



PRESENTATION TO **MACRS**

PRESENTED BY
Michael G. Trotsky, CFA, Executive Director and Chief Investment Officer

October 4, 2021

Deborah B. Goldberg, Treasurer and Receiver General, Chair
Michael G. Trotsky, CFA, Executive Director and Chief Investment Officer

Table of Contents

• PRIM Board & PRIT Fund Overview	3
• Economic Update	14
• PRIT Fund Asset Allocation Targets	17
• PRIT Fund Performance	21



PRIM BOARD & PRIT FUND OVERVIEW



AS OF JUNE 30, 2021

PRIT Fund Snapshot

PRIT FUND FACTS

As of June 30, 2021

- \$95.7 billion AUM
- 51 public markets portfolios
- 16 real estate, timber and REIT portfolios
- 100+ private equity managers;
200+ partnerships
- 32 portfolio completion strategies managers

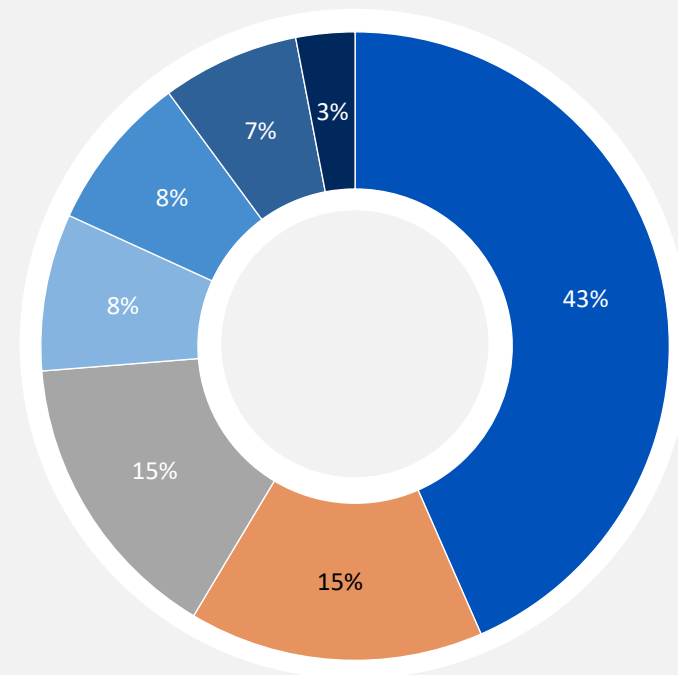
OVERSIGHT AND STAFFING

As of August 31, 2021

- 9 appointed and elected trustees
- 4 advisory committees, consisting of 35 industry professionals and Board members
- Staff of 53 professionals
 - 2 PhDs
 - 25 Masters
 - 14 CFAs
 - 6 CPAs
 - 2 CAIAs
 - 1 FRM
 - 1 CRE
 - 19 CFA Investment Foundations Program Certificate Holders

ASSET ALLOCATION

(as of 6/30/21)



TARGET RANGES

(approved 2/24/21)

- Global Equities 34% - 44%
- Core Fixed Income 12% - 18%
- Private Equity 11% - 17%
- Portfolio Completion Strategies 7% - 13%
- Real Estate 7% - 13%
- Value-Added Fixed Income 5% - 11%
- Timberland 1% - 7%

About PRIM



\$95.7 billion investment fund that invests public employee pension benefits

- PRIM has a professional, experienced and focused investment staff.
- PRIM does not administer benefits.

PRIM's mission is to relieve the pension funding burden on the taxpayer

- Self-funded agency which generates asset returns for the Massachusetts pension system.
- PRIM's Project SAVE initiative is achieving over \$250 million annualized value enhancing activities for the fund annually.

PRIM is independent and governed by a nine-member Board of Trustees

- Massachusetts State Treasurer is the Chair of the PRIM Board.
- A robust committee structure lends investment and operational expertise to the decision-making process.



PRIM Core Beliefs

We believe that any investment must be evaluated on three equally important parameters: return, risk and cost.

We don't make tactical asset allocation decisions or investment decisions based on market or economic predictions. Instead, we engineer a strategic, long-term asset allocation strategy that we hope will stand the test of a long-time horizon.

We value a basis point of cost reduction more than a basis point of return. Because we can count on cost savings every year, but nobody ever really knows what the markets will deliver.

PRIM Top 10 Accomplishments

1

Stable organization: Exceptional staff with low turnover supported by a strong, stable Board and Committee structure

2

National recognition for PRIM and its staff

3

Strong relative and absolute investment performance

4

Sophisticated risk management platform and framework

5

Methodical asset allocation decisions

6

Project SAVE

7

Re-engineered Hedge Fund program – Portfolio Completion Strategies

- Direct hedge funds
- Hedge fund replication
- Emerging manager direct hedge fund
- Hedge fund and other credit fund co-investment

8

Enhanced manager search and selection process

9

Private Equity co-investment

10

Direct Real Estate Program

PRIM Board



Chair
DEBORAH B. GOLDBERG
State Treasurer and
Receiver General,
Commonwealth of Massachusetts



**Ruth Ellen
Fitch**

Appointee of
the State
Treasurer



**James B.G.
Hearty**

Designee
of the
Governor,
Ex Officio
Member



**Peter
Monaco**

Appointee
of the
Governor,
Non-State
Employee or
Official



Carly Rose

Appointee
of the
Governor,
Public Safety



**Theresa F.
McGoldrick,
Esquire**

State
Retirement
Board
Member
(SRB)



**Dennis J.
Naughton**

Teachers'
Retirement
Board
Member
(TRB)



**Robert L.
Brousseau**

Elected
Representative
State Teachers'
Retirement
System



**Paul E.
Shanley,
Esquire**

Elected
Representative
State
Employees
Retirement
System



PRIM Advisory Committees

Investment Committee

The Committee advises the Board with respect to the asset allocation policy of PRIM and related investment policies and assist the Board in overseeing the investment program. The mandate of the Investment Committee does not include real estate and timber. Members include:

1. **Deborah B. Goldberg**, Chair, Treasurer and Receiver General of Massachusetts, PRIM Board Chair (Ex Officio)
2. **Joseph C. Bonfiglio**, Massachusetts & Northern New England Laborers' District Council
3. **C. LaRoy Brantley**, Investment Consultant
4. **Michael Even**, Former President and CEO, Numeric Investors
5. **Constance M. Everson**, CFA, Managing Director, Capital Markets Outlook Group
6. **Ruth Ellen Fitch**, Esq., Board Member, Former President and CEO, the Dimock Center
7. **James B. G. Hearty**, Board Member, Former Partner, Clough Capital (Ex Officio)
8. **Peter Monaco**, Board Member, Managing Director, Raptor Group
9. **Phillip H. Perelmuter**, Former Managing Partner, Wellington Management
10. **Philip Rotner**, Chief Investment Officer, Boston Children's Hospital
11. **Paul E. Shanley**, Esq., Board Member, Director of Professional Liability, Amity Insurance
12. **Glenn P. Strehle**, CFA, Treasurer Emeritus, MIT
13. **Timothy L. Vaill**, Former Chairman and CEO, Boston Private Holdings

Real Estate Committee

The Committee advises the Board in setting investment policy within the real estate and timber portfolios and assist the Board in overseeing these portfolios. Members include:

1. **Jill S. Hatton**, CRE, Chair, Real Estate Investment Professional
2. **Deborah B. Goldberg**, Treasurer and Receiver General of Massachusetts, PRIM Board Chair (Ex Officio)
3. **Lydia Chesnick**, Esq., Partner, Bernkopf Goodman LLP
4. **Robert Gifford**, RGA Corp.
5. **Anthony E. Hubbard**, Esq., CVS Health
6. **Jack Lutz**, PhD., Forest Research Group
7. **William F. (Bill) McCall, Jr.**, CRE, McCall & Almy, Inc.
8. **Garlan Morse, Jr.**, CRE, Morris and Morse Company, Inc.
9. **Peter F. O'Connell**, Marina Bay Company
10. **Carly Rose**, Board Member, Public Safety Union Member



PRIM Advisory Committees

Administration and Audit Committee

The Committee assists the Board in overseeing all issues related to the governance, administration, and audit functions of PRIM, and to provide recommendations for the Board's consideration. Members include:

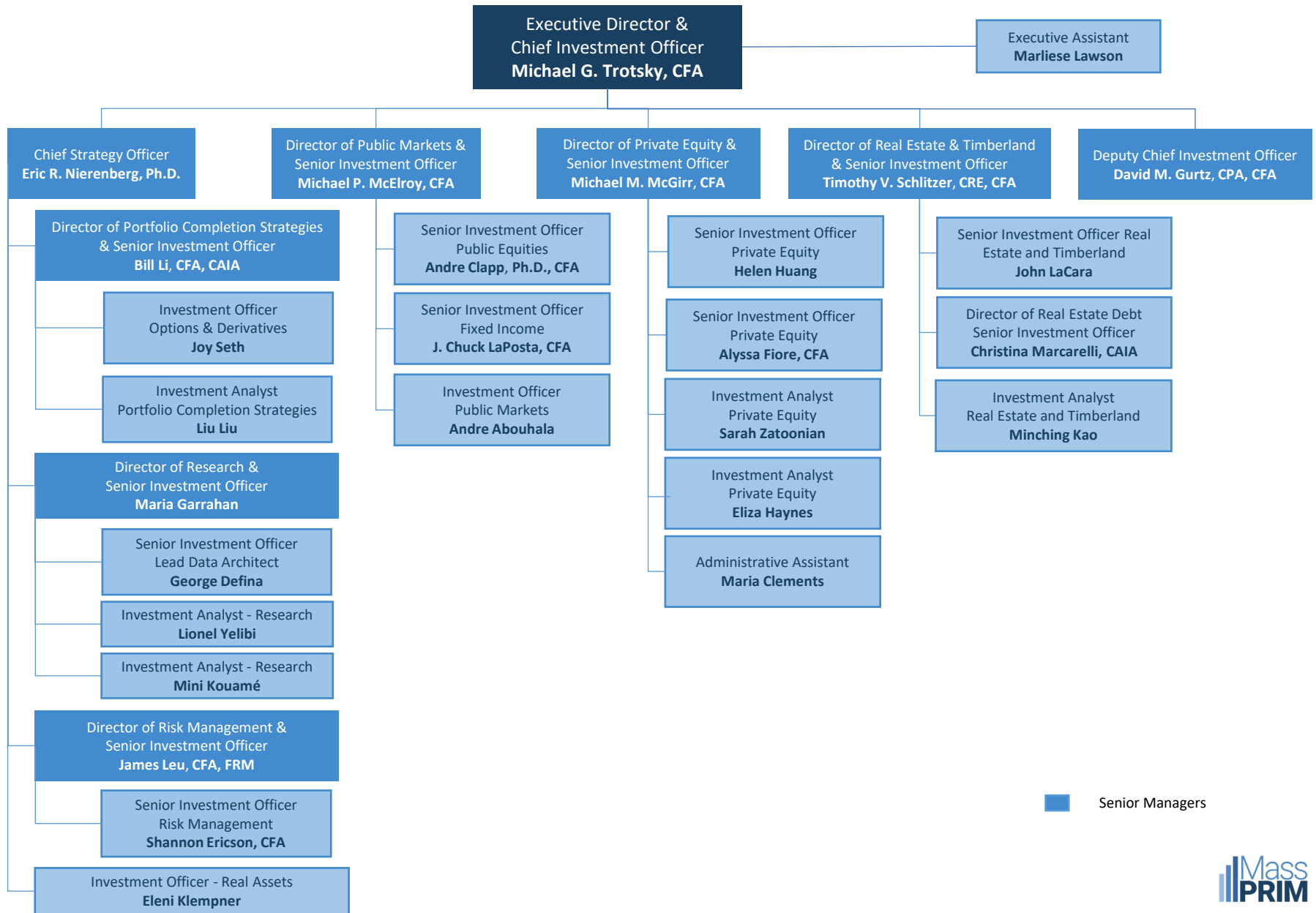
1. **Robert L. Brousseau**, Chair, Board Member, Retired Teacher, Town of Wareham School System
2. **Deborah B. Goldberg**, Treasurer and Receiver General of Massachusetts, PRIM Board Chair (Ex Officio)
3. **Patrick E. Brock**, Chairman, Hampshire County Retirement Board
4. **Karen E. Gershman**, CPA, Former Partner and Chief Operating Officer, Health Advances
5. **James B. G. Hearty**, Board Member, Former Partner, Clough Capital (Ex Officio)
6. **Theresa F. McGoldrick**, Esq., Board Member, National Executive Vice President, National Association of Government Employees (NAGE)
7. **Dennis J. Naughton**, Board Member, Retired Educator, Millis Public Schools
8. **Michele A. Whitham**, Esq., Founder & Principal, Whitham Law LLC

Compensation Committee

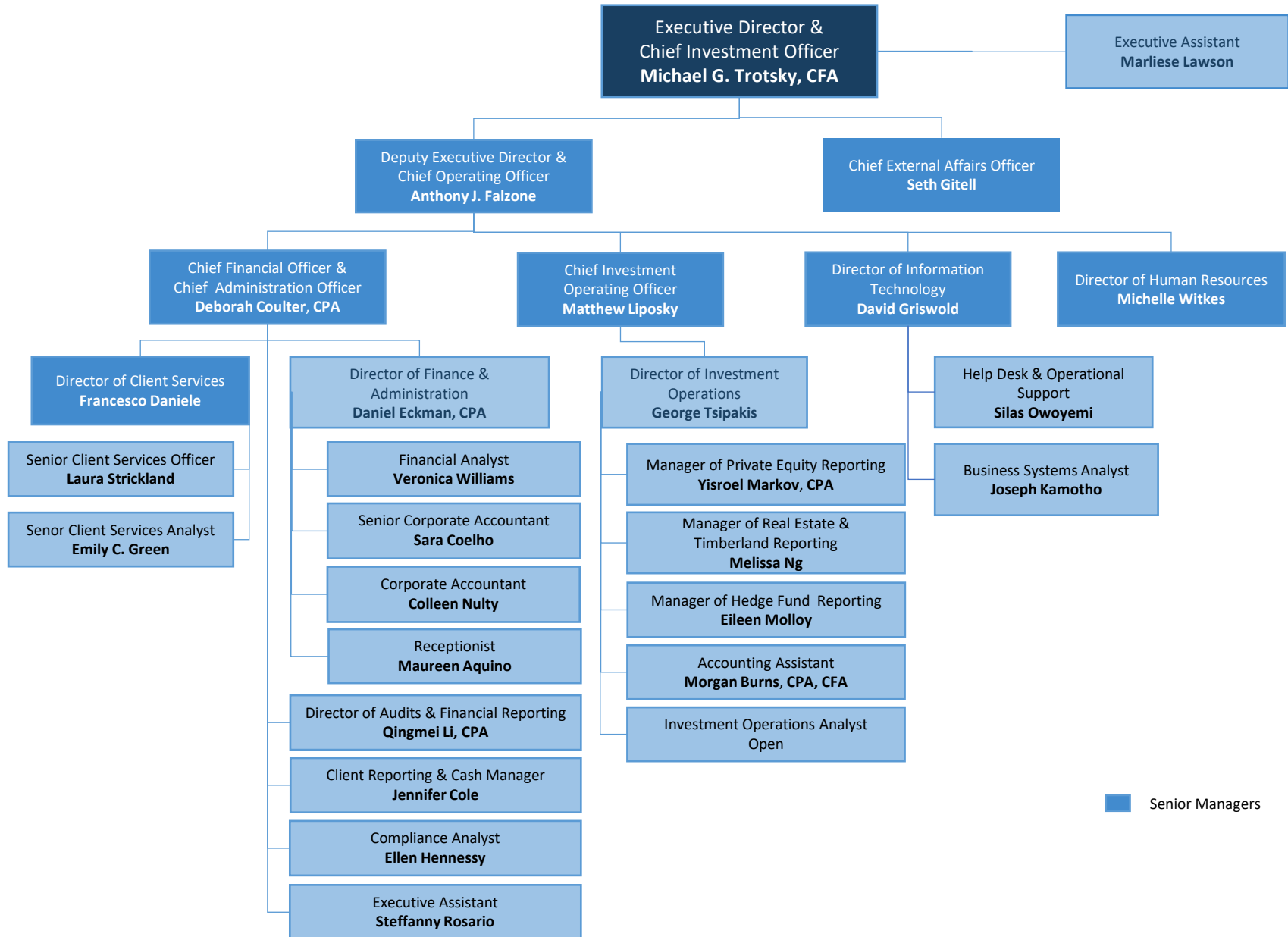
The Committee assists the Board in overseeing staff compensation and benefit policies. The Administration and Audit Committee is responsible for assisting the Board on other human resource matters. Members include:

1. **Michele A. Whitham**, Esq., Chair, Founder & Principal, Whitham Law LLC
2. **Deborah B. Goldberg**, Treasurer and Receiver General of Massachusetts, PRIM Board Chair (Ex Officio)
3. **Robert L. Brousseau**, Board Member, Retired Teacher, Town of Wareham School System
4. **Patrick E. Brock**, Chairman, Hampshire County Retirement Board

PRIM Investment Team



PRIM Finance and Operations Team



Recent Recognition

PRIM's Private Equity Portfolio ranked #4 by the American Investment Council

PRIM's Private Equity Portfolio has been ranked #4 among 176 U.S. public pension funds based on 10-year performance by the American Investment Council's Public Pension Study. PRIM is the only fund that has been in the top five every year the study has been conducted, including #1 rankings in 2019, 2018, 2015, and 2013. (July 2021)

Institutional Investor's Partnership of the Year Award Finalist

PRIM's Portfolio Completions Strategies team is one of four finalists for "Partnership of the Year" at their Allocators' Choice Awards, to be held in New York in September. This is the sixth time PRIM has been recognized for outstanding innovation by *Institutional Investor*, as nominated by industry peers and colleagues, including "Plan of the Year" – winner, 2016, "Plan of the Year" – nominee 2017, 2018, 2019, and Michael Trotsky, CFA, Executive Director and Chief Investment Officer of MassPRIM "Lifetime Achievement Award" in 2019. (June 2021)

GIPS Compliance

For the 4th consecutive year, PRIM has completed the CFA Institute's Global Investment Performance Standards of Integrity and transparency. PRIM is one of only a handful of large public pension plans to comply with the GIPS standards. (August 2021)

Certificate of Achievement for Excellence in Financial Reporting – Government Finance Officer Association

PRIM was awarded the Government Finance Officer Association's Certificate of Achievement for Excellence in Financial Reporting for the 16th consecutive year. (June 2021)

MIT Sloan/PRIM Collaboration on Environmental, Social, and Governance Ratings Research

PRIM has joined with the MIT Sloan Sustainability Initiative as the founding member of the Aggregate Confusion Project. The groundbreaking collaboration seeks to create more reliable and transparent ESG data and benchmarks for Investors. (September 2020)

PRIM FUTURE Initiative on Diversity & Inclusion

PRIM launched the FUTURE initiative, which is designed to implement the newly created Investment Equity law, the law created and championed by Treasurer Goldberg and signed into law in January 2021. The new law will help PRIM create an enhanced pathway for diverse investment managers and vendors to compete successfully for contracts. (May 2021)

Treasurer Deborah B. Goldberg Honored by National Association of State Treasurers

Treasurer Goldberg was honored by the National Association of State Treasurers with the Jesse H. Unruh Award, which is awarded to an active Treasurer in recognition of outstanding service to the Association, the profession, and his or her state. Treasurer Goldberg currently serves as the President of the Association (September 2020)

A photograph of a city skyline at dusk, with buildings illuminated against a dark blue sky. In the foreground, there is a waterfront promenade with a cobblestone path, a low stone wall, and some greenery. The water reflects the city lights.

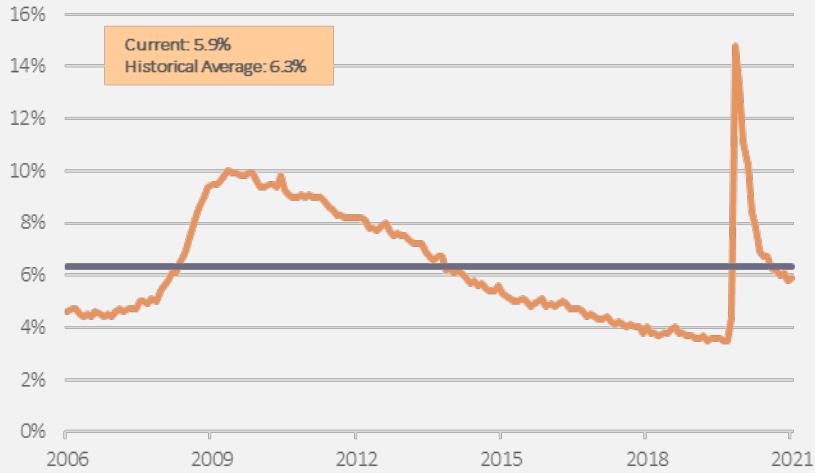
ECONOMIC UPDATE

**Mass
PRIM**

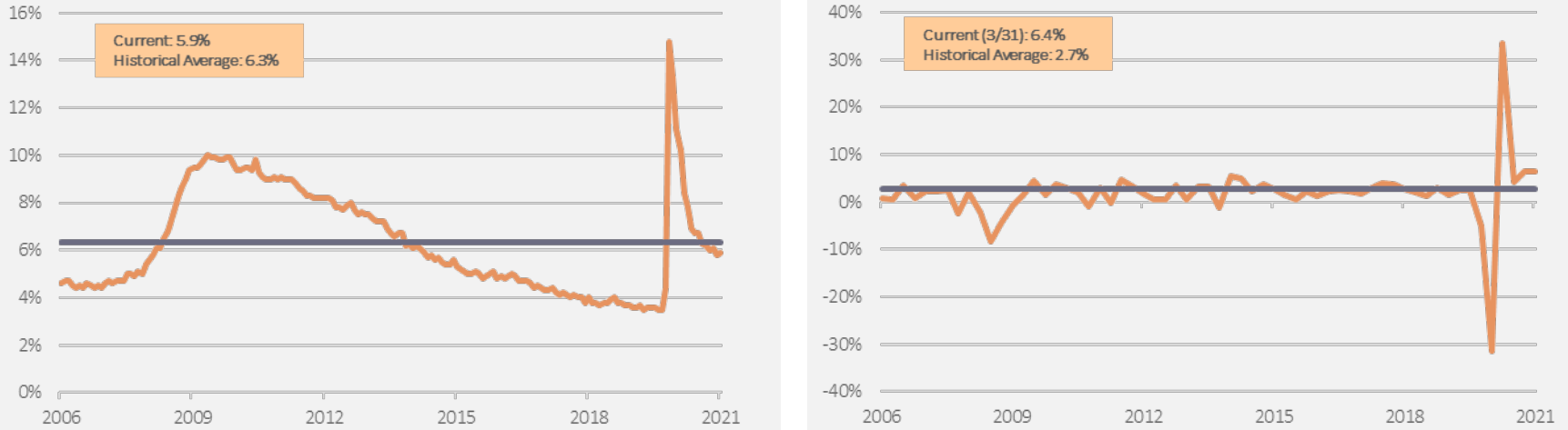
AS OF JUNE 30, 2021

U.S. Economic Data

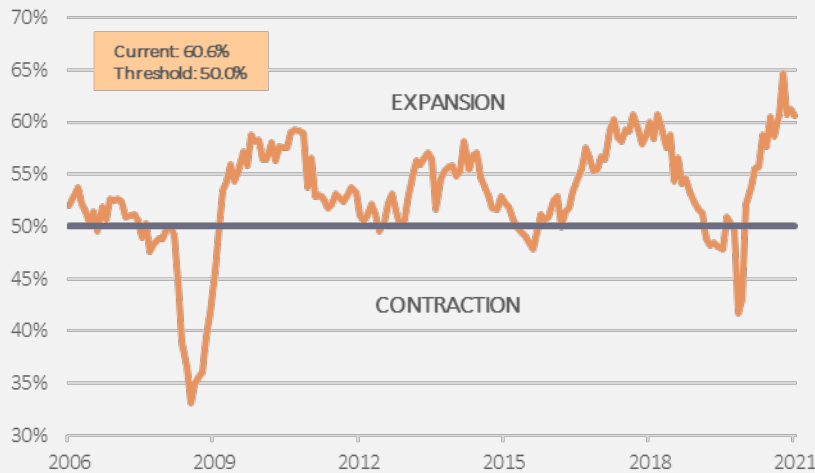
UNEMPLOYMENT RATE



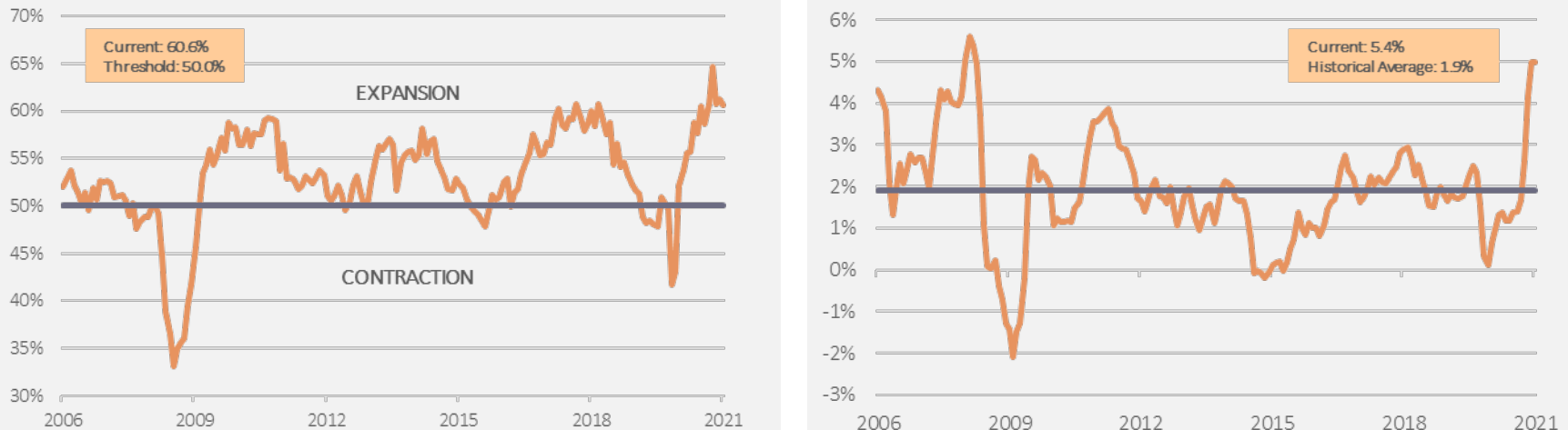
GDP GROWTH RATE



MANUFACTURING PMI

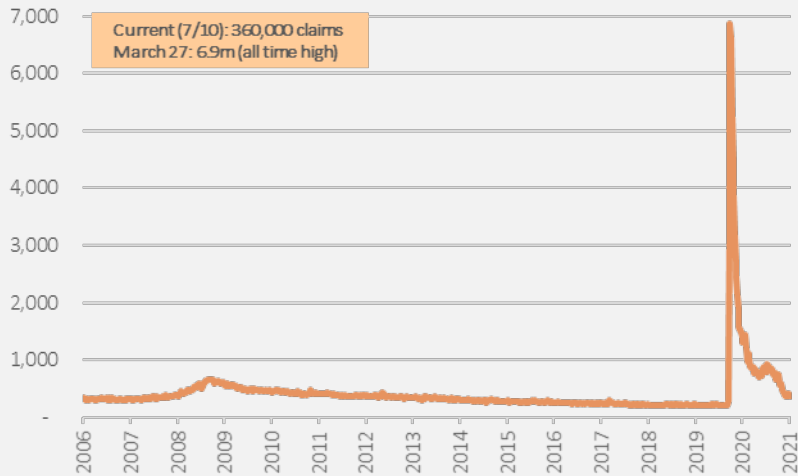


CONSUMER PRICE INDEX



U.S. Economic Data

WEEKLY INITIAL JOBLESS CLAIMS (IN MILLIONS)



WTI CRUDE OIL (\$/BBL)



CBOE MARKET VOLATILITY INDEX (VIX)





PRIT FUND ASSET ALLOCATION TARGETS

Mass
PRIM

Changes to Target Ranges – PRIT Fund Asset Allocation

Approved February 24, 2021

Increase in Allocation Range

Private Equity:
Target Band moves up 1%

Same Allocation Range

Global Equity:
Target Band stays the same

Core Fixed Income:
Target Band stays the same

Value-Added Fixed Income:
Target Band stays the same

Real Estate:
Target Band stays the same

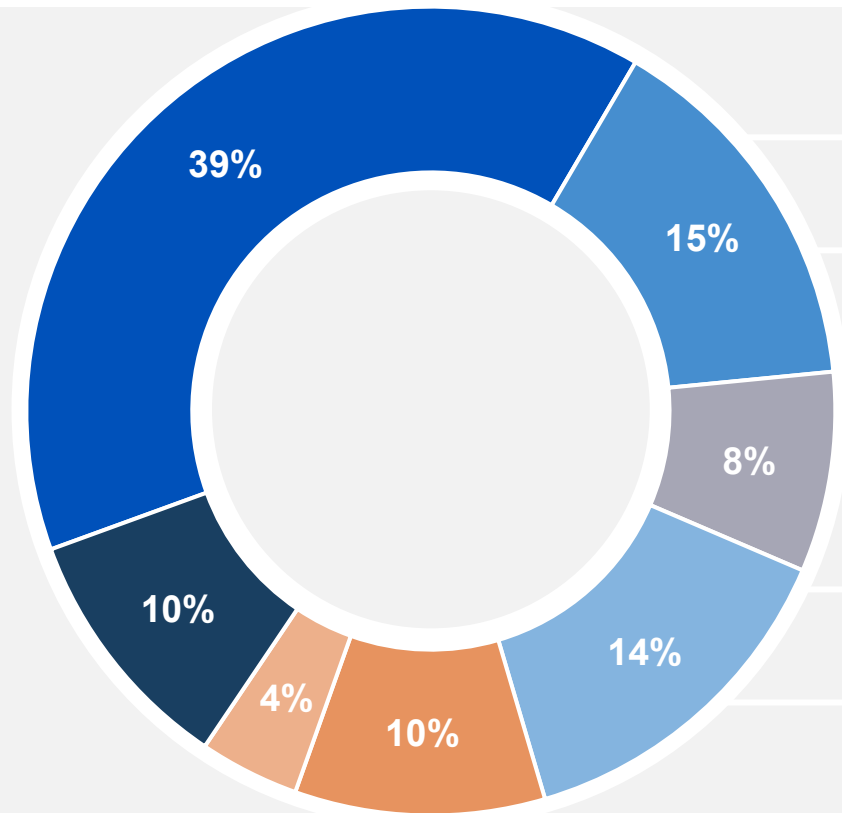
Timberland:
Target Band stays the same

Decrease in Allocation Range

Portfolio Completion Strategies:
Target Band moves down 1%

PRIT Asset Allocation

Approved February 24, 2021



	AA 2020 Approved Range	AA 2021 Approved Range	Within Range
Global Equity (including Hedged US Equity)	34% - 44%	No Change	Yes
Core Fixed Income	12% - 18%	No Change	Yes
Value-Added Fixed Income	5% - 11%	No Change	Yes
Private Equity	10% - 16%	11% - 17%	Yes
Real Estate	7% - 13%	No Change	Yes
Timberland	1% - 7%	No Change	Yes
Portfolio Completion Strategies	8% - 14%	7% - 13%	Yes

The ranges in the PRIM asset allocation reflect the long-standing use of bands around a midpoint. Managing the asset allocation to a particular midpoint in the range is not always possible, practical or advisable.

PRIM 2021 Asset Allocation Recommendations

NEPC Capital Market Assumptions with PE and PCS Changes

Asset Classes			12/31/20 Asset Class Assumptions	
	Proposed Asset Allocation Range		10 Yr. Expected Return	30 Yr. Expected Return
US Equity ¹	21.2%		5.5%	6.4%
International Equities ²	11.8%		5.9%	6.6%
Emerging International Equities ²	5.0%		7.6%	8.4%
Hedged Equity ³	1.0%		4.8%	5.7%
Global Equity	34% - 44%			
Core Bonds	7.0%		1.4%	2.7%
Short-Term Fixed Income ⁴	1.0%		1.0%	2.0%
20+ Yr. Treasury STRIPS	3.0%		0.4%	1.7%
TIPS/ILBs	4.0%		1.0%	2.1%
Core Fixed Income	12% - 18%			
Value-Added Fixed Income ⁵		5% - 11%	4.8%	6.2%
Private Equity		11% - 17%	9.6%	10.2%
Real Estate ⁶		7% - 13%	4.8%	6.0%
Timberland ⁷		1% - 7%	5.4%	6.6%
Portfolio Completion (PCS) ⁸		7% - 13%	4.0%	5.2%
Total Fund Expected Return⁹			5.8%	6.8%

1. Blended allocation to large-cap equity (85%) and small-cap equity (15%)
2. Blended allocation to large-cap equity (90%) and small-cap equity (10%)
3. Modeled as US LIBOR, US large-cap equity, and US small-cap equity
4. Modeled as short-term Treasury
5. Modeled as 50% High Yield and 50% Private Debt

6. Real Estate is modeled as 80% Private Real Estate and 20% REITs
7. Timberland is modeled as Private Real Assets Infrastructure/Land
8. Modeled as equal weighed blend of Hedge Fund Equity, Credit and Macro
9. Asset classes modeled as the midpoint of the asset allocation range



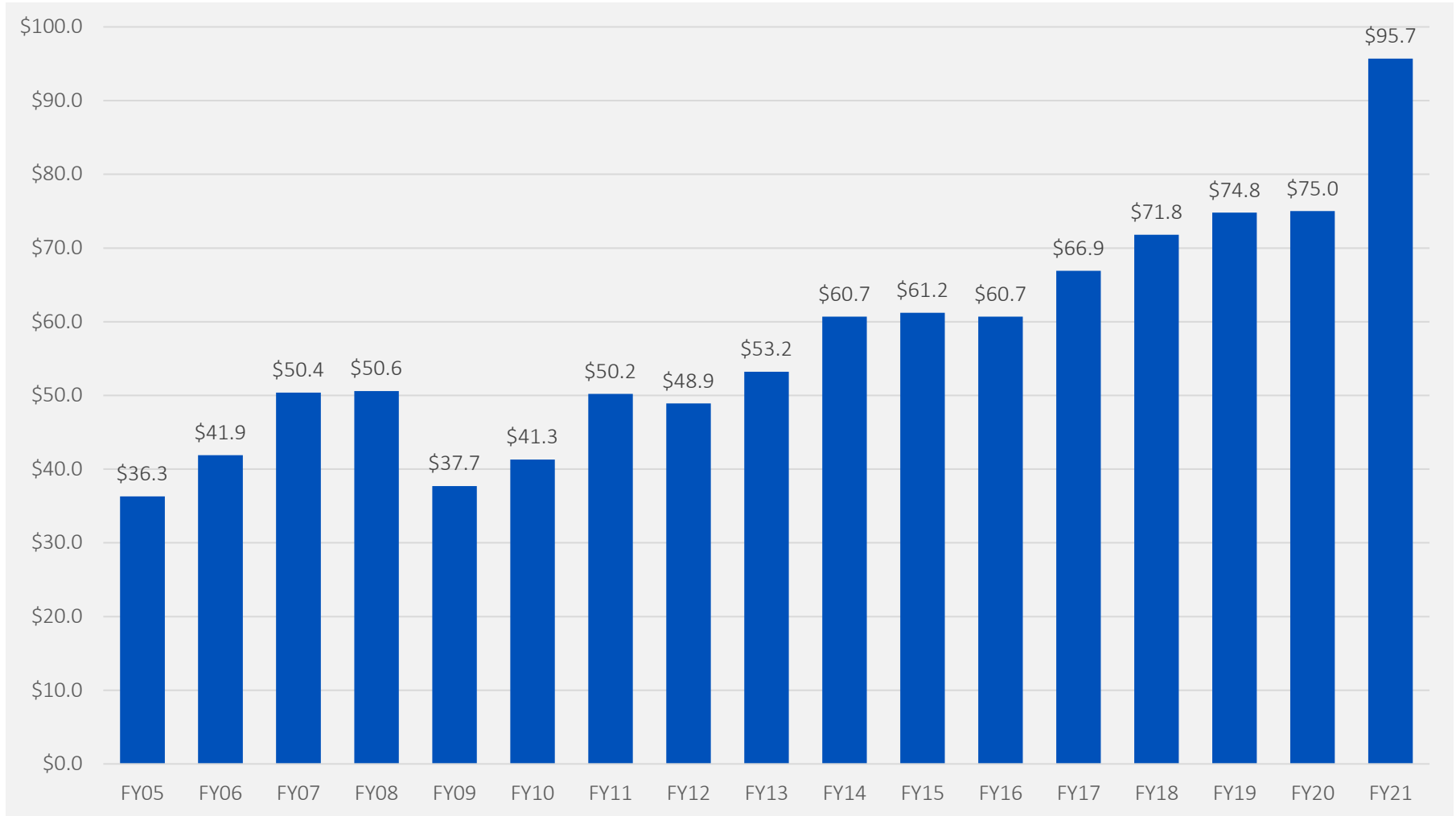
PRIT FUND PERFORMANCE

**Mass
PRIM**

AS OF JUNE 30, 2021

Total PRIT Fund Fiscal Year Market Value

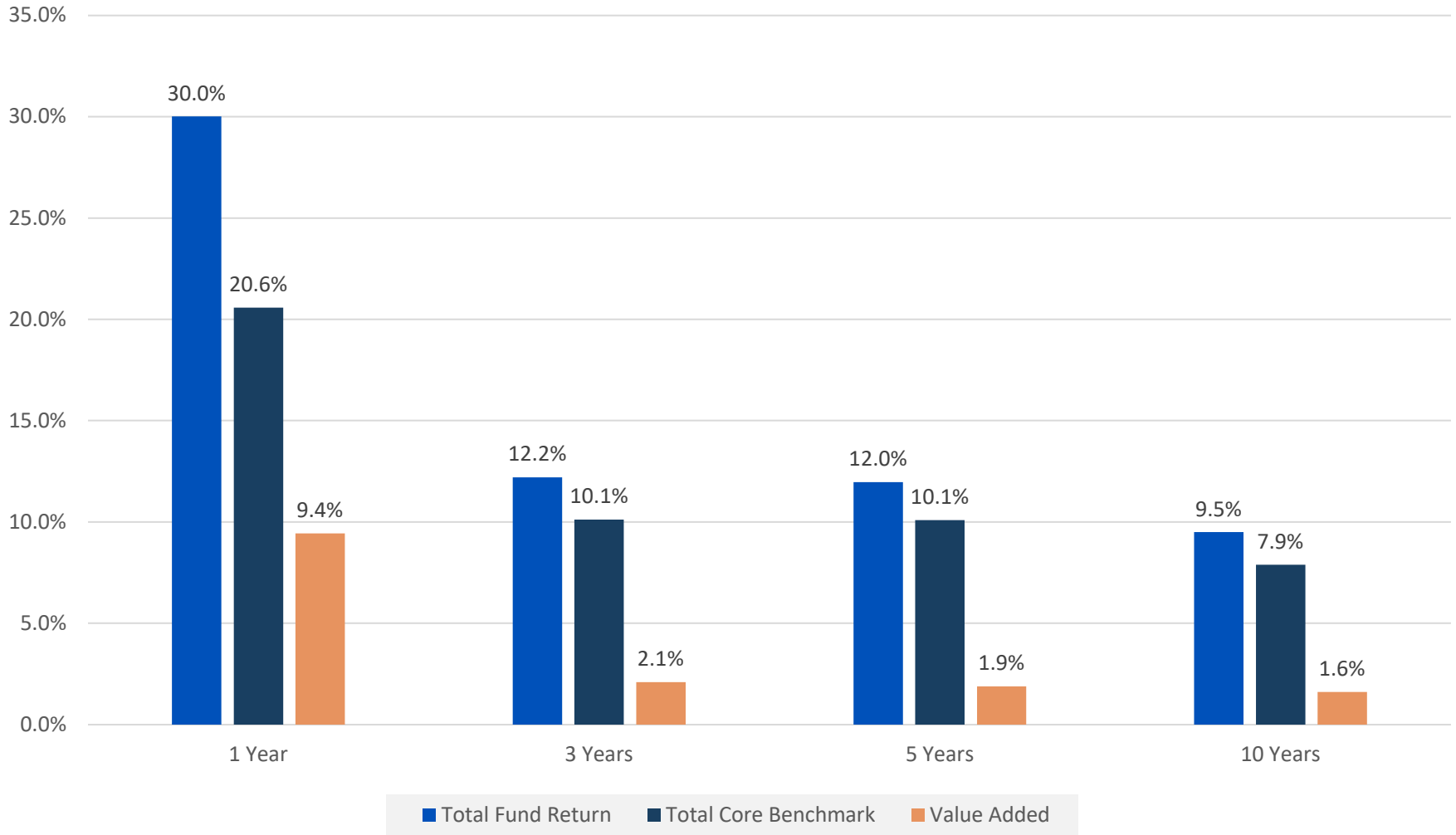
Value (\$Billions)



Source: BNY Mellon. As of June 30, 2021.

PRIT Fund Total Returns

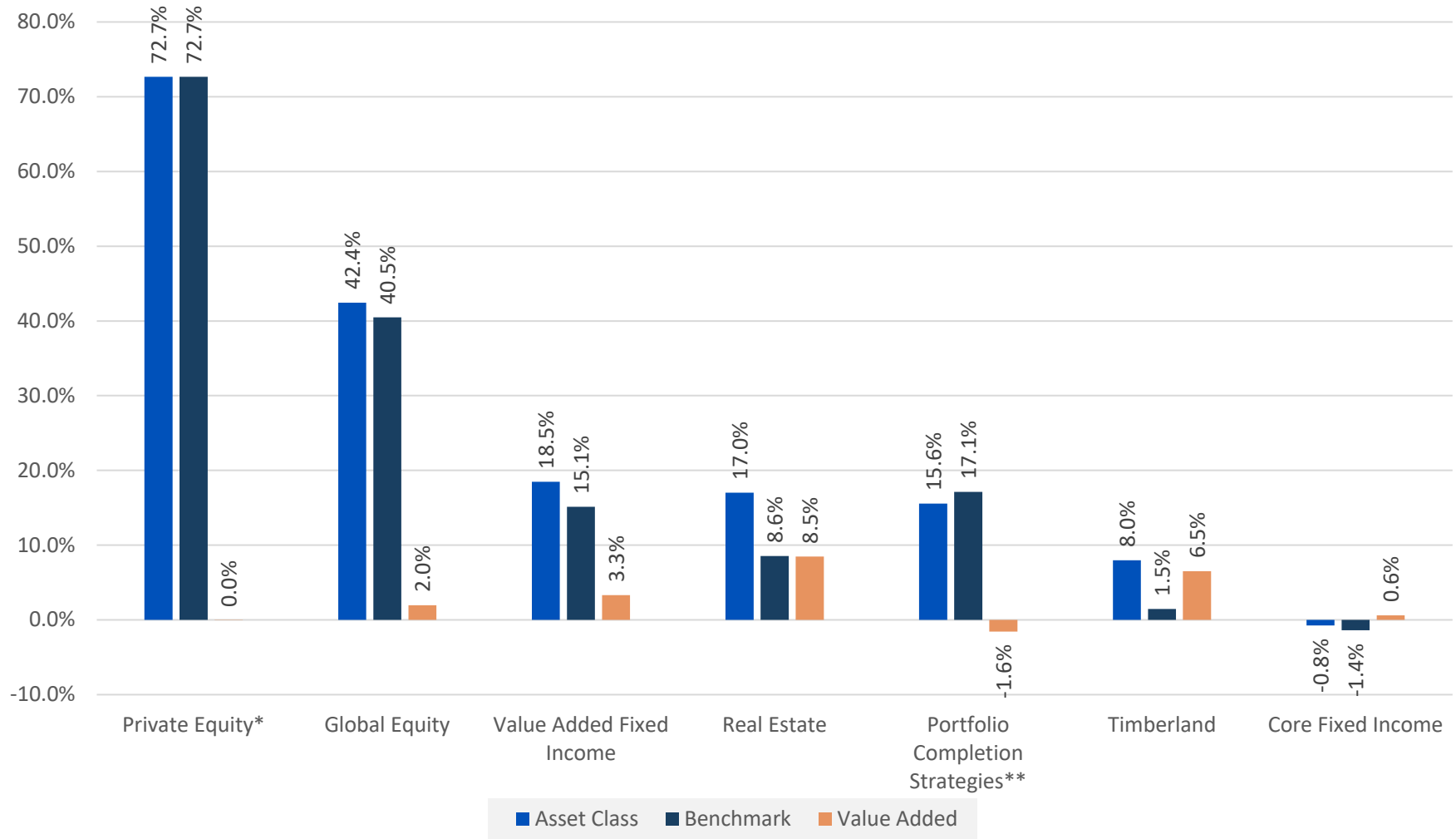
Annualized Returns as of June 30, 2021 (Gross of Fees)



Source: BNY Mellon. Total Core Benchmark includes private equity benchmark.

PRIT Asset Class Performance Summary

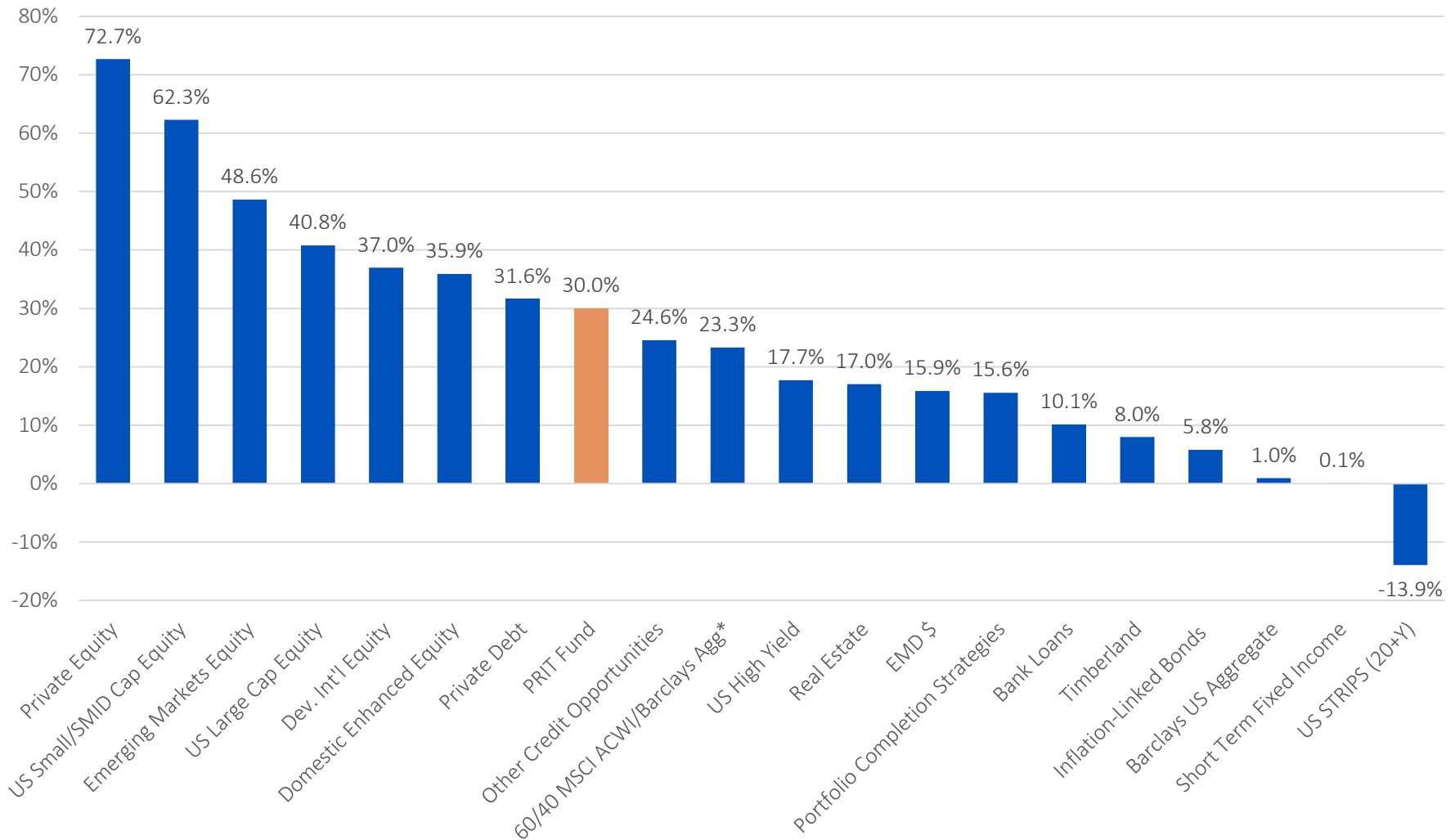
One-Year Ended June 30, 2021 (Gross of Fees)



Source: BNY Mellon. Totals may not add due to rounding. *Benchmark is actual performance. **Hedge Fund returns are net of fees.

PRIT Performance By Strategy – One-Year

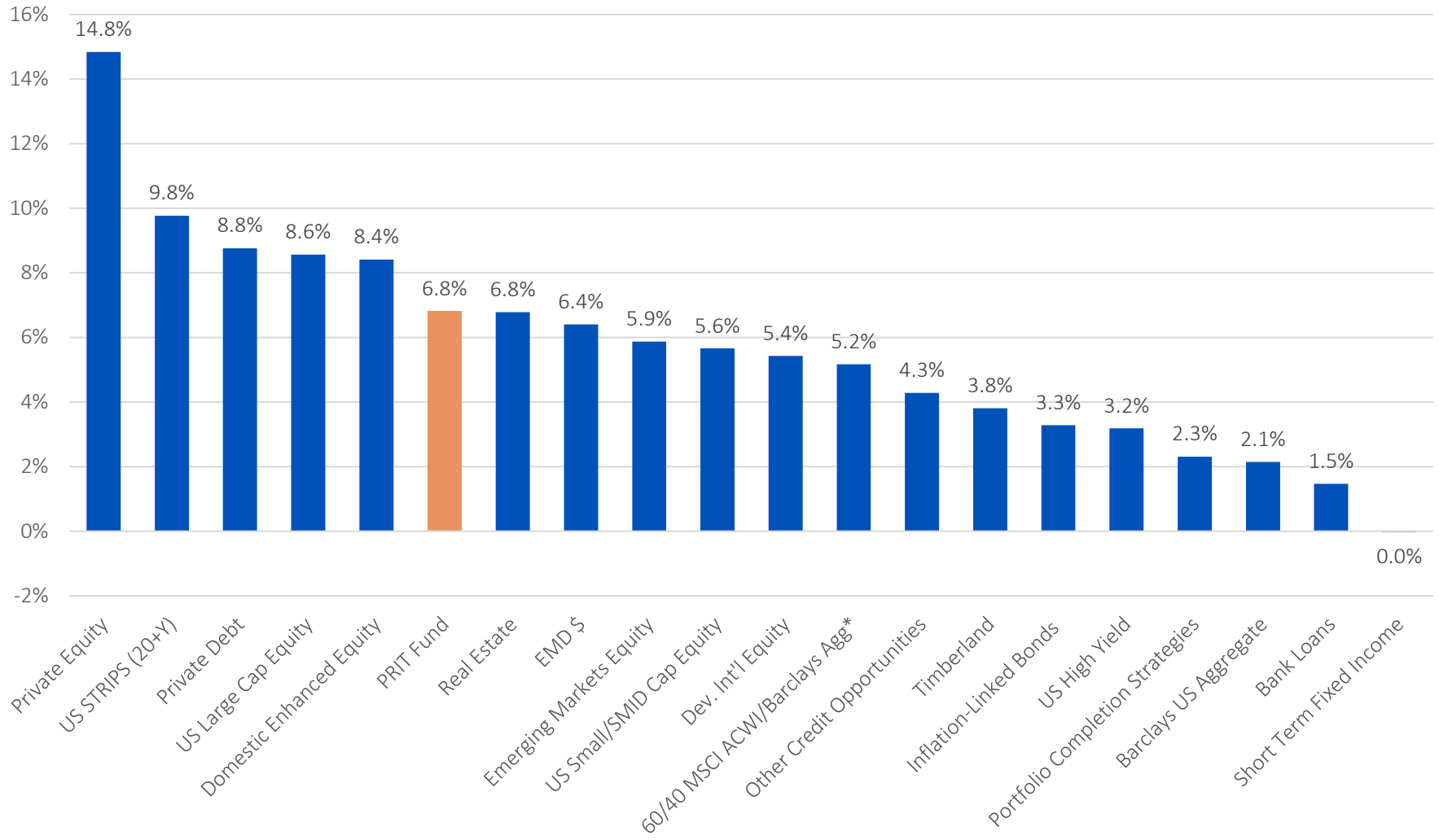
One-Year Ended June 30, 2021 (Gross of Fees)



Source: BNY Mellon, FactSet. All performance figures reflected are PRIT Fund Asset Class returns. *MSCI ACWI/Barclays Aggregate is derived from a 60/40 combination of index returns.

PRIT Performance By Strategy – Second Quarter 2021

Quarter Ended June 30, 2021 (Gross of Fees)



Source: BNY Mellon, FactSet. All performance figures reflected are PRIT Fund Asset Class returns. *MSCI ACWI/Barclays Aggregate is derived from a 60/40 combination of index returns.

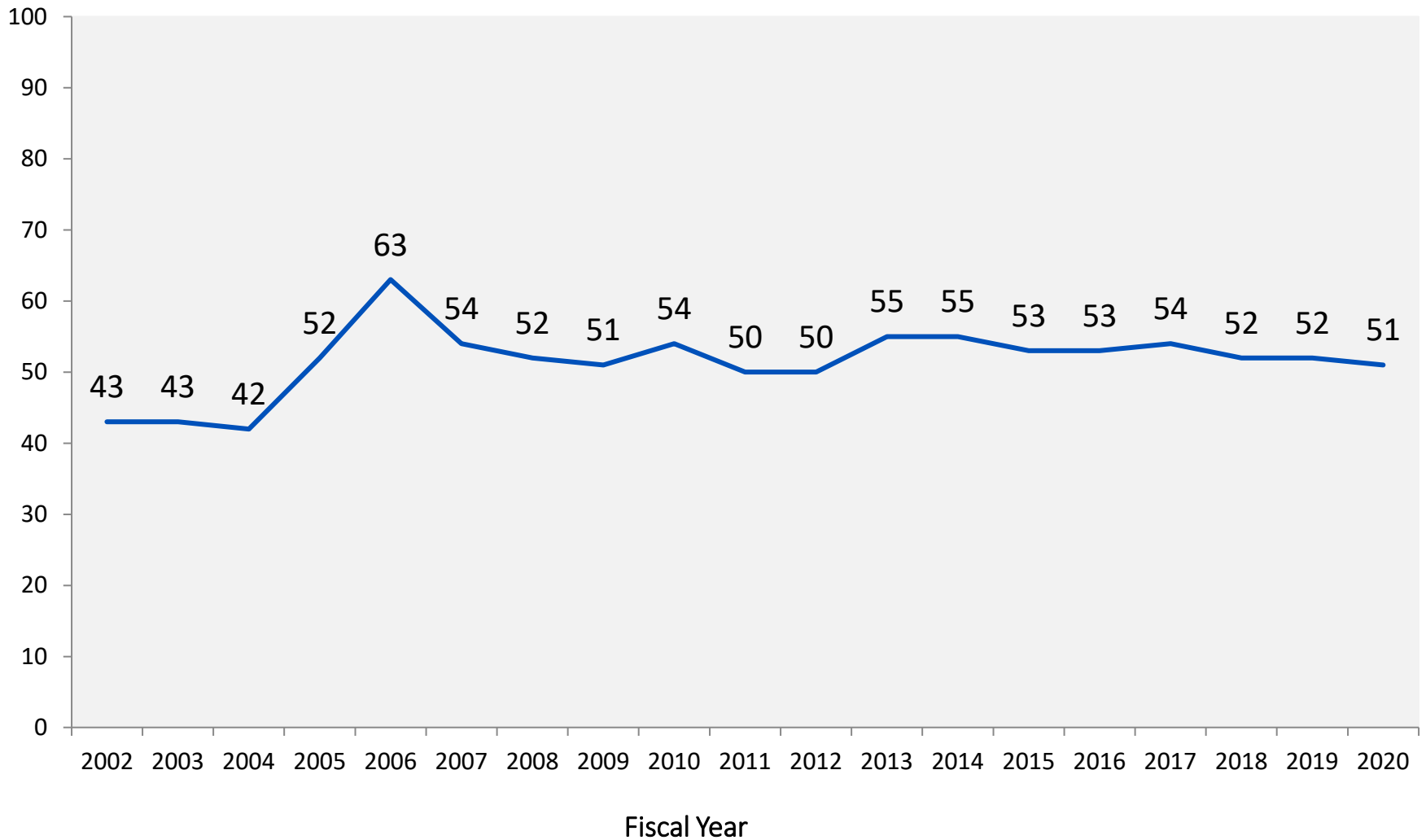
PRIT Fund Annualized Returns By Asset Class

As of June 30, 2021 (Gross of Fees)

1 Year	3 Year	5 Year	10 Year
PRIVATE EQUITY 72.7%	PRIVATE EQUITY 28.8%	PRIVATE EQUITY 25.9%	PRIVATE EQUITY 20.8%
GLOBAL EQUITY 42.4%	GLOBAL EQUITY 14.3%	GLOBAL EQUITY 15.1%	GLOBAL EQUITY 10.4%
VALUE-ADDED FIXED INCOME 18.5%	REAL ESTATE 7.9%	REAL ESTATE 7.9%	REAL ESTATE 10.0%
REAL ESTATE 17.0%	CORE FIXED INCOME 7.0%	VALUE-ADDED FIXED INCOME 7.0%	VALUE-ADDED FIXED INCOME 5.4%
PORTFOLIO COMPLETION STRATEGIES 15.6%	VALUE-ADDED FIXED INCOME 6.9%	PORTFOLIO COMPLETION STRATEGIES 5.2%	TIMBER 5.0%
TIMBER 8.0%	PORTFOLIO COMPLETION STRATEGIES 3.8%	TIMBER 4.8%	CORE FIXED INCOME 5.0%
CORE FIXED INCOME (0.8%)	TIMBER 2.6%	CORE FIXED INCOME 3.5%	PORTFOLIO COMPLETION STRATEGIES 4.5%

Source: BNY Mellon.

Total PRIT Fund - Ratio of Expenses in Basis Points





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THANK YOU

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