

Prudent and cost-efficient management

PSRS/PEERS of MISSOURI 2014 COMPREHENSIVE ANNUAL FINANCIAL REPOR

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# Letter from Towers Watson



1191 Second Avenue Suite 1400 Seattle, WA 98101-2933

T +1 206 343 6000

towerswatson.com

October 2, 2014

To the Members of the Board:

Fiscal year 2014 was again marked by large gains in developed equity markets. However, unlike last year, those gains were accompanied this year by positive returns in both emerging markets equities and fixed income markets. In the U.S., news of the Federal Reserve's (Fed) decision to begin tapering the quantitative easing program that drove markets last year, continued GDP growth, and a pick-up in earnings growth caused developed equity markets globally to increase. The Fed's tapering plan also led to increased interest rate volatility, although rates ended the fiscal year not far from where they began, leading to modest fixed income returns. In non-U.S. markets, modest GDP growth in most countries, combined with stabilization in the Eurozone, drove these markets higher during the second half of the fiscal year, but non- U.S. stocks still trailed U.S. stocks. Fixed income trailed equities. Longer dated U.S. government bonds returned +6% while long corporate bonds had +13% returns as spreads declined to near all time lows. Looking forward to the coming year, the focus will be on when the Fed will decide to raise interest rates from the historic lows of the past few years.

Fiscal Year 2014 was the first year the PSRS and PEERS plans were combined to show one performance number for the consolidated Missouri Education Pension Trust (MEPT). The Total Fund return for the fiscal year ended June 30, 2014 was +16.9%, outperforming the policy benchmark return of +15.5%. The MEPT fiscal year returns for public risk assets were strong at +19.8% and safe assets were up for the year at +1.7%. MEPT private risk assets returned +19.4% vs. +18.6% for its benchmark.

The continued implementation of private programs was enhanced with the introduction of the co-investment private equity program. PSRS/PEERS took advantage of both internal and external resources in their effort to manage the portfolio through the volatile investment climate by introducing a hedging program that reduced volatility in the portfolio with minimal return degradation.

In the next fiscal year, Towers Watson will continue work that began this year with the PSRS/PEERS internal investment staff, evaluating the overall structure and individual managers in the U.S. and non-U.S. public equity composites.

We at Towers Watson have enjoyed our relationship with Missouri PSRS/PEERS and are looking forward to the coming year.

Regards,

Towers Watson Investment Services, Inc.

Michael M. Hall, ASA, CFA West Division Investment Leader

PSRS/PEERS of MISSOURI 2014 COMPREHENSIVE ANNUAL FINANCIAL REPORT

# Letter from the Chief Investment Officer



PUBLIC SCHOOL & EDUCATION EMPLOYEE RETIREMENT SYSTEMS OF MISSOURI

December 1, 2014

To the Members of the Systems:

Throughout this year's Financial Report you will see the phrase: "Building on the Past, Investing in Your Future". While this statement certainly addresses the PSRS/PEERS commitment to help members manage their retirement security, it also refers to the investment process at the Systems. We continue to build on the past success of the PSRS/PEERS' investment program as the annualized investment return for the Systems over the last 30 years is 9.9%. However, we are also developing a deeper and more robust investment platform that will provide financial security for our members well into the future.

With that in mind, I present the following report on the Systems' investments for the fiscal year ended June 30, 2014 on behalf of the PSRS and PEERS Board of Trustees and the internal investment staff.

A recovering global economy coupled with low interest rates and low inflation led to an ideal backdrop to make money in fiscal year 2014. The strength in the investment markets directly resulted in solid gains for PSRS/PEERS as the Systems' assets increased through investment earnings by almost \$5.5 billion from the previous year with a total fund performance of 16.9% for both PSRS and PEERS.

# Key Points within this year's Financial Report

As you review the financial information in this report for the fiscal year ended June 30, 2014, it is important to be aware of the following points:

- PSRS and PEERS significantly outperformed the assumed investment return of 8.0%,
- The Systems generated the investment return while taking less risk than approximately two-thirds
  of comparable public funds,
- The PSRS/PEERS internal investment staff and external investment managers added value above
  the policy benchmark of over \$400 million, net of all fees and expenses. The outperformance in
  2014 was due to portfolio construction and tactical asset allocation decisions by internal investment
  staff (overweighting and underweighting asset classes around targets) as well as active management
  on the part of external managers,
- The PSRS/PEERS investment expenses (including accrued performance based fees and all internal
  investment staff expenses) for fiscal year 2014 were 1.50%, or \$1.50 for every \$100 managed.
  The investment returns reported throughout this publication are mostly net of these fees. The
  investment return net of all fees and expenses was 16.7% for PSRS and PEERS,
- Investment performance throughout this report is calculated using a time-weighted rate of return based on market values, and
- The total invested assets of both PSRS and PEERS were approximately \$37.9 billion on June 30, 2014, making the combined entity larger than all other public retirement plans in the state combined, and the 44th largest defined benefit plan in the United States.

 Location
 3210 W. Truman
 Blvd. / Jefferson City, M0 65109
 Mail
 P.O. Box
 268 / Jefferson City, M0 65102
 Phone
 (573)
 634-5290

 Toll Free
 (800)
 392-6848
 Email
 psrspeers@psrspeers.org
 Member
 Services
 FAX
 (573)
 634-7934
 Employer
 Services
 FAX
 (573)
 634-7911

### Fiscal Year 2014 Year in Review

The internal investment staff, under the direction of the PSRS/PEERS Board of Trustees, has adopted a disciplined and diversified investment portfolio over the past several years that includes allocations to multiple asset classes. In each year or market cycle, every specific asset class within the PSRS/PEERS investment portfolio performs a valuable function.

In fiscal year 2014, the combined asset allocation provided the Systems with substantial absolute returns, led by above average returns from global stocks. U.S. stocks returned 25.2% for the fiscal year ended June 30, 2014 (as measured by the Russell 3000 Index), non-U.S. developed stocks moved 23.6% higher (as measured by the MSCI EAFE Index), and emerging market stocks increased 14.3% (as measured by the MSCI Emerging Markets Index). In contrast, U.S. Treasury Bonds and U.S. Treasury Inflation Protection Securities (TIPS) provided low absolute returns for PSRS/PEERS, increasing 2.0% and 3.6%, respectively.

The PSRS/PEERS non-traditional asset classes also provided strong returns in fiscal year 2014. The Hedged Asset Program represented 13.5% of total fund assets at fiscal year-end and generated a 15.8% return, outperforming the 1-year return of the HFRI Fund Weighted Composite Hedge Fund Index at 9.1%. The objective of the Hedged Assets Program is to provide competitive returns, diversification and lower volatility (risk) than the Systems' stock portfolios. Diversification into private equity, private real estate and private credit proved beneficial for the year as the Private Equity Composite returned 25.6%, the Real Estate Composite increased 13.9%, and the Private Credit Composite increased 18.2%. The adoption of non-traditional asset classes were not only additive to the PSRS/PEERS total fund performance in fiscal year 2014, but also proved beneficial over the last five years.

As noted above, significant absolute returns in most of the major asset classes contributed to the 16.9% return for PSRS and PEERS. Additionally, the investment returns were supported by solid implementation (stock selection) and tactical asset allocation decisions. For example, the PSRS/PEERS Private Credit portfolio outperformed its benchmark (Merrill Lynch High Yield Master II Index) by 6.4% in fiscal year 2014, while the PSRS/PEERS Real Estate Portfolio outperformed its benchmark (NCREIF Property Index) by 2.7%. From a portfolio construction and tactical standpoint, the internal investment staff maintained a significant underweight to safe assets (Treasury bonds) throughout the year (due to historically low interest rates) and a substantial overweight to U.S. stocks and emerging market stocks relative to Europe. The underweight to safe assets and the overweight to U.S. stocks for the fiscal year provided meaningful contribution to the overall PSRS/PEERS returns.

### Fiscal Year 2015: Low Return Environment

Investing can be dissected into a most simple format: there are risky assets and there are riskless assets, and there is an exchange rate between them. At periods of economic stress (for example, the financial crisis in 2008), the exchange rate is high and there is a demand for riskless assets. When times are good or the economy is improving (today for example), the exchange rate is lower and there is limited demand for riskless assets. There is no truly risk-free asset. However, short-term U.S. Treasury Bills are a good approximation of a risk-free asset and the current yield is close to zero. As such, current returns on many asset classes, including longer term bonds and stocks, by definition, must be lower.

The return environment that we find ourselves in today does pose a conundrum for institutional investors such as PSRS/PEERS. If the Systems put more money into safe (riskless) assets, the total investment return for PSRS/PEERS may be inadequate. But, if the Systems take on more risk in pursuit of higher returns, PSRS/PEERS may face the outcome of even lower returns or long term capital impairment.

# Letter from the Chief Investment Officer, continued

The Systems have developed a long-term strategic asset allocation that is designed to achieve the assumed investment return of 8.0% over long periods of time. However, the Board also adopted an Investment Policy that provides the internal PSRS/PEERS investment staff and external advisors with the flexibility to deviate from the strategic asset allocation within appropriate bands. To that end, at times, the Systems may have a greater allocation to risk assets or safe (riskless) assets than the policy dictates. Since 2009, due to historically low interest rates and attractive valuations within the equity markets, PSRS and PEERS were significantly overweight to stocks and underweight to safe (riskless) assets. For example, at the beginning of fiscal year 2014, the Systems had less than 13% of the total fund in safe assets as compared to the target allocation of 20%. Alternatively, the Systems had over 33% in U.S. equities relative to the benchmark of 27%. These tactical deviations from the policy targets proved very beneficial to PSRS and PEERS over the last several years. Specifically, in fiscal year 2014 alone, the Systems' allocation to U.S. stocks outperformed safe assets by over 24%. This benefit accrued directly to the PSRS/PEERS members and school districts through the stabilization of contribution rates.

Toward the end of fiscal year 2014, the PSRS/PEERS internal investment staff began to move back toward the long-term target asset allocation by reducing the amount in U.S. stocks and increasing the amount in safe assets (specifically cash) and private assets. The move was directed because stock and bond prices increased throughout the year, indicating full valuation from a fundamental standpoint. Additionally, the Systems continued to increase the allocation to private investments (real estate, private equity) in the low-rate environment primarily because there is a return premium afforded to those investors willing to accept illiquidity risk and because it increases the diversification of the fund. As I write the annual letter at the beginning of December 2014, the Systems have moved even closer to the PSRS/PEERS target asset allocation with just over 19% in safe assets and close to 30% in U.S. stocks.

With the global economy improving, there has been modest demand for safe assets and thus low yields associated with the riskless investment. However, we believe that in the current environment it is prudent to move back toward the Systems' long-term target asset allocation (increasing safe assets) to reduce the volatility of the fund. PSRS/PEERS is obviously sacrificing yield in the short-term but it is expected that this change will give the Systems more flexibility in the future.

The PSRS/PEERS asset allocation continues to exhibit an overweight to U.S. stocks relative to developed Europe stocks due to an uncertain outlook for Europe. Additionally, the Systems are overweight to emerging market stocks due to higher long-term growth prospects and better fundamental valuations. Moreover, in terms of investment implementation, PSRS/PEERS have maintained a healthy allocation to active management due to an expectation that a greater level of 'alpha' (or excess return above the market) can be achieved in a less certain market environment.

Under the support and guidance of the Board of Trustees, the internal investment staff will **build on the past** success of the investment program while always focusing on the **future** of the Systems. The PSRS and PEERS investment structure will continue to evolve to ensure that all members receive the financial security and **peace of mind** that they have earned through their hard work and dedication.

Respectfully,

Craig A. Husting, CFA Chief Investment Officer

# **Investment Policy Summary**

The Board of Trustees of the Public School Retirement System of Missouri and Public Education Employee Retirement System of Missouri (PSRS and PEERS, also referred to as the Systems) is charged with the responsibility for investing the assets of the Systems in a manner consistent with the fiduciary standards set forth in the 'prudent person' rule. To that end, the Board has adopted the following principles to guide all investment-related decisions:

- 1. Act in the exclusive interest of the members of the Systems,
- 2. Maximize total return within prudent risk parameters, and
- 3. Preserve the long-term purchasing power of the Systems.

The investment portfolios of PSRS and PEERS represent all contributions to the plans, from members and their employers, as well as all net earnings on these assets. These funds are held in support of both current and future liabilities. In total, approximately 63% of every dollar used to pay retirees is generated from investment earnings<sup>1</sup>.

The Board of Trustees of PSRS and PEERS recently approved the commingling of assets for purposes of investment as allowed by state statute. In order to implement this change, PSRS and PEERS adopted the Missouri Education Pension Trust (MEPT) Agreement, which is managed by the PSRS and PEERS Board of Trustees and investment staff. Effective July 1, 2013, the invested assets of the Systems were pooled and invested in MEPT. All assets held by MEPT are for the exclusive benefit of PSRS and PEERS. Each of the Systems has equity in MEPT based on funds contributed and earnings allocated. Earnings of MEPT are allocated based on the average daily balances of each of the respective Systems. Individual investments in MEPT are not specifically identified to the respective Systems. Due to the fact all invested assets are invested in MEPT, the rate of return for each of the Systems is approximately the same, therefore the following discussions focus on MEPT in total and not the individual Systems.

# Investment Objective

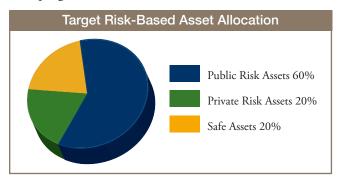
Based on the general beliefs about the long-term investment returns available from a well-diversified, prudently invested portfolio, the Board has adopted an objective to achieve a total nominal investment return of 8.0% with a real rate of return of at least 5.5% per annum over time.<sup>2</sup>

In order to achieve this rate of return, the Systems have developed a portfolio that is prudently invested across a broad array of assets that reflects the long-term nature of the Systems' pension obligations. The principles of diversification, risk control, and competitive rates of return provide the framework for selecting an asset allocation that is expected, over longer periods of time and in the aggregate, to give the Systems the most competitive long-term return within a prudent level of risk.

# **Understanding Risk**

Selection of an appropriate asset allocation is one of the most important decisions made by a retirement plan. Within that asset allocation, it is important to not only consider the expected investment return, but also to understand the risks. The importance of risk consideration for institutional investors is critical to long-term success. To that end, the Systems employ an effective and intuitive risk-based approach to setting and reporting the asset allocation decision. The Systems developed a risk-based asset allocation to clearly define the prudent risks taken within its investment portfolios. The Systems consider a variety of risks including, but not limited to, liquidity risk, volatility, tail risk (the possibility that an investment will move much more than expected) and the ability to meet the Systems' assumed rate of return when structuring the portfolio.

This analysis results in an asset allocation to Public Risk Assets, Safe Assets and Private Risk Assets. Within each risk allocation, the Systems' investment portfolio includes strategic, long-term commitments to specific asset programs.



<sup>&</sup>lt;sup>1</sup> Based on a twenty-year average for fiscal years 1994-2014.

<sup>&</sup>lt;sup>2</sup> The real rate of return is the rate by which the long-term total return exceeds the long-term inflation rate. The Board of Trustees shall employ an actuarial consultant for purposes of determining the inflation rate to be used in calculating the pension obligations. The assumed inflation rate as of June 30, 2014 was 2.5% per annum.

# Roles and Responsibilities

### **Board of Trustees**

It is the responsibility of the Board of Trustees (Board) to establish and maintain policies and objectives for all aspects of the Systems' investment program including the determination of long-term policies for risk tolerance and asset allocation.

In keeping with its obligation to serve as the governing fiduciary, any changes to the investment policy or investment implementation manuals require the Board's approval.

As one of the largest public pension funds in the United States, the Systems' operational requirements are complex. In order to properly administer the Systems and carry out investment strategies, the Board relies heavily on both internal staff and external service providers. Due to the number of parties involved, their roles as fiduciaries are clearly identified to ensure distinct lines of responsibility and proper controls exist, while providing increased operational efficiency and elimination of duplication of effort.

### **Executive Director**

The Executive Director (Director) is appointed by, and serves at the pleasure of the Board. The Director is responsible for planning, organizing, and administering all operations of the Systems under the broad policy guidance and direction of the Board. The Director, with the assistance of the investment staff, monitors the performance of the investment portfolio; ensures that funds are invested in accordance with Board policies; and, ensures that proper internal controls are developed to safeguard the assets of the Systems. In fulfilling these responsibilities, the Director relies heavily on the Chief Investment Officer and external asset consultants.

### Chief Investment Officer

The Chief Investment Officer (CIO) serves at the pleasure of the Director yet has a direct, but limited, link to the Board on investment-related issues. The CIO's sole access to the Board is for submission of investment reports, information, or communications required by the investment policy and any other information or opinions specifically requested by the Board with regard to the investment program. The CIO is the individual primarily responsible for providing direction for the investment program. It is the CIO's responsibility to work with the Director, the general consultant, specialty

consultants, and other external service providers with the assistance of the internal staff in advising the Board on policies related to the investment program. The CIO has responsibilities related to hiring and terminating service providers.

Critical functions of the CIO include recommendations for implementation decisions related to the investment plan and for the strategic allocation of the portfolio within broad ranges approved by the Board.

#### **External Asset Consultants**

The Systems employ Towers Watson as a general consultant and Albourne America, LLC (Albourne), Pathway Capital Management (Pathway) and The Townsend Group (Townsend) as specialty consultants. Towers Watson is an independent resource available to collaborate with the Board and staff on the investment process. This typically includes regular meetings with the Board to provide an independent perspective on the Systems' goals, structure, performance and external service providers. Additionally, Towers Watson may be involved with the strategic allocation shifts for the portfolio.

The specialty consultants work on specific programs within the overall investment program. Albourne is utilized for the Private Credit, Hedged Assets and Alpha Overlay programs, Pathway is the consultant for the Private Equity and Private Credit programs and Townsend consults on the Real Estate program.

# **External Investment Managers**

The Systems employ external investment managers that include external money managers which may be structured as public or private entities in the form of a partnership, limited liability company, trust, separately managed account, commingled account, or some other form of operational structure in which assets may be held by an external custodian selected and monitored by the external manager.

Managers are given explicit written directions detailing their particular assignments or they follow the investment program outlined in their offering documents or Limited Partnership Agreements, and will construct and manage investment portfolios that are consistent with the investment philosophy and disciplines for which they were hired. Discretion is delegated to the managers to carry out investment actions as directed by the Systems.

### Master Custodian

JP Morgan Chase Bank, NA (JP Morgan) serves as the master custodian for the Systems. The master custodian holds most cash and securities for the Systems, except in cases where investment in a partnership, commingled account, or unique asset class makes it impossible to do so. The Systems thoroughly evaluate the structure of all investments and their custody arrangements. JP Morgan is responsible for providing the official book of record for performance reporting and accounting, and serves as an additional layer of risk control in safekeeping the Systems' assets.

# **Asset Allocation**

The asset allocation decision is generally regarded as the most important decision in the investment management process since it is crucial to achieving the long-term objectives established by the Board. In that light, it is the Board's responsibility to determine the appropriate policy asset allocation based upon several criteria with input and guidance from internal staff and Towers Watson. These criteria are as follows:

- 1. The expected rate of return for each asset classification
- 2. The expected risk of each asset classification (expressed as the standard deviation of the rate of return)
- 3. The correlation of returns between asset types
- 4. The investment objectives and risk constraints of the Systems (including but not limited to liquidity needs and the expected time horizon)
- The funded ratio and cash flow requirements for PSRS and PEERS
- 6. The impact of the Systems' return volatility on the contribution rate

The long-term policy allocation as of June 30, 2014 is illustrated in the following table. The allocation to each investment program considers both the risk tolerance of the Systems and the long-term return objective. The Board approved the addition of cash equivalents within Safe Assets during fiscal year 2014.

Asset Allocation				
Investment Type	Long-Term Target	Policy Range		
Public Risk Asset Programs				
U.S. Public Equity	27.00%	16% - 48%		
Public Credit	12.00%	0% - 20%		
Hedged Assets	6.00%	0% - 25%		
Non-U.S. Public Equity	15.00%	8% - 28%		
Total Public Risk Assets	60.00%	35% - 75%		
Safe Asset Programs				
U.S. Treasuries	16.00%	0% - 40%		
U.S. TIPS	4.00%	0% - 40%		
Cash Equivalents	0.00%	0% - 10%		
Total Safe Assets	20.00%	10% - 40%		
Private Risk Asset Programs	S			
Private Equity	10.50%	4% - 14%		
Private Real Estate	7.50%	4% - 10%		
Private Credit	2.00%	0% - 7%		
Total Private Risk Assets	20.00%	5% - 25%		
Total Fund	100.0%			

The Board recognizes the cyclical nature of the investment markets and it has allowed the internal staff to capitalize upon opportunities by changing the allocation of each asset class or sub-asset class within broad strategic bands or policy ranges (as indicated in the table above). The flexibility given to the internal staff in establishing the strategic mix provides opportunities for the Systems to take advantage of changing market conditions. To ensure appropriate controls, the Director, CIO and Towers Watson must unanimously agree upon all material strategic changes prior to implementation.

# Performance Objectives and Monitoring Process

Generating a total nominal rate of return net of expenses of at least 8% and a real rate of return net of expenses of at least 5.5% per annum is an important consideration in the asset allocation decision and the primary performance objective for the Systems over long periods of time. The need for a long-term focus is necessary to preclude the temptation to overreact to events in the financial markets that have no relevance to long-term asset/liability management of the Systems. The resulting dilemma is the conflicting requirement to evaluate investment policy implementation over shorter time periods while maintaining a longer-term focus on meeting the return objectives. In order to determine if the Systems' shorter-term and long-term objectives are being achieved, the Board evaluates performance relative to policy and strategic benchmarks. The policy benchmarks allow the Systems to be judged by performance relative to a defined set of broad market indices (i.e., the Systems' long-term asset allocation objective). The strategic benchmarks allow the Board to consider the additional value generated from the latitude given to the internal staff to alter the asset class or subasset class allocations.

# **Policy Decisions**

The value added through policy decisions is measured by the difference between the policy benchmark return and the actuarial required rate of return objective (defined as real return objective + inflation). A policy benchmark return greater than the actuarial required rate of return reflects value added. A policy benchmark return less than the actuarial required rate of return reflects losses or shortfalls in performance in funding the liabilities of the Systems. These policy decisions are measured over long periods of time.

# Strategy Decisions

Strategy decisions are asset class or sub-asset class asset allocation choices made by the internal staff to deviate from the policy benchmark weights, with approval from the General Consultant and the Director that the proposed material deviation is in compliance with the

Board's investment policy. The value added through these decisions to overweight and/or underweight these sub-asset classes is measured by the difference between the strategic benchmark return and the policy benchmark return. This difference captures the value added by internal staff through sub-asset class strategic decisions relative to the Board's broad policy allocation decisions. A strategic benchmark return greater than the policy benchmark return reflects value added through the allocation decisions. A strategic benchmark return less than the policy benchmark return reflects losses to the fund's performance based upon strategy decisions.

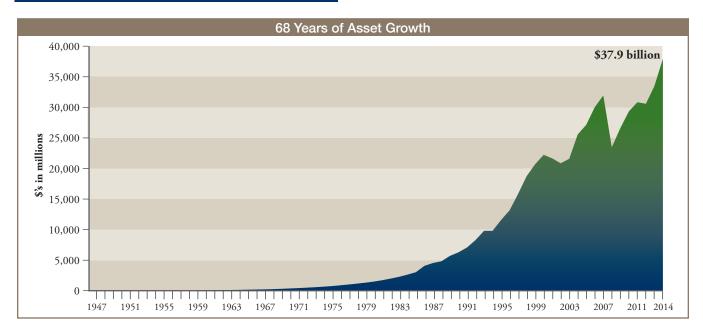
## Implementation Decisions

Implementation decisions are manager selection choices made by the internal staff with the approval of a consultant(s) and the Director. The value added through these manager selection decisions is measured by the difference between the actual portfolio return and the strategic benchmark return. An actual portfolio return greater than the strategic benchmark return reflects value added through these manager selection decisions. An actual portfolio return less than the strategic benchmark return reflects losses to the fund's performance based upon implementation decisions.

## Risk Controls

The Board recognizes that even though the Systems' investments are subject to short-term volatility, it is critical that a long-term investment focus be maintained. Given the importance of the broad asset allocation decision to the Systems' long-term investment success, internal staff is required to conduct an asset allocation/liability study at least every five years and to report the results of that study to the Board. The last experience study was conducted in 2011 and the next experience study is scheduled for 2016. In addition, the CIO must annually evaluate the asset allocation mix and any strategic allocation of the portfolio and provide a report to the Board on the results of that evaluation. This ongoing review of the asset allocation process helps to ensure the asset allocation is being monitored and modified as needed to meet the financial obligations of the Systems.

# Total Fund Review



The Systems' total invested assets were \$37.9 billion as of June 30, 2014. There has been a consistent and long-term growth in assets since the inception of PSRS in 1946 and PEERS in 1965, as shown in the graph above.

# Investment Performance<sup>3</sup>

The Systems achieved strong absolute and relative returns in fiscal year 2014. The Systems' well-structured investment portfolio added approximately \$5.5 billion in investment earnings to the growth of assets during fiscal year 2014. The Systems earned an investment return of 16.9% in fiscal year 2014, exceeding both the long-term investment goal (actuarially assumed return) of earning 8% and the total plan policy benchmark return of 15.5%. The Systems' return net of all fees and expenses was 16.7%. Over long periods of time, the Systems also continue to produce investment returns that meet or exceed the Systems' objectives. The annualized investment return over the last 30 years is 9.9%.

As illustrated in the tables below, within the Systems' investment portfolios, U.S. stocks delivered returns of 25.9%, non-U.S. stocks returned 21.7%, private equity (investments in private companies) increased 25.6%, real estate produced 13.9% returns, and hedged assets returned 15.8%. Each of these asset classes strongly contributed to the total returns of the Systems while providing diversification from fixed income securities.

Total Fund Performance				
Assets	Total Return	Weighted Contribution*		
U.S. Public Equity	25.9%	7.8%		
Public Credit	5.0%	0.4%		
Hedged Assets	15.8%	2.1%		
Non-U.S. Public Equi	ty 21.7%	3.3%		
Public Risk Assets	19.8%	13.6%		
U.S. Treasuries	1.9%	0.2%		
U.S. TIPS	3.7%	0.1%		
Cash Equivalents	n/a	n/a		
Safe Assets	1.7%	0.3%		
Private Equity	25.6%	1.8%		
Private Real Estate	13.9%	1.0%		
Private Credit	18.2%	0.2%		
Private Risk Assets	19.4%	3.0%		
TOTAL RETURN	16.9%	16.9%		

<sup>\*</sup>Percentages have been adjusted to reflect compounding effects and changes in asset weights.

<sup>&</sup>lt;sup>3</sup> Investment returns were prepared using a time-weighted rate of return based on market values.

		chmarks**	£ 37	10.37
Dublic Diels Assets Danamans	Fiscal Year	3-Year	5-Year	10-Year
Public Risk Assets Programs  U.S. Public Equity	25.9%	16.9%	20.2%	8.6%
Russell 3000 Index Public Credit	25.2%	16.5% <b>4.9%</b>	19.3%	8.2%
Barclays U.S. Intermediate Credit Index	<b>5.0%</b> 5.2%	<b>4.9%</b> 4.5%	7.0% 6.4%	<b>n/</b> :
Hedged Assets	15.8%	7.9%	11.8%	n/:
Hedged Assets Benchmark	14.1%	8.0%	11.0%	n/
Benchmark consists of: 50.0% Barclays U.S. Intermediate Credit Index 25.0% MSCI ACWI ex-USA Index 25.0% Russell 3000 Index				
Non-U.S. Public Equity  MSCI ACWI ex-USA Index	<b>21.7%</b> 21.8%	7 <b>.3</b> % 6.3%	<b>12.5%</b> 11.5%	<b>8.0</b> % 7.9%
Total Public Risk Assets	19.8%	11.1%	14.8%	7.4%
Public Risk Assets Benchmark  Benchmark consists of:  47.5% Russell 3000 Index  27.5% MSCI ACWI ex-USA Index  25.0% Barclays U.S. Intermediate Credit Index	19.1%	10.7%	14.1%	6.5%
Safe Assets Program				
Total Safe Assets	1.7%	2.3%	3.6%	4.4%
Safe Assets Benchmark  Benchmark consists of: 72.0% Barclays U.S. Treasury: Intermediate Index 8.0% Barclays U.S. Treasury: Long Index 20.0% Barclays U.S. TIPS 1-10 Years Index	2.3%	2.7%	3.6%	4.2%
Private Risk Assets Program				
Private Equity	25.6%	16.0%	17.6%	11.0%
Russell 3000 Index	25.2%	16.5%	19.3%	8.29
Private Real Estate	13.9%	12.1%	10.1%	n/
NCREIF Property Index	11.2%	11.3%	7.8%	n/
Private Credit	18.2%	10.8%	17.7%	n/
Merrill Lynch High Yield Master II Index	11.8%	9.3%	13.9%	n/
Total Private Risk Assets	19.4%	13.7%	14.3%	n/
Private Risk Assets Benchmark  Benchmark consists of:	18.6%	14.0%	14.7%	n/
52.5% Russell 3000 Index				
37.5% NCREIF Property Index				
10.0% Merrill Lynch High Yield Master II Index				
TOTAL FUND  Total Fund	16.9%	10.3%	13.1%	7.19
Total Fund Benchmark	1 <b>6.9%</b> 15.5%	9.8%	12.2%	6.79
Benchmark consists of:	1).)/0	<i>7.</i> 6 /0	12.2/0	0.7 /
39.0% Russell 3000 Index				
16.5% MSCI ACWI ex-USA Index				
14.4% Barclays U.S. Treasury: Intermediate Index				
1.6% Barclays U.S. Treasury: Long Index 15.0% Barclays U.S. Intermediate Credit Index				
7.5% NCREIF Property Index				
4.0% Barclays U.S. TIPS 1-10 Years Index				
2.0% Merrill Lynch High Yield Master II Index				
Actuarially Required Rate of Return	8.0%	8.0%	8.0%	8.0%
TUCS Universe Median	17.1%	10.1%	13.0%	7.6%

<sup>\*</sup>Some programs have been established more recently and therefore 10-year returns are not available.

<sup>\*\*</sup> Investment returns were prepared using a time-weighted rate of return based on market values.

### Investment Performance Relative to Benchmarks

The Board has established a long-term goal to achieve a total investment return of at least 8.0% per year and a real rate of return of at least 5.5% per year. The investment returns for the fiscal year, three-year and five-year time periods are substantially higher than the long-term investment objective. Additionally, the 30-year annualized total return of 9.9% for the Systems exceeds the long-term return objective of 8.0%.

The Systems utilize the Trust Universe Comparison Services (TUCS) to compare the total return and risk levels of the Systems relative to other public pension funds with assets in excess of \$1 billion. As the chart on page 54 indicates, the total return for the three-year and five-year time periods exceeded the median return of other large public funds. Total returns for the fiscal year and ten-year time periods were marginally below the public fund median return primarily due to asset allocation and risk tolerance differences. The 2014 TUCS universe data indicates that the Systems have taken less risk than 70% of other comparable public funds over the last five years.

In order to determine if the Systems' shorter-term and long-term objectives are being achieved, the Board also utilizes three benchmarks by which the Systems' progress may be judged: (1) performance relative to a policy benchmark (defined set of broad market indices that reflects the Systems' long-term asset allocation, or market beta), (2) performance relative to a strategic benchmark which indicates value added by the internal staff, and, to a lesser extent, (3) performance relative to other public pension systems and their investment managers as a reference point of oversight.

The internal staff presents to the Board a detailed attribution of the total fund performance at the end of each fiscal year. Value is added over and above expected market returns if the strategic benchmark exceeds the policy benchmark (i.e., the internal staff made positive strategic decisions) and/or if the actual total fund return exceeds the strategic benchmark. The table below summarizes the substantial value that was created in fiscal year 2014.

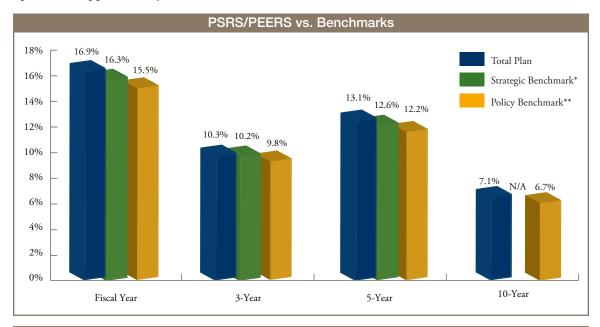
Performance Attribution	
Strategic Benchmark	16.31%
Policy Benchmark	15.50%
Value Added Through Strategic Decisions to Reposition Portfolio	0.81%
Actual Fund Return	16.87%
Strategic Benchmark	16.31%
Value Added Through Implementation	0.56%
Total Value Added	1.37%
Fees Paid Outside of Investment Structures	-0.20%
Total Value Added (Net of Fees and Expenses)	1.17%

The total returns exceeded the policy benchmark by 1.17% (net of all fees and expenses), for fiscal year 2014. This resulted in over \$400 million in excess performance to the Systems. The total fund returns have exceeded the policy benchmark in six of the last nine fiscal years, an indication that internal staff and active investment management have added value to the Systems.

# Statistical Performance

One of the primary investment objectives of the Systems is to achieve returns similar to the market but at lower risk or volatility levels. To that end, internal staff monitors a number of quantitative risk statistics related to the total investment portfolio as well as individual composites. The table below indicates that the Systems have taken substantially less risk than the policy benchmark (as measured by standard deviation) over all time periods while achieving higher returns, thereby indicating strong risk-adjusted performance.

**Beta** measures the volatility, or systematic risk, of a security or portfolio in comparison to the market as a whole. If a portfolio has a beta of 1.0, it indicates that the portfolio moves in unison with the market. The Systems' portfolios have a beta of less than 1.0 relative to the policy benchmark, indicating less market volatility. The Systems' beta relative to the world stock index (ACWI World Index) is approximately 0.50. This signifies that the Systems' portfolio moves up or down approximately half as much as the world stock index.



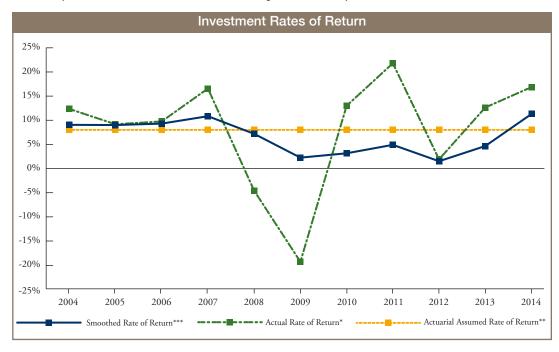
Total Plan Statistical Performance				
Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Total Plan Return	16.9%	10.3%	13.1%	7.1%
Annualized Policy Benchmark Return**	15.5%	9.8%	12.2%	6.7%
Annualized Strategic Benchmark Return*	16.3%	10.2%	12.6%	N/A
Excess Return	1.4%	0.5%	0.9%	0.4%
Annualized Standard Deviation of Composite	5.2%	7.0%	7.5%	8.9%
Annualized Standard Deviation of Policy Benchmark	5.5%	7.6%	8.1%	9.9%
Beta to Policy Benchmark	0.93	0.91	0.93	0.89
Beta to ACWI World Index	0.53	0.48	0.50	0.53

<sup>\*</sup>As of June 30, 2014: 35.3% Russell 3000 Index, 18.7% MSCI ACWI ex-USA Index, 14.7% Barclays U.S. Intermediate Credit Index, 10.2% Barclays U.S. Treasury: Intermediate Index, 1.1% Barclays U.S. Treasury: Long Index, 10.6% Merrill Lynch 3- Month U.S. Treasury Bill Index, 7.0% NCREIF Property Index, 1.4% Barclays U.S. TIPS 1-10 Years Index, and 1% Merrill Lynch High Yield Master II Index. The Total Plan Strategic Benchmark changes monthly based on the actual asset allocation at the end of the previous month. It was established more recently so a 10-year return is not available.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

<sup>\*\*</sup>As of June 30, 2014: 39.0% Russell 3000 Index, 16.5% MSCI ACWI ex-USA Index, 14.4% Barclays U.S. Treasury: Intermediate Index, 1.6% Barclays U.S. Treasury: Long Index, 15% Barclays U.S. TIPS 1-10 Years Index, and 2% Merrill Lynch High Yield Master II Index.

The following chart shows the relationship between market value returns, the actuarially assumed rate of return and the utilization of an actuarial asset valuation method of smoothed assets. To reduce volatility in employer and employee contribution rates a common actuarial practice of "asset smoothing" is utilized. The application of this practice results in full recognition of returns at the actuarial assumed rate and recognizes any annual excess or deficiency relative to the assumed rate over a period of five years.

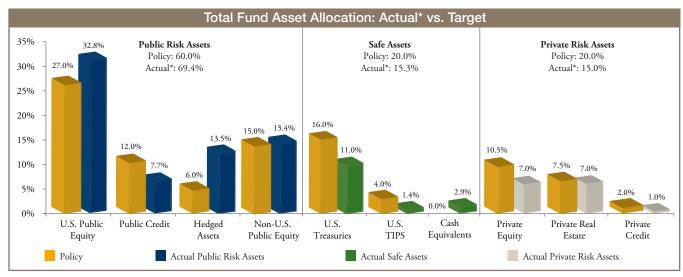


- \*The Actual Rate of Return (market return) consists of all investment gains and losses (net of investment expenses) on the fair market value of assets each year.
- \*\*The Actuarial Assumed Rate of Return is the assumed rate of return on the actuarial value of assets and is used in establishing contribution rates and pension obligations, including the net pension liability.
- \*\*\*Investment earnings in excess or deficient of the expected 8.0% rate of return are smoothed over a 5-year period for actuarial funding purposes. Twenty percent of the excess or deficiency is recognized annually for a 5 year period. This calculation results in the Smoothed Rate of Return.

# Asset Allocation: Actual Versus Target

The Board's broad policy allocation target as of June 30, 2014 was 60% Public Risk Assets, 20% Safe Assets and 20% Private Risk Assets. Within each broad policy target, the Board has established sub-asset class targets. For example, as the chart below indicates, the target allocation to U.S. Public Equity was 27% as of June 30, 2014.

As illustrated in the chart, internal staff utilized the flexibility built into the investment policy to strategically overweight or underweight certain asset classes throughout the year. Significant strategic decisions during the current year included the strategic underweight to Safe Assets and Public Credit and an overweight to all other Public Risk Assets. Specific strategic decisions within the Public Risk Assets program were the substantial overweight to U.S. equities and emerging market stocks relative to Europe, while underweighting Public Credit. These tactical asset allocation decisions by internal staff contributed significantly to the value added above the policy benchmark for the fiscal year.



\*Actual assets include 0.3% invested in cash and cash equivalents and securitlies lending collateral that is not reflected in the chart above.

# Public Risk Assets Class Summary

As of June 30, 2014, the Public Risk assets had a market value of approximately \$26.3 billion, representing 69.4% of total assets.

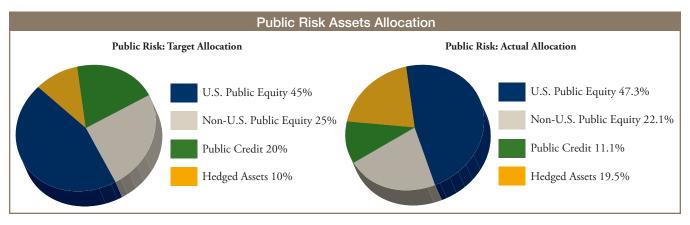
# **Investment Program Description**

The Board of Trustees has adopted an asset allocation policy that includes a broad allocation to Public Risk Assets. The four programs within the Public Risk Asset composite are U.S. Public Equity, Public Credit, Hedged Assets and Non-U.S. Public Equity. Each program within the Public Risk allocation is a separate multi-manager composite that is treated generally as a single portfolio. Each program serves a specific and distinct role within the overall Public Risk composite and also within the overall total plan allocation. Over time, the Public Risk composite and its subcomponents serve as an effective and efficient vehicle to supply the underlying beta exposure to a portfolio of global risk assets required by the Systems' asset allocation policy, while providing the opportunity to achieve excess returns above that of a passive equity benchmark through the prudent combination of passive investment vehicles and a wide range of active investment strategies.

## Structure

As of June 30, 2014, 47.3% of the Systems' Public Risk assets were invested in the U.S. Public Equity program, 22.1% in the Non-U.S. Public Equity program, 11.1% in the Public Credit program and 19.5% in the Hedged Assets program. Each of these programs is discussed in more detail on the following pages.

The internal staff strategically overweighted the total plan to Public Risk assets during the year. The target allocation for Public Risk assets is 60% and the Systems' allocation at the end of the fiscal year was 69.4%. Within the Public Risk Assets composite, internal staff strategically overweighted U.S. Public Equity and Hedged Assets, while significantly underweighting Public Credit. The Systems' maintained a minor overweight to Non-U.S. Public Equity during the year. U.S. and developed global equity markets experienced large gains during the fiscal year while public credit performed poorly on an absolute basis; therefore the employed strategic decisions contributed significant value to the Systems for the fiscal year.

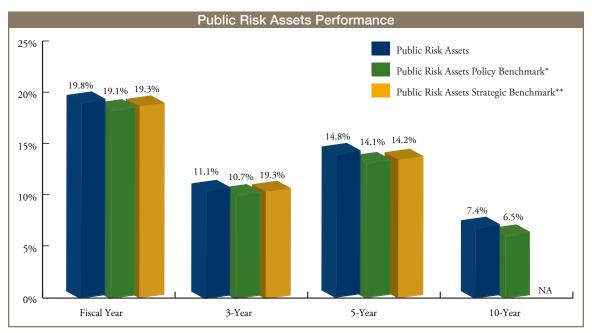


### Market Overview

The global developed equity markets experienced significant gains during the fiscal year, fueled in the U.S. by improving labor markets and other positive economic data. There was significant easing of the Eurozone crisis as well as progress toward economic recovery. The Russell 3000 Index (broad measure of the U.S. stock market) was up 25.2% for the year and the MSCI ACWI ex-USA Index (broad measure of the international stock markets) gained 21.8%. Bond markets experienced volatility and continued historically low interest rates, resulting in a modest gain for the Public Credit benchmark (Barclays U.S. Intermediate Credit Index) of 5.2%.

### Performance

The total return for the Systems' Public Risk portfolio was 19.8% compared to the benchmark return of 19.1% for the fiscal year ended June 30, 2014. As shown in the table and graph, the Public Risk portfolio outperformed the policy benchmark by 70 basis points. The strong performance relative to the benchmark can be attributed to tactical asset allocations by the internal staff and solid active management from external money managers. For the three-, five- and ten-year time periods, the Systems' significantly outperformed the benchmark as noted below.



Public Risk Assets Statistical Performance				
Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Return	19.8%	11.1%	14.8%	7.4%
Annualized Policy Benchmark Return*	19.1%	10.7%	14.1%	6.5%
Annualized Strategic Benchmark Return**	19.3%	10.9%	14.2%	n/a
Excess return	0.7%	0.4%	0.7%	0.9%
Annualized Standard Deviation of Composite	7.4%	10.4%	11.1%	13.9%
Annualized Standard Deviation of Policy Benchmark*	7.4%	10.6%	11.2%	14.3%
Beta to Policy Benchmark*	1.00	0.98	0.99	0.97
Beta to ACWI World Index	0.75	0.72	0.73	0.82

<sup>\*</sup>The Public Risk Assets Policy Benchmark is composed as follows: 47.5% Russell 3000 Index, 27.5% MSCI ACWI ex-USA Index, 25.0% Barclays U.S. Intermediate Credit Index.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

The table indicates that the Systems have taken similar risk relative to the policy benchmark (as measured by standard deviation) while achieving substantially higher returns over longer time periods, thereby indicating strong risk-adjusted performance. Additionally, the Systems' portfolios have a beta of less than 1.0 relative to the policy benchmark over longer time periods shown, indicating less market risk.

<sup>\*\*</sup> The Public Risk Assets Strategic Benchmark changes monthly based on the actual asset allocation at the end of the previous month. It was established more recently so a ten-year returns is not available.

# U.S. Public Equity Program Summary

As of June 30, 2014, the U.S. Public Equity assets had a market value of approximately \$12.4 billion, representing 32.8% of total assets.

# **Investment Program Description**

U.S. Public Equity is comprised of the Large-Cap and Small-Cap programs which seek to provide long-term capital appreciation and dividend income in excess of inflation through the investment in domestic equity securities. Returns above a purely passive investment benchmark are targeted through the use of a wide variety of active investment strategies that may employ exposure to both equity securities and other types of investments. The primary *beta* exposure is achieved through investments in passive investment vehicles (including derivatives), traditional long-only active domestic equity management, and active long/short approaches. *Alpha* (or, excess returns above a passive alternative) is expected to be achieved through traditional long-only active domestic equity management, active long/short approaches and alpha overlay strategies (described in greater detail at the end of this section).

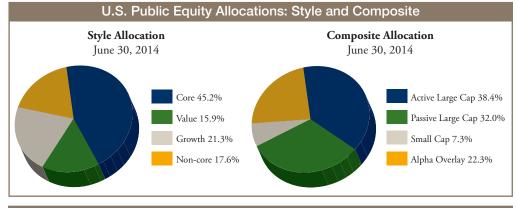
## Structure

As of June 30, 2014, 32% of the U.S. Public Equity composite was passively managed. The remainder of the portfolio was actively managed and diversified across a broad array of capitalization ranges and investment styles, including the Small-Cap Alpha Pool (S-CAP) and the Alpha Overlay program. Both programs represent multi-manager pools of assets managed within the overall U.S. Public Equity structure. The S-CAP Program encompasses all small capitalization assets. The Alpha Overlay composite focuses on the separation of returns into alpha and beta, and encompasses alternative equity mandates including hedge fund portfolios.

Exposure to the various segments of the domestic equity market (i.e., growth-oriented, value-oriented, and core) and to the approved investment strategy types are achieved through the identification, selection and on-going management of SEC-registered investment advisors qualified to serve as fiduciaries to the Systems.

The pie charts below depict the U.S. Public Equity portfolio by presenting the current style structure of the portfolio as well as the allocation by composite and market sector.

Internal staff maintained a substantial overweight to U.S. public equities during the fiscal year. All investment strategies within the U.S. Public Equity program provided strong absolute returns. The U.S. Large Cap strategy returned 25.7%, Alpha Overlay returned 27.2% and the S-CAP program returned 23.3% for the fiscal year. U.S. equity markets have experienced substantial gains not only during fiscal year 2014 but also during the preceding fiscal year. Internal staff decreased the U.S. Public Equity exposure through a disciplined process throughout fiscal year 2014 to lower portfolio risk as equity markets continued to move higher.





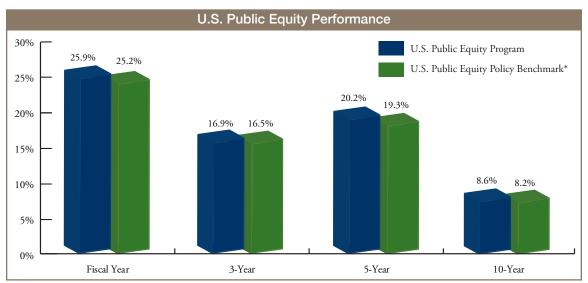
### Market Overview

The U.S. stock markets had another very strong year across both market capitalization and styles as the broad measure of the U.S. stock market (Russell 3000 Index) increased by 25.2%. Small-cap stocks (Russell 2000 Index) increased by 23.6% for the year with large-cap growth stocks (Russell 1000 Growth Index) outperforming large-cap value stocks (Russell 1000 Value Index) with a return of 26.9% compared to 23.8%.

## Performance

The total return for the U.S. Public Equity program was 25.9% compared to the benchmark return of 25.2% for the fiscal year ended June 30, 2014. As shown in the table and graph below, the annualized U.S. equity composite return outperformed the benchmark by 70 basis points. The positive performance of the portfolio relative to the policy benchmark indicates value added by the internal staff through both strategic asset allocation decisions and manager selection decisions. Active management strategies contributed significantly to the outperformance, with the Alpha Overlay program exceeding its benchmark by 255 basis points for the year.

As indicated in the table and graph, the U.S. Public Equity portfolio outperformed the benchmark for all reported time periods. Over longer periods of time, the Systems' U.S. Public Equity portfolio is designed to deliver approximately 50-100 basis points of excess return through a combination of active and passive investment strategies.



U.S. Public Equity Statistical Performance				
Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
U.S. Public Equity Return	25.9%	16.9%	20.2%	8.6%
Annualized Policy Benchmark Return*	25.2%	16.5%	19.3%	8.2%
Excess Return	0.7%	0.4%	0.9%	0.4%

<sup>\*</sup>The U.S. Public Equity Policy Benchmark is the Russell 3000 Index.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

# **Statistics**

The following table displays the statistical characteristics of the Systems' U.S. Public Equity program as of June 30, 2014 with comparisons shown to the portfolio's policy benchmark. In addition, the top ten U.S. stock holdings as of June 30, 2014 are shown in the table on the right.

U.S. Public Equity Characteristics				
Characteristics	June 30, 2014 Combined Systems*	June 30, 2014 Russell 3000 Index		
Number of Securities	1,361	3,000		
Dividend Yield	1.7%	1.8%		
Price-to-Earnings Ratio	19.2	19.7		
Avg. Market Capitalization	86.4 bil	101.7 bil		
Price-to-Book Ratio	3.1	2.7		

<sup>\*</sup> Includes only actively managed separate accounts A complete list of portfolio holdings is available upon request.

U.S. Public Equity - Top 10 Holdings				
Top 10 Largest Holdings* June 30, 2014	Market Value	% of Total U.S. Public Equity		
Chevron Corp.	\$ 73,155,390	0.6%		
Apple, Inc.	70,212,053	0.6%		
Exxon Mobil, Corp.	69,638,040	0.6%		
Celgene, Corp.	54,886,252	0.4%		
AT&T, Inc.	52,883,391	0.4%		
Verizon Communications, Inc	49,432,805	0.4%		
Tesla Motors, Inc.	49,308,324	0.4%		
Amdocs, Ltd.	49,112,626	0.4%		
FaceBook, Inc.	48,608,614	0.4%		
Amazon.com, Inc.	45,699,144	0.3%		
TOTAL	\$ 562,936,639	4.5%		

# **Investment Advisors**

As of June 30, 2014, the Systems had contracts with 14 external investment advisors who managed 22 portfolios that comprised 77.7% of the U.S. Public Equity portfolio. The remaining 22.3% of the portfolio was in the Alpha Overlay program described in the next section. In fiscal year 2014, one new investment advisor was added: a Large Cap growth assignment managed by Columbia Management.

U.S. Public Equity Investment Advisors					
T	T C. 1	Market Value*	% of Total		
Investment Advisor	Investment Style	As of June 30, 2014	Market Value		
Analytic Investors	Structured Large Cap Value	\$ 254,551,021	0.7%		
Analytic Investors	U.S. Low Volatility Equity	1,001,820,831	2.6%		
AQR Capital Management	Large Cap 140/40 Core	530,677,312	1.4%		
Aronson + Johnson + Ortiz	Active Large Cap 130/30 Value	387,088,220	1.0%		
Aronson + Johnson + Ortiz	Active Large Cap Value	595,299,799	1.6%		
Blackrock	Passive Russell 1000 Index	2,316,589,533	6.1%		
Blackrock	Passive Russell 1000 Growth Index	386,354,447	1.0%		
Columbia Management	Active Large Cap Growth	289,637,819	0.8%		
Martingale Asset Management	Active Large Cap 130/30 Growth	312,149,594	0.8%		
NISA Investment Advisors	Diversified Beta	1,283,325,956	3.4%		
Westwood Management	Active Large Cap Value	522,600,862	1.4%		
Westwood Management	Master Limited Partnerships	338,998,859	0.9%		
Zevenbergen Capital	Active All Cap Growth	547,866,496	1.4%		
S-CAP: Allianz	Active Micro Cap Growth	105,813,759	0.3%		
S-CAP: Allianz	Active Ultra Micro Cap Growth	32,055,094	0.1%		
S-CAP: AQR Capital Management	Active Small Cap Value	178,345,189	0.5%		
S-CAP: Chartwell Investment Partners	Active Small Cap Value	185,257,063	0.5%		
S-CAP: Columbus Circle	Active Small Cap Growth	124,578,750	0.3%		
S-CAP: Next Century Growth Investors	Active Small Cap Growth	59,972,838	0.2%		
S-CAP: Next Century Growth Investors	Active Micro Cap Growth	17,710,327	0.0%		
S-CAP: NISA Investment Advisors	Russell 2000 Value Exposure	35,157,687	0.1%		
S-CAP: RBC Global Asset Management	Active Small Cap Core	163,487,891	0.4%		
Small Cap Alpha Pool (S-CAP) Subtotal	-	902,378,598	2.4%		
Total		\$ 9,669,339,347	25.5%		

<sup>\*</sup>Includes manager cash

# Alpha Overlay Program Summary

As of June 30, 2014, the Alpha Overlay allocation had a market value of approximately \$2.8 billion, representing 7.3% of total assets.

# **Investment Program Description**

The Alpha Overlay portfolio resides within the U.S. Large-Cap Equity program. The Alpha Overlay portfolio has been constructed to assist in meeting the long-term goals established for the overall U.S. Large-Cap Equity allocation. Specifically, Alpha Overlay provides broad exposure to large-cap U.S. stocks using S&P 500 total return swaps, while the returns of a select portfolio of hedge fund strategies provides the opportunity to earn excess returns above the passive S&P 500 Index. By combining the market exposure obtained through the S&P 500 total return swaps with the diversified exposures to investment strategies focused on alpha generation, the combined portfolio is constructed and managed to produce a return stream with volatility and beta characteristics similar to the passive S&P 500 Index, while generating excess returns (or alpha) of approximately 200-250 basis points over longer periods of time.

## Structure

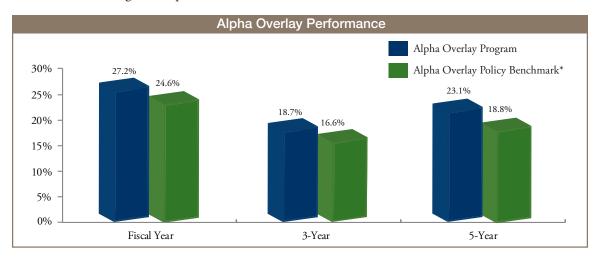
As of June 30, 2014, 28.5% of the Alpha Overlay composite assets were passively managed by NISA Investment Advisors using S&P 500 total return swaps to attain equitization. An additional 66.5% of the portfolio was actively managed across a diversified range of multi-strategy and market neutral hedge fund mandates. The remaining 5.0% of the portfolio was actively managed by Zevenbergen Capital in a long-only mandate. The chart below displays the specific investment advisor exposure within the composite as of June 30, 2014.

Alpha Overlay Investment Advisors				
		Market Value*	% of Total	
Investment Advisor	Investment Style	As of June 30, 2014	Market Value	
Algert Coldiron Investors	Multi-Strategy Market Neutral	\$ 706,690	0.0%	
Analytic Investors	Japan Market Neutral	34,047,613	0.1%	
AQR Absolute Return Fund	Multi-Strategy	129,068,610	0.3%	
Bridgewater Pure Alpha II	Asset Allocation/Global Macro	284,840,182	0.8%	
Bridgewater Pure Alpha Major Markets	Asset Allocation/Global Macro	100,042,612	0.2%	
Carlson Black Diamond	Multi-Strategy	250,153,336	0.7%	
Davidson Kempner Institutional Partners	Multi-Strategy	380,921,029	1.0%	
NISA Investment Advisors	S&P 500 Exposure	790,873,100	2.1%	
Och-Ziff Domestic Partners	Multi-Strategy	203,349,882	0.5%	
Renaissance Institutional Equities Fund	Equity Long/short	179,517,879	0.5%	
Stark Investments Limited Partners	Equity Long/short	5,424,401	0.0%	
UBS O'Connor Fundamental MN	Global Market Neutral	87,796,463	0.2%	
UBS O'Connor Multi-Strategy Alpha	Multi-Strategy	191,196,876	0.5%	
Zevenbergen Capital	Active All-Cap Growth	139,327,452	0.4%	
Total		\$ 2,777,266,125	7.3%	

<sup>\*</sup> Includes manager cash

# Performance

The total return for the Alpha Overlay program was 27.2% compared to the benchmark return of 24.6% for the fiscal year ended June 30, 2014. As shown in the table and graph below, the Alpha Overlay composite returns substantially exceeded the benchmark while maintaining a risk profile (standard deviation and beta) similar to that of the benchmark over longer time periods.



Alpha Overlay Statistical Performance				
Portfolio Characteristics	Fiscal Year	3-Year	5-Year	
Annualized Alpha Overlay Return	27.2%	18.7%	23.1%	
Annualized Policy Benchmark Return*	24.6%	16.6%	18.8%	
Excess Return	2.6%	2.1%	4.3%	
Annualized Standard Deviation of Composite	9.6%	11.8%	13.4%	
Annualized Standard Deviation of Policy Benchmark*	9.5%	12.3%	13.4%	
Beta to Policy Benchmark*	1.01	0.96	0.99	

<sup>\*</sup>The Alpha Overlay Policy Benchmark is the S&P 500 Index. Ten-year returns are not available due to the age of the asset class.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

# Non-U.S. Public Equity Program Summary

As of June 30, 2014, the Non-U.S. Public Equity assets had a market value of approximately \$5.8 billion, representing 15.4% of total assets.

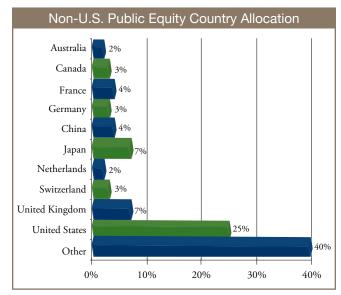
# **Investment Program Description**

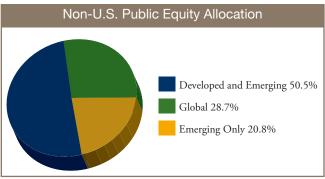
The Non-U.S. Public Equity program provides longterm capital appreciation and dividend income in excess of inflation through exposure to public equity securities on a global basis. Specific investment strategies approved for the Non-U.S. Public Equity program include passive investment vehicles, traditional long-only active equity management and active long/short approaches. Exposure to the various segments of the global equity market (i.e., U.S., developed non-U.S., emerging, growth-oriented, value-oriented, and core) and to the approved investment strategy types are achieved through the identification, selection and on-going management of SEC-registered investment advisors qualified to serve as fiduciaries to the Systems. The Non-U.S. portfolios provide an element of diversification relative to the domestic equity portfolios. Currency is another aspect of international investing that can impact the performance and volatility of the asset class over the short-term, however, over the long-term the effect from currency is expected to be neutral.

### Structure

As of June 30, 2014, 19.8% of the Non-U.S. Public Equity composite was passively managed. The remainder of the portfolio was actively managed and diversified across capitalization ranges, styles and a number of developed and emerging market countries.

The bar graph below displays the specific country exposure within the composite while the pie chart indicates broader exposure by investment mandate.





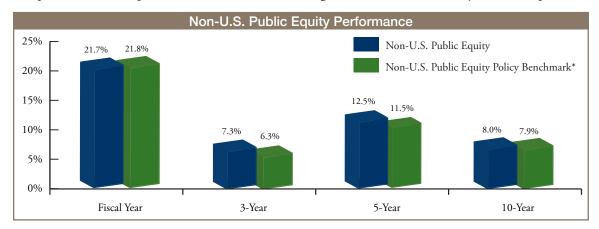
The Systems maintained a slight overweight to Non-U.S. Public Equity throughout the year. Within the Non-U.S Public Equity composite, emerging market equities were overweight relative to Europe.

#### Market Overview

Stock markets throughout the world increased substantially in fiscal year 2014. The broad measure for developed international markets (MSCI EAFE Index) increased 23.6%, emerging markets (MSCI EM Index) increased 14.3% and global stocks (MSCI World) increased 24.1%. Global markets benefited from significant easing of the Eurozone crisis as well as progress toward economic recovery.

# Performance

The total return for the Non-U.S. Public Equity program was 21.7% compared to the benchmark return of 21.8% for the fiscal year ended June 30, 2014. As shown in the table and graph below, the Systems' Non-U.S. Public Equity composite returns outperformed the benchmark during the three-, five- and ten-year returns periods.



Non-U.S. Public Equity Statistical Performance					
Portfolio Characteristics Fiscal Year 3-Year 5-Year 10-Yea					
Annualized Non-U.S. Public Equity Return	21.7%	7.3%	12.5%	8.0%	
Annualized Policy Benchmark Return*	21.8%	6.3%	11.5%	7.9%	
Excess Return	-0.1%	1.0%	1.0%	0.1%	

<sup>\*</sup>The Non-U.S. Public Equity Benchmark is the MSCI ACWI ex-USA Index.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

# **Statistics**

The following table displays the top ten non-U.S. stock holdings as of June 30, 2014.

Non-U.S. Public Equity - Top 10 Holdings				
Top 10 Largest Holdings* June 30, 2014	Market Value	% of Total Non-U.S. Public Equity		
Bayer AG	\$ 48,929,650	0.8%		
Nestle SA	37,614,955	0.6%		
Compass Group	30,153,263	0.5%		
HSBC Holdings	28,038,751	0.5%		
Roche Holdings AG	27,853,628	0.5%		
ING	26,919,493	0.5%		
Honda Motor Co.	25,595,723	0.5%		
WPP Plc	23,997,759	0.4%		
Schneider Electric	23,637,313	0.4%		
Denso Corp	23,090,400	0.4%		
Total	\$ 295,830,935	5.1%		

<sup>\*</sup> Includes only actively managed separate accounts

A complete list of portfolio holdings is available upon request.

# **Investment Advisors**

As of June 30, 2014, the Systems had contracts with 11 external investment advisors who managed 14 portfolios within the Non-U.S. Public Equity portfolio. There were no changes in manager assignments during the fiscal year.

Non-U.S. Public Equity Investment Advisors					
		Market Value*	% of Total		
Investment Advisor	Investment Style	As of June 30, 2013	Market Value		
Acadian Asset Management	Active Emerging Markets	\$ 219,398,867	0.6%		
AllianceBernstein Institutional Mgmt.	Active Intl Value	358,754,461	0.9%		
Analytic Investors	Active Global	628,185,158	1.7%		
AQR Capital Management	Active Intl Core	526,466,822	1.4%		
Arrowstreet Capital	Active Emerging Markets	153,614,300	0.4%		
Arrowstreet Capital	Active Global	507,411,629	1.3%		
Arrowstreet Capital	Global Long/Short	527,623,839	1.4%		
Blackrock	Passive Intl Core	819,220,835	2.2%		
MFS Investment Management	Active Intl Core	774,274,044	2.0%		
MFS Investment Management	Active Intl Core	129,698,761	0.3%		
Neon Capital Management	Active Emerging Markets	99,742,632	0.3%		
NISA Investment Advisors	ACWI Swaps	330,638,392	0.9%		
Rock Creek Group	Active Emerging Markets	554,576,945	1.5%		
Russell Investments	Active Emerging Markets	183,471,856	0.5%		
Transition accounts	Transition accounts	2,241,771	0.0%		
Total		\$ 5,815,320,312	15.4%		

<sup>\*</sup> Includes manager cash.

# Public Credit Program Summary

As of June 30, 2014, the Public Credit assets had a market value of approximately \$2.9 billion, representing 7.7% of total assets.

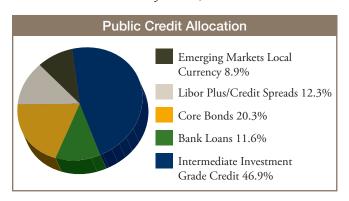
# **Investment Program Description**

The Public Credit Program is designed to provide a source of income and capital appreciation for the Systems while creating substantial diversification to the total plan with a low correlation to other asset classes. Most securities in this program exhibit high liquidity. Specific investments can include investment grade corporate securities, below investment grade debt instruments, distressed debt securities, convertible bonds, bank loans, agencies, mortgage-backed securities, asset-backed securities, and interest rate sensitive securities (including those issued or guaranteed by the United States government or its agencies). Investments in this program may include debt of both U.S. and non-U.S. issuers.

The performance objective for the Public Credit program is to exceed the returns of the investment grade credit markets through the use of a wide variety of active management approaches while incurring a level of risk that is generally consistent with the policy benchmark.

### Structure

As of June 30, 2014, the Public Credit composite was actively managed and diversified across high quality corporate bonds, bank loans and non-dollar currencies of both developed and emerging countries. The pie chart below presents the strategy allocation of the Systems' Public Credit assets as of June 30, 2014.



The target allocation for the Public Credit program is 12.0% and the Systems' allocation at the end of the fiscal year was 7.7%. Within the Public Credit composite, the Systems' internal staff has built a diversified

portfolio with a base of almost 50% in high quality, shorter duration corporate bonds. The most significant position outside of the core bond allocation was to non-U.S. dollar bonds (and foreign currencies) due to an expectation that the U.S. dollar would decline over the medium term.

### Market Overview

Interest rates experienced significant volatility during fiscal year 2014, rising during the first half of the year only to reverse course during the last half of the year and end the year much as it had started. The yield on the 10-year Treasury increased from 2.48% on June 30, 2013 to 2.53% on June 30, 2014.

Investment grade credit corporate bonds (Barclays U.S. Intermediate Credit Index) increased 5.2% for the year while a broader measure of the U.S. bond market (Barclays U.S. Aggregate Index) increased 4.4%. High yield, or lower quality, bonds (Merrill Lynch High Yield Master II Index) increased 11.8% for the year and global bonds (Barclays Global Agg Ex.U.S. Index) increased 9.4%.

### **Statistics**

The following table displays the top ten Public Credit holdings as of June 30, 2014.

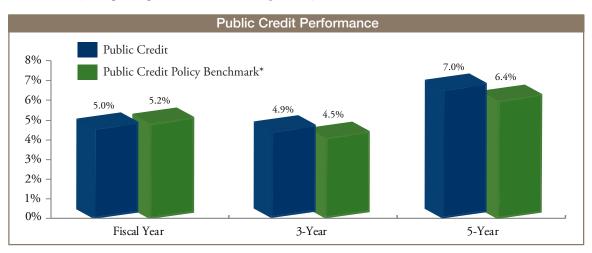
Public Credit - Top 10 Holdings					
Top 10 Largest Holdings*		% of Total			
June 30, 2014	Market Value	Public Credit			
PIMCO Short Term Floating					
NAV II Fund	\$ 276,050,378	9.4%			
PIMCO Developing Local					
Markets Fund	259,035,241	8.8%			
Verizon Communications, Inc.,					
2.5%, 9/15/2016	69,938,463	2.4%			
IBM, Corp, 3.375%,					
8/1/2023	37,194,913	1.3%			
JP Morgan Chase and Co.,					
1.35%, 02/15/2017	36,845,338	1.2%			
SunTrust Banks, Inc. 2.35%,					
11/1/2018	35,341,600	1.2%			
MUFG Union Bank NA,					
2.625%, 06/26/2018	35,102,538	1.2%			
Bank of America Corp.,					
2.6%, 1/15/2019	34,291,715	1.2%			
Goldman Sachs Group,					
2.625%, 1/31/2019	34,193,459	1.2%			
ACE INA, Holdings, Inc.					
5.7%, 2/15/2017	33,950,831	1.1%			
Total	\$ 851,944,476	29.0%			

<sup>\*</sup> Includes only actively managed separate accounts. A complete list of portfolio holdings is available upon request.

# Performance

The total return for the Public Credit program was 5.0% compared to the benchmark return of 5.2% for the fiscal year ended June 30, 2014. As indicated in the table and graph below, the Systems outperformed the benchmark for the three- and five-year time periods.

The Oaktree bank loan portfolio and the PIMCO LIBOR Plus portfolios provided solid absolute and relative returns for the fiscal year, gaining 6.6% and 7.3%, respectively.



Public Credit Statistical Performance				
Portfolio Characteristics	Fiscal Year	3-Year	5-Year	
Annualized Public Credit Return	5.0%	4.9%	7.0%	
Annualized Policy Benchmark Return*	5.2%	4.5%	6.4%	
Excess Return	-0.2%	0.4%	0.6%	

<sup>\*</sup>The Public Credit Policy Benchmark is the Barclays U.S. Intermediate Credit Index.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

### **Investment Advisors**

As of June 30, 2014, the Systems had contracts with 3 external investment advisors who managed 5 portfolios in the Public Credit portfolio. There were no changes in manager assignments during the fiscal year.

P	ublic Credit Investment Advisors			
		1	Market Value*	% of Total
Investment Advisor	Investment Style	As	of June 30, 2014	Market Value
NISA Investment Advisors	Corporate Credit	\$	1,378,829,505	3.6%
Oaktree Bank Loans	Senior Bank Loans		341,109,872	0.9%
Pacific Investment Management Co.	Core Plus		596,611,146	1.6%
Pacific Investment Management Co.	LIBOR Plus		362,103,820	1.0%
Pacific Investment Management Co.	Developing Local Markets		259,035,241	0.6%
Total		\$	2,937,689,584	7.7%

<sup>\*</sup>Includes manager cash

The Public Credit Program was established in December 2008, so ten-year returns are not available.

# Hedged Assets Program Summary

As of June 30, 2014, the Hedged Assets portfolio had a market value of approximately \$5.1 billion, representing 13.5% of total assets.

# **Investment Program Description**

The Hedged Assets program's objective is to provide diversification to the total portfolio and reduce volatility within the Public Risk composite. The purpose of this program is to enhance the overall risk/return profile of the Public Risk composite through the inclusion of specialized investment strategies that typically generate returns in a different fashion (i.e., absent a high correlation to equities or bonds). These strategies may utilize leverage as allowed within their governing documents. The returns from these strategies have historically had a low-to-moderate correlation with the traditional equity markets, thus providing diversification benefits in addition to portfolio return enhancement. These strategies seek to control risks and maintain a focus on absolute returns. The inherent nature of these vehicles to serve as a "hedge" provides for the expectation that the Program will lag the equity market during times when equities are performing above the long-term averages. However, when equities are performing below the long-term averages, the program would be expected to outperform the equity market. In addition, managers within this asset class have

historically possessed significantly lower volatility

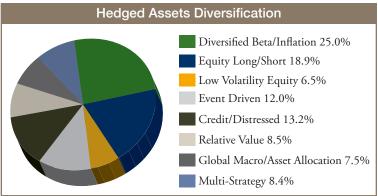
relative to traditional equity managers.

## Structure

The Systems have retained Albourne America, LLC (Albourne) as its hedge fund Consultant. Albourne is an independent global advisory firm focused mainly on hedge funds. The Systems utilize direct investments into hedge funds as opposed to incorporating fund-of-funds. The Systems' internal staff believe the benefits of direct investments, including lower fees, customized portfolio exposures, direct access to manager knowledge, and higher levels of transparency, outweighed the benefit of quicker implementation offered by fund-of-funds.

As the chart below indicates, the Hedged Assets program is diversified into Multi-Strategy Managers, Asset Allocation/Global Macro, Diversified Beta/Inflation, Credit/Distressed Specialists and Equity Long/Short. Multi-Strategy managers include those focused on event-driven, credit, and relative value. The Systems manage the Hedged Assets portfolio to a blended benchmark of 25% Russell 3000 Index, 25% MSCI ACWI Ex-USA. Index, and 50% Barclays U.S. Intermediate Credit Index.

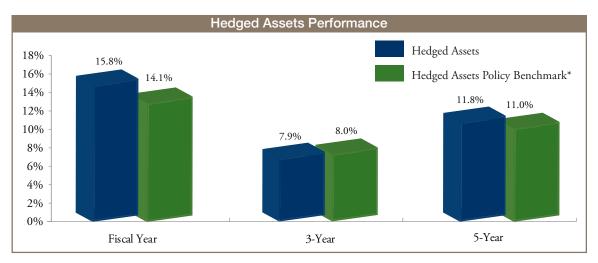
Internal staff's decision to continue a substantial overweight to Hedged Assets relative to Safe Assets and Public Credit throughout fiscal year 2014 added value to the Systems.



### Performance

The total annualized return on the Systems' Hedged Assets portfolios was 15.8%, compared to the benchmark return of 14.1% for the fiscal year ended June 30, 2014. The one-year return outperformed the policy benchmark by 170 basis points, providing exceptional absolute and relative returns.

Over the past five years, the Hedged Assets Program has outperformed its benchmark by 80 bps on an annualized basis. The outperformance relative to the policy benchmark is particularly impressive given the strong performance of equities over the past five years. The Russell 3000 Index was up an annualized 19.3% over the past five years and the MSCI ACWI Index was up an annualized 14.3%. As discussed previously, the hedging characteristics of the Hedged Assets Program provide for the expectation that its performance will lag equity markets and/or its policy benchmark during periods of higher-than-normal equity returns. The Hedged Assets Program is expected to outperform in less robust and below average markets. As the table indicates, the longer term performance was accomplished by assuming less than one-half of the volatility of the world stock index and achieving a beta of approximately .40 to the index, signifying that the Systems' portfolios move up or down less than half as much as the world stock index.



Hedged Assets Statistical Performance					
Portfolio Characteristics	Fiscal Year	3-Year	5-Year		
Annualized Hedged Assets Return	15.8%	7.9%	11.8%		
Annualized Policy Benchmark Return*	14.1%	8.0%	11.0%		
Annualized S&P 500 Return	24.6%	16.6%	18.8%		
Annualized MSCI ACWI Index	23.0%	10.3%	14.3%		
Annualized Standard Deviation of Composite	4.5%	6.6%	6.7%		
Annualized Standard Deviation of Policy Benchmark*	5.3%	7.9%	8.2%		
Annualized Standard Deviation of S&P 500	9.5%	12.3%	13.4%		
Annualized Standard Deviation to MSCI ACWI Index	9.7%	14.3%	15.0%		
Beta to Policy Benchmark*	0.79	0.78	0.76		
Beta to S&P 500	0.43	0.45	0.43		
Beta to MSCI ACWI Index	0.41	0.42	0.40		

<sup>\*</sup>The Hedged Assets Policy Benchmark is composed as follows: 50% Barclays U.S. Intermediate Credit Index, 25% MSCI ACWI ex-USA, 25% Russell 3000 Index.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

# **Investment Advisors**

As of June 30, 2014, the Systems' had contracts with 16 external investment advisors who managed 24 portfolios. One investment advisor ceased operations during fiscal year 2014.

Hedged A	Assets Investment Advisors		
		Market Value*	% of Total
Investment Advisor	Investment Style	As of June 30, 2014	Market Value
AQR Absolute Return Fund	Multi-Strategy	\$ 119,140,255	0.3%
AQR Diversified Beta Fund	Diversified Beta/Inflation	413,530,435	1.1%
AQR Real Asset Fund	Multi-Strategy	55,522,305	0.1%
Bridgewater All Weather	Equity Long/short	396,716,404	1.0%
Bridgewater Inflation Pool	Diversified Beta/Inflation	110,120,498	0.3%
Bridgewater Pure Alpha II	Asset Allocation/Global Macro	153,375,485	0.4%
Bridgewater Pure Alpha Major Markets	Asset Allocation/Global Macro	233,432,744	0.6%
Carlson Black Diamond	Multi-Strategy	188,712,166	0.5%
Davidson Kempner Institutional Partners	Multi-Strategy	67,221,358	0.2%
Davidson Kempner Distressed Opportunities Fund	Distressed Debt/Credit	239,525,287	0.6%
GoldenTree Partners	Distressed Debt/Credit	441,994,846	1.2%
Indus Asia Pacific Fund	Equity Long/short	119,138,623	0.3%
Maverick Fund USA	Equity Long/short	93,856,047	0.2%
NISA Investment Advisors	Diversified Beta/Inflation	492,248,978	1.3%
Och-Ziff Domestic Partners	Multi-Strategy	180,329,140	0.5%
Och-Ziff Europe	Multi-Strategy	62,107,041	0.2%
Och-Ziff Asia	Multi-Strategy	176,111,212	0.5%
Owl Creek Overseas Fund	Multi-Strategy	149,482,847	0.4%
Pershing Square	Equity Long/short	298,039,502	0.8%
Renaissance Institutional Equities Fund	Equity Long/short	333,390,346	0.9%
Stark Investments Limited Partners	Equity Long/short	10,073,891	0.0%
UBS O'Connor Multi-Strategy Alpha	Multi-Strategy	127,464,584	0.3%
Westwood Management	Diversified Beta/Inflation	272,616,014	0.7%
York Capital Management	Multi-Strategy	400,232,521	1.1%
Total		\$ 5,134,382,529	13.5%

<sup>\*</sup>Includes manager cash

# Safe Assets Class Summary

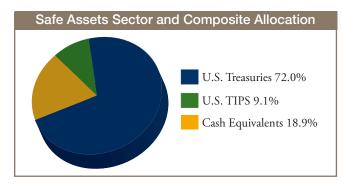
As of June 30, 2014, the Safe Assets had a market value of approximately \$5.8 billion, representing 15.3% of total assets.

# **Investment Program Description**

The Safe Assets program is intended to act as a source of safety and income for the Systems. The program is designed to create substantial diversification to the total portfolio and reduce volatility through low correlation to other asset classes. Specifically, the Safe Assets portfolio should provide asset protection at the total fund level in periods of economic stress. The policy benchmark for the Safe Assets allocation is 80% Barclays U.S. Treasury Blended Index (a combination of the Barclays U.S. Treasury Intermediate Index and the Barclays U.S. Treasury Long Index) and 20% Barclays Capital U.S. TIPS 1-10 Year Index.

## Structure

As of June 30, 2014, the Systems' entire Safe Assets program was actively managed by NISA Investment Advisors. The assets held within the program exhibit high liquidity and safety. The pie chart below depicts the Safe Assets Program by showing the sector and composite allocations as of June 30, 2014.



Internal staff strategically underweighted the allocation to Safe Assets during the year. Internal staff continues to maintain an underweight to Safe Assets due in part to historically low yields and due to better expected risk/adjusted returns going forward within the Public Risk program. The Systems' allocation to Safe Assets was 15.3% as of June, 30, 2014, as compared to the benchmark weight of 20%. However, the Systems' allocation to Safe Assets increased during the last half of the year as the Cash Equivalents portfolio was established. The cash position is a result of internal staff decreasing the U.S. Public Equity exposure to lower total portfolio risk as equity markets continued to move higher. The cash balances provide the Systems with flexibility to deploy cash opportunistically as the market environment dictates.

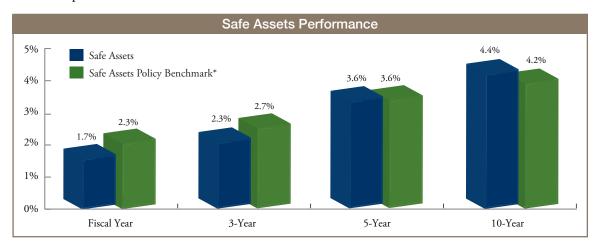
### Market Overview

Interest rates experienced significant volatility during fiscal year 2014, rising during the first half of the year only to reverse course during the last half of the year and end the year much as it had started. The yield on the 10-year Treasury increased from 2.48% on June 30, 2013 to 2.53% on June 30, 2014.

# Performance

The total return for Safe Assets portfolio was 1.7% for the fiscal year ended June 30, 2014. The portfolio underperformed the benchmark for the year by 60 basis points due to an underweight in TIPS and an increased allocation to cash equivalents. For the three-year time period, the Systems' modestly underperformed the Safe Assets benchmark. The Systems' performance equaled the Safe Assets benchmark for the five-year time period and exceeded the benchmark over the longer time period of 10 years.

The absolute return of the Safe Assets portfolio is relatively modest over longer time periods. However, the Safe Assets portfolio continues to provide asset protection at the total fund level in periods of economic stress and ultimate liquidity to the Systems. An allocation to Safe Assets allows the Systems to accept market risk in other portions of the total fund portfolio.



Safe Assets Statistical Performance					
Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year	
Annualized Safe Assets Return	1.7%	2.3%	3.6%	4.4%	
Annualized Policy Benchmark Return*	2.3%	2.7%	3.6%	4.2%	
Excess Return	-0.6%	-0.4%	0.0%	0.2%	
Annualized Standard Deviation of Composite	2.0%	2.8%	3.0%	3.3%	
Annualized Standard Deviation of Policy Benchmark*	2.4%	2.9%	3.1%	3.4%	
Beta to Policy Benchmark*	0.82	0.96	0.95	0.97	
Beta to ACWI World Index	-0.01	-0.07	-0.06	-0.02	

<sup>\*</sup>The Safe Assets Policy Benchmark is composed as follows: 72.0% Barclays U.S. Treasury: Intermediate Index, 20% Barclays Capital U.S. TIPS 1-10 Yrs. Index and 8.0% Barclays U.S. Treasury: Long Index.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

The table indicates that the Systems have taken lower risk to the Policy benchmark (as measured by standard deviation) over longer time periods, while achieving similar returns; indicating strong risk-adjusted performance. The Systems have specifically taken less risk compared to the Policy benchmark more recently with the addition of the cash equivalents portfolio. Additionally, the Systems' portfolios have a beta slightly less than 1.0 relative to the Policy benchmark over all time periods, indicating less market volatility. During the fiscal year, the Safe Assets beta to the Policy benchmark decreased substantially with the addition of the cash equivalents portfolio. Most importantly, the Safe Assets portfolio exhibits a beta of approximately zero relative to the world stock index (MSCI ACWI Index), indicating no correlation to risk assets. These statistics support one of the primary objectives of Safe Assets: diversification from other risk assets in the total fund.

# **Statistics**

The following table displays the statistical characteristics of the Systems' Safe Assets Program as of June 30, 2014 with comparisons shown to the Barclays U.S. Treasury: Intermediate Index. Additionally, the top ten Safe Assets holdings as of June 30, 2014 are shown in the table below the characteristics.

Safe Assets Characteristics				
Characteristics	June 30, 2014 Combined Systems	June 30, 2014 Barclays U.S. Treasury: Intermediate Index		
Number of Securities	94	204		
Average Coupon	1.6%	1.8%		
Yield to Maturity	0.8%	1.1%		
Average Maturity (Year	s) 5.7	3.9		
Duration (Years)	4.1	3.7		

Safe Assets - Top 10 Holdings				
Top 10 Largest Holdings* June 30, 2014	Market Value	% of Total Safe Assets		
United States Treasury Note, 0.25%, 02/29/2016	\$ 376,081,079	6.5%		
United States Treasury Note, 0.375%, 01/31/16	350,183,539	6.0%		
United States Treasury Note, 0.25%, 12/31/15	300,524,040	5.2%		
United States Treasury Note, 1.25%, 10/31/15	238,215,877	4.1%		
United States Treasury Note, 3.50%, 5/15/20	213,172,399	3.7%		
United States Treasury Note, 2.375%, 10/31/14	201,470,659	3.4%		
United States Treasury Note, 2.00%, 4/30/16	163,347,979	2.8%		
United States Treasury Note, 2.875%, 5/15/43	163,122,650	2.8%		
United States Treasury Note, 3.00%, 9/30/16	153,047,794	2.6%		
United States Treasury Note, 2.125%, 5/31/15	143,912,676	2.5%		
Total	\$ 2,303,078,692	39.6%		

<sup>\*</sup>Includes only actively managed separate accounts.

# **Investment Advisors**

NISA Investment Advisors managed the Safe Assets program as of June 30, 2014. The Cash Equivalents portfolio was added during the fiscal year. The following table lists the firm's management by investment style.

Safe Assets Investment Advisor					
Investment Advisor	Investment Style	Market Value* As of June 30, 2014	% of Total Market Value		
NISA Investment Advisors	U.S. Treasuries	\$ 4,187,034,443	11.0%		
NISA Investment Advisors	Cash Equivalents	1,101,733,597	2.9%		
NISA Investment Advisors	U.S. TIPS	526,804,432	1.4%		
Total		\$ 5,815,572,472	15.3%		

<sup>\*</sup>Includes manager cash

A complete list of portfolio holdings is available upon request.

# Private Risk Assets Class Summary

As of June 30, 2014, the Private Risk assets had a market value of approximately \$5.7 billion, representing 15.0% of total assets.

# **Investment Program Description**

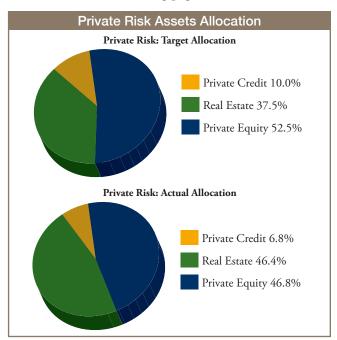
The allocation to Private Risk investments is viewed as a separate asset class for inclusion in the Systems' overall investment portfolios. The process of building the Systems' Private Risk program and fully funding the target allocation is expected to occur over a period of several years. Additional new investments will be necessary beyond the initial start-up period in order to maintain the long-term 20% target allocation. The three programs within the Private Risk Assets composite are Private Equity, Private Real Estate and Private Credit. Each program within the Private Risk allocation is a separate multi-manager composite that is treated generally as a single portfolio. Each program serves a specific and distinct role within the overall Private Risk Composite and also within the overall Total Plan allocation. Over time, the Private Risk Composite serves as a long-term vehicle to supply the underlying beta exposure to a portfolio of private assets.

Investments in Private Risk Assets differ substantially from the Systems' public markets asset classes (Public Risk Assets and Safe Assets) in part because they are typically very long-term in nature, not publicly traded, relatively illiquid, and offer the potential for substantially higher returns (along with a commensurate level of risk). The illiquid nature of Private Risk Assets can result from the form of the asset or security itself, or it can be a function of the investment structure being utilized (e.g., a limited partnership).

Due to the fact that Private Risk Assets are not publicly traded, pricing and performance measurements prior to realization of gains are less reliable than in the traditional publicly traded asset classes. The Systems continually monitor the valuation policies and procedures utilized for such investments.

### Structure

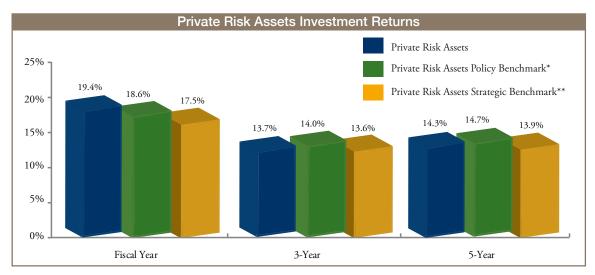
As of June 30, 2014, 46.8% of Private Risk assets were invested in the Private Equity program, 46.4% in the Private Real Estate program, and 6.8% in the Private Credit program. Each of these programs is discussed in more detail on the following pages.



### Performance

The total return for Private Risk portfolio was 19.4%, compared to the policy benchmark return of 18.6% for the fiscal year ended June 30, 2014. For the three- and five-year time periods, the Systems marginally underperformed the benchmark as noted below. The underperformance is partially due to the policy benchmark being constructed based on the long term asset allocations. Private Equity is currently underweight to the long term target. The strategic benchmark is adjusted monthly based on the actual asset allocation. Private Risk Assets have outperformed the strategic benchmark for all time periods noted.

The pricing and performance methodology utilized for private assets can provide for significant performance variances over short time periods. For instance, the Systems utilize a liquid benchmark (Russell 3000 Index) to measure an illiquid (private equity) asset class. Thus, there will be significant performance differences over short time periods in volatile markets. Due to the long term nature of Private Risk assets, the performance can be more appropriately judged over a longer timeframe. As the table below indicates, the Private Risk portfolios have produced strong absolute returns over all time periods.



Private Risk Assets Statistical Performance						
Portfolio Characteristics	Fiscal Year	3-Year	5-Year			
Annualized Private Risk Assets Return	19.4%	13.7%	14.3%			
Annualized Policy Benchmark Return*	18.6%	14.0%	14.7%			
Excess Return	0.8%	-0.3%	-0.4%			
Annualized Strategic Benchmark Return**	17.5%	13.6%	13.9%			

<sup>\*</sup>The Private Risk Assets Policy Benchmark is composed as follows: 52.5% Russell 3000 Index, 37.5% NCREIF Property Index and 10.0% Merrill Lynch High Yield Master II Index.

The Private Risk Assets composite was established more recently, so ten-year returns are not available.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

<sup>\*\*</sup> The Private Risk Assets Strategic Benchmark changes monthly based on the actual asset allocation at the end of the previous month.

# Private Equity Program Summary

As of June 30, 2014, the Private Equity assets had a market value of approximately \$2.7 billion, representing 7.0% of total assets.

# **Investment Program Description**

The Private Equity asset class is comprised of investment opportunities not typically included within the public equity and fixed income markets. Private Equity investments provide financing for start-up companies, private middle market companies, firms in financial distress and public and non-public firms seeking buyout financing. Private Equity investments can be classified into three basic sub-asset class categories:

- Venture Capital
- Buyouts
- Debt-Related

Investments in the sub-asset classes can be made in the U.S. or foreign countries. In total, the allocation to Non-U.S. Private Equity investments will not exceed 40.0% of the overall Private Equity target allocation. The risks associated with Private Equity will be viewed both in isolation and within the context of the entire fund.

In January 2014, the Board approved the development and implementation of a Private Equity Co-Investment Program. The Co-Investment Program is expected to further advance the goals and objectives of the overall Private Equity Program by obtaining additional exposure to underlying portfolio company investments through direct equity investments made on a side-by-side basis with private equity funds where the Systems have an existing relationship. Co-investments serve to increase exposure to the Private Equity asset class with little or no additional fees and/or performance carry paid to the underlying private equity partnerships. The objective of the Co-Investment Program is to leverage existing, high-quality relationships with private equity managers in order to increase commitments to the asset class in a format that does not materially increase overall risk, while simultaneously helping to lower fees and performance carry.

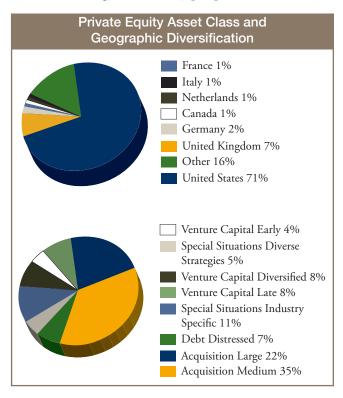
### Structure

As of June 30, 2014, Private Equity assets committed\* for investment were \$6.1 billion. The market value of funds that had been drawn down and actually invested

as of June 30, 2014 were approximately \$2.7 billion, representing 7.0% of total assets. The Systems private equity investment commitments that had not yet been funded were approximately \$2.9 billion as of June 30, 2014.

The objective for the Systems' allocation to Private Equity is to achieve returns that are higher than those attainable in the public equity markets with the added benefit of diversification. The target allocation to Private Equity is 10.5%. However, as of June 30, 2014, the actual allocation for the Systems was just 7.0% because the long-term and illiquid nature of the private equity asset class dictates that capital must be invested at a measured pace. In addition, private equity investments have made record distributions the past two fiscal years. Pathway Capital Management has been retained by the Systems to provide private equity investment management services through three structures; a discretionary fund-of-funds relationship, an advisory relationship and a co-investment program. Additionally, the Systems have invested in private equity secondary funds.

The pie charts below show the diversification (utilizing the market value of the assets that have been invested) of the Systems' private equity holdings as of June 30, 2014 from both strategy and country perspectives.



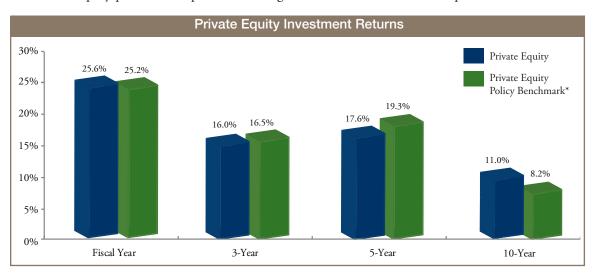
<sup>\*</sup> Committed capital reflects the total amount of capital that the Systems are legally obligated to supply to the partnerships and funds as the capital is needed to invest in underlying holdings. Market value reflects capital that has actually been drawn and invested by the partnerships and funds.

### Market Overview

Private equity funds performed well in fiscal year 2014, particularly in the U.S. and Europe. Global IPO issuances and M&A exit activity for private equity backed companies were extremely strong during the fiscal year. During the last quarter of the fiscal year, the global M&A exit activity for private equity backed companies was the highest on record. Strong exit markets for private equity-backed companies resulted in the second year of record distributions to limited partners, which helped drive a significant increase in fundraising activity.

### Performance

The total return for the Private Equity program was 25.6%, compared to the benchmark return of 25.2% for the fiscal year ended June 30, 2014. While short-term returns are not overly insightful for the Private Equity Program in comparison to a benchmark, the one-year return exceeded the benchmark by 40 basis points. The underperformance for the three- and five-year time frames noted below is partially due to the Systems utilizing a liquid benchmark (Russell 3000 Index) to measure an illiquid (private equity) asset class. As such, there will be significant performance differences over short time periods in volatile markets. Due to the long term nature of the asset class, the performance of a private equity portfolio can be more appropriately judged over a longer timeframe. As the table below indicates, the Private Equity portfolio has produced strong absolute returns over all time periods.



Private Equity Statistical Performance					
Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year	
Annualized Private Equity Return	25.6%	16.0%	17.6%	11.0%	
Annualized Policy Benchmark Return*	25.2%	16.5%	19.3%	8.2%	
Excess Return	0.4%	-0.5%	-1.7%	2.8%	

<sup>\*</sup>The Private Equity policy benchmark is the Russell 3000 Index.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

# **Investment Advisors**

As of June 30, 2014, the Systems had committed to 78 separate partnerships with 42 firms within the Private Equity asset class. In fiscal year 2014, the Systems committed to nine new partnerships for \$912 million. Additionally, the Systems received total distributions from the private equity partnerships in excess of \$687 million in fiscal year 2014.

Private Equity Investment Advisors					
Investment Advisor	Investment Style	Market Value* As of June 30, 2014	% of Total Market Value		
Advent International GPE VII-B	Acquisition - Medium	\$ 24,942,100	0.1%		
BC European IX	Acquisition - Medium	23,092,799	0.1%		
Blackstone Capital Partners V and VI	Acquisition - Large	36,054,274	0.1%		
Canaan Partners IX	Venture Capital	14,981,574	0.0%		
Carlyle Europe Partners III	Acquisition - Medium	29,143,920	0.1%		
Carlyle Partners IV, V and VI	Acquisition - Large	46,618,775	0.1%		
Centerbridge Capital Partners I and II	Acquisition & Debt	41,712,175	0.1%		
Centerbridge Capital Special Credit Partners II	Debt - Distressed	33,167,847	0.1%		
CVC Capital Partners VI	Acquisition - Large	6,976	0.0%		
CVC European Equity Partners IV and V	Acquisition - Large	30,511,639	0.1%		
CVC European Equity Tandem Fund	Acquisition - Large	8,205,731	0.0%		
Encap VIII Co-Investors and IX	Acquisition - Energy	39,157,351	0.1%		
Exponent Partners II	Acquisition - Medium	29,239,687	0.1%		
First Reserve Fund XI and XII	Acquisition - Energy	45,574,986	0.1%		
Genstar Capital Partners V	Acquisition - Medium	6,300,568	0.0%		
GTCR Fund IX and X	Acquisition - Medium	68,922,600	0.2%		
Hellman & Friedman Capital Partners VI and VII	Acquisition - Large	40,218,086	0.1%		
Kelso Investment Associates VIII	Acquisition - Medium	32,392,842	0.1%		
KKR 2006 Fund	Acquisition - Large	28,424,297	0.1%		
KRG Fund IV	Acquisition - Medium	22,688,512	0.1%		
Lexington Capital Partners VI-B, VII and VIII	Secondary Fund	173,554,860	0.5%		
Madison Dearborn VI			0.0%		
	Acquisition - Large	18,362,656			
Montagu III and IV	Acquisition - Medium	20,241,463	0.1%		
Nordic VII and VIII	Acquisition - Medium	32,700,517	0.1%		
New Enterprise Associates 13 and 14	Venture Capital	57,202,022	0.2%		
Oak Investment Partners XIII	Venture Capital	22,715,389	0.0%		
OCM Principal Opportunities Fund IV, VII, VIIb and IX	Debt - Distressed	43,922,866	0.1%		
Odyssey Investment Partners IV	Acquisition - Medium	13,351,134	0.0%		
Onex Partners II and III	Acquisition - Medium	37,509,954	0.1%		
Pantheon Global Secondary Fund III and IV	Secondary Fund	128,950,222	0.3%		
Pathway Capital Management	Fund-of-Funds	1,126,303,534	3.0%		
Paul Capital Partners IX	Secondary Fund	33,716,040	0.1%		
Permira IV and V	Acquisition - Large	24,715,489	0.1%		
Providence Equity Partners VI	Acquisition - Medium	26,271,394	0.1%		
Quad-C Partners VIII	Acquisition - Medium	13,492,072	0.0%		
Quantum Energy Partners V and V-C	Acquisition - Energy	16,849,378	0.0%		
The Resolute Fund II and III	Acquisition - Medium	32,183,956	0.1%		
Silver Lake Partners III	Acquisition - Technology	20,940,746	0.0%		
Spectrum Equity Investors VI	Acquisition - Medium	12,239,266	0.0%		
TA XI	Acquisition - Large	17,748,359	0.0%		
TCV VI, VII and VIII	Venture Capital	46,091,534	0.1%		
Thoma Cressey Fund VIII	Acquisition - Medium	23,318,999	0.1%		
TPG Partners V and VI	Acquisition - Large	47,933,999	0.1%		
Vista Equity Partners V	Acquisition - Medium	1,864,862	0.0%		
Wayzata Opportunities Fund I, II and III	Debt - Distressed	28,491,257	0.1%		
Wind Point Partners VI and VII	Acquisition - Medium	33,512,850	0.1%		
Cash and cash equivalents	Cash and cash equivalents	5,239,847	0.0%		
Total		\$ 2,660,781,404	7.0%		

<sup>\*</sup>Market values are reported by the Systems' Private Equity advisors. Market values reflect the most current net asset values. In instances where the most current net asset values were not as of June 30, 2014, the net asset values utilized were cash flow adjusted through June 30, 2014.

# Private Credit Program Summary

As of June 30, 2014, the Private Credit assets had a market value of approximately \$386 million, representing 1.0% of total assets.

# **Investment Program Description**

Investments in Private Credit are similar to Private Equity investments in that they are typically very longterm in nature, not publicly traded, relatively illiquid, and offer the potential for substantially higher returns (along with a commensurate level of risk). The Private Credit portfolio also differs from the Private Equity portfolio, and is a separate and distinct composite within Private Risk Assets. The Private Credit asset class is comprised primarily of debt-related investments that provide a current yield along with equity participation (usually warrants) referred to as an 'equity kicker.' Primary strategies are distressed debt, bankruptcy restructurings, mezzanine debt, bank loans, and other credit-driven or debt-related investment strategies. Investments can be made in the U.S. or foreign countries. In total, the allocation to Non-U.S. Private Credit investments will not exceed 40% of the overall Private Credit target allocation. The risks associated with Private Credit will be viewed both in isolation and within the context of the entire fund.

### Structure

As of June 30, 2014, Private Credit assets committed\* for investment were \$827 million. The market value of funds that had been drawn down and actually invested as of June 30, 2014 were approximately \$386 million, representing 1.0% of total assets. The Systems' private credit investment commitments that had not yet been funded were approximately \$184 million as of June 30, 2014.

The objective for the Systems' allocation to Private Credit is to achieve returns that are higher than those attainable in the public markets with the added benefit of diversification. In December 2009, the Board approved 2.0% for the target allocation to the Private Credit asset class. The long-term and illiquid nature of the Private

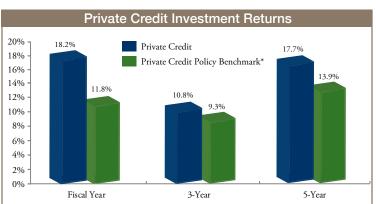
Credit asset class dictates that capital must be invested at a measured pace. Pathway Capital Management has been retained by the Systems to provide private credit investment management services through two structures; a discretionary fund-of-funds relationship and an advisory relationship. Albourne America, LLC has also been retained to provide private credit advisory services.

### Market Overview

Private credit markets were driven by robust debt markets and low default rates in fiscal year 2014. The Systems' Private Credit partnerships continued to take advantage of the attractive markets to realize investments and return cash to investors.

# Performance

The total return for the Private Credit program was 18.2%, compared to the benchmark return of 11.8% for the fiscal year ended June 30, 2014. While short-term returns can be volatile for the Private Credit Program in comparison to a benchmark, the one-year return exceeded the benchmark by 640 basis points. For the three- and five-year time period, the systems outperformed the benchmark by 150 basis points and 380 basis points, respectively. As discussed previously, private assets are more appropriately evaluated over longer time frames.



Private Credit Statistical Performance						
Portfolio Characteristics	Fiscal Year	3-Year	5-Year			
Annualized Private Credit Return	18.2%	10.8%	17.7%			
Annualized Policy Benchmark Return*	11.8%	9.3%	13.9%			
Excess Return	6.4%	1.5%	3.8%			

<sup>\*</sup>The Private Credit Policy Benchmark is the Merrill Lynch High Yield Master II Index. The Private Credit Program was established in December 2007, so ten-year returns are not available.

<sup>\*</sup> Committed capital reflects the total amount of capital that the Systems are legally obligated to supply to the partnerships and funds as the capital is needed to invest in underlying holdings. Market value reflects capital that has actually been drawn and invested by the partnerships and funds.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

# **Investment Advisors**

As of June 30, 2014, the Systems had committed to 12 separate partnerships with 10 firms within the Private Credit asset class. One new commitment for \$100 million was made to the Private Credit asset class during fiscal year 2014. Additionally, the Systems received total distributions from the private credit partnerships of approximately \$119 million in fiscal year 2014.

Private Credit Investment Advisors						
Investment Advisor	Investment Style	Market Value* As of June 30, 2014	% of Total Market Value			
Avenue Capital Group Fund V	Debt - Distressed	\$ 1,591,419	0.0%			
Caltius IV	Debt - Mezzanine	2,398,911	0.0%			
Centerbridge Special Capital Partners	Debt - Distressed	16,809,188	0.0%			
EIG Energy Fund XVI	Debt - Energy	10,338,357	0.0%			
Encap Fund VII	Acquisition - Energy	10,838,780	0.0%			
Encap Fund VIII	Acquisition - Energy	38,309,226	0.1%			
Indigo Capital V	Debt - Mezzanine	13,015,171	0.0%			
Lone Star Real Estate Fund II	Debt - Distressed	30,052,691	0.1%			
OCM Opportunities Fund VIII	Debt - Distressed	25,797,094	0.1%			
OCM Opportunities Fund VIII b	Debt - Distressed	37,320,278	0.1%			
Pathway Capital Management	Funds-of-Funds	179,170,594	0.5%			
TA Subordinated Debt Fund III	Debt - Mezzanine	20,574,378	0.1%			
Total		\$ 386,216,087	1.0%			

<sup>\*</sup>Market values are reported by the Systems' Private Credit advisors. Market values reflect the most current net asset values. In instances where the most current net asset values were not as of June 30, 2014, the net asset values utilized were cash flow adjusted through June 30, 2014.

# Private Real Estate Program Summary

As of June 30, 2014, the Private Real Estate assets had a market value of approximately \$2.6 billion, representing 7.0% of total assets.

# **Investment Program Description**

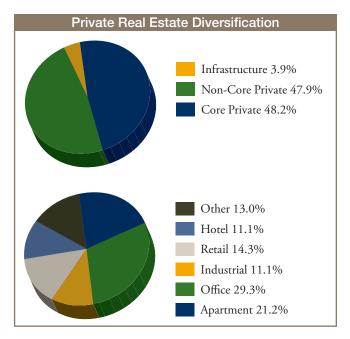
The Real Estate allocation is intended to provide exposure to a diversified portfolio of institutional quality private real estate investments that will provide meaningful, consistent returns, and act as a hedge against inflation and as a diversifier to the overall investment portfolio. The specific objectives of the real estate allocation is to optimize yield and return, preserve capital and enhance portfolio value across market cycles. The risks associated with Private Real Estate will be viewed both in isolation and within the context of the entire fund.

### Structure

As of June 30, 2014, the Systems' private real estate assets committed\* for investment were \$3.5 billion. The market value of funds that had been drawn down and actually invested as of June 30, 2014 were approximately \$2.6 billion, representing 7.0% of total assets. The Systems' private real estate investment commitments that had not yet been funded were approximately \$685 million as of June 30, 2014.

Within the overall Real Estate allocation, the Systems have established a 55% target allocation to noncore real estate and a 45% allocation to core private real estate. Non-Core investments represent those properties and/or investment strategies that require specialized acquisition and management expertise or skill to mitigate the business and leasing risk that may be associated with individual investments. Non-Core investments have greater associated volatility compared to Core investments. Core investments include existing, substantially leased income-producing properties located mainly in metropolitan areas that exhibit reasonable economic diversification and growth.

The following pie charts indicate the current allocation to real estate investment strategies utilizing the market value of the Systems' invested real estate assets and the diversification within the real estate composite by property type.



### Market Overview

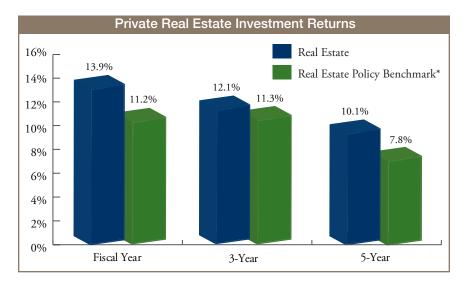
Real estate fundamentals continued to improve during fiscal year 2014, led by rising business confidence and stronger labor market conditions. Occupancy rates increased as healthy tenant demand outpaced moderate construction activity. Overall, most real estate markets experienced economic expansion with superior demand relative to supply. The private real estate benchmark, the NCREIF Property Index ("NPI"), increased 11.2% in fiscal year 2014.

The Systems maintain a sizable allocation to high-quality, stabilized real estate assets (core) held in primary markets due to the secure income return. Additionally, the Systems have an allocation to non-core assets to participate in the distressed sector of the real estate market. The Systems will continue to focus real estate efforts going forward on investments that complement the existing portfolio.

<sup>\*</sup> Committed capital reflects the total amount of capital that the Systems are legally obligated to supply to the partnerships and funds as the capital is needed to invest in underlying holdings. Market value reflects capital that has actually been drawn and invested by the partnerships and funds.

# Performance

The total return for the Private Real Estate program was 13.9%, compared to the benchmark return of 11.2% for the fiscal year ended June 30, 2014. The Systems significantly outperformed the policy benchmark for all time periods noted below.



Private Real Estate Statistical Performance						
Portfolio Characteristics	Fiscal Year	3-Year	5-Year			
Annualized Private Real Estate Return	13.9%	12.1%	10.1%			
Annualized Policy Benchmark Return*	11.2%	11.3%	7.8%			
Excess Return	2.7%	0.8%	2.3%			

<sup>\*</sup>The Real Estate Policy Benchmark is the NCREIF Property Index.

The Real Estate Program was established in April 2004 and the first investment funded in December 2004, so a ten-year return is not available.

Note: Investment returns were prepared using a time-weighted rate of return based on market values.

# **Investment Advisors**

As of June 30, 2014, the Systems had committed to 52 separate partnerships with 29 firms within the Private Real Estate asset class. In fiscal year 2014, the Systems committed to four new partnerships totaling \$200 million. Additionally, the Systems received total distributions from the real estate partnerships in excess of \$507 million in fiscal year 2014.

Market Value* % of 7						
Investment Advisor	Investment Style	As of June 30, 2014	Market Value			
Alinda Infrastructure Fund I	Infrastructure	\$ 54,328,682	0.1%			
Alterna Core Capital Assets Fund II	Infrastructure	5,918,789	0.0%			
AMB Alliance III	Non-Core - Private	53,365,278	0.1%			
AMB Japan Fund I	Non-Core - Private	169,942	0.0%			
AEW Core Property Fund	Core - Private	83,597,608	0.2%			
Blackstone R.E. Partners V, VI, VII, and						
Real Estate Partners Asia	Non-Core - Private	245,931,495	0.6%			
Brockton Capital II	Non-Core - Private	31,834,921	0.1%			
Carlyle Europe Real Estate Partners III	Non-Core - Private	48,088,684	0.1%			
Carlyle Realty V and VI	Non-Core - Private	77,477,342	0.2%			
CBRE Fund IV, US Value 5, and US Value 6	Non-Core - Private	76,546,257	0.2%			
CIM Fund III	Non-Core - Private	72,500,925	0.2%			
CIM Urban REIT	Non-Core - Private	40,859,524	0.1%			
Colony Investors VIII	Non-Core - Private	28,353,773	0.1%			
CPI Capital Partners Europe	Non-Core - Private	11,648,432	0.0%			
Dune Real Estate Fund I	Non-Core - Private	15,531,464	0.1%			
Forum Asian Realty Income II	Non-Core - Private	13,499,859	0.0%			
Guggenheim Structured R.E. III	Non-Core - Private	6,097,382	0.0%			
Heitman Value Partners I, II, and III	Non-Core - Private	54,356,671	0.1%			
JPMorgan Special Situation Property Fund	Non-Core - Private	96,297,863	0.3%			
JPMorgan Strategic Property Fund	Core - Private	284,209,409	0.7%			
KKR Real Estate Partners America	Non-Core - Private	23,892,999	0.1%			
LaSalle Asia Opportunity Fund II and III	Non-Core - Private	23,217,943	0.1%			
LaSalle Income & Growth IV and V	Non-Core - Private	61,226,744	0.2%			
LaSalle Japan Logistics Fund II	Non-Core - Private	8,166,085	0.0%			
LaSalle Property Fund	Core - Private	106,803,220	0.3%			
Lone Star V and VI	Non-Core - Private	28,211,253	0.1%			
Lone Star Real Estate Fund	Non-Core - Private	6,000,365	0.0%			
Macquarie Infrastructure Partners	Infrastructure	42,889,987	0.1%			
MSREF V International	Non-Core - Private	2,184,070	0.0%			
Morgan Stanley Prime Property Fund	Core - Private	312,617,222	0.8%			
NREP Real Estate Debt Fund	Non-Core - Private	3,314,479	0.0%			
Noble Hospitality Fund	Non-Core - Private	74,260,731	0.2%			
Principal Enhanced Property Fund	Core - Private	39,833,267	0.1%			
Prudential PRISA Fund	Core - Private	148,869,674	0.4%			
Prudential PRISA III	Non-Core - Private	15,202,044	0.1%			
RREEF America REIT III	Non-Core - Private	25,554,888	0.1%			
Starwood Hospitality Fund	Non-Core - Private	22,870,240	0.1%			
UBS Trumbull Property Fund	Core - Private	292,414,347	0.8%			
Westbrook R.E. Fund VII, VIII, and IX	Non-Core - Private	95,420,890	0.3%			
Cash and cash equivalents	Cash and cash equivalents	450,641	0.0%			
Total		\$ 2,634,015,389	7.0%			

<sup>\*</sup>Market values are reported by the Systems' Private Real Estate advisors. Market values reflect the most current net asset values. In instances where the most current net asset values were not as of June 30, 2014, the net asset values utilized were cash flow adjusted through June 30, 2014.

U.S. Public Equity Broker Commissions Report						
Brokerage Firm	<b>Shares Traded</b>	<b>Dollars Traded</b>	Commissions Paid	Cost Per Share		
Investment Technology Group	50,630,868	\$ 2,095,313,233	\$ 438,943	\$ 0.01		
Capital Institutional Services	11,412,888	502,084,591	413,590	0.04		
Credit Suisse Securities, LLC	11,313,416	585,599,776	409,901	0.04		
SG Cowen & Co	32,212,388	1,174,861,213	279,181	0.01		
Merrill Lynch	22,120,145	530,960,358	267,133	0.01		
Instinet, LLC	16,223,878	551,458,306	199,182	0.01		
Deutsche Bank	19,515,188	595,109,540	180,142	0.01		
Bank of New York	8,522,645	533,601,273	169,937	0.02		
Weeden & Co	14,447,912	611,090,471	160,193	0.01		
Barclays Capital, Inc.	10,217,244	654,628,599	149,583	0.01		
Morgan Stanley & Co Incorporated	10,768,966	375,072,265	136,739	0.01		
UBS Securities, LLC	4,566,431	139,712,379	119,158	0.03		
Citigroup Global Markets, Inc.	5,222,437	195,644,504	112,746	0.02		
Liquidnet Inc.	9,529,965	393,357,054	112,339	0.01		
Other (<\$100,000)	79,688,721	4,204,052,576	1,639,920	0.02		
Total	306,393,092	\$13,142,546,138	\$ 4,788,687	\$ 0.02		

Non-U.S. Public Equity Broker Commissions Report						
Brokerage Firm	Shares Traded	D	ollars Traded	Commi	ssions Paid	Cost (Basis Points)
Merrill Lynch	73,602,903	\$	463,994,584	\$	257,788	5.6
Instinet, LLC	134,899,316		545,806,760		255,544	4.7
Goldman Sachs and Company	71,079,854		514,035,234		239,027	4.7
Morgan Stanley & Co Incorporated	69,783,029		455,326,763		225,232	4.9
Credit Suisse Securities, LLC	47,368,266		218,059,773		109,793	5.0
Deutsche Bank	29,993,903		234,769,547		99,161	4.2
Citigroup Global Markets, Inc.	20,402,366		128,148,104		96,016	7.5
Barclays Capital, Inc.	2,051,049		1,187,251,396		76,185	0.6
JP Morgan Chase	9,269,319		112,684,709		68,296	6.1
UBS Securities, LLC	8,774,219		62,280,037		59,581	9.6
Macquarie Securities	21,219,999		117,360,192		55,138	4.7
Investment Technology Group	23,033,215		141,593,090		53,347	3.8
Other (< \$50,000)	85,965,390		591,851,273		337,387	5.7
Total	597,442,828	\$ 4	4,773,161,462	\$ 1	1,932,495	4.0

		Percent of Tota	ıl Fair Valu
Asset Type	Fair Value	FY 2014	FY 2013
Public Risk Assets			
U.S. Public Equity	\$ 12,446,605,472	32.8%	32.7%
Non-U.S. Public Equity	5,815,320,312	15.4%	15.3%
Public Credit	2,937,689,584	7.7%	8.2%
Hedged Assets	5,134,382,529	13.5%	14.1%
Total Public Risk Assets	26,333,997,897	69.4%	70.3%
Safe Assets			
U.S. Treasuries	4,187,034,443	11.0%	11.8%
U.S. TIPS	526,804,432	1.4%	1.5%
Cash Equivalents	1,101,733,597	2.9%	0.0%
Total Safe Assets	5,815,572,472	<i>15.3%</i>	13.3%
Private Risk Assets			
Private Real Estate	2,634,015,389	7.0%	7.7%
Private Equity	2,660,781,404	7.0%	7.0%
Private Credit	386,216,087	1.0%	1.2%
Total Private Risk Assets	5,681,012,880	15.0%	15.9%
Securities Lending Collateral	(821)	0.0%	0.0%
Cash & Equivalents*	101,330,285	0.3%	0.5%
Total Investments**	\$ 37,931,912,713	100.0%	100.0%
Reconciliation with Financial Statements			
Total from above	\$ 37,931,912,713		
Accrued payable for investments purchased	4,982,221,081		
Accrued income payable	162,904		
Accrued receivable for investments sold	(1,656,340,649)		
Accrued income receivable	(62,869,837)		
Securities lending collateral	821		
Short-term investments designated for benefits	(95,300,817)		
Statements of Fiduciary Net Position	\$ 41,099,786,216		

<sup>\*</sup>Managers may hold cash or cash equivalents as part of an active management strategy. Cash or cash equivalents held as part of an active management strategy are not separately listed.

<sup>\*\*</sup> Total Investments includes accrued income and securities lending collateral as of June 30, 2014.

Investment Managers	
Investment Management Fees	
NISA Investment Advisors - Core	\$ 3,376,759
NISA Investment Advisors - TIPS	376,539
Safe Assets Fees	3,753,298
NISA Investment Advisors - Corporate Oaktree Bank Loans	966,810 1,662,820
Pacific Investment Management Company	5,123,419
Public Credit Fees	7,753,049
Analytic Investors, LLC	1,536,317 1,927,909
AQR Capital Management Aronson & Johnson & Ortiz	2,118,000
BlackRock Investment Management	204,590
Columbia Management	541,622
Martingale Asset Management	1,066,955
NISA Investment Advisors	316,72
Westwood Management	4,710,133
Zevenbergen Capital	981,435
US Public Equity Fees	13,403,690
Acadian Asset Management	565,50
Alliance Bernstein Institutional Management	1,198,21
Analytic Investors, LLC	1,114,078
AQR Capital Management	1,718,154
Arrowstreet Capital	5,240,807
BlackRock	444,003
MFS Institutional Advisors	3,093,572
Neon Capital Management	3,823,509
NISA Investment Advisors	135,160
Russell Investments	223,47
The Rock Creek Group	3,307,958 20,864,427
Non-U.S. Public Equity Fees	
Allianz	1,344,70
AQR Capital Management	895,415
Chartwell Investment Partners	764,46
Columbus Circle NISA Investment Advisors	1,015,237
Next Century Growth Investors	121,237 700,252
RBC Global Asset Management	1,017,369
S-Cap Fees	5,858,672
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Alpha Overlay Fees	71,736,859
Hedged Assets Fees Private Real Estate Fees	156,178,835 61,904,266
Private Credit Fees	24,897,30
Private Equity Fees	192,629,063
Commission Recapture Income	(234,101
Investment Management Expense	558,745,369
Custodial Services	
JP Morgan Chase, NA	535,872
Custodial Fees	535,872
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Investment Consultants	900.00
Albourne America, LLC	800,000
Pathway Consulting Institutional Shareholder Services, Inc.	2,515,750 65,000
Towers Watson	379,688
Townsend	350,000
Investment Consultant Fees	4,110,438
Legal Expenses	4,163,908
Staff Investment Expenses	2,846,384
Total Investment Expenses	\$ 570,401,97