Tracking Error	1.71	0.00
Information Ratio	-0.52	-

### CORRELATION STATISTICS

R-Squared	0.98	1.00
Correlation	0.99	1.00



## Highway Patrol Retirement System Quarter Ending 06/30/2013

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Mar-94	Dec-95	50.0	BC Aggregate
	Mar-96	Dec-97	50.0	Standard & Poors 500
	Mar-98	Sep-99	40.0	BC Aggregate
	Dec-99	Dec-01	25.0	Standard & Poors 500
	Mar-02	Dec-02	20.0	BC Aggregate
	Mar-03	Dec-06	16.0	Standard & Poors 500
			25.0	BC Aggregate
			15.0	MSCI EAFE (Net)
			12.0	NCREIF
			50.0	Standard & Poors 500
			40.0	BC Aggregate
			25.0	Standard & Poors 500
			20.0	BC Aggregate
			20.0	MSCI EAFE (Net)
			10.0	NCREIF
			10.0	MSCI EAFE (Net)

Label	Quarter Start	Quarter End	Percent	Description
Policy Index	Mar-07	Jun-07	32.0	Standard & Poors 500
			18.0	Russell 2500
			15.0	MSCI ACWI ex US
			5.0	NCREIF
			10.0	CPI + 5%
			5.0	HFRI Fund of Funds
			15.0	BC Aggregate
	Sep-07	Jun-10	30.0	Standard & Poors 500
			15.0	Russell 2500
			20.0	BC Aggregate
			15.0	MSCI ACWI ex US
			5.0	NCREIF
			10.0	CPI + 5%
			5.0	HFRI Fund of Funds
	Sep-10	Jun-11	30.0	Standard & Poors 500
			15.0	Russell 2500
			20.0	BC Aggregate
		15.0	MSCI ACWI ex US	
		5.0	NCREIF	
		10.0	Wilshire 5000 +3% (one qtr. In arrears)	
		5.0	HFRI Fund of Funds	
Jul-11	Jun-13	35.0	Russell 3000	
		22.5	BC Aggregate	
		20.0	MSCI ACWI ex US	
		5.0	NCREIF	
		5.0	Wilshire 5000 +3% (one qtr. In arrears)	
		12.5	HFRI Fund of Funds	

HPRS' custom policy index is shown above.

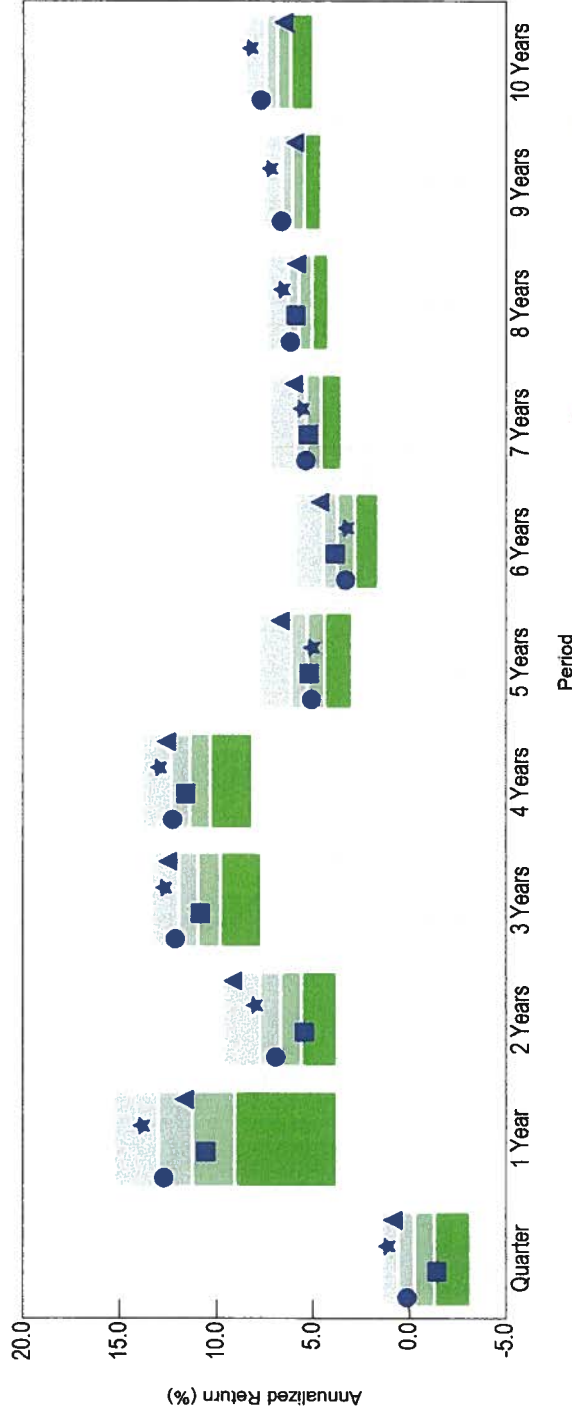


## Performance Comparisons

# Total Plans

## InvestorForce All Defined Benefit Fund Universe

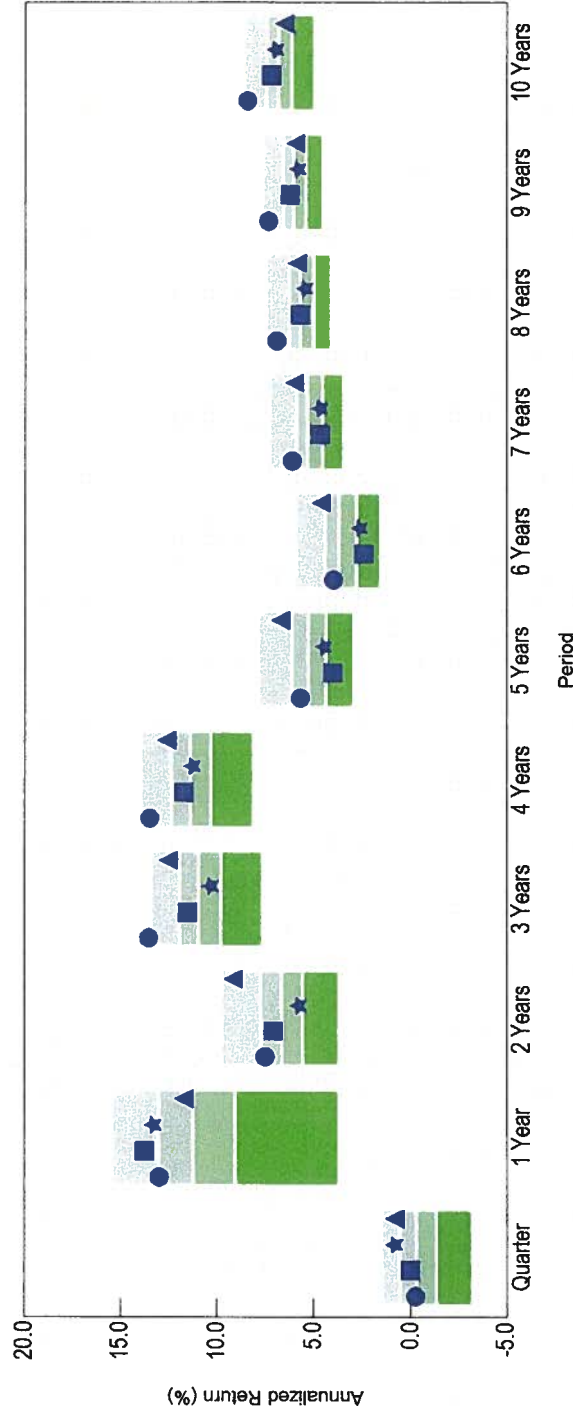
IF All DB Gross Accounts  
Ending June 30, 2013



	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
5th Percentile	1.5	15.4	9.7	13.4	14.0	7.8	5.9	7.3	7.5	7.7	8.6
25th Percentile	0.6	13.0	7.8	12.0	12.4	6.1	4.5	5.9	6.3	6.6	7.5
Median	-0.3	11.2	6.7	11.0	11.4	5.3	3.7	5.4	5.7	6.1	6.9
75th Percentile	-1.3	9.1	5.6	9.8	10.3	4.4	2.8	4.6	5.0	5.5	6.2
95th Percentile	-3.2	3.7	3.7	7.6	8.1	2.9	1.6	3.5	4.2	4.5	5.0
# of Portfolios	786	763	725	692	670	656	641	613	570	536	504
Public Employees Retirement System (DB)	0.1 (40)	12.7 (29)	7.0 (42)	12.1 (23)	12.3 (28)	5.1 (57)	3.3 (63)	5.4 (50)	6.2 (30)	6.6 (25)	7.7 (19)
Public Employees Retirement System (HC)	-1.5 (78)	10.6 (60)	5.4 (79)	10.9 (54)	11.6 (46)	5.2 (54)	3.8 (47)	5.2 (55)	5.9 (43)	-- (--)	-- (--)
State Teachers Retirement System	1.1 (12)	13.9 (16)	8.0 (20)	12.7 (12)	13.0 (14)	5.0 (58)	3.2 (64)	5.6 (41)	6.6 (16)	7.2 (10)	8.2 (9)
60/40 S&P 500/Barclays Aggregate	0.8 (18)	11.7 (44)	9.2 (8)	12.5 (16)	12.6 (21)	6.7 (13)	4.6 (20)	6.0 (22)	5.9 (44)	5.9 (58)	6.5 (66)

**Total Plans**  
**InvestorForce All Defined Benefit Fund Universe**

IF All DB Gross Accounts  
 Ending June 30, 2013



Return (Rank)

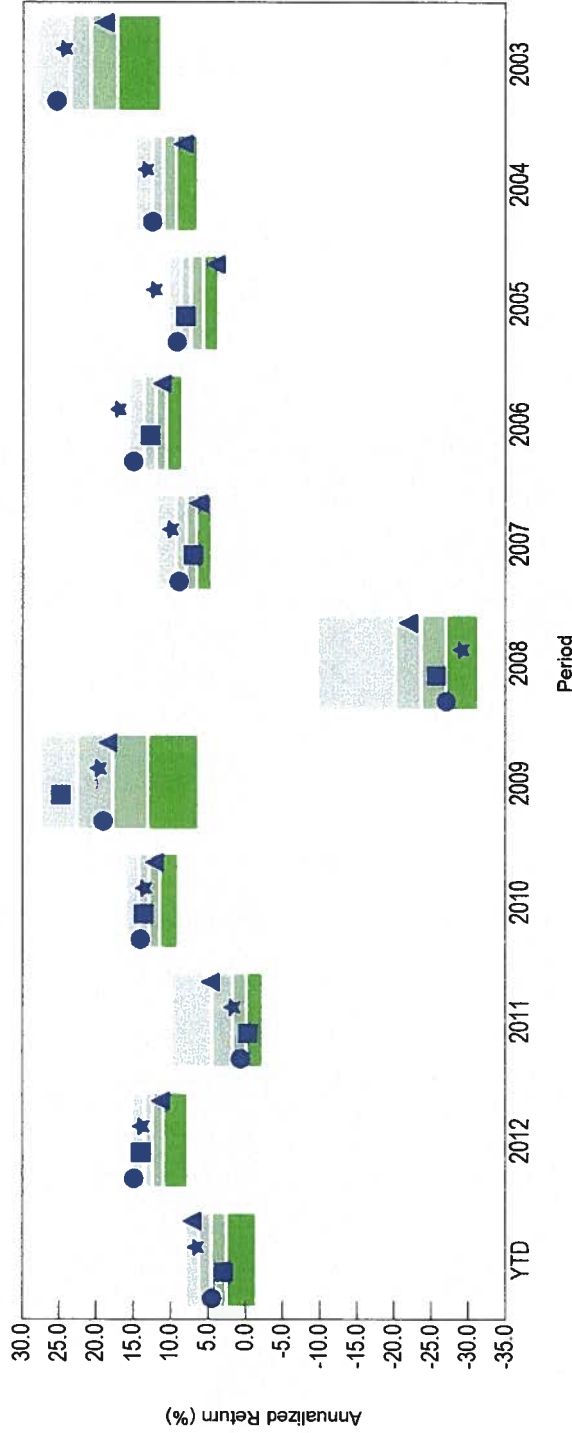
5th Percentile  
 25th Percentile  
 Median  
 75th Percentile  
 95th Percentile  
 # of Portfolios

- Ohio Police & Fire
- School Employees Retirement System
- ★ Highway Patrol Retirement System
- ▲ 60/40 S&P 500/Barclays Aggregate

# Total Plans

## InvestorForce All Defined Benefit Fund Universe - Calendar Year Performance

IF All DB Gross Accounts  
Ending June 30, 2013



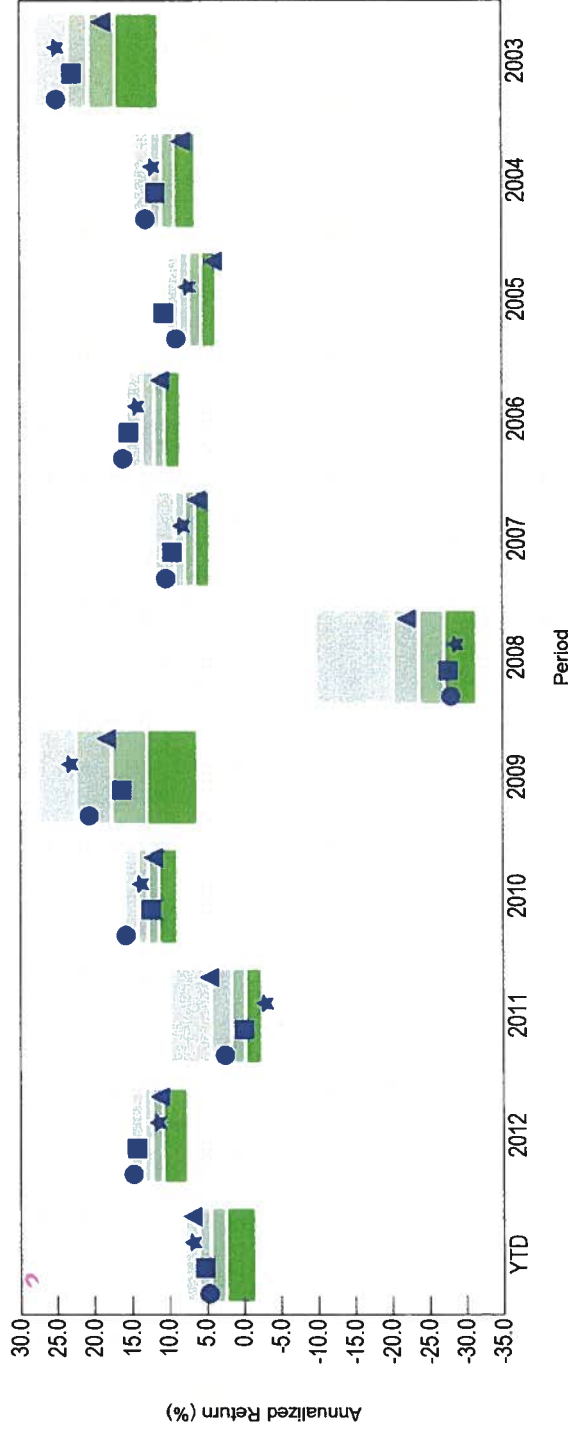
Return (Rank)

5th Percentile	8.1	15.1	9.9	16.0	27.5	-9.7	11.8	15.7	10.3	14.8	28.2
25th Percentile	6.2	13.5	4.5	14.2	22.5	-20.2	9.3	13.6	8.6	12.5	23.5
Median	4.5	12.4	1.7	12.9	17.8	-23.8	7.9	12.0	7.3	11.0	20.8
75th Percentile	2.5	10.9	-0.2	11.4	13.0	-27.1	6.5	10.6	5.6	9.2	17.2
95th Percentile	-1.5	7.5	-2.5	8.9	6.2	-31.6	4.5	8.4	3.6	6.4	11.3
# of Portfolios	777	732	389	367	354	347	332	315	300	279	262
Public Employees Retirement System (DB)	4.4 (52)	14.8 (8)	0.6 (65)	14.0 (31)	19.1 (44)	-27.1 (77)	8.9 (33)	15.0 (9)	9.2 (16)	12.5 (26)	25.4 (16)
Public Employees Retirement System (HC)	2.9 (71)	13.8 (20)	-0.4 (78)	13.5 (39)	24.8 (14)	-25.8 (67)	6.9 (69)	12.7 (40)	8.0 (35)	-- (-)	-- (-)
State Teachers Retirement System	6.6 (19)	13.8 (21)	1.6 (51)	13.5 (40)	19.7 (40)	-29.2 (90)	10.0 (17)	17.0 (2)	12.2 (1)	13.4 (14)	24.3 (22)
60/40 S&P 500/Barclays Aggregate	7.1 (13)	11.3 (70)	4.7 (25)	12.1 (66)	18.4 (47)	-22.1 (37)	6.2 (78)	11.1 (68)	4.0 (92)	8.3 (81)	19.0 (66)

# Total Plans

## InvestorForce All Defined Benefit Fund Universe - Calendar Year Performance

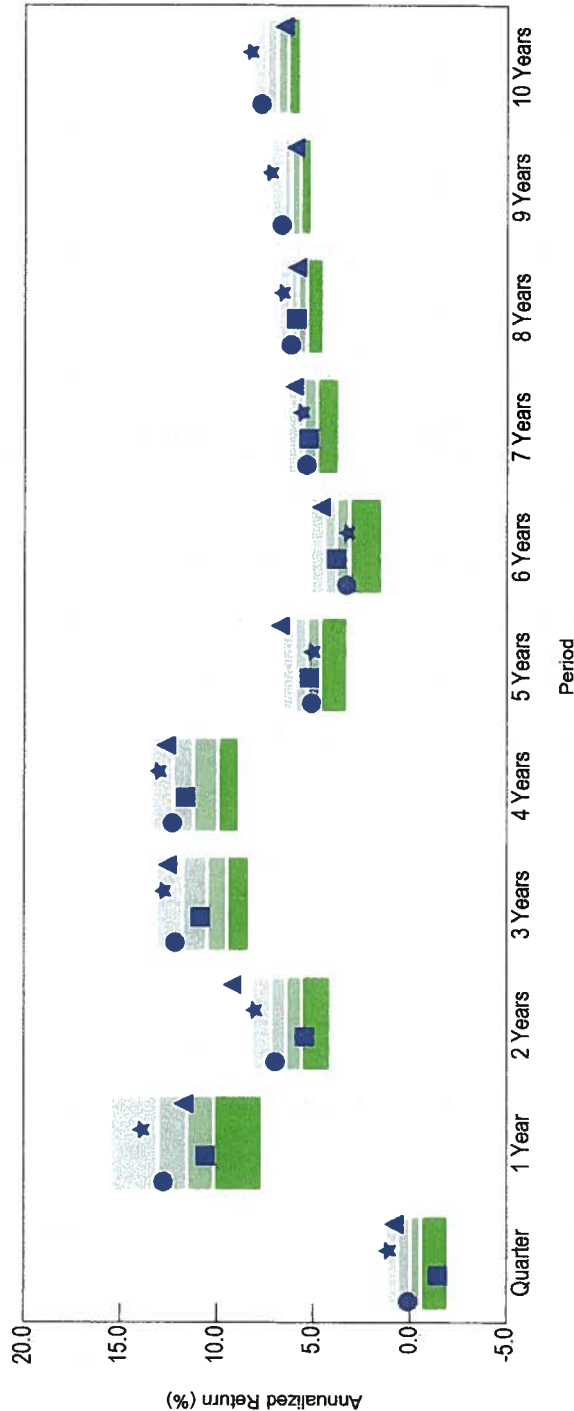
IF All DB Gross Accounts  
Ending June 30, 2013



Return (Rank)	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
5th Percentile	15.1	9.9	16.0	27.5	-9.7	11.8	15.7	10.3	14.8	28.2
25th Percentile	13.5	4.5	14.2	22.5	-20.2	9.3	13.6	8.6	12.5	23.5
Median	12.4	1.7	12.9	17.8	-23.8	7.9	12.0	7.3	11.0	20.8
75th Percentile	10.9	-0.2	11.4	13.0	-27.1	6.5	10.6	5.6	9.2	17.2
95th Percentile	7.5	-2.5	8.9	6.2	-31.6	4.5	8.4	3.6	6.4	11.3
# of Portfolios	732	389	367	354	347	332	315	300	279	262
Ohio Police & Fire	4.7 (48)	2.5 (41)	15.9 (7)	20.7 (35)	-28.1 (83)	10.5 (12)	16.1 (4)	9.1 (18)	13.1 (18)	25.0 (17)
School Employees Retirement System	5.3 (40)	-0.1 (74)	12.4 (62)	16.4 (61)	-27.7 (81)	9.6 (21)	15.4 (7)	10.8 (3)	11.7 (37)	22.9 (31)
Highway Patrol Retirement System	6.9 (15)	-2.9 (97)	13.8 (35)	23.2 (21)	-28.8 (88)	8.3 (45)	14.3 (17)	7.4 (47)	12.2 (28)	25.0 (17)
60/40 S&P 500/Barclays Aggregate	7.1 (13)	4.7 (25)	12.1 (66)	18.4 (47)	-22.1 (37)	6.2 (78)	11.1 (68)	4.0 (92)	8.3 (81)	19.0 (66)

**Total Plans**  
**InvestorForce All Public Defined Benefit Fund Universe**

IF Public DB Gross Accounts  
 Ending June 30, 2013



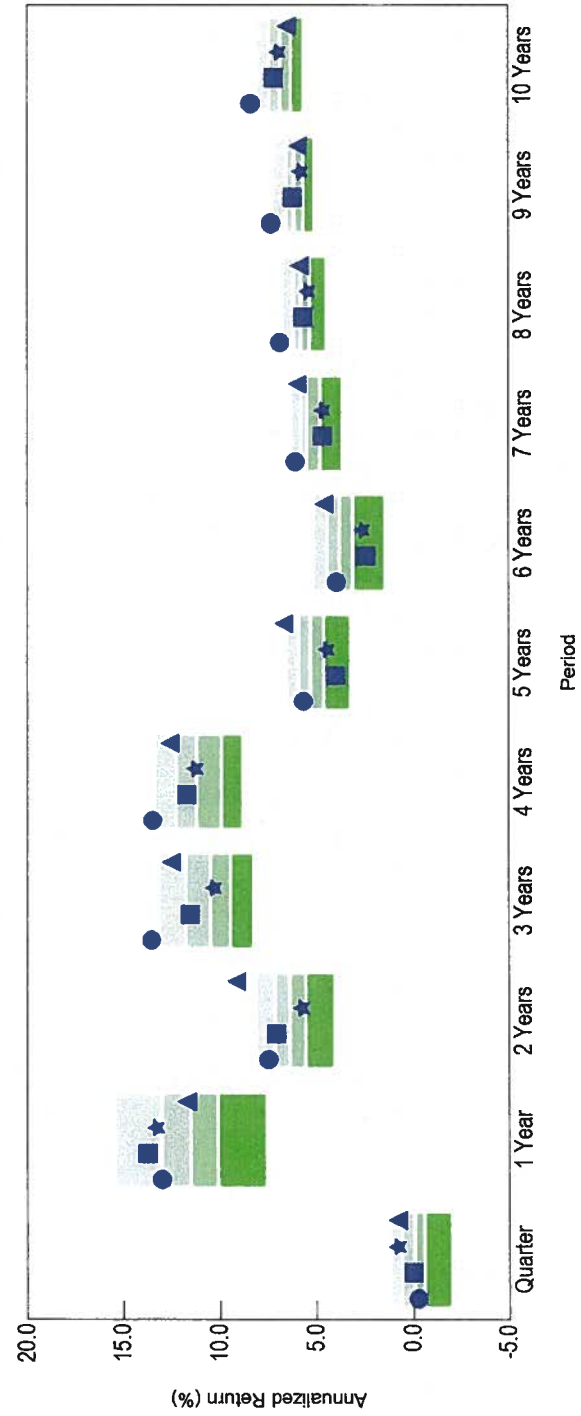
Return (Rank)

	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
5th Percentile	1.2	15.5	8.1	13.1	13.4	6.6	5.2	6.3	6.8	7.3	8.1
25th Percentile	0.6	13.0	7.2	11.8	12.3	6.0	4.5	5.8	6.2	6.6	7.5
Median	0.0	11.5	6.4	10.5	11.2	5.3	3.8	5.5	5.8	6.2	6.9
75th Percentile	-0.6	10.1	5.6	9.5	9.9	4.6	3.1	4.8	5.3	5.7	6.3
95th Percentile	-2.0	7.6	4.1	8.3	8.8	3.2	1.4	3.6	4.5	5.1	5.7
# of Portfolios	166	161	152	138	131	129	126	124	116	114	110
Public Employees Retirement System (DB)	0.1 (46)	12.7 (31)	7.0 (31)	12.1 (19)	12.3 (26)	5.1 (60)	3.3 (72)	5.4 (58)	6.2 (28)	6.6 (22)	7.7 (19)
Public Employees Retirement System (HC)	-1.5 (92)	10.6 (69)	5.4 (81)	10.9 (43)	11.6 (40)	5.2 (57)	3.8 (50)	5.2 (62)	5.9 (48)	-- (--)	-- (--)
State Teachers Retirement System	1.1 (9)	13.9 (15)	8.0 (6)	12.7 (6)	13.0 (8)	5.0 (61)	3.2 (72)	5.6 (44)	6.6 (9)	7.2 (6)	8.2 (4)
60/40 S&P 500/Barclays Aggregate	0.8 (16)	11.7 (46)	9.2 (1)	12.5 (9)	12.6 (16)	6.7 (3)	4.6 (19)	6.0 (13)	5.9 (50)	5.9 (60)	6.5 (70)

# Total Plans

## InvestorForce All Public Defined Benefit Fund Universe

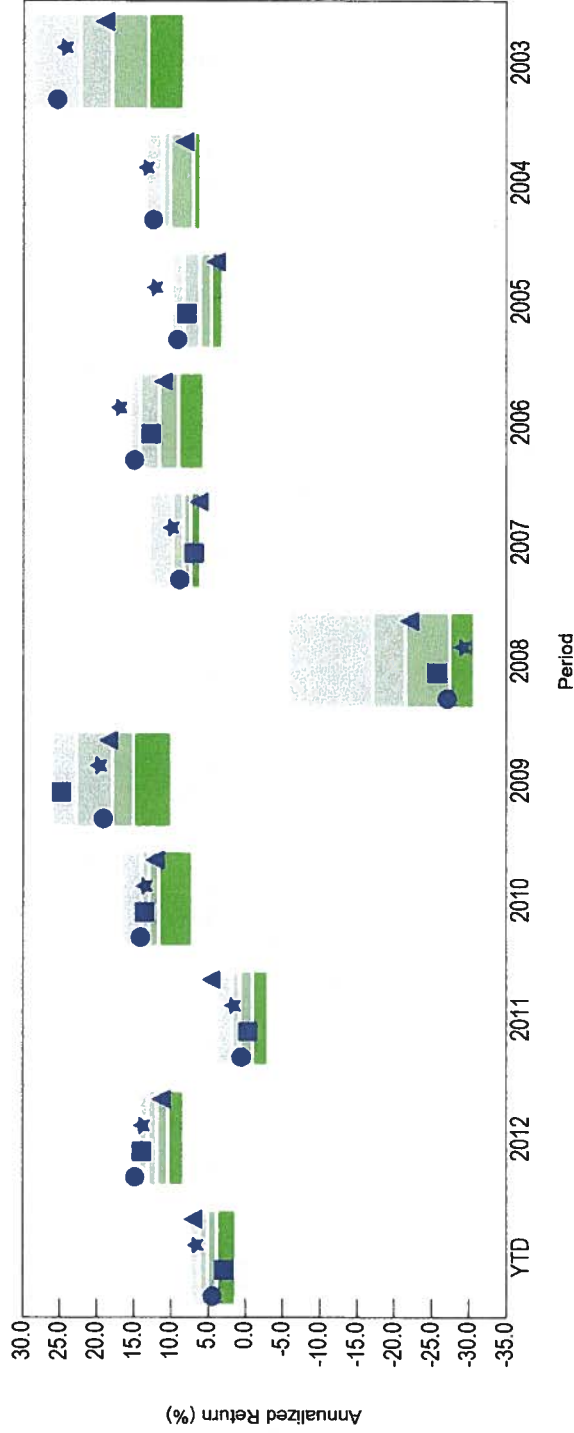
IF Public DB Gross Accounts  
Ending June 30, 2013



	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
5th Percentile	1.2	15.5	8.1	13.1	13.4	6.6	5.2	6.3	6.8	7.3	8.1
25th Percentile	0.6	13.0	7.2	11.8	12.3	6.0	4.5	5.8	6.2	6.6	7.5
Median	0.0	11.5	6.4	10.5	11.2	5.3	3.8	5.5	5.8	6.2	6.9
75th Percentile	-0.6	10.1	5.6	9.5	9.9	4.6	3.1	4.8	5.3	5.7	6.3
95th Percentile	-2.0	7.6	4.1	8.3	8.8	3.2	1.4	3.6	4.5	5.1	5.7
# of Portfolios	166	161	152	138	131	129	126	124	116	114	110
Ohio Police & Fire	-0.3 (61)	13.0 (28)	7.5 (14)	13.5 (1)	13.5 (4)	5.7 (35)	4.0 (42)	6.1 (10)	6.9 (4)	7.3 (5)	8.4 (2)
School Employees Retirement System	0.0 (50)	13.7 (16)	7.1 (27)	11.5 (30)	11.7 (39)	4.0 (88)	2.4 (87)	4.7 (82)	5.7 (59)	6.2 (48)	7.2 (36)
Highway Patrol Retirement System	0.8 (16)	13.2 (21)	5.7 (69)	10.3 (57)	11.3 (48)	4.5 (78)	2.6 (83)	4.7 (82)	5.4 (74)	5.8 (71)	7.0 (48)
60/40 S&P 500/Barclays Aggregate	0.8 (16)	11.7 (46)	9.2 (1)	12.5 (9)	12.6 (16)	6.7 (3)	4.6 (19)	6.0 (13)	5.9 (50)	5.9 (60)	6.5 (70)

**Total Plans**  
**InvestorForce All Public Defined Benefit Fund Universe - Calendar Year Performance**

IF Public DB Gross Accounts  
 Ending June 30, 2013



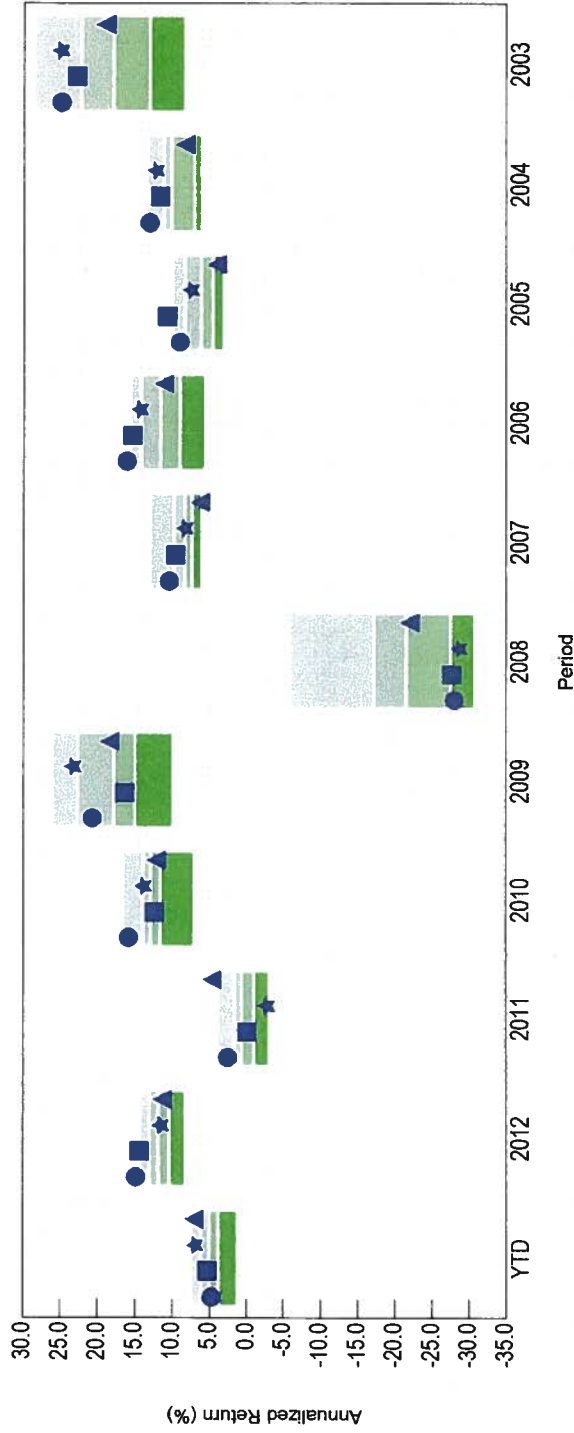
Series	YTD	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Public Employees Retirement System (DB)	4.4 (65)	14.8 (2)	0.6 (51)	14.0 (26)	19.1 (41)	-27.1 (73)	8.9 (38)	15.0* (10)	9.2 (14)	12.5 (8)	25.4 (15)
Public Employees Retirement System (HC)	2.9 (83)	13.8 (11)	-0.4 (62)	13.5 (33)	24.8 (11)	-25.8 (71)	6.9 (91)	12.7 (35)	8.0 (34)	--	--
State Teachers Retirement System	6.6 (18)	13.8 (12)	1.6 (27)	13.5 (33)	19.7 (39)	-29.2 (91)	10.0 (25)	17.0 (1)	12.2 (1)	13.4 (6)	24.3 (18)
60/40 S&P 500/Barclays Aggregate	7.1 (9)	11.3 (65)	4.7 (4)	12.1 (64)	18.4 (45)	-22.1 (54)	6.2 (95)	11.1 (54)	4.0 (86)	8.3 (63)	19.0 (46)
Return (Rank)	7.5	14.3	3.9	16.6	26.2	-5.7	13.0	15.6	10.0	13.6	28.7
5th Percentile	7.5	14.3	3.9	16.6	26.2	-5.7	13.0	15.6	10.0	13.6	28.7
25th Percentile	6.2	13.1	1.8	14.0	22.7	-17.1	9.9	14.3	8.4	11.2	22.3
Median	5.0	11.9	0.8	13.0	17.9	-21.6	8.4	11.6	6.2	10.2	18.0
75th Percentile	3.9	10.4	-1.0	11.6	15.1	-27.5	7.4	9.0	4.6	7.0	13.1
95th Percentile	1.2	8.2	-3.1	7.0	9.9	-30.7	6.0	5.7	3.0	6.2	8.3
# of Portfolios	165	162	39	37	34	34	31	28	27	23	19



**Total Plans**

**InvestorForce All Public Defined Benefit Fund Universe - Calendar Year Performance**

IF Public DB Gross Accounts  
Ending June 30, 2013

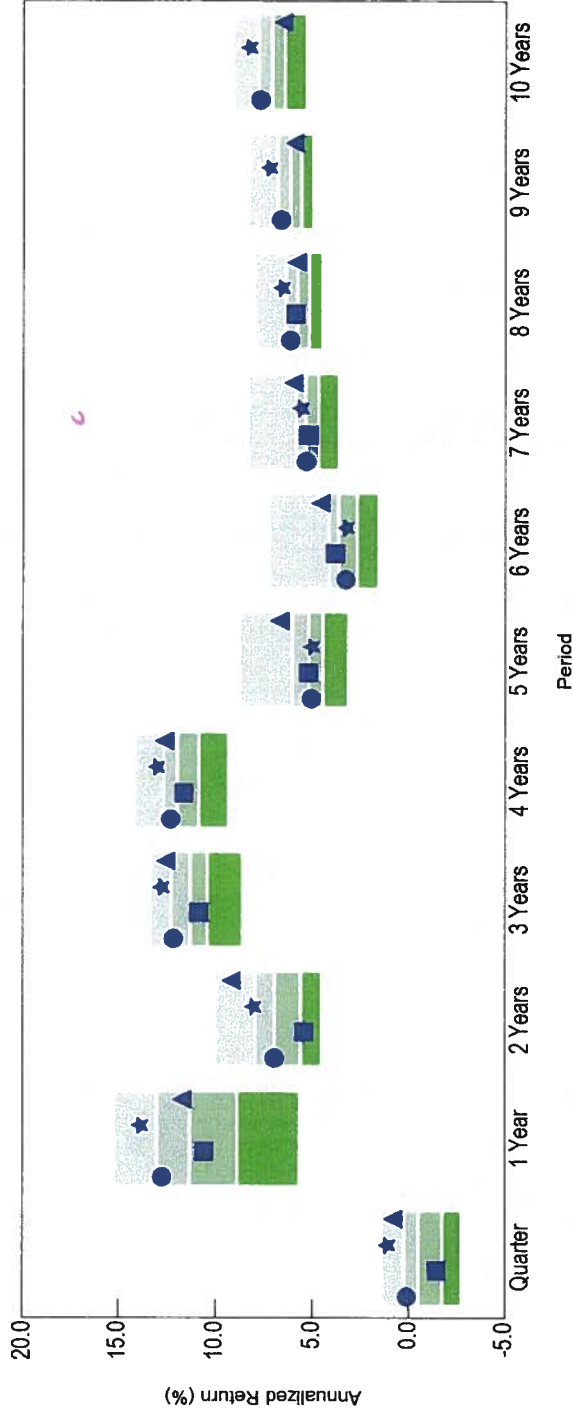


	YTD	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
<b>Return (Rank)</b>	7.5	14.3	3.9	16.6	26.2	-5.7	13.0	15.6	10.0	13.6	28.7
<b>5th Percentile</b>	6.2	13.1	1.8	14.0	22.7	-17.1	9.9	14.3	8.4	11.2	22.3
<b>25th Percentile</b>	5.0	11.9	0.8	13.0	17.9	-21.6	8.4	11.6	6.2	10.2	18.0
<b>Median</b>	3.9	10.4	-1.0	11.6	15.1	-27.5	7.4	9.0	4.6	7.0	13.1
<b>75th Percentile</b>	1.2	8.2	-3.1	7.0	9.9	-30.7	6.0	5.7	3.0	6.2	8.3
<b>95th Percentile</b>	165	162	39	37	34	34	31	28	27	23	19
<b># of Portfolios</b>	4.7 (58)	14.9 (2)	2.5 (17)	15.9 (13)	20.7 (36)	-28.1 (83)	10.5 (21)	16.1 (3)	9.1 (15)	13.1 (7)	25.0 (16)
<b>Ohio Police &amp; Fire</b>	5.3 (43)	14.4 (5)	-0.1 (53)	12.4 (63)	16.4 (68)	-27.7 (80)	9.6 (29)	15.4 (7)	10.8 (3)	11.7 (16)	22.9 (24)
<b>School Employees Retirement System</b>	6.9 (13)	11.5 (63)	-2.9 (93)	13.8 (30)	23.2 (18)	-28.8 (89)	8.3 (54)	14.3 (20)	7.4 (45)	12.2 (9)	25.0 (16)
<b>Highway Patrol Retirement System</b>	7.1 (9)	11.3 (65)	4.7 (4)	12.1 (64)	18.4 (45)	-22.1 (54)	6.2 (95)	11.1 (54)	4.0 (86)	8.3 (63)	19.0 (46)
<b>60/40 S&amp;P 500/Barclays Aggregate</b>											

**Total Plans**

**InvestorForce All Defined Benefit Fund > \$1 Billion Universe**

IF All DB > \$1B Gross Accounts  
Ending June 30, 2013

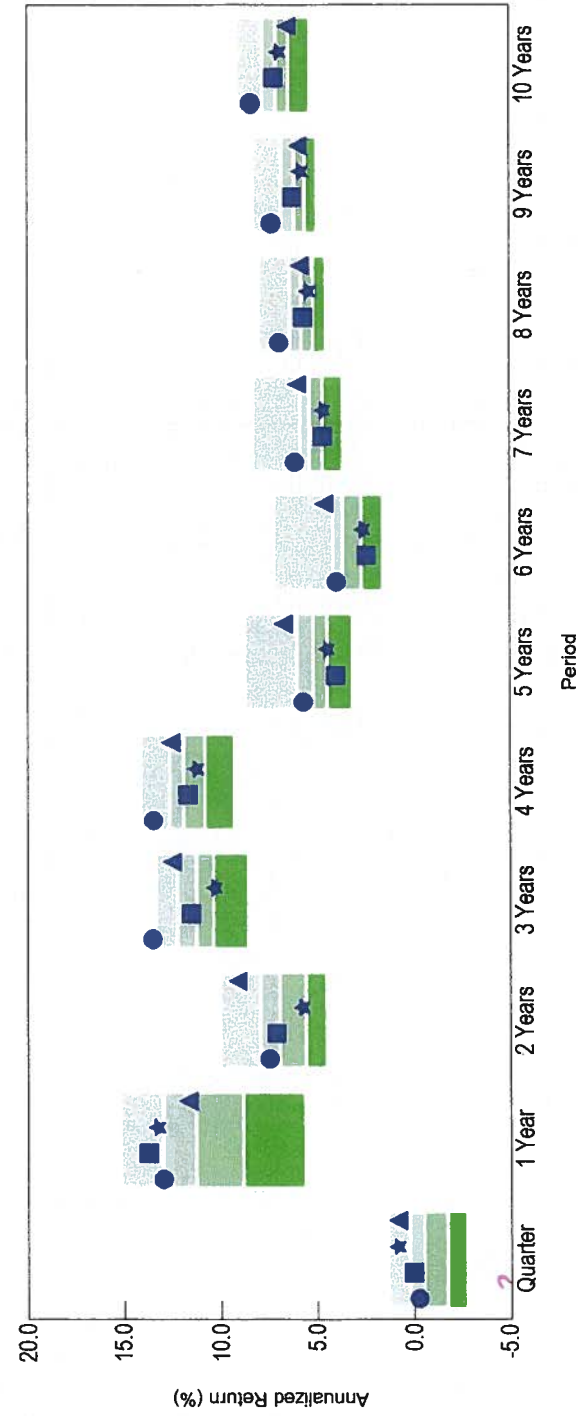


	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
5th Percentile	1.4	15.2	10.0	13.3	14.1	8.8	7.2	8.3	8.0	8.3	9.2
25th Percentile	0.2	13.0	7.9	12.3	12.7	6.1	4.2	5.8	6.4	6.8	7.8
Median	-0.5	11.3	6.9	11.3	12.0	5.2	3.7	5.4	5.8	6.2	7.1
75th Percentile	-1.7	8.9	5.6	10.4	10.8	4.5	2.7	4.7	5.2	5.6	6.5
95th Percentile	-2.7	5.6	4.5	8.6	9.3	3.1	1.5	3.6	4.5	5.0	5.3
# of Portfolios	113	107	103	98	98	97	95	93	92	89	88
Public Employees Retirement System (DB)	0.1 (31)	12.7 (27)	7.0 (50)	12.1 (29)	12.3 (36)	5.1 (57)	3.3 (62)	5.4 (51)	6.2 (37)	6.6 (33)	7.7 (28)
Public Employees Retirement System (HC)	-1.5 (71)	10.6 (58)	5.4 (80)	10.9 (65)	11.6 (62)	5.2 (52)	3.8 (41)	5.2 (53)	5.9 (46)	-- (-)	-- (-)
State Teachers Retirement System	1.1 (9)	13.9 (16)	8.0 (22)	12.7 (16)	13.0 (19)	5.0 (59)	3.2 (63)	5.6 (42)	6.6 (19)	7.2 (15)	8.2 (14)
60/40 S&P 500/Barclays Aggregate	0.8 (13)	11.7 (42)	9.2 (8)	12.5 (20)	12.6 (26)	6.7 (16)	4.6 (19)	6.0 (18)	5.9 (47)	5.9 (66)	6.5 (73)

**Total Plans**

**InvestorForce All Defined Benefit Fund > \$1 Billion Universe**

IF All DB > \$1B Gross Accounts  
Ending June 30, 2013

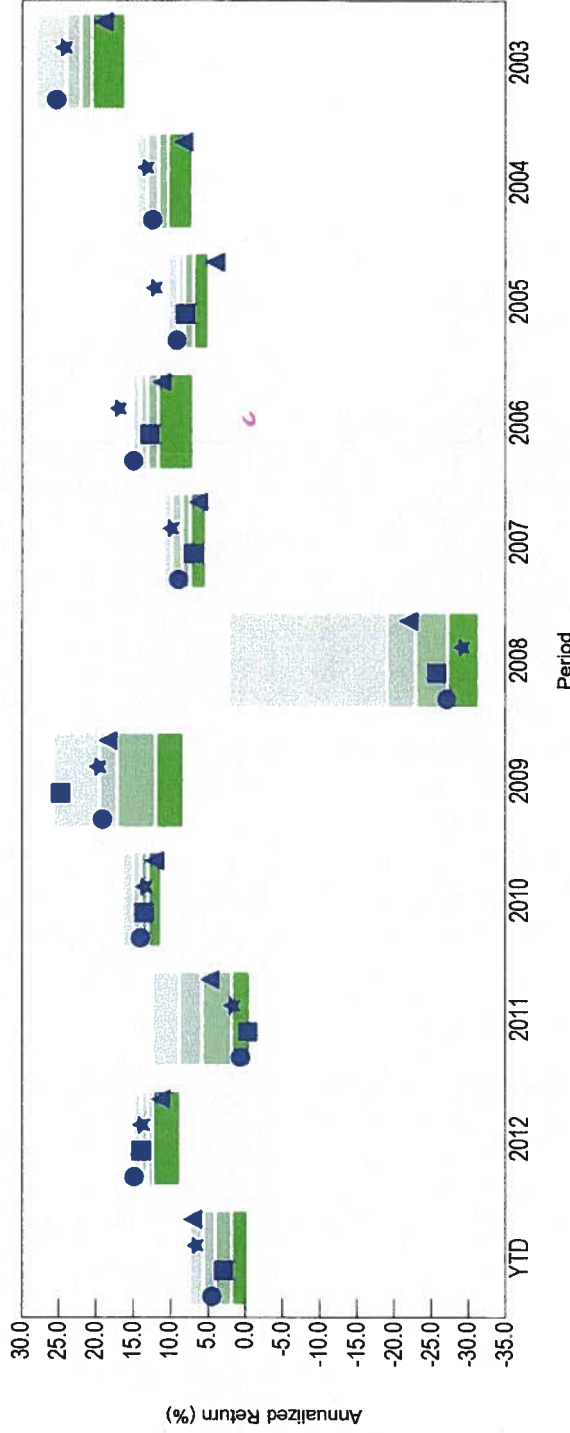


	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
5th Percentile	1.4	15.2	10.0	13.3	14.1	8.8	7.2	8.3	8.0	8.3	9.2
25th Percentile	0.2	13.0	7.9	12.3	12.7	6.1	4.2	5.8	6.4	6.8	7.8
Median	-0.5	11.3	6.9	11.3	12.0	5.2	3.7	5.4	5.8	6.2	7.1
75th Percentile	-1.7	8.9	5.6	10.4	10.8	4.5	2.7	4.7	5.2	5.6	6.5
95th Percentile	-2.7	5.6	4.5	8.6	9.3	3.1	1.5	3.6	4.5	5.0	5.3
# of Portfolios	113	107	103	98	98	97	95	93	92	89	88
Ohio Police & Fire	-0.3 (41)	13.0 (26)	7.5 (34)	13.5 (4)	13.5 (11)	5.7 (31)	4.0 (33)	6.1 (16)	6.9 (14)	7.3 (13)	8.4 (13)
School Employees Retirement System	0.0 (35)	13.7 (18)	7.1 (47)	11.5 (43)	11.7 (59)	4.0 (83)	2.4 (80)	4.7 (77)	5.7 (54)	6.2 (49)	7.2 (47)
Highway Patrol Retirement System	0.8 (13)	13.2 (22)	5.7 (72)	10.3 (76)	11.3 (66)	4.5 (76)	2.6 (77)	4.7 (77)	5.4 (68)	5.8 (71)	7.0 (57)
60/40 S&P 500/Barclays Aggregate	0.8 (13)	11.7 (42)	9.2 (8)	12.5 (20)	12.6 (26)	6.7 (16)	4.6 (19)	6.0 (18)	5.9 (47)	5.9 (66)	6.5 (73)

**Total Plans**

**InvestorForce All Defined Benefit Fund > \$1 Billion Universe - Calendar Year Returns**

IF All DB > \$1B Gross Accounts  
Ending June 30, 2013



Return (Rank)

5th Percentile  
25th Percentile  
Median  
75th Percentile  
95th Percentile  
# of Portfolios

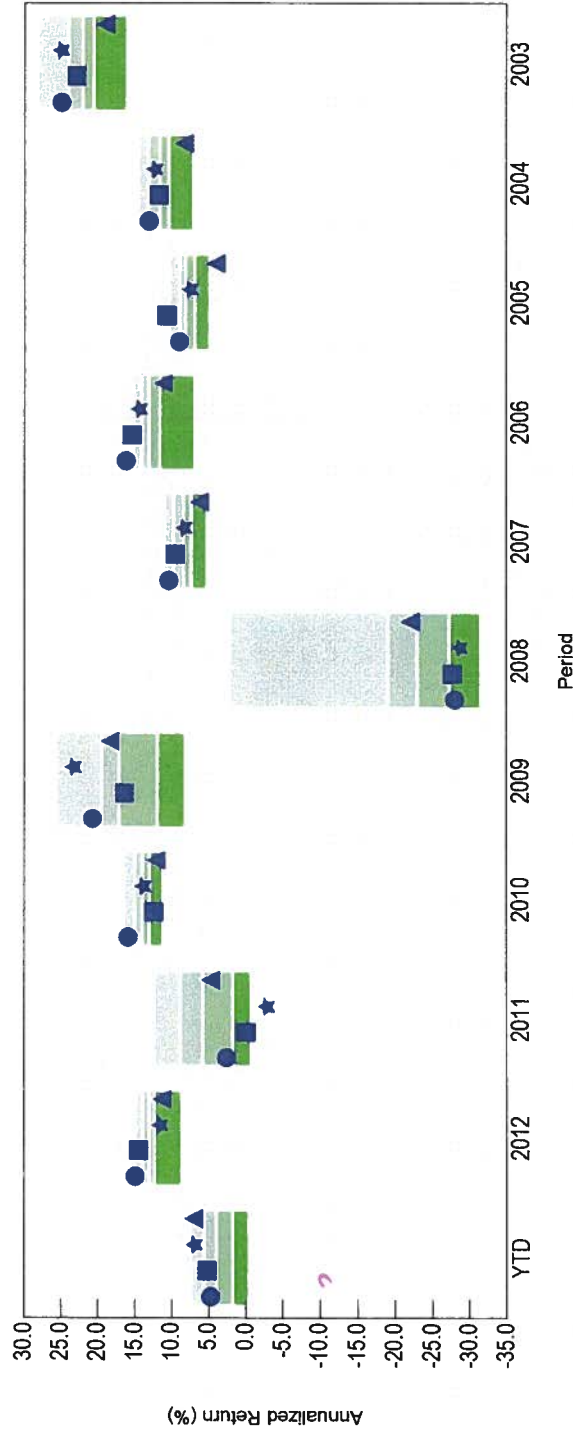
● Public Employees Retirement System (DB)  
■ Public Employees Retirement System (HC)  
★ State Teachers Retirement System  
▲ 60/40 S&P 500/Barclays Aggregate

7.4	14.9	12.5	16.5	25.7	2.2	11.0	15.1	10.4	14.5	28.2
5.6	13.9	8.9	15.0	19.5	-19.0	9.8	14.1	8.9	13.2	24.0
4.0	13.0	5.8	14.0	17.2	-22.9	8.5	13.1	8.2	11.7	22.1
1.8	12.3	1.8	13.0	12.0	-27.3	7.4	11.7	6.9	10.4	20.6
-0.4	8.6	-0.7	11.1	8.2	-31.5	5.2	6.9	4.9	7.1	16.1
111	96	41	34	33	31	30	30	29	28	28
4.4 (45)	14.8 (7)	0.6 (88)	14.0 (51)	19.1 (31)	-27.1 (75)	8.9 (42)	15.0 (6)	9.2 (20)	12.5 (41)	25.4 (15)
2.9 (62)	13.8 (27)	-0.4 (92)	13.5 (60)	24.8 (6)	-25.8 (71)	6.9 (82)	12.7 (60)	8.0 (64)	-- (-)	-- (-)
6.6 (14)	13.8 (31)	1.6 (78)	13.5 (61)	19.7 (25)	-29.2 (87)	10.0 (21)	17.0 (2)	12.2 (1)	13.4 (23)	24.3 (24)
7.1 (9)	11.3 (85)	4.7 (61)	12.1 (84)	18.4 (38)	-22.1 (48)	6.2 (90)	11.1 (82)	4.0 (98)	8.3 (90)	19.0 (84)

# Total Plans

## InvestorForce All Defined Benefit Fund > \$1 Billion Universe - Calendar Year Returns

IF All DB > \$1B Gross Accounts  
Ending June 30, 2013

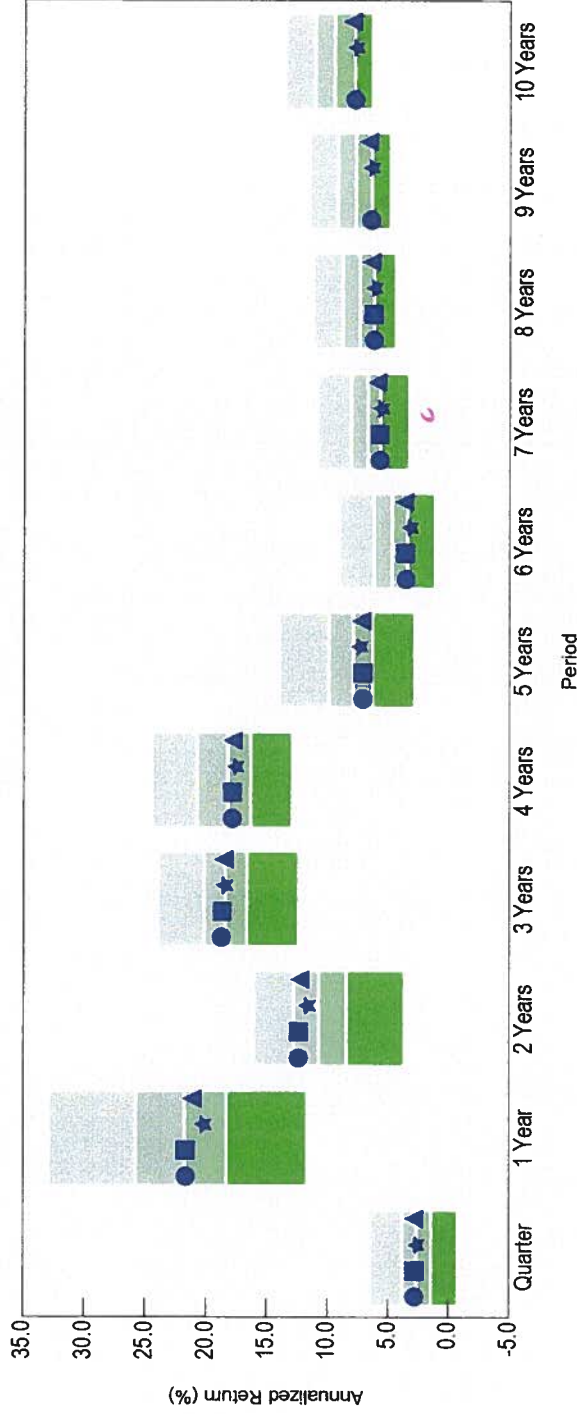


Return (Rank)	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
5th Percentile	7.4	12.5	16.5	25.7	2.2	11.0	15.1	10.4	14.5	28.2
25th Percentile	5.6	8.9	15.0	19.5	-19.0	9.8	14.1	8.9	13.2	24.0
Median	4.0	5.8	14.0	17.2	-22.9	8.5	13.1	8.2	11.7	22.1
75th Percentile	1.8	1.8	13.0	12.0	-27.3	7.4	11.7	6.9	10.4	20.6
95th Percentile	-0.4	-0.7	11.1	8.2	-31.5	5.2	6.9	4.9	7.1	16.1
# of Portfolios	111	41	34	33	31	30	30	29	28	28
Ohio Police & Fire	4.7 (40)	2.5 (69)	15.9 (16)	20.7 (21)	-28.1 (84)	10.5 (15)	16.1 (3)	9.1 (22)	13.1 (30)	25.0 (17)
School Employees Retirement System	5.3 (29)	-0.1 (90)	12.4 (83)	16.4 (63)	-27.7 (80)	9.6 (27)	15.4 (4)	10.8 (3)	11.7 (50)	22.9 (44)
Highway Patrol Retirement System	6.9 (10)	-2.9 (99)	13.8 (56)	23.2 (9)	-28.8 (86)	8.3 (56)	14.3 (21)	7.4 (74)	12.2 (46)	25.0 (17)
60/40 S&P 500/Barclays Aggregate	7.1 (9)	11.3 (85)	12.1 (84)	18.4 (38)	-22.1 (48)	6.2 (90)	11.1 (82)	4.0 (98)	8.3 (90)	19.0 (84)

# Total Domestic Equities

## InvestorForce All Domestic Equities Universe

US Equity Accounts  
Ending June 30, 2013



Return (Rank)

5th Percentile  
25th Percentile  
Median  
75th Percentile  
95th Percentile  
# of Portfolios

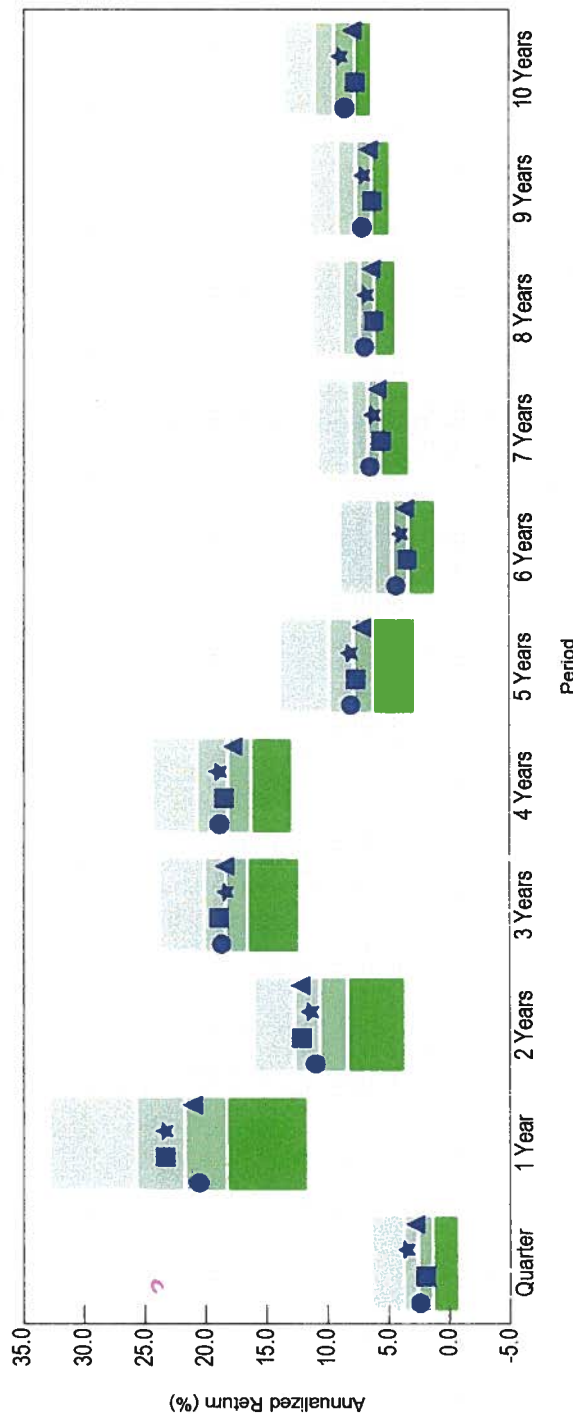
● PERS(DB) Domestic Equity  
■ PERS(HC) Domestic Equity  
★ STRS Domestic Equity  
▲ Wilshire 5000

6.4	32.9	16.0	23.8	24.5	13.9	9.0	10.8	11.2	11.6	13.6
3.8	25.7	12.8	20.2	20.7	9.9	6.2	8.1	8.8	9.2	11.1
2.6	21.8	10.7	18.4	18.2	7.9	4.7	6.7	7.4	7.7	9.5
1.4	18.3	8.4	16.6	16.3	6.3	3.4	5.6	6.2	6.4	7.8
-0.8	11.6	3.6	12.3	12.9	2.8	1.1	3.2	4.4	4.8	6.3
2,671	2,620	2,507	2,423	2,342	2,240	2,131	2,012	1,854	1,711	1,557
2.7 (47)	21.6 (51)	12.3 (31)	18.7 (44)	17.8 (56)	7.1 (64)	3.5 (73)	5.7 (74)	6.2 (76)	6.4 (75)	7.7 (77)
2.7 (47)	21.6 (51)	12.3 (31)	18.7 (44)	17.8 (56)	7.1 (64)	3.5 (73)	5.7 (74)	6.2 (76)	-- (-)	-- (-)
2.5 (53)	20.2 (64)	11.5 (40)	18.3 (53)	17.5 (61)	7.3 (61)	3.1 (81)	5.5 (78)	6.0 (79)	6.3 (78)	7.6 (80)
2.8 (46)	21.1 (55)	12.2 (33)	18.4 (50)	17.8 (57)	7.2 (62)	3.6 (72)	5.9 (69)	6.4 (71)	6.6 (71)	8.0 (72)

# Total Domestic Equities

## InvestorForce All Domestic Equities Universe

US Equity Accounts  
Ending June 30, 2013

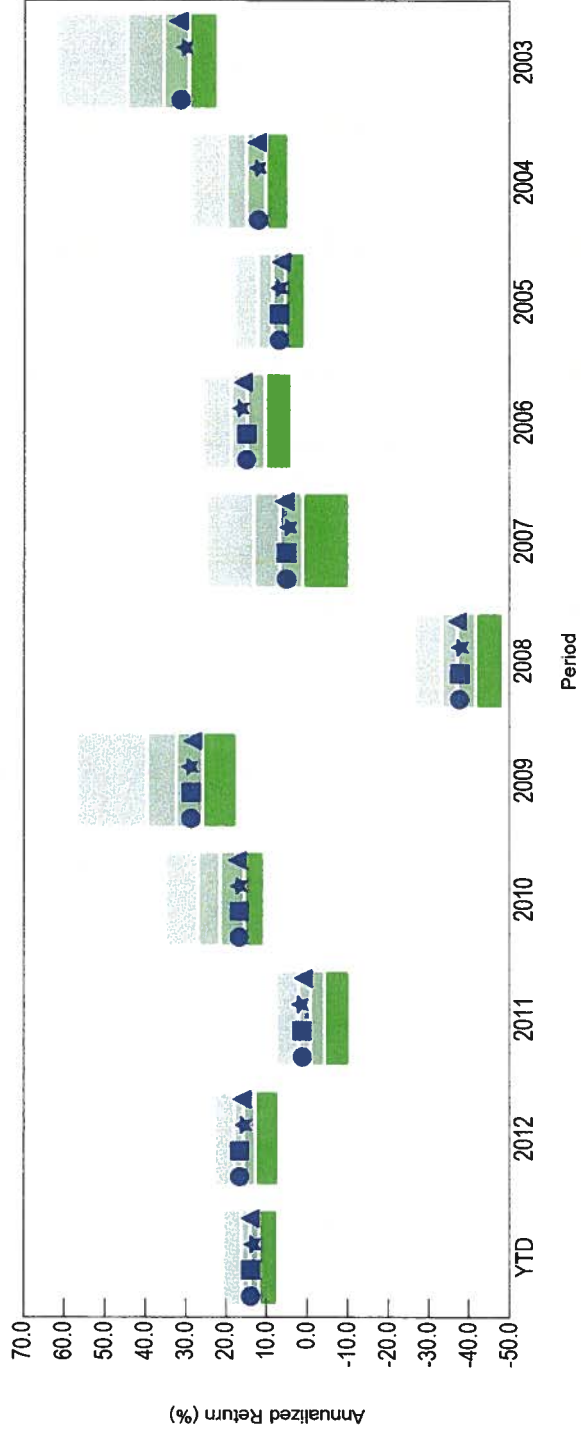


Period	OP&F Domestic Equity	SERS Domestic Equity	HPRS Domestic Equity	Wilshire 5000
Quarter	6.4	3.8	2.6	1.4
1 Year	32.9	25.7	21.8	18.3
2 Years	16.0	12.8	10.7	8.4
3 Years	23.8	20.2	18.4	16.6
4 Years	24.5	20.7	18.2	16.3
5 Years	13.9	9.9	7.9	6.3
6 Years	9.0	6.2	4.7	3.4
7 Years	10.8	8.1	6.7	5.6
8 Years	11.2	8.8	7.4	6.2
9 Years	11.6	9.2	7.7	6.4
10 Years	13.6	11.1	9.5	7.8
# of Portfolios	2,671	2,620	2,507	2,423
5th Percentile	2.4	20.6	11.0	8.1
25th Percentile	2.0	23.3	12.1	7.6
Median	3.5	23.4	11.4	8.1
75th Percentile	2.8	21.1	12.2	7.2
95th Percentile	8.6	11.1	7.7	6.6
Rank	(55)	(60)	(47)	(48)
Rank	(66)	(42)	(34)	(54)
Rank	(29)	(41)	(42)	(47)
Rank	(46)	(55)	(33)	(62)
Rank	(63)	(59)	(61)	(71)
Rank	(77)	(78)	(76)	(69)
Rank	(58)	(63)	(61)	(71)
Rank	(72)	(71)	(66)	(71)

# Total Domestic Equities - Calendar Year Returns

## InvestorForce All Domestic Equities Universe

US Equity Accounts  
Ending June 30, 2013



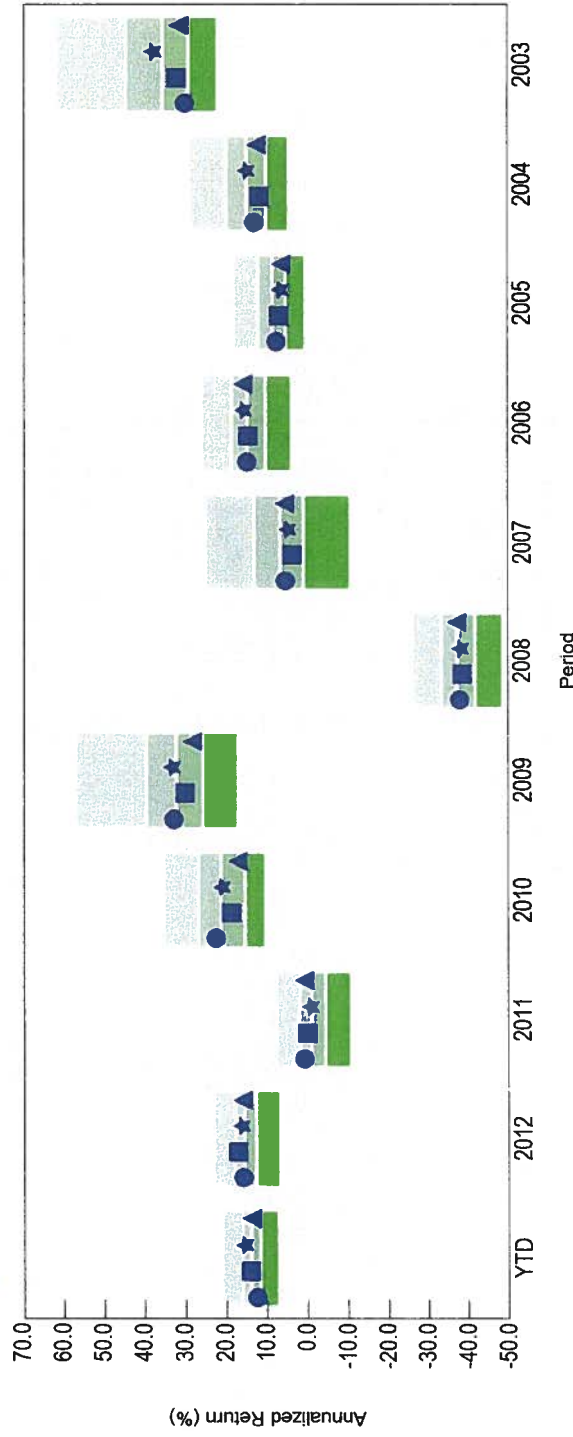
Return (Rank)	YTD	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
5th Percentile	21.2	23.0	7.7	35.4	57.2	-26.2	25.1	25.9	18.2	29.1	62.2
25th Percentile	16.2	18.0	2.1	27.0	39.6	-33.4	13.2	18.7	12.1	20.0	44.7
Median	14.0	15.7	-0.9	21.4	32.3	-37.3	6.7	14.9	8.6	14.9	35.5
75th Percentile	11.8	12.7	-4.4	15.4	25.8	-41.7	1.1	10.3	5.4	10.3	29.2
95th Percentile	7.2	6.9	-10.8	10.4	17.2	-48.7	-10.6	4.0	0.5	4.5	22.1
# of Portfolios	2,655	2,433	2,168	2,135	2,191	1,661	1,794	1,824	1,782	1,741	1,679
PERS(DB) Domestic Equity	13.8 (53)	16.6 (38)	1.1 (34)	16.7 (68)	28.7 (63)	-37.8 (53)	5.1 (58)	14.9 (51)	6.8 (64)	12.0 (67)	31.1 (67)
PERS(HC) Domestic Equity	13.8 (53)	16.6 (38)	1.1 (34)	16.7 (68)	28.7 (63)	-37.8 (53)	5.1 (58)	14.9 (51)	6.8 (64)	-- (-)	-- (-)
STRS Domestic Equity	13.3 (62)	15.6 (53)	1.5 (31)	16.6 (68)	28.8 (62)	-38.1 (54)	4.5 (61)	16.2 (42)	6.7 (66)	11.9 (67)	30.1 (71)
Wilshire 5000	14.0 (51)	16.1 (45)	1.0 (36)	17.2 (66)	28.3 (65)	-37.2 (50)	5.6 (56)	15.8 (44)	6.4 (68)	12.5 (63)	31.6 (64)



# Total Domestic Equities - Calendar Year Returns

## InvestorForce All Domestic Equities Universe

US Equity Accounts  
Ending June 30, 2013

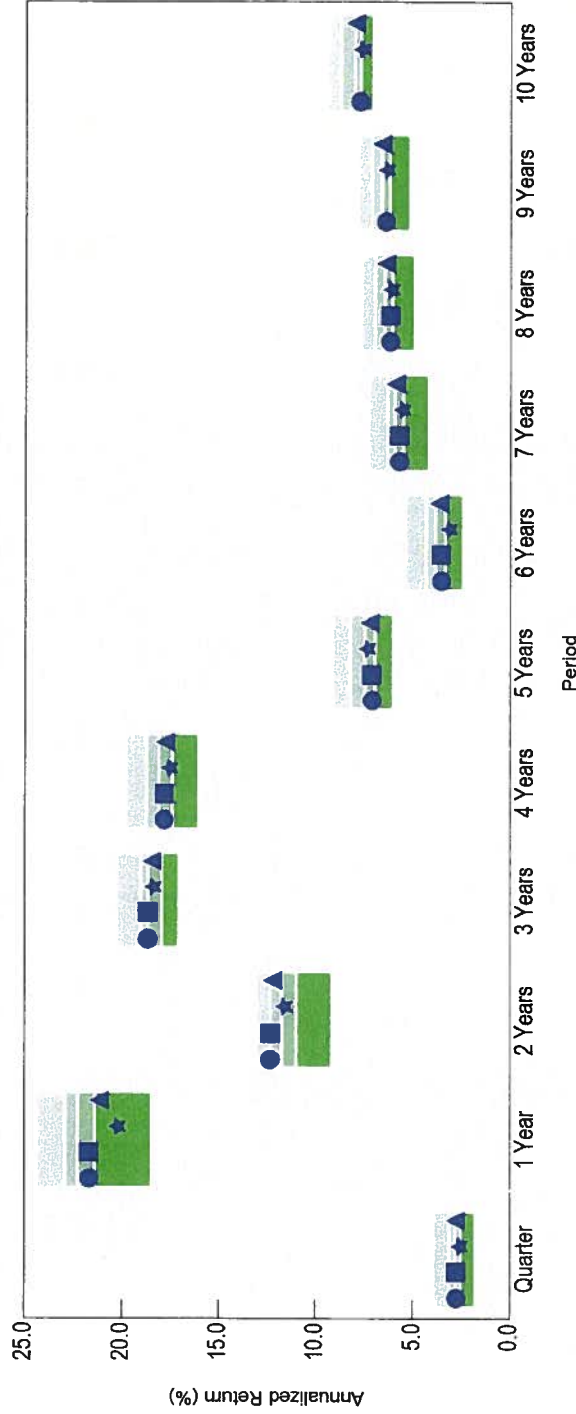


Return (Rank)	5th Percentile	25th Percentile	Median	75th Percentile	95th Percentile	# of Portfolios
21.2	23.0	7.7	35.4	27.0	15.4	2,168
16.2	18.0	2.1	21.4	15.4	10.4	2,135
14.0	15.7	-0.9	15.4	10.4	7.2	2,433
11.8	12.7	-4.4	10.4	7.2	6.9	2,168
7.2	6.9	-10.8	7.2	6.9	6.9	2,168
2,655	2,433	2,168	2,135	2,191	1,661	1,824

- OP&F Domestic Equity
- SERS Domestic Equity
- ★ HPRS Domestic Equity
- ▲ Wilshire 5000

**Total Domestic Equities**  
**InvestorForce All Public DB Domestic Equities Universe**

IF Public DB US Eq Gross Accounts  
 Ending June 30, 2013

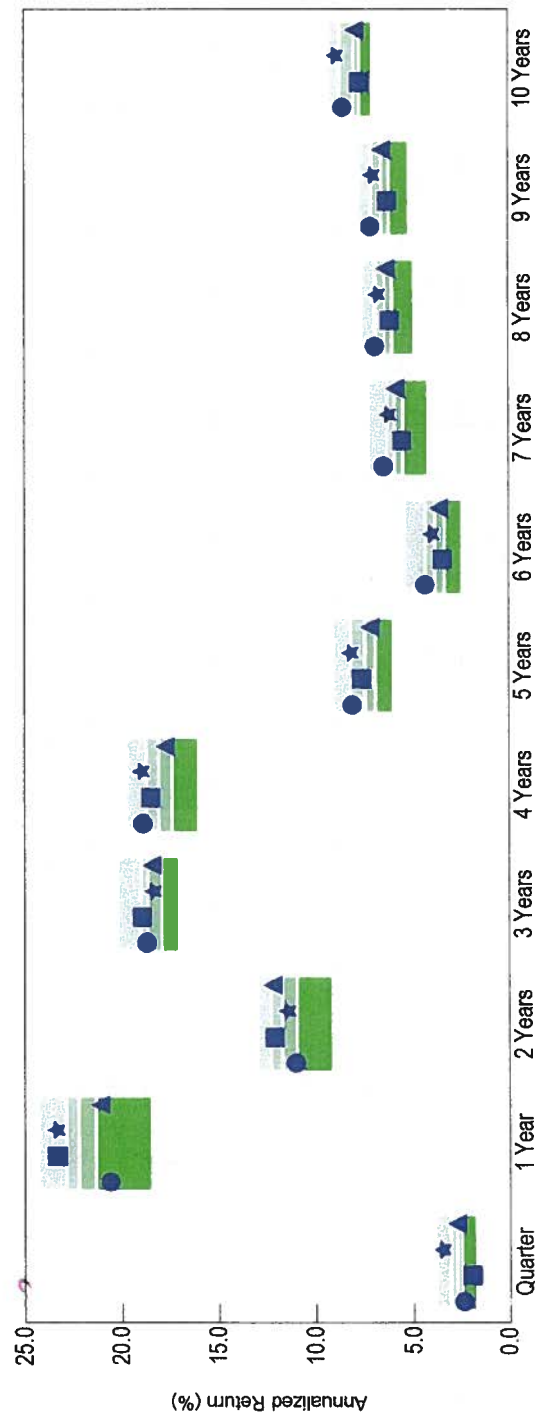


	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
<b>Return (Rank)</b>	3.9	24.3	13.0	20.2	19.8	9.1	5.4	7.2	7.6	7.8	9.4
<b>5th Percentile</b>	3.1	22.9	12.3	19.0	18.8	8.2	4.3	6.3	6.9	7.1	8.7
<b>25th Percentile</b>	2.8	22.2	11.7	18.6	18.1	7.5	3.8	5.9	6.5	6.6	8.0
<b>Median</b>	2.5	21.4	11.0	17.9	17.4	6.9	3.3	5.5	6.1	6.2	7.7
<b>75th Percentile</b>	1.7	18.4	9.1	17.0	16.0	6.0	2.4	4.2	4.9	5.1	7.1
<b># of Portfolios</b>	120	117	105	95	90	89	86	85	78	76	71
<b>PERP(DB) Domestic Equity</b>	2.7 (62)	21.6 (67)	12.3 (25)	18.7 (48)	17.8 (64)	7.1 (68)	3.5 (69)	5.7 (64)	6.2 (67)	6.4 (69)	7.7 (73)
<b>PERP(HC) Domestic Equity</b>	2.7 (62)	21.6 (67)	12.3 (25)	18.7 (48)	17.8 (64)	7.1 (68)	3.5 (69)	5.7 (64)	6.2 (67)	-- (-)	-- (-)
<b>STRS Domestic Equity</b>	2.5 (76)	20.2 (89)	11.5 (58)	18.3 (61)	17.5 (74)	7.3 (63)	3.1 (88)	5.5 (74)	6.0 (76)	6.3 (75)	7.6 (81)
<b>Wishire 5000</b>	2.8 (54)	21.1 (79)	12.2 (32)	18.4 (59)	17.8 (69)	7.2 (65)	3.6 (62)	5.9 (54)	6.4 (56)	6.6 (57)	8.0 (54)

# Total Domestic Equities

## InvestorForce All Public DB Domestic Equities Universe

IF Public DB US Eq Gross Accounts  
Ending June 30, 2013

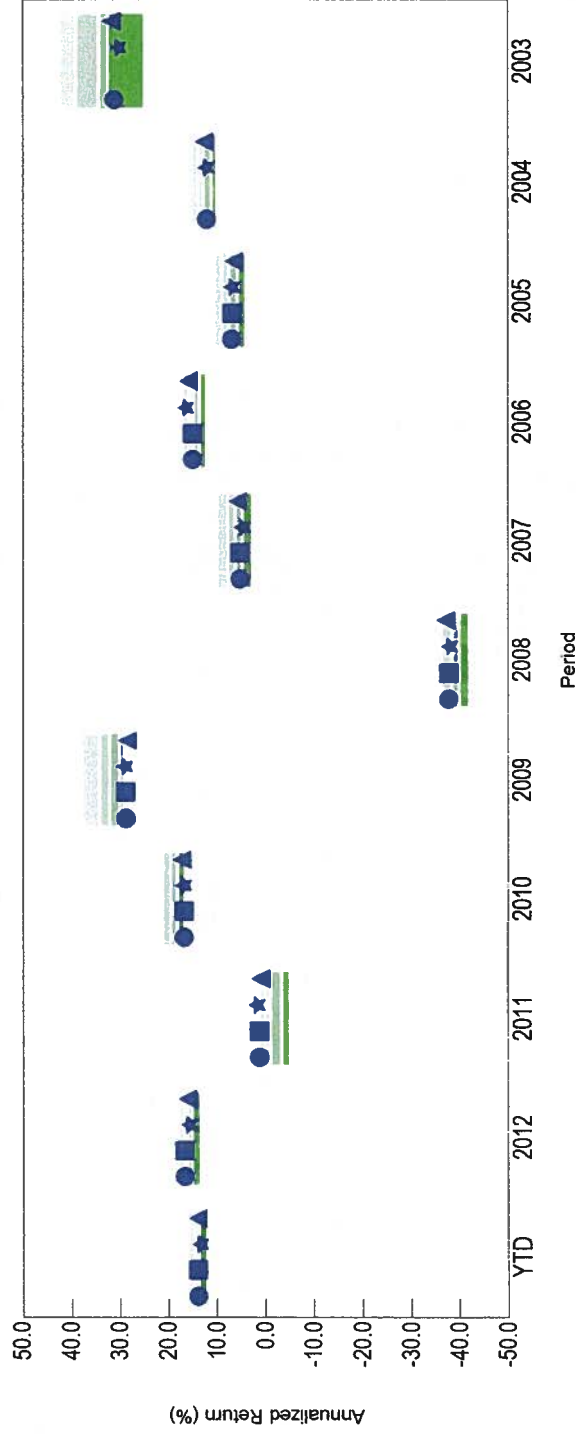


	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
Return (Rank)	3.9	24.3	13.0	20.2	19.8	9.1	5.4	7.2	7.6	7.8	9.4
5th Percentile	3.1	22.9	12.3	19.0	18.8	8.2	4.3	6.3	6.9	7.1	8.7
25th Percentile	2.8	22.2	11.7	18.6	18.1	7.5	3.8	5.9	6.5	6.6	8.0
Median	2.5	21.4	11.0	17.9	17.4	6.9	3.3	5.5	6.1	6.2	7.7
75th Percentile	1.7	18.4	9.1	17.0	16.0	6.0	2.4	4.2	4.9	5.1	7.1
95th Percentile	120	117	105	95	90	89	86	85	78	76	71
# of Portfolios	2.4 (85)	20.6 (84)	11.0 (75)	18.7 (45)	18.9 (22)	8.1 (30)	4.4 (25)	6.5 (20)	6.9 (26)	7.2 (23)	8.6 (32)
OP&F Domestic Equity	2.0 (92)	23.3 (17)	12.1 (35)	18.9 (34)	18.5 (35)	7.6 (42)	3.4 (74)	5.5 (73)	6.2 (67)	6.3 (75)	7.7 (76)
SERS Domestic Equity	3.5 (9)	23.4 (17)	11.4 (63)	18.3 (61)	19.0 (21)	8.1 (27)	4.0 (44)	6.2 (28)	6.8 (31)	7.0 (31)	8.9 (15)
HPRS Domestic Equity	2.8 (54)	21.1 (79)	12.2 (32)	18.4 (59)	17.8 (69)	7.2 (65)	3.6 (62)	5.9 (54)	6.4 (56)	6.6 (57)	8.0 (54)
Wishire 5000											

# Total Domestic Equities - Calendar Year Returns

## InvestorForce All Public DB Domestic Equities Universe

IF Public DB US Eq Gross Accounts  
Ending June 30, 2013



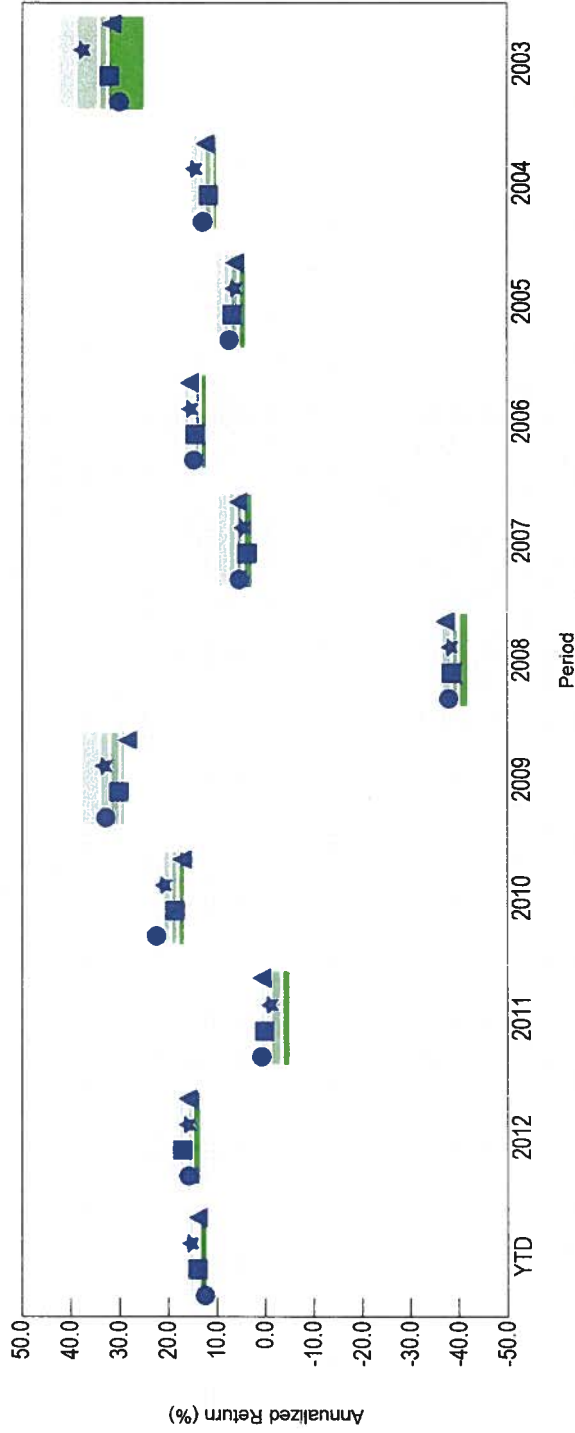
Return (Rank)

	YTD	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
5th Percentile	15.8	17.9	1.1	21.8	37.9	-36.2	10.0	16.9	10.4	15.6	42.9
25th Percentile	14.8	16.8	0.0	21.3	34.2	-36.4	7.7	15.6	8.8	13.8	39.1
Median	14.4	16.1	-1.0	19.7	32.2	-38.5	6.2	14.7	7.4	12.8	34.4
75th Percentile	13.8	15.2	-3.4	18.1	30.0	-40.0	4.7	13.5	5.7	11.1	32.5
95th Percentile	12.1	13.3	-5.0	16.5	29.2	-42.1	2.5	12.0	3.9	9.9	24.8
# of Portfolios	118	105	12	10	10	9	9	8	8	7	6
● PERS(DB) Domestic Equity	13.8 (75)	16.6 (32)	1.1 (3)	16.7 (94)	28.7 (99)	-37.8 (43)	5.1 (72)	14.9 (41)	6.8 (62)	12.0 (64)	31.1 (82)
■ PERS(HC) Domestic Equity	13.8 (75)	16.6 (32)	1.1 (3)	16.7 (94)	28.7 (99)	-37.8 (43)	5.1 (72)	14.9 (41)	6.8 (63)	-- (-)	-- (-)
★ STRS Domestic Equity	13.3 (88)	15.6 (66)	1.5 (1)	16.6 (94)	28.8 (99)	-38.1 (46)	4.5 (82)	16.2 (19)	6.7 (64)	11.9 (65)	30.1 (84)
▲ Wilshire 5000	14.0 (72)	16.1 (52)	1.0 (10)	17.2 (90)	28.3 (99)	-37.2 (36)	5.6 (67)	15.8 (24)	6.4 (67)	12.5 (56)	31.6 (81)

# Total Domestic Equities - Calendar Year Returns

## InvestorForce All Public DB Domestic Equities Universe

IF Public DB US Eq Gross Accounts  
Ending June 30, 2013

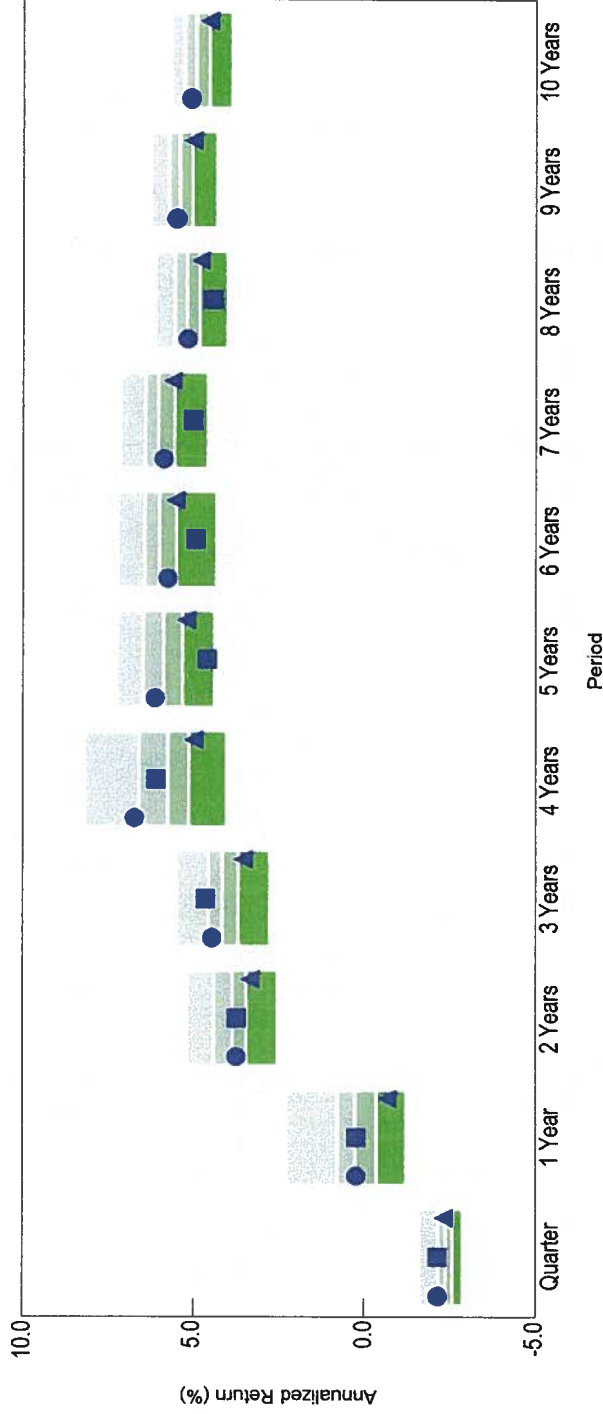


Return (Rank)	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
5th Percentile	17.9	1.1	21.8	37.9	-36.2	10.0	16.9	10.4	15.6	42.9
25th Percentile	16.8	0.0	21.3	34.2	-36.4	7.7	15.6	8.8	13.8	39.1
Median	16.1	-1.0	19.7	32.2	-38.5	6.2	14.7	7.4	12.8	34.4
75th Percentile	15.2	-3.4	18.1	30.0	-40.0	4.7	13.5	5.7	11.1	32.5
95th Percentile	13.3	-5.0	16.5	29.2	-42.1	2.5	12.0	3.9	9.9	24.8
# of Portfolios	105	12	10	10	9	9	8	8	7	6
OP&F Domestic Equity	12.5 (95)	0.9 (10)	22.4 (1)	32.8 (47)	-38.0 (45)	5.4 (70)	14.8 (43)	7.6 (43)	13.1 (33)	30.0 (85)
SERS Domestic Equity	14.0 (72)	0.1 (24)	18.7 (64)	30.1 (74)	-38.7 (53)	3.8 (90)	14.5 (59)	6.9 (62)	11.7 (68)	32.1 (80)
HPRS Domestic Equity	15.5 (8)	-1.0 (55)	20.9 (38)	33.1 (45)	-38.3 (48)	4.7 (76)	15.6 (26)	6.5 (66)	14.7 (15)	37.6 (31)
Wishire 5000	14.0 (72)	16.1 (52)	17.2 (90)	28.3 (99)	-37.2 (36)	5.6 (67)	15.8 (24)	6.4 (67)	12.5 (56)	31.6 (81)

# Fixed Income

## InvestorForce US Core Fixed Income Universe

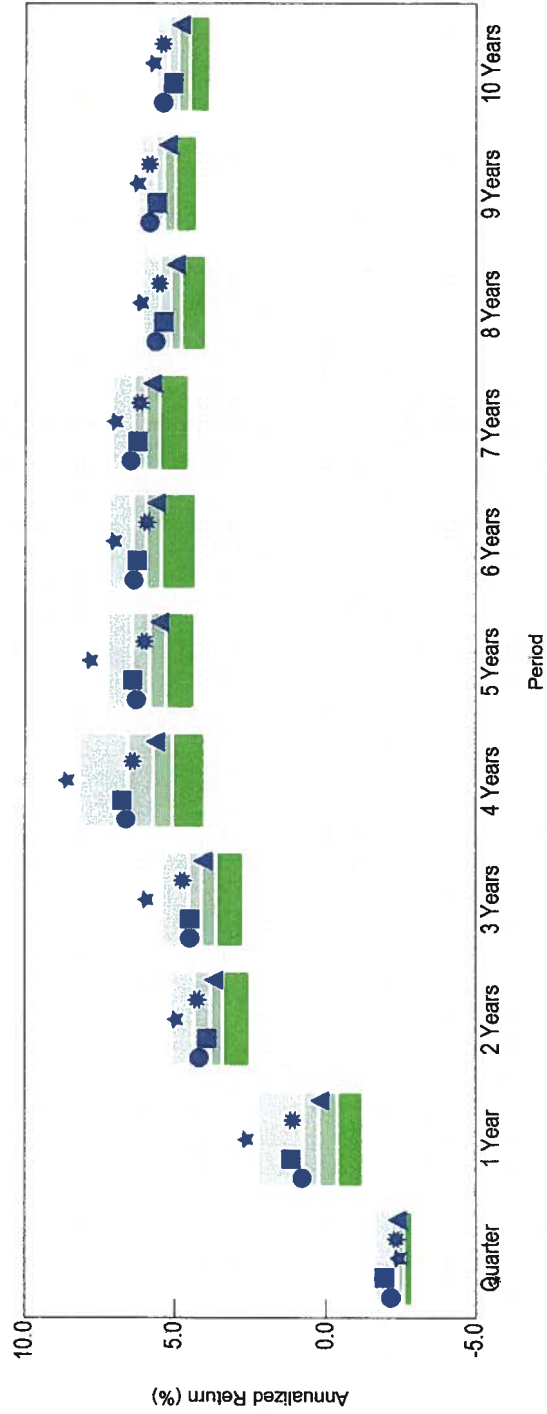
US Core (Gov/Corp/Mtg) Fixed Income Accounts  
Ending June 30, 2013



	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
Return (Rank)	-1.6	2.2	5.1	5.5	8.2	7.3	7.2	7.1	6.1	6.3	5.7
5th Percentile	-2.2	0.8	4.4	4.6	6.6	6.5	6.4	6.4	5.5	5.7	5.3
25th Percentile	-2.4	0.2	3.8	4.1	5.7	5.9	6.0	6.0	5.2	5.4	4.9
Median	-2.6	-0.4	3.4	3.7	5.1	5.3	5.5	5.5	4.8	5.0	4.5
75th Percentile	-2.9	-1.2	2.5	2.7	4.0	4.4	4.3	4.6	4.0	4.3	3.9
95th Percentile	169	167	167	165	163	162	160	158	155	150	148
# of Portfolios											
● PERS(DB) Core Fixed	-2.2 (26)	0.2 (51)	3.7 (60)	4.5 (29)	6.7 (21)	6.1 (41)	5.7 (66)	5.9 (65)	5.2 (54)	5.5 (41)	5.1 (35)
■ PERS(HC) Core Fixed	-2.2 (26)	0.2 (51)	3.7 (60)	4.6 (24)	6.1 (40)	4.6 (93)	4.9 (88)	5.0 (89)	4.4 (90)	-- (-)	-- (-)
▲ Barclays Aggregate	-2.3 (41)	-0.7 (84)	3.3 (81)	3.5 (81)	5.0 (79)	5.2 (81)	5.5 (75)	5.6 (74)	4.8 (80)	5.0 (79)	4.5 (77)

**Fixed Income**  
**InvestorForce US Core Fixed Income Universe**

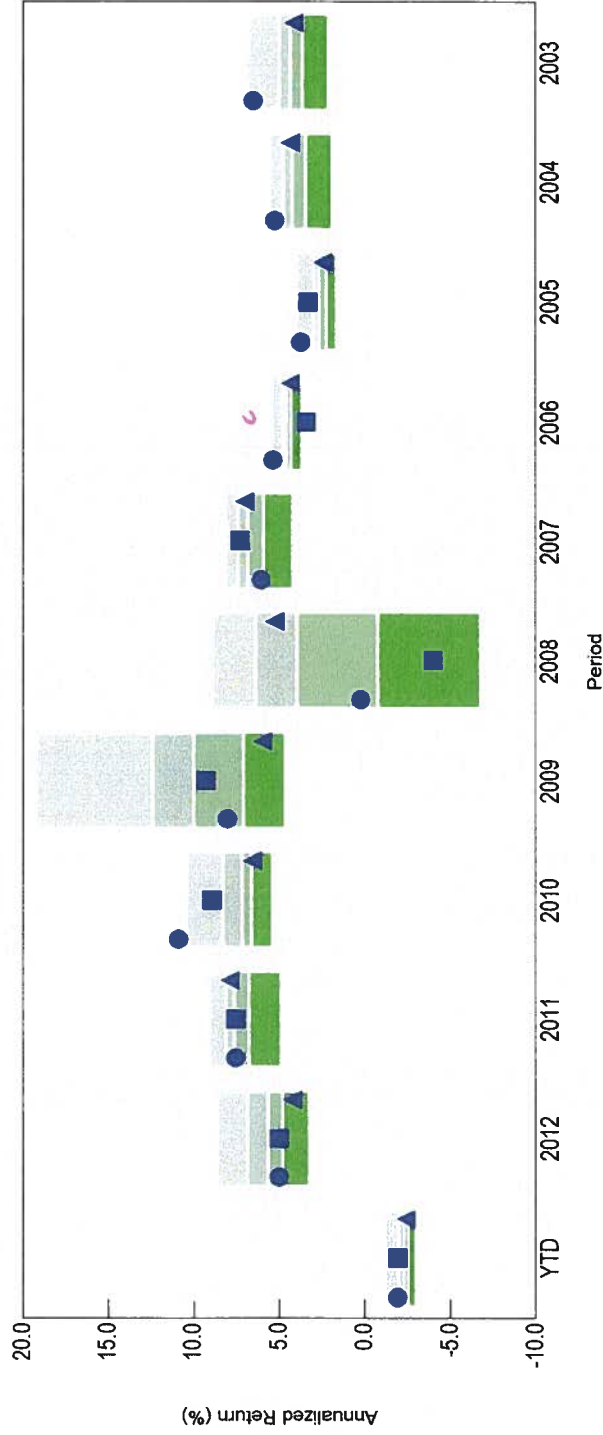
US Core (Gov/Corp/Mtg) Fixed Income Accounts  
 Ending June 30, 2013



	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
Return (Rank)	-1.6	2.2	5.1	5.5	8.2	7.3	7.2	7.1	6.1	6.3	5.7
5th Percentile	-2.2	0.8	4.4	4.6	6.6	6.5	6.4	6.4	5.5	5.7	5.3
25th Percentile	-2.4	0.2	3.8	4.1	5.7	5.9	6.0	6.0	5.2	5.4	4.9
Median	-2.6	-0.4	3.4	3.7	5.1	5.3	5.5	5.5	4.8	5.0	4.5
75th Percentile	-2.9	-1.2	2.5	2.7	4.0	4.4	4.3	4.6	4.0	4.3	3.9
95th Percentile	169	167	167	165	163	162	160	158	155	150	148
# of Portfolios	-2.2 (27)	0.8 (24)	4.2 (33)	4.5 (27)	6.6 (23)	6.3 (33)	6.4 (28)	6.5 (22)	5.7 (19)	5.9 (19)	5.4 (16)
STRS Fixed Income	-2.0 (17)	1.2 (19)	3.9 (45)	4.5 (27)	6.8 (18)	6.4 (27)	6.3 (31)	6.3 (30)	5.4 (32)	5.6 (33)	5.1 (34)
OP&F Core Fixed	-2.4 (55)	2.7 (3)	5.0 (8)	6.0 (3)	8.6 (2)	7.8 (1)	7.0 (11)	7.0 (7)	6.2 (4)	6.3 (6)	5.7 (4)
SERS Global Fixed	-2.3 (42)	1.1 (20)	4.3 (30)	4.8 (20)	6.4 (28)	6.0 (42)	6.0 (55)	6.2 (38)	5.6 (25)	5.9 (19)	5.4 (16)
HPRS Global Fixed Income	-2.4 (48)	0.2 (51)	3.7 (59)	4.1 (54)	5.7 (53)	5.5 (70)	5.6 (71)	5.8 (68)	5.0 (67)	5.3 (65)	4.8 (59)
Barclays U.S. Universal											

**Fixed Income**  
**InvestorForce US Core Fixed Income Universe - Calendar Year Returns**

US Core (Gov/Corp/Mtg) Fixed Income Accounts  
 Ending June 30, 2013



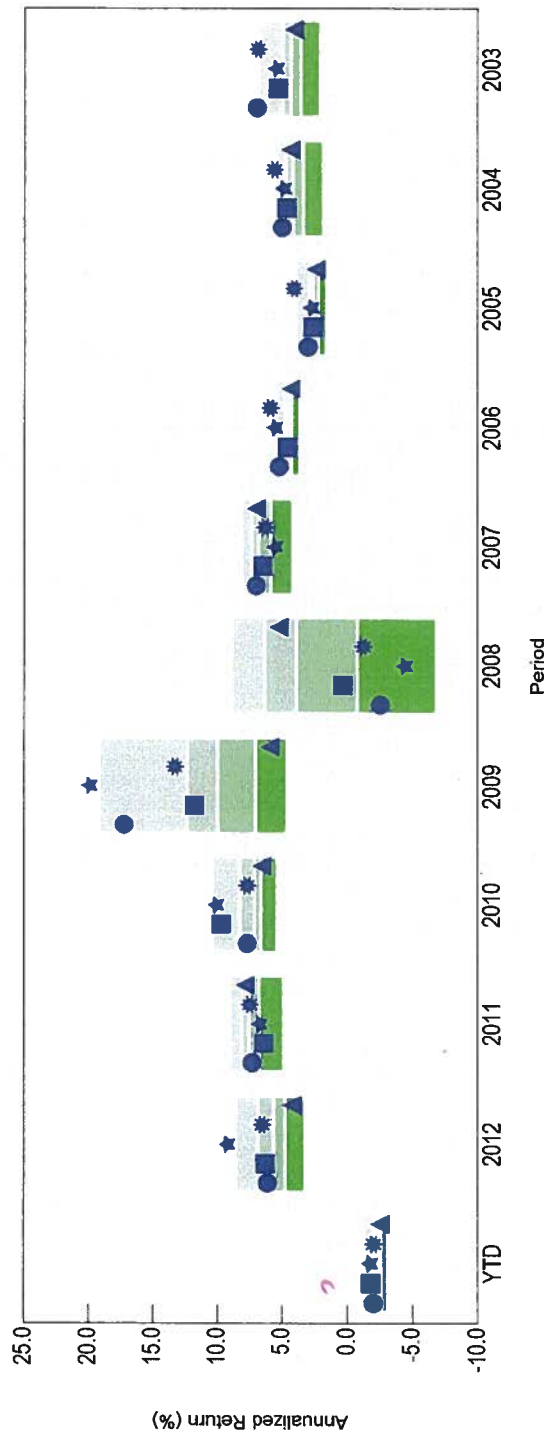
Period	5th Percentile	25th Percentile	Median	75th Percentile	95th Percentile	# of Portfolios	PERS(DB) Core Fixed	PERS(HC) Core Fixed	Barclays Aggregate
YTD	-1.2	-2.0	-2.3	-2.5	-3.0	168	1.9	1.9	2.1
2012	8.6	6.9	5.6	4.8	3.2	168	4.2	4.2	2.1
2011	9.0	8.1	7.6	6.8	4.9	160	4.9	4.9	2.1
2010	10.4	8.3	7.2	6.6	5.4	155	5.4	5.4	2.1
2009	19.2	12.4	10.0	7.1	4.6	152	4.6	4.6	2.1
2008	8.9	6.4	4.0	-0.8	-6.8	183	-6.8	-6.8	2.1
2007	8.1	7.4	6.8	5.9	4.2	224	4.2	4.2	2.1
2006	5.4	4.8	4.6	4.3	3.7	252	3.7	3.7	2.1
2005	3.9	3.0	2.7	2.3	1.6	263	1.6	1.6	2.1
2004	5.5	4.8	4.2	3.4	1.9	266	1.9	1.9	2.1
2003	6.9	5.0	4.3	3.6	2.1	261	2.1	2.1	2.1



# Fixed Income

## InvestorForce US Core Fixed Income Universe - Calendar Year Returns

US Core (Gov/Corp/Mtg) Fixed Income Accounts  
Ending June 30, 2013

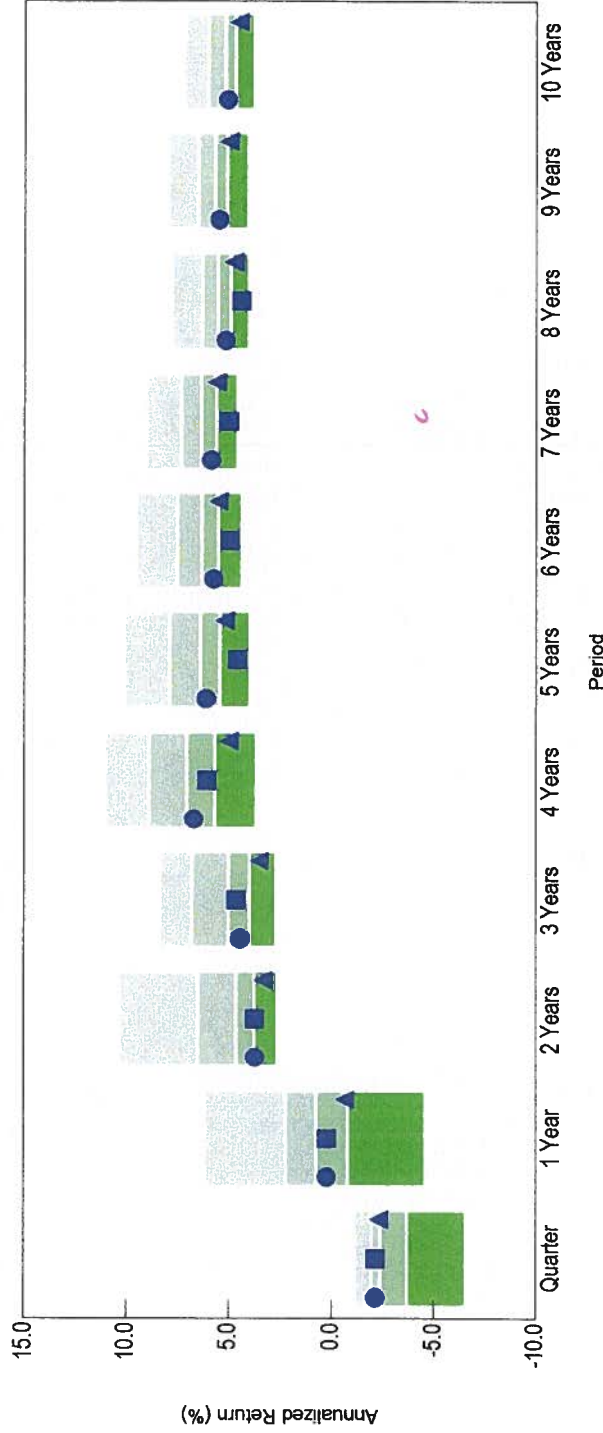


	YTD	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
<b>Return (Rank)</b>	-1.2 (28)	8.6 (40)	9.0 (60)	10.4 (36)	19.2 (9)	8.9 (84)	8.1 (42)	5.4 (9)	3.9 (20)	5.5 (16)	6.9 (5)
<b>5th Percentile</b>	-2.0 (18)	6.9 (33)	8.1 (83)	8.3 (7)	12.4 (32)	6.4 (70)	7.4 (51)	4.8 (31)	3.0 (51)	4.8 (31)	5.0 (19)
<b>25th Percentile</b>	-2.3 (18)	5.6 (3)	7.6 (76)	7.2 (8)	10.0 (5)	4.0 (90)	6.8 (82)	4.6 (48)	2.7 (44)	4.2 (42)	4.3 (18)
<b>Median</b>	-2.5 (28)	4.8 (29)	6.8 (54)	6.6 (7)	7.1 (19)	-0.8 (77)	5.9 (66)	4.3 (71)	2.3 (69)	3.4 (69)	3.6 (6)
<b>75th Percentile</b>	-3.0 (68)	3.2 (88)	4.9 (40)	5.4 (77)	4.6 (85)	-6.8 (35)	4.2 (44)	3.7 (71)	1.6 (69)	1.9 (69)	2.1 (59)
<b>95th Percentile</b>	168 (68)	168 (88)	160 (88)	155 (77)	152 (85)	183 (35)	224 (44)	252 (71)	263 (69)	266 (46)	261 (59)
<b># of Portfolios</b>											
<b>Legend:</b>											
●	STRS Fixed Income										
■	OP&F Core Fixed										
★	SERS Global Fixed										
✱	HPRS Global Fixed Income										
▲	Barclays Aggregate										

# Fixed Income

## InvestorForce All Defined Benefit US Core Fixed Income Universe

IF All DB US Fix Inc Gross Accounts  
Ending June 30, 2013

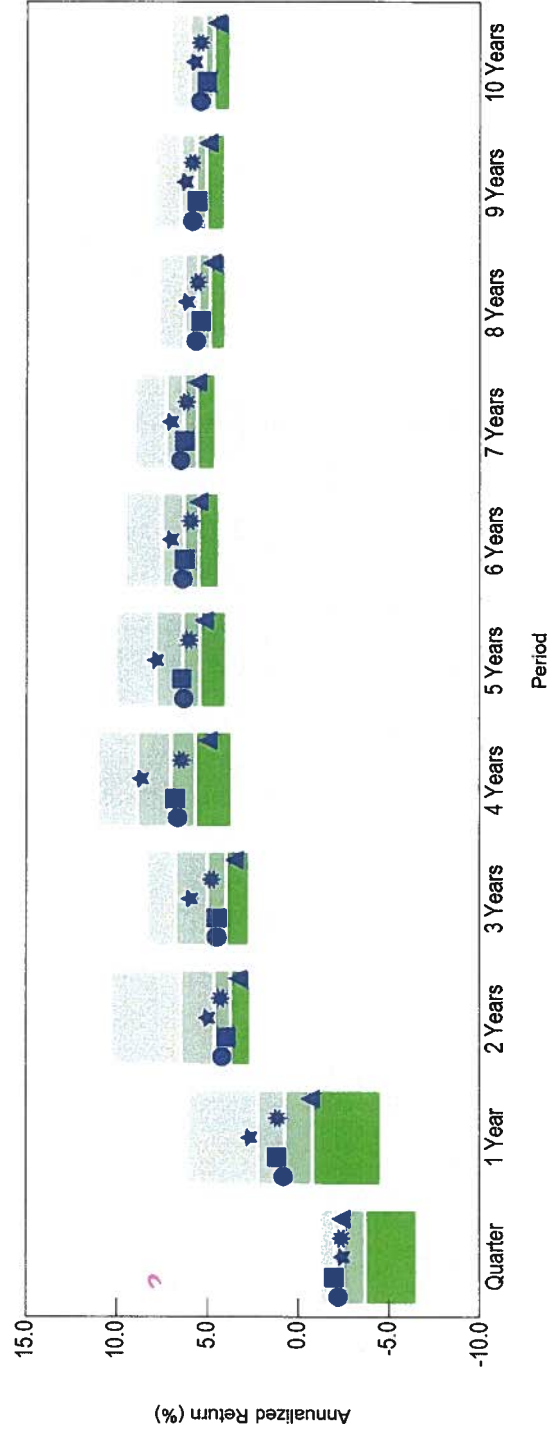


Return (Rank)	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
5th Percentile	-1.1	6.1	10.3	8.4	11.1	10.1	9.5	9.0	7.8	8.0	7.2
25th Percentile	-2.0	2.3	6.5	6.8	8.9	7.9	7.5	7.3	6.3	6.5	6.1
Median	-2.4	0.7	4.7	5.0	7.0	6.4	6.3	6.4	5.5	5.7	5.2
75th Percentile	-3.7	-0.8	3.7	4.0	5.7	5.4	5.5	5.6	4.9	5.1	4.7
95th Percentile	-6.6	-4.6	2.6	2.7	3.7	4.0	4.4	4.6	4.1	4.1	3.8
# of Portfolios	430	426	395	353	330	326	302	290	267	248	230
● PERS(DB) Core Fixed	-2.2 (37)	0.2 (59)	3.7 (76)	4.5 (64)	6.7 (57)	6.1 (58)	5.7 (68)	5.9 (71)	5.2 (70)	5.5 (63)	5.1 (60)
■ PERS(HC) Core Fixed	-2.2 (37)	0.2 (59)	3.7 (76)	4.6 (60)	6.1 (67)	4.6 (90)	4.9 (87)	5.0 (90)	4.4 (90)	-- (-)	-- (-)
▲ Barclays Aggregate	-2.3 (45)	-0.7 (75)	3.3 (85)	3.5 (86)	5.0 (85)	5.2 (81)	5.5 (76)	5.6 (77)	4.8 (82)	5.0 (81)	4.5 (80)

# Fixed Income

## InvestorForce All Defined Benefit US Core Fixed Income Universe

IF All DB US Fix Inc Gross Accounts  
Ending June 30, 2013

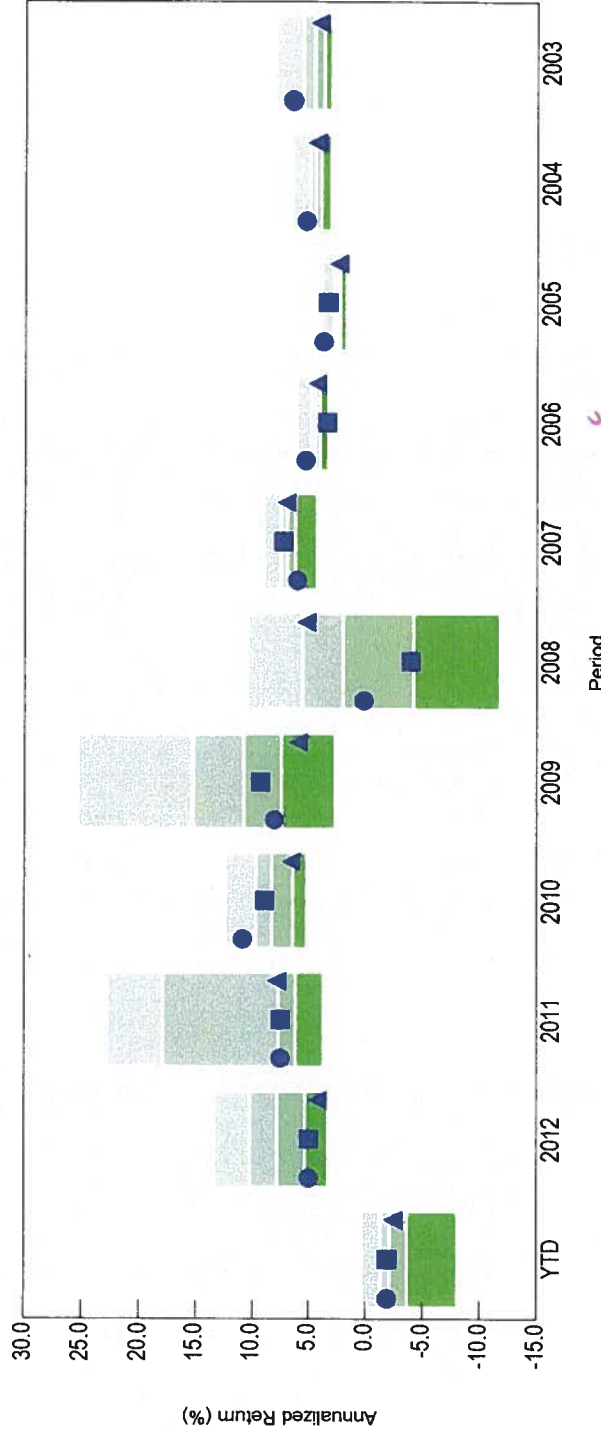


	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
5th Percentile	-1.1	6.1	10.3	8.4	11.1	10.1	9.5	9.0	7.8	8.0	7.2
25th Percentile	-2.0	2.3	6.5	6.8	8.9	7.9	7.5	7.3	6.3	6.5	6.1
Median	-2.4	0.7	4.7	5.0	7.0	6.4	6.3	6.4	5.5	5.7	5.2
75th Percentile	-3.7	-0.8	3.7	4.0	5.7	5.4	5.5	5.6	4.9	5.1	4.7
95th Percentile	-6.6	-4.6	2.6	2.7	3.7	4.0	4.4	4.6	4.1	4.1	3.8
# of Portfolios	430	426	395	353	330	326	302	290	267	248	230
STRS Fixed Income	-2.2 (37)	0.8 (48)	4.2 (63)	4.5 (63)	6.6 (57)	6.3 (53)	6.4 (48)	6.5 (45)	5.7 (46)	5.9 (45)	5.4 (44)
OP&F Core Fixed	-2.0 (26)	1.2 (42)	3.9 (69)	4.5 (62)	6.8 (55)	6.4 (50)	6.3 (53)	6.3 (53)	5.4 (59)	5.6 (56)	5.1 (59)
SERS Global Fixed	-2.4 (51)	2.7 (22)	5.0 (42)	6.0 (35)	8.6 (28)	7.8 (26)	7.0 (32)	7.0 (33)	6.2 (31)	6.3 (32)	5.7 (34)
HPRS Global Fixed Income	-2.3 (45)	1.1 (43)	4.3 (61)	4.8 (57)	6.4 (61)	6.0 (60)	6.0 (65)	6.2 (59)	5.6 (49)	5.9 (45)	5.4 (44)
Barclays Aggregate	-2.3 (45)	-0.7 (75)	3.3 (85)	3.5 (86)	5.0 (86)	5.2 (81)	5.5 (76)	5.6 (77)	4.8 (82)	5.0 (81)	4.5 (80)

# Fixed Income

## InvestorForce All Defined Benefit US Core Fixed Income Universe - Calendar Year Returns

IF All DB US Fix Inc Gross Accounts  
Ending June 30, 2013

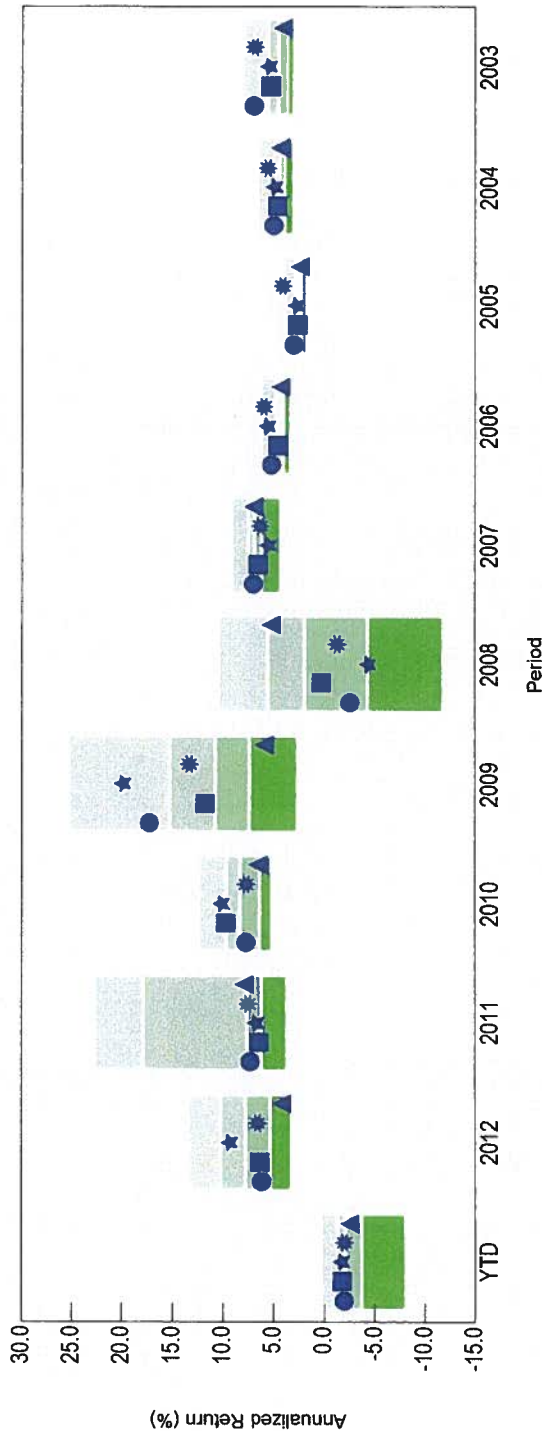


### Return (Rank)

5th Percentile	0.3	13.4	22.7	12.4	25.3	10.4	9.1	6.1	3.9	6.6	8.1
25th Percentile	-1.3	10.3	17.9	9.7	15.3	5.6	7.5	4.8	2.9	5.0	5.6
Median	-2.1	7.8	7.7	8.3	10.8	2.0	6.9	4.5	2.7	4.5	4.6
75th Percentile	-3.7	5.4	6.2	6.4	7.4	-4.2	6.2	4.1	2.4	4.0	3.7
95th Percentile	-8.1	3.3	3.7	5.2	2.7	-11.8	4.3	3.4	1.8	3.1	3.1
# of Portfolios	430	414	225	128	124	121	101	96	93	89	86
● PERS(DB) Core Fixed	-1.9 (44)	5.0 (81)	7.5 (55)	10.8 (15)	8.0 (72)	0.2 (58)	6.0 (81)	5.3 (16)	3.8 (7)	5.2 (16)	6.5 (13)
■ PERS(HC) Core Fixed	-1.9 (44)	5.0 (81)	7.5 (55)	8.9 (35)	9.2 (60)	-4.0 (74)	7.3 (35)	3.4 (95)	3.4 (14)	--	--
▲ Barclays Aggregate	-2.4 (63)	4.2 (90)	7.8 (49)	6.5 (71)	5.9 (84)	5.2 (28)	7.0 (50)	4.3 (64)	2.4 (69)	4.3 (60)	4.1 (64)

**Fixed Income**  
**InvestorForce All Defined Benefit US Core Fixed Income Universe - Calendar Year Returns**

IF All DB US Fix Inc Gross Accounts  
 Ending June 30, 2013

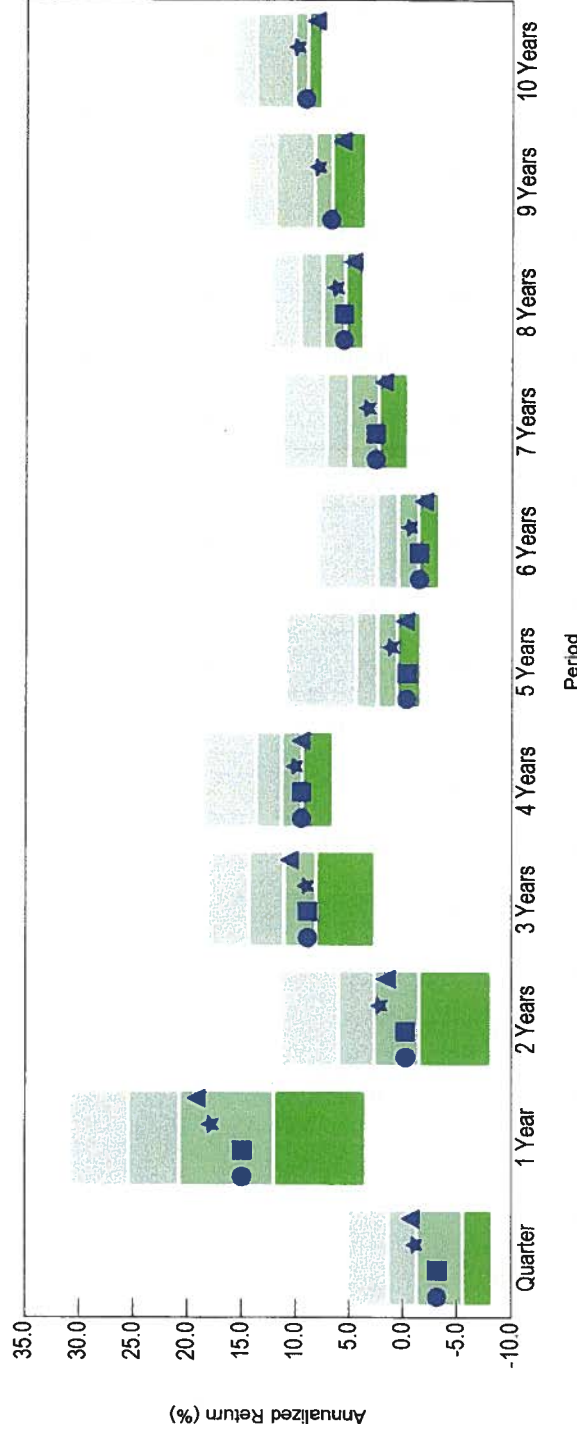


	YTD	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
5th Percentile	0.3	13.4	22.7	12.4	25.3	10.4	9.1	6.1	3.9	6.6	8.1
25th Percentile	-1.3	10.3	17.9	9.7	15.3	5.6	7.5	4.8	2.9	5.0	5.6
Median	-2.1	7.8	7.7	8.3	10.8	2.0	6.9	4.5	2.7	4.5	4.6
75th Percentile	-3.7	5.4	6.2	6.4	7.4	-4.2	6.2	4.1	2.4	4.0	3.7
95th Percentile	-8.1	3.3	3.7	5.2	2.7	-11.8	4.3	3.4	1.8	3.1	3.1
# of Portfolios	430	414	225	128	124	121	101	96	93	89	86
● STRS Fixed Income	-2.0 (46)	6.1 (68)	7.3 (58)	7.7 (55)	17.2 (22)	-2.5 (69)	7.0 (49)	5.2 (17)	3.0 (22)	5.0 (25)	6.9 (9)
■ OP&F Core Fixed	-1.8 (39)	6.3 (67)	6.4 (72)	9.7 (25)	11.8 (48)	0.4 (57)	6.5 (65)	4.6 (47)	2.7 (53)	4.7 (37)	5.3 (33)
★ SERS Global Fixed	-1.7 (39)	9.2 (36)	6.7 (67)	10.1 (21)	19.8 (14)	-4.4 (77)	5.5 (88)	5.5 (12)	2.7 (42)	4.9 (29)	5.4 (30)
◆ HPRS Global Fixed Income	-2.0 (46)	6.6 (64)	7.5 (55)	7.7 (55)	13.3 (37)	-1.2 (64)	6.3 (74)	5.9 (8)	4.1 (4)	5.6 (12)	6.9 (9)
▲ Barclays Aggregate	-2.4 (63)	4.2 (90)	7.8 (49)	6.5 (71)	5.9 (84)	5.2 (28)	7.0 (50)	4.3 (64)	2.4 (69)	4.3 (60)	4.1 (64)

# Total International Equities

## InvestorForce Global Developed ex-USA Equities Universe

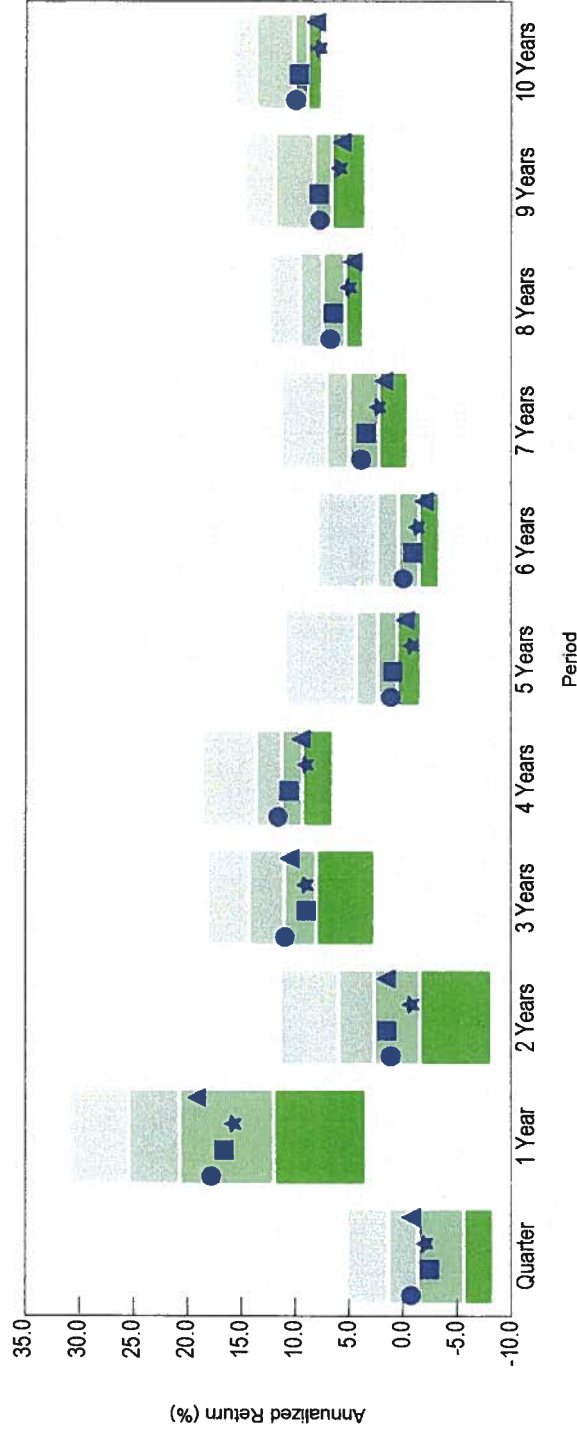
Global Developed xUS Equity Accounts  
Ending June 30, 2013



	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
Return (Rank)	5.1	30.9	11.3	18.1	18.7	11.0	7.9	11.3	12.5	14.8	15.9
5th Percentile	1.4	25.4	6.0	14.3	13.7	4.5	2.5	7.2	9.7	12.0	13.7
25th Percentile	-1.3	20.7	2.7	11.1	11.3	2.4	0.5	5.1	7.5	8.3	10.2
Median	-5.6	12.0	-1.5	8.1	9.4	0.6	-1.4	2.3	5.4	6.7	8.9
75th Percentile	-8.3	3.4	-8.2	2.6	6.5	-1.6	-3.3	-0.4	3.8	3.5	7.6
95th Percentile	68	67	66	66	65	63	60	55	49	46	43
# of Portfolios											
● PERS(DB) International Equity	-3.2 (58)	15.0 (71)	-0.2 (68)	8.8 (71)	9.4 (75)	-0.3 (88)	-1.5 (77)	2.6 (72)	5.6 (70)	6.7 (75)	9.1 (69)
■ PERS(HC) International Equity	-3.2 (58)	15.0 (71)	-0.2 (68)	8.8 (71)	9.4 (75)	-0.3 (88)	-1.5 (76)	2.6 (72)	5.6 (70)	-- (-)	-- (-)
★ STRS International Equity	-1.1 (50)	17.8 (64)	2.2 (54)	9.0 (70)	10.0 (69)	1.1 (66)	-0.7 (66)	3.3 (60)	6.2 (60)	7.9 (55)	9.9 (55)
▲ MSCI EAFE Gross	-0.7 (46)	19.1 (58)	1.6 (56)	10.6 (56)	9.5 (74)	-0.2 (85)	-1.9 (85)	1.9 (83)	4.7 (85)	5.7 (82)	8.2 (89)

**Total International Equities**  
**InvestorForce Global Developed ex-USA Equities Universe**

Global Developed xUS Equity Accounts  
 Ending June 30, 2013

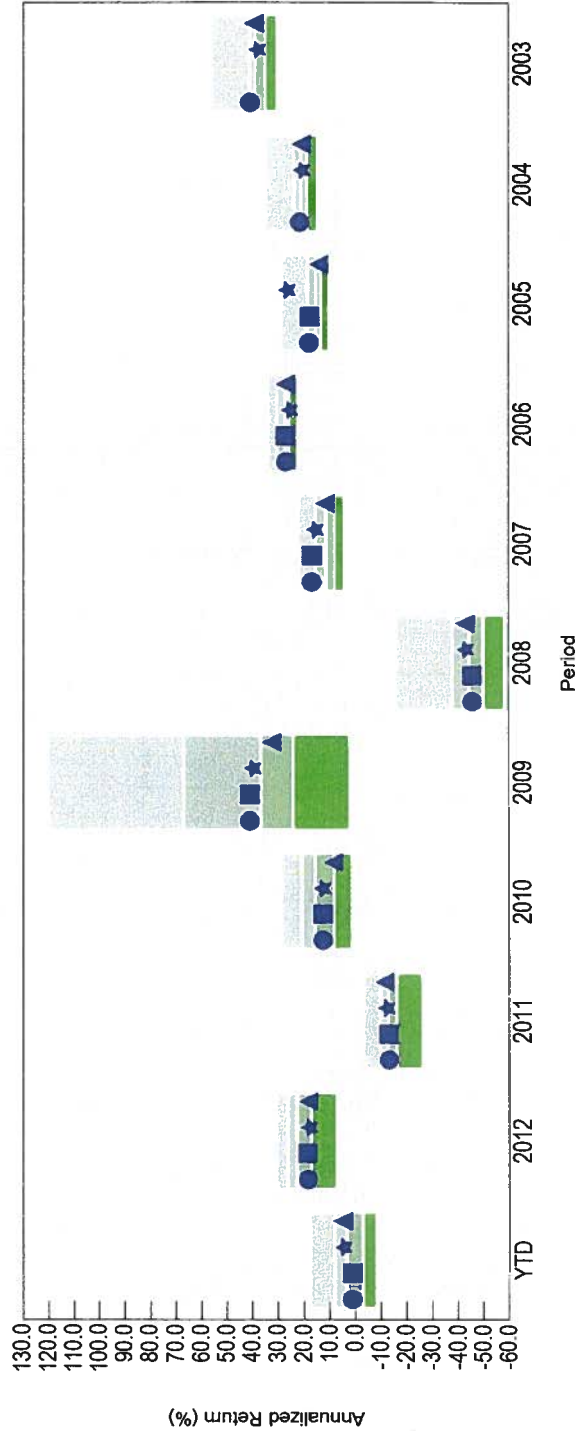


	Quarter	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years
5th Percentile	5.1	30.9	11.3	18.1	18.7	11.0	7.9	11.3	12.5	14.8	15.9
25th Percentile	1.4	25.4	6.0	14.3	13.7	4.5	2.5	7.2	9.7	12.0	13.7
Median	-1.3	20.7	2.7	11.1	11.3	2.4	0.5	5.1	7.5	8.3	10.2
75th Percentile	-5.6	12.0	-1.5	8.1	9.4	0.6	-1.4	2.3	5.4	6.7	8.9
95th Percentile	-8.3	3.4	-8.2	2.6	6.5	-1.6	-3.3	-0.4	3.8	3.5	7.6
# of Portfolios	68	67	66	66	65	63	60	55	49	46	43
OP&F International Equity	-0.7 (46)	17.8 (64)	1.1 (60)	11.0 (51)	11.6 (47)	1.1 (65)	0.0 (53)	4.0 (57)	6.8 (56)	7.8 (56)	10.0 (54)
SERS International Equity	-2.4 (54)	16.6 (67)	1.5 (56)	9.0 (70)	10.6 (64)	0.9 (68)	-0.9 (72)	3.5 (59)	6.5 (57)	7.9 (55)	9.7 (60)
HPRS International Equity	-2.1 (53)	15.7 (70)	-0.8 (70)	9.1 (70)	9.0 (77)	-0.8 (91)	-1.3 (73)	2.3 (75)	5.0 (83)	5.9 (81)	7.8 (92)
MSCI EAFE Gross	-0.7 (46)	19.1 (58)	1.6 (56)	10.6 (56)	9.5 (74)	-0.2 (85)	-1.9 (85)	1.9 (83)	4.7 (85)	5.7 (82)	8.2 (89)

# Total International Equities - Calendar Year Returns

## InvestorForce Global Developed ex-USA Equities Universe

Global Developed xUS Equity Accounts  
Ending June 30, 2013



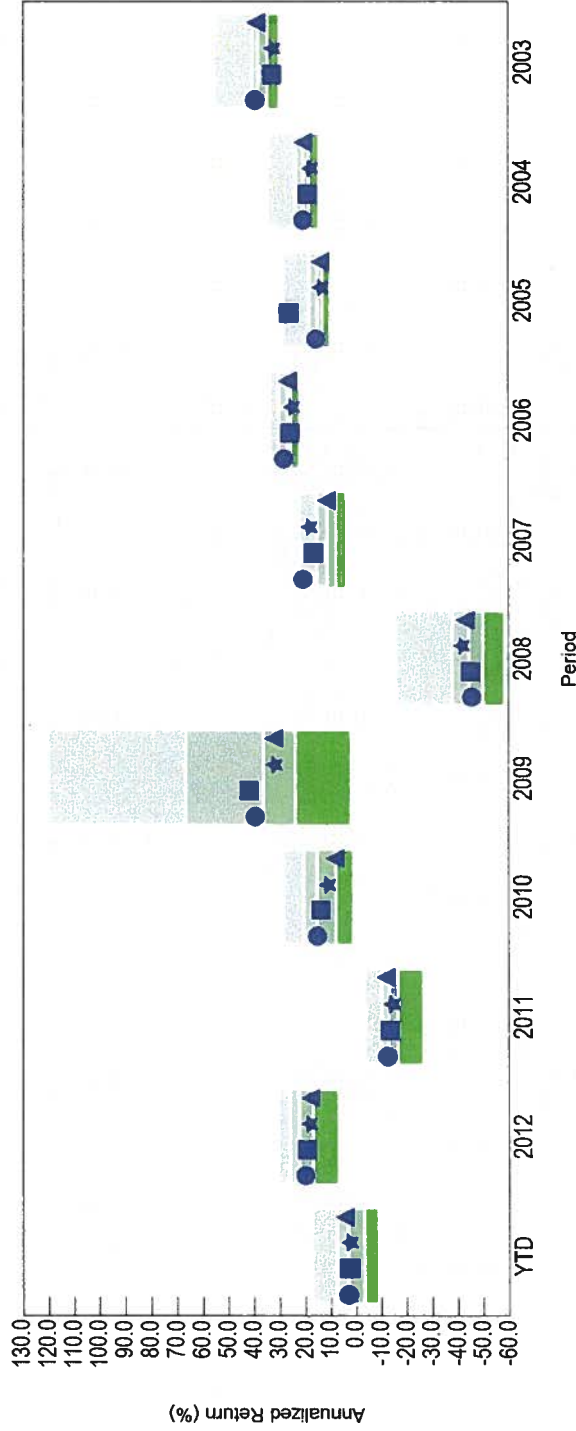
	YTD	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Return (Rank)	17.4	30.5	-3.2	28.4	120.3	-15.9	22.0	33.6	28.4	34.8	56.3
5th Percentile	7.8	26.0	-9.9	20.7	66.8	-38.0	15.4	30.4	18.4	23.6	40.8
25th Percentile	3.2	22.6	-12.9	15.5	36.6	-44.6	11.3	27.1	15.1	20.9	38.6
Median	-3.2	17.0	-16.3	8.0	23.9	-49.9	8.0	25.6	13.2	18.7	34.9
75th Percentile	-8.5	6.8	-26.6	0.9	1.8	-58.5	3.9	22.0	10.0	14.5	30.2
95th Percentile	67	66	72	72	73	83	89	88	94	96	96
# of Portfolios	1.0 (66)	18.2 (71)	-13.4 (53)	12.3 (62)	40.8 (43)	-45.8 (54)	16.7 (17)	26.8 (54)	18.0 (28)	21.3 (46)	40.7 (27)
● PERS(DB) International Equity	1.0 (66)	18.1 (71)	-13.4 (53)	12.3 (62)	40.8 (43)	-45.8 (54)	16.7 (17)	26.9 (53)	17.8 (29)	-- (-)	-- (-)
■ PERS(HC) International Equity	4.1 (45)	17.3 (75)	-12.8 (49)	12.2 (62)	39.4 (44)	-43.5 (43)	15.1 (29)	25.0 (83)	25.9 (7)	20.3 (59)	37.7 (58)
★ STRS International Equity	4.5 (45)	17.9 (72)	-11.7 (44)	8.2 (75)	32.5 (60)	-43.1 (40)	11.6 (43)	26.9 (53)	14.0 (61)	20.7 (52)	39.2 (44)
▲ MSCI EAFE Gross											



# Total International Equities - Calendar Year Returns

## InvestorForce Global Developed ex-USA Equities Universe

Global Developed xUS Equity Accounts  
Ending June 30, 2013



Return (Rank)	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
5th Percentile	30.5	-3.2	28.4	120.3	-15.9	22.0	33.6	28.4	34.8	56.3
25th Percentile	26.0	-9.9	20.7	66.8	-38.0	15.4	30.4	18.4	23.6	40.8
Median	22.6	-12.9	15.5	36.6	-44.6	11.3	27.1	15.1	20.9	38.6
75th Percentile	17.0	-16.3	8.0	23.9	-49.9	8.0	25.6	13.2	18.7	34.9
95th Percentile	6.8	-26.6	0.9	1.8	-58.5	3.9	22.0	10.0	14.5	30.2
# of Portfolios	66	72	72	73	83	89	88	94	96	96
OP&F International Equity	3.1 (51)	-12.4 (45)	15.1 (52)	39.6 (44)	-45.7 (53)	20.6 (6)	28.2 (37)	15.6 (44)	20.7 (52)	39.6 (37)
SERS International Equity	2.5 (56)	-13.2 (53)	13.7 (59)	41.9 (38)	-45.3 (51)	16.6 (17)	25.9 (72)	26.5 (7)	19.0 (72)	33.0 (83)
HPRS International Equity	2.3 (57)	-14.5 (62)	11.2 (67)	31.7 (61)	-42.0 (35)	18.0 (14)	24.9 (83)	13.6 (75)	17.6 (82)	32.5 (87)
MSCI EAFE Gross	4.5 (45)	-11.7 (44)	8.2 (75)	32.5 (60)	-43.1 (40)	11.6 (43)	26.9 (53)	14.0 (61)	20.7 (52)	39.2 (44)

