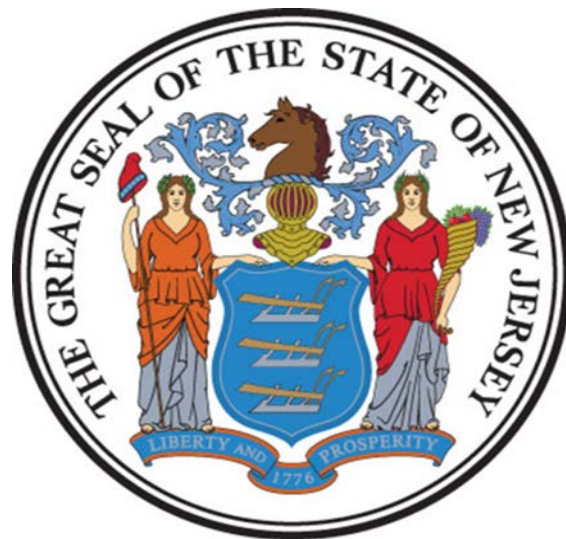


# 2016 ANNUAL REPORT

# NEW JERSEY STATE INVESTMENT COUNCIL



**FOR FISCAL AND CALENDAR YEAR 2016**

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**New Jersey State Investment Council  
50 West State Street, 9<sup>th</sup> Floor  
P.O. Box 290  
Trenton, N.J., 08625**

January 25, 2017

**To the Honorable: the Governor, the Legislature, the State Treasurer and the Citizens of New Jersey:**

Diversification is a core principle of investing, but it didn't help us much this past fiscal year. The S&P 500 Index provided a total return of 4.0% for the period. But a broader list of stocks, as reflected in the Russell 2000 Index, showed a loss of 6.7%. And international stocks were worse, losing 10.2%.

It is hard to outperform market benchmarks. But the State's investment staff has done so with remarkable consistency in recent years. Some have suggested that it was too good to be true. Maybe so. But for the first time in six years, we lagged our benchmark. So, it wasn't a great year. Still, the staff has outperformed the benchmark in seven of the past 10 years, and has provided the pension fund with an additional \$5.7 billion above benchmark over the past decade.

But practically speaking, there is no way that investment returns can be good enough to cover the unfunded liability in the system. The far bigger problem, as most know, is the State's lack of sufficient contributions into the funds over the past two decades. As with compound interest on a credit card, the gap keeps getting wider. I hope policymakers come to a reasonable structural solution before it is too late.

We have fewer than 25 investment professionals managing \$61 billion internally. That is a huge amount of responsibility on a remarkably small number of people. That they have produced such good returns over the years is a testament to their dedication and skill.

There are certain categories of investment that we do not have the capacity to manage internally, particularly in private equity and real estate. We have earned annualized net returns (i.e., after all fees have been paid) of 13.2% and 11.4% in those categories over the last five years. A large portion of the fees we pay are actually profit-sharing arrangements. Generally, there is no profit-sharing unless and until a manager has already earned a return of 8% or more for us.

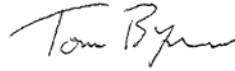
Hedge funds have similar fee structures, but usually with less advantageous profit-sharing terms. They have done well over the long term. But they have done less well in many cases in the last two years. We have cut the target for our hedge fund exposure in half, and will seek out managers with solid track records who are willing to cut us a better deal on fees. No one on the investment council advocated for eliminating this category of investments entirely; they can serve a valuable purpose. They can do well in good times, can do a lot to protect us in bad times, and tend to limit the overall volatility and risk in the portfolio.

In the recent past, we have had years with double-digit returns. We have had years like this with slight losses. Over the last five years, our annualized return has been 6.6%. Given the level of interest rates and the valuations in equity markets, few see the prospect of double-digit returns anytime soon. Our job is to seek the best possible returns *at an acceptable level of risk* for the pension beneficiaries. Stated another way, we are as mindful of risk and downside as we are of upside returns.

We pay out over \$10 billion per year in pension benefits. So even with assets of over \$70 billion, the system is fragile. We've done our best to limit downside volatility in the fund while maintaining the exposure needed to make solid returns over the long haul.

The investment staff is doing right by the pension beneficiaries. Hopefully, markets and the political process will as well.

Yours sincerely,



Brendan Thomas Byrne, Jr.  
Chairman

## INTRODUCTION TO THE COUNCIL AND DIVISION

### DIVISION STAFF

*Director:*

Christopher McDonough

*Deputy Director:*

Corey Amon

### THE STATE INVESTMENT COUNCIL

The State Investment Council (the “Council”) was created by the New Jersey Legislature in 1950 to formulate policies governing the investment of funds by the Director of the Division of Investment (the “Division”), as well as to consult with the Director with respect to the work of the Division.

The Council conducts meetings to discuss major investment policy issues, review Pension Fund performance and accept comments from members of the public. Other investment programs and returns are reviewed annually or when needed.

Council meetings are open to the public. Agendas, meeting times and locations are available on the Division’s website, [www.state.nj.us/treasury/doinvest](http://www.state.nj.us/treasury/doinvest) under the State Investment Council tab.

**Mailing Address:**

PO Box 290, Trenton, NJ 08625-0290

**Email Address:**

doi@treas.nj.gov

**Offices:**

50 West State Street, 9th Floor, Trenton, N.J.  
08608-0290 Phone: (609) 292-5106

### COUNCIL MEMBERSHIP AS OF DECEMBER 31, 2016:

*Council Chairman:*

Brendan Thomas Byrne, Jr. <sup>(1)</sup>

President, Byrne Asset Management LLC

*Council Vice-Chairman:*

Adam Liebttag <sup>(1)</sup>

New Jersey State AFL-CIO Nominee

*Council Members:*

Marty Barrett

Police and Firemen’s Retirement System Designee

Tom Bruno, Jr.

Public Employees Retirement System Designee

Michael Cleary <sup>(1)</sup>

New Jersey State AFL-CIO Nominee

Charles Dolan <sup>(1)</sup>

Managing Member, Global Markets Advisory Group

Andrew Michael Greaney <sup>(1)</sup>

State Troopers Fraternal Association Nominee

James E. Hanson II <sup>(1)</sup>

CEO, Hampshire Real Estate Company

Guy Haselmann <sup>(1)</sup>

Managing Director, Product Solutions, OpenDoor Securities LLC

James L. Joyner

Teachers Pension and Annuity Fund Designee

Timothy McGuckin <sup>(1)</sup>

New Jersey Education Association Nominee

Jeffrey Oram <sup>(1)</sup>

Self Employed

Eric E. Richard

Senate President and Assembly Speaker Joint Appointee

Mitchell Shivers <sup>(1)</sup>

Former Principal Deputy Assistant Secretary of Defense for Asian & Pacific Security Affairs  
Former Managing Director, Merrill Lynch

<sup>(1)</sup> Appointed by the Governor

## COUNCIL MEMBERSHIP

The Council is comprised of sixteen (16) members<sup>1</sup> pursuant to N.J.S.A. 52:18A-83. Nine members are appointed by the Governor for five-year terms, and are drawn traditionally from the investment community. Of those nine appointments, eight are made with the advice and consent of the State Senate. One appointment is made from nominees submitted jointly by the President of the Senate and Speaker of the Assembly. The statute requires that at least seven of the nine gubernatorial appointments shall be qualified by training and experience in the direct management, analysis, supervision or investment of assets, which training and experience shall have been acquired through academic training or through actual employment in those fields.

Four members are appointed by the Governor from nominees submitted by various employee organizations. Two of these four are appointed for five-year terms from nominees submitted by the New Jersey State AFL-CIO, with at least one of such two appointed members being a member of a union representing police officers or firefighters. One of these four members is appointed for a three-year term from nominees submitted by the New Jersey Education Association. The last of these four members is appointed by the Governor for a three-year term from nominees submitted by the State Troopers Fraternal Association. The statute requires that these four appointments shall be qualified by training, experience or long-term interest in the direct management, analysis, supervision or investment of assets and this training, experience or long-term interest shall have been supplemented by academic training in the fields of economics, business, law, financial or actuarial science or by actual employment in those fields.

Three members, representing the Public Employees' Retirement System (PERS), Teachers' Pension and Annuity Fund (TPAF) and Police and Firemen's Retirement System (PFRS), are designated from members of the respective pension system's board of trustees and serve three-year terms.

All members serve until reappointed or until a successor is named and has qualified.

## THE DIVISION OF INVESTMENT

The Division, under the Council's supervision, is the 34<sup>th</sup> largest pension fund manager globally<sup>2</sup> and the 17<sup>th</sup> largest among U.S. public and corporate pension fund managers<sup>3</sup>. The Pension Fund supports the retirement plans of approximately 785,000 members in seven public pension systems: the Consolidated Police & Firemen's Pension Fund, the Judicial Retirement System, the Police & Firemen's Retirement System, the Prison Officers Pension Fund, the Public Employees' Retirement System, the State Police Retirement System and the Teachers' Pension & Annuity Fund (collectively referred to in this report as the "Pension Fund"). Approximately 51% of the members are still working and contributing to the pension plans while 41% are retired. The remaining 8% reflects the number of vested members no longer accruing benefits but not yet retired. Pension Fund assets are primarily managed through common trust funds ("Common Pension Funds"). The net asset value of the Pension Fund assets managed by the Division was \$72.9 billion as of June 30, 2016. The investment return for Fiscal Year 2016 excluding the Police and Fire Mortgages was -0.93% and approximately \$10 billion was paid to plan beneficiaries.

<sup>1</sup> As of December 31, 2016, there were 14 Council members, with 2 vacant positions

<sup>2</sup> Measured by assets as of 12/31/15. Reported by P&I and TowerWatson.com in "P&I/ TW 300 analysis." <https://www.willistowerswatson.com/en/insights/2016/09/The-worlds-300-largest-pension-funds-year-ended-2015> Page 39

<sup>3</sup> Measured by assets as of 9/30/15. Reported by P&I February 8, 2016.

The Division also manages the State of New Jersey Cash Management Fund, Supplemental Annuity Collective Trust (a 403b plan), a portion of the NJBEST Fund (a 529 college savings plan) as well as several funds under the New Jersey State Employees Deferred Compensation Program (a 457 plan).

## STATUTORY AUTHORITY AND HISTORY OF THE DIVISION

The Division was created in 1950 by the New Jersey Legislature (P.L. 1950, c.270) to centralize all functions relating to the purchase, sale or exchange of securities for the State's diverse funds under experienced and professional management. The statute also established a State Investment Council to formulate policies that govern the methods, practices or procedures for investments, reinvestments, sale or exchange transactions to be followed by the Director of the Division. The statute vests investment authority in the Director of the Division, who is appointed by the State Treasurer from a list of candidates certified as qualified and submitted by the Council.

## INVESTMENT PARAMETERS

All investments must conform to the heightened "prudent person" standard set by the New Jersey Legislature (P.L. 1997, c.26). This standard requires the Director "to manage and invest the portfolio solely in the interests of the beneficiaries of the portfolio and for the exclusive purpose of providing financial benefits to the beneficiaries of the portfolio."

The mission of the Division is to achieve the best possible return at an acceptable level of risk utilizing the highest fiduciary standards.

## COUNCIL REGULATIONS AND STRUCTURE

In addition to investment guidelines established by law, the Council is authorized by statute to establish investment policies that govern the methods, practices or procedures for investments, reinvestments, sale or exchange transactions (P.L. 1950, c.270).

Proposed regulations and amendments are filed upon approval of the Council with the Office of Administrative Law for publication in *The New Jersey Register*, followed by a 60-day public comment period. After the public comment period, each proposal is returned to the Council for adoption, along with any comments received. The adopted regulations of the Council are published in the New Jersey Administrative Code (N.J.A.C. 17:16), and are available for viewing online at <http://www.lexisnexis.com/njoal>. There were no proposals or amendments during fiscal or calendar 2016.

## COUNCIL ORGANIZATIONAL CHANGES DURING CALENDAR YEAR 2016

The Council underwent the following organizational changes between January 1, 2016 and December 31, 2016:

- Tom Bruno replaced Benjamin "Max" Hurst as the Public Employees Retirement System representative on March 16, 2016.
- Eric E. Richard was nominated jointly by the President of the Senate and the Speaker of the General Assembly, and appointed by the Governor on May 3, 2016.
- The Council re-elected Brendan Thomas Byrne, Jr. as Council Chair and Adam Liebttag as Council Vice-Chair, each for a one-year term on September 28, 2016.

## LEGISLATIVE UPDATE

### PROHIBITED INVESTMENTS

The Division maintains a list of companies ineligible for investment under three State laws: a Sudan divestiture law adopted in 2005 (P.L. 2005, c. 162), an Iran divestiture law adopted in 2007 (P.L. 2007, c. 250), and a law requiring divestments of companies boycotting Israel (P.L. 2016, c. 24). The Division utilizes an independent research firm to assist it in complying with the provisions of the statutes. Reports are filed with the Legislature annually in accordance with each of the statutes.

Divestitures pose three primary fiscal challenges to the Pension Fund: they require the identification and sale of holdings on a timetable that does not consider market conditions, they impact risk and return for the Pension Fund, and they permanently reduce the investment universe available to the Pension Fund. Together, the Sudan and Iran divestiture laws reduced the investment universe as of June 30, 2016 by approximately 1.90% in international developed markets and 2.08% in international emerging markets, relative to its respective benchmarks.

### NORTHERN IRELAND REPORT

The Division has been required since 1987 (P.L. 1987, c.177) to report annually to the Legislature regarding the adherence of U.S. companies and their subsidiaries doing business in Northern Ireland, in which the assets of any state pension or annuity fund are invested, to the “MacBride Principles.” “MacBride Principles” refers to a body of employment laws aimed at reducing employment discrimination in Northern Ireland. The report is filed each year by January 15<sup>th</sup> in accordance with the statute.



## NET ASSETS UNDER MANAGEMENT

	NET ASSETS IN MILLIONS	
	June 30, 2016	June 30, 2015
<b>PENSION FUND <sup>(1)</sup></b>	<b>\$72,940</b>	<b>\$79,001</b>
The Pension Fund includes pension assets contributed by participants and by State and local employers for currently working and/or retired participants in seven statewide retirement plans.		
Teachers' Pension & Annuity Fund	22,761	25,651
Public Employees' Retirement System	25,473	27,319
Police & Firemen's Retirement System	22,822	23,941
State Police Retirement System	1,694	1,867
Judicial Retirement System	182	214
Prison Officers' Pension Fund	6	7
Consolidated Police & Firemen's Pension Fund	2	2
<i>Note: Total may not equal sum of components due to rounding</i>		
<b>CASH MANAGEMENT FUND <sup>(2)</sup></b>	<b>\$11,849</b>	<b>\$11,875</b>
This fund includes the cash balances of State government funds and "other-than-state" government entities (counties, municipalities, school districts and the agencies or authorities created by any of these).		
<b>SUPPLEMENTAL ANNUITY COLLECTIVE TRUST</b>	<b>\$202</b>	<b>\$212</b>
This fund includes voluntary investments by employees for retirement income separate from, and in addition to, their basic pension plan.		

(1) The net assets of the Pension Fund include the net assets managed by the Division through the Common Pension Funds and exclude certain direct assets and liabilities of the seven underlying pension plans.

(2) The total for the Cash Management Fund includes \$4 billion on June 30, 2016 (\$4 billion on June 30, 2015) held for and included in the totals for the Pension Fund, the Supplemental Annuity Collective Trust, Trustees for the Support of Public Schools Fund, the NJBEST Fund and Deferred Compensation Program.

### NJBEST FUND

The Division manages some of the contributions of New Jersey residents for the state's tax-advantaged 529 college savings program. On June 30, 2016, the Division-managed portion of this fund had a market value of \$372 million compared with \$415 million on June 30, 2015. The year-over-year decline in market value is primarily attributable to net redemptions.

### DEFERRED COMPENSATION PROGRAM

The Division manages some of the assets contributed by employees into the New Jersey State Employees Deferred Compensation Program. Prudential Retirement, a business of Prudential Financial, serves as the third-party administrator for this plan. Funds managed by the Division include contributions to the Equity Fund and Small Capitalization Equity Fund, and prior to August 2015, the Bond (Fixed Income) Fund and Money Market (Cash Management) Fund. On June 30, 2016, these funds had a combined market value of \$494 million compared with \$541 million on June 30, 2015.

### TRUSTEES FOR THE SUPPORT OF PUBLIC SCHOOL FUND

The Division manages the fund reserve required to support the rating of school bonds issued for the maintenance and support of the State's public schools. On June 30, 2016, the portfolio had a market value of \$146 million compared with \$143 million on June 30, 2015.

## 20-YEAR PENSION FUND FINANCIAL SUMMARY

FISCAL YEAR	NET ASSETS <sup>(1)</sup> (\$BILLIONS)	RATE OF RETURN <sup>(2)</sup> (%)	GROSS PENSION PAYMENTS (\$BILLIONS)
2016	72.9	(0.93)	10.0
2015	79.0	4.09	9.6
2014	81.2	16.79	9.1
2013	74.4	11.72	8.7
2012	70.1	2.47	8.3
<b>5-YEAR ANNUALIZED RETURN</b>		6.64	
2011	73.7	17.97	7.7
2010	66.8	13.34	7.0
2009	62.9	(15.49)	6.6
2008	78.6	(2.61)	6.1
2007	82.5	17.14	5.6
<b>10-YEAR ANNUALIZED RETURN</b>		5.92	
2006	73.1	9.79	5.2
2005	69.8	8.77	4.8
2004	67.8	14.16	4.4
2003	62.6	3.31	4.1
2002	63.3	(8.61)	3.6
<b>15-YEAR ANNUALIZED RETURN</b>		5.67	
2001	72.2	(9.80)	3.2
2000	82.6	11.86	2.9
1999	76.2	16.27	2.7
1998	67.3	22.70	2.5
1997	56.6	22.09	2.3
<b>20-YEAR ANNUALIZED RETURN</b>		7.20	

<sup>(1)</sup> Includes the net assets of the Common Pension Funds managed by the Division.

<sup>(2)</sup> Returns exclude Police and Fire Mortgages. Investment returns for Fiscal Years 2009-2015 have been updated following the conclusion of the Division's study to calculate all external fees and costs and to capture and report returns net of all fees. Therefore, there will be small differences in returns vs. prior annual reports.

During Fiscal Year 2016, net transfers of approximately \$5.4 billion were made from the Common Funds to the following pension plans: \$29 million to the Judicial Retirement System, \$1.0 billion to the Police & Firemen's Retirement System, \$1.6 billion to the Public Employees' Retirement System, \$157 million to the State Police Retirement System and \$2.6 billion to the Teachers' Pension & Annuity Fund.

## PENSION FUND ASSET ALLOCATION

Asset allocation policies for the Pension Fund are adopted and revised by the Council as conditions warrant. The Council formally adopts target allocations and long-term ranges for each asset class and asset category. Eligible investments are governed by the “whole plan” or “whole portfolio” principle, which permits a broad spectrum of investments to ensure diversity, and optimize expected risk/return tradeoffs on the investments as a whole.

In May 2015, the Council adopted targeted allocations for Fiscal Year 2016 that reflected modest changes vs. the prior fiscal year. The allocation to Risk Mitigation was increased to reflect, in part, expectations for somewhat higher market volatility over time. An increased allocation to Global Diversified Credit investments was consistent with a more attractive risk-return profile as a source of income for the Pension Fund, while a lower allocation to U.S. Treasuries and investment grade bonds reflected low yields and lower long-term return expectations. The allocation to commodities was also reduced, based partly on the view that the benefits of diversification for commodities had declined somewhat, while volatility remained high. The allocation to equity-related real estate, in turn, reflected a favorable long-term return profile for value-added real estate. Within Global Growth, there was a modest shift out of U.S. Equities as valuations expanded and into Non-U.S. Developed Market Equities toward an allocation more aligned with the composition of the global equity opportunity set. Following the adjustment, the Pension Fund’s targeted allocation to U.S. Equities continued to demonstrate a home country bias.

Modest changes to long-term ranges included an expansion of the ranges for Risk Mitigation to 0-10% from 0-5% and for Equity-Related Real Estate from 2-7% to 0-9%, as well as adjustments to the long-term ranges for Investment Grade Credit from 8-23% to 5-20% and for Commodities from 0-7% to 0-3%. The benchmark for the Police and Fire Mortgage Program was changed from the Barclays U.S. Credit Index to the Barclays U.S. Treasury, 1-3 year Index.

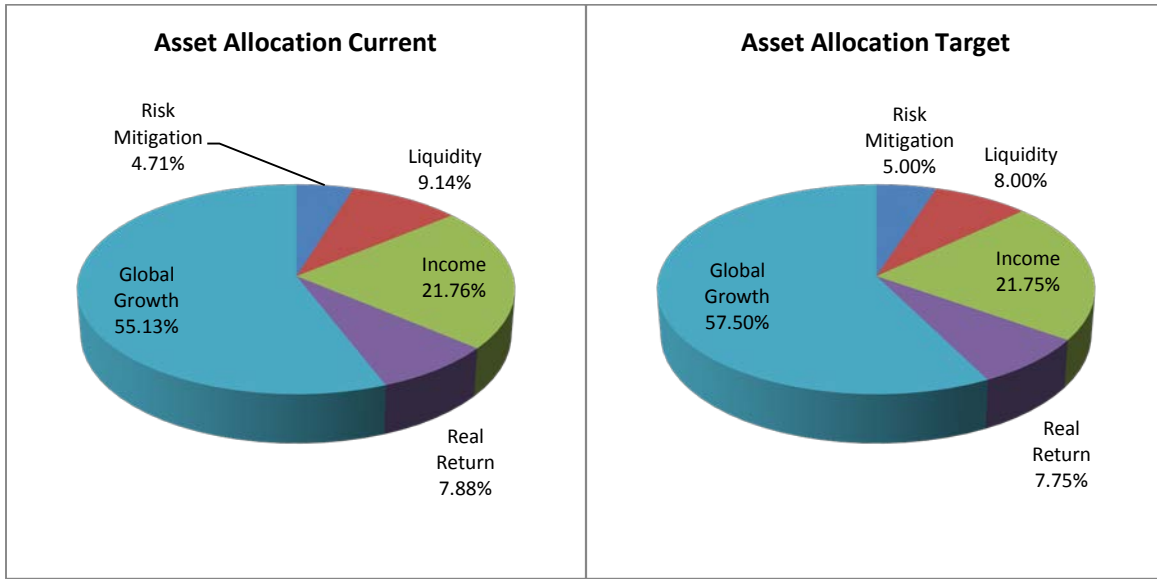
**ACTUAL ALLOCATION AS OF JUNE 30, 2016, VS. FISCAL YEAR 2016 INVESTMENT PLAN TARGET**

	Actual Allocation %	Target %	Difference %	Allocation (\$ in millions)
Absolute Return/Risk Mitigation	4.71%	5.00%	-0.29%	3,433.52
<b>Risk Mitigation</b>	<b>4.71%</b>	<b>5.00%</b>	<b>-0.29%</b>	<b>3,433.52</b>
Cash Equivalents <sup>(1)</sup>	5.89%	5.00%	0.89%	4,293.31
Short-Term Cash Equivalents	0.30%	0.00%	0.30%	215.81
TIPS	2.03%	1.50%	0.53%	1,482.48
U.S. Treasuries	0.93%	1.50%	-0.57%	676.09
<b>Total Liquidity</b>	<b>9.14%</b>	<b>8.00%</b>	<b>1.14%</b>	<b>6,667.69</b>
Investment Grade Credit	8.75%	8.00%	0.75%	6,382.38
Public High Yield	2.50%	2.00%	0.50%	1,822.54
Global Diversified Credit	3.86%	5.00%	-1.14%	2,813.23
Credit-Oriented Hedge Funds	3.66%	3.75%	-0.09%	2,665.98
Debt-Related Private Equity	0.96%	1.00%	-0.04%	698.23
Debt-Related Real Estate	0.65%	0.80%	-0.15%	473.18
Police and Fire Mortgage Program <sup>(2)</sup>	1.40%	1.20%	0.20%	1,019.41
<b>Total Income</b>	<b>21.76%</b>	<b>21.75%</b>	<b>0.01%</b>	<b>15,874.95</b>
Commodities	0.61%	0.50%	0.11%	445.33
Private Real Assets	2.00%	2.00%	0.00%	1,461.28
Equity Related Real Estate	5.26%	5.25%	0.01%	3,839.96
<b>Total Real Return</b>	<b>7.88%</b>	<b>7.75%</b>	<b>0.13%</b>	<b>5,746.57</b>
U.S. Equity	26.76%	26.00%	0.76%	19,517.51
Non-US Developed Markets Equity	11.38%	13.25%	-1.87%	8,298.45
Emerging Markets Equity	4.67%	6.50%	-1.83%	3,409.67
Equity Oriented Hedge Funds	3.15%	3.75%	-0.60%	2,294.52
Buyouts/Venture Capital	9.17%	8.00%	1.17%	6,689.62
<b>Total Global Growth</b>	<b>55.13%</b>	<b>57.50%</b>	<b>-2.37%</b>	<b>40,209.77</b>
Opportunistic Private Equity	<b>0.46%</b>	<b>0.00%</b>	<b>0.46%</b>	335.36
Other Cash and Receivables	<b>0.92%</b>	<b>0.00%</b>	<b>0.92%</b>	672.39
<b>Total Pension Fund</b>	<b>100.00%</b>	<b>100.00%</b>	<b>0.00%</b>	<b>72,940.25</b>

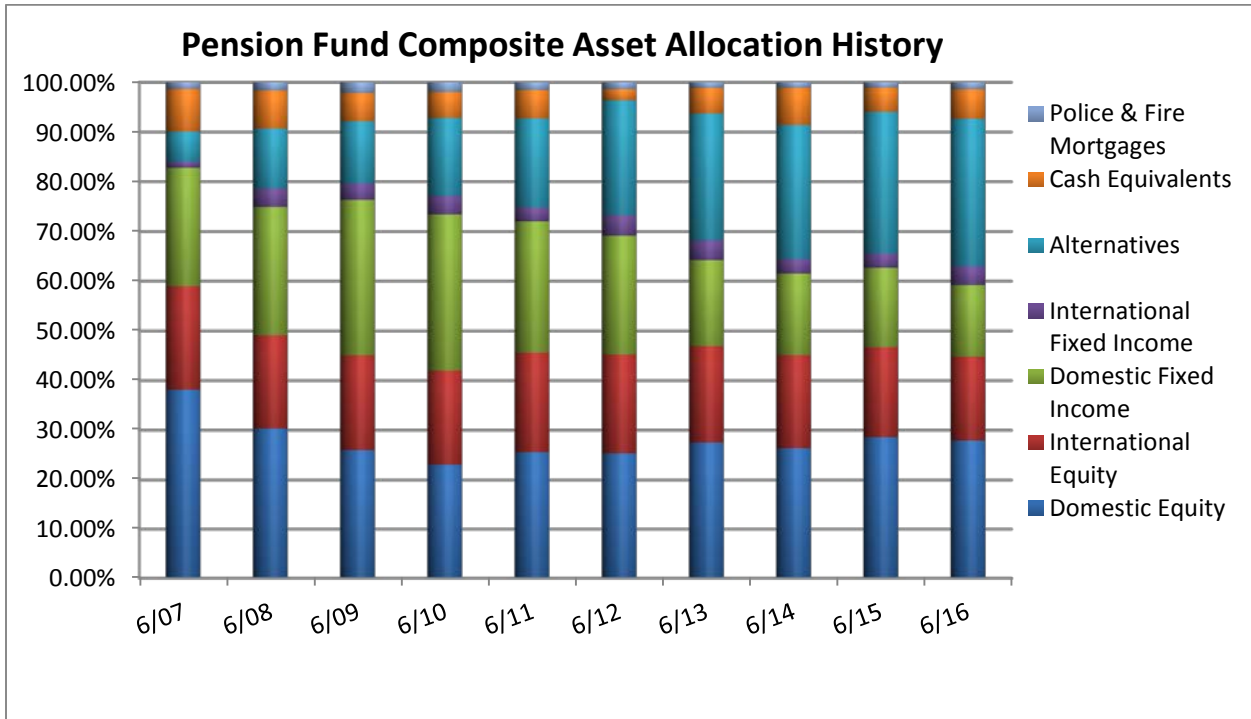
1 The cash aggregate comprises the two common fund cash accounts, in addition to the seven plan cash accounts.

2. For Financial Reporting, Police and Fire Mortgage Program is considered a receivable under GASB 72. Only the Police and Fire Retirement System has exposure to the Program.

Totals may not equal sum of components due to rounding.



**PENSION FUND COMPOSITE ASSET ALLOCATION 10-YEAR HISTORY**



## MARKET OVERVIEW FOR FISCAL YEAR 2016

During Fiscal Year 2016, there was a sharp divergence in returns across major asset classes. Global equities realized negative returns, with the MSCI All Country World Index (ACWI) returning -3.72%. Key headwinds included an economic slowdown in China, concerns of tighter U.S. monetary policy, geopolitical turmoil in the Middle East, and persistently weak commodity prices.

U.S. equities managed to realize positive returns as the Russell 3000 gained +2.13%. Within the U.S. equity markets, there was a wide dispersion of returns across the various equity sectors, with 36 percentage points separating the best performing sector (Utilities, +28.30%) and the worst performing sector (Energy, -8.15%). Healthcare (-5.22%) underperformed as returns were volatile ahead of an election year. There was also a wide gap in returns from a capitalization standpoint as large cap stocks outperformed small cap stocks by over 10%.

International equity returns were disappointing, with both developed market and emerging market indices realizing double digit losses. Within the developed markets, only three (Belgium, Denmark and New Zealand) of the 21 countries that are included in the MSCI EAFE provided investors with positive returns, with the three outliers comprising in total just 3% of the EAFE market cap. All told, the EAFE returned -10.16% as the largest economies experienced losses. The U.K. (-12.75%) was impacted by the Brexit referendum, the Japanese equity market returned -9.63% as a stronger yen adversely impacted its export-driven economy, while Germany (-11.99%) also was impacted by weaker export growth in the midst of greater global economic uncertainty. The MSCI Emerging Market (EM) Index realized negative returns (-12.02%). Structural economic growth concerns and diminished benefits from otherwise supportive fiscal and monetary policies resulted in China (-23.39%) representing the most significant contributor to negative returns.

Fixed income performed well in conjunction with weak global equity returns and highly accommodative central bank policies as the Bloomberg Barclays U.S. Aggregate Bond Index returned +6.00%. Longer duration and higher quality securities outperformed in a declining interest rate environment, with Long Treasuries returning +19.30%. Lower quality securities underperformed as CCC rated corporates realized negative returns (-0.51%), in part as a result of weak energy markets. During Fiscal Year 2016, investment grade corporate bonds outperformed high yield bonds by 632 basis points (+7.94% vs. +1.62%).

Led by a further sell-off in oil, commodities prices are in the midst of a secular downturn that dates back to June 2008. Over the past eight fiscal years, the Bloomberg Commodity Index (BCI) has a cumulative return of -62%, led by a drop in oil. During Fiscal Year 2016, oil declined 42% as the broader BCI dropped by more than 13%.

Currency volatility rose during the fiscal year ended June 30, 2016, driven by divergent global monetary policies, a wide range of geopolitical and economic uncertainties, and sharp moves in commodities. On balance, most major currencies weakened vs. the U.S. dollar, offset largely by strength in the Yen. Notwithstanding the Bank of Japan's negative interest rate policy, the Yen was the best performing major currency relative to the U.S. Dollar. The U.S. Dollar peaked shortly after the Fed's first rate hike in nearly a decade in December 2015 and subsequently weakened as investors anticipated a more prolonged and gradual move toward less policy accommodation. The British Pound was the worst performing currency as it moved to its weakest level in three decades in the wake of the Brexit referendum.

On the heels of favorable returns during the prior fiscal year, Real Estate (+10.80%) returns remained strong across all property types and regions and proved to be the best performing asset class during Fiscal Year 2016. Real Estate performed so well because of continued strong demand from both

offshore and domestic investors, low levels of construction that kept supply balanced in many markets, renewed interest in income producing assets in a low growth economy, and attractive yields relative to other asset classes. Demand remained strong in major coastal markets, particularly in tech-driven markets in the West (e.g., San Francisco Bay Area, Silicon Valley, Seattle, Denver, and Portland). Fundamentals remained robust as well, with positive net absorption and limited new supply in most property sectors. Strong returns in the industrial and retail sectors were driven by increasing rental rates and backed by a healthy consumer base.

Global Private Equity exhibited modestly positive performance (+2.90%), beating the public equity markets, led by Buyout strategies (+6.29%) and Mezzanine strategies (+7.09%) which continued to exhibit consistent returns. Buyouts were supported by strong valuations, low borrowing costs, and recapitalizations. Venture Capital (-0.09%) realized slightly negative returns, as public market volatility impacted the VC space given its reliance on initial public offerings to fuel valuations. Weakness in the energy sector drove down Upstream Energy and Royalties (-16.93%) returns and, to a lesser degree, Distressed Debt strategies (+1.41%).

During Fiscal Year 2016, Hedge Funds, as measured by the HFRI Fund Weighted Composite Index, returned -2.39%. Concerns about weaker economic growth led to poor Equity Hedge (-5.02%) and Credit Arbitrage strategy (-3.37%) returns. A slowdown in M&A activity further impacted Event Driven (-3.77%) and Activist strategies (-5.06%), while weaker energy and metals/mining prices weighed on Distressed strategies (-5.37%). Favorable relative returns were realized by those strategies focused on absolute returns and downside risk protection. Systematic (+3.13%) and Macro strategies (+1.82%) realized positive returns, benefitting from currency, fixed income and energy positioning.

## TOTAL PENSION FUND RETURN VS. BENCHMARK

	Annualized Returns (%)				
	FY16	3 Years	5 Years	10 Years	20 Years
Total Pension Fund excluding Police and Fire Mortgages	(0.93)	6.40	6.64	5.92	7.20
<i>Total Fund Benchmark<sup>(1)</sup></i>	0.23	6.10	5.86	5.13	*

(1) Benchmark is a weighted composite of index returns in each asset class

\* Benchmark return not available for 20 year period

- The Total Pension Fund, excluding Police and Fire Mortgages, underperformed the Total Fund Benchmark by 116 basis points for Fiscal Year 2016.
- Fiscal Year 2016 marked the first year in the last six in which the Fund underperformed its benchmark. The aggregate outperformance of the benchmark of this six-year period has generated approximately \$3.8 billion of additional value for the Pension Fund.
- Key drivers of Fiscal Year 2016 underperformance relative to the Total Fund Benchmark were underperformance of the U.S. Equity portfolio as well as disappointing returns for certain hedge funds.
- The Pension Fund has outperformed the benchmark on the trailing three-, five- and 10-year basis.

## DOMESTIC EQUITY HIGHLIGHTS OF FISCAL YEAR 2016

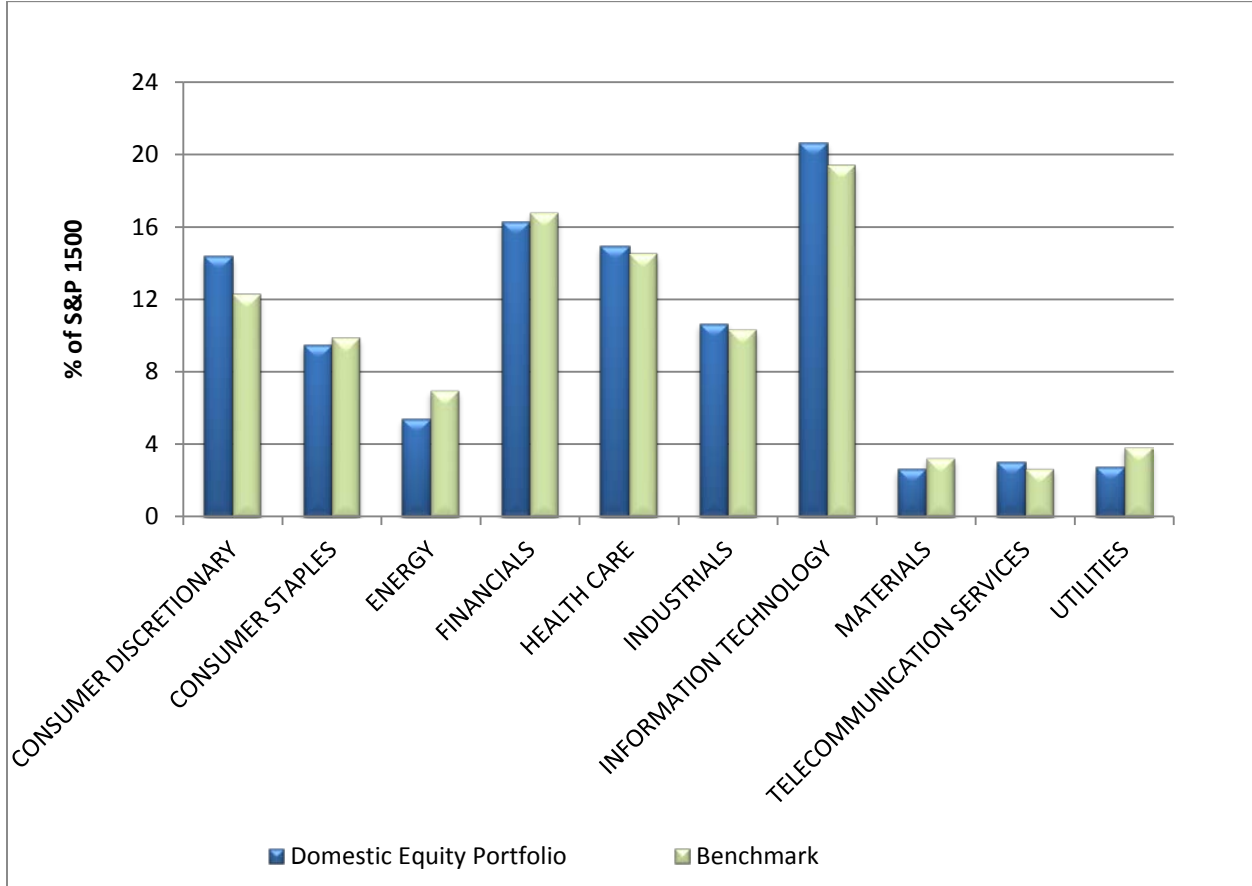
	Annualized Returns (%)			
	FY16	3 Years	5 Years	10 Years
Domestic Equity with Cash, Hedges, Miscellaneous	(1.48)	9.93	10.83	7.84
Domestic Equity Only (Ex Cash and hedges)	(1.58)	10.12	11.00	8.00
<i>S&amp;P 1500 Composite</i>	3.64	11.52	11.94	7.53

- The US Equity portfolio is broadly diversified by economic sector with approximately 800 publicly traded stocks. While exposure to most sectors is comparable to that of the overall market, the Division will actively overweight and underweight securities and industries in the portfolio with the objective to outperform the benchmark.
- During FY16, the U.S. Equity Portfolio returned -1.58% vs. the Benchmark S&P 1500 return of +3.64%, marking just the second time in the past 10 years that the portfolio underperformed its benchmark.
- Over the 10-year period ended June 30, 2016, the U.S. Equity portfolio has outperformed its benchmark by 47 basis points on an annualized basis. Based on an average portfolio value of \$25.9 billion, the 47 basis points of outperformance over the past decade is equivalent to an additional \$1.2 billion of value for the Fund.



- The key driver of Fiscal Year 2016 U.S. Equity underperformance vs. its benchmark was stock selection. Relative returns also were impacted by the Fund’s below benchmark allocation to higher dividend-yielding stocks that outperformed and above benchmark allocation to small cap stocks that underperformed.

**SECTOR WEIGHTING OF DOMESTIC EQUITY PORTFOLIO IN COMPARISON TO S&P 1500 AS OF 6/30/16**



- The top 10 holdings in the Domestic Equity portfolio represent 20.93% of the total portfolio. Apple Inc. continues to be the largest holding.

**TOP HOLDINGS IN DOMESTIC EQUITY PORTFOLIO AS OF JUNE 30, 2016**

Company	% of Portfolio
APPLE INC	3.25
ALPHABET INC	2.71
MICROSOFT CORP	2.33
WALT DISNEY CO	2.26
EXXON MOBIL	1.99
FACEBOOK INC	1.93
JOHNSON & JOHNSON	1.79
WELLS FARGO	1.62
GENERAL ELECTRIC	1.56
AMAZON.COM	1.49

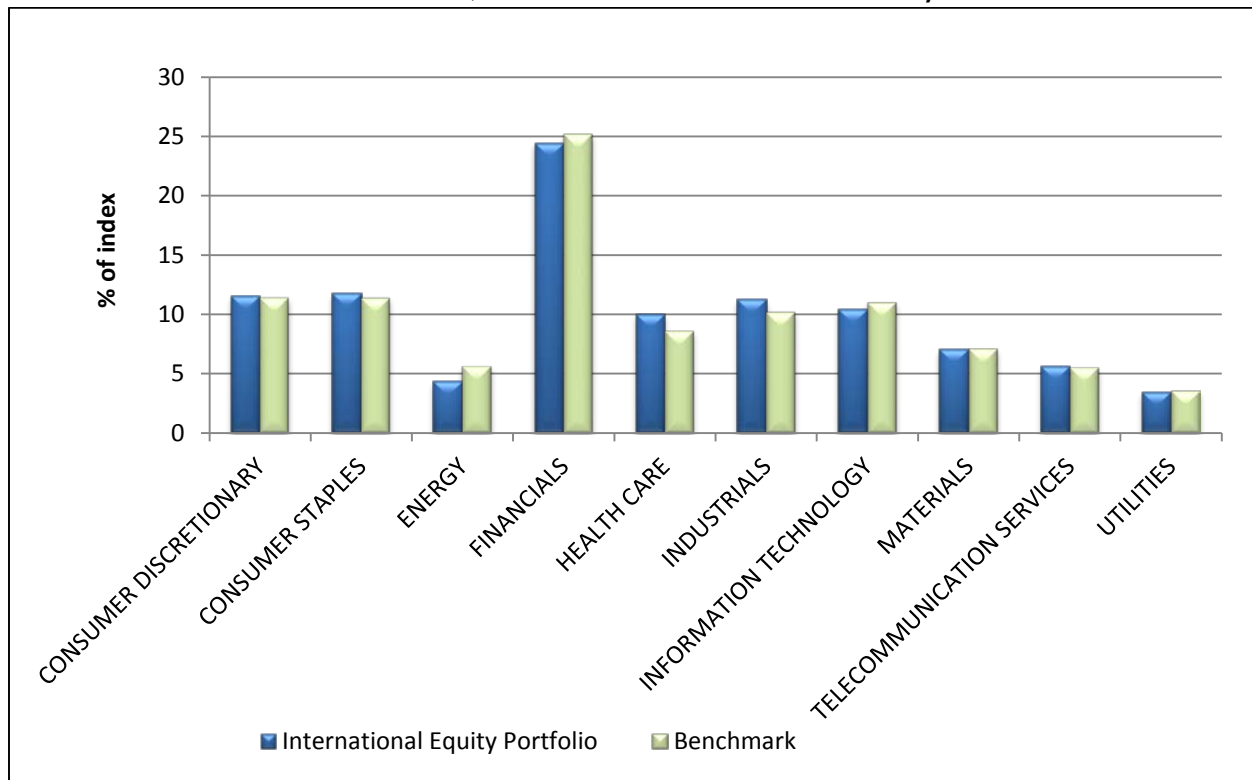
## INTERNATIONAL EQUITY HIGHLIGHTS OF FISCAL YEAR 2016

	Annualized Returns (%)			
	FY16	3 Years	5 Years	10 Years
<b>International Equity with Cash, Hedges, Miscellaneous</b>	(10.36)	0.60	(1.04)	1.05
<i>Custom International Equity Markets Benchmark<sup>(1)</sup></i>	(10.43)	0.76	(0.24)	
<i>MSCI All Country World Index (ex U.S.)</i>	(10.24)	1.16	0.10	1.87
Developed Markets Equity	(9.60)	2.36	0.85	
<i>Custom International Developed Markets Benchmark<sup>(1)</sup></i>	(9.96)	1.93	1.37	
<i>MSCI EAFE Index</i>				
Emerging Markets Equity	(10.81)	(2.28)	(3.87)	
<i>Custom International Emerging Markets Benchmark<sup>(1)</sup></i>	(11.77)	(1.41)	(3.27)	
<i>MSCI Emerging Markets Index</i>				

<sup>(1)</sup> Source: MSCI. The MSCI data is comprised of a custom index calculated by MSCI for, and as requested by the Division. These benchmarks exclude those securities deemed ineligible for investment under the State statutes governing investments in Iran and Sudan. The MSCI data is for internal use only and may not be redistributed or used in connection with creating or offering any securities, financial products or indices. Neither MSCI nor any other third party involved in or related to compiling, computing or creating the MSCI data (the MSCI Parties) makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and the MSCI Parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to such data. Without limiting any of the foregoing, in no event shall any of the MSCI Parties have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

- The International Equity portfolio is broadly diversified with exposure to more than 50 countries and investments in nearly 2,500 publicly traded non-U.S. stocks. The International Equity portfolio includes both developed market equities and emerging market equities. The Developed Market portfolio is a composite of ETFs, a passively managed optimized portfolio, an actively managed targeted health care portfolio and an actively managed portfolio of international small cap securities. The Emerging Market portfolio is a composite of ETFs and an actively managed portfolio of individual securities. At fiscal year-end, approximately 32% of the total international equity portfolio was actively managed.
- The International Equity portfolio outperformed its benchmark for Fiscal Year 2016, returning -10.36% against a custom benchmark return of -10.43%. The portfolio's defensive positioning in a weak market environment and a below benchmark allocation to emerging markets contributed positively to relative performance as developed markets outperformed emerging markets, partially offset by currency hedging strategies.
- The Developed Market Equity portfolio returned -9.60% for Fiscal Year 2016, outperforming its custom benchmark return of -9.96% by 36 basis points. An underweight allocation to cyclical sectors, especially Financials and Consumer Discretionary, and an overweight allocation to Health Care and certain Consumer Staples benefited relative returns as did a risk mitigating ETF investment strategy. In addition, the portfolio benefitted from an underweight exposure to Eurozone countries, as Brexit fears coupled with low growth pressured equities in this region.
- The Emerging Markets Equity portfolio returned -10.81%, outperforming its custom benchmark return of -11.77% by 96 basis points. The primary driver of outperformance was the underweight allocation to China which reflected concerns regarding China's structural economic growth prospects. Favorable stock selection, as well as an underweight allocation to cyclical sectors, also added value relative to the benchmark index.

**SECTOR WEIGHTING OF INTERNATIONAL EQUITY PORTFOLIO IN COMPARISON TO CUSTOM INTERNATIONAL EQUITY MARKETS INDEX AS OF JUNE 30, 2016<sup>(1)</sup>**



(1) This chart represents sector weights against the custom benchmark, which excludes those names deemed ineligible for investment under the State’s Sudan and Iran Divestment laws.

- The top 10 holdings in the International Equity portfolio represent 10.48% of the portfolio.

**TOP HOLDINGS IN INTERNATIONAL EQUITY PORTFOLIO AS OF JUNE 30, 2016**

Company	% of Portfolio
ISHARES CORE MSCI EMERGING MARKETS ETF	1.43
ROCHE HOLDING AG	1.25
NESTLE SA	1.22
NOVARTIS AG	1.18
ISHARES EDGE MSCI MIN VOL EMERGING MARKETS ETF	0.98
ISHARES MSCI INDIA ETF	0.98
L’ OREAL PRIME DE FIDELITE	0.91
SAMSUNG ELECTRONICS CO LTD	0.89
TAIWAN SEMICONDUCTOR SP ADR	0.88
TENCENT HOLDINGS LTD	0.77

## FIXED INCOME HIGHLIGHTS OF FISCAL YEAR 2016

	Annualized Returns (%) <sup>(1)</sup>			
	FY16	3 Years	5 Years	10 Years
Fixed Income with Cash, Hedges, Miscellaneous	4.91	4.73	6.25	7.44
<i>Fixed Income Blended Benchmark</i>	4.93	4.26	5.90	6.78
Investment Grade	5.93	4.54	5.79	6.99
<i>Investment Grade Blended Benchmark</i>	6.97	4.58	6.92	7.29
High Grade	6.57	5.25	6.19	
<i>Custom Investment Grade Credit Benchmark</i>	7.55	4.78	4.72	
U.S. Treasuries	6.00	2.46	5.25	
<i>Custom US Treasuries Benchmark</i>	6.22	3.98	3.34	
TIPS	3.62	1.81	3.13	
<i>Custom TIPS Benchmark</i>	4.59	3.27	2.36	
High Yield	2.96	6.85	7.72	
<i>Bloomberg Barclays Corp High Yield Index</i>	1.62	4.19	5.84	

(1) Benchmark index returns reflect returns for Bloomberg Barclays indices that were selected by the SIC as the most appropriate measure of performance for the investment plan approved by the Council in advance of each fiscal year. The benchmark composition has changed over time to reflect changes in the targeted asset allocation. Returns for each time period have been geometrically linked for longer-term comparisons. For Fiscal Year 2016, the following Bloomberg Barclays Indices were represented in the Blended Benchmark and the underlying fixed income subindices listed above: U.S. Credit Index, U.S. Treasury Index, U.S. Treasury Inflation Protected Securities (TIPS) Index, and Corporate High Yield Index.

- The Fixed Income portfolio returned +4.91% for Fiscal Year 2016, in line with its blended custom benchmark return of +4.93%. The key drivers of relative returns were outperformance within the Global Diversified Credit portfolio and the Public High Yield portfolio, offset by a lower duration profile in a declining interest rate environment for the Investment Grade Credit, Treasury, and TIPS portfolios.
- The Fixed Income portfolio has outperformed its benchmark index in seven of the last 10 fiscal years, realizing outperformance of 66 basis points (annualized) over the same horizon. Based on an average portfolio value of \$19 billion for the 10-year period, the 66 basis points of outperformance is equivalent to approximately \$1.3 billion of additional value for the Pension Fund over the past decade.
- During Fiscal Year 2016, the Fixed Income portfolio's below benchmark allocation to lower quality securities added value as higher quality securities outperformed in an environment characterized by sharply wider credit spreads. Within High Yield, the portfolio's underweight allocation to energy also added value as the energy sector underperformed by 15.9% on a duration-matched basis. Favorable sector and quality selection was offset by an underweight allocation to long-dated securities as long Treasuries outperformed intermediate Treasuries by 15.3%.

## ALTERNATIVE INVESTMENTS

### PRIVATE EQUITY HIGHLIGHTS OF FISCAL YEAR 2016

	Annualized Returns (%)			
	FY16	3 Years	5 Years	10 Years
Private Equity	6.27	15.73	13.24	8.59
<i>Cambridge Associates Benchmark<sup>(1)</sup></i>	3.16	10.90	11.52	10.76

(1) Reported on a one-quarter lag

- As of June 30, 2016, the Private Equity portfolio, including Buyouts/Venture Capital, Debt-Related Private Equity and Opportunistic Private Equity, had a market value of \$7.72 billion and consisted of 108 limited partnerships and co-investments.
- The Private Equity portfolio is broadly diversified with across a wide range of private equity fund limited partnerships and co-investment opportunities. Private equity investment agreements specify the investment horizon, with a wide range of possible time periods. The typical investment time period for private equity investment agreements is 10-12 years.
- The overall Private Equity portfolio returned +6.27% for the fiscal year, outperforming the benchmark by 311 basis points. The co-investment and special situation portfolios were the best performing portfolios during the fiscal year, returning +10.9% and +15.4% respectively.
- The Total Value Multiple for the overall Private Equity Portfolio was unchanged at 1.45x as of June 30, 2015, and June 30, 2016. The Total Value Multiple measures the portfolio's current market value plus distribution divided by contributions. In the case of the Private Equity Portfolio, the current value of the remaining investments plus all distributions received to date is 45% greater than the amount of contributions.
- The Pension Fund committed \$1.2 billion to 10 new private equity partnerships in Fiscal Year 2016.
- The Pension Fund contributed \$1.18 billion to various Private Equity portfolio funds and received distributions totaling \$1.64 billion from funds in the portfolio during the fiscal year. In Fiscal Years 2015 and 2014, the Pension Fund contributed \$1.2 billion and \$1.4 billion, respectively, to various Private Equity portfolio funds and received distributions of \$2.1 billion and \$1.9 billion, respectively, from funds in the portfolio. Over the trailing five years, the Private Equity portfolio has been cash flow positive with \$7.9 billion in distributions and \$6.1 billion in contributions.

### REAL ESTATE HIGHLIGHTS OF FISCAL YEAR 2016

	Annualized Returns (%)			
	FY16	3 Years	5 Years	10 Years
Real Estate	9.86	12.10	11.41	(1.21)
<i>NCREIF(ODCE)<sup>(1)</sup></i>	12.62	12.59	12.10	7.68

(1) Reported on a one-quarter lag

- As of June 30, 2016, the Real Estate portfolio, including Equity Related Real Estate and Debt-Related Real Estate, had a market value of \$4.31 billion and consisted of 49 limited

partnerships, which invest in opportunities both in the U.S. and abroad, as well as investments in publicly traded REIT securities.

- The Real Estate portfolio returned +9.86% for the fiscal year, underperforming the benchmark by 276 basis points. Fiscal Year 2016 was the sixth consecutive year that the Real Estate portfolio produced a positive overall return, supported by non-core strategies that capitalize on positive fundamentals and macro-economic trends.
- Within the Real Estate portfolio, favorable absolute returns were partly offset by the impact of a strong U.S. dollar on certain non-U.S. real estate fund holdings. Approximately 40% of the Real Estate portfolio is non-U.S. dollar denominated.
- The Total Value Multiple for the private investments in the Real Estate portfolio increased from 1.38x to 1.40x from June 30, 2015, to June 30, 2016. The Total Value Multiple measures the portfolio's current market value plus distribution divided by contributions. In the case of the Real Estate Portfolio, the current value of the remaining investments plus all distributions received to date is 40% greater than the amount of contributions.
- The Pension Fund committed \$1.13 billion to nine real estate partnerships in Fiscal Year 2016.
- The Pension Fund contributed \$664 million to various Real Estate portfolio funds and received distributions totaling \$723 million from funds in the portfolio during the fiscal year. In Fiscal Years 2015 and 2014, the Pension Fund contributed \$696 million and \$800 million, respectively, to various Real Estate portfolio funds and received distributions of \$1.3 billion and \$983 million, respectively, from funds in the portfolio.

## HEDGE FUND HIGHLIGHTS OF FISCAL YEAR 2016

	Annualized Returns (%)			
	FY16	3 Years	5 Years	10 Years
Hedge Funds	(5.13)	3.00	3.95	3.46
<i>HFRI Fund of Funds Composite<sup>(1)</sup></i>	(5.94)	1.60	1.46	1.57

<sup>(1)</sup> Reported on a one-month lag.

- As of June 30, 2016, the Hedge Fund portfolio, including Absolute Return/Risk Mitigation, Credit-Oriented Hedge Funds and Equity-Oriented Hedge Funds, had a market value of \$8.39 billion and consisted of 43 limited partnerships.
- The Hedge Fund portfolio returned -5.13% and outperformed the HFRI Fund of Funds Composite by 81 basis points for the fiscal year. Most segments of the Hedge fund portfolio realized disappointing returns during the fiscal year while some segments, including risk mitigation and long/short credit, contributed positively.
- Equity event driven strategies were a drag on performance due to a slowdown in M&A activity and poor security selection.
- Quantitative macro strategies produced solid gains on fixed income positioning in developed and emerging markets along with tactical energy and equity-related investments. Structured credit investments also performed well during the year.

- During Fiscal Year 2016, the Pension Fund committed \$760 million to six strategies in the Hedge Fund portfolio. During the same period, the Pension Fund redeemed \$1.9 billion from 12 funds.

### COMMODITIES/REAL ASSET HIGHLIGHTS OF FISCAL YEAR 2016

	Annualized Returns (%)		
	FY16	3 Years	5 Years
Real Assets/Commodities	(4.39)	(2.10)	(3.41)
<i>Bloomberg Commodity Index Total Return</i>	(13.32)	(10.55)	(10.82)

- At June 30, 2016, the Commodities/Real Asset portfolio is invested in 19 funds with diversified strategies and in publicly traded securities and ETFs.
- The Commodities/Real Asset portfolio returned -4.39% and outperformed the Bloomberg Commodity Index by 893 basis points for the fiscal year.
- Within the Real Assets portfolio, the Fund benefited from an emphasis on operationally focused investment structures that offered a more attractive risk-reward profile vs. direct investments in commodities, particularly in a highly volatile commodity pricing environment. Notwithstanding a challenging environment for real assets, these investment structures outperformed direct investments in commodities.
- During Fiscal Year 2016, the Pension Fund committed \$500 million to four investments in the real asset portfolio.

## SUMMARY OF CALENDAR YEAR 2016

Rate of Return (%) for Calendar Year 2016 (Unaudited)	CY16	Benchmark
<b>Total Pension Fund</b>	7.01	8.51
<b>Total Pension Fund excluding Police and Fire Mortgages</b>	7.09	8.51
<b>Domestic Equity with Cash, Hedges, Miscellaneous</b>	11.63	13.03
<b>International Equity with Cash, Hedges, Miscellaneous</b>	4.25	5.21
Developed Markets Equity	1.50	2.50
Emerging Markets Equity	12.16	10.92
<b>Fixed Income with Cash, Hedges, Miscellaneous</b>	7.06	9.24
Investment Grade	3.54	4.45
High Grade Credit	4.68	5.37
US Treasuries	(1.26)	1.04
Tips	2.65	2.90
High Yield	13.92	17.13
<b>Alternative Investments</b>	5.42	
Private Equity <sup>(2)</sup>	8.63	7.35
Real Estate <sup>(2)</sup>	7.15	9.08
Hedge Funds <sup>(2)</sup>	2.16	(0.82)
Real Assets/Commodities	7.04	11.77
<b>Cash Equivalents</b>	1.57	0.27

<sup>(1)</sup> Benchmark is a weighted composite of index returns in each asset class.

<sup>(2)</sup> Performance based on most recent values available

- The net asset value of the Pension Fund was \$71.2 billion at December 31, 2016.
- The Total Pension Fund excluding Police and Fire Mortgages underperformed the Total Pension Fund Benchmark by 142 basis points for Calendar Year 2016. The Pension Fund has outperformed the Benchmark on an annualized basis for the 5 year (+48 basis points) and 10 year (+77 basis points) periods ended December 31, 2016.
- The Domestic Equity portfolio returned +11.63% vs. +13.03% for the S&P 1500 Index, with equity markets recovering strongly after an initial selloff. While returns were favorable on an absolute return basis, the U.S. Equity portfolio underperformed the benchmark index primarily as a result of sector allocation, with below market weightings in energy and financials. Gains were broad, and with the exception of healthcare, all industry groups had positive absolute returns. All of the relative weakness occurred early in the calendar year, with the portfolio dropping more than 13% by mid-February. For the calendar year, stock selection was positive in six of the 11 industry groups, led by consumer staples, materials, and utilities. With crude prices gaining 45 percent during the year, the underweight in the energy sector hurt returns. This was offset somewhat by strength in energy-related industrial holdings. The portfolio's above market allocation to small cap stocks added value as small caps outperformed large caps for the first time since 2013.
- The International Equity portfolio returned +4.25% vs. +5.21% for the benchmark index. The key drivers of relative returns was an underweight allocation to Emerging Markets (EM) and an overweight allocation to small cap and healthcare within the Developed Markets (DM) portfolio. A rebound in valuations for EM led to strong outperformance relative to DM, as EM outperformed DM by 8.42% during calendar year 2016, led by strong returns in Brazil and Russia. Within EM, active management added value as the EM portfolio outperformed the benchmark index by 124



basis points (+12.16% vs. +10.92%). Underweight positions in China and Korea, as well as an overweight position in Russia, added value. The developed markets equity portfolio underperformed its benchmark by 100 basis points (+1.50% vs. +2.50%). Within DM, political headwinds and weak currencies adversely impacted the healthcare (-12%) sector, while a commitment to small cap equities detracted from returns as small caps underperformed the broader DM benchmark.

- The Fixed Income portfolio returned +7.06% vs. +9.24% for the blended custom benchmark. Key drivers of relative returns included a below benchmark duration profile in a strong fixed income environment, sector selection within the Investment Grade Credit portfolio, and security and quality selection within the High Yield portfolio. During calendar year 2016, lower quality fixed income outperformed higher quality fixed income as credit spreads narrowed sharply. The portfolio emphasized higher quality securities, adversely impacting relative returns. This was partly offset by an increased commitment to high yield during calendar year 2016.
- Private Equity and Real Estate both realized strong returns, net of all fees. High exit multiples and attractive financing markets continued to benefit Private Equity. Real Estate capitalization rates remained at levels near all-time lows and fundamentals remained solid. The Hedge Fund portfolio realized positive, but modest returns on balance. During the first half of 2016, most hedged fund strategies underperformed as flight to quality and preference towards low volatility and yield oriented strategies dominated the marketplace. Recovery was experienced in the second half of the year as credit and equity markets recovered and company specific fundamentals took hold over the macro outlook.

## CASH MANAGEMENT FUND

	Returns <sup>(1)</sup> (%)		
	FY16	3 Years	5 Years
Cash Mgt. Fund – State Participants	0.31	0.19	0.17
Cash Mgt. Fund – Non-State Participants	0.24	0.12	0.09
<i>U.S. Treasury Bills (3 month)</i>	0.17	0.09	0.07

<sup>(1)</sup> Returns represent the annual rate for the period based on the average daily rate of return.

- The State of New Jersey Cash Management Fund has consistently beaten its benchmark over the trailing five-year period. In December 2015, the Federal Reserve Open Market Committee raised its target range for the Federal Funds rate from a range of 0 - 0.25% to a new range of 0.25% - 0.50%, representing the first increase in rates since 2006. The Fed's action led to somewhat higher rates available in the marketplace during the second half of Fiscal Year 2016, resulting in higher returns for the participants of the Cash Management Fund. The Non-State Participants' return is reduced by a Reserve Fund Fee and the proportionate share of gain on investment transactions, which is credited to the Reserve Fund.
- The net assets of the Cash Management Fund of \$11.9 billion decreased by \$26 million (or -0.2%) during the fiscal year, primarily due to net participant withdrawals, which are at the discretion of the participants.

### CASH MANAGEMENT PORTFOLIO <sup>(1)</sup> DETAIL AS OF JUNE 30, 2016

	Percentage	June 30, 2016 (000'S)
US TREASURY NOTES	39.56%	\$4,686,074
COMMERCIAL PAPER	40.06%	4,744,812
CERTIFICATES OF DEPOSIT	13.13%	1,554,991
GOVERNMENT AGENCY	4.22%	499,961
MONEY MARKET FUND	2.36%	279,927
CORPORATE BONDS	0.67%	79,075
TOTAL **	100.00%	\$11,844,840

<sup>(1)</sup>Excludes receivables and payables

## COSTS OF MANAGEMENT

All investment returns for the Pension Fund and the various asset classes are reported net of external fees and costs associated with investing the assets. The Division strives to minimize cost while at the same time investing the assets in a manner that will generate attractive risk-adjusted returns. When appropriate, the Division manages assets internally. As of June 30, 2016, approximately 72% of the net assets of \$84.8 billion of all funds under Division management are managed by in-house staff at very low cost. When the Division believes it is in the best interest of Plan participants, it utilizes the services of external fund managers for strategies in which the Division does not possess the resources or expertise.

The Division and the Council are both committed to demonstrating industry leadership in transparency and have been recognized for doing so. In recent years, the Division and the Council have made significant enhancements to the level of detail disclosed related to the cost of investments. Starting in Fiscal Year 2014, the Council began to include performance allocation for all investment vehicles. The Council further expanded the information provided with regard to fees, expenses and performance allocation in Fiscal Year 2015 to include information at the fund-of-fund manager level, as well as for the underlying funds, in situations where fund-of-fund structures are used.

While we believe the reporting changes incorporated into the annual reports for Fiscal Years 2014 and 2015 are enhancements that improve transparency, the expanded formats are not comparable to prior Council reports and, therefore, comparisons to prior reports are not meaningful.

In total, costs to manage the portfolios were \$417.1 million, or 0.49% of assets under management for the fiscal year.

The Division paid \$377.5 million in management fees and expenses in Fiscal Year 2016 to managers within the Alternative Investment Program that includes private equity funds, real estate and real asset funds, opportunistic funds, hedge funds and global diversified credit funds. As of June 30, 2016, the value of the Alternative Investment Program was \$24 billion. The Division paid an additional \$22.4 million to the advisers of a portion of its emerging market equity, international small cap equity and high-yield fixed income portfolios in Fiscal Year 2016. Investments in these portfolios totaled \$4.9 billion on June 30, 2016.

Operating expenses for staff compensation, overhead and equipment were \$11.1 million for the fiscal year, and represent about 2.7% of fees and expenses. Remaining expenses, which include fees for consulting services, custodial banking and legal services, are included in the chart below.

	Fiscal Year Ended June 30, 2016
Fees & Expenses <sup>1</sup> :	
Hedge Funds	\$126.9
Private Equity Funds	132.3
Real Estate Funds	50.8
Real Asset Funds	26.9
Opportunistic Funds	7.0
Global Diversified Credit Funds	33.6
High-Yield, Small Cap and Emerging Market Advisers	22.4
Division Operations	11.1
Consulting Fees	2.6
Legal Fees	1.8
Custodial Banking Fees	1.8
<b>Total</b>	<b>\$417.1 million</b>
Total net assets under management	<b>\$84.8 billion</b>
Cost as a percentage of assets under management	0.49%
<b>Cost per each \$100 under management</b>	<b>49 cents</b>

Total does not equal sum of components due to rounding

## PERFORMANCE ALLOCATIONS

As noted above, the Council includes detailed information about the performance allocation earned by the managers of the funds in which the Division invests in this Annual Report, as part of its commitment to transparency. By way of background, investment fund managers may earn a performance allocation or share of the investment profits, also known as carried interest, if certain conditions and objectives are met. Typically a private equity limited partner (e.g., the New Jersey Pension Fund) must receive a preferred return, often 8%, before the general partner can collect a performance allocation. When negotiating investment agreements, the Division is committed to negotiating preferential terms that incentivize strong performance, provide the Division with meaningful governance rights, and ensure the alignment of interests.

The table below summarizes the returns, net profits earned by the Division, fees and expenses, and profit allocation for the Alternative Investment Program for Fiscal Year 2016.

<sup>1</sup> Alternative Investment Program fees and expenses are based on information provided by the manager.

(\$ in millions)

	Estimated				Fees & Expenses		Profit Allocation		
	Average Assets	Gross Profit	Estimated Net Profit	FY16 Net Return	Amount	As % of Assets	Amount	As % of Assets	As % of Profit
Private Equity	\$ 7,256.0	\$ 596.9	\$ 355.1	6.27%	\$ 132.3	1.82%	\$ 109.5	1.51%	18.34%
Real Estate	4,378.6	484.4	384.5	9.86%	50.8	1.16%	49.2	1.12%	10.16%
Real Assets	1,787.0	(61.1)	(99.6)	(4.39%)	26.9	1.51%	11.6	0.65%	NA
Opportunistic	255.5	(8.4)	(15.4)	(0.92%)	7.0	2.75%	0.0	0.00%	NA
Hedge Funds	9,039.9	(290.7)	(472.9)	(5.13%)	126.9	1.40%	55.3	0.61%	NA
Global Diversified Credit	2,570.4	123.1	73.1	3.32%	33.6	1.31%	16.4	0.64%	13.32%
<b>Total</b>	<b>\$ 25,287.4</b>	<b>\$ 844.3</b>	<b>\$ 224.8</b>	<b>1.61%</b>	<b>\$ 377.5</b>	<b>1.49%</b>	<b>\$ 242.0</b>	<b>0.96%</b>	<b>28.66%</b>

## REPORTING STANDARDS AND COMPARISONS TO OTHER FUNDS

There is no standard for the reporting of investment fees and expenses, including performance allocations. As a result, comparisons to other funds may not be meaningful because other funds may elect not to provide the same level of disclosure or they may not believe it is appropriate to include performance allocations as part of an expense report. In addition, since 2015 the Council has included fees and performance allocations for both the fund-of-fund manager level and for the underlying funds in such structures, while other investors may not do so. Accordingly, it is likely that the Council *reports more costs* than other funds, while the NJ Pension Fund actually *incurs fewer costs* than those same funds.

## COSTS ASSOCIATED WITH THE ALTERNATIVE INVESTMENT PROGRAM

The large majority of the Total Fund's fees and expenses are incurred by the Alternative Investment Program. These types of investment vehicles are typically more complex, require greater resources, and therefore are more expensive to manage relative to traditional asset classes (e.g., public stocks and bonds). When performance allocation is included in total fees and expenses, the costs associated with the Alternative Investment Program are higher.

While more costly, the Alternative Investment Program provides important investment benefits for the Pension Fund, including a long-term performance advantage (net of all fees) on both an absolute and risk-adjusted basis, enhanced portfolio diversification, and better downside protection.

During Fiscal Year 2016, the Alternative Investment Program (+1.61%) outperformed the Total Fund excluding Alternative Investments (-2.26%) by 386 basis points. Over the past six fiscal years, the Alternative Investment Program has generated \$9.4 billion of net profit after all management fees, expenses and performance allocation, adding an additional \$1.9 billion of value for the Fund, net of all fees.

## COMMISSIONS

The Division incurred broker/dealer commission costs totaling \$16.4 million for Fiscal Year 2016. The brokerage commission total includes \$3.7 million in "soft dollar" commissions used to procure systems and services critical to the Division's trading and research.

The Division purchases and sells certain investments with no involvement by a broker/dealer, including commercial paper, certificates of deposit, foreign currency transactions and investments in alternative investment funds by transacting directly with the issuer, partnership or fund; as a result, no direct commissions are paid.