2019 ANNUAL REPORT

NEW JERSEY STATE INVESTMENT COUNCIL

FOR FISCAL YEAR 2019

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

January 29, 2020

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

As the newly elected chairman of the State Investment Council (Council), it is my honor and privilege to present the Fiscal Year 2019 Annual Report on behalf of the Council and the New Jersey Division of Investment (Division).

On behalf of myself and the Division, I am pleased to welcome several new appointees to the Council, including Ted Aronson, Wasseem Boraie, Vaughn Crowe, and Samir Pandiri, who together bring over 100 years of collective investment experience to the Council. Combined with the pension fund and labor representatives (including the new designee of the Teachers' Pension and Annuity Fund, Edward Yarusinsky, and the new designee of the Retired Judges Association of New Jersey, Jerome St. John), the newly constituted Council has a depth of knowledge and diversity of perspective that makes it well positioned to serve our beneficiaries.

I would like to thank former Acting Chair Adam Liebtag and the rest of the Council for doing an excellent job as the Council went through this transition. We are grateful for his and their hard work. I would also like to congratulate Corey Amon, who was officially sworn in as Director of the Division after serving as Acting Director following the departure of the previous Director, Chris McDonough, at the beginning of the fiscal year. Under Adam's and Corey's leadership, the Council and the Division launched several initiatives during fiscal year 2019 which should enhance our performance over time.

One such initiative was a corporate governance initiative, including the Council's adoption of an Environmental, Social and Governance (ESG) Policy and the appointment of a Corporate Governance Officer, which recognizes that incorporation of ESG analysis into the investment decision-making process can enhance risk-adjusted returns. The Division anticipates an expanded engagement with companies, targeted towards achieving better financial outcomes.

The Division also committed itself to identify a wider universe of qualified Minority and Women-owned Business Enterprises (MWBEs) to incorporate into its investment process. This initiative is central to the Division's belief that diversity amongst its broker-dealers, investment consultants, investment advisors and alternative investment fund managers can lead to better risk-adjusted investment returns.

Finally, the Division is in the midst of a comprehensive initiative to ensure that its entire front, middle and back office IT infrastructure is consistent with best practices and enables the Division to efficiently meet its investment objectives. The project includes trade order management, portfolio management, performance analytics and attribution, risk analysis and modeling, as well as compliance and reporting. This initiative, when completed, will lay the foundation for sustained performance for years to come.

As you may have read, calendar year 2019 was an exceptionally strong year, not only for the U.S. equity market, but for virtually all asset classes. For Fiscal Year 2019, however, which ended on June 30, 2019, market returns were much more muted and do not reflect the strong performance that markets experienced during the second half of the calendar year.

The net asset value of the Pension Fund managed by the Division was $80.0 billion as of June 30, 2019, compared to $78.2 billion as of June 30, 2018. The Pension Fund return for fiscal year 2019 was 6.3% (net of all fees). The Pension Fund received $3.4 billion from the State and $4.2 billion from employee and employer contributions. The $3.4 billion contributed by the State was significantly higher than the $2.5 billion contributed in fiscal year 2018 and the $1.9 billion contributed in fiscal year 2017. Approximately $11.2 billion was paid out to plan beneficiaries.

The Pension Fund's 6.3% performance in fiscal year 2019 was respectable on an absolute basis, but modestly trailed the benchmark index (up 7.1%), primarily due to the domestic equity portfolio underperforming the S&P 1500 benchmark. In the current market, it is difficult to generate market-beating returns on large pools of capital. The Division recognized this and moved decisively to a passive, index-based portfolio for domestic equities. The move toward a passive portfolio was essentially completed in September 2019. Not only does this make it less likely that we will miss market opportunities, it also frees up Division resources to be applied to other asset classes.

During Fiscal Year 2019, the Council approved a new asset allocation plan, which is informed by changing market conditions and recognizes the increasing likelihood that capital market returns over the past decade are unlikely to persist. As part of this plan, the Council recommended modestly increasing our exposure to international equity markets, which the Council believes are poised to perform better after several years of relative underperformance, and to U.S. Treasuries, primarily to increase liquidity to rebalance and pay benefits in the event of a drawdown.

The Division has also undertaken a thorough review of its alternative investment classes to make sure that we continue to have an effective strategy for investing in private equity and other such asset classes, one that ensures favorable risk-adjusted returns with minimum fees. The Council's new asset allocation plan provides for a modest increase in the exposure to private equity, based in part on its strong historical performance, while at the same time recognizing concerns regarding fees and liquidity. At the same time, the Council recommended reducing the target hedge fund allocation to 3% of the portfolio, down from 6% for fiscal year 2018 and as high as 12% just two years ago. Hedge funds have recently been a disappointing asset class for investors, with subpar performance and high fees. We expect the exposure to approach the reduced targets as lock-up periods expire and we receive proceeds.

In summary, the Division is working to further strengthen its team of investment professionals and to build out its risk management and IT systems, in order to maximize risk-adjusted performance. The Council has made, and will continue to make, adjustments to investment policies focused on enhancing risk-adjusted returns for our beneficiaries. History has taught us that a well-diversified portfolio is the best defense against market uncertainties. Just a word of caution, though - U.S. equity markets have had a very strong run over the past decade and hit all-time record highs as we closed out calendar year 2019. Any softness in these equity markets will likely affect not only the public markets, but also the private markets, and will therefore have a negative impact on Pension Fund returns.

Please be assured that our primary goal is and always has been to provide for the safe and secure retirement of our beneficiaries.

Respectfully,

Deepak D. Raj

Deepak D. Raj
Chair

INTRODUCTION TO THE COUNCIL AND N.J. DIVISION OF INVESTMENT

DIVISION STAFF

Director:
Corey Amon[1]

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 under the State Investment Council tab.

Mailing Address:
PO Box 290, Trenton, NJ 08625-0290
Email Address:
doi@treas.nj.gov

COUNCIL MEMBERSHIP:

Council Chair:
Deepak D. Raj[2]
Founder, Raj Associates

Council Vice-Chair:
Adam Liebtag[2]
New Jersey State AFL-CIO Nominee

Council Members:
Theodore Aronson
Partner – AJO, LP

Wasseem Boraie
Principal, Boraie Development LLC

Thomas Bruno, Jr.
Public Employees' Retirement System Designee

Michael Cleary
New Jersey State AFL-CIO Nominee

Vaughn E. Crowe
Kotumba Capital Management

Andrew Michael Greaney
State Troopers Fraternal Association Nominee

James E. Hanson II
CEO, Hampshire Real Estate Company

Timothy McGuckin
New Jersey Education Association Nominee

Samir Pandiri
President, Broadridge International

Eric E. Richard
Senate President and Assembly Speaker Joint Appointee

Honorable Jerome M. St. John
Retired Judges Association of New Jersey Designee

Edward Yarusinsky
Teachers' Pension and Annuity Fund Designee

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[1] Corey Amon was appointed Division Director on March 27, 2019.

[2] In accordance with the Council bylaws, Adam Liebtag served as Acting Chair until September 2019. At its September 2019 meeting, the Council elected Deepak Raj as Chair and Adam Liebtag as Vice-Chair for one year terms.

COUNCIL MEMBERSHIP

The Council is comprised of sixteen (16) members pursuant to N.J.S.A. 52:18A-83[1]. Nine members are appointed by the Governor for five year terms, and are drawn traditionally from the professional 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 the four members are appointed for five year terms from nominees submitted by the New Jersey State AFL-CIO. One of the four members is appointed for a three year term from nominees submitted by the New Jersey Education Association. The fourth member 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, finance or actuarial science or by actual employment in those fields.

Two members, representing the Public Employees' Retirement System (PERS), and the Teachers' Pension and Annuity Fund (TPAF), are designated from members of the respective pension system's board of trustees and serve three year terms. One member is designated by the Chief Justice of the New Jersey Supreme Court from members of the Retired Judges Association of New Jersey.

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

THE DIVISION OF INVESTMENT

The Division, under the Council's supervision, is the 40th largest pension fund manager globally[2] and the 18th largest among U.S. public and corporate pension fund managers[3]. The Pension Fund supports the retirement plans of approximately 800,000 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 49% of the members are still working and contributing to the pension plans while 43% 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").

[1] As of January 27, 2020, there were 14 Council members, with 2 vacant positions

[2] Measured by assets as of December 31, 2018. Reported by Pensions & Investments (P&I) and TowerWatson.com in "P&I/ TW 300 analysis." https://www.thinkingaheadinstitute.org/en/Library/Public/Research-and-Ideas/2019/09/P_I_300_2019_research_paper Page 38

[3] Measured by assets as of September 30, 2018. Reported by P&I on February 8, 2019.

The net asset value of the Pension Fund assets managed by the Division was $80 billion as of June 30, 2019 compared to $78.2 billion as of June 30, 2018. The Pension Fund investment return[1] for Fiscal Year 2019 was 6.27% (net of all fees) and approximately $11.2 billion was paid to plan beneficiaries. The Pension Fund received contributions of $3.4 billion from the State (including net lottery proceeds and receivables of $1.1 billion), $2.0 billion from local employers, and $2.2 billion from employees.

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 Plan (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 investment, reinvestment, 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 qualified candidates submitted by the Council.

On July 3, 2018, the Governor signed P.L. 2018, c. 55 (the "PFRS Act") which, among other changes, transferred the authority to direct investment policy of the Police and Firemen's Retirement System ("PFRS") to a newly constituted twelve-member PFRS Board of Trustees (the "New PFRS Board"). The PFRS Act further provides that all functions, powers and duties relating to the formulation, establishment, amendment, modification or repeal of any policy, procedure, method or practice on the investment or reinvestment of moneys of PFRS shall be performed by the New PFRS Board. The purchase, sale or exchange of any investments or securities under the control and management of the New PFRS Board shall continue to be exercised by the Division. The PFRS Act became fully effective on the 366th day following enactment, or July 5, 2019.

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 investment, reinvestment, sale or exchange transactions (N.J.S.A. 52:18A-91).

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

[1] Pension Fund returns cited throughout this Annual Report exclude the Police and Fire Mortgage Program. The mortgages are considered a receivable under GASB 72. All investment returns are reported net of all fees.

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.

On July 1, 2019, amendments to the Council's regulations became effective that are necessary to implement the PFRS Act.

On July 1, 2019, amendments to the Council's regulation governing investments in certificates of deposit became effective. These amendments: clarified that permissible investments in certificates of deposits include those issued by a branch of a bank or trust company; deleted the long term deposit rating requirements for issuers since maturities are limited to a term of one year or less; replaced the short-term deposit rating requirement with a short-term issuer rating as not all issuers have short-term deposit ratings; and replaced primary capital with outstanding debt as the metric used in the investment limitation.

On November 20, 2019, the Council approved proposed amendments to its regulations governing investments in private equity and real estate to allow for greater flexibility in asset allocation. The proposed amendments will also allow for implementation of the Council's new investment plan. The proposed amendments provide for an increase in the limitation of real estate investments from nine to 10 percent of the Pension and Annuity Fund assets, and provide for an increase in the limitation of private equity investments and private equity buy out investments from 12 to 15 percent of the Pension and Annuity Fund assets. The Council also proposed an additional amendment necessary to implement the PFRS Act which provides clarification that the five percent limitation on commitments or investments to any one partnership or investment shall be applied to the pension and annuity funds under the supervision of the Council. The proposed amendments were published in *The New Jersey Register* on January 6, 2020 and the comment period expires on March 6, 2020.

COUNCIL ORGANIZATIONAL CHANGES DURING FISCAL YEAR 2019

The Council underwent the following organizational changes during Fiscal Year 2019:

- Kevin Kelleher, representative of the Teachers' Pension and Annuity Fund Retirement System, resigned from the Council on March 5, 2019. Edward Yarusinsky was designated as the Teachers' Pension and Annuity Fund Retirement System representative on April 4, 2019.
- Theodore Aronson and Deepak Raj were appointed to the Council on May 13, 2019.
- James Hanson was reappointed to the Council on May 13, 2019.
- Wasseem Boraie was appointed to the Council on June 4, 2019.
- James Kompany replaced Marty Barrett as the Police and Firemen's Retirement System representative on February 11, 2019 for the remaining term through June 30, 2019.

LEGISLATIVE UPDATE

PROHIBITED INVESTMENTS

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

Divestitures pose three primary fiscal challenges to the Pension Fund: 1) the requirement of the identification and sale of holdings on a timetable that may not consider market conditions; 2) the impact on risk and return for the Pension Fund; and 3) the reduction of the investment universe available to the Pension Fund. Collectively, the divestiture laws reduced the number of stocks comprising the investment universe as of June 30, 2019 by approximately 1% for the international developed markets and 3% for the international emerging markets relative to their 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.” ”McBride Principles” refers to a body of employment laws aimed at reducing employment discrimination in Northern Ireland. The report is filed each year by January 15th in accordance with the statute.

NET ASSETS UNDER MANAGEMENT

NET ASSETS IN MILLIONS

	June 30, 2019	June 30, 2018
PENSION FUND (1)	**$79,992**	**$78,186**
The Pension Fund includes pension assets contributed by participants, Lottery contributions, and State and local employers for participants in seven statewide retirement plans.		
Public Employees' Retirement System	28,646	27,858
Police & Firemen's Retirement System	26,595	25,685
Teachers' Pension & Annuity Fund	22,789	22,695
State Police Retirement System	1,796	1,776
Judicial Retirement System	160	166
Prison Officers' Pension Fund	5	5
Consolidated Police & Firemen's Pension Fund	1	2
Note: Total may not equal sum of components due to rounding		
CASH MANAGEMENT FUND(2)	**$15,131**	**$12,812**
This fund includes the cash balances of State government funds and other non-state government entities (counties, municipalities, school districts and the agencies or authorities created by any of these).		
SUPPLEMENTAL ANNUITY COLLECTIVE TRUST	**$230**	**$235**
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. Year over year change in net assets is impacted by a variety of factors including performance, plan funding and plan design.

(2) The total for the Cash Management Fund includes $4 billion on June 30, 2019 ($2.3 billion on June 30, 2018) 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 a portion of the State's tax-advantaged 529 college savings program. On June 30, 2019, the Division-managed portion of this fund had a market value of $264 million compared with $316 million on June 30, 2018. The year-over-year decline in market value is primarily attributable to net redemptions.

DEFERRED COMPENSATION PLAN

The Division manages several funds that comprise the New Jersey State Employees Deferred Compensation Plan. Prudential Retirement, a business of Prudential Financial, serves as the third-party administrator for this plan. The Division manages the Equity Fund and Small Capitalization Equity Fund. As of June 30, 2019, these funds had a combined market value of $571 million compared with $577 million as of June 30, 2018. The year-over-year decline in market value is primarily attributable to net redemptions.

TRUSTEES FOR THE SUPPORT OF PUBLIC SCHOOLS 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. As of June 30, 2019, the portfolio had a market value of $158 million compared with $152 million as of June 30, 2018.

20-YEAR PENSION FUND FINANCIAL SUMMARY

FISCAL YEAR	NET ASSETS ($ billions)	RATE OF RETURN (net of all fees) (%)	GROSS PENSION PAYMENTS ($ billions)
2019	80.0	6.27	11.2
2018	78.2	9.06	10.8
2017	76.0	13.07	10.4
2016	72.9	(0.93)	10.0
2015	79.0	4.09	9.6
5-YEAR ANNUALIZED RETURN		6.21	
2014	81.2	16.79	9.1
2013	74.4	11.72	8.7
2012	70.1	2.47	8.3
2011	73.7	17.97	7.7
2010	66.8	13.34	7.0
10-YEAR ANNUALIZED RETURN		9.22	
2009	62.9	(15.49)	6.6
2008	78.6	(2.61)	6.1
2007	82.5	17.14	5.6
2006	73.1	9.79	5.2
2005	69.8	8.77	4.8
15-YEAR ANNUALIZED RETURN		7.06	
2004	67.8	14.16	4.4
2003	62.6	3.31	4.1
2002	63.3	(8.61)	3.6
2001	72.2	(9.80)	3.2
2000	82.6	11.86	2.9
20-YEAR ANNUALIZED RETURN		5.69	

During Fiscal Year 2019, net transfers of approximately $5.132 billion were made from the Common Funds to the following pension plans: $19.4 million to the Judicial Retirement System, $936.8 million to the Police & Firemen's Retirement System, $1,508.7 million to the Public Employees' Retirement System, $108.1 million to the State Police Retirement System and $2,559 million to the Teachers' Pension & Annuity Fund. Included within the transfers are contributions totaling $1.057 billion to the investment account of Common Pension Fund L in accordance with the Lottery Enterprise Contribution Act (P.L. 2017, c.98) on behalf of the following pension plans: $12.7 million for the Police & Firemen's Retirement System, $222.2 million for the Public Employees' Retirement System, and $822.1 million for the Teachers' Pension & Annuity Fund. Net transfers are the difference between total contributions to the pensions plans and liabilities (primarily benefit payments) paid by the pension plans.

PENSION FUND ASSET ALLOCATION

The Council reviews, approves, and adopts an investment plan that includes a targeted asset allocation, as well as allowable ranges for asset classes. The Council's key objective in setting the targeted asset allocation is to provide for a well-diversified portfolio designed to achieve the best possible return at an acceptable level of risk utilizing the highest fiduciary standards.

The targeted asset allocation in effect during Fiscal Year 2019 was approved at the Council meeting in May 2017.

ACTUAL ALLOCATION AS OF JUNE 30, 2019 VS. TARGETED ASSET ALLOCATION

	Actual Allocation %	Target %	Difference %	Allocation (in millions $)
Total Risk Mitigation	**4.19**	**5.00**	**(0.81)**	**3,347.74**
Total Cash and Short Term [1]	5.55	5.50	0.05	4,439.03
Governments	1.90	3.00	(1.10)	1,517.25
Total Liquidity	**7.45**	**8.50**	**(1.05)**	**5,956.28**
Investment Grade Credit	9.89	10.00	(0.11)	7,911.23
Public High Yield	1.39	2.50	(1.11)	1,109.91
Global Diversified Credit	5.99	5.00	0.99	4,789.64
Credit-Oriented Hedge Funds	1.01	1.00	0.01	809.71
Debt-Related Private Equity	1.16	2.00	(0.84)	924.74
Debt Related Real Estate	0.52	1.00	(0.48)	418.34
Total Income	**19.96**	**21.50**	**(1.54)**	**15,963.56**
Real Assets	2.77	2.50	0.27	2,214.08
Equity Related Real Estate	5.65	6.25	(0.60)	4,519.99
Total Real Return	**8.42**	**8.75**	**(0.33)**	**6,734.08**
US Equity	29.72	30.00	(0.28)	23,773.71
Non-US Equity Developed Markets Equity	11.46	11.50	(0.04)	9,165.05
Emerging Markets Equity	6.44	6.50	(0.06)	5,148.17
Buyouts-Venture Capital	9.81	8.25	1.56	7,844.15
Equity Oriented Hedge Funds	0.14	0.00	0.14	108.04
Total Global Growth	**57.55**	**56.25**	**1.30**	**46,039.12**
Opportunistic Investments	0.53	0.00	0.53	422.54
Police & Fire Mortgage Program [2]	1.60	0.00	1.60	1,280.88
Other Cash and Receivable	0.31	0.00	0.31	247.54
Total Pension Fund	100.00	100.00	0.00	79,991.73

Total may not equal sum of components due to rounding
[1] The cash aggregate comprises the two common pension fund cash accounts, in addition to the seven plan cash accounts.
[2] For financial reporting, the Police & Fire Mortgage Program is considered a receivable under GASB 72. Only the Police & Firemen's Retirement System has exposure to the program.

The Council adopted a new investment plan including a new targeted asset allocation during its May 2019 meeting. The new investment plan reflects updates to the classification of asset classes. Specifically, Debt-Related Private Equity and Buyouts/Venture Capital were combined to form the broader Private Equity classification, Debt-Related Real Estate and Equity-Related Real Estate were combined to form the broader Real Estate classification, and Global Diversified Credit and Credit-Oriented Hedge Funds were combined to form the broader Private Credit classification.

The Council subsequently adopted new allowable ranges for asset classes during its July 2019 meeting. The new investment plan, including the targeted allocation and allowable ranges, became effective on October 1, 2019. The allowable ranges for private equity and real estate are subject to the ultimate adoption of proposed amendments to the Council regulations.

The new investment plan includes modest adjustments to prior targeted allocations. The allocation to U.S. equities was reduced by 2%, while the allocation to Non-U.S. Developed Markets was increased by 1%. These changes reflect a gradual shift toward a global equity allocation more aligned with the opportunity set and result in a reduction in the Pension Fund's home country bias that follows a period of strong outperformance for U.S. equities.

The allocation to Risk Mitigation Strategies was reduced by 2% while the allocation to U.S. Treasuries was increased by 2%. These changes are consistent with a key portfolio objective to provide downside protection and negative correlation relative to equity risk. The shift to U.S. Treasuries increases liquidity to rebalance and pay benefits in the event of a drawdown.

The allocation to Private Equity increased by 1.75% and is supported by an expected return premium for private investments and a shift in dynamics between public and private markets. The Council also made modest adjustments to the allocations to High Yield and Real Estate. The new investment plan, including the targeted allocation and allowable ranges is shown below.

TARGETED ASSET ALLOCATION AND ALLOWABLE RANGES (effective October 1, 2019)

Asset Class	Target %	Allowable Ranges
GLOBAL GROWTH	**59.00%**	
U.S. Equity	28.00%	23 – 33%
Non-U.S. Developed Market Equity	12.50%	10 – 15%
Emerging Market Equity	6.50%	4 – 9%
Private Equity	12.00%	9 – 15%
REAL RETURN	**10.00%**	
Real Estate	7.50%	5 – 10%
Real Assets	2.50%	1 – 5%
INCOME	**18.00%**	
High Yield	2.00%	1 – 5%
Private Credit	6.00%	3 – 9%
Investment Grade Credit	10.00%	7 – 13%
DEFENSIVE	**13.00%**	
Cash Equivalents	5.00%	3 – 10%
US Treasuries	5.00%	3 – 10%
Risk Mitigation Strategies	3.00%	1 – 6%

MARKET OVERVIEW FOR FISCAL YEAR 2019

During Fiscal Year 2019, global public equities and fixed income, as well as most private markets, realized positive performance as asset class returns were more highly correlated. The Bloomberg Barclays U.S. Aggregate Bond Index (+7.87%) had its strongest performance year since Fiscal Year 2010 as yields declined and credit spreads narrowed. In this environment, fixed income outperformed global equities, as the MSCI ACWI Index returned +5.74%. Private markets broadly outperformed, with strong returns in both private equity and real estate.

Fiscal Year 2019 was characterized by heightened volatility for global equities, as weakness during the first half (-9.02%) was offset by strong returns (+16.23%) during the last six months of the Fiscal Year. For the eighth time in the past nine fiscal years, U.S. equities outperformed both non-U.S. Developed Markets (DM) and Emerging Markets (EM). DM and EM realized modestly positive returns, with a wide dispersion of returns across geographic regions. The MSCI USA Index returned +10.24% versus +1.29% for the MSCI EAFE & Canada Index and +1.21% for the MSCI Emerging Markets Index. Over the past nine fiscal years, U.S. equities (+14.73%) outperformed DM (+6.71%) and EM (+4.04%) by 802 and 1,069 basis points, respectively, on an annualized basis.

The strong market gains realized during the second half of Fiscal Year 2019 also coincided with a slowdown in global economic growth, suggesting markets discounted deceleration of growth and subsequently anticipated further monetary policy accommodation. As U.S. monetary policy shifted from a tightening mode to an easing bias, yields declined across the curve and equity multiples expanded. In this environment, large cap stocks and growth stocks outperformed. During Fiscal Year 2019, the MSCI USA Small Cap Index (+0.40%) barely realized positive returns, underperforming the MSCI USA Index by 984 basis points. Favorable returns in growth stocks have been persistent. The MSCI USA Growth Index outperformed the MSCI USA Value Index in five of the past six fiscal years, as growth (+15.43%) outperformed value (+10.23%) by 520 basis points on an annualized basis over the same six year period.

Slowing global growth prospects, elevated trade conflicts, and rising uncertainty ahead of some form of ultimate Brexit resolution all proved to be a challenging investment environment for international equities as the MSCI All Country World Index ex-US (ACWI ex-US) returned +1.29% during the Fiscal Year. EM equity markets broadly struggled in the midst of global trade disputes and a resilient U.S. dollar. Volatility within EM remained high as some of the best performing countries of Fiscal Year 2019 were among the worst performers of the prior year. Brazil (+39.43%) outperformed after realizing negative returns a year earlier while China (-6.73%) underperformed after leading EM in Fiscal Year 2018.

Within fixed income, the Bloomberg Barclays U.S. Credit Index (+10.34%) was the best performing asset class on the heels of negative returns a year earlier, as Treasury yields declined and credit spreads narrowed. U.S. Treasuries (+7.24%) followed two years of consecutive losses with favorable returns during the Fiscal Year. Longer duration assets outperformed as the yield curve flattened, with long-dated Treasuries returning +12.30% and long-dated credit returning +14.97%. High yield (+7.48%) realized favorable returns on a duration-adjusted basis, outperforming duration-matched Treasuries by 626 basis points as spreads compressed. There was a wide dispersion of returns across the credit markets. Within investment grade credit, lower quality BBB corporate debt (+11.39%) outperformed, while lower quality CCC corporate debt (+0.16%) underperformed in high yield.

Real Estate marked its tenth consecutive fiscal year of positive returns supported by constructive fundamentals. The NCREIF ODCE Real Estate Index, a broad measure of private real estate returns, realized solid performance (+6.55%) during Fiscal Year 2019. Of the major property types, the performance of industrial assets continued to be robust as companies streamline their logistics and distribution networks to satisfy both business and consumer demand. Performance in the industrial sector more than offset the negative performance among retail properties. Income producing assets remain particularly attractive to investors in a moderate growth, later-cycle economy. The fundamental outlook remains constructive with continued tenant demand for high quality real estate, relatively low levels of construction, and positive net absorption.

Private equity returns remained strong as the Cambridge Index returned +13.48%, outperforming the broader financial markets. Nearly all of the elements that have driven robust performance for private equity over the last several years continued to be tailwinds during 2019: low interest rates; a plentiful supply of debt from strong capital markets and private lenders; and continued strong M&A interest. Notwithstanding this, valuations and leverage remain high. Within private equity, venture capital was the best performing subsector. Growth strategies (+15.37%) realized favorable returns, followed by buyouts (+10.72%). Within the buyout universe, the best performance came from the Mid-Cap sector (+11.90%).

PENSION FUND RETURN VS. BENCHMARK

	Annualized Returns (%)					
	FY19	3 Years	5 Years	10 Years	20 Years	25 Years
Pension Fund	6.27	9.43	6.21	9.22	5.69	8.29
Pension Fund Benchmark (1)	7.07	9.62	6.33	8.82	5.32	*

(1) *Benchmark is a weighted composite of index returns in each asset class*
** Benchmark return not available for 25 year period*

- During Fiscal Year 2019, the Pension Fund returned 6.27% versus 7.07% for the benchmark index primarily due to the relative returns within the Pension Fund's largest portfolio, the Domestic Equity portfolio.

- All asset classes realized positive returns. Investment Grade Credit was the best performing asset class for the Pension Fund, returning 10.07%, following negative returns a year earlier. The Private Equity, Domestic Equity and Real Estate portfolios all realized strong absolute returns, while the International Equity portfolio lagged.

- For the ten and twenty year periods ended June 30, 2019, the Pension Fund outperformed its benchmark by 40 and 37 basis points, respectively, on an annualized basis.

DOMESTIC EQUITY HIGHLIGHTS OF FISCAL YEAR 2019

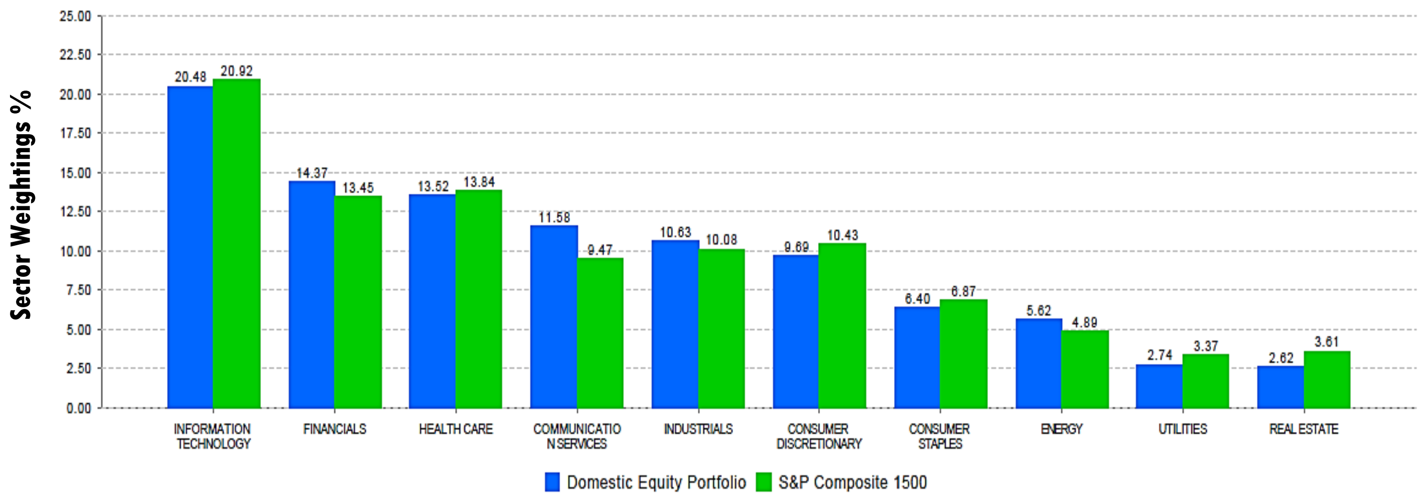
	Annualized Returns (%)			
	FY19	3 Years	5 Years	10 Years
Domestic Equity Only (Ex Cash and hedges)	7.85	13.37	9.04	14.32
S&P 1500 Super Composite (Daily)	9.32	13.91	10.45	14.73

- The Domestic Equity portfolio remained broadly diversified by economic sector, with over 700 publicly traded stocks as of June 30, 2019. During Fiscal Year 2019, the Division actively managed the Domestic Equity portfolio by overweighting and underweighting securities and industries in the portfolio with the objective of outperforming the benchmark.

- During Fiscal Year 2019, the Domestic Equity Portfolio returned 7.85% versus 9.32% for the benchmark index. Notwithstanding favorable absolute returns, relative performance was adversely impacted by a more value-oriented and small cap emphasis as growth-oriented and large cap equities outperformed.

- The Division shifted the Domestic Equity portfolio to a more passive index-based investment style during the first quarter of Fiscal Year 2020.

SELECT SECTOR WEIGHTINGS OF DOMESTIC EQUITY PORTFOLIO vs. S&P 1500 AS OF JUNE 30, 2019



The top 10 holdings (including related receivables) in the Domestic Equity portfolio represent 25.2% of the total portfolio.

TOP HOLDINGS IN DOMESTIC EQUITY PORTFOLIO AS OF JUNE 30, 2019

Security Name	% of Portfolio
MICROSOFT CORP	4.40
AMAZON.COM INC	4.07
APPLE INC	3.15
ALPHABET INC CL C	2.79
AT+T INC	2.13
FACEBOOK INC CLASS A	2.10
JPMORGAN CHASE + CO	2.00
BANK OF AMERICA CORP	1.59
VISA INC CLASS A SHARES	1.53
JOHNSON + JOHNSON	1.41

INTERNATIONAL EQUITY HIGHLIGHTS OF FISCAL YEAR 2019

	Annualized Returns (%)			
	FY19	3 Years	5 Years	10 Years
International Equity with Cash, Hedges, Miscellaneous	1.59	9.35	2.24	5.19
Custom International Equity Markets Benchmark (1)	1.47	9.71	2.46	
MSCI All Country World Index (ex U.S.)	1.29	9.39	2.16	6.54
Developed Markets Equity	1.16	9.21	2.52	
Custom International Developed Markets Benchmark (1)	1.40	9.03	2.15	
Emerging Markets Equity	2.38	9.80	1.77	
Custom International Emerging Markets Benchmark(1)	1.30	10.72	2.71	

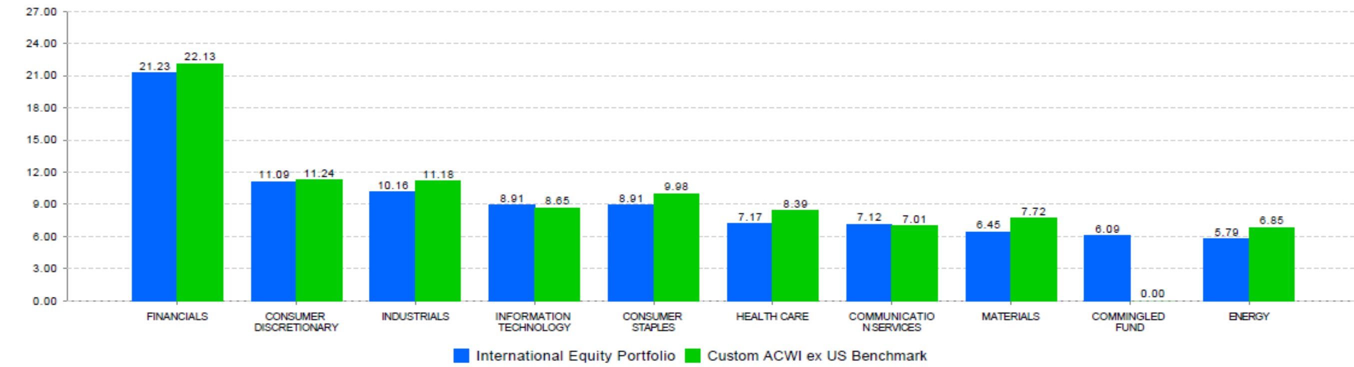
(1) Source: MSCI. Each benchmark is a custom index calculated by MSCI for, and as requested by the Division, based on screening criteria defined by the Division. These benchmarks exclude those securities deemed ineligible for investment under the State statutes governing investments in Iran, Sudan and companies that boycott Israel. 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 investments in approximately 2,600 publicly traded stocks across more than 50 countries. The International Equity portfolio includes both Developed Market (DM) equities and Emerging Market (EM) equities. The DM portfolio is primarily managed passively and also includes an actively managed allocation to small cap stocks. The EM portfolio includes both passively managed and actively managed strategies.

- During Fiscal Year 2019, the International Equity Portfolio returned 1.59% versus 1.47% for the benchmark index. Strong relative returns within the EM portfolio were largely offset by an out-of-benchmark allocation to small cap equities and security selection within the small cap portfolio that adversely impacted overall returns for the DM portfolio.

- The EM portfolio returned 2.38% versus 1.30% for the benchmark index. The EM portfolio remained well diversified across style strategies. Growth, Value and Core strategies drove excess returns through favorable stock selection and country allocation. Style diversification proved beneficial as value-oriented equities outperformed during the first half of the Fiscal Year and growth-oriented equities outperformed during the second half of the Fiscal Year.

SELECT SECTOR WEIGHTINGS OF INTERNATIONAL EQUITY PORTFOLIO vs. BENCHMARK INDEX AS OF JUNE 30, 2019



The top 10 holdings (including related receivables) in the International Equity portfolio represent 12.9% of the portfolio.

TOP HOLDINGS IN INTERNATIONAL EQUITY PORTFOLIO AS OF JUNE 30, 2019

Security Name	% of Portfolio
ISHARES MSCI INDIA ETF	2.04
ISHARES MSCI TAIWAN ETF	2.02
TENCENT HOLDINGS LTD	1.67
ALIBABA GROUP HOLDING SP ADR	1.45
SAMSUNG ELECTRONICS CO LTD	1.32
NESTLE SA REG	1.21
TAIWAN SEMICONDUCTOR SP ADR	0.97
ROCHE HOLDING AG GENUSSCHEIN	0.77
NOVARTIS AG REG	0.77
PING AN INSURANCE GROUP CO H	0.68

FIXED INCOME HIGHLIGHTS OF FISCAL YEAR 2019

	Annualized Returns (%)			
	FY19	3 Years	5 Years	10 Years
Fixed Income with Cash, Hedges, Miscellaneous	8.00	5.11	4.39	6.88
Fixed Income Blended Benchmark	8.39	4.56	3.81	6.23
Governments	6.72	1.01	1.26	
Custom Government Benchmark	7.24	1.46	2.04	
Investment Grade Credit	10.07	3.25	3.70	
Custom Investment Grade Credit Benchmark	9.42	3.14	3.56	
Public High Yield	6.75	7.19	4.69	8.67
Bloomberg Barclays Corp High Yield Index	7.48	7.52	4.70	9.24
Global Diversified Credit (GDC)	5.79	10.48	7.86	
Bloomberg Barclays Corp High Yield Index	7.48	7.52	4.70	

- The Fixed Income portfolio is comprised of the U.S. Government portfolio, the Investment Grade (IG) Credit portfolio, the Public High Yield (HY) portfolio, and the Global Diversified Credit (GDC) portfolio. The IG and HY portfolios are broadly diversified across economic sectors. The GDC portfolio is comprised primarily of limited partnerships invested in a wide range of private credit strategies.

- During Fiscal Year 2019, the Fixed Income Portfolio returned 8.00% versus 8.39% for the benchmark index. The key driver of relative returns was underperformance within the GDC portfolio.

- The GDC portfolio underperformed as more liquid strategies outperformed structured credit, leveraged loans and opportunistic credit. Notwithstanding underperformance in Fiscal Year 2019, the GDC portfolio has realized strong absolute and relative returns over time, outperforming its benchmark index by 316 basis points (annualized) over the past five years.

- Strong absolute and relative returns in the IG portfolio added value as yields declined sharply and credit spreads narrowed modestly. The IG portfolio benefitted from positive sector selection, new issue concessions in the primary market, and a commitment to select lower quality investment grade credits (BBB rated) that outperformed.

- Within the U.S. Government portfolio, an underweight position in the long end of the yield curve adversely impacted relative returns as the yield curve flattened.

PRIVATE EQUITY HIGHLIGHTS OF FISCAL YEAR 2019

	Annualized Returns (%)			
	FY19	3 Years	5 Years	10 Years
Private Equity	9.06	13.02	12.53	13.76
Custom Cambridge Associates Blended Benchmark(1)	12.29	15.74	12.13	14.86

(1) Reported on a one-quarter lag

- As of June 30, 2019, the Private Equity portfolio, including Buyouts, Venture Capital and Debt-Related Private Equity, had a market value of $8.8 billion and consisted of investments in 123 limited partnerships and co-investment vehicles. The Pension Fund committed a total of $815 million to five new Private Equity partnerships in Fiscal Year 2019.

- The Private Equity portfolio is broadly diversified across a wide range of private equity 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 horizon for private equity investment agreements is 10-12 years.

- During Fiscal Year 2019, the Private Equity portfolio returned 9.06%, underperforming the Custom Cambridge Associates Blended Benchmark. Within the Private Equity portfolio, Debt-Related Private Equity underperformed. Vintage year selection and legacy investments also adversely impacted relative returns. The co-investment and venture capital portfolios were the best performing private equity portfolios during the fiscal year. Over the past five years, the Private Equity portfolio outperformed the benchmark index by 40 basis points on an annualized basis.

- As of June 30, 2019, the Total Value Multiple for the Private Equity Portfolio was 1.53x. The Total Value Multiple measures the portfolio's current market value plus distributions, divided by contributions. In the case of the Private Equity Portfolio, the current value of the remaining investments plus all distributions received to date exceeds contributions by $7.9 billion.

- The Private Equity portfolio continues to generate significant distributions. During Fiscal Year 2019, the Private Equity portfolio was net cash flow positive by $680 million, with distributions of $1.95 billion versus contributions of $1.25 billion. Since the start of Fiscal Year 2013, the Private Equity portfolio is net cash flow positive by $3.4 billion.

REAL ESTATE AND REAL ASSET HIGHLIGHTS OF FISCAL YEAR 2019

	Annualized Returns (%)			
	FY19	3 Years	5 Years	10 Years
Real Estate	8.52	9.42	10.13	9.54
NCREIF(ODCE) (1)	6.55	7.01	9.18	9.57
Real Assets & Commodities	0.48	6.57	0.92	
Custom Cambridge Real Asset Index	0.43	9.55	(0.53)	

(1) Reported on a one-quarter lag

- The Real Estate portfolio is comprised of Equity-Related and Debt-Related Real Estate. As of June 30, 2019, the Real Estate portfolio had a market value of $4.8 billion and consisted of investments in 55 limited partnerships that invest in global opportunities, as well as investments in publicly traded REIT securities. The Pension Fund committed a total of $325 million to three Real Estate partnerships in Fiscal Year 2019.

- During Fiscal Year 2019, the Real Estate portfolio returned 8.52% versus 6.55% for the benchmark index. The Division's investment in non-core and opportunistic strategies and public REITs were the key drivers of outperformance.

- As of June 30, 2019, the Total Value Multiple (TVM) for the private Real Estate Portfolio was 1.48x. The TVM measures the portfolio's current market value plus distributions, divided by contributions. The current value of the remaining Real Estate investments plus all distributions received to date exceeds contributions by $2.9 billion.

- The limited partnerships in the Real Estate portfolio continue to generate significant distributions. During Fiscal Year 2019, this portion of the portfolio was net cash flow positive by $255 million, with distributions of $623 million versus contributions of $368 million. Since the start of Fiscal Year 2013, the Real Estate portfolio is net cash flow positive by $1.85 billion.

- The Real Asset portfolio is comprised of private real assets including energy, infrastructure, power, mining, and agriculture, as well as investments in publicly traded securities. As of June 30, 2019, the Real Assets portfolio had a market value of $2.2 billion and consisted of 19 investments in limited partnerships that invest in global opportunities, as well as investments in publicly traded securities. The Pension Fund committed a total of $200 million to two Real Asset partnerships in Fiscal Year 2019.

- During Fiscal Year 2019, the Real Assets portfolio returned +0.48% in line with the benchmark index of +0.43%.

RISK MITIGATION STRATEGIES AND CREDIT- AND EQUITY-ORIENTED HEDGE FUND HIGHLIGHTS OF FISCAL YEAR 2019

	Annualized Returns (%)			
	FY19	3 Years	5 Years	10 Years
Risk Mitigation Strategies and Credit- and Equity-Oriented Hedge Funds	3.04	5.77	3.18	6.09
HFRI Fund of Funds Composite[1]	(0.85)	3.55	2.07	3.09

[1] Reported on a one-month lag.

- The Hedge Fund portfolio is comprised primarily of Risk Mitigation (Absolute Return) Strategies, with additional investments in Credit-Oriented Hedge Funds and Equity-Oriented Hedge Funds. As of June 30, 2019, the portfolio had a combined market value of $4.4 billion and consisted of investments in 27 limited partnerships.

- During Fiscal Year 2019, the Hedge Fund portfolio returned +3.04% versus -0.85% for the benchmark index. Outperformance of the Hedge Fund portfolio was attributable to several strategies including Market Neutral, Global Macro and Systematic Strategies driven by higher volatility and persistent trends. Credit- and Equity-Oriented strategies were a slight detractor to the overall returns.

- During Fiscal Year 2019, the Pension Fund redeemed $906 million from hedge funds as the Division continued its progress toward reducing the overall allocation to hedge funds in accordance with the Council's target asset allocation plan.

CASH MANAGEMENT FUND

	Returns [1] (%)		
	FY19	3 Years	5 Years
Cash Mgt. Fund – State Participants	2.29	1.42	0.94
Cash Mgt. Fund – Non-State Participants	2.23	1.36	0.88
91 Day U.S. Treasury Bills (Daily)	2.31	1.38	0.87

[1] Returns represent the annual rate for the period based on the average daily rate of return.

- The Cash Management Fund (CMF) is the Local Government Investment Pool (LGIP) utilized by the Pension Fund, the State of New Jersey and local towns, municipalities, school districts, agencies, and authorities for its cash management needs. Participation is voluntary. As of June 30, 2019, the net asset value of the Cash Management Fund was $15.1 billion.
- The CMF primarily invests in U.S. Treasury and Agency obligations, highly-rated commercial paper and short-term corporate obligations, other highly-rated government debt, and certificates of deposit.
- The yield on the CMF has increased over time as short term interest rates have moved higher in conjunction with a more restrictive Federal Reserve monetary policy stance.
- The Non-State Participants' return is reduced by an Administrative Expense Fund Fee (0.05% per year) and a Reserve Fund Fee (0.01% per year). The Administrative Expense Fund Fee is used to reimburse the State of New Jersey for administrative and custodial fees of the CMF. The Reserve Fund fees are reinvested and participate in the CMF.

CASH MANAGEMENT PORTFOLIO [1] DETAIL AS OF JUNE 30, 2019

	Percentage	(000'S)
US TREASURY BILLS	47.81%	$7,259,553
COMMERCIAL PAPER	31.60%	4,798,243
US TREASURY NOTES	7.49%	1,137,312
CERTIFICATES OF DEPOSIT	6.36%	965,024
GOVERNMENT AGENCY	5.41%	822,098
CORPORATE BONDS	0.95%	143,986
STATE STREET STIF	0.38%	57,028
TOTAL	100.00%	$15,183,243

[1] Excludes receivables and payables

Sum of components may not equal total due to rounding

COSTS OF MANAGEMENT

All investment returns for the Pension Fund and the various asset classes are reported net of external fees and expenses associated with investing the assets. The Division strives to minimize costs, with the key objective to realize attractive risk-adjusted net returns. The Division continues to utilize internal resources to minimize costs, with the Pension Fund representing one of the highest percentages of internally managed plans amongst public pension funds.

The Division utilizes external advisers and fund managers for strategies that require greater resources than are currently available internally. The large majority of the fees and expenses within the Pension Fund are incurred by the $24 billion Alternative Investment Program (AIP) that includes private equity funds, real estate funds, real asset funds, opportunistic funds, hedge funds and global diversified credit funds. The Division paid $334 million in management fees and expenses in Fiscal Year 2019 to fund managers within the AIP.

While more costly, the AIP 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. Moreover, certain strategies within the AIP provide exposure to rapidly growing segments of the global market which are not investable in the public market.

The Division paid an additional $21.8 million to advisers with respect to its emerging market equity, international small cap equity and high-yield fixed income portfolios in Fiscal Year 2019. Investments in these portfolios totaled $6.7 billion as of June 30, 2019.

Operating expenses for staff compensation, overhead and equipment were $10.5 million for the Fiscal Year and represent approximately 2.8% of fees and expenses or .01% of $92.3 billion in total assets under management.

Fees for consulting services, custodial banking, and legal services were $6 million for the fiscal year and represent approximately 1.6% of fees and expenses or less than .01% of $92.3 billion in total assets under management.

In total, costs to manage the portfolios were $372.3 million, or .40% of $92.3 billion in total assets under management. The following chart summarizes total fees and expenses for Fiscal Year 2019.

	Fiscal Year Ended June 30, 2019
Fees & Expenses[1]:	$ Millions
Private Equity Funds	113.1
Real Estate Funds	57.9
Real Asset Funds	31.5
Opportunistic Funds	11.8
Hedge Funds	53.6
Global Diversified Credit Funds	66.2
Subtotal	334.0
High-Yield, Small Cap and Emerging Market Advisers	21.8
Division Operations	10.5
Consulting Fees	2.4
Custodial Banking Fees	2.6
Legal Fees	1.0
Total	372.3

Total may not equal sum of components due to rounding

[1] Alternative Investment Program fees and expenses are based on information provided by the manager.

PERFORMANCE ALLOCATIONS

The Council also provides detailed information regarding the performance allocation earned by the fund managers within the AIP. By way of background, 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 Pension Fund) must receive a net minimum return, also known as a hurdle rate or preferred rate, before the fund manager can collect a performance allocation. Other requirements may include prior repayment of contributed capital, management fees, and other expenses to limited partners. The Division is committed to negotiating preferential terms that incentivize strong performance, provide the Division with meaningful governance rights, and ensure alignment of interests.

The table below summarizes the performance allocation for the AIP for Fiscal Year 2019.

($ in millions)

	Performance Allocation		
	Amount	As % of Assets	As % of Profit
Private Equity Funds	$ 155.9	1.79%	15.69%
Real Estate Funds	20.2	0.43%	4.32%
Real Assets Funds	0.9	0.04%	1.70%
Opportunistic Funds	0.0	0.00%	0.00%
Hedge Funds	28.9	0.62%	13.93%
Global Diversified Credit Funds	42.6	0.94%	12.49%
Total	$ 248.6	0.97%	12.06%

For Fiscal Year 2019, the AIP earned a net return of 6.07% and generated $1.48 billion of net profits. The AIP has been a significant driver of the Pension Fund's returns over longer term periods. Over the five years ending June 30, 2019, the AIP has returned 7.43%, outperforming the Total Pension Fund, excluding the AIP, by 189 basis points on an annualized basis.

The table below summarizes the net returns and profits for the AIP for Fiscal Year 2019.

($ in millions)

	Estimated Average Gross Assets	Estimated Gross Profit (Loss)	Estimated Net Profit (Loss)	FY19 Net Return
Private Equity Funds	8,697.48	993.63	724.68	9.06%
Real Estate Funds	4,719.7	468.9	390.8	8.52%
Real Assets Funds	2,444.4	55.8	23.3	0.54%
Opportunistic Funds	437.7	(5.4)	(17.2)	(3.90%)
Hedge Funds	4,674.5	207.6	125.1	3.04%
Global Diversified Credit Funds	4,556.2	341.2	232.4	5.79%
Total	$ 25,530.11	$ 2,061.67	$ 1,479.10	6.07%

Performance allocations were $19.3 million lower in Fiscal Year 2019 versus Fiscal Year 2018, primarily due to a reduction in performance allocation for Real Estate. Performance allocations were moderately higher for Private Equity in Fiscal Year 2019 versus Fiscal Year 2018, in line with investment returns.

Fees and expenses within the AIP were $29.2 million lower in Fiscal Year 2019 versus Fiscal Year 2018, driven primarily by a decrease in private equity, global diversified credit, and hedge fund fees and expenses. The reduction in hedge fund fees is consistent with the Council's decision to reduce the overall allocation to hedge funds.

The table below summarizes year-over-year changes in AIP fees and expenses, performance allocation, and estimated net profits.

($ in millions)	Fiscal Year 2018	Fiscal Year 2019	Year over Year Reduction*
Fees and Expenses	$ 363.1	$ 334.0	$ (29.2)
Performance Allocation	$ 267.9	$ 248.6	$ (19.3)
Estimated Net Profit	$ 2,722.9	$ 1,479.1	$ (1,243.8)

* May not equal difference of components due to rounding

REPORTING STANDARDS AND COMPARISONS TO OTHER FUNDS

Public pension funds do not have a uniform standard for the reporting of investment fees and expenses, including performance allocations. As a result, comparisons to other public funds may not be meaningful because other funds may not provide comparable disclosure. For example, the Council includes performance allocation in this report, whereas other public funds may not include performance allocation in similar reports. Accordingly, it is possible that the Council reports more types of costs and, therefore, *higher* costs than other funds, while the Pension Fund may actually incur *lower* costs than those same funds.

ADDITIONAL INFORMATION REGARDING ALTERNATIVE INVESTMENT PROGRAM FEES AND EXPENSES

The Division and the Council are both committed to demonstrating industry leadership in transparency. As part of this commitment, the Council also includes a report of fees and expenses, along with performance allocation and returns over the past 5 fiscal years, in Appendix 1 of this Annual Report.

In accordance with N.J.S.A. 52:18A-91(b), the Council is also including a schedule of the percentage and amount of fees, expenses and performance allocations that were paid to those AIP fund managers in connection with commitments made from January 1, 2018 through June 30, 2019 in Appendix 2 of this Annual Report.

COMMISSIONS

The Division incurred broker/dealer commission costs totaling $10.5 million for Fiscal Year 2019. The commission total includes $3.4 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.

Appendix 1: Five Year Cost Comparison

Appendix 1		Fiscal Year Ended June 30, 2019	Fiscal Year Ended June 30, 2018	Fiscal Year Ended June 30, 2017	Fiscal Year Ended June 30, 2016	Fiscal Year Ended June 30, 2015
Fees and Expenses:						
Hedge Funds	$	53,588,989	59,513,684.66	99,974,409	126,880,195	141,737,524
Private Equity Funds		113,064,371	134,088,404	135,822,473	132,287,674	126,561,769
Real Estate Funds		57,870,196	56,459,596	67,920,674	50,751,772	47,764,490
Real Asset Funds		31,496,895	29,980,413	33,901,880	26,914,795	21,908,944
Opportunistic Funds		11,770,080	10,765,042	6,082,764	7,019,900	3,762,715
Global Diversified Credit Funds		66,167,004	72,338,858	48,538,827	33,600,719	31,292,645
Division Operations and Internal Mgt [1]		38,333,573	50,831,884	45,578,113	39,675,226	42,634,420
Total Fees and Expenses:		372,291,108	413,977,881	437,819,141	417,130,281	415,662,506
Performance Allocation:						
Hedge Funds		28,913,464	35,961,645	66,331,578	55,307,643	128,180,329
Private Equity Funds		155,890,534	145,675,005	90,228,372	109,485,871	125,663,807
Real Estate Funds		20,247,890	39,998,435	72,966,276	49,204,152	50,318,243
Real Asset Funds		946,262	7,974,099	1,632,938	11,587,460	3,619,892
Opportunistic Funds		-	-	-	-	-
Global Diversified Credit Funds		42,613,549	38,302,254	42,642,060	16,396,283	20,602,969
Total Performance Allocation:		248,611,700	267,911,438	273,801,224	241,981,410	328,385,240
Total Fees, Expenses, Performance Allocation:	$	620,902,808	681,889,319	711,620,365	659,111,691	744,047,746

Performance	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015
Hedge Funds	3.04%	6.32%	7.99%	-5.13%	4.21%
Private Equity Funds	9.06%	17.52%	12.66%	6.27%	17.61%
Real Estate Funds	8.52%	11.98%	7.79%	9.86%	12.57%
Real Asset Funds	0.54%	12.70%	5.70%	-4.39%	-10.50%
Opportunistic Funds	-3.90%	11.83%	15.18%	-0.92%	11.42%
Global Diversified Credit Funds	5.79%	9.46%	16.46%	3.32%	4.74%
Total Alternative Investment Program	6.07%	11.88%	10.12%	1.60%	7.80%
Total Non-Alternative Investment Portfolio	6.42%	7.67%	14.37%	-2.26%	2.24%
Alternative Investment Portfolio Net Profit ($)	1,479,103,190	2,722,890,897	2,497,253,176	405,411,118	1,949,148,666
Percentage of Net Assets Internally Managed [2]	74%	73%	74%	72%	72%

[1] Includes costs related to external investment advisers for international small cap, emerging markets equity and high yield, as well as Division operations, consulting fees, legal fees, and custodial banking fees.

[2] International small cap, emerging markets and high yield assets managed with the support of external investment advisers are considered internally managed.

APPENDIX 2: ALTERNATIVE INVESTMENT DISCLOSURES PURSUANT TO N.J.S.A. 52:18A-91(b).

Pursuant to N.J.S.A. 52:18A-91(b), the Pension Fund made commitments after January 1, 2018 to the investments in the table below, which includes the terms of the commitments made from January 1, 2018 to June 30, 2019 and the amounts of fees and expenses paid for Fiscal Year 2019.

Investment	Commitment ($ Millions)	Annual Management Fee %	Performance Fee/Carried Interest %	Fees and Expenses Paid	Performance Fees Paid
Aether Real Assets SONJ Fund, L.P Executed March 2018	$135	Years 1-5: 0.60% Years 6-12: 85% of prior year's fee Years 13-15: 0.1%	4.475% carried interest subject to 7% return.	$907,497	$0
Aermont IV Executed October 2018 [1]	$117	1.50% of aggregate commitments stepping down to 1.7% of net invested capital during the post investment period.	20% carried interest subject to 9% return.	$1,819,724	$0
Blueprint Cap I, LP Executed May 2018	$300	0.30% on the first $225 million; 0.25% on the next $100 million, 0.20% thereafter.	No Performance Fee/No Carried Interest	$1,258,531	$0
Brookfield V Executed April 2019	$100	1.675 % during the commitment period; 1.425% in the post commitment period.	20% carried interest subject to 8% return.	$1,611,666	$0
Exeter Core Industrial Club Fund III Executed June 2019	$100	0.90% on invested capital	15% carried interest subject to 8% return.	$0	$0
Homestead III Executed April 2019	$100	1.5% on committed during investment period (or until successor fund is raised, if earlier), thereafter, 1.5% on invested capital.	15% carried interest subject to 6% compound IRR.	$554,282	$0
JLL Fund VIII Executed February 2019	$200	2.0% of commitments during the Investment Period; thereafter, 1.5% of actively invested capital.	20% carried interest subject to 8% return.	$0	$0
KSL V Executed February 2019	$100	1.75% on committed capital during the investment period;1.25% on invested capital post investment period	20% carried interest subject to 8% return.	$0	$0
NB/NJ Custom Fund III Executed April 2018	$200	0.10% on commitment during the investment period; 0.30% on actively invested capital	10% carried interest subject to 8% return. 15% carried interest subject to 15% return.	$165,307	$0
Owl Rock Technology Corporation and Owl Rock Technology Finance Limited Executed November 2018	$100	Prior to Exchange Listing: 0.90% of gross assets above 200% asset coverage, plus 1.50% of unfunded capital commitments. After Exchange Listing: 1.50% of gross assets above 200% asset coverage, plus 1.0% of gross assets below 200% asset coverage.	17.5% prior to Exchange Listing subject to a 6% hurdle; 17.5% after Exchange Listing subject to a 6% hurdle.	$899,727	$8,949

Investment	Commitment ($ Millions)	Annual Management Fee %	Performance Fee/Carried Interest %	Fees and Expenses Paid	Performance Fees Paid
Sycamore Partners III, L.P Executed January 2018	$150	2% per annum of commitments during the investment period, thereafter, 2% per annum of invested capital.	20% carried interest subject to 8% return.	$3,221,464	$0
The Rise II Executed March 2019	$125	1.75% of capital commitments during the commitment period; following the commitment period 1.25% on actively invested capital. During any extension, 0.50% on actively invested capital.	20% carried interest subject to 8% return.	$0	$0
TPG Real Estate Partners III LP Executed May 2018	$100	1.5% on first $50 million of invested capital; 1.25% on next $150 million. Uninvested equity during the Commitment Period: 0.80% of blended rate on invested equity.	20% carried interest subject to 8% net return.	$1,504,050	$0
TSG 8 Executed December 2018	$150	2.0% of commitments during the Investment Period; thereafter, 2.0% of the cost basis of the remaining investments	20% carried interest subject to 8% return; 25% carried interest subject to a 15% return and 2.0x TVM	$1,504,654	$0
Vista VII Executed August 2018	$300	1.5% of commitments during the Investment Period; thereafter, 1.5% of net invested capital.	20% carried interest subject to 8% net return.	$1,914,128	$0
Warburg Pincus China SEA II Executed June 2019	$100	1.4% on commitments during the investment term; 1.4% on cost of investments from years 6-8; 1.25% on cost of investments from years 8-10; 1.% on cost of investments thereafter.	20% carried interest.	$0	$0
Total	$2,377			$15,361,029	$8,949

[1.] Commitment is Euro 100 Million converted at the 6/30/19 exchange rate of 0.856494