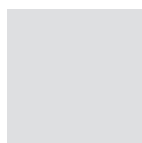
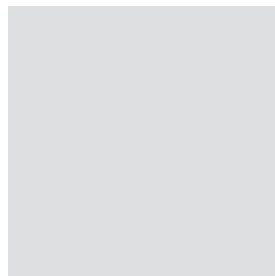
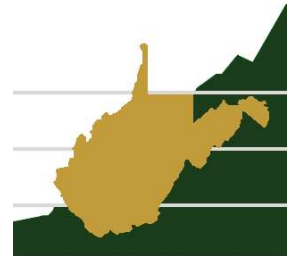


# West Virginia Investment Management Board

## 2019 ANNUAL REPORT

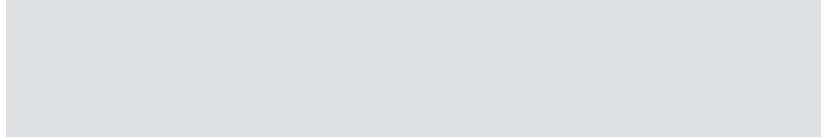






# **ANNUAL REPORT**

Year Ended June 30, 2019



Our mission is to exercise our best independent judgment in providing prudent and professional investment management for the exclusive benefit of the beneficiaries.

# Table of Contents

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## Introduction

Message from Chairman.....	1
Message from Executive Director .....	2

## Organization

Board of Trustees .....	4
Representatives and Committee Members .....	5
Staff Members .....	6
Organizational History .....	7
Statutory Mandate .....	8
Administrative Mandate .....	9
Organization Chart .....	10
Investment Philosophy .....	11

## Investment Objectives and Financial Highlights

Equity Pool.....	12
Short-Term Fixed Income Pool .....	16
Fixed Income Pool.....	18
TIPS Pool .....	21
Special Purpose Pool: TRS Annuity .....	23
Private Markets Pool .....	24
Hedge Fund Pool.....	26



# Table of Contents

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## Participant Plans

Participant Plans Overview .....	28
Deputy Sheriff's Retirement System .....	29
Emergency Medical Services Retirement System .....	31
Judges' Retirement System .....	33
Municipal Police Officers' and Firefighters' Retirement System .....	35
Municipal Policemen's or Firemen's Pension and Relief Funds .....	37
Public Employees' Retirement System .....	39
State Police Death, Disability and Retirement Fund .....	41
State Police Retirement System .....	43
Teachers' Retirement System .....	45
Board of Risk and Insurance Management .....	47
Coal Workers' Pneumoconiosis Fund .....	49
Public Employees Insurance Agency .....	51
West Virginia Retiree Health Benefit Trust Fund .....	53
Workers' Compensation Old Fund .....	55
Workers' Compensation Self-Insured Employer Guaranty Risk Pool .....	57
Workers' Compensation Self-Insured Employer Security Risk Pool .....	59
Workers' Compensation Uninsured Employers' Fund .....	61
Berkeley County Development Authority .....	63
Revenue Shortfall Reserve Fund .....	65
Revenue Shortfall Reserve Fund – Part B .....	67
West Virginia Department of Environmental Protection Agency .....	69
West Virginia Department of Environmental Protection Trust .....	71
West Virginia Prepaid Tuition Trust Fund .....	73
Wildlife Endowment Fund .....	75

## Definition of Terms and Abbreviations

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The following terms and abbreviations are used throughout the West Virginia Investment Management Board's Annual Report and are listed here to help with the overall understanding and readability of this document.

<b>Allocation Committee</b>	The Allocation Committee is a committee of the West Virginia Investment Management Board's general investment consultant, as approved by the Board, and the West Virginia Investment Management Board's investment officers: The Executive Director, who is also the Chief Investment Officer, and the Investment Officers with specific asset class responsibilities. The Allocation Committee is permitted to make adjustments within set ranges around the Strategic Allocation, based upon current market conditions and forward looking market views.
<b>Base Allocation</b>	The allocation between the three major asset classes – global equity, fixed income, and cash – whose purpose is to serve as return generators, or diversifiers, or some combination of both.
<b>Board</b>	The thirteen-member Board of Trustees that governs the West Virginia Investment Management Board.
<b>Cap</b>	Abbreviation for “capitalization,” referring to the size of the investment market for that particular asset style.
<b>IMB</b>	The “West Virginia Investment Management Board” including its Trustees, plan Representatives, Committee Members, and staff.
<b>Neutral Target</b>	The absolute percentage weighting assigned to an asset class or the secondary components within an allocation to which rebalancing should ultimately occur in the absence of an Allocation Committee modification.
<b>Participant Plan</b> (Participant)	A specific group of assets entrusted to the West Virginia Investment Management Board. Retirement plans, endowments, and insurance trusts, for example, are all Participant Plans.
<b>Pool</b>	Refers to the specific investment pool created and operated by the West Virginia Investment Management Board for a specific investment asset class.
<b>Range Allocation</b>	The Board has placed ranges (Allocation Ranges) around the Strategic Allocation in order to maintain appropriate risk controls. Allocation decisions made by the Allocation Committee are defined as the Range Allocation.
<b>Strategic Allocation</b>	The first level of adjustment to the Base Allocation is the principal focus of the asset allocation process and results in the Strategic Allocation. The broad types of assets considered at the Strategic Allocation level include global equities (commonly referred to as stocks), fixed income (broadly notes, bills, bonds issued by corporations and countries), real estate, private equity, and cash, as well as the opportunity set and management style of hedge funds.

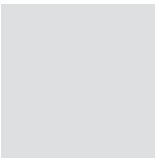
## Definition of Terms and Abbreviations

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The following terms and abbreviations refer to the investment performance benchmarks used for comparison purposes in the Investment Objectives and Financial Highlights section.

<b>Bloomberg Barclays U.S. Aggregate Bond</b>	A market capitalization weighted index that includes most U. S. traded investment grade bonds.
<b>Bloomberg Barclays U.S. TIPS</b>	An index that measures the performance of U.S. Treasury Inflation Protected Securities.
<b>Bloomberg Barclays U.S. Universal Bond</b>	The index covers U.S. dollar-denominated, taxable bonds that are rated either investment-grade or below investment-grade.
<b>Citigroup 90-Day Treasury Bill</b>	An unmanaged index representing monthly return equivalents of yield averages of the last 3 month Treasury Bill issues.
<b>Credit Suisse Leveraged Loan</b>	An index designed to mirror the investable universe of the U.S. dollar-denominated leveraged loan market.
<b>HRFI FoF</b>	Hedge Fund Research, Inc.'s composite index of fund of funds.
<b>MSCI ACWI ex U.S. (IMI)</b>	A market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The “ <b>ex U.S.</b> ” qualifier indicates that the index excludes the United States markets. The “ <b>IMI</b> ” qualifier further limits the index to investable markets. It is maintained by MSCI Barra, formerly Morgan Stanley Capital International.
<b>MSCI EAFE</b>	A stock market index that is designed to measure the equity market performance of developed markets outside of the U.S. & Canada. It is maintained by MSCI Barra, formerly Morgan Stanley Capital International. The EAFE acronym stands for Europe, Australasia and Far East.
<b>NCREIF Property Index</b>	National Council of Real Estate Investment Fiduciaries' property index.
<b>Russell 2500/ Russell 3000</b>	The Russell 2500 is an index of the 2,500 smallest companies in the Russell Investments' Russell 3000 index which is a broad market index comprised of 3,000 publicly held U.S. companies.
<b>S&amp;P 500</b>	Standard & Poor's 500 is a stock market index based on the market capitalizations of 500 large companies having common stock listed on the New York Stock Exchange or NASDAQ.





**INTRODUCTION**



## Message from Chairman

---

October 28, 2019

Dear Fellow West Virginians:

On behalf of the trustees of the West Virginia Investment Management Board (IMB), I present the IMB's Annual Financial Report for the fiscal year ending June 30, 2019. Please note that additional information about the IMB may be accessed electronically on its website, [www.wvimb.org](http://www.wvimb.org).

The IMB was able to return 6.0 percent in fiscal year 2019 (using the Public Employees' Retirement System as a proxy for all long-term assets). While this is a seemingly modest result after returns of 9.7 and 15.8 percent, respectively, the prior two years, one must take the economic environment into account. Rising interest rates and trade tension between the U.S. and China weighed heavily on capital markets this year. In the past I have warned readers of the vagaries of the world's capital markets, the year to year "ups" and "downs". The past few years are an example of that market volatility. The IMB, however, is a long-term investor, with an asset allocation plan to achieve its return goals fully cognizant that year to year volatility is the price one pays for return on one's money. It is important to maintain a long-term perspective.

I wish to thank fellow trustees and the staff for their dedicated service. I commend the IMB on its professionalism, commitment to the mission, and customer service.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jim Justice".

Jim Justice  
Governor of the State of West Virginia  
Chairman of the Board of Trustees

# Message from Executive Director

---

October 28, 2019

It is with great pleasure that I submit the Annual Report of the West Virginia Investment Management Board (IMB). The IMB is considered an internal service fund of the State of West Virginia for financial reporting purposes and, as such, the significant financial information contained in the report is also included in the State of West Virginia's comprehensive annual financial report. The information presented in this report is the responsibility of the management of the IMB, and sufficient internal accounting controls exist to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements, supporting schedules, and statistical tables. The report is also designed to comply with the reporting requirements of Chapter 12, Article 6, Section 6 of the *West Virginia Code*, as amended. This report is divided into the following sections:

- **Organization** – Contains general information regarding trustees and staff, history of the IMB, statutory mandate, administrative mandate, and investment philosophy.
- **Investment Objectives and Financial Highlights** – Outlines the more specific objectives and performance of each of the investment pools.
- **Participant Plans** – Contains a brief description of each of the participant plans whose assets are entrusted to the IMB.

Please note that the audited financial statements of the investment pools administered by the IMB and the IMB's Administrative Fund are published as a separate document. This is done to accommodate two audit opinion release dates and will also minimize the time required to download this annual report. The audited financial statements are available on the IMB website.

As an investment organization, the IMB's constant focus is the performance of its investments as it seeks to satisfy the investment needs of the beneficiaries of the participant plans entrusted to it. To a large extent, each participant plan's performance is a function of the asset classes in which it invests. As such, a review of asset class performance for the year may be helpful.

The fiscal year ending June 30, 2019, started well with continued evidence of economic growth and expectations for the abatement of trade tensions between the U.S. and China. U.S. equity markets were off to a good start. By the second quarter of the fiscal year, however, the weight of successive rate hikes along with unresolved trade issues and weak growth in international markets brought expectations down resulting in a dramatic pull back in equity markets, especially in the U.S. Halfway through the fiscal year, markets were down across the board. However, all the turmoil led the Federal Reserve to reconsider its upward bias on rates. That, and what appeared to be constructive developments on the trade front, seemed to calm the markets in the third quarter of the fiscal year with a snap back in equity markets to reverse the downturn in the December quarter. Meanwhile, the Federal Reserves' sensitivity to weakening growth boosted fixed income markets, especially long dated U.S. treasuries. As the fiscal year ended, U.S. growth appeared to stabilize while the Fed appeared to be signaling a rate cut. This helped to shore up the capital markets even though China/U.S. trade tensions continued to fester. Meanwhile, the yield curve inverted, potentially signaling a recession in the not too distant future. Debate continues to swirl on that topic, so the end of the current economic cycle may not yet be at hand. For the fiscal year, U.S. stocks were up 9.0 percent (Russell 3000). International stocks by comparison, were only up 0.8 percent (MSCI AC World ex U.S. IMI). Fixed income ended up being the relative star of the year returning 8.1 percent (Bloomberg Barclays U.S. Universal Bond).

The IMB experienced relative underperformance in all the major asset classes in fiscal year in 2019. The IMB's U.S. public equity portfolio returned 7.5 percent but fell short of its benchmark (Russell 3000) by 1.5 percent. International public equity was a significant detractor returning (1.0) percent and falling short of its benchmark (MSCI AC World ex U.S. IMI) by 1.8 percent. The fixed income portfolio contributed positively to the portfolio returning 7.7 percent, but it also fell short of its benchmark (Bloomberg Barclays U.S. Universal Bond) by 0.4 percent. Performance measurement of private market assets, which include private equity and a majority of the IMB's real estate portfolio, is fraught with measurement issues, so it is less meaningful over shorter time periods. Regardless, the private equity portfolio returned 20.9 percent and the real estate portfolio returned 7.3 percent. The hedge fund portfolio, which is intended to be a diversifying component of the entire portfolio, returned 2.6 percent, which was above its benchmark (HFRI FOF plus 1 percent) by 0.4 percent. The opportunistic income composite out performed its policy index by 1.4 percent (Credit Suisse Leveraged Loan plus 2 percent) returning 7.5 percent for the year.



## Message from Executive Director

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The majority of assets managed by the IMB are for participants with longer time horizons. These include the defined benefit pension plans, some employment security plans and other trust assets. Still others, like Revenue Shortfall Reserve Funds A and B, have shorter time horizons of varying degrees.

Defined benefit pension plans make up approximately 80 percent of the IMB's total assets under management. For general comparison purposes, the IMB uses the Public Employees' Retirement System (PERS) as a proxy for the other pension plans because of its similarity to other statewide public pension plans throughout the nation. As of June 30, 2019, the return for PERS was 6.0 percent, net of expenses, for the fiscal year. Of greater significance is the longer-term performance. In that regard, over the ten-year period ending June 30, 2019, the IMB's annualized return was 10.2 percent versus the base portfolio benchmark of 8.5 percent. This difference represents millions of dollars in value added by trustees and staff. The other defined benefit pension plans' returns for the fiscal year ending June 30, 2019, were essentially identical to PERS. Since asset allocations are virtually the same for each plan, any differences in the returns for the various pension plans are a function of the differences in the timing of cash flows into and out of each plan and relative levels of cash equivalent securities necessary to make benefit payments. The Wildlife Endowment Fund and the West Virginia Retiree Health Benefit Trust Fund have similar asset allocations to the defined benefit pension plans, and both returned 6.1 percent.

With regard to employment security assets, the reader will note a significant difference in returns from defined benefit plans. This is, primarily, a function of differences in the time horizon and liquidity needs, which vary quite significantly by plan. This leads to a wide divergence in the respective plans' allocations to various asset classes. The returns for employment security assets for the fiscal year ending June 30, 2019, ranged from 4.4 percent for the Workers' Compensation Uninsured Employer Fund to 4.9 percent for the Workers' Compensation Old Fund. The IMB manages assets for other state entities as well. Specific data on the returns and objectives of all Participant Plans may be found in the pages that follow.

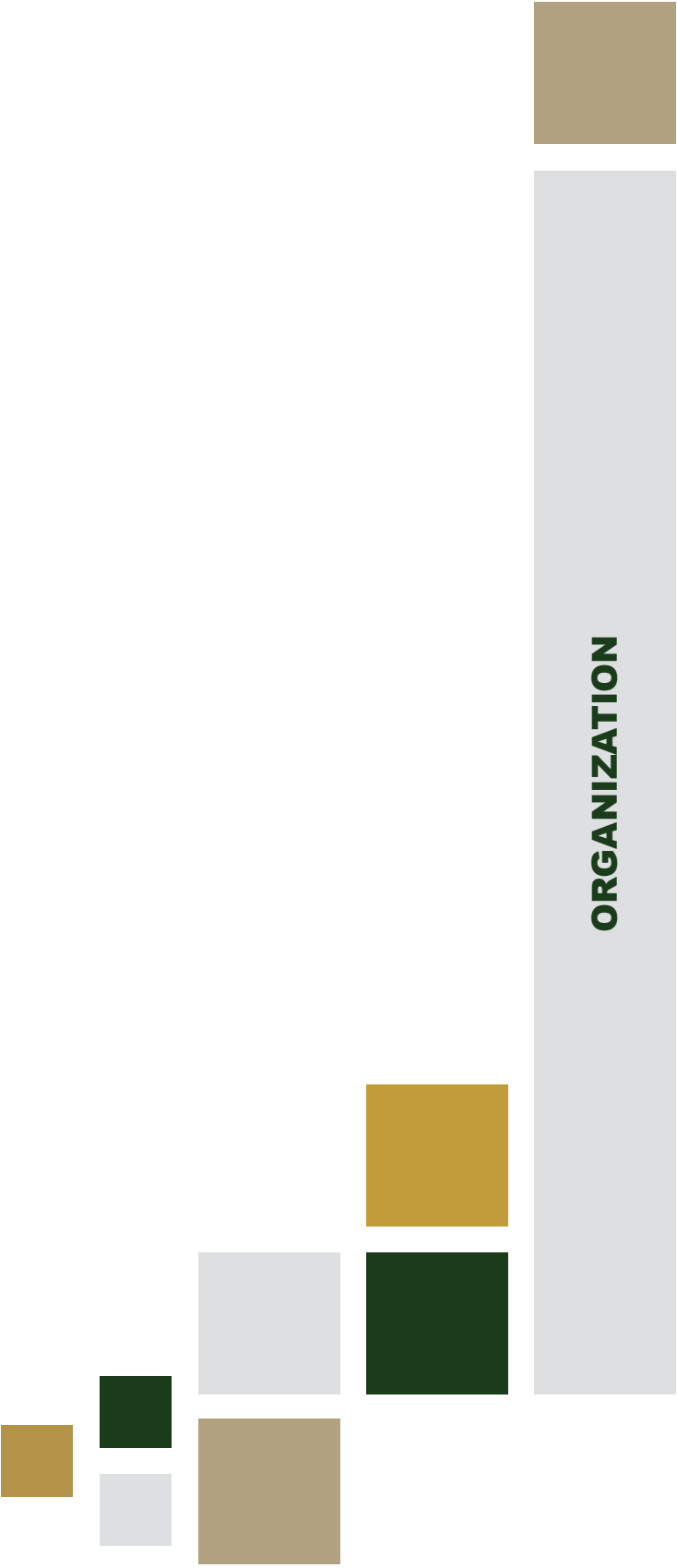
As an investor, the IMB's capacity to generate a return on assets is largely a function of growth in the world capital markets. Diversification helps reduce short-term volatility in the capital markets, what is commonly referred to as risk, but it is generally at the expense of long-term growth. Growth is the engine of returns. The IMB's asset allocation is clearly tilted towards long-term growth for those assets with long time horizons, such as defined benefit pension plans. These plans are structured to spread risk and cost over multiple generations. The correct target rate of return is one that fairly does this. While the IMB does not set that rate, it has an obligation to advise those that do. The IMB believes that the current target is attainable over very long time periods. That being said, the state of the capital markets will make it very difficult to achieve that rate in the near term. As one looks out over the horizon, there are many concerns. The current economic expansion has been one of the longest on record. China has become the major rival to the U.S. creating geopolitical tensions with far-reaching ramifications. Meanwhile, the disparity between the haves and have-nots in society has spawned a global wave of populism threatening the underpinnings of an economic order that has, despite its faults, raised unprecedented numbers out of poverty across the globe. Nevertheless, the future is unknowable. The IMB's portfolio is built for the long-term, seeking return from risky assets, while diversifying to reduce risk. The IMB will continue to monitor its portfolio, moderate the structure on the margins to accommodate what we believe the markets are offering, but not so much as to compromise the portfolio's ability to take advantage of long-term growth. The staff looks forward to helping trustees meet the challenges as fiscal year 2020 unfolds.

Respectfully Submitted,



Craig Slaughter, JD, CFA  
Executive Director







## Board of Trustees – Fiscal Year 2019

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**Jim Justice**, Chairman

Governor of the State of West Virginia

**Steve Antoline** (Currently Vacant)

Businessman *July 13, 2010 to January 17, 2019*

**G. Kurt Dettinger**

Member in Steptoe & Johnson, PLLC

**Judy Hale**

**David A. Haney**

Executive Director of the West Virginia Education Association

**Roger D. Hunter**

Special Counsel, Bowles Rice, LLP

**John B. McCuskey**

Auditor of the State of West Virginia

**David H. McKinley**

President and Managing Director of McKinley | Carter Wealth Services

**John D. Perdue**

Treasurer of the State of West Virginia

**Marie L. Prezioso**

Executive Director, West Virginia Water Development Authority

**Jack Rossi**

Executive Vice President of Business Development, Summit Community Bank

**Steven L. Smith**

Administrator of the West Virginia Laborers Trust Funds

**Randall E. Snider**

President and Chief Executive Officer of Community Bank

## Representatives and Committee Members – Fiscal Year 2019

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### ***Deputy Sheriff's Retirement System***

**David Gentry**, Representative

**J. Scott Gittings**, Committee Member

### ***Judges' Retirement System***

**Thomas A. Bedell**, Representative

### ***Public Employees' Retirement System***

**Melissa G. Smith**, Representative

**Shelly L. Murray**, Committee Member

**Sheri Richardson**, Committee Member

### ***State Police Death, Disability and Retirement Fund***

**David L. Lemmon, II**, Representative

### ***State Police Retirement System***

**William Andrew Pendleton**, Representative

### ***Teachers' Retirement System***

**Tony Lautar, Jr.**, Representative

**Robert L. Brown**, Committee Member

**Dale Lee**, Committee Member

### ***Emergency Medical Services Retirement System***

**Mark Kerns**, Representative

**Robert A. Ford**, Committee Member

### ***Workers' Compensation Old Fund and Coal Workers' Pneumoconiosis Fund***

**Melinda Kiss**, Representative

**Nancy J. Staats**, Committee Member

*By statute, the Consolidated Public Retirement Board and the West Virginia Offices of the Insurance Commissioner are responsible for appointing a representative for each plan who may select a committee of up to three individuals. The Representative and Committee Members work with the Investment Management Board to develop the investment policy for their respective plan. They are appointed on an annual basis.*

## Staff Members – Fiscal Year 2019

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### *Executive Staff*

**Craig Slaughter, J.D., CFA**, Executive Director / Chief Investment Officer

**Matthew Jones, CPA, CCM, CGMA**, Chief Financial Officer / Chief Operating Officer

**Deborah Sink, J.D.**, General Counsel / Policy Compliance Officer

### *Internal Audit*

**Melissa Petit, CPA, CIA, CIDA, CISA, MBA**, Director of Internal Audit

**Johnna Campbell**, Internal Auditor

### *Investments Division*

**Rod Livingston, CFA, CAIA, CCM, MBA**, Senior Investment Officer

**Tom Sauvageot, CAIA, MBA**, Fixed Income and Real Estate Investment Officer

**Jim Herrington, CFA, CAIA, MBA/MSM**, Private and Public Equity Investment Officer

### *Operations Division*

**Roger Summerfield, CPA**, Director of Operations

**Steve Frenchik, CPA, CGMA, MBA**, Financial Reporting Manager

**Brian DuBois**, Senior Investment Accountant

**Crystal Hunt**, Investment Accountant

**Anna Scott, CPA, CGMA, MS**, Investment Accountant

**Aaron Souza, CPA**, Investment Accountant

**Brittney Hewlett**, Investment Account

**James Atkins, CPA, CAIA, CGMA**, Senior Alternative Investment Analyst

**Mallory Engel, CPA**, Alternative Investment Analyst

**Mika Hubbard, CPA**, Alternative Investment Analyst

### *Support Staff*

**Jane Heitz**, Secretary / Receptionist

**Shane Jividen, CPA, MA**, Human Resources and Office Administrator

**Milly Torman**, Administrative Assistant

### *Technology Division*

**Darius Walker, MSCE, CompTIA Security+, CEH**, Director of Technology

**Fred Branham, MSCE, MCSA, CompTIA Security+**, Senior Network Engineer

**Rick Greathouse, CompTIA A+, CompTIA Security+, Network+**, Network Administrator

**Rebecca King, CPA-Inactive**, Enterprise Information Architect

## Organizational History

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The West Virginia Investment Management Board came into existence in the spring of 1997 after years of hard work modernizing the State's investment management structure. This structural modernization was widely acknowledged as a necessary precursor to the passage of a constitutional referendum to allow investment in stocks. The risks were perceived to be too great to be managed by anything but a modern, professional entity.

Although the West Virginia Investment Management Board's predecessors, the West Virginia State Board of Investments and the West Virginia Trust Fund, Inc., brought about vast improvements, each had significant shortcomings. However, with the creation of the West Virginia Investment Management Board, the State achieved a balance between control and independence that helps foster efficient and prudent investment management of long-term assets well into the future.

The beginning of the modern era in investment management by the State goes back to the late 1970s with the consolidation of the investment authority for the State's defined benefit plans, employment security plans, and other assets into a newly created West Virginia State Board of Investments. One of the goals of the legislation was to achieve economies of scale by commingling like assets.

Significantly, this newly created West Virginia Board of Investments was staffed by the State Treasury and the board itself was made up of the State's Governor, Treasurer, and Auditor.

Although a step in the right direction, the initial West Virginia State Board of Investments lacked proper or sufficient control features. After a few problems in the 1980s, principally involving its short-term pool, the Consolidated Fund, the board was expanded to seven members, adding four members from the private sector including an attorney experienced in financial matters and a Certified Public Accountant.

In the fall of 1990, the Legislature took a huge leap forward by creating a staff for the West Virginia State Board of Investments separate from the staff of the Treasury. This provided clear accountability to the Board of Investments – something that did not exist previously. Other very important control features included: (1) a statutory requirement for an Internal Auditor, (2) an annual external audit by a certified public accounting firm, and (3) monthly reporting requirements to government leaders in accordance with generally accepted accounting principles. This last feature dictated that all pools with a weighted average maturity in excess of 90 days must be marked-to-market (carried at market value), something that had not been done in the 1980s.

At the same time, the West Virginia Board of Investments made its first tepid step towards a diversified portfolio to be invested in stocks domiciled in the United States. Although it made some initial stock purchases in 1993, which were subsequently liquidated at a gain, the statute was challenged and the West Virginia Supreme Court ruled that investing in equities was unconstitutional.

In 1996, in an effort to satisfy the constitutional strictures, the Legislature carved out the pension and employment security funds with long time horizons and placed them in a trust to be managed by a new entity called the West Virginia Trust Fund, Inc. The creation of the trust as a vehicle to allow investment in stocks was also challenged and was struck down, failing to satisfy the constitutional concerns of the Supreme Court. It did, however, bring about three very important changes. The Legislature, demonstrating impeccable managerial foresight, granted the West Virginia Trust Fund, Inc. control over its own budget. With the same foresight, the Legislature imposed personal fiduciary liability on the board and staff of the West Virginia Trust Fund, Inc. Of no less importance was the creation of representative roles for members of the retirement systems and employment security systems.

With the failure of the West Virginia Trust Fund, Inc., it and the West Virginia State Board of Investments were replaced in 1997 by a new entity, the present day West Virginia Investment Management Board. The basic modernization process was complete. All of the improvements made in the Board of Investments and the West Virginia Trust Fund, Inc. were incorporated into the new entity.

The Legislature, for policy reasons, transferred the Consolidated Fund on July 8, 2005 to a newly created West Virginia Board of Treasury Investments, chaired by the State Treasurer. This was widely perceived as a policy move to ensure direct governmental oversight of State general and special revenue funds. The West Virginia Investment Management Board continues to manage the retirement funds, the employment security funds, and other assets with long time horizons.

In 2007, the Legislature expanded the investable universe of assets, increasing the allowable allocation to public equity and international securities, while also providing for a significant allocation to "alternative investments," loosely defined as hedge funds and private equity. Then, in 2014, the Legislature eliminated the percentage limitations on allowable asset classes or securities, joining most of its peers in recognizing the prudent investor standard of care is the most effective control on investor behavior for institutions.



## Statutory Mandate

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The bill creating the West Virginia Investment Management Board passed during the 1997 legislative session and is cited as the *West Virginia Investment Management Board Act* (the Act). The legislative findings of the Act make it clear that the West Virginia Investment Management Board was intended to be a professional, apolitical, financial management organization dedicated to the interests of the State's teachers, public employees and workers in general. The Act was intended to give the West Virginia Investment Management Board "...the authority to develop, implement and maintain an efficient and modern system for the investment and management of the State's money." In order to accomplish this purpose, the Act further stated that the West Virginia Investment Management Board must "...operate as an independent board with its own full-time staff of financial professionals immune to changing political climates..." [West Virginia Code §12-6-1(a)(b)] The Act also mandates that the assets contributed by the public employee and employer to the 401(a) Plans and the assets of the Workers' Compensation Fund and the Coal Workers' Pneumoconiosis Fund, are "declared to be irrevocable trusts, available for no use or purpose other than for the benefit of those public employees...workers, miners and their beneficiaries..." [West Virginia Code §12-6-1(c)(d)] The West Virginia Investment Management Board is further "empowered by this Article to act as Trustee of the irrevocable trusts created by this Article, and to manage and invest other state funds." [West Virginia Code §12-6-1a(f)]

The standard of care mandated by the Statute is that codified in the "Uniform Prudent Investor Act," Article 6C of Chapter 44 of the *West Virginia Code*. The West Virginia Investment Management Board is further subject to the following requirements:

- (a) Trustees shall discharge their duties with respect to the 401(a) Plans for the exclusive purpose of providing benefits to participants and their beneficiaries;
- (b) Trustees shall diversify fund investments so as to minimize the risk of large losses unless, under the circumstances, it is clearly prudent not to do so;
- (c) Trustees shall defray reasonable expenses of investing and operating the funds under management;
- (d) Trustees shall discharge their duties in accordance with the trust documents and instruments governing the trusts or other funds under the management insofar as the documents and instruments are consistent with provisions of this Article; and
- (e) The duties of the Board apply only with respect to those assets deposited with or otherwise held by it. [West Virginia Code §12-6-11]

## Administrative Mandate

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Governance of the West Virginia Investment Management Board is vested, by statute, in a thirteen-member Board of Trustees. Three members of the Board serve by virtue of their office: the Governor, the Auditor, and the Treasurer. The other ten are appointed by the Governor and confirmed by the Senate. All appointees must have experience in pension management, institutional management or financial markets. In addition, one must be an attorney experienced in finance and investment matters and another must be a Certified Public Accountant. Only six of the ten appointed Trustees may be from the same political party. The Governor serves as Chairman of the Board. A Vice-Chairman is elected by the Trustees. A Secretary, who need not be a member of the Board, is also elected by the Trustees to keep a record of the proceedings of the Board.

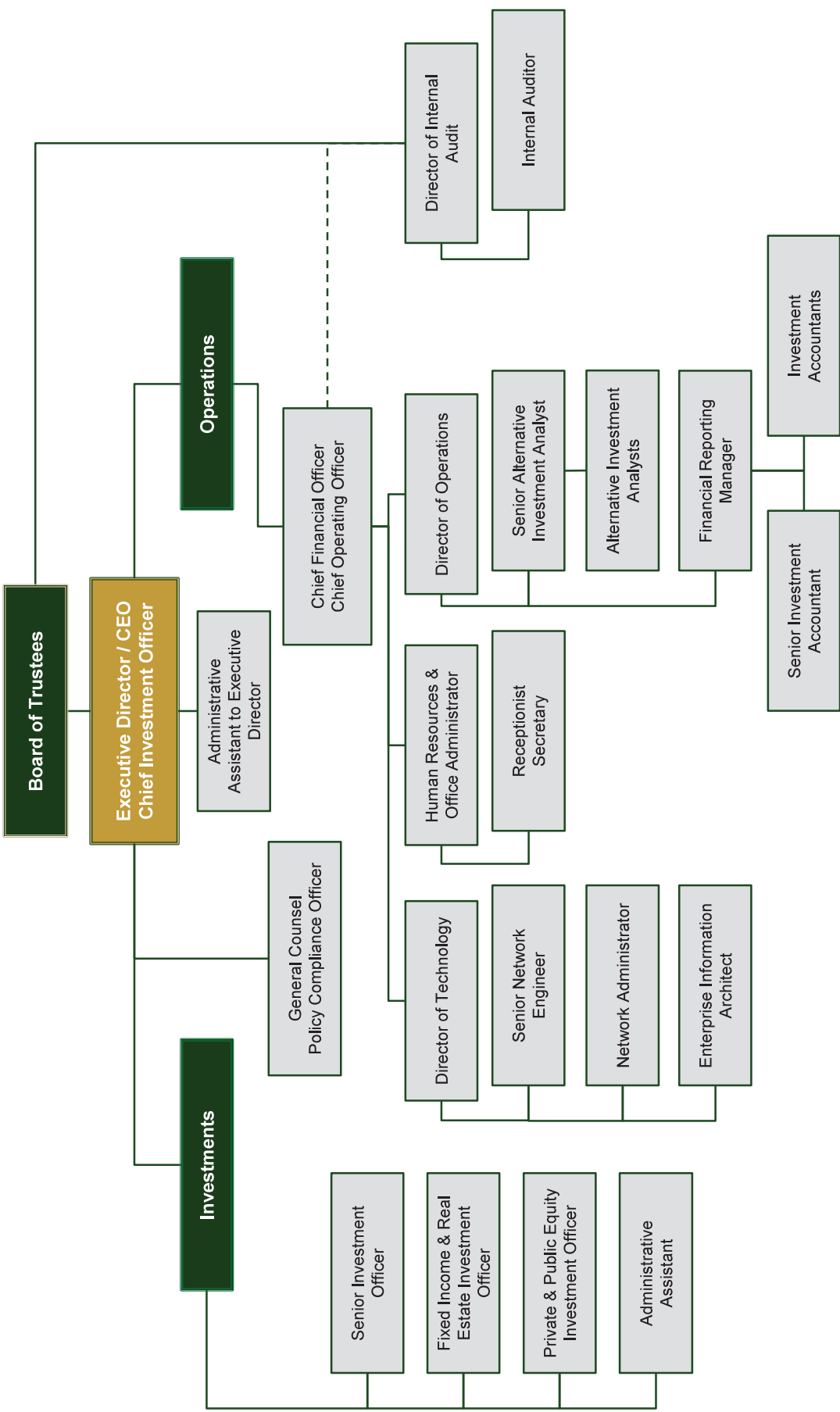
A member of each defined benefit retirement plan is designated by the Consolidated Public Retirement Board to represent the Participant Plans' interests. Likewise, the West Virginia Insurance Commission designates a representative for the Coal Workers' Pneumoconiosis Fund and the Workers' Compensation Old Fund. Each of the Representatives may designate up to three persons to comprise a committee representing their respective plan's beneficiaries. The Representatives and Committee Members do not have a vote but have the right to be heard at the annual meetings of the Board and are subject to the same code of conduct and requirements of confidentiality that apply to the Trustees.

The day-to-day management of the West Virginia Investment Management Board is delegated to the Executive Director who is appointed by the Board and serves at its will and pleasure. The Executive Director acts as an advisor to the Board on all matters.

The staff of the West Virginia Investment Management Board is divided into two principal divisions—Investments and Operations.

The Operations Division is focused on providing the back office support necessary for the organization to function on a day-to-day basis. The Investments Division is structured to devote its time and resources to staying current with new developments and research in the investment field and being prepared to apply this knowledge to the investment of assets for the West Virginia Investment Management Board. See the organization chart on the following page.

Organization Chart



# Investment Philosophy

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The primary objective of the investment pools is to provide benefits to its participants and beneficiaries. Based on general beliefs about the investment return available from a well-diversified, prudently invested portfolio, the Board has adopted specific investment objectives for each Participant Plan.

In order to achieve the investment objectives for each Participant Plan, the IMB relies on prevailing financial theory. This is a philosophy that is generally characterized by prudent diversification across different asset classes (stocks, bonds, cash, non-traditional, etc.) to reduce risk, taking into account each Participant Plan's time horizon, liquidity needs, financial condition (funded status), and return objectives in determining each Participant Plan's appropriate allocation to various assets. Diversification is not just limited to asset classes although it is, generally, considered the most significant factor. Other factors, including, but not limited to, geography/country, industry, and maturity, are also considered from the Participant Plan's perspective. These factors may also dictate the extent to which the Participant Plan may be impacted by general business conditions. Importantly, the factors mentioned here are not intended to be limiting; rather, they are outlined as a general indication of the importance of diversification and customization to proper asset allocation. The Board determines the proper allocation among asset classes and managers, based on advice and analysis provided by the IMB and an external general investment consultant.

The Board recognizes that even though its investments may be subject to short-term volatility, it is critical that the IMB maintain a focus on longer time horizons for most Participant Plans, during which time the impact of short-term market volatility generally averages out. Impulsive reactions to short-term market events are not conducive to achieving long-term investment objectives. The strategies employed for each Participant Plan factor in an acceptable level of expected volatility given the relevant time horizon and liquidity needs for that Participant Plan. This prevents ad-hoc revisions to its philosophy and policies in reaction to either speculation or short-term market fluctuations. It is important to note that the Board recognizes that markets may become dislocated due to behavioral or other factors. When major dislocations occur, the Board has allowed for minor adjustments to the asset allocation for each Participant Plan through its Allocation Committee. In order to preserve a longer-term perspective generally, however, the Board of Trustees has adopted the following formal review schedule:

<b>Agenda Item</b>	<b>Review Schedule</b>
Investment Performance	Quarterly
Investment Policy	Every Year
Allocation Ranges	Every Three Years
Asset Allocation Review for Each Participant Plan	At Least Every Three Years

The Board may hire investment managers to implement its objectives. These managers will be given specific tactical roles within the overall strategic investment plan. Depending on their assignments, the managers may be judged on some or all of the following: (1) consistency of philosophy, style and key personnel, (2) performance relative to an appropriate index or proxy group, and (3) ability to add incremental value after costs. The Board and staff shall monitor performance and supervise all fund managers.

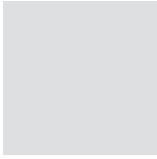
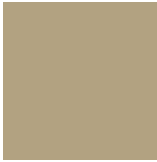
In determining the appropriate level of risk, the Board considers, in addition to its fiduciary obligations and statutory requirements, each entity's purpose and characteristics, financial condition, liquidity needs, sources and level of contributions, income and general business conditions. Based upon these many factors, the Board identifies where either a more aggressive or more conservative investment approach is warranted, on an individual plan-by-plan basis.

## INVESTMENT OBJECTIVES

*"Trustees, at the annual meeting...shall review, establish and modify, if necessary, the investment objectives of the individual participant plans, as incorporated in the investment policy statements of the respective trusts so as to provide for the financial security of the trust funds giving consideration to the following: (1) Preservation of Capital; (2) Diversification; (3) Risk Tolerance; (4) Rate of Return; (5) Stability; (6) Turnover; (7) Liquidity; and (8) Reasonable Costs of Fees." [West Virginia Code §12-6-11(a)(5)]*

## PARTICIPANT PLANS

The Board's objective is to manage the Participant Plans' moneys in an efficient and economical manner, managing risk as it seeks to achieve the specific goals set out in each Participant Plan's investment program.



## INVESTMENT OBJECTIVES & FINANCIAL HIGHLIGHTS



# Equity Pool

## OBJECTIVES

The main objective for the Equity Pool is to provide for long-term growth for all participants. The Equity Pool is comprised of separate strategic asset classes, and their sub-components, which when taken in aggregate enable adequate diversification. Separate investment pools have been established for each investment style or to comply with specific legal and accounting requirements.

Each Participant Plan invested in the Equity Pool has its own Equity Strategic Allocation, set out in each Participant Plan Description within Appendix A of the IMB's Investment Policy Statement. The Allocation Committee has the authority to adjust a Participant's Plan Equity Strategic Allocation within the approved range. In the case of Equity, the Allocation Committee's range authority is: 10 percent of the approved Equity Strategic Allocation. As an example, if a Participant Plan has a 50 percent Strategic Allocation to Equity, the Strategic Range would be 45 to 55 percent.

The Allocation Committee also has the authority to adjust asset class components within the Equity Pool. The authority of the Allocation Committee for each strategic asset class sub-components are outline below:

Strategic Asset Class Sub-Components	Neutral Target*	Allocation Range
Domestic vs. International	Domestic vs. International Percentage in MSCI ACWI (IMI)	0.5 to 2.5 times benchmark weight Sum must equal 100% of Equity allocation
U.S. Large Cap vs. U.S. Non-Large Cap	Large = 1 minus Non-Large Non-Large = Russell 2500/Russell 3000	0.5 to 2.5 times benchmark weight Sum must equal 100% of Domestic Equity allocation
U.S. Non-Large Value vs. U.S. Non-Large Growth	Value vs. Growth Percentage in Russell 2500	0.5 to 2.5 times benchmark weight Sum must equal 100% of Non-Large Cap Domestic Equity allocation
International Large vs. International Small vs. Emerging Markets	Large vs. Small vs. Emerging Percentage in MSCI ACWI ex U.S. (IMI)	0.5 to 2.5 times benchmark weight Sum must equal 100% of International Equity allocation

\* The Neutral Target is established based on these index weights every June 30.

# Equity Pool

## MANAGEMENT STRUCTURE

The equity pools are managed by the following firms, in accordance with a particular investment style.

Manager	Style
<b>Domestic Equity Pool</b>	
BlackRock	Index Core
INTECH Investment Management, LLC	Quantitative Core
Westfield Capital Management	Growth at a Reasonable Price
AJO	Relative Value
<b>International Qualified and International Nonqualified Pools</b>	
<i>Developed Markets</i>	
Silchester International Investors	All Country, Value
<b>International Equity Pool</b>	
<i>Developed Markets</i>	
LSV Asset Management	All Country, Relative Value
<i>Small Capitalization</i>	
Oberweis Asset Management, Inc.	All Country, Growth
Acadian Asset Management, LLC	All Country, Quantitative Value
<i>Emerging Markets</i>	
Brandes Investment Partners, L.P.	Emerging Market, Value
Axiom International Investors, LLC	Emerging Market, Growth at a Reasonable Price

## FINANCIAL HIGHLIGHTS (in \$000s)

Audited financial statements are prepared for each of the equity pools and are available at [www.WVIMB.org](http://www.WVIMB.org). Financial Highlights for each pool are presented below.

Composite	Individual Pools per Audited Financial Statements
Domestic	Domestic Equity Pool
International	International Qualified Pool
	International Nonqualified Pool
	International Equity Pool

### Condensed Statement of Net Position

	Domestic Equity	International Qualified	International Nonqualified	International Equity
Investments	\$ 4,889,897	\$ 1,301,531	\$ 210,181	\$ 3,291,170
Payable upon return of securities loaned	(242,304)	-	-	(70,807)
Cash	17	-	-	29,022
Receivable for investments sold	28,000	-	-	7,107
Payable for investments purchased	(87,364)	-	-	(8,951)
Other assets and liabilities	1,743	(56)	(9)	15,796
Net position - June 30, 2019	<u>\$ 4,589,989</u>	<u>\$ 1,301,475</u>	<u>\$ 210,172</u>	<u>\$ 3,263,337</u>

## Equity Pool

### FINANCIAL HIGHLIGHTS (continued in \$000s)

#### Investments

	Domestic Equity	
	Fair Value	Percent of Securities
Domestic equities sector exposure:		
Basic Materials	\$ 58,251	1.2%
Communication Services	199,449	4.1
Consumer Discretionary	264,940	5.4
Consumer Staples	116,068	2.4
Energy	146,400	3.0
Financial Services	502,212	10.2
Health Care	399,167	8.2
Industrials	346,283	7.1
Real Estate	99,814	2.0
Technology	417,347	8.5
Utilities	132,177	2.7
Total domestic equities	2,682,108	54.8
Commingled equity fund	1,937,693	39.6
Money market mutual funds	27,792	0.6
Securities lending collateral	242,304	5.0
Total	<u>\$ 4,889,897</u>	<u>100.0%</u>

#### Investments

	International Qualified		International Nonqualified	
	Fair Value	Percent of Securities	Fair Value	Percent of Securities
Commingled equity funds	<u>\$ 1,301,531</u>	<u>100.0%</u>	<u>\$ 210,181</u>	<u>100.0%</u>

#### Investments

	International Equity	
	Fair Value	Percent of Securities
International equities country exposure:		
Australia	\$ 126,522	3.9%
Brazil	174,568	5.4
Canada	125,740	3.9
China	307,614	9.5
France	139,513	4.3
Germany	108,327	3.3
Hong Kong	132,161	4.1
India	89,501	2.8
Japan	380,773	11.7
Korea	201,783	6.2
Mexico	77,917	2.4
Russia	109,632	3.4
Sweden	71,775	2.2
Switzerland	95,078	2.9
Taiwan	117,172	3.6
United Kingdom	286,662	8.8
All others (none greater than 2%)	649,577	19.9
Total international equities	3,194,315	98.3
Money market mutual fund	26,048	0.8
Securities lending collateral	29,022	0.9
Total	<u>\$ 3,249,385</u>	<u>100.0%</u>



## Equity Pool

### FINANCIAL HIGHLIGHTS (continued in \$000s)

#### Progression of Net Position

	Domestic Equity	International Qualified	International Nonqualified	International Equity
Net position - June 30, 2018	\$ 4,564,593	\$ 1,330,884	\$ 215,408	\$ 2,986,828
Net investment income (loss)	339,725	(29,807)	(5,300)	(16,730)
Net increase (decrease) from unit transactions	(314,329)	398	64	293,239
Net position - June 30, 2019	\$ 4,589,989	\$ 1,301,475	\$ 210,172	\$ 3,263,337

### INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of investment advisor fees.

	Domestic Equity		International Qualified		International Nonqualified		International Equity	
Period	Actual	Russell 3000	Actual	MSCI EAFE	Actual	MSCI EAFE	Actual	MSCI ACWI ex U.S.(IMI)*
One-year	7.5%	9.0%	(2.2)%	1.6%	(2.4)%	1.6%	(0.5)%	0.8%
Three-year	13.4%	14.0%	9.2%	9.7%	9.0%	9.7%	10.3%	9.7%
Five-year	9.8%	10.2%	3.8%	2.7%	3.6%	2.7%	2.5%	2.7%
Ten-year	14.7%	14.7%	9.7%	7.4%	9.5%	7.4%	7.9%	7.1%
Twenty-year	7.2%	6.3%	9.7%	4.5%	9.4%	4.5%	5.4%	5.0%

\*Prior to January 2014, the International Equity Pool index was the MSCI ACWI ex U.S. (Standard).

### EXPENSES

The IMB charges each investment pool for its direct investment-related expenses, such as investment advisor fees, custodian bank fees, and some professional service fees, and an allocated share of other expenses. The Equity Pool's expenses for the year, divided by the average net position, are as follows:

Expense Ratios (in basis points)	Domestic Equity	International Qualified	International Nonqualified	International Equity
Investment advisor fees	3.9	51.3	58.4	53.0
Trustee fees	0.0*	0.0*	0.0*	0.0*
Custodian bank fees	0.2	N/A	N/A	5.7
Management fees	2.5	2.5	2.5	2.6
Fiduciary bond fees	0.0*	0.0*	0.0*	0.0*
Professional service fees	0.5	0.5	0.5	0.5
Total	7.1	54.3	61.4	61.8

\* Expense Ratio rounds to less than 0.1 basis points.

#### Trading Costs

	Domestic Equity	International Equity	Total
Net commission costs (in \$000s)	\$ 1,383	\$ 3,026	\$ 4,409
Domestic equity commission rate (cents per share)	1.4		
International equity commission rate (basis points per dollar volume)		9.8	

# Short-Term Fixed Income Pool

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## OBJECTIVES

The Short-Term Fixed Income Pool was created to maintain sufficient liquidity to meet the daily disbursements requested by the Plans and to invest any contributions until the time the money is transferred to other asset classes without sustaining capital losses and while earning a small return above inflation. The Short-Term Fixed Income Pool is structured as a commingled fund where the goal is a stable dollar value per share, thus preserving principal. The risk factor on this pool is low and managed through numerous maturity restrictions, diversification guidelines, and credit limits. The participants are paid on an income basis that includes interest income net of expenses.

## MANAGEMENT STRUCTURE

The Short-Term Fixed Income Pool is managed by JPMorgan Investment Advisors, Inc.

## FINANCIAL HIGHLIGHTS (in \$000s)

Audited financial statements for the Short-Term Fixed Income Pool are available at [www.WVIMB.org](http://www.WVIMB.org). Financial Highlights are presented below.

### Condensed Statement of Net Position

Investments	\$ 186,050
Cash	1
Other assets and liabilities, net	(21)
Net position - June 30, 2019	<u>\$ 186,030</u>

### Investments

	Fair Value	Percent of Securities
Repurchase agreement	\$ 45,000	24.2%
U.S. government agency bonds	91,095	49.0
U.S. Treasury bonds	49,955	26.8
Total	<u>\$ 186,050</u>	<u>100.0%</u>

### Progression of Net Position

Net position - June 30, 2018	\$ 218,269
Net investment income	3,351
Distributions to unitholders	(3,351)
Net decrease from unit transactions	(32,239)
Net position - June 30, 2019	<u>\$ 186,030</u>

## Short-Term Fixed Income Pool

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### INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of investment advisor fees.

Period	Actual	Citigroup 90 Day Treasury Bill*
One-year	2.2%	2.3%
Three-year	1.4%	1.4%
Five-year	0.9%	0.8%
Ten-year	0.5%	0.5%
Twenty-year	1.9%	1.9%

*\*Prior to January 2014, the Short-Term Fixed Income Pool index was the Citigroup 90 Day Treasury Bill plus 15 basis points.*

### EXPENSES

The IMB charges each investment pool for its direct investment-related expenses, such as investment advisor fees, custodian bank fees, and some professional service fees, and an allocated share of other expenses. The Short-Term Fixed Income Pool's expenses for the year, divided by the average net position, are as follows:

#### Expense Ratios (in basis points)

Investment advisor fees	5.0
Trustee fees	0.0*
Custodian bank fees	0.7
Management fees	2.7
Fiduciary bond fees	0.0*
Professional service fees	0.5
Total	<u>8.9</u>

\* Expense Ratio rounds to less than 0.1 basis points.

# Fixed Income Pool

## OBJECTIVES

The main objectives for the Fixed Income Pool are to generate investment income, provide stability, and enhance diversification but not at the expense of total return. Separate investment pools have been established for particular investment styles or to comply with specific accounting requirements. The strategic asset class, the Neutral Target allocation to the sub-component of the strategic asset class, as well as the approved Allocation Ranges within which the Allocation Committee can operate, are outlined below:

Category	Strategic Allocation	Allocation Range
Core Fixed Income	--	--
Total Return Fixed Income	--	--
Fixed Income Pool	20.0%	+/- 5% (15% to 25%)

*Note: Each Participant Plan has its own unique Strategic Allocation. The above example is for clarification purposes only.*

Neutral Target	Allocation Range
30% Core Fixed Income	Minimum 20% to Maximum 70%
70% Total Return Fixed Income	Minimum 30% to Maximum 80%
	Sum must equal 100% of the Fixed Income allocation

*\*The Neutral Target is approved by the Board.*

## MANAGEMENT STRUCTURE

The fixed income pools are managed by the following firms, in accordance with a particular investment style.

Manager	Style
<b>Total Return Fixed Income Pool</b>	
Western Asset Management Company	Core Plus Fixed Income
Dodge & Cox	Core Plus Fixed Income
Franklin Templeton Investments	Emerging Markets Fixed Income
<b>Core Fixed Income Pool</b>	
JPMorgan Investment Advisors, Inc.	Core Fixed Income

## FINANCIAL HIGHLIGHTS (in \$000s)

Audited financial statements are prepared for each of the fixed income pools and are available at [www.WVIMB.org](http://www.WVIMB.org). Financial Highlights for each pool are presented below.

### Condensed Statement of Net Position

	Total Return Fixed Income	Core Fixed Income
Investments	\$ 2,101,768	\$ 987,113
Investment derivatives	(24,213)	-
Payable upon return of securities loaned	(88,926)	(57,501)
Cash	59,932	-
Receivable for investments sold	232,231	34,969
Payable for investments purchased	(77,220)	(375)
Other assets and liabilities	15,921	4,002
Net position – June 30, 2019	<u>\$ 2,219,493</u>	<u>\$ 968,208</u>

## Fixed Income Pool

### FINANCIAL HIGHLIGHTS (continued in \$000s)

Investments	Total Return Fixed Income		Core Fixed Income	
	Fair Value	Percentage of Securities	Fair Value	Percentage of Securities
Commingled debt funds	\$ 214,489	10.3%	\$ -	0.0%
Corporate asset backed issues	76,494	3.7	122,361	12.4
Corporate CMO	40,069	1.9	33,516	3.4
Corporate preferred security	9,979	0.5	-	0.0
Foreign asset backed issues	27,005	1.3	2,698	0.3
Foreign corporate bonds	271,117	13.0	59,221	6.0
Foreign currency forward contracts	(1,979)	(0.1)	-	0.0
Foreign equity investments	14	0.0	-	0.0
Foreign government bonds	317,462	15.3	3,125	0.3
Futures contracts	(5,514)	(0.3)	-	0.0
Money market mutual fund	41,138	2.0	55,686	5.6
Municipal bonds	34,254	1.6	10,261	1.0
Option contracts purchased	1,088	0.1	-	0.0
Option contracts written	(1,154)	(0.1)	-	0.0
Repurchase agreement	8,000	0.4	-	0.0
Securities lending collateral	88,926	4.3	57,501	5.8
Short term investments	6,083	0.3	-	0.0
Swaps	(16,654)	(0.8)	-	0.0
U.S. corporate bonds	402,522	19.5	165,080	16.8
U.S. government agency bonds	9,464	0.5	5,257	0.5
U.S. government agency CMO	63,007	3.0	116,680	11.8
U.S. government agency MBS	293,585	14.1	150,176	15.2
U.S. Treasury issues	198,160	9.5	205,551	20.9
Total	\$ 2,077,555	100.0%	\$ 987,113	100.0%

### Progression of Net Position

	Total Return Fixed Income	Core Fixed Income
Net position - June 30, 2018	\$ 2,365,474	\$ 1,042,010
Net investment income	162,191	78,372
Net decrease from unit transactions	(308,172)	(152,174)
Net position - June 30, 2019	\$ 2,219,493	\$ 968,208

### INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of investment advisor fees.

Period	Total Return Fixed Income		Core Fixed Income	
	Actual	Bloomberg Barclays U.S. Universal Bond*	Actual	Bloomberg Barclays U.S. Aggregate Bond
One-year	7.5%	8.1%	8.3%	7.9%
Three-year	4.9%	2.8%	2.7%	2.3%
Five-year	3.6%	3.2%	3.4%	3.0%
Ten-year	5.6%	4.4%	4.6%	3.9%
Twenty-year	6.1%	5.2%	N/A	N/A

\* Prior to April 2008, the Total Return Fixed Income Pool index was a custom index.

## Fixed Income Pool

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### EXPENSES

The IMB charges each investment pool for its direct investment-related expenses, such as investment advisor fees, custodian bank fees, and some professional service fees, and an allocated share of other expenses. The Fixed Income Pools' expenses for the operating period, divided by the average net position, are as follows:

Expense Ratios (in basis points)	Total Return Fixed Income	Core Fixed Income
Investment advisor fees	22.0	11.3
Trustee fees	0.0*	0.0*
Custodian bank fees	0.9	0.7
Management fees	2.5	2.5
Fiduciary bond fees	0.0*	0.0*
Professional service fees	0.5	0.5
Total	25.9	15.0

\* Expense Ratio rounds to less than 0.1 basis points.

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# TIPS Pool

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## OBJECTIVES

The Pool was established to offer an additional level of diversification over and above nominal fixed income securities in an attempt to mitigate the risk of inflation. The main objective for the Pool is to generate a return that exceeds the rate of inflation over a market cycle, to provide investment income and stability of principal, and to diversify interest rate exposure.

## MANAGEMENT STRUCTURE

The TIPS Pool is managed by BlackRock.

## FINANCIAL HIGHLIGHTS (in \$000s)

Audited financial statements for the TIPS Pool are available at [www.WVIMB.org](http://www.WVIMB.org). Financial Highlights are presented below.

### Condensed Statement of Net Position

Investments	\$ 403,343
Other assets and liabilities	(33)
Net position - June 30, 2019	<u>\$ 403,310</u>

### Investments

	Fair Value	Percent of Securities
Commingled bond fund	\$ 397,843	98.6%
Money market mutual fund	5,500	1.4
Total	<u>\$ 403,343</u>	<u>100.0%</u>

### Progression of Net Position

Net position - June 30, 2018	\$ 391,234
Net investment income	18,688
Net decrease from unit transactions	(6,612)
Net position - June 30, 2019	<u>\$ 403,310</u>

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of investment advisor fees.

Period	Actual	Bloomberg Barclays U.S. TIPS
One-year	4.9%	4.8%
Three-year	2.1%	2.1%
Five-year	1.8%	1.8%



## TIPS Pool

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### EXPENSES

The IMB charges each investment pool for its direct investment-related expenses, such as investment advisor fees, custodian bank fees, and some professional service fees, and an allocated share of other expenses. The TIPS Pool's expenses for the operating period, divided by the average net position, are as follows:

#### Expense Ratios (in basis points)

Investment advisor fees	1.8
Trustee fees	0.0*
Management fees	2.5
Fiduciary bond fees	0.0*
Professional service fees	0.5
Total	4.8

\* Expense Ratio rounds to less than 0.1 basis points.

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## Special Purpose Pool

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The Board operated one special purpose pool: **TRS ANNUITY POOL**

### **HISTORY (in \$000s)**

The Pool held an investment contract issued by the Variable Annuity Life Insurance Company (VALIC) strictly for the benefit of the Teachers' Retirement System (TRS). On December 10, 2008, the IMB assumed responsibility for this investment as part of the restructuring of the Teachers' Defined Contribution (TDC) plan, a separate retirement plan administered solely by the Consolidated Public Retirement System, whereby certain TDC participants elected to transfer the ownership of their individual TDC retirement accounts to the TRS in exchange for current participation in the TRS defined benefit plan. The final amount transferred under the contract was \$248,293.

The IMB initially requested the immediate redemption of the entire balance but VALIC denied the request, claiming the amounts were subject to withdrawal restrictions. Effective April 23, 2009, the IMB, while reserving its rights under the contract, executed the appropriate forms with VALIC to elect to withdraw funds under the Five Year Equal Annual Installment method. By making this election the guaranteed minimum annual yield of 4.5 percent became the fixed rate for this contract. The first four withdrawals of \$55,058 each occurred on May 4, 2009, 2010, 2011 and 2012. The final withdraw of \$55,191 occurred on May 8, 2013. On that date, all remaining income, net of all management fees, was distributed to TRS and all units of ownership in the Pool were redeemed.

In response to VALIC's refusal to allow the IMB to liquidate the contract in its entirety, the IMB sued VALIC. A three-judge Business Court arbitration panel issued its decision on April 28, 2017, and no recovery was awarded to the IMB. An appeal was filed with the West Virginia Supreme Court of Appeals and it issued an opinion affirming the decision of the arbitration panel. The legal fees associated with this litigation were paid by the Pool. The funding for the payment of these expenses were from contributions by the TRS into the Pool. No other management fees were charged to the Pool since the final withdrawal on May 8, 2013. This matter was finalized, and the Pool closed effective April 30, 2019.

### **FINANCIAL HIGHLIGHTS (in \$000s)**

Audited financial statements for the TRSA are available at [www.WVIMB.org](http://www.WVIMB.org). Financial Highlights are presented below.

#### **Condensed Statement of Net Position**

Assets	\$	-
Liabilities		-
Net position - April 30, 2019	<u>\$</u>	<u>-</u>

#### **Progression of Net Position**

Net position - June 30, 2018	\$	(130)
Net investment loss		(100)
Net increase from capital transactions		230
Net position - April 30, 2019	<u>\$</u>	<u>-</u>

# Private Markets Pool

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## OBJECTIVES

The objective of the Private Markets Pool is to enhance the diversification and stability of the portfolio, while generating a higher level of income than generally available in the public fixed income markets and to provide for long-term growth of participants' assets and risk-reduction through diversification. The Private Markets Pool is comprised of the private equity, real estate, and opportunistic income strategies. Prior to July 1, 2017, each of these strategies were operated as individual investment pools. For operational efficiencies, the three pools were combined on July 1, 2017 to form the Private Markets Pool. Investment performance for each of these strategies is tracked separately and presented on the following page.

The private equity strategy is comprised of the following categories and target range allocations as of June 30, 2019:

Category	Target Range
Corporate Finance	90-100%
Venture Capital	0-10%
U.S.	80-100%
Non-U.S.	0-20%

The real estate strategy is comprised of three categories. The target range allocations as of June 30, 2019, are as follows:

Category	Target	Target Range
Core	50%	+/- 20% (30% to 70%)
Value-Added	30%	+/- 20% (10% to 50%)
Opportunistic	20%	+/- 10% (10% to 30%)

The opportunistic income strategy is to invest in a broad spectrum of non-traditional income oriented assets.

## MANAGEMENT STRUCTURE

The selection of investments in the Private Markets Pool are approved by the Board of Trustees or by its established committees.

## FINANCIAL HIGHLIGHTS (in \$000s)

Audited financial statements for the Private Markets Pool are available at [www.WVIMB.org](http://www.WVIMB.org). Financial Highlights are presented below.

### Condensed Statement of Net Position

Investments	\$ 4,453,602
Payable upon return of securities loaned	(6,289)
Cash	7,120
Fund distributions receivable	9,227
Receivable for investments sold	8,911
Payable for investments purchased	(15)
Other assets and liabilities	(451)
Net position - June 30, 2019	<u>\$ 4,472,105</u>

# Private Markets Pool

## FINANCIAL HIGHLIGHTS (in \$000s) (continued)

Investments	Fair Value	Percent of Securities
Corporate bonds	\$ 15,359	0.3%
Equity investments	215,993	4.8
Money market mutual fund	96,635	2.2
Opportunistic income funds	569,356	12.8
Private equity partnerships	1,826,265	41.1
Private real estate partnerships and funds	1,723,705	38.7
Securities lending collateral	6,289	0.1
Total	<u>\$ 4,453,602</u>	<u>100.0%</u>

### Progression of Net Position

Net position - June 30, 2018	\$ 4,151,500
Net investment income	509,919
Net decrease from unit transactions	(189,314)
Net position - June 30, 2019	<u>\$ 4,472,105</u>

## INVESTMENT PERFORMANCE BY STRATEGY

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of external investment management and/or partnership fees and expenses.

Period	Private Equity		Real Estate		Opportunistic Income	
	Actual	Russell 3000 plus 300 basis points*	Actual	NCREIF Property Index plus 100 basis points	Actual	Credit Suisse Leveraged Loan plus 200 basis points
One-year	20.9%	N/A	7.3%	N/A	7.5%	6.2%
Three-year	20.6%	N/A	8.4%	N/A	5.8%	7.5%
Five-year	16.6%	13.2%	9.3%	10.1%	N/A	N/A
Ten-year	16.2%	18.3%	5.9%	9.5%	N/A	N/A

\*Prior to January 2014, the Private Equity index was the S&P 500 plus 500 basis points.

## EXPENSES

The IMB charges each investment pool for its direct investment-related expenses, such as investment advisor fees, custodian bank fees, and some professional service fees, and an allocated share of other expenses. The Private Market Pool's expenses for the year, divided by the average net position, are as follows:

### Expense Ratio (in basis points)

Investment advisor fees	2.4
Trustee fees	0.0*
Custodian bank fees	0.2
Management fees	2.5
Fiduciary bond fees	0.0*
External fees/Fund closing costs	19.0
Professional service fees	3.9
Total	<u>28.0</u>

\* Expense Ratio rounds to less than 0.1 basis points.

# Hedge Fund Pool

## OBJECTIVES

The main objective for the Hedge Fund Pool is to reduce risk through diversification of participants' assets. Secondly, the Hedge Fund Pool should provide for long-term growth.

The Hedge Funds are comprised of the following strategic categories and target range allocations as of June 30, 2019:

Category	Target Range	Allocation Range
<b>Core</b>		
Relative Value	30-40%	25-55%
Event Driven	15-25%	10-40%
Long-Short Equity	15-25%	10-40%
Directional	10-20%	5-25%
<b>Supplemental</b>		
Long Biased	3-12%	0-20%
Private Equity	0-3%	0-5%
Private Credit	0-3%	0-5%
Real Assets	0-3%	0-5%

## MANAGEMENT STRUCTURE

The selection of investments in the Hedge Fund Pool are approved by the Hedge Fund Subcommittee.

## FINANCIAL HIGHLIGHTS (in \$000s)

Audited financial statements for the Hedge Fund Pool are available at [www.WVIMB.org](http://www.WVIMB.org). Financial Highlights are presented below.

### Condensed Statement of Net Position

Investments	\$ 2,082,274
Advance on investments in hedge funds	210,000
Investment funds redeemed	79,582
Other assets and liabilities	177
Net position - June 30, 2019	<u>\$ 2,372,033</u>

### Investments

	Fair Value	Percent of Securities
Hedge funds	\$ 2,081,618	100.0%
Money market mutual fund	656	0.0
Total	<u>\$ 2,082,274</u>	<u>100.0%</u>

### Progression of Net Position

Net position - June 30, 2018	\$ 2,240,158
Net investment income	56,192
Net increase from unit transactions	75,683
Net position - June 30, 2019	<u>\$ 2,372,033</u>

# Hedge Fund Pool

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## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of external investment management and/or partnership fees and expenses.

Period	Actual	HFRI FoF plus 100 basis points*
One-year	2.6%	2.2%
Three-year	4.9%	5.3%
Five-year	3.1%	3.2%
Ten-year	5.2%	3.8%

*\* Prior to January 2014, the Hedge Fund index was LIBOR plus 400 basis points.*

## EXPENSES

The IMB charges each investment pool for its direct investment-related expenses, such as custodian bank fees and some professional service fees, and an allocated share of other expenses. The Hedge Fund Pool's expenses for the year, divided by the average net position, are as follows:

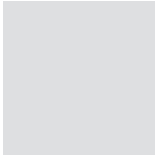
### Expense Ratio (in basis points)

Trustee fees	0.0*
Custodian bank fees	0.0*
Management fees	2.5
Fiduciary bond fees	0.0*
Professional service fees	2.8
Total	5.3

\* Expense Ratio rounds to less than 0.1 basis points.







**PARTICIPANT PLANS**





## Participant Plans Overview

### FINANCIAL HIGHLIGHTS (in \$000s)

#### Plan Balances as of June 30, 2019

	Assets	Percent of Total	Page Reference
<b>Pension Assets</b>			
Deputy Sheriff's Retirement System	\$ 232,576	1.2%	29
Emergency Medical Services Retirement System	84,650	0.4	31
Judges' Retirement System	212,655	1.1	33
Municipal Police Officers' and Firefighters' Retirement System	11,090	0.1	35
Municipal Policemen's or Firemen's Pension and Relief Funds	4,107	0.0	37
Public Employees' Retirement System	6,895,387	34.5	39
State Police Death, Disability and Retirement Fund	689,820	3.5	41
State Police Retirement System	207,102	1.0	43
Teachers' Retirement System	7,836,785	39.2	45
<b>Insurance Assets</b>			
Board of Risk and Insurance Management	158,696	0.8	47
Coal Workers' Pneumoconiosis Fund	238,605	1.2	49
Public Employees Insurance Agency	225,314	1.1	51
West Virginia Retiree Health Benefit Trust Fund	1,001,570	5.0	53
Workers' Compensation Old Fund	1,105,721	5.5	55
Workers' Compensation Self-Insured Employer Guaranty Risk Pool	34,206	0.2	57
Workers' Compensation Self-Insured Employer Security Risk Pool	52,220	0.3	59
Workers' Compensation Uninsured Employers' Fund	13,468	0.1	61
<b>Endowment Assets</b>			
Berkeley County Development Authority	6,177	0.0	63
Revenue Shortfall Reserve Fund	197,342	1.0	65
Revenue Shortfall Reserve Fund - Part B	465,189	2.3	67
West Virginia Department of Environmental Protection Agency	204,701	1.0	69
West Virginia Department of Environmental Protection Trust	9,258	0.0	71
West Virginia Prepaid Tuition Trust Fund	34,513	0.2	73
Wildlife Endowment Fund	65,000	0.3	75
<b>Total</b>	<b>\$ 19,986,152</b>	<b>100.0%</b>	

# Deputy Sheriff's Retirement System

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## HISTORY

The Deputy Sheriff's Retirement System (DSRS) was created in 1998.

## LIQUIDITY NEEDS

DSRS currently has positive net cash flows.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the actuarial interest rate assumption of 7.5 percent per annum, net of fees.
- Preserve the current well-funded position while not subjecting DSRS to an undue level of risk.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for DSRS. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from DSRS will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%

## Deputy Sheriff's Retirement System

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### FINANCIAL HIGHLIGHTS (in \$000s)

#### Progression of Plan Balance

June 30, 2018	\$	219,368
Contributions		5,480
Withdrawals		(5,454)
Net		26
Investment income		9
Net appreciation		13,173
June 30, 2019	\$	232,576

#### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 57,610	24.6%
International Qualified	18,323	7.9
International Equity	41,170	17.7
Short-Term Fixed Income	393	0.2
Total Return Fixed Income	20,135	8.7
Core Fixed Income	8,738	3.8
Private Markets	59,666	25.7
Hedge Fund	26,541	11.4
Total	\$ 232,576	100.0%

### INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.0%	7.5%
Three-year	10.4%	7.5%
Five-year	6.9%	7.5%
Ten-year	10.2%	7.5%
Twenty-year	6.8%	7.5%

# Emergency Medical Services Retirement System

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## HISTORY

The Emergency Medical Services Retirement System (EMSRS) was created by the *Emergency Medical Services Retirement System Act* effective January 1, 2008, under *West Virginia Code §16-5V-4*. EMSRS members with benefits earned in the Public Employees' Retirement System (PERS) transferred their full membership and benefits under PERS to EMSRS on the effective date.

## LIQUIDITY NEEDS

EMSRS is expected to be in a positive net cash flow position for the foreseeable future.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the actuarial interest rate assumption of 7.5 percent per annum, net of fees.
- Maintain adequate liquidity to satisfy benefit payments while not subjecting EMSRS to an undue level of risk.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for EMSRS. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from EMSRS will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%

# Emergency Medical Services Retirement System

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## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	78,921
Contributions		1,806
Withdrawals		(851)
Net		955
Investment income		4
Net appreciation		4,770
June 30, 2019	\$	84,650

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 20,815	24.6%
International Qualified	6,517	7.7
International Equity	15,187	17.9
Short-Term Fixed Income	338	0.4
Total Return Fixed Income	7,431	8.8
Core Fixed Income	3,220	3.8
Private Markets	21,526	25.4
Hedge Fund	9,616	11.4
Total	\$ 84,650	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.0%	7.5%
Three-year	10.4%	7.5%
Five-year	6.9%	7.5%
Ten-year	10.1%	7.5%

# Judges' Retirement System

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## HISTORY

The Judges' Retirement System (JRS) was created in 1949.

## LIQUIDITY NEEDS

JRS currently has slightly negative net cash flows.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the actuarial interest rate assumption of 7.5 percent per annum, net of fees.
- Reduce the unfunded liability while maintaining adequate liquidity to satisfy benefit payments and not subjecting JRS to an undue level of risk.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for JRS. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from JRS will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%



# Judges' Retirement System

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	204,484
Contributions		820
Withdrawals		(4,734)
Net		(3,914)
Investment income		9
Net appreciation		12,076
June 30, 2019	\$	212,655

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 52,616	24.8%
International Qualified	17,016	8.0
International Equity	37,276	17.5
Short-Term Fixed Income	391	0.2
Total Return Fixed Income	18,135	8.5
Core Fixed Income	7,852	3.7
Private Markets	55,073	25.9
Hedge Fund	24,296	11.4
Total	\$ 212,655	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.0%	7.5%
Three-year	10.5%	7.5%
Five-year	7.0%	7.5%
Ten-year	10.2%	7.5%
Twenty-year	6.8%	7.5%

# Municipal Police Officers' and Firefighters' Retirement System

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## HISTORY

Municipal Police Officers' and Firefighters' Retirement System (MPFRS) was created in 2010 for the purpose of providing retirement benefits for municipal police officers and paid professional firefighters hired into covered employment by participating municipalities on or after January 1, 2010.

## LIQUIDITY NEEDS

There are no anticipated liquidity needs at this time.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the actuarial interest rate assumption of 7.5 percent per annum, net of fees.
- Maintain adequate liquidity to satisfy benefit payments while not subjecting MPFRS to an undue level of risk.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for MPFRS. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from MPFRS will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%

# Municipal Police Officers' and Firefighters' Retirement System

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	7,843
Contributions		2,711
Withdrawals		(75)
Net		2,636
Investment income		4
Net appreciation		607
June 30, 2019	\$	11,090

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 2,649	23.9%
International Qualified	622	5.6
International Equity	2,085	18.8
Short-Term Fixed Income	472	4.4
Total Return Fixed Income	981	8.8
Core Fixed Income	425	3.8
Private Markets	2,643	23.8
Hedge Fund	1,213	10.9
Total	\$ 11,090	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.1%	7.5%
Three-year	10.2%	7.5%
Five-year	6.8%	7.5%

# Municipal Policemen's or Firemen's Pension and Relief Funds

## HISTORY

West Virginia Code §8-22-22 offers municipalities the ability to invest Policemen's or Firemen's Pension and Relief Funds established under West Virginia Code §8-22 in the investment pools operated by the IMB. Collectively all municipal plans will be grouped in this section and referred to as the Municipal Policemen's or Firemen's Pension and Relief Funds. The IMB received monies from the first municipality on July 17, 2013.

## MUNICIPAL RETIREMENT PLANS INVESTMENT ALLOCATIONS

The IMB investment staff has created various model allocations that utilize percentage mixes of the investment pools operated by the IMB. The models can be found in the tables below. The IMB will work with the municipal retirement plan's authorized party to determine the appropriate investment model based on information provided by the plan and Municipal Pensions Oversight Board that includes, but is not limited to, actuarial studies, cash flow projections, etc. The IMB may change the allocation within an established range for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively. The model allocation to opportunistic income is 0%, but the IMB has the authority to make an allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from the Participant Plan will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

The potential investment models include:

Investment Type	Investment Allocation Percentages					
	Model A	Model B	Model C	Model D	Model E	Model F
Equity	55%	70%	50%	65%	35%	55%
Fixed Income	15%	30%	30%	35%	35%	45%
Opportunistic Income	0%	0%	0%	0%	0%	0%
Hedge Fund	10%	0%	10%	0%	10%	0%
Private Equity	10%	0%	5%	0%	10%	0%
Real Estate	10%	0%	5%	0%	10%	0%

The following IMB Investment Pools may be used for these Investment Types. The weighting and allocation of the Pools within each Investment Type is determined by the Board as expressed in the IMB's Investment Policy Statement.

### Equity

- Domestic Equity
- International Qualified
- International Equity

### Fixed Income

- Total Return Fixed Income
- Core Fixed Income

### Opportunistic Income

- Private Markets

### Hedge Fund

- Hedge Fund

### Private Equity

- Private Markets

### Real Estate

- Private Markets

### Cash

- Short-Term Fixed Income (exact allocations to be determined based on plan needs)

# Municipal Policemen’s or Firemen’s Pension and Relief Funds

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**SUMMARY OF PLAN BALANCES (in \$000s)**

	Amount
<b>Model A:</b>	
Town of Belle Policemen’s Pension and Relief Fund	\$ 1,492
City of Chester Policemen’s Pension and Relief Fund	1,433
<b>Model C:</b>	
City of Williamson Policemen’s Pension and Protection Fund	1,182
Total	<u>\$ 4,107</u>

# Public Employees' Retirement System

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## HISTORY

The Public Employees' Retirement System (PERS) was created in 1961.

## LIQUIDITY NEEDS

PERS is expected to have modest liquidity needs of approximately 1 to 2 percent per year for the foreseeable future.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the actuarial interest rate assumption of 7.5 percent per annum, net of fees.
- Reduce the unfunded liability while maintaining adequate liquidity to satisfy benefit payments and not subjecting PERS to an undue level of risk.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for PERS. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from PERS will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%

# Public Employees' Retirement System

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$ 6,718,698
Contributions	162,761
Withdrawals	(379,251)
Net	(216,490)
Investment income	472
Net appreciation	392,707
June 30, 2019	<u>\$ 6,895,387</u>

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 1,698,197	24.6%
International Qualified	558,010	8.1
International Equity	1,214,443	17.6
Short-Term Fixed Income	14,156	0.2
Total Return Fixed Income	576,580	8.4
Core Fixed Income	249,812	3.6
Private Markets	1,796,477	26.1
Hedge Fund	787,712	11.4
Total	<u>\$ 6,895,387</u>	<u>100.0%</u>

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.0%	7.5%
Three-year	10.4%	7.5%
Five-year	7.0%	7.5%
Ten-year	10.2%	7.5%
Twenty-year	6.8%	7.5%

# State Police Death, Disability and Retirement Fund

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## HISTORY

The State Police Death, Disability and Retirement Fund (SPDDRF) was created in 1925.

## LIQUIDITY NEEDS

SPDDRF is now a closed plan and is expected to experience an increasingly negative cash flow position in the near future.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the actuarial interest rate assumption of 7.5 percent per annum, net of fees.
- Reduce the unfunded liability while maintaining adequate liquidity to satisfy benefit payments and not subjecting SPDDRF to an undue level of risk.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for SPDDRF. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from SPDDRF will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%



# State Police Death, Disability and Retirement Fund

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	682,799
Contributions		16,293
Withdrawals		(47,446)
Net		(31,153)
Investment income		86
Net appreciation		38,088
June 30, 2019	\$	689,820

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 166,807	24.1%
International Qualified	55,557	8.1
International Equity	116,454	16.9
Short-Term Fixed Income	16,319	2.4
Total Return Fixed Income	54,351	7.9
Core Fixed Income	23,511	3.4
Private Markets	179,590	26.0
Hedge Fund	77,231	11.2
Total	\$ 689,820	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	5.9%	7.5%
Three-year	10.4%	7.5%
Five-year	6.9%	7.5%
Ten-year	10.2%	7.5%
Twenty-year	6.9%	7.5%

# State Police Retirement System

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## HISTORY

The State Police Retirement System (SPRS) was created in 1994.

## LIQUIDITY NEEDS

SPRS is expected to be in a positive net cash flow position for the foreseeable future.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the actuarial interest rate assumption of 7.5 percent per annum, net of fees.
- Reduce the unfunded liability while maintaining adequate liquidity to satisfy benefit payments and not subjecting SPRS to an undue level of risk.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for SPRS. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from SPRS will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%

# State Police Retirement System

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	188,912
Contributions		6,925
Withdrawals		(465)
Net		6,460
Investment income		14
Net appreciation		11,716
June 30, 2019	\$	207,102

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 51,197	24.7%
International Qualified	15,573	7.5
International Equity	37,428	18.1
Short-Term Fixed Income	962	0.5
Total Return Fixed Income	18,227	8.8
Core Fixed Income	7,908	3.8
Private Markets	52,265	25.2
Hedge Fund	23,542	11.4
Total	\$ 207,102	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.0%	7.5%
Three-year	10.4%	7.5%
Five-year	7.0%	7.5%
Ten-year	10.1%	7.5%
Twenty-year	6.8%	7.5%

# Teachers' Retirement System

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## HISTORY

The Teachers' Retirement System (TRS) was created in 1941. It was closed to new members in 1991, but reopened to first-time hires as of July 1, 2005. Employees hired from 1991 through June 30, 2005, joined the Teachers' Defined Contribution Plan (TDC). In the spring of 2008, more than 78 percent of the participants in the Teachers' Defined Contribution Plan elected to transfer their TDC account balance to TRS and become participants in TRS. This transfer occurred in July 2008.

## LIQUIDITY NEEDS

TRS has a net negative cash flow position, and will likely continue to have substantial liquidity needs of at least 10 percent per year.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the actuarial interest rate assumption of 7.5 percent per annum, net of fees.
- Reduce the unfunded liability while maintaining adequate liquidity to satisfy benefit payments and not subjecting TRS to an undue level of risk.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for TRS. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from TRS will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%

# Teachers' Retirement System

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$ 7,691,788
Contributions	452,139
Withdrawals	(751,759)
Net	(299,620)
Investment income	939
Net appreciation	443,678
June 30, 2019	<u>\$ 7,836,785</u>

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 1,918,351	24.5%
International Qualified	629,522	8.0
International Equity	1,363,648	17.4
Short-Term Fixed Income	84,127	1.1
Total Return Fixed Income	641,299	8.2
Core Fixed Income	277,315	3.5
Private Markets	2,031,952	25.9
Hedge Fund	890,571	11.4
Total	<u>\$ 7,836,785</u>	<u>100.0%</u>

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.0%	7.5%
Three-year	10.4%	7.5%
Five-year	6.9%	7.5%
Ten-year	10.1%	7.5%
Twenty-year	6.7%	7.5%

# Board of Risk and Insurance Management

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## HISTORY

The Board of Risk and Insurance Management (BRIM) is a State entity charged with providing insurance coverage to all State agencies, as well as cities, counties, and non-profit organizations throughout West Virginia. BRIM also provides a coal mine subsidence reinsurance program that allows homeowners and businesses to obtain insurance coverage up to \$75,000 for collapses and damage caused by underground coal mines.

## LIQUIDITY NEEDS

According to representatives of the Plan, there may be some current liquidity needs in the next few fiscal years, not to exceed 10 percent in any given year. BRIM requires a cash reserve account for collateral purposes amounting to approximately 15 percent of the funds for investment. This amount is held in the Consolidated Fund, which is administered by the West Virginia Board of Treasury Investments and utilized at BRIM's discretion.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Provide adequate liquidity to meet the cash flow requirements.
- Given the expected infinite life of the fund, allow for growth of assets in an amount at least equal to expected inflation.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for BRIM. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C.

Asset Class	Base Allocation	Strategic Allocation
Equity	20.0%	30.0%
Fixed Income	80.0%	35.0%
TIPS	0.0%	10.0%
Hedge Fund	0.0%	20.0%
Cash*	0.0%	5.0%

*\* IMB Staff has authority to change the cash target up to 5 percent during a fiscal year, in consultation with the appropriate representative(s) from BRIM.*

# Board of Risk and Insurance Management

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## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	151,588
Contributions		-
Withdrawals		-
Net		-
Investment income		166
Net appreciation		6,942
June 30, 2019	\$	158,696

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 23,121	14.5%
International Nonqualified	7,763	4.9
International Equity	16,133	10.2
Short-Term Fixed Income	7,864	5.0
Total Return Fixed Income	35,870	22.6
Core Fixed Income	15,508	9.8
TIPS	16,062	10.1
Hedge Fund	36,375	22.9
Total	\$ 158,696	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	4.7%
Three-year	6.2%
Five-year	4.0%
Ten-year	6.5%

# Coal Workers' Pneumoconiosis Fund

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## HISTORY

The Coal Workers' Pneumoconiosis Fund (CWPF) was formed in 1974 to provide insurance coverage to coal operators for their potential liability under the *Federal Coal Mine Health and Safety Act of 1969*. Upon termination of the West Virginia Workers' Compensation Commission, the assets and liabilities of CWPF remained with the State for administration of the run-off of the liabilities incurred during the years of operation. Effective January 1, 2006, insurance coverage for liabilities incurred under the *Federal Coal Mine Health and Safety Act of 1969* is provided by private insurance carriers and is no longer available through the State.

## LIQUIDITY NEEDS

Liquidity needs are actuarially determined based on the run-off of liabilities, which are assessed annually.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the actuarial interest rate assumption of 5.0 percent per annum, net of fees.
- Preserve the current surplus position.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for CWPF. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C.

Asset Class	Base Allocation	Strategic Allocation
Equity	30.0%	30.0%
Fixed Income	70.0%	35.0%
TIPS	0.0%	10.0%
Hedge Fund	0.0%	20.0%
Cash*	0.0%	5.0%

*\* IMB Staff has authority to change the cash target up to 5 percent, within a fiscal year, in consultation with the appropriate representative(s) from CWPF.*



# Coal Workers' Pneumoconiosis Fund

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	245,797
Contributions		1,290
Withdrawals		(19,171)
Net		(17,881)
Investment income		234
Net appreciation		10,455
June 30, 2019	\$	238,605

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 34,833	14.7%
International Nonqualified	11,809	4.9
International Equity	24,400	10.2
Short-Term Fixed Income	10,024	4.2
Total Return Fixed Income	54,182	22.7
Core Fixed Income	23,419	9.8
TIPS	24,499	10.3
Hedge Fund	55,439	23.2
Total	\$ 238,605	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	4.6%	5.0%
Three-year	6.2%	5.0%
Five-year	4.0%	5.0%
Ten-year	6.4%	5.0%
Twenty-year	5.7%	5.0%

# Public Employees Insurance Agency

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## HISTORY

The Public Employees Insurance Agency (PEIA) is a State entity charged with providing health insurance coverage to eligible public employees.

## LIQUIDITY NEEDS

PEIA projects net cash outflows from operations every year going forward. This anticipated liquidity need within a three-year time horizon indicates a substantial allocation to cash is appropriate. PEIA currently manages part of its cash allocation and invests this amount with the West Virginia Board of Treasury Investments. The IMB collaborates with management at PEIA to monitor combined cash levels.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Provide adequate liquidity to meet the cash flow requirements.
- Given the expected infinite life of the fund, allow for growth of assets in an amount at least equal to expected inflation.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for PEIA. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. IMB Staff, in consultation with the appropriate representative(s) from PEIA will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually.

Asset Class	Base Allocation	Strategic Allocation
Equity	20.0%	25.0%
Fixed Income	80.0%	40.0%
TIPS	0.0%	15.0%
Hedge Fund	0.0%	20.0%

# Public Employees Insurance Agency

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## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	198,826
Contributions		30,000
Withdrawals		(15,000)
Net		15,000
Investment income		53
Net appreciation		11,435
June 30, 2019	\$	225,314

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 25,918	11.5%
International Nonqualified	9,326	4.1
International Equity	19,812	8.8
Total Return Fixed Income	58,940	26.2
Core Fixed Income	25,503	11.3
TIPS	34,192	15.2
Hedge Fund	51,623	22.9
Total	\$ 225,314	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	5.1%
Three-year	6.2%
Five-year	4.0%
Ten-year	6.4%

# West Virginia Retiree Health Benefit Trust Fund

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## HISTORY

The West Virginia Retiree Health Benefit Trust Fund (RHBTF) was created under *West Virginia Code §5-16D* for the purpose of providing for and administering retiree post-employment health care benefits, and the respective revenues and costs of those benefits as a cost sharing multiple employer plan.

## LIQUIDITY NEEDS

RHBTF assets managed by the IMB are expected to be long-term in nature and have no liquidity needs as deemed by PEIA, which administers these assets. Short-term projected cash needs for RHBTF are calculated by PEIA and held in reserve in PEIA cash accounts.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Exceed the investment return assumption of 7.5 percent per annum, net of fees.
- To provide stable, long term growth of assets, while seeking to minimize the risk of loss.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for RHBTF. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from RHBTF will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Funds	0.0%	10.0%
Real Estate	0.0%	10.0%

# West Virginia Retiree Health Benefit Trust Fund

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## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	903,813
Contributions		40,000
Withdrawals		-
Net		40,000
Investment income		69
Net appreciation		57,688
June 30, 2019	\$	1,001,570

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 248,998	24.9%
International Nonqualified	83,843	8.4
International Equity	173,189	17.3
Total Return Fixed Income	88,937	8.9
Core Fixed Income	38,465	3.8
Private Markets	253,848	25.3
Hedge Fund	114,290	11.4
Total	\$ 1,001,570	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	6.1%
Three-year	10.5%
Five-year	7.0%
Ten-year	9.1%

# Workers' Compensation Old Fund

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## HISTORY

Formed in January 2006, the Workers' Compensation Old Fund (Old Fund) assumed responsibility for payment of all workers' compensation claims and liabilities incurred by the former West Virginia Workers' Compensation Commission prior to July 1, 2005. After July 1, 2005, workers' compensation claims or liabilities incurred are covered by private insurance carriers.

## LIQUIDITY NEEDS

Liquidity needs are uncertain due to legislation that reduced funding sources. Regardless, the Old Fund is expected to have a negative net cash flow position. Liquidity needs for short-term cash (amount necessary for approximately 12 months' worth of anticipated claims) will continue to be reviewed annually with the West Virginia Office of the Insurance Commissioner. Currently, a cash balance is held in the Old Fund in an amount equal to 5 percent of assets which should be adequate to meet the needs of the Old Fund even with funding uncertainty.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Preservation of principal and minimization of volatility, while still achieving some investment earnings growth adjusted for inflation.
- Provide adequate liquidity to meet cash flow requirements.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the Old Fund. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C.

Asset Class	Base Allocation	Strategic Allocation
Equity	30.0%	30.0%
Fixed Income	70.0%	40.0%
TIPS	0.0%	10.0%
Hedge Funds	0.0%	15.0%
Cash*	0.0%	5.0%

*\* IMB Staff has authority to change the cash target up to 5 percent, during a fiscal year, in consultation with the appropriate representative(s) from the Old Fund.*

# Workers' Compensation Old Fund

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$ 1,185,505
Contributions	9,915
Withdrawals	(142,098)
Net	(132,183)
Investment income	1,011
Net appreciation	51,388
June 30, 2019	<u>\$ 1,105,721</u>

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 162,444	14.8%
International Nonqualified	55,236	5.0
International Equity	113,678	10.3
Short-Term Fixed Income	39,162	3.5
Total Return Fixed Income	299,009	27.0
Core Fixed Income	129,214	11.7
TIPS	114,404	10.3
Hedge Fund	192,574	17.4
Total	<u>\$ 1,105,721</u>	<u>100.0%</u>

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	4.9%
Three-year	6.0%
Five-year	4.1%
Ten-year	6.1%

# Workers' Compensation Self-Insured Employer Guaranty Risk Pool

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## HISTORY

The Workers' Compensation Self-Insured Guaranty Risk Pool (Self-Insured Pool) was established on January 1, 2006, for the purpose of paying the workers' compensation claims of defaulted self-insured employers occurring on or after July 1, 2004. It consists of those funds transferred, and any future funds collected, as provided by law.

## LIQUIDITY NEEDS

As all current and active self-insured employers are required to provide a bond, security, or other collateral to the West Virginia Office of the Insurance Commissioner in the event of a deteriorating financial condition, it is anticipated that the liquidity position of this fund should remain stable. A small cash reserve will be held in the event of an unforeseen emergency, as is possible with an insurance program of this kind.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Provide adequate liquidity to meet cash flow requirements.
- Given the expected infinite life of the fund, allow for growth of assets in an amount at least equal to expected inflation.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the Self-Insured Pool. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C.

Asset Class	Base Allocation	Strategic Allocation
Equity	30.0%	30.0%
Fixed Income	70.0%	35.0%
TIPS	0.0%	10.0%
Hedge Fund	0.0%	20.0%
Cash*	0.0%	5.0%

*\* IMB Staff has authority to change the cash target up to 5 percent, during a fiscal year, in consultation with the appropriate representative(s) from the Self-Insured Pool.*



# Workers' Compensation Self-Insured Employer Guaranty Risk Pool

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	33,908
Contributions		357
Withdrawals		(1,600)
Net		(1,243)
Investment income		35
Net appreciation		1,506
June 30, 2019	\$	34,206

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 5,007	14.7%
International Nonqualified	1,685	4.9
International Equity	3,464	10.1
Short-Term Fixed Income	1,536	4.5
Total Return Fixed Income	7,760	22.7
Core Fixed Income	3,362	9.8
TIPS	3,493	10.2
Hedge Fund	7,899	23.1
Total	\$ 34,206	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	4.7%
Three-year	6.3%
Five-year	4.1%
Ten-year	4.6%

# Workers' Compensation Self-Insured Employer Security Risk Pool

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## HISTORY

The Workers' Compensation Self-Insured Security Risk Pool (Security Pool) was established on January 1, 2006, and initially funded with the IMB in March 2014, for the purpose of paying the workers' compensation claims of defaulted self-insured employers with dates of injury occurring prior to July 1, 2004, provided that the default of the self-insured employer took place on or after the creation of the Security Pool on January 1, 2006. It consists of those funds transferred, and any future funds collected, as provided by law.

## LIQUIDITY NEEDS

It is anticipated that the Security Pool will have a net cash inflow over the next five years. A small cash reserve will be held in the event of an unforeseen emergency, as is possible with an insurance program of this kind.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Provide adequate liquidity to meet cash flow requirements.
- Given the expected infinite life of the fund, allow for growth of assets in an amount at least equal to expected inflation.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the Security Pool. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C.

Asset Class	Base Allocation	Strategic Allocation
Equity	30.0%	30.0%
Fixed Income	70.0%	35.0%
TIPS	0.0%	10.0%
Hedge Fund	0.0%	20.0%
Cash*	0.0%	5.0%

*\* IMB Staff has authority to change the cash target up to 5 percent, within a fiscal year, in consultation with the appropriate representative(s) from the Security Pool.*

# Workers' Compensation Self-Insured Employer Security Risk Pool

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## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	53,204
Contributions		641
Withdrawals		(3,960)
Net		(3,319)
Investment income		51
Net appreciation		2,284
June 30, 2019	\$	52,220

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 7,634	14.5%
International Nonqualified	2,586	5.0
International Equity	5,373	10.3
Short-Term Fixed Income	2,117	4.1
Total Return Fixed Income	11,867	22.7
Core Fixed Income	5,129	9.8
TIPS	5,357	10.3
Hedge Fund	12,157	23.3
Total	\$ 52,220	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	4.6%
Three-year	6.3%
Five-year	4.0%

# Workers' Compensation Uninsured Employers' Fund

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## HISTORY

The Workers' Compensation Uninsured Employers' Fund (Uninsured Fund) was established January 1, 2006, to provide for the benefit of injured workers, whose employers failed to provide mandatory workers' compensation coverage. The Uninsured Fund received initial funding of \$5 million by proclamation of the Governor.

## LIQUIDITY NEEDS

There are minimal liquidity needs projected at this time as cash inflows (premiums) are expected to be sufficiently above cash outflows (claims) for the near future. At the Uninsured Fund's request, moderate liquidity needs are being reserved in anticipation of cash that may be needed for a settlement program. A small cash reserve will be held in the event of an unforeseen emergency, as is possible with an insurance program of this kind.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Provide adequate liquidity to meet cash flow requirements.
- Given the expected infinite life of the fund, allow for growth of assets in an amount at least equal to expected inflation.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the Uninsured Fund. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C.

Asset Class	Base Allocation	Strategic Allocation
Equity	30.0%	30.0%
Fixed Income	70.0%	30.0%
TIPS	0.0%	10.0%
Hedge Fund	0.0%	20.0%
Cash*	0.0%	10.0%

*\* IMB Staff has authority to change the cash target up to 5 percent, within a fiscal year, in consultation with the appropriate representative(s) from the Uninsured Fund.*

# Workers' Compensation Uninsured Employers' Fund

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	12,881
Contributions		518
Withdrawals		(498)
Net		20
Investment income		28
Net appreciation		539
June 30, 2019	\$	13,468

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 1,966	14.4%
International Nonqualified	662	4.9
International Equity	1,382	10.3
Short-Term Fixed Income	1,287	9.6
Total Return Fixed Income	2,569	19.1
Core Fixed Income	1,114	8.3
TIPS	1,370	10.2
Hedge Fund	3,118	23.2
Total	\$ 13,468	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	4.4%
Three-year	6.1%
Five-year	3.9%
Ten-year	4.3%

## HISTORY

Berkeley County is the second most populous county in West Virginia and benefits economically from its close proximity to the Washington, D.C. metropolitan area. The Berkeley County Development Authority (BCDA) seeks to attract business through tax credits and financing programs.

## LIQUIDITY NEEDS

BCDA is expected to experience no cash outflows for the next five years. Large cash inflows are expected but on an ad hoc basis emanating from land sales in excess of expenses.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Meet or exceed 7.5 percent per annum, net of fees.
- Achieve long-term growth by investing in a well-diversified portfolio.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for BCDA. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from BCDA will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%

# Berkeley County Development Authority

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## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	7,742
Contributions		-
Withdrawals		(1,950)
Net		(1,950)
Investment income		-
Net appreciation		385
June 30, 2019	\$	6,177

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 1,537	24.9%
International Nonqualified	517	8.4
International Equity	1,070	17.3
Total Return Fixed Income	548	8.9
Core Fixed Income	237	3.8
Private Markets	1,561	25.3
Hedge Fund	707	11.4
Total	\$ 6,177	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.0%	7.5%
Three-year	10.4%	7.5%

# Revenue Shortfall Reserve Fund

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## HISTORY

The Revenue Shortfall Reserve Fund (Reserve Fund), created under *West Virginia Code §11B-2-20*, is funded from state surplus revenues accrued, if any, during the most recent fiscal year. The first 50 percent of all such surplus revenues are deposited into the Reserve Fund within 60 days of the end of each fiscal year. The deposit of surplus revenue into the Reserve Fund becomes discretionary when the balance in the Reserve Fund meets or exceeds 13 percent of the state's General Revenue Fund Budget for the expiring fiscal year. The West Virginia Legislature is authorized to make an appropriation from the Reserve Fund for revenue shortfalls, for emergency revenue needs caused by acts of God or natural disasters, or for other fiscal needs.

## LIQUIDITY NEEDS

The Reserve Fund is intended to be co-managed between the IMB and the West Virginia Board of Treasury Investments. A cash account of \$100 million must be invested throughout the life of the Reserve Fund in cash with the West Virginia Board of Treasury Investments. Any assets in excess of \$100 million will be invested with the IMB. Statute dictates that expenditures will occur out of the Board of Treasury Investments first until those assets are depleted, and then out of the assets managed at the IMB. The West Virginia State Budget Office will monitor these asset balances and will direct both the IMB and the West Virginia Board of Treasury Investments when the transfer of funds is necessary from one to the other.

Future cash outflows are uncertain. The assets may be withdrawn, in whole or in part, at any time as directed by the West Virginia Legislature or by executive order.

## INVESTMENT OBJECTIVES (for the assets managed by the IMB)

The investment objective is to provide for preservation of principal and minimization of volatility. There is no specifically identified target rate of return, as the Reserve Fund is a perpetual, endowment-like fund with no anticipated or scheduled liabilities.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the Reserve Fund. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the fixed income asset class. The range authority for fixed income is defined in the IMB's Investment Policy Statement for the Fixed Income Pool Appendix C. IMB Staff, in consultation with the appropriate representative(s) from the Participant Plan will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually.

Asset Class	Base Allocation	Strategic Allocation
Fixed Income	100.0%	50.0%
TIPS	0.0%	50.0%

*\* Statutory cash requirements of \$100 million will be invested by the West Virginia Board of Treasury Investments.*



## Revenue Shortfall Reserve Fund

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### FINANCIAL HIGHLIGHTS (in \$000s)

#### Progression of Plan Balance

June 30, 2018	\$	167,666
Contributions		18,067
Withdrawals		-
Net		18,067
Investment income		23
Net appreciation		11,586
June 30, 2019	\$	197,342

#### Asset Allocation

	Amount	Percent of Total
Total Return Fixed Income	\$ 68,869	34.9%
Core Fixed Income	29,763	15.1
TIPS	98,710	50.0
Total	\$ 197,342	100.0%

### INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	6.3%
Three-year	3.1%
Five-year	2.4%
Ten-year	4.8%

## Revenue Shortfall Reserve Fund – Part B

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### HISTORY

The Revenue Shortfall Reserve Fund - Part B (Reserve Fund - Part B), created under *West Virginia Code §11B-2-20*, was funded using the entire balance of the assets in the former Tobacco Settlement Medical Trust Fund. The West Virginia Legislature is authorized and may make expenditures from the Reserve Fund - Part B for the purposes set forth in *West Virginia Code §4-11A-3* or in instances of revenue shortfalls or fiscal emergencies of an extraordinary nature.

### LIQUIDITY NEEDS

The Reserve Fund - Part B is intended to experience no cash outflows, but this is not entirely certain, as the West Virginia Legislature may appropriate a qualified expenditure as noted above. Cash inflows are expected to be minimal and emanate from insurance tax payments.

### INVESTMENT OBJECTIVES

The investment objective is to provide for stable, long-term growth of assets, while seeking to minimize risk of loss. There is no specifically identified rate of return target as the Reserve Fund - Part B is a perpetual, endowment-like fund with no anticipated or scheduled liabilities.

### ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the Reserve Fund - Part B. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. IMB Staff, in consultation with the appropriate representative(s) from the Reserve Fund - Part B will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually.

Asset Class	Base Allocation	Strategic Allocation
Equity	20.0%	22.50%
Fixed Income	80.0%	55.00%
TIPS	0.0%	22.50%

## Revenue Shortfall Reserve Fund – Part B

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### FINANCIAL HIGHLIGHTS (in \$000s)

#### Progression of Plan Balance

June 30, 2018	\$	438,711
Contributions		-
Withdrawals		-
Net		-
Investment income		2
Net appreciation		26,476
June 30, 2019	\$	465,189

#### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 50,478	10.9%
International Nonqualified	16,949	3.6
International Equity	35,359	7.6
Total Return Fixed Income	179,527	38.6
Core Fixed Income	77,653	16.7
TIPS	105,223	22.6
Total	\$ 465,189	100.0%

### INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	6.0%
Three-year	6.0%
Five-year	4.1%
Ten-year	6.7%

## HISTORY

The West Virginia Department of Environmental Protection Agency (DEP Agency) was established in 1991, for the primary purpose of protecting the environment and the health and welfare of the public, including providing for the long-term maintenance of certain water control facilities. The DEP Agency has established reserve funds for reclamation efforts related to these areas of responsibility.

## LIQUIDITY NEEDS

The DEP Agency has had no liquidity needs, but anticipates that liquidity needs may increase to fund reclamation activities.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Provide adequate liquidity to meet the cash flow requirements.
- Given the expected infinite life of the fund, allow for growth of assets in an amount at least equal to expected inflation.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the DEP Agency. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. IMB Staff, in consultation with the appropriate representative(s) from the DEP Agency will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually.

Asset Class	Base Allocation	Strategic Allocation
Equity	40.0%	40.0%
Fixed Income	60.0%	40.0%
Hedge Funds	0.0%	20.0%

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$ 195,399
Contributions	-
Withdrawals	-
Net	-
Investment income	-
Net appreciation	9,302
June 30, 2019	<u><u>\$ 204,701</u></u>

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 39,819	19.5%
International Nonqualified	13,373	6.5
International Equity	27,799	13.6
Total Return Fixed Income	53,485	26.1
Core Fixed Income	23,122	11.3
Hedge Fund	47,103	23.0
Total	<u><u>\$ 204,701</u></u>	<u><u>100.0%</u></u>

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees. A target rate of return has not been set for this plan.

Period	Actual
One-year	4.8%
Three-year	7.3%
Five-year	4.6%

## HISTORY

The West Virginia Department of Environmental Protection Trust (DEP Trust) was established on January 29, 2010, for the primary purpose of protecting the environment and the health and welfare of the public, including providing for the long-term maintenance of certain water control facilities. The DEP Trust seeks to provide an economical way by which funds contributed for that purpose may be invested and managed. The sole trustee of the DEP Trust is the Treasurer of the State of West Virginia. The beneficiary of the DEP Trust is the West Virginia Department of Environmental Protection. The DEP Trust began investing funds with the IMB on May 27, 2011.

## LIQUIDITY NEEDS

There are limited liquidity needs for the DEP Trust going forward, based on historical actual needs incurred by the DEP Trust, adjusted for inflation.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Meet or exceed 7.0 percent per annum. This is the discount rate by the DEP Trust and the Federal Office of Surface Mining in determining the amount of assets invested in the DEP Trust.
- Achieve long-term growth by investing the DEP Trust in a well-diversified portfolio.
- Achieve a real rate of return that is high enough to protect the purchasing power of the DEP Trust.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the DEP Trust. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity and fixed income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. IMB Staff, in consultation with the appropriate representative(s) from the DEP Trust will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually.

Asset Class	Base Allocation	Strategic Allocation
Equity	65.0%	65.0%
Fixed Income	35.0%	15.0%
Hedge Funds	0.0%	20.0%

# West Virginia Department of Environmental Protection Trust

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## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	9,658
Contributions		-
Withdrawals		(723)
Net		(723)
Investment income		-
Net appreciation		323
June 30, 2019	\$	9,258

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 2,946	31.8%
International Nonqualified	989	10.7
International Equity	2,045	22.1
Total Return Fixed Income	791	8.5
Core Fixed Income	343	3.7
Hedge Fund	2,144	23.2
Total	\$ 9,258	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. The actual rate of return is net of fees.

Period	Actual	Target
One-year	3.6%	7.0%
Three-year	9.2%	7.0%
Five-year	5.4%	7.0%

# West Virginia Prepaid Tuition Trust Fund

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## HISTORY

The West Virginia Prepaid Tuition Trust Fund (Tuition Trust) was established in 1997 with the objective of enhancing and improving higher education in the State. This is accomplished by providing individuals and organizations a means for paying future college tuition and fees in advance at a rate set at current levels.

Effective March 2003, the Fund was closed to new contracts unless or until the Legislature authorizes the Fund to reopen. During fiscal year 2015, the West Virginia College Prepaid Tuition and Savings Program Board voted to close the Prepaid Tuition Plan on June 30, 2022. Any funds not distributed to account holders or beneficiaries who cannot be located at that time will be transferred to the West Virginia Unclaimed Property Division where the rightful owner can claim the funds at any time. The unclaimed funds will cease to be the responsibility of the Program.

## LIQUIDITY NEEDS

There are rising liquidity needs for the Tuition Trust. Benefits and expenses will exceed receipts from participants' monthly payments on prepaid tuition contracts at an increasing rate in future years. Under normal economic conditions and funding scenarios the Tuition Trust's assets are expected to be depleted by 2022.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Meet or exceed the investment return assumption of 3.1 percent per annum, net of fees.
- Preservation of capital.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the Tuition Trust. Base and Strategic Allocations are established on a market value basis.

Asset Class	Base Allocation	Strategic Allocation
Fixed Income	80.0%	80.0%
Cash*	20.0%	20.0%

*\* IMB Staff has authority to change the cash allocation plus or minus 10 percent, as necessary, in consultation with the appropriate representative(s) from the Tuition Trust.*



# West Virginia Prepaid Tuition Trust Fund

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	42,256
Contributions		16
Withdrawals		(10,000)
Net		(9,984)
Investment income		131
Net appreciation		2,110
June 30, 2019	\$	34,513

### Asset Allocation

	Amount	Percent of Total
Short-Term Fixed Income	\$ 6,774	19.6%
Total Return Fixed Income	13,817	40.1
Core Fixed Income	13,922	40.3
Total	\$ 34,513	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.7%	3.1%
Three-year	7.8%	3.1%
Five-year	5.6%	3.1%
Ten-year	8.9%	3.1%
Twenty-year	6.6%	3.1%

# Wildlife Endowment Fund

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## HISTORY

The Wildlife Endowment Fund (WEF) was created in 1986 to supplement the Division of Natural Resources' annual budget in support of various statewide projects.

## LIQUIDITY NEEDS

The liquidity needs of the WEF will be set on an annual basis and determined by a separate Wildlife Endowment Board as established by West Virginia State Code.

## INVESTMENT OBJECTIVES

The investment objectives are as follows:

- Achieve a total rate of return of at least 6.0 percent per annum, net of fees.
- Provide adequate liquidity to meet cash flow requirements.

## ASSET ALLOCATION

Based upon a determination of the appropriate risk tolerance, the Board adopted the following broad asset allocation guidelines for the assets managed for the WEF. Base and Strategic Allocations are established on a market value basis. The Allocation Committee has the authority to change the allocation within an established range around the Strategic Allocation for the public equity, fixed income, and opportunistic income asset classes. The range authority for public equities and fixed income is defined in the IMB's Investment Policy Statement for the Equity and Fixed Income Pools, respectively Appendix C. The Base and Strategic Allocations to opportunistic income are 0 percent, but the Allocation Committee has the authority to make a range allocation of up to 5 percent to this asset class. IMB Staff, in consultation with the appropriate representative(s) from the WEF will from time to time set a target for transactional cash needs. The Board will receive a report on the target level annually. Private Equity, Opportunistic Income, and Real Estate together comprise the Private Markets Pool.

Asset Class	Base Allocation	Strategic Allocation
Equity	60.0%	55.0%
Private Equity	0.0%	10.0%
Fixed Income	40.0%	15.0%
Opportunistic Income	0.0%	0.0%
Hedge Fund	0.0%	10.0%
Real Estate	0.0%	10.0%

# Wildlife Endowment Fund

## FINANCIAL HIGHLIGHTS (in \$000s)

### Progression of Plan Balance

June 30, 2018	\$	63,823
Contributions		2,671
Withdrawals		(5,174)
Net		(2,503)
Investment income		6
Net appreciation		3,674
June 30, 2019	\$	65,000

### Asset Allocation

	Amount	Percent of Total
Domestic Equity	\$ 16,042	24.6%
International Nonqualified	5,434	8.4
International Equity	11,241	17.3
Short-Term Fixed Income	63	0.1
Total Return Fixed Income	5,714	8.8
Core Fixed Income	2,470	3.8
Private Markets	16,624	25.6
Hedge Fund	7,412	11.4
Total	\$ 65,000	100.0%

## INVESTMENT PERFORMANCE

The IMB calculates total rates of return using the time-weighted rate of return methodology. The time-weighted method determines the rate of return exclusive of the effects of participant contributions or withdrawals. Actual rates of return are net of fees.

Period	Actual	Target
One-year	6.1%	6.0%
Three-year	10.5%	6.0%
Five-year	7.0%	6.0%
Ten-year	10.2%	6.0%
Twenty-year	7.3%	6.0%