



SHAWN T. WOODEN
TREASURER

State of Connecticut
Office of the Treasurer

DARRELL V. HILL
DEPUTY TREASURER

MEMORANDUM

TO: Members of the Investment Advisory Council

FROM: Shawn T. Wooden, State Treasurer, and Council Secretary

DATE: December 12, 2022

SUBJECT: Investment Advisory Council Special Meeting – December 14, 2022

Enclosed is the agenda package for the Investment Advisory Council special meeting on Wednesday, December 14, 2022, starting at 9:00 A.M.

The following subjects will be covered at the meeting:

Item 1: Approval of the Minutes of the November 16, 2022, IAC Meeting and Minutes of the November 16, 2022, IAC Audit Sub-Committee Meeting

Item 2: Opening Comments by the Treasurer

Item 3: Executive session

- Discuss personnel matters

Item 4: Private Asset Classes Pacing Plan Overviews

Mark Evans, Principal Investment Officer and Denise Stake, Principal Investment Officer will provide an overview of the recommended pacing plans for the Private Investment Fund, the Private Credit Fund, Real Estate, and Infrastructure/Natural Resource Asset Classes.

Item 5: Presentation and Consideration of Private Credit and Private Equity Opportunities

Item 5a: Presentation and Consideration of HarbourVest CT Co-Investment Fund L.P. and HarbourVest CT Private Debt Fund L.P.

Mark Evans, Principal Investment Officer, will provide opening remarks and present HarbourVest CT Co-Investment Fund L.P. and HarbourVest CT Private Debt Fund L.P., Private Investment Fund and Private Credit Fund opportunities.

Item 6: Presentation and Consideration of Infrastructure and Natural Resource Opportunities

Item 6a: Presentation and Consideration of Morgan Stanley - CT Real Assets Co-Investment Fund LP

Denise Stake, Principal Investment Officer, will provide opening remarks and present Morgan Stanley - CT Real Assets Co-Investment Fund LP, an Infrastructure Fund opportunity.

Item 6b: Presentation and Consideration of BlackRock Global Infrastructure Fund IV, L.P.

Denise Stake, Principal Investment Officer, will provide opening remarks and present Blackrock Global Infra Fund IV, an Infrastructure Fund opportunity.

Item 7: Other Business

- Review and Approval of the IAC Meeting Schedules for the 2023/2024 Calendar Years

Item 8: Comments by the Chair

Item 9: Adjournment

We look forward to reviewing these agenda items with you at the December 14th meeting.

Please confirm your attendance with Raymond Tuohey (raymond.tuohey@ct.gov) as soon as possible.

STW/rt

Enclosures

**DRAFT VERSION –
MINUTES OF THE INVESTMENT ADVISORY COUNCIL AUDIT SUBCOMMITTEE MEETING
WEDNESDAY, NOVEMBER 16, 2022 – SUBJECT TO REVIEW AND APPROVAL
FINAL VERSION OF THESE MINUTES WILL BE POSTED AFTER APPROVAL OF THE INVESTMENT
ADVISORY COUNCIL AT THE NEXT MEETING, WHICH WILL BE HELD ON
WEDNESDAY, DECEMBER 16, 2022**

MEETING NO. 511

Members present: Michael Knight, Audit Subcommittee Chair
D. Ellen Shuman
Myra Drucker
Thomas Fiore, representing Secretary Jeffrey Beckham

Members absent: Michael LeClair
Steven Muench

Others present: Peter Gajowiak, Principal Investment Officer
Raymond Tuohey, Executive Secretary

Guests: Matthew Wood, State Auditor
David Tarallo, State Auditor
Public Line

With a quorum present, Chair Michael Knight called the Investment Advisory Council (“IAC”) Audit Subcommittee meeting to order at 1:01 p.m.

Opening Comments by the Chair

Chair Knight welcomed the IAC audit subcommittee members to the meeting.

Executive Session

Chair Knight asked for a motion to move into Executive Session. **A motion was made by Thomas Fiore, seconded by D. Ellen Shuman that the Investment Advisory Council Audit Subcommittee enter into Executive Session to discuss the audit process at 1:02 p.m. The motion passed unanimously.** Matthew Wood, State Auditor; David Tarallo, State Auditor; and Peter Gajowiak, Principal Investment Officer were invited to attend the Executive Session.

Chair Knight reconvened the regular session at 2:16 p.m. **Chair Knight noted that no substantive votes or actions were taken during the Executive Session.**

**DRAFT VERSION –
MINUTES OF THE INVESTMENT ADVISORY COUNCIL AUDIT SUBCOMMITTEE MEETING
WEDNESDAY, NOVEMBER 16, 2022 – SUBJECT TO REVIEW AND APPROVAL
FINAL VERSION OF THESE MINUTES WILL BE POSTED AFTER APPROVAL OF THE INVESTMENT
ADVISORY COUNCIL AT THE NEXT MEETING, WHICH WILL BE HELD ON
WEDNESDAY, DECEMBER 16, 2022**

Meeting Adjourned

There being no further business, Chair Knight called for a motion to adjourn the meeting. Ms. Shuman moved to adjourn the meeting and the motion was seconded by Mr. Fiore. There being no discussion, the meeting was adjourned at 2:17 p.m.

**DRAFT VERSION – MINUTES OF THE INVESTMENT ADVISORY COUNCIL REGULAR MEETING
WEDNESDAY, NOVEMBER 16, 2022 – SUBJECT TO REVIEW AND APPROVAL
FINAL VERSION OF THESE MINUTES WILL BE POSTED AFTER APPROVAL OF THE INVESTMENT
ADVISORY COUNCIL AT THE NEXT MEETING, WHICH WILL BE HELD ON
WEDNESDAY, DECEMBER 14, 2022**

MEETING NO. 512

- Members present:** D. Ellen Shuman, Chair
Treasurer Wooden, Secretary
Thomas Fiore, representing Secretary Jeffrey Beckham
William Murray
Michael Knight
Michael LeClair
Patrick Sampson
- Members absent:** Steven Muench
Myra Drucker
- Others present:** Erick Russell, Treasurer-Elect
Darrell Hill, Deputy Treasurer
Ted Wright, Chief Investment Officer
Mark Evans, Principal Investment Officer
Karen Gagnon, Assistant General Counsel
Ginny Kim, Assistant General Counsel, Chief Compliance and
Diversity Officer
Peter Gajowiak, Principal Investment Officer
Denise Stake, Principal Investment Officer
Michael Terry, Principal Investment Officer
Christine Shaw, Principal Investment Officer
Olivia Wall, Senior Investment Officer
Kan Zuo, Investment Officer
Jessica Weaver, Corporate Governance Analyst
Raymond Tuohey, Executive Secretary
- Guests:** Public Line
Robin Kaplan – Cho, CT Education Association
Peter Wooley, Meketa Investment Group
Sarah Bernstein, Meketa Investment Group
Deidra Givice, T. Rowe Price
Liz Smith, Alliance Bernstein
Bill Myers, Retired Teacher

With a quorum present, Chair D. Ellen Shuman called the Investment Advisory Council (“IAC”) regular meeting to order at 2:48 p.m.

Approval of the Minutes of September 14, 2022 IAC Meeting

Chair Shuman called for a motion to accept the minutes of the September 14, 2022, IAC meeting. **Mr. Fiore moved to approve the minutes. The motion was seconded by Mr. Murray. There being no further discussion, the Chair called for a vote to accept the minutes of the meeting, and the motion passed.**

Comments by the Treasurer

Treasurer Wooden welcomed the IAC members and began by sharing recent updates at the Office of the Treasurer (OTT). Treasurer Wooden announced a \$125 million commitment to Bregal Sagemount Fund IV in the Private Investment portfolio. In the Private Credit portfolio, Treasurer Wooden approved commitments of \$100 million to Vistria Structured Credit Fund I, \$300 million to SLR Capital-CRPTF Credit Partnership and \$100 million to Centre Lane Credit Partners III.

For the Private Real Estate portfolio, he approved a commitment of \$125 million each to Artemis Real Estate Partners Fund IV and IPI Partners Fund III. And in the Private Infrastructure and Natural Resources portfolio, Treasurer Wooden approved a \$100 million add-on commitment to IFM Global Infrastructure Fund and a \$150 million investment to Paine Schwartz Partners Food Chain Fund VI. Additionally, he announced the approval of the 2022 Strategic Asset Allocation and the 2022 Updated Investment Policy Statement for the CRPTF. Lastly, Treasurer Wooden provided a brief overview of the agenda.

Update on the Market CRPTF Performance

Ted Wright, Chief Investment Officer, provided an update on the capital market environment and report on performance for the CRPTF.

Connecticut Retirement Plans and Trust Funds 2022 Strategic Asset Allocation Update Presentation

Ted Wright provided an update to the Strategic Asset Allocation for the Connecticut Retirement Plans and Trust Funds.

Presentation and Consideration of a Private Equity Opportunity

Mark Evans, Principal Investment Officer provided an overview of the Private Equity Portfolio. Additionally, Mark Evans presented a Private Investment Fund opportunity with Vista Equity Partners Fund VIII.

Roll Call of Reactions for the Private Equity investment opportunity

Messrs. Thomas Fiore, William Murray, Michael Knight, Michael LeClair, Patrick Sampson, and Chair Shuman provided feedback on the investment opportunity. **There being no further discussion, Chair Shuman called for a motion to waive the 45-day comment period. A motion was made by Mr. Knight, seconded by Mr. Murray, to waive the 45-day comment period for the Private Equity investment opportunity. The Chair called for a vote, and the motion passed.**

Presentation of the Real Estate and Infrastructure/Natural Resource Portfolios

Denise Stake, Principal Investment Officer, provided a Real Assets Portfolio Fund portfolio update.

Presentation of the Climate Strategy for CRPTF

Christine Shaw, Principal Investment Officer, and Sarah Bernstein, Meketa Investment Group, provided a presentation regarding the Climate Strategy for the CRPTF.

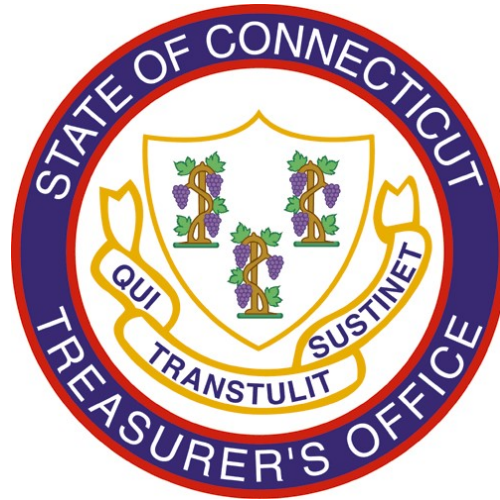
Other Business

Chair Shuman gave some brief comments reflecting upon the various accomplishments throughout the year.

Meeting Adjourned

There being no further business, Chair Shuman called for a motion to adjourn the meeting. **Mr. Fiore moved to adjourn the meeting, and the motion was seconded by Mr. Murray. There being no discussion, the motion passed, and the meeting was adjourned at 4:57 p.m.**

DRAFT



Overview of 2023 Private Markets Pacing Plans

December 14, 2022

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Executive Summary

- Pacing plans are developed to support the achievement of the long-term strategic asset allocation targets for the CRPTF’s Infrastructure/Natural Resources (“INR”), Real Estate (“RE”), Private Credit (“PC”), and Private Equity (“PE”) portfolios.
- The pacing plans are developed annually and utilize various inputs (see Appendix) to target annual commitment levels and portfolio objectives consistent with the Investment Policy Statement for each asset class.
- Pension Funds Management staff worked with Meketa (INR), NEPC (RE), and Hamilton Lane (PC & PE) to develop 2023 pacing plans with consistent baseline assumptions for the CPRTF, including:
 - A current CRPTF overall value of \$44.7 billion
 - A range of net growth rates for the CRPTF total value of 3%, 4%, and 5% per annum used for scenario development
- The 2023 pacing plans identify targeted commitment levels for each asset class as shown below and more fully described in this overview.

2023 Pacing Plan Targets					
(\$Millions)	INR	RE ¹	PC ²	PE ²	Total
Commitments	\$850	\$500	\$1,300	\$1,900	\$4,550

1. RE targeted commitments shown based on 4% CRPTF net growth rate.

2. PC and PE targeted commitments shown are based on mid-point of commitment ranges.



Consolidated Private Markets Pacing Plans

Private Markets Pacing Plan Summary											
(\$Millions)	2022E	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	2031P	2032P
Commitments											
INR	\$725	\$850	\$650	\$750	\$550	\$550	\$600	\$450	\$450	\$600	\$450
RE ¹	625	500	500	500	550	550	600	700	700	800	800
PC ²	2,325	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
PE2	2,005	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Total Commitments	\$5,680	\$4,550	\$4,350	\$4,450	\$4,300	\$4,300	\$4,400	\$4,350	\$4,350	\$4,600	\$4,450
Net Cash Flow											
INR	(\$318)	(\$541)	(\$602)	(\$351)	(\$279)	(\$163)	(\$31)	\$107	\$222	\$281	\$325
RE	(82)	(340)	7	74	(60)	81	268	331	333	275	207
PC	(687)	(530)	(734)	(579)	(316)	(63)	171	330	417	486	526
PE	(104)	(67)	(145)	34	170	279	465	623	830	1,018	1,163
Total Net Cash Flow	(\$1,191)	(\$1,478)	(\$1,474)	(\$822)	(\$485)	\$134	\$874	\$1,391	\$1,801	\$2,060	\$2,221
Net Asset Value											
INR	\$873	\$1,485	\$2,211	\$2,748	\$3,257	\$3,695	\$4,037	\$4,269	\$4,406	\$4,494	\$4,544
RE	3,839	4,429	4,732	5,006	5,450	5,794	5,980	6,118	6,262	6,473	6,767
PC	1,469	2,150	3,118	4,069	4,844	5,459	5,897	6,222	6,474	6,681	6,831
PE	5,025	5,681	6,518	7,281	8,031	8,791	9,474	10,097	10,597	10,975	11,258
Total Net Asset Value	\$11,206	\$13,745	\$16,579	\$19,103	\$21,582	\$23,739	\$25,388	\$26,705	\$27,738	\$28,622	\$29,400
Net Unfunded Commitments											
INR	\$991	\$1,227	\$1,160	\$1,375	\$1,361	\$1,337	\$1,360	\$1,250	\$1,167	\$1,238	\$1,168
RE	2,010	1,367	1,127	941	876	830	886	1,003	1,075	1,115	1,218
PC	2,025	2,470	2,598	2,530	2,512	2,500	2,496	2,494	2,494	2,493	2,494
PE	3,005	3,728	4,228	4,544	4,707	4,823	4,888	4,936	4,966	4,989	4,998
Total Unfunded	\$8,031	\$8,792	\$9,113	\$9,390	\$9,456	\$9,490	\$9,630	\$9,683	\$9,702	\$9,836	\$9,878

1. RE targeted commitments and pacing plan outputs shown based on 4% CRPTF net growth rate.

2. PC and PE targeted commitments and pacing plan outputs shown are based on mid-point of commitment ranges.



2023 INR Pacing Plan

- Developed to achieve INR's strategic asset allocation target of 7%.
- Current estimated year-end 2022 position of 2.0% of CRPTF with total exposure of 4.2%.
- Includes targeted ranges for Core Infrastructure (20-40%), Non-Core Infrastructure (50-70%) and Natural Resources (10% to 30%).
- Non-core Infrastructure includes co-investments, value-add infrastructure and opportunistic infrastructure.

Infrastructure/Natural Resources Pacing Plan Summary											
(\$Millions)	2022E	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	2031P	2032P
Commitments											
Non-Core Infrastructure	\$325	\$450	\$500	\$400	\$350	\$350	\$300	\$300	\$300	\$300	\$300
Core Infrastructure	250	200	0	150	0	0	150	0	0	150	0
Natural Resources	150	200	150	200	200	200	150	150	150	150	150
Total Commitments	\$725	\$850	\$650	\$750	\$550	\$550	\$600	\$450	\$450	\$600	\$450
Cash Flows											
Contributions	(\$356)	(\$614)	(\$717)	(\$535)	(\$564)	(\$574)	(\$577)	(\$559)	(\$533)	(\$529)	(\$519)
Distributions	38	73	115	184	285	411	547	667	755	810	844
Net Cash Flow	(\$318)	(\$541)	(\$602)	(\$351)	(\$279)	(\$163)	(\$31)	\$107	\$222	\$281	\$325
Net Asset Value	\$873	\$1,485	\$2,211	\$2,748	\$3,257	\$3,695	\$4,037	\$4,269	\$4,406	\$4,494	\$4,544
Unfunded Commitments	\$991	\$1,227	\$1,160	\$1,375	\$1,361	\$1,337	\$1,360	\$1,250	\$1,167	\$1,238	\$1,168
Infrastructure/Natural Resources Projected Asset Allocation Level											
Net CRPTF Growth Rate											
3%	1.9%	3.2%	4.6%	5.5%	6.4%	7.0%	7.5%	7.7%	7.7%	7.6%	7.5%
4%	1.9%	3.1%	4.5%	5.4%	6.1%	6.7%	7.0%	7.1%	7.1%	6.9%	6.7%
5%	1.9%	3.1%	4.5%	5.2%	5.9%	6.3%	6.6%	6.6%	6.5%	6.3%	6.1%

2023 Real Estate Pacing Plan

- Developed to achieve Real Estate’s strategic asset allocation target of 10%.
- Current estimated year-end 2022 position of 8.6% of CRPTF with total exposure of 12.5%.
- Target range for Core: 30-50%; Non-core: 50-70%.
- Non-core Real Estate includes co-investments, REITs, value-add and opportunistic real estate investments.
- Pacing assumes sales/redemptions of core investments averaging \$230m per year over the next four years.

	Real Estate Pacing Plan Summary										
(\$Millions)	2022E	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	2031P	2032P
Commitments 4% Growth											
Non-Core	\$625	\$500	\$500	\$500	\$550	\$550	\$600	\$700	\$700	\$800	\$800
Core	0	0	0	0	0	0	0	0	0	0	0
Total Commitments 4% Growth	\$625	\$500	\$500	\$500	\$550	\$550	\$600	\$700	\$700	\$800	\$800
Total Commitments 3% Growth	\$625	\$400	\$400	\$400	\$450	\$450	\$500	\$600	\$600	\$600	\$700
Total Commitments 5% Growth	\$625	\$550	\$550	\$600	\$600	\$600	\$700	\$700	\$800	\$800	\$900
Cash Flows - 4% Growth											
Contributions	(\$446)	(\$796)	(\$639)	(\$586)	(\$515)	(\$531)	(\$479)	(\$519)	(\$564)	(\$596)	(\$634)
Distributions	364	474	694	727	566	687	813	890	906	871	830
Net Cash Flow	(\$82)	(\$340)	\$7	\$74	(\$60)	\$81	\$268	\$331	\$333	\$275	\$207
Net Asset Value	\$3,839	\$4,429	\$4,732	\$5,006	\$5,450	\$5,794	\$5,980	\$6,118	\$6,262	\$6,473	\$6,767
Unfunded Commitments	\$2,010	\$1,448	\$1,261	\$1,106	\$1,058	\$1,021	\$1,077	\$1,193	\$1,266	\$1,387	\$1,461
	Real Estate Projected Asset Allocation Level										
Net CRPTF Growth Rate											
3%	8.6%	9.6%	9.8%	10.0%	10.3%	10.5%	10.3%	10.1%	10.0%	10.0%	10.1%
4%	8.6%	9.5%	9.8%	10.0%	10.4%	10.7%	10.6%	10.4%	10.2%	10.2%	10.2%
5%	8.6%	9.5%	9.7%	9.8%	10.3%	10.6%	10.5%	10.3%	10.2%	10.0%	10.0%

2023 Private Credit Pacing Plan

- Developed to achieve Private Credit’s strategic asset allocation target of 10%.
- Current estimated year-end 2022 net asset value of \$1.5 billion, or 3% of total CRPTF net asset value, with approximately \$2.0 billion of unfunded commitments.
- Pacing plan includes sub-strategy targeted allocations in alignment with IPS exposure ranges established for Senior (30% to 70%), Mezzanine (0% to 30%), Special Situations (0% to 20%), and Distressed (0% to 40%), and Distressed (0% to 20%)
- The current HarbourVest co-investment program is structured to provide exposure to primarily Senior and Mezzanine credit.

Private Credit Pacing Plan Summary											
(\$Millions)	2022E	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	2031P	2032P
Commitments											
Primary Commitments	\$1,875	\$1,150	\$1,150	\$1,150	\$1,150	\$1,150	\$1,150	\$1,150	\$1,150	\$1,150	\$1,150
Co-Investments	450	150	150	150	150	150	150	150	150	150	150
Total Commitments	\$2,325	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300	\$1,300
Cash Flows											
Contributions	(\$830)	(\$1,005)	(\$1,323)	(\$1,342)	(\$1,319)	(\$1,312)	(\$1,304)	(\$1,299)	(\$1,297)	(\$1,297)	(\$1,297)
Distributions	143	475	589	763	1,002	1,249	1,475	1,629	1,714	1,783	1,823
Net Cash Flow	(\$687)	(\$530)	(\$734)	(\$579)	(\$316)	(\$63)	\$171	\$330	\$417	\$486	\$526
Net Asset Value	\$1,469	\$2,150	\$3,118	\$4,069	\$4,844	\$5,459	\$5,897	\$6,222	\$6,474	\$6,681	\$6,831
Unfunded Commitments	\$2,025	\$2,470	\$2,598	\$2,530	\$2,512	\$2,500	\$2,496	\$2,494	\$2,494	\$2,493	\$2,494
Private Credit Projected Asset Allocation Level											
Net CRPTF Growth Rate											
3%	3.3%	4.6%	6.5%	8.3%	9.6%	10.5%	11.0%	11.2%	11.3%	11.4%	11.3%
4%	3.3%	4.6%	6.4%	8.0%	9.2%	9.9%	10.3%	10.5%	10.5%	10.4%	10.2%
5%	3.2%	4.5%	6.2%	7.8%	8.8%	9.5%	9.7%	9.8%	9.7%	9.5%	9.3%

2023 Private Equity Pacing Plan

- Developed to achieve Private Equity strategic asset allocation target of 15%.
- Current estimated year-end 2022 net asset value of \$5.0 billion, or 11% of total CRPTF net asset value, with approximately \$3.0 billion of unfunded commitments.
- Pacing plan includes sub-strategy targeted allocations in alignment with IPS exposure ranges established for Corporate Finance (70% to 100%) and Venture Capital (0% to 30%).
- The current HarbourVest co-investment program is structured to provide exposure to primarily Buyout and Growth Equity.

Private Equity Pacing Plan Summary											
(\$Millions)	2022E	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	2031P	2032P
Commitments											
Primary Commitments	\$1,555	\$1,750	\$1,750	\$1,750	\$1,750	\$1,750	\$1,750	\$1,750	\$1,750	\$1,750	\$1,750
Co-Investments	450	150	150	150	150	150	150	150	150	150	150
Total Commitments	\$2,005	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Cash Flows											
Contributions	(\$1,045)	(\$1,314)	(\$1,550)	(\$1,583)	(\$1,679)	(\$1,764)	(\$1,821)	(\$1,851)	(\$1,866)	(\$1,877)	(\$1,884)
Distributions	941	1,247	1,405	1,616	1,850	2,042	2,287	2,474	2,696	2,895	3,047
Net Cash Flow	(\$104)	(\$67)	(\$145)	\$34	\$170	\$279	\$465	\$623	\$830	\$1,018	\$1,163
Net Asset Value	\$5,025	\$5,681	\$6,518	\$7,281	\$8,031	\$8,791	\$9,474	\$10,097	\$10,597	\$10,975	\$11,258
Unfunded Commitments	\$3,005	\$3,728	\$4,228	\$4,544	\$4,707	\$4,823	\$4,888	\$4,936	\$4,966	\$4,989	\$4,998
Private Equity Projected Asset Allocation Level											
Net CRPTF Growth Rate											
3%	11.2%	12.2%	13.6%	14.8%	15.8%	16.8%	17.6%	18.2%	18.6%	18.7%	18.6%
4%	11.1%	12.1%	13.3%	14.3%	15.2%	16.0%	16.6%	17.0%	17.2%	17.1%	16.8%
5%	11.1%	12.0%	13.1%	13.9%	14.6%	15.2%	15.6%	15.9%	15.8%	15.6%	15.3%

Appendix – Pacing Plan Model Summary

- The CRPTF private markets pacing plans are developed utilizing models that incorporate numerous inputs, including:
 - Strategic asset allocation targets and ranges
 - Existing portfolio composition
 - Historical cash flow profiles for each asset/sub-asset class
 - Projected capital calls, distributions, and net asset values (“NAV”) for each asset/sub-asset class
- The current overall value of the CRPTF and a range of projected, annual net growth rates for the CRPTF total value
 - The annual net growth rate assumptions are intended to capture the estimated net impact of contributions, distributions, and investment returns

Connecticut Retirement Plans and Trust Funds

Pacing Plan– Private Investment Fund Portfolio

December 2022

Private Investment Fund Commitment Pacing

The Horizon Model is a Hamilton Lane proprietary tool that uses existing portfolio information coupled with future allocation targets to create a quantitative future investment plan

- Model uses a formulaic approach to project value and future cash flows
- The pacing model takes into account Connecticut's historical Private Investment Fund commitments
- The table below summarizes the input assumptions used to forecast cash flows and market values

Horizon Model Pacing Assumptions	
Connecticut Total Plan Assets ¹	\$44.7 billion
Net Plan Growth Rate	3.0%; 4.0%; 5.0%
Private Investment Fund as % of Plan ²	11.0%
Target Allocation to Private Investment Fund	15.0%
Private Investment Fund Boundary	10.0% - 20.0%

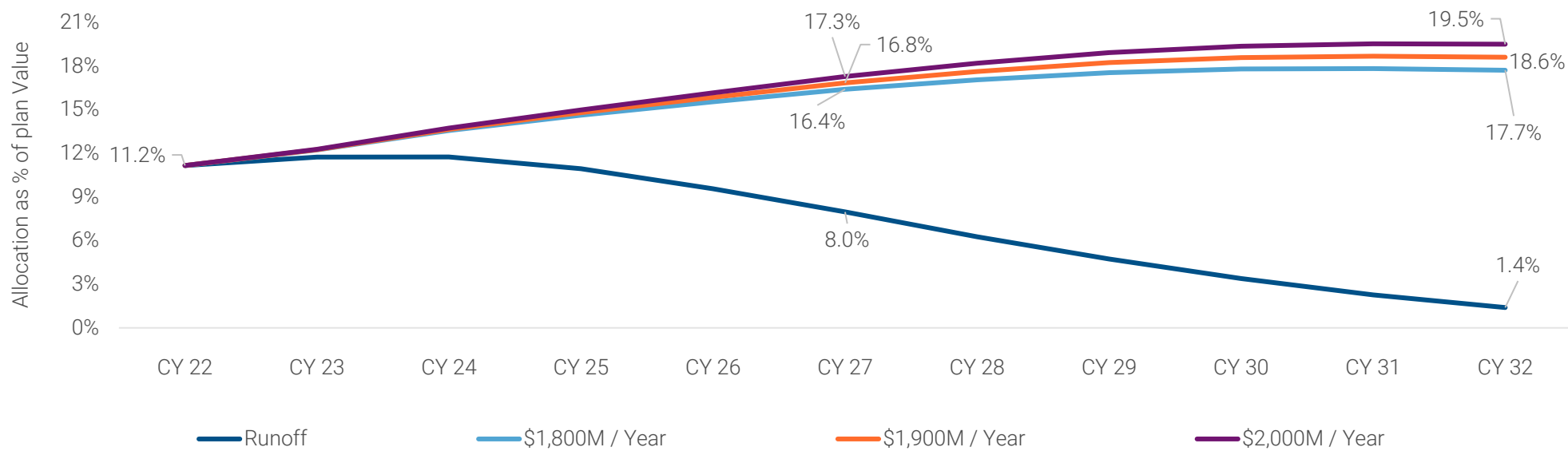
See endnotes in the Appendix

¹ As of 9/30/2022

² Uses 9/30/2022 CRPTF adjusted PE NAV (as of 10/13/2022) and CRPTF Total Plan Assets as of 9/30/2022.

Private Investment Fund Pacing Scenarios

3% Plan Growth Rate¹



Annual Cash Flow Summary Assuming Midpoint Commitment Target (\$1,900M / Year)

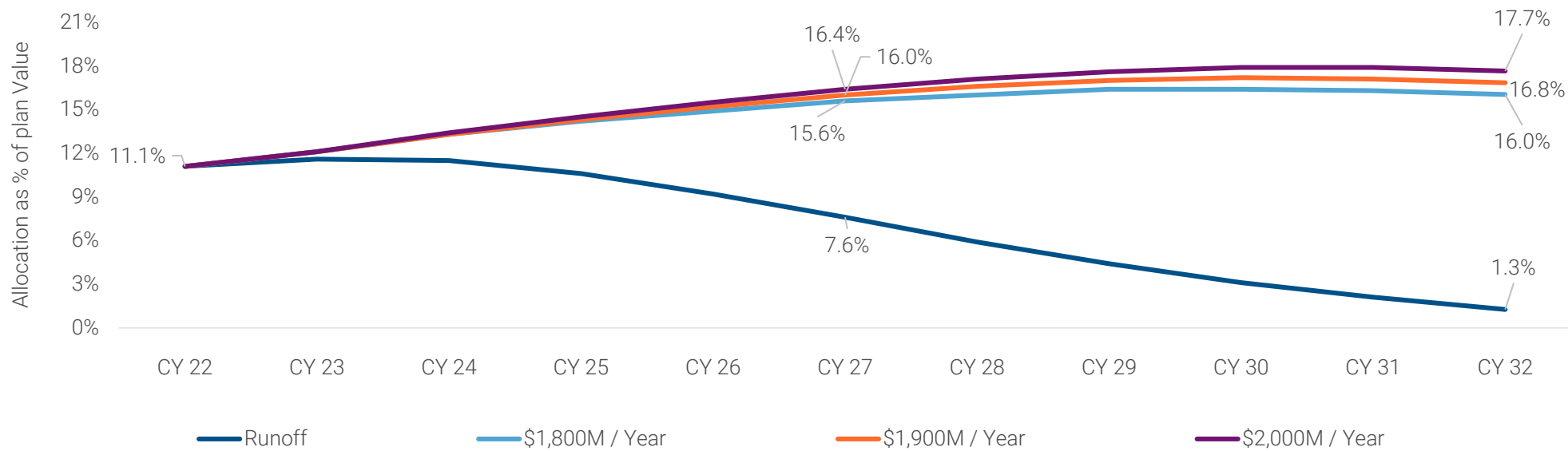
(\$ in millions)	CY 22 ²	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$18,208.8	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PE)	\$450.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$1,045.2	\$1,313.5	\$1,550.2	\$1,582.8	\$1,679.3	\$1,763.7	\$1,821.2	\$1,850.6	\$1,865.7	\$1,876.7	\$1,883.6
Distributions	\$940.9	\$1,246.9	\$1,404.8	\$1,616.3	\$1,849.7	\$2,042.2	\$2,286.6	\$2,473.8	\$2,696.0	\$2,894.7	\$3,046.6
Net Cash Flow	(\$104.3)	(\$66.6)	(\$145.4)	\$33.5	\$170.3	\$278.6	\$465.3	\$623.1	\$830.3	\$1,017.9	\$1,163.0
Unfunded	\$3,004.9	\$3,728.4	\$4,228.2	\$4,543.7	\$4,707.2	\$4,822.5	\$4,887.7	\$4,936.1	\$4,966.3	\$4,989.4	\$4,998.4

¹ CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rate (3%) to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 value.

² Commitment amount in CY 22 column represents total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows.

Private Investment Fund Pacing Scenarios

4% Plan Growth Rate¹



Annual Cash Flow Summary Assuming Midpoint Commitment Target (\$1,900M / Year)

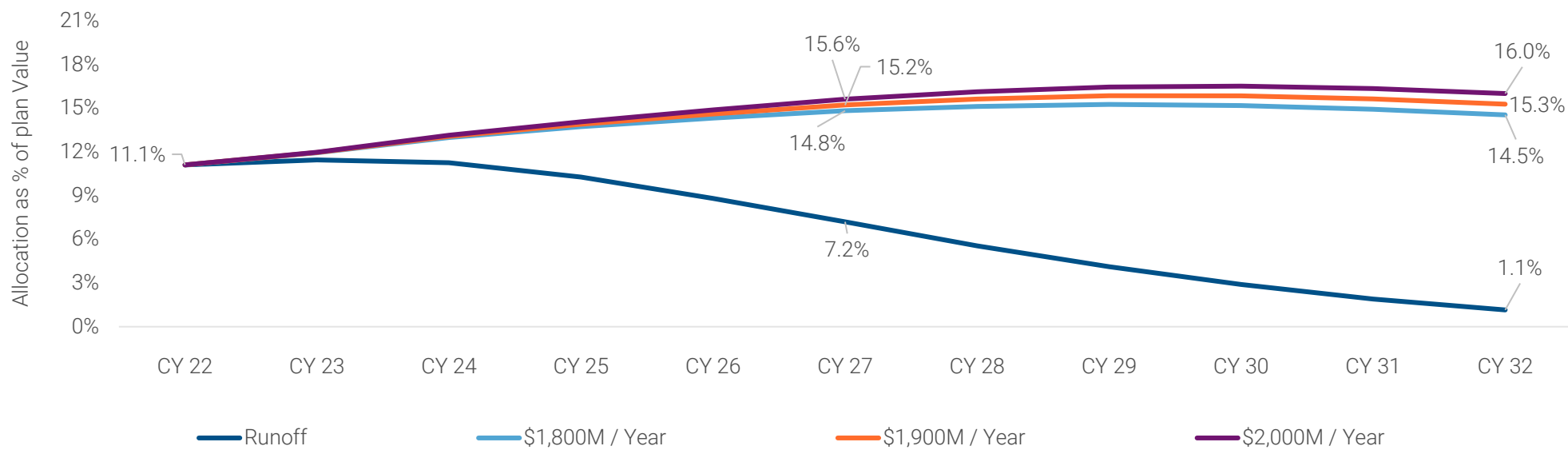
(\$ in millions)	CY 22 ²	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$18,208.8	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PE)	\$450.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$1,045.2	\$1,313.5	\$1,550.2	\$1,582.8	\$1,679.3	\$1,763.7	\$1,821.2	\$1,850.6	\$1,865.7	\$1,876.7	\$1,883.6
Distributions	\$940.9	\$1,246.9	\$1,404.8	\$1,616.3	\$1,849.7	\$2,042.2	\$2,286.6	\$2,473.8	\$2,696.0	\$2,894.7	\$3,046.6
Net Cash Flow	(\$104.3)	(\$66.6)	(\$145.4)	\$33.5	\$170.3	\$278.6	\$465.3	\$623.1	\$830.3	\$1,017.9	\$1,163.0
Unfunded	\$3,004.9	\$3,728.4	\$4,228.2	\$4,543.7	\$4,707.2	\$4,822.5	\$4,887.7	\$4,936.1	\$4,966.3	\$4,989.4	\$4,998.4

¹ CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rate (4%) to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 value.

² Commitment amount in CY 22 column represents total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows.

Private Investment Fund Pacing Scenarios

5% Plan Growth Rate¹



Annual Cash Flow Summary Assuming Midpoint Commitment Target (\$1,900M / Year)

(\$ in millions)	CY 22 ²	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$18,208.8	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PE)	\$450.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$1,045.2	\$1,313.5	\$1,550.2	\$1,582.8	\$1,679.3	\$1,763.7	\$1,821.2	\$1,850.6	\$1,865.7	\$1,876.7	\$1,883.6
Distributions	\$940.9	\$1,246.9	\$1,404.8	\$1,616.3	\$1,849.7	\$2,042.2	\$2,286.6	\$2,473.8	\$2,696.0	\$2,894.7	\$3,046.6
Net Cash Flow	(\$104.3)	(\$66.6)	(\$145.4)	\$33.5	\$170.3	\$278.6	\$465.3	\$623.1	\$830.3	\$1,017.9	\$1,163.0
Unfunded	\$3,004.9	\$3,728.4	\$4,228.2	\$4,543.7	\$4,707.2	\$4,822.5	\$4,887.7	\$4,936.1	\$4,966.3	\$4,989.4	\$4,998.4

¹ CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rate (5%) to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 value.

² Commitment amount in CY 22 column represents total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows.



Private Investment Fund Horizon Model Scenarios

Private Investment Fund Horizon Model Output

CRPTF PIF Horizon Model - Runoff											
(\$ in millions)	CY 22 ¹	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$18,208.8	-	-	-	-	-	-	-	-	-	-
Future Co-Investments	-	-	-	-	-	-	-	-	-	-	-
Harbourvest CI SMA (PE)	\$450.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$1,045.2	\$1,067.8	\$837.0	\$522.5	\$312.4	\$176.2	\$96.6	\$55.5	\$34.2	\$21.7	\$13.1
Distributions	\$940.9	\$1,242.7	\$1,357.5	\$1,475.4	\$1,544.4	\$1,475.4	\$1,401.9	\$1,204.0	\$1,027.3	\$845.9	\$638.6
Net Cash Flow	(\$104.3)	\$175.0	\$520.4	\$952.9	\$1,231.9	\$1,299.2	\$1,305.3	\$1,148.6	\$993.1	\$824.2	\$625.5
Cumulative Cash Flow											
Paid-in Capital	\$11,057.2	\$12,125.0	\$12,962.0	\$13,484.5	\$13,796.9	\$13,973.1	\$14,069.7	\$14,125.2	\$14,159.4	\$14,181.1	\$14,194.2
Distributions	\$12,818.9	\$14,061.7	\$15,419.1	\$16,894.5	\$18,438.9	\$19,914.3	\$21,316.2	\$22,520.3	\$23,547.6	\$24,393.5	\$25,032.1
Net Cash Flow	\$1,761.8	\$1,936.7	\$2,457.1	\$3,410.1	\$4,642.0	\$5,941.2	\$7,246.5	\$8,395.1	\$9,388.2	\$10,212.4	\$10,837.9
PIF Portfolio											
PIF Market Value	\$5,024.9	\$5,442.3	\$5,613.4	\$5,381.5	\$4,843.9	\$4,158.3	\$3,363.8	\$2,620.0	\$1,933.1	\$1,326.7	\$845.3
Unfunded	\$3,004.9	\$2,074.0	\$1,387.0	\$862.9	\$493.3	\$296.1	\$185.8	\$129.4	\$91.0	\$69.1	\$48.6
3.00% Plan Growth	11.2%	11.7%	11.7%	10.9%	9.6%	8.0%	6.3%	4.7%	3.4%	2.3%	1.4%
4.00% Plan Growth	11.1%	11.6%	11.5%	10.6%	9.2%	7.6%	5.9%	4.4%	3.1%	2.1%	1.3%
5.00% Plan Growth	11.1%	11.5%	11.2%	10.3%	8.8%	7.2%	5.5%	4.1%	2.9%	1.9%	1.1%

CRPTF PIF Horizon Model - \$1,800M											
(\$ in millions)	CY 22 ¹	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$18,208.8	\$1,650.0	\$1,650.0	\$1,650.0	\$1,650.0	\$1,650.0	\$1,650.0	\$1,650.0	\$1,650.0	\$1,650.0	\$1,650.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PE)	\$450.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$1,045.2	\$1,303.0	\$1,517.7	\$1,530.8	\$1,609.8	\$1,681.5	\$1,731.3	\$1,756.6	\$1,769.6	\$1,779.3	\$1,785.2
Distributions	\$940.9	\$1,246.7	\$1,403.0	\$1,610.8	\$1,836.6	\$2,016.6	\$2,245.2	\$2,412.7	\$2,614.2	\$2,792.9	\$2,925.6
Net Cash Flow	(\$104.3)	(\$56.4)	(\$114.8)	\$80.0	\$226.8	\$335.1	\$513.9	\$656.1	\$844.7	\$1,013.6	\$1,140.3
Cumulative Cash Flow											
Paid-in Capital	\$11,057.2	\$12,360.2	\$13,877.9	\$15,408.7	\$17,018.5	\$18,700.0	\$20,431.3	\$22,187.9	\$23,957.5	\$25,736.8	\$27,522.0
Distributions	\$12,818.9	\$14,065.6	\$15,468.6	\$17,079.3	\$18,916.0	\$20,932.5	\$23,177.7	\$25,590.4	\$28,204.7	\$30,997.6	\$33,923.1
Net Cash Flow	\$1,761.8	\$1,705.4	\$1,590.6	\$1,670.6	\$1,897.4	\$2,232.5	\$2,746.4	\$3,402.5	\$4,247.2	\$5,260.8	\$6,401.1
PIF Portfolio											
PIF Market Value	\$5,024.9	\$5,670.8	\$6,478.1	\$7,192.1	\$7,876.4	\$8,561.4	\$9,165.7	\$9,715.4	\$10,151.3	\$10,475.9	\$10,718.2
Unfunded	\$3,004.9	\$3,638.8	\$4,071.1	\$4,338.6	\$4,471.7	\$4,569.1	\$4,624.3	\$4,666.7	\$4,693.0	\$4,713.5	\$4,720.8
3.00% Plan Growth	11.2%	12.2%	13.6%	14.6%	15.5%	16.4%	17.0%	17.5%	17.8%	17.8%	17.7%
4.00% Plan Growth	11.1%	12.1%	13.3%	14.2%	14.9%	15.6%	16.0%	16.4%	16.4%	16.3%	16.0%
5.00% Plan Growth	11.1%	11.9%	13.0%	13.7%	14.3%	14.8%	15.1%	15.3%	15.2%	14.9%	14.5%

¹ Commitment amount in CY 22 column represents total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows. CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rates to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 values.

Private Investment Fund Horizon Model Output

CRPTF PIF Horizon Model - \$1,900M											
(\$ in millions)	CY 22 ¹	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$18,208.8	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0	\$1,750.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PE)	\$450.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$1,045.2	\$1,313.5	\$1,550.2	\$1,582.8	\$1,679.3	\$1,763.7	\$1,821.2	\$1,850.6	\$1,865.7	\$1,876.7	\$1,883.6
Distributions	\$940.9	\$1,246.9	\$1,404.8	\$1,616.3	\$1,849.7	\$2,042.2	\$2,286.6	\$2,473.8	\$2,696.0	\$2,894.7	\$3,046.6
Net Cash Flow	(\$104.3)	(\$66.6)	(\$145.4)	\$33.5	\$170.3	\$278.6	\$465.3	\$623.1	\$830.3	\$1,017.9	\$1,163.0
Cumulative Cash Flow											
Paid-in Capital	\$11,057.2	\$12,370.6	\$13,920.8	\$15,503.7	\$17,183.0	\$18,946.6	\$20,767.9	\$22,618.5	\$24,484.1	\$26,360.9	\$28,244.4
Distributions	\$12,818.9	\$14,065.8	\$15,470.6	\$17,086.9	\$18,936.6	\$20,978.8	\$23,265.4	\$25,739.1	\$28,435.1	\$31,329.8	\$34,376.3
Net Cash Flow	\$1,761.8	\$1,695.2	\$1,549.8	\$1,583.3	\$1,753.6	\$2,032.2	\$2,497.5	\$3,120.7	\$3,951.0	\$4,968.9	\$6,131.9
PIF Portfolio											
PIF Market Value	\$5,024.9	\$5,680.8	\$6,518.0	\$7,280.7	\$8,030.7	\$8,791.4	\$9,473.9	\$10,096.8	\$10,596.6	\$10,974.5	\$11,258.3
Unfunded	\$3,004.9	\$3,728.4	\$4,228.2	\$4,543.7	\$4,707.2	\$4,822.5	\$4,887.7	\$4,936.1	\$4,966.3	\$4,989.4	\$4,998.4
3.00% Plan Growth	11.2%	12.2%	13.6%	14.8%	15.8%	16.8%	17.6%	18.2%	18.6%	18.7%	18.6%
4.00% Plan Growth	11.1%	12.1%	13.3%	14.3%	15.2%	16.0%	16.6%	17.0%	17.2%	17.1%	16.8%
5.00% Plan Growth	11.1%	12.0%	13.1%	13.9%	14.6%	15.2%	15.6%	15.9%	15.8%	15.6%	15.3%

CRPTF PIF Horizon Model - \$2,000M											
(\$ in millions)	CY 22 ¹	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$18,208.8	\$1,850.0	\$1,850.0	\$1,850.0	\$1,850.0	\$1,850.0	\$1,850.0	\$1,850.0	\$1,850.0	\$1,850.0	\$1,850.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PE)	\$450.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$1,045.2	\$1,323.9	\$1,582.6	\$1,634.9	\$1,748.9	\$1,845.8	\$1,911.2	\$1,944.6	\$1,961.7	\$1,974.1	\$1,981.9
Distributions	\$940.9	\$1,247.1	\$1,406.7	\$1,621.9	\$1,862.7	\$2,067.9	\$2,327.9	\$2,534.8	\$2,777.7	\$2,996.4	\$3,167.6
Net Cash Flow	(\$104.3)	(\$76.8)	(\$176.0)	(\$13.0)	\$113.8	\$222.1	\$416.7	\$590.2	\$815.9	\$1,022.3	\$1,185.7
Cumulative Cash Flow											
Paid-in Capital	\$11,057.2	\$12,381.0	\$13,963.7	\$15,598.6	\$17,347.4	\$19,193.2	\$21,104.4	\$23,049.1	\$25,010.8	\$26,984.9	\$28,966.8
Distributions	\$12,818.9	\$14,066.0	\$15,472.6	\$17,094.5	\$18,957.2	\$21,025.1	\$23,353.1	\$25,887.8	\$28,665.5	\$31,661.9	\$34,829.6
Net Cash Flow	\$1,761.8	\$1,684.9	\$1,508.9	\$1,496.0	\$1,609.8	\$1,831.9	\$2,248.6	\$2,838.8	\$3,654.7	\$4,677.0	\$5,862.7
PIF Portfolio											
PIF Market Value	\$5,024.9	\$5,690.8	\$6,557.9	\$7,369.3	\$8,185.1	\$9,021.3	\$9,782.1	\$10,478.1	\$11,041.8	\$11,473.1	\$11,798.5
Unfunded	\$3,004.9	\$3,818.0	\$4,385.3	\$4,748.8	\$4,942.7	\$5,075.9	\$5,151.1	\$5,205.5	\$5,239.6	\$5,265.3	\$5,276.0
3.00% Plan Growth	11.2%	12.3%	13.7%	15.0%	16.1%	17.3%	18.2%	18.9%	19.4%	19.5%	19.5%
4.00% Plan Growth	11.1%	12.1%	13.4%	14.5%	15.5%	16.4%	17.1%	17.6%	17.9%	17.9%	17.7%
5.00% Plan Growth	11.1%	12.0%	13.1%	14.1%	14.9%	15.6%	16.1%	16.5%	16.5%	16.3%	16.0%

¹ Commitment amount in CY 22 column represents total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows. CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rates to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 values.

Building the Portfolio

Long-Term Portfolio Targets - By Strategy

Strategy	Current NAV Exposure ¹	Current Total Exposure ^{1,2}	Long-Term Portfolio Target ^{2,3}	Target Commitments	Target Commitment Sizes (\$M)	Pacing Target (\$M) Mid-Point of \$1.9B
Buyout	58%	54%	55-75%	5-8	\$200-\$300	\$1,150-\$1,850
<i>Buyout Large/Mega</i>	29%	27%	15-25%	1-3	\$200-\$300	\$350-\$700
<i>Buyout SMID</i>	29%	27%	40-50%	4-5	\$200-\$300	\$800-\$1,150
Growth Equity	4%	5%	10-20%	2-3	\$150-\$200	\$350-\$475
Co-Investments ⁴	1%	5%	10-20%	7-10	\$10-\$20	\$100-\$200
Venture Capital ⁵	18%	13%	5-10%	0-1	\$0-\$150	\$0-\$150
Secondaries	8%	10%	5-10%	1-2	\$150-\$250	\$250-\$300
Mezzanine	5%	5%	5-10%	0-1	\$100-\$200	\$0-\$200
Distressed/Restructuring	5%	5%	5-15%	0-2	\$100-\$150	\$0-\$300

Long-Term Portfolio Targets - By Geography

Geography	Current Exposure ⁶	Long-Term Portfolio Target ⁶	Target Commitments	Target Commitment Sizes (\$M)	Pacing Target (\$M) Mid-Point of \$1.9B
North America	72%	65-75%	6-8	\$200-\$350	\$1,250-\$1,900
Western Europe	13%	15-25%	2-4	\$125-\$300	\$475-\$625
Rest of World	15%	5-10%	0-2	\$100-\$150	\$0-\$300

¹As of 6/30/2022. Excludes Multi-Strategy, which represents 0.1% of PIF NAV and Total Exposure as of 6/30/2022. Totals may not sum to 100% due to rounding.

²Total Exposure is equal to Remaining Net Asset Value plus Unfunded Commitment.

³Long-Term Portfolio Target measured by Total Exposure.

⁴Co-investment exposure to be accessed through a vehicle/SMA structure.

⁵Venture Capital exposure to be accessed through a vehicle/SMA structure.

⁶Current Exposure and Long-Term Portfolio Target by Geography refer to NAV exposure at the underlying company-level (CRPTF's share of a portfolio company's remaining NAV).

Connecticut Retirement Plans and Trust Funds

Pacing Plan– Private Credit Fund Portfolio

December 2022

Private Credit Fund Commitment Pacing

The Horizon Model is a Hamilton Lane proprietary tool that uses existing portfolio information coupled with future allocation targets to create a quantitative future investment plan

- Model uses a formulaic approach to project value and future cash flows
- The pacing model takes into account Connecticut's historical Private Credit Fund commitments
- The table below summarizes the input assumptions used to forecast cash flows and market values

Horizon Model Pacing Assumptions	
Connecticut Total Plan Assets ¹	\$44.7 billion
Net Plan Growth Rate	3.0%; 4.0%; 5.0%
Private Investment Fund as % of Plan ²	2.9%
Target Allocation to Private Credit	10.0%
Private Credit Boundary	5.0% - 15.0%

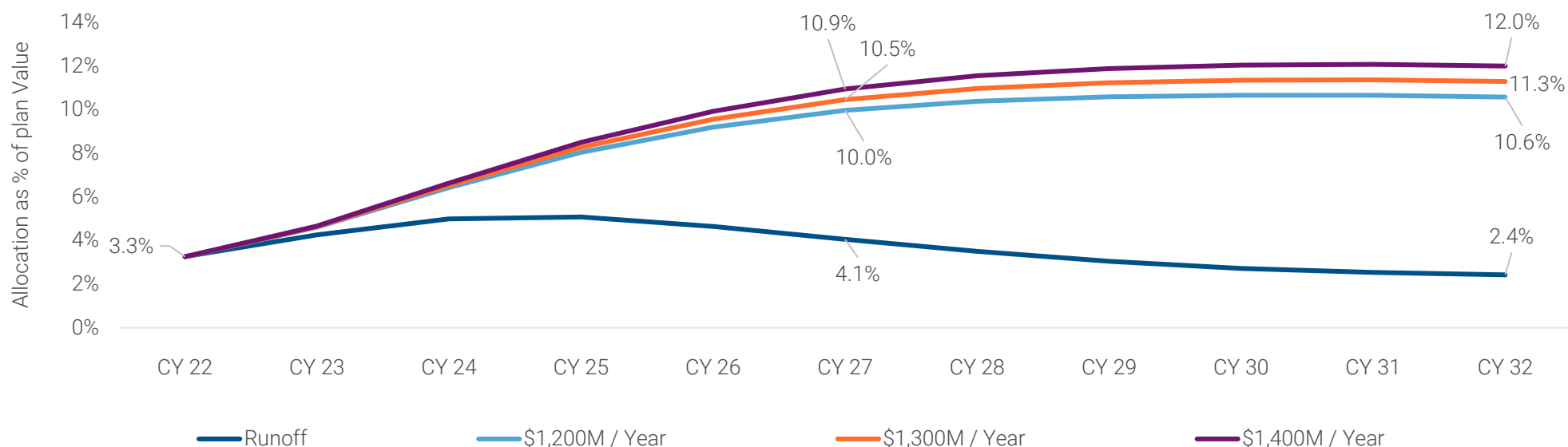
See endnotes in the Appendix

¹ As of 9/30/2022

² Uses 9/30/2022 CRPTF adjusted PC market values (as of 10/13/2022) and CRPTF Total Plan Assets as of 9/30/2022.

Private Credit Fund Pacing Scenarios

3% Plan Growth Rate¹



Annual Cash Flow Summary Assuming Midpoint Commitment Target (\$1,300M / Year)

(\$ in millions)	CY 22 ²	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$2,587.6	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PC)	\$450.0	-	-	-	-	-	-	-	-	-	-
Crescent SMAs	\$600.0	-	-	-	-	-	-	-	-	-	-
SLR Separate Account	\$300.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$829.6	\$1,005.2	\$1,322.7	\$1,341.9	\$1,318.7	\$1,311.5	\$1,303.6	\$1,298.6	\$1,297.1	\$1,297.0	\$1,296.8
Distributions	\$142.8	\$474.8	\$588.8	\$763.0	\$1,002.4	\$1,248.9	\$1,474.8	\$1,628.8	\$1,713.7	\$1,782.6	\$1,823.0
Net Cash Flow	(\$686.8)	(\$530.4)	(\$733.9)	(\$578.9)	(\$316.3)	(\$62.7)	\$171.2	\$330.2	\$416.6	\$485.5	\$526.1
Unfunded	\$2,025.4	\$2,470.2	\$2,597.5	\$2,530.3	\$2,511.6	\$2,500.1	\$2,495.8	\$2,494.2	\$2,494.1	\$2,493.4	\$2,493.5

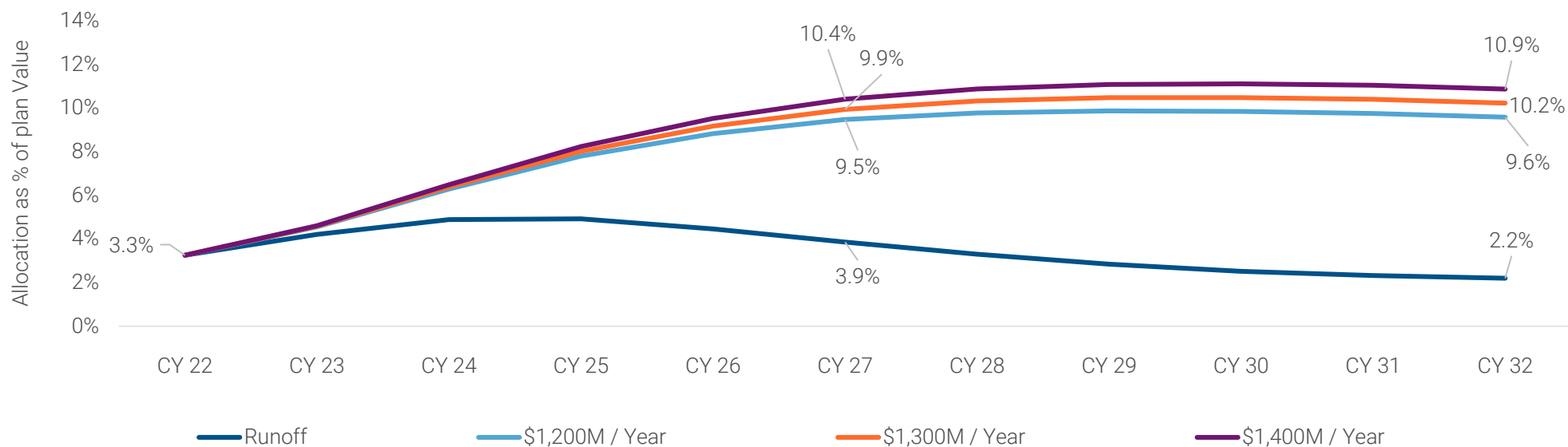
¹ CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rate (3%) to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 value.

² Commitment amounts in CY 22 column represent total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows.

³ \$600M (total) Crescent SMA commitments and \$300M SLR Separate Account are modeled to reflect an evergreen structure.

Private Credit Fund Pacing Scenarios

4% Plan Growth Rate¹



Annual Cash Flow Summary Assuming Midpoint Commitment Target (\$1,300M / Year)

(\$ in millions)	CY 22 ²	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$2,587.6	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PC)	\$450.0	-	-	-	-	-	-	-	-	-	-
Crescent SMAs	\$600.0	-	-	-	-	-	-	-	-	-	-
SLR Separate Account	\$300.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$829.6	\$1,005.2	\$1,322.7	\$1,341.9	\$1,318.7	\$1,311.5	\$1,303.6	\$1,298.6	\$1,297.1	\$1,297.0	\$1,296.8
Distributions	\$142.8	\$474.8	\$588.8	\$763.0	\$1,002.4	\$1,248.9	\$1,474.8	\$1,628.8	\$1,713.7	\$1,782.6	\$1,823.0
Net Cash Flow	(\$686.8)	(\$530.4)	(\$733.9)	(\$578.9)	(\$316.3)	(\$62.7)	\$171.2	\$330.2	\$416.6	\$485.5	\$526.1
Unfunded	\$2,025.4	\$2,470.2	\$2,597.5	\$2,530.3	\$2,511.6	\$2,500.1	\$2,495.8	\$2,494.2	\$2,494.1	\$2,493.4	\$2,493.5

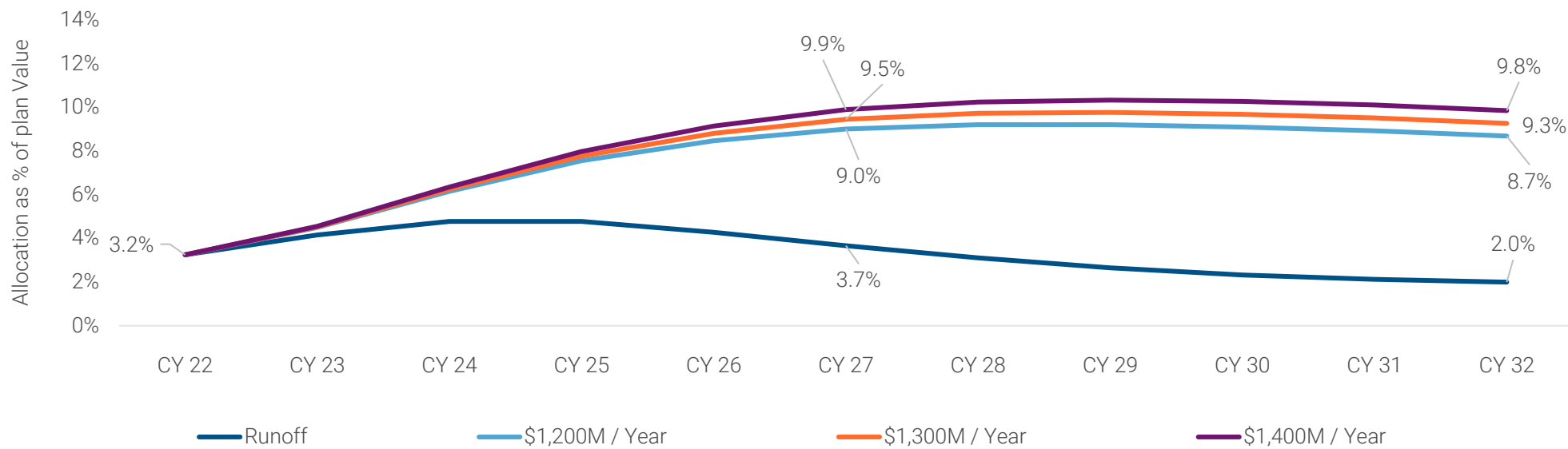
¹ CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rate (4%) to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 value.

² Commitment amounts in CY 22 column represent total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows.

³ \$600M (total) Crescent SMA commitments and \$300M SLR Separate Account are modeled to reflect an evergreen structure.

Private Credit Fund Pacing Scenarios

5% Plan Growth Rate¹



Annual Cash Flow Summary Assuming Midpoint Commitment Target (\$1,300M / Year)

(\$ in millions)	CY 22 ²	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$2,587.6	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PC)	\$450.0	-	-	-	-	-	-	-	-	-	-
Crescent SMAs	\$600.0	-	-	-	-	-	-	-	-	-	-
SLR Separate Account	\$300.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$829.6	\$1,005.2	\$1,322.7	\$1,341.9	\$1,318.7	\$1,311.5	\$1,303.6	\$1,298.6	\$1,297.1	\$1,297.0	\$1,296.8
Distributions	\$142.8	\$474.8	\$588.8	\$763.0	\$1,002.4	\$1,248.9	\$1,474.8	\$1,628.8	\$1,713.7	\$1,782.6	\$1,823.0
Net Cash Flow	(\$686.8)	(\$530.4)	(\$733.9)	(\$578.9)	(\$316.3)	(\$62.7)	\$171.2	\$330.2	\$416.6	\$485.5	\$526.1
Unfunded	\$2,025.4	\$2,470.2	\$2,597.5	\$2,530.3	\$2,511.6	\$2,500.1	\$2,495.8	\$2,494.2	\$2,494.1	\$2,493.4	\$2,493.5

¹ CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rate (5%) to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 value.

² Commitment amounts in CY 22 column represent total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows.

³ \$600M (total) Crescent SMA commitments and \$300M SLR Separate Account are modeled to reflect an evergreen structure.



Private Credit Fund Horizon Model Scenarios



Private Credit Fund Horizon Model Output

CRPTF PCF Horizon Model - Runoff											
(\$ in millions)	CY 22 ¹	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$2,587.6	-	-	-	-	-	-	-	-	-	-
Future Co-Investments	-	-	-	-	-	-	-	-	-	-	-
Harbourvest CI SMA (PC)	\$450.0	-	-	-	-	-	-	-	-	-	-
Crescent SMAs	\$600.0	-	-	-	-	-	-	-	-	-	-
SLR Separate Account	\$300.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$829.6	\$826.6	\$739.6	\$427.9	\$181.8	\$72.2	\$27.2	\$10.0	\$5.0	\$3.1	\$1.8
Distributions	\$142.8	\$471.0	\$537.7	\$591.9	\$609.9	\$592.9	\$513.3	\$435.1	\$337.8	\$263.4	\$191.1
Net Cash Flow	(\$686.8)	(\$355.6)	(\$202.0)	\$163.9	\$428.1	\$520.6	\$486.1	\$425.2	\$332.8	\$260.2	\$189.3
Cumulative Cash Flow											
Paid-in Capital	\$3,021.4	\$3,848.0	\$4,587.6	\$5,015.6	\$5,197.4	\$5,269.6	\$5,296.9	\$5,306.8	\$5,311.9	\$5,315.0	\$5,316.9
Distributions	\$394.7	\$865.7	\$1,403.4	\$1,995.2	\$2,605.1	\$3,198.0	\$3,711.3	\$4,146.5	\$4,484.3	\$4,747.7	\$4,938.8
Net Cash Flow	(\$2,626.7)	(\$2,982.3)	(\$3,184.3)	(\$3,020.3)	(\$2,592.3)	(\$2,071.6)	(\$1,585.5)	(\$1,160.4)	(\$827.6)	(\$567.4)	(\$378.0)
PIF Portfolio											
PC Market Value	\$1,469.0	\$1,974.4	\$2,384.2	\$2,500.8	\$2,353.6	\$2,115.8	\$1,884.5	\$1,686.7	\$1,552.1	\$1,491.2	\$1,470.5
Unfunded	\$2,025.4	\$1,348.8	\$759.1	\$306.0	\$124.2	\$51.9	\$24.7	\$14.7	\$9.7	\$6.0	\$4.1
3.00% Plan Growth	3.3%	4.3%	5.0%	5.1%	4.6%	4.1%	3.5%	3.0%	2.7%	2.5%	2.4%
4.00% Plan Growth	3.3%	4.2%	4.9%	4.9%	4.5%	3.9%	3.3%	2.8%	2.5%	2.3%	2.2%
5.00% Plan Growth	3.2%	4.2%	4.8%	4.8%	4.3%	3.7%	3.1%	2.6%	2.3%	2.1%	2.0%

CRPTF PC Horizon Model – 1,200M											
(\$ in millions)	CY 22 ¹	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$2,587.6	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0	\$1,050.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PC)	\$450.0	-	-	-	-	-	-	-	-	-	-
Crescent SMAs	\$600.0	-	-	-	-	-	-	-	-	-	-
SLR Separate Account	\$300.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$829.6	\$993.0	\$1,283.5	\$1,275.2	\$1,232.6	\$1,216.5	\$1,205.4	\$1,199.3	\$1,197.6	\$1,197.3	\$1,197.0
Distributions	\$142.8	\$474.5	\$585.5	\$752.7	\$977.3	\$1,204.9	\$1,407.5	\$1,541.6	\$1,610.7	\$1,667.1	\$1,697.7
Net Cash Flow	(\$686.8)	(\$518.5)	(\$698.1)	(\$522.6)	(\$255.3)	(\$11.7)	\$202.1	\$342.3	\$413.2	\$469.8	\$500.7
Cumulative Cash Flow											
Paid-in Capital	\$3,021.4	\$4,014.4	\$5,298.0	\$6,573.2	\$7,805.8	\$9,022.4	\$10,227.7	\$11,427.0	\$12,624.6	\$13,821.9	\$15,018.9
Distributions	\$394.7	\$869.2	\$1,454.7	\$2,207.3	\$3,184.6	\$4,389.5	\$5,797.0	\$7,338.6	\$8,949.3	\$10,616.5	\$12,314.2
Net Cash Flow	(\$2,626.7)	(\$3,145.2)	(\$3,843.3)	(\$4,365.9)	(\$4,621.2)	(\$4,632.9)	(\$4,430.8)	(\$4,088.5)	(\$3,675.3)	(\$3,205.5)	(\$2,704.8)
PIF Portfolio											
PC Market Value	\$1,469.0	\$2,138.0	\$3,068.6	\$3,957.1	\$4,659.3	\$5,203.3	\$5,583.8	\$5,862.7	\$6,081.0	\$6,264.7	\$6,400.2
Unfunded	\$2,025.4	\$2,382.4	\$2,448.8	\$2,348.4	\$2,315.8	\$2,299.2	\$2,293.1	\$2,290.8	\$2,290.2	\$2,289.3	\$2,289.2
3.00% Plan Growth	3.3%	4.6%	6.4%	8.0%	9.2%	10.0%	10.4%	10.6%	10.7%	10.7%	10.6%
4.00% Plan Growth	3.3%	4.6%	6.3%	7.8%	8.8%	9.5%	9.8%	9.9%	9.8%	9.7%	9.6%
5.00% Plan Growth	3.2%	4.5%	6.1%	7.6%	8.5%	9.0%	9.2%	9.2%	9.1%	8.9%	8.7%

¹ Commitment amount in CY 22 column represents total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows. CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rates to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 values.

² \$600M (total) Crescent SMA commitments and \$300M SLR Separate Account are modeled to reflect an evergreen structure.

Private Credit Fund Horizon Model Output

CRPTF PCF Horizon Model – \$1,300M											
(\$ in millions)	CY 22 ¹	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$2,587.6	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0	\$1,150.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PC)	\$450.0	-	-	-	-	-	-	-	-	-	-
Crescent SMAs	\$600.0	-	-	-	-	-	-	-	-	-	-
SLR Separate Account	\$300.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$829.6	\$1,005.2	\$1,322.7	\$1,341.9	\$1,318.7	\$1,311.5	\$1,303.6	\$1,298.6	\$1,297.1	\$1,297.0	\$1,296.8
Distributions	\$142.8	\$474.8	\$588.8	\$763.0	\$1,002.4	\$1,248.9	\$1,474.8	\$1,628.8	\$1,713.7	\$1,782.6	\$1,823.0
Net Cash Flow	(\$686.8)	(\$530.4)	(\$733.9)	(\$578.9)	(\$316.3)	(\$62.7)	\$171.2	\$330.2	\$416.6	\$485.5	\$526.1
Cumulative Cash Flow											
Paid-in Capital	\$3,021.4	\$4,026.6	\$5,349.3	\$6,691.3	\$8,009.9	\$9,321.5	\$10,625.1	\$11,923.6	\$13,220.8	\$14,517.8	\$15,814.7
Distributions	\$394.7	\$869.5	\$1,458.3	\$2,221.4	\$3,223.8	\$4,472.6	\$5,947.4	\$7,576.2	\$9,289.9	\$11,072.5	\$12,895.4
Net Cash Flow	(\$2,626.7)	(\$3,157.1)	(\$3,891.0)	(\$4,469.9)	(\$4,786.2)	(\$4,848.8)	(\$4,677.6)	(\$4,347.4)	(\$3,930.9)	(\$3,445.3)	(\$2,919.2)
PIF Portfolio											
PC Market Value	\$1,469.0	\$2,149.9	\$3,117.8	\$4,068.5	\$4,844.2	\$5,459.0	\$5,897.3	\$6,221.6	\$6,473.5	\$6,680.5	\$6,830.9
Unfunded	\$2,025.4	\$2,470.2	\$2,597.5	\$2,530.3	\$2,511.6	\$2,500.1	\$2,495.8	\$2,494.2	\$2,494.1	\$2,493.4	\$2,493.5
3.00% Plan Growth	3.3%	4.6%	6.5%	8.3%	9.6%	10.5%	11.0%	11.2%	11.3%	11.4%	11.3%
4.00% Plan Growth	3.3%	4.6%	6.4%	8.0%	9.2%	9.9%	10.3%	10.5%	10.5%	10.4%	10.2%
5.00% Plan Growth	3.2%	4.5%	6.2%	7.8%	8.8%	9.5%	9.7%	9.8%	9.7%	9.5%	9.3%

CRPTF PCF Horizon Model – \$1,400M											
(\$ in millions)	CY 22 ¹	CY 23	CY 24	CY 25	CY 26	CY 27	CY 28	CY 29	CY 30	CY 31	CY 32
Commitments											
Core Commitments	\$2,587.6	\$1,250.0	\$1,250.0	\$1,250.0	\$1,250.0	\$1,250.0	\$1,250.0	\$1,250.0	\$1,250.0	\$1,250.0	\$1,250.0
Future Co-Investments	-	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0
Harbourvest CI SMA (PC)	\$450.0	-	-	-	-	-	-	-	-	-	-
Crescent SMAs	\$600.0	-	-	-	-	-	-	-	-	-	-
SLR Separate Account	\$300.0	-	-	-	-	-	-	-	-	-	-
Period Cash Flow											
Paid-in Capital	\$829.6	\$1,017.4	\$1,361.9	\$1,408.6	\$1,404.7	\$1,406.5	\$1,401.8	\$1,397.9	\$1,396.7	\$1,396.8	\$1,396.7
Distributions	\$142.8	\$475.1	\$592.2	\$773.4	\$1,027.6	\$1,292.9	\$1,542.1	\$1,715.9	\$1,816.7	\$1,898.0	\$1,948.2
Net Cash Flow	(\$686.8)	(\$542.3)	(\$769.7)	(\$635.2)	(\$377.2)	(\$113.7)	\$140.3	\$318.0	\$420.0	\$501.3	\$551.5
Cumulative Cash Flow											
Paid-in Capital	\$3,021.4	\$4,038.8	\$5,400.7	\$6,809.3	\$8,214.1	\$9,620.6	\$11,022.4	\$12,420.2	\$13,816.9	\$15,213.7	\$16,610.4
Distributions	\$394.7	\$869.8	\$1,462.0	\$2,235.4	\$3,263.0	\$4,555.8	\$6,097.9	\$7,813.8	\$9,630.5	\$11,528.5	\$13,476.7
Net Cash Flow	(\$2,626.7)	(\$3,169.0)	(\$3,938.7)	(\$4,573.9)	(\$4,951.1)	(\$5,064.8)	(\$4,924.5)	(\$4,606.4)	(\$4,186.4)	(\$3,685.2)	(\$3,133.7)
PIF Portfolio											
PC Market Value	\$1,469.0	\$2,161.8	\$3,167.0	\$4,180.0	\$5,029.1	\$5,714.6	\$6,210.8	\$6,580.5	\$6,866.1	\$7,096.3	\$7,261.5
Unfunded	\$2,025.4	\$2,558.0	\$2,746.1	\$2,712.3	\$2,707.5	\$2,701.0	\$2,698.5	\$2,697.6	\$2,697.9	\$2,697.5	\$2,697.8
3.00% Plan Growth	3.3%	4.7%	6.6%	8.5%	9.9%	10.9%	11.5%	11.9%	12.0%	12.1%	12.0%
4.00% Plan Growth	3.3%	4.6%	6.5%	8.2%	9.5%	10.4%	10.9%	11.1%	11.1%	11.0%	10.9%
5.00% Plan Growth	3.2%	4.5%	6.3%	8.0%	9.1%	9.9%	10.2%	10.3%	10.3%	10.1%	9.8%

¹ Commitment amount in CY 22 column represents total since inception through year-end 2022 (expected). CY 22 cash flows represent 1H 2022 real cash flows plus 2H 2022 projected cash flows. CY 22 projected total CRPTF plan value (denominator) applies three-twelfths of the annual growth rates to the 9/30/2022 value as provided by CRPTF to achieve projected 12/31/2022 values.

² \$600M (total) Crescent SMA commitments and \$300M SLR Separate Account are modeled to reflect an evergreen structure.

Building the Portfolio

Long-Term Portfolio Targets - By Strategy

Strategy	Current NAV Exposure ¹	Current Total Exposure ^{1,2}	Long-Term Portfolio Target ^{2,3}	Target Commitments	Target Commitment Sizes (\$M)	Pacing Target (\$M) Mid-Point of \$1.3B
Senior	25%	26%	40-50%	4-6	\$150-\$250	\$800-\$1,000
Mezzanine	10%	11%	10-20%	1-2	\$75-\$200	\$150-\$200
Special Situations	47%	40%	20-30%	1-3	\$100-\$275	\$275-\$400
Distressed	9%	7%	10-20%	1-2	\$75-\$200	\$150-\$200
Co-Investments ⁴	9%	17%	10-20%	7-10	\$10-\$20	\$100-\$200

Long-Term Portfolio Targets - By Geography

Geography	Current Exposure ⁵	Long-Term Portfolio Target ⁵	Target Commitments	Target Commitment Sizes (\$M)	Pacing Target (\$M) Mid-Point of \$1.3B
North America	75%	60-70%	4-6	\$150-\$250	\$800-\$1,000
Western Europe	12%	20-30%	1-3	\$100-\$275	\$275-\$400
Rest of World	14%	0-10%	0-2	\$0-\$125	\$0-\$250

¹As of 6/30/2022. Totals may not sum to 100% due to rounding.

²Total Exposure is equal to Remaining Net Asset Value plus Unfunded Commitment.

³Long-Term Portfolio Target measured by Total Exposure.

⁴Co-investment exposure to be accessed through a vehicle/SMA structure.

⁵Current Exposure and Long-Term Portfolio Target by Geography refer to NAV exposure at the underlying company-level (CRPTF's share of a portfolio company's remaining NAV).



2023 REAL ESTATE PACING PLAN

CONNECTICUT RETIREMENT PLANS
& TRUST FUNDS

DECEMBER 2022



EXECUTIVE SUMMARY

- **The State of Connecticut Retirement Plans & Trust Funds (“State of CT”) has a current target allocation to real estate of 10.0%**
 - This target was increased in 2019 from 7.0%
 - The State of CT has a current allocation to real estate of 8.6% of estimated year-end plan assets
 - When adding unfunded commitments to the current net asset value, the State of CT has a total potential exposure to real estate of 12.5% of estimated year-end plan assets
- **This presentation will review the current portfolio and provide an investment pacing plan for the next several years, with the following primary objectives:**
 - Build towards the 10% allocation to real estate
 - Reduce the relative over-weight to core real estate
 - Maintain regular annual commitments to value-add and opportunistic strategies
- **NEPC will continue to work with the State of CT investment team to source new investment ideas and implement the pacing plan**



Notes: Real estate portfolio data (net asset value, commitment and unfunded commitment amounts, etc.) represent June 30, 2022 actual values plus any commitments approved subsequent to June 30, 2022. The total plan assets represents the estimated total plan assets at year-end (December 31, 2022).

PACING PLAN INPUTS



2023 INVESTMENT PLAN

- **The State of CT's current exposure to real estate is as follows:**
 - \$3,839 million net asset value (8.6% of estimated year-end plan assets)
 - \$1,762 million in uncalled capital commitments (3.9% of plan assets)
 - Potential total exposure of \$5,601 million (12.5% of plan assets)
 - **We modeled three scenarios for the plan, with total plan-level net growth rates of 3%, 4%, and 5%**
 - All other inputs and assumptions remained the same across all scenarios
 - The recommendations were adjusted to meet the pacing plan's primary objectives in each scenario
 - **All scenarios include the same base case projections for open-end fund redemption payouts and proceeds from separate account asset sales**
 - These projected redemptions and sales average approximately \$230 million per year (over the next four years), and are part of the overall plan for reducing core and core-plus exposure
- **NEPC will continue to update the pacing plan on a regular basis to ensure the plan is on-track**

Notes: Real estate portfolio data (net asset value, commitment, and unfunded commitments) represent June 30, 2022 actual values plus any commitments approved subsequent to June 30, 2022. All references to "plan assets" represent the estimated total plan assets at year-end (December 31, 2022).

Open-end fund redemption payout and separate account asset sale projections are based on information provided by investment managers; actual timing and magnitude of payouts and proceeds may vary based on market conditions and other factors.



COMPARISON OF SCENARIOS



COMPARISON OF SCENARIOS

Scenario	2023 Budget	2024-2026 Annual Pace
5% Growth Rate	\$550 million	\$550-600 million
4% Growth Rate	\$500 million	\$500-550 million
3% Growth Rate	\$400 million	\$400-450 million

Includes continued investments in the co-investment program

5% GROWTH SCENARIO

Assumes 5% Average
Annual Net Plan-Level
Growth Rate



SUMMARY OF 5% GROWTH SCENARIO

- **The scenario assumes a total net plan-level growth rate of 5% per year**
- **NEPC recommends the following investment pacing over the next few years to achieve the target allocations:**
 - 2023: Commit \$550 million to non-core real estate
 - Includes an allocation to the co-investment program
 - Consider tactical allocations to REITs, depending on market conditions
 - 2024-2026: Commit \$550-600 million to non-core real estate per year, including co-investments
 - NEPC believes that a target of three to five commitments per year is appropriate
 - Beyond: Continue to make regular annual commitments to non-core real estate funds
- **In addition, this plan includes:**
 - Continued, select redemptions from open-ended real estate funds and asset sales from separately managed accounts, subject to market environment
 - Continue to receive dividends (rather than re-invest) for most core and core-plus funds but re-evaluate on an annual basis



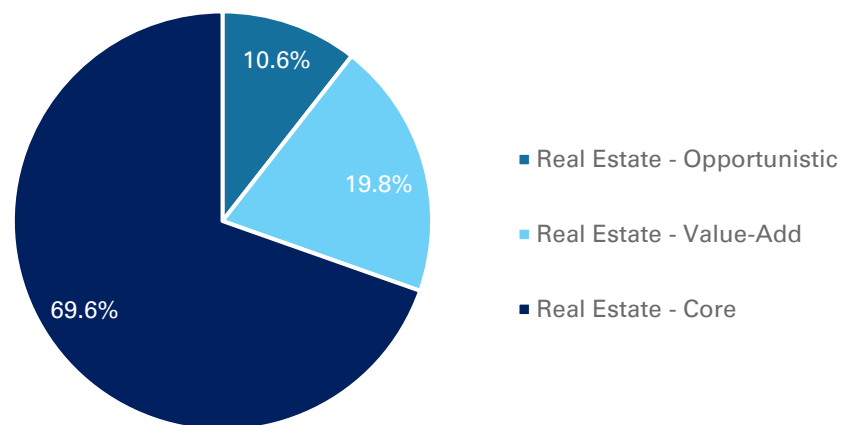
Notes: "Non-core real estate" includes value-add and opportunistic real estate strategies, including secondaries; actual allocations per year may depend on market conditions, manager availability, and portfolio construction considerations.

KEY INPUTS (5% GROWTH)

Plan Summary

Total Portfolio Assets	\$44,700.0
Current NAV %	8.6%
Current Total Exposure %	12.5%
Target Allocation %	10.0%
Ann. Expected Return %	5.0%

Current Real Estate Exposure by NAV



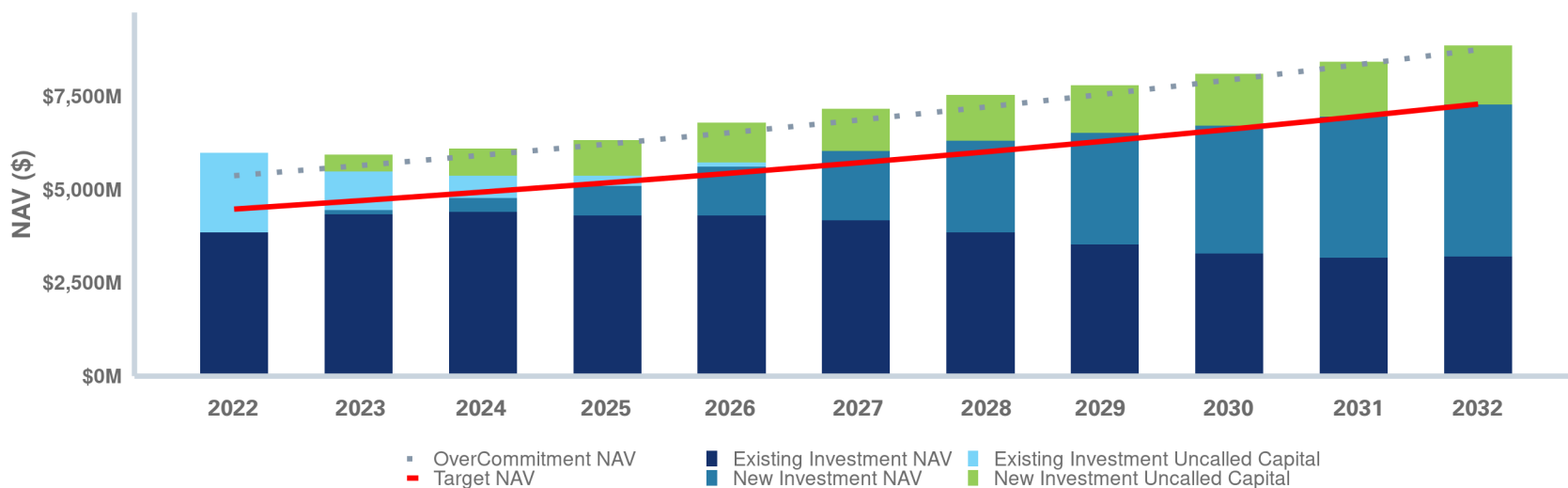
Current Allocations (in millions)

Asset Class	Investment Strategy	Commitment	Unfunded Commitment	NAV	Total Exposure
Real Estate	Real Estate - Core	\$2,260.0	\$32.9	\$2,670.6	\$2,703.5
	Real Estate - Opportunistic	\$2,682.9	\$1,185.4	\$405.6	\$1,591.0
	Real Estate - Value-Add	\$1,902.4	\$544.1	\$762.8	\$1,306.9
	Total	\$6,845.3	\$1,762.4	\$3,839.0	\$5,601.4

Notes: Real estate portfolio net asset value (NAV) as of June 30, 2022; commitment and unfunded commitment amounts include commitments made subsequent to June 30, 2022. "Total Exposure" represents the sum of current NAV and unfunded commitments. "Total Portfolio Assets" represent the estimated total plan assets at year-end (December 31, 2022). REITs are included as part of the Value-Add allocation.

OVERALL PLAN PROJECTIONS (5% GROWTH)

Real Estate Portfolio Projections



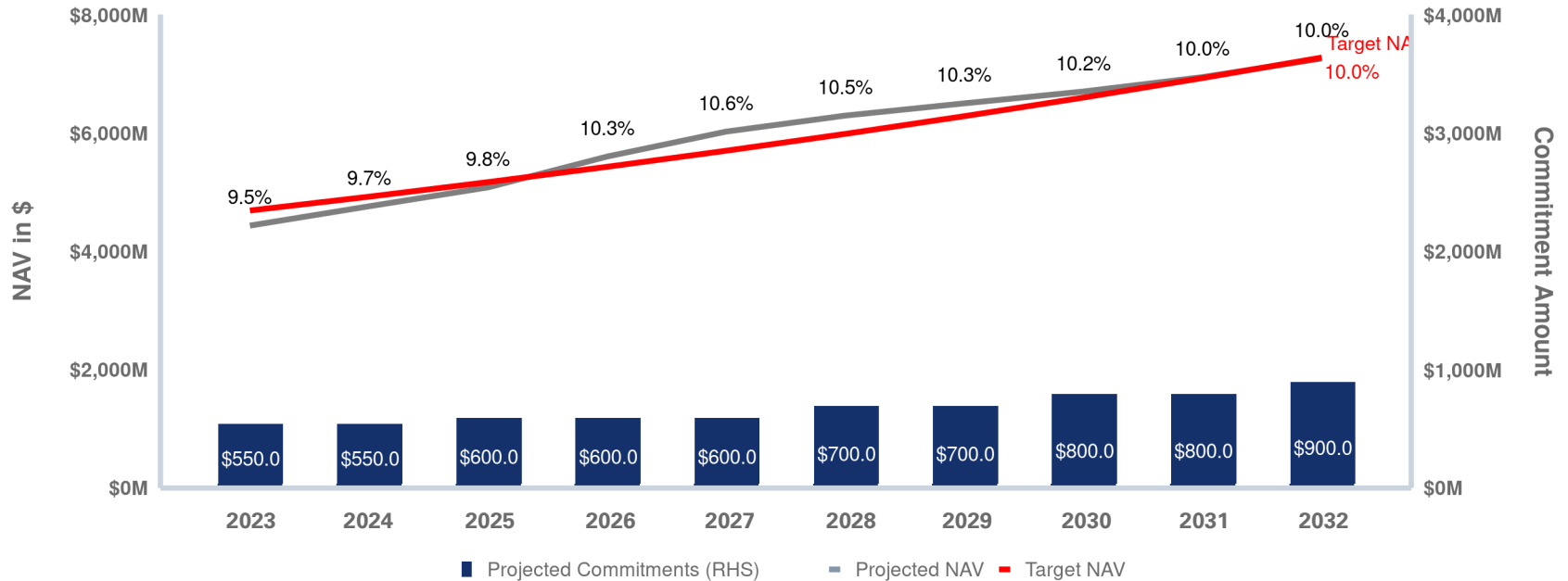
Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Net Asset Value (NAV)	\$3,839.0	\$4,438.7	\$4,765.9	\$5,085.9	\$5,606.9	\$6,028.8	\$6,299.7	\$6,506.7	\$6,706.7	\$6,950.2	\$7,264.5
Uncalled Capital	\$2,134.0	\$1,488.7	\$1,327.7	\$1,229.3	\$1,175.5	\$1,132.0	\$1,222.0	\$1,278.5	\$1,391.2	\$1,460.6	\$1,582.1
NAV + Uncalled Capital	\$5,972.9	\$5,927.5	\$6,093.6	\$6,315.3	\$6,782.4	\$7,160.8	\$7,521.7	\$7,785.2	\$8,097.9	\$8,410.8	\$8,846.6
Target NAV	\$4,470.0	\$4,693.5	\$4,928.2	\$5,174.6	\$5,433.3	\$5,705.0	\$5,990.2	\$6,289.7	\$6,604.2	\$6,934.4	\$7,281.2
NAV (%)	8.6%	9.5%	9.7%	9.8%	10.3%	10.6%	10.5%	10.3%	10.2%	10.0%	10.0%
NAV + Uncalled Capital (%)	13.4%	12.6%	12.4%	12.2%	12.5%	12.6%	12.6%	12.4%	12.3%	12.1%	12.1%
Target Allocation (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

Notes: Real estate portfolio actual data as of June 30, 2022 plus commitments made subsequent to June 30, 2022. Total portfolio assets (not shown on this page but used as the denominator for calculating the percentage allocations) represents the estimated total plan assets at December 31, 2022, growing at the projected 5% annual growth rate. Dollars in millions.



COMMITMENTS & ALLOCATION (5% GROWTH)

Real Estate Commitments by Vintage



More Certain

Less Certain

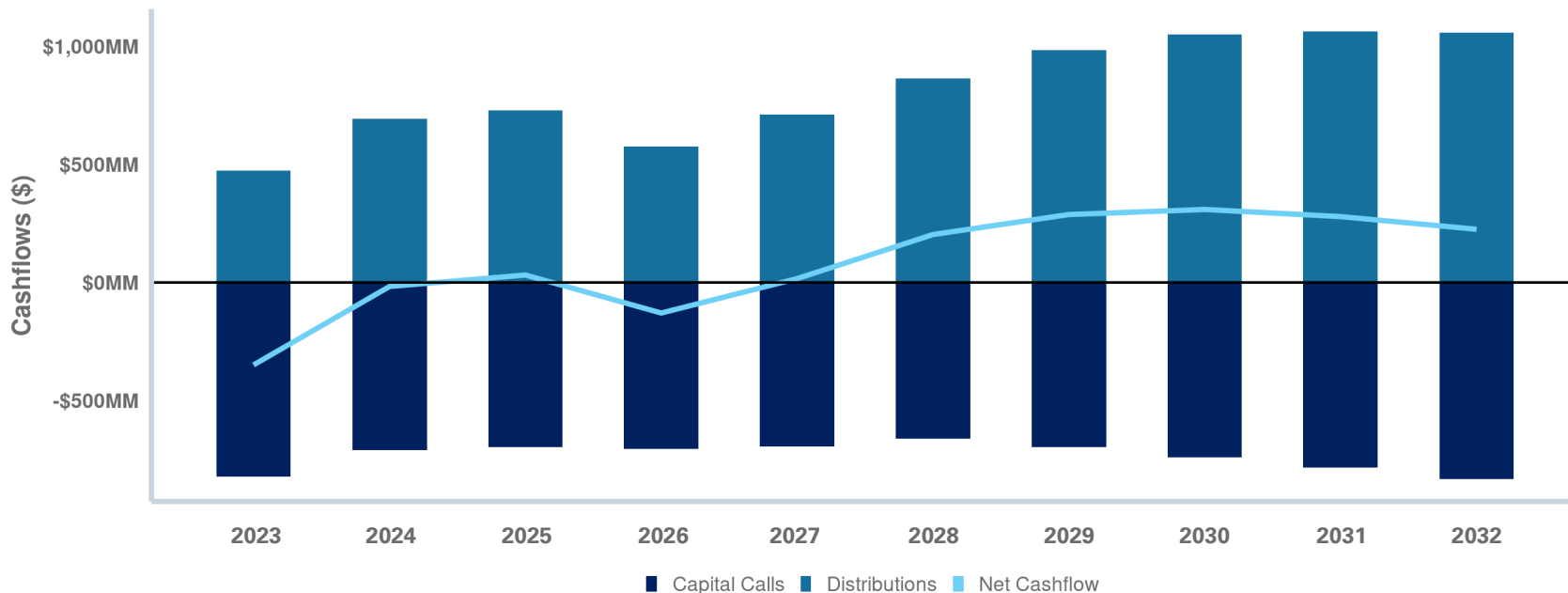
Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Commitments (\$M)	\$550.0	\$550.0	\$600.0	\$600.0	\$600.0	\$700.0	\$700.0	\$800.0	\$800.0	\$900.0
Target (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Projected NAV / Total Portfolio Assets	9.5%	9.7%	9.8%	10.3%	10.6%	10.5%	10.3%	10.2%	10.0%	10.0%

Notes: Real estate portfolio actual data as of June 30, 2022 plus commitments made subsequent to June 30, 2022. Total portfolio assets (not shown on this page but used as the denominator for calculating the percentage allocations) represents the estimated total plan assets at December 31, 2022, growing at the projected 5% annual growth rate. Dollars in millions.



CASH FLOW PROJECTIONS (5% GROWTH)

Real Estate Projected Capital Calls & Distributions



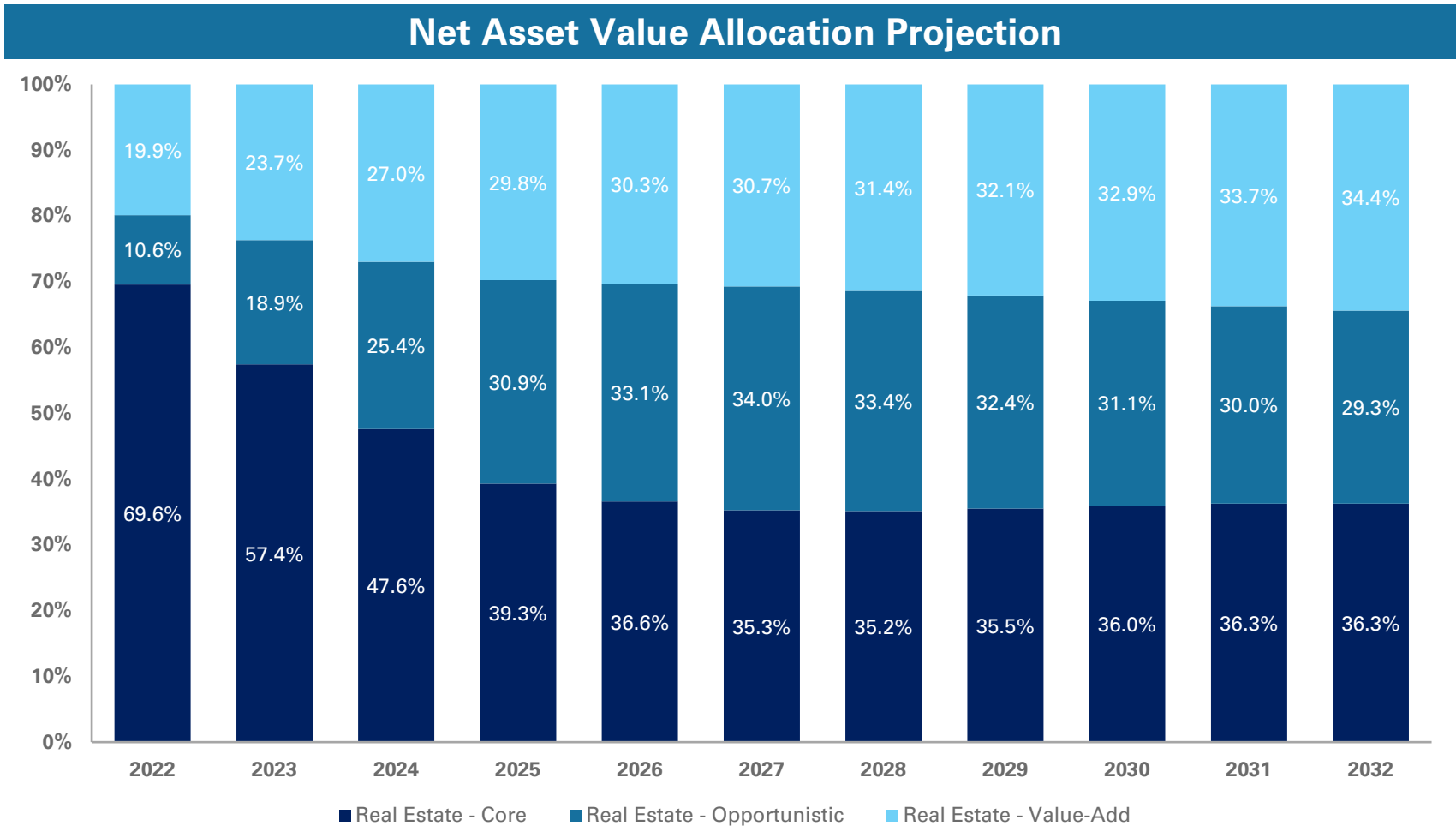
Projected Cashflows

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Capital Calls	-\$823.7	-\$711.0	-\$698.4	-\$705.2	-\$695.4	-\$662.5	-\$696.6	-\$740.9	-\$784.9	-\$833.4
Distributions	\$474.1	\$694.2	\$729.9	\$575.8	\$711.6	\$865.8	\$984.7	\$1,050.3	\$1,064.1	\$1,058.8
Net Cash Flow	-\$349.5	-\$16.8	\$31.5	-\$129.4	\$16.2	\$203.3	\$288.1	\$309.5	\$279.2	\$225.4



Note: Dollars in millions.

ALLOCATION PROJECTIONS (5% GROWTH)



Notes: Real estate portfolio data as of June 30, 2022. REITs are included as part of the Value-Add allocation.

4% GROWTH SCENARIO

Assumes 4% Average
Annual Net Plan-Level
Growth Rate



SUMMARY OF 4% GROWTH SCENARIO

- **The scenario assumes a total net plan-level growth rate of 4% per year**
- **NEPC recommends the following investment pacing over the next few years to achieve the target allocations:**
 - 2023: Commit \$500 million to non-core real estate
 - Includes an allocation to the co-investment program
 - Consider tactical allocations to REITs, depending on market conditions
 - 2024-2026: Commit between \$500 million and \$550 million to non-core real estate per year, including co-investments
 - NEPC believes that a target of three to five commitments per year is appropriate
 - Beyond: Continue to make regular annual commitments to non-core real estate funds
- **In addition, this plan includes:**
 - Continued, select redemptions from open-ended real estate funds and asset sales from separately managed accounts, subject to market environment
 - Continue to receive dividends (rather than re-invest) for most core and core-plus funds for now, but re-evaluate on an annual basis



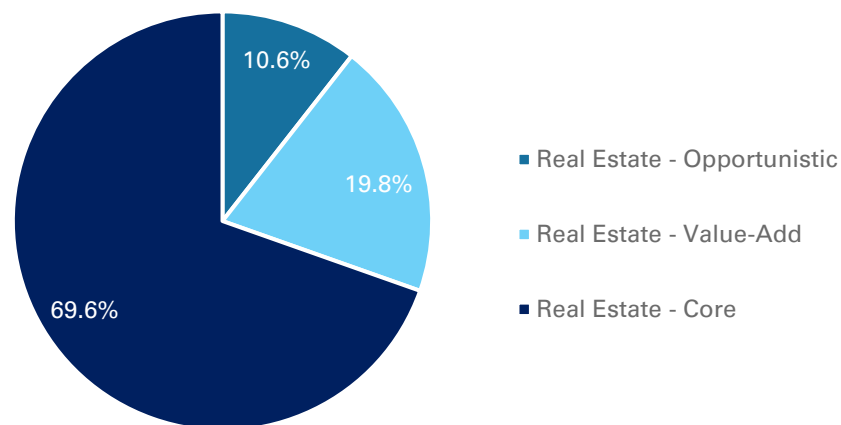
Notes: "Non-core real estate" includes value-add and opportunistic real estate strategies, including secondaries; actual allocations per year may depend on market conditions, manager availability, and portfolio construction considerations.

KEY INPUTS (4% GROWTH)

Plan Summary

Total Portfolio Assets	\$44,700.0
Current NAV %	8.6%
Current Total Exposure %	12.5%
Target Allocation %	10.0%
Ann. Expected Return %	4.0%

Current Real Estate Exposure by NAV



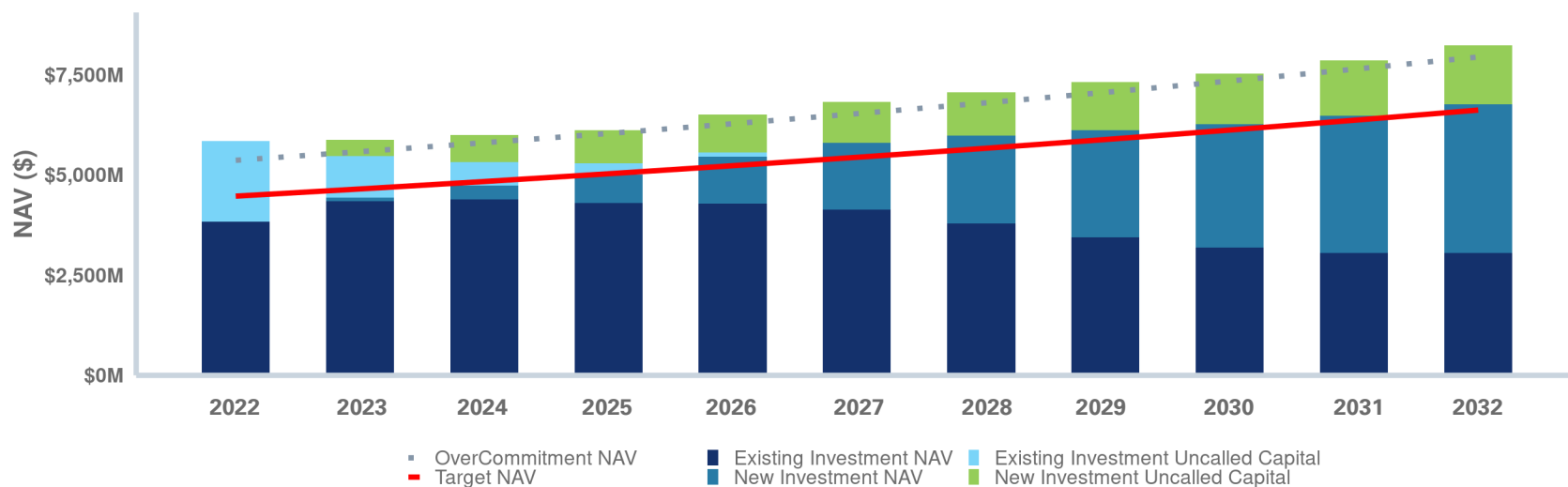
Current Allocations (in millions)

Asset Class	Investment Strategy	Commitment	Unfunded Commitment	NAV	Total Exposure
Real Estate	Real Estate - Core	\$2,260.0	\$32.9	\$2,670.6	\$2,703.5
	Real Estate - Opportunistic	\$2,682.9	\$1,185.4	\$405.6	\$1,591.0
	Real Estate - Value-Add	\$1,902.4	\$544.1	\$762.8	\$1,306.9
	Total	\$6,845.3	\$1,762.4	\$3,839.0	\$5,601.4

Notes: Real estate portfolio net asset value (NAV) as of June 30, 2022; commitment and unfunded commitment amounts include commitments made subsequent to June 30, 2022. "Total Exposure" represents the sum of current NAV and unfunded commitments. "Total Portfolio Assets" represent the estimated total plan assets at year-end (December 31, 2022). REITs are included as part of the Value-Add allocation.

OVERALL PLAN PROJECTIONS (4% GROWTH)

Real Estate Portfolio Projections



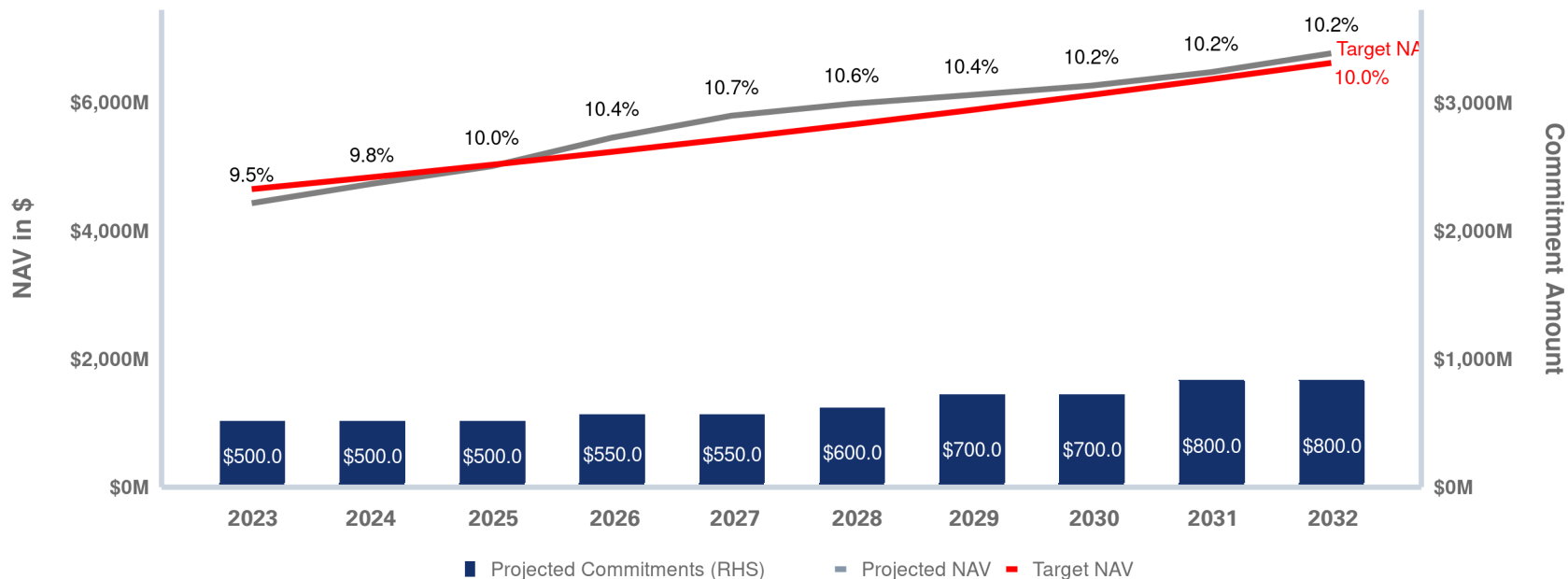
Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Net Asset Value (NAV)	\$3,839.0	\$4,429.4	\$4,731.9	\$5,006.1	\$5,450.0	\$5,793.8	\$5,980.0	\$6,117.6	\$6,262.2	\$6,473.0	\$6,766.7
Uncalled Capital	\$2,010.1	\$1,448.0	\$1,260.9	\$1,106.2	\$1,058.3	\$1,020.9	\$1,077.3	\$1,193.3	\$1,265.5	\$1,386.9	\$1,460.6
NAV + Uncalled Capital	\$5,849.1	\$5,877.5	\$5,992.9	\$6,112.3	\$6,508.3	\$6,814.7	\$7,057.2	\$7,311.0	\$7,527.7	\$7,860.0	\$8,227.3
Target NAV	\$4,470.0	\$4,648.8	\$4,834.8	\$5,028.1	\$5,229.3	\$5,438.4	\$5,656.0	\$5,882.2	\$6,117.5	\$6,362.2	\$6,616.7
NAV (%)	8.6%	9.5%	9.8%	10.0%	10.4%	10.7%	10.6%	10.4%	10.2%	10.2%	10.2%
NAV + Uncalled Capital (%)	13.1%	12.6%	12.4%	12.2%	12.4%	12.5%	12.5%	12.4%	12.3%	12.4%	12.4%
Target Allocation (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

Notes: Real estate portfolio actual data as of June 30, 2022 plus commitments made subsequent to June 30, 2022. Total portfolio assets (not shown on this page but used as the denominator for calculating the percentage allocations) represents the estimated total plan assets at December 31, 2022, growing at the projected 4% annual growth rate. Dollars in millions.



COMMITMENTS & ALLOCATION (4% GROWTH)

Real Estate Commitments by Vintage



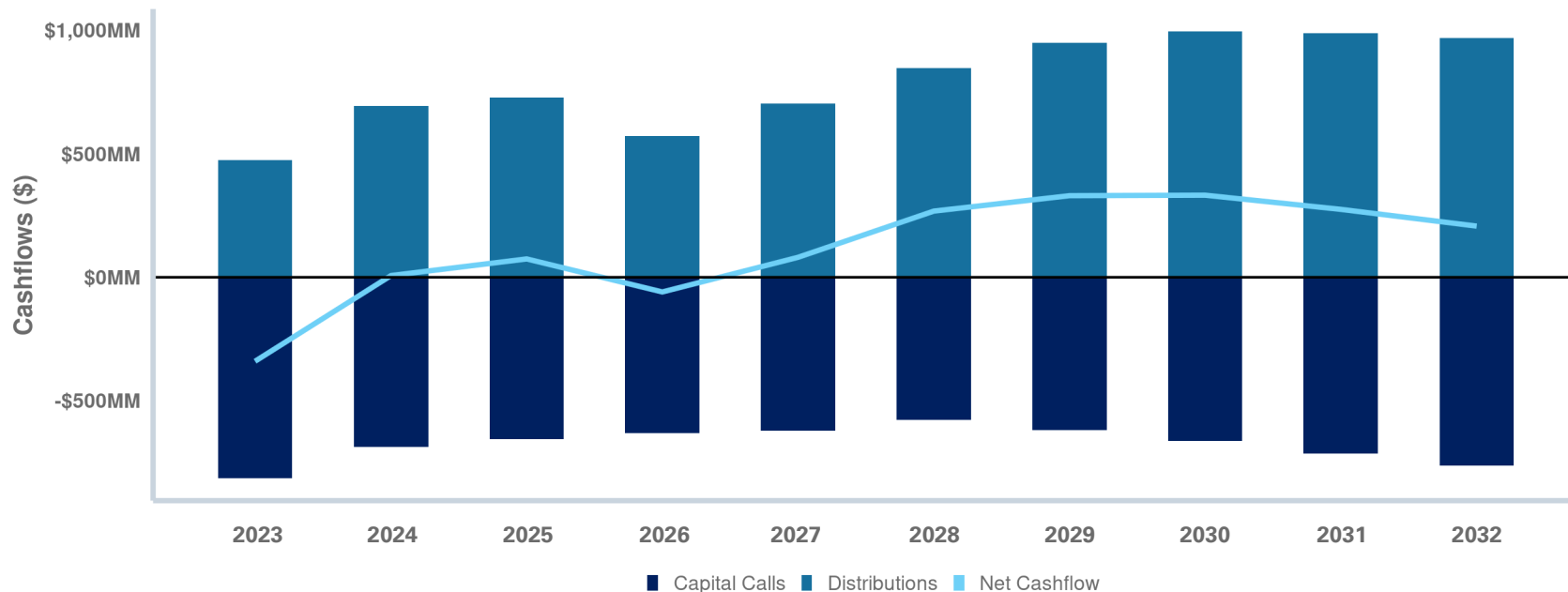
Description	More Certain					Less Certain				
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Commitments (\$M)	\$500.0	\$500.0	\$500.0	\$550.0	\$550.0	\$600.0	\$700.0	\$700.0	\$800.0	\$800.0
Target (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Projected NAV / Total Portfolio Assets	9.5%	9.8%	10.0%	10.4%	10.7%	10.6%	10.4%	10.2%	10.2%	10.2%

Notes: Real estate portfolio actual data as of June 30, 2022 plus commitments made subsequent to June 30, 2022. Total portfolio assets (not shown on this page but used as the denominator for calculating the percentage allocations) represents the estimated total plan assets at December 31, 2022, growing at the projected 4% annual growth rate. Dollars in millions.



CASH FLOW PROJECTIONS (4% GROWTH)

Real Estate Projected Capital Calls & Distributions



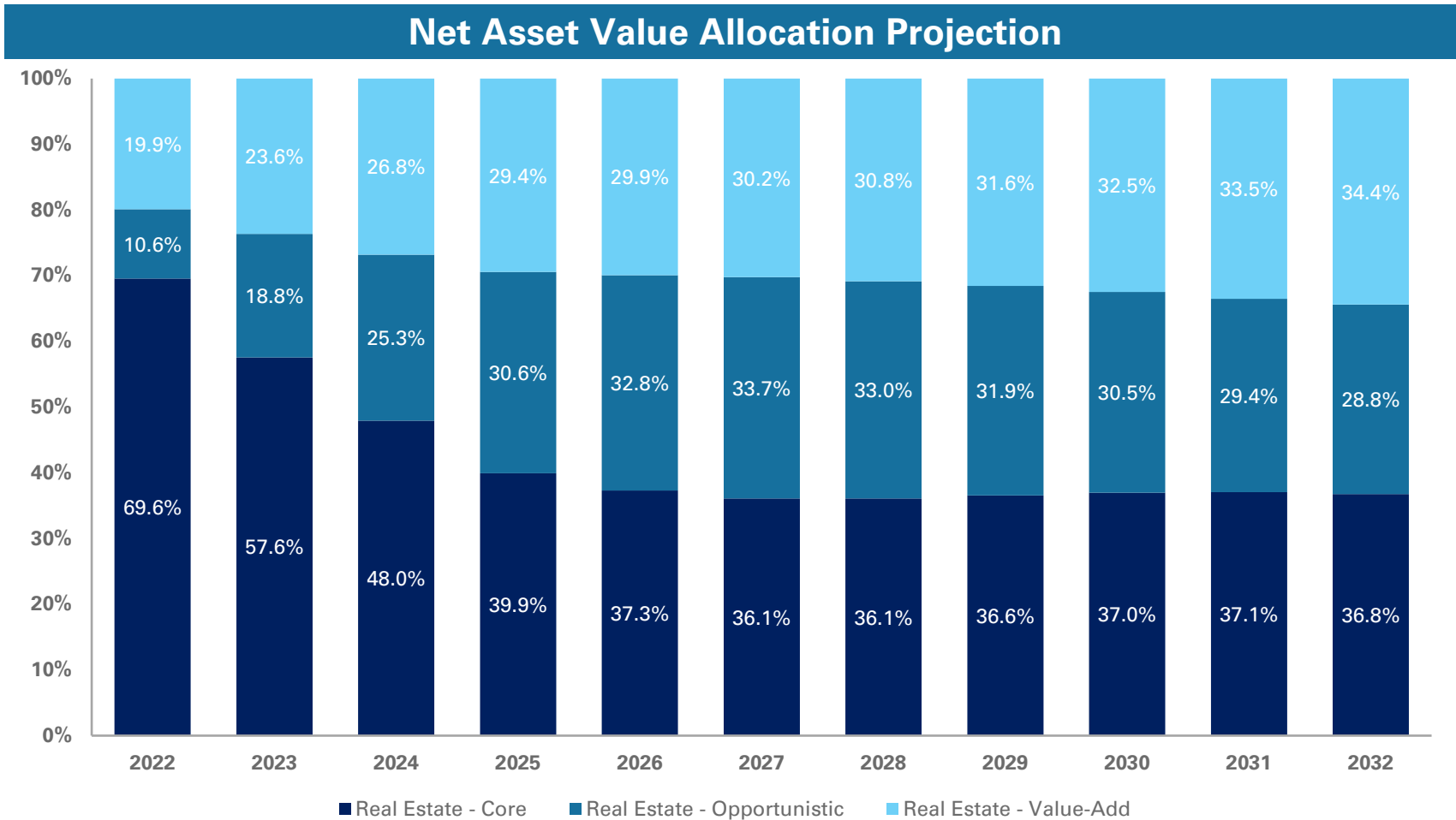
Projected Cashflows

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Capital Calls	-\$814.3	-\$687.1	-\$654.8	-\$632.1	-\$622.0	-\$578.6	-\$619.3	-\$663.6	-\$714.7	-\$762.9
Distributions	\$474.1	\$694.1	\$729.0	\$572.6	\$702.8	\$846.7	\$949.8	\$996.1	\$989.9	\$970.1
Net Cash Flow	-\$340.2	\$7.0	\$74.3	-\$59.5	\$80.7	\$268.2	\$330.5	\$332.5	\$275.1	\$207.2



Note: Dollars in millions.

ALLOCATION PROJECTIONS (4% GROWTH)



Notes: Real estate portfolio data as of June 30, 2022. REITs are included as part of the Value-Add allocation.

3% GROWTH SCENARIO

Assumes 3% Average
Annual Net Plan-Level
Growth Rate



SUMMARY OF 3% GROWTH SCENARIO

- **The scenario assumes a total net plan-level growth rate of 3% per year**
- **NEPC recommends the following investment pacing over the next few years to achieve the target allocations:**
 - 2023: Commit \$400 million to non-core real estate
 - Includes an allocation to the co-investment program
 - Consider tactical allocations to REITs, depending on market conditions
 - 2024-2026: Commit \$400-450 million to non-core real estate per year, including co-investments
 - NEPC believes that a target of three to five commitments per year is appropriate
 - Beyond: Continue to make regular annual commitments to non-core real estate funds
- **In addition, this plan includes:**
 - Continued, select redemptions from open-ended real estate funds and asset sales from separately managed accounts, subject to market environment
 - Continue to receive dividends (rather than re-invest) for most core and core-plus funds but re-evaluate on an annual basis



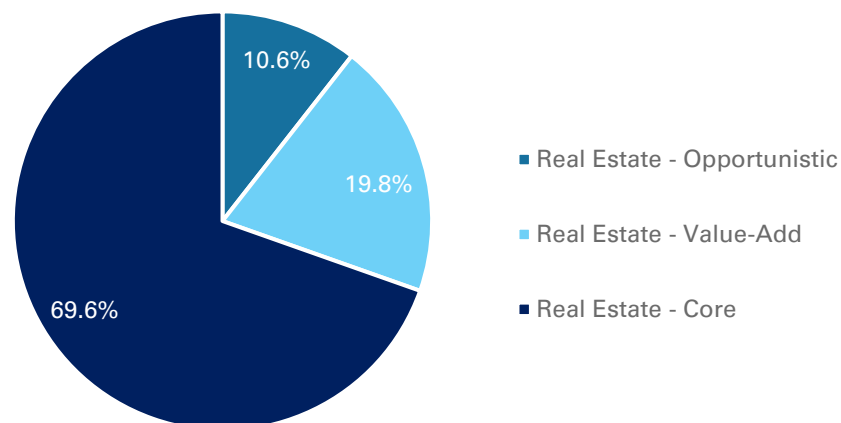
Notes: "Non-core real estate" includes value-add and opportunistic real estate strategies, including secondaries; actual allocations per year may depend on market conditions, manager availability, and portfolio construction considerations.

KEY INPUTS (3% GROWTH)

Plan Summary

Total Portfolio Assets	\$44,700.0
Current NAV %	8.6%
Current Total Exposure %	12.5%
Target Allocation %	10.0%
Ann. Expected Return %	3.0%

Current Real Estate Exposure by NAV



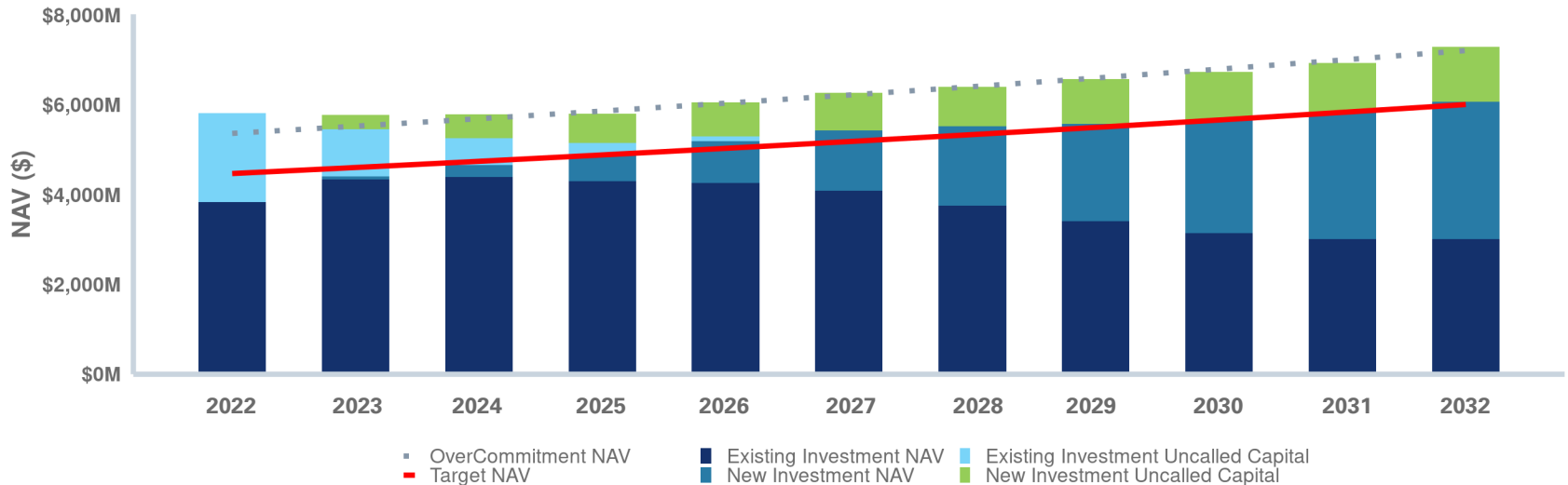
Current Allocations (in millions)

Asset Class	Investment Strategy	Commitment	Unfunded Commitment	NAV	Total Exposure
Real Estate	Real Estate - Core	\$2,260.0	\$32.9	\$2,670.6	\$2,703.5
	Real Estate - Opportunistic	\$2,682.9	\$1,185.4	\$405.6	\$1,591.0
	Real Estate - Value-Add	\$1,902.4	\$544.1	\$762.8	\$1,306.9
	Total	\$6,845.3	\$1,762.4	\$3,839.0	\$5,601.4

Notes: Real estate portfolio net asset value (NAV) as of June 30, 2022; commitment and unfunded commitment amounts include commitments made subsequent to June 30, 2022. "Total Exposure" represents the sum of current NAV and unfunded commitments. "Total Portfolio Assets" represent the estimated total plan assets at year-end (December 31, 2022). REITs are included as part of the Value-Add allocation.

OVERALL PLAN PROJECTIONS (3% GROWTH)

Real Estate Portfolio Projections



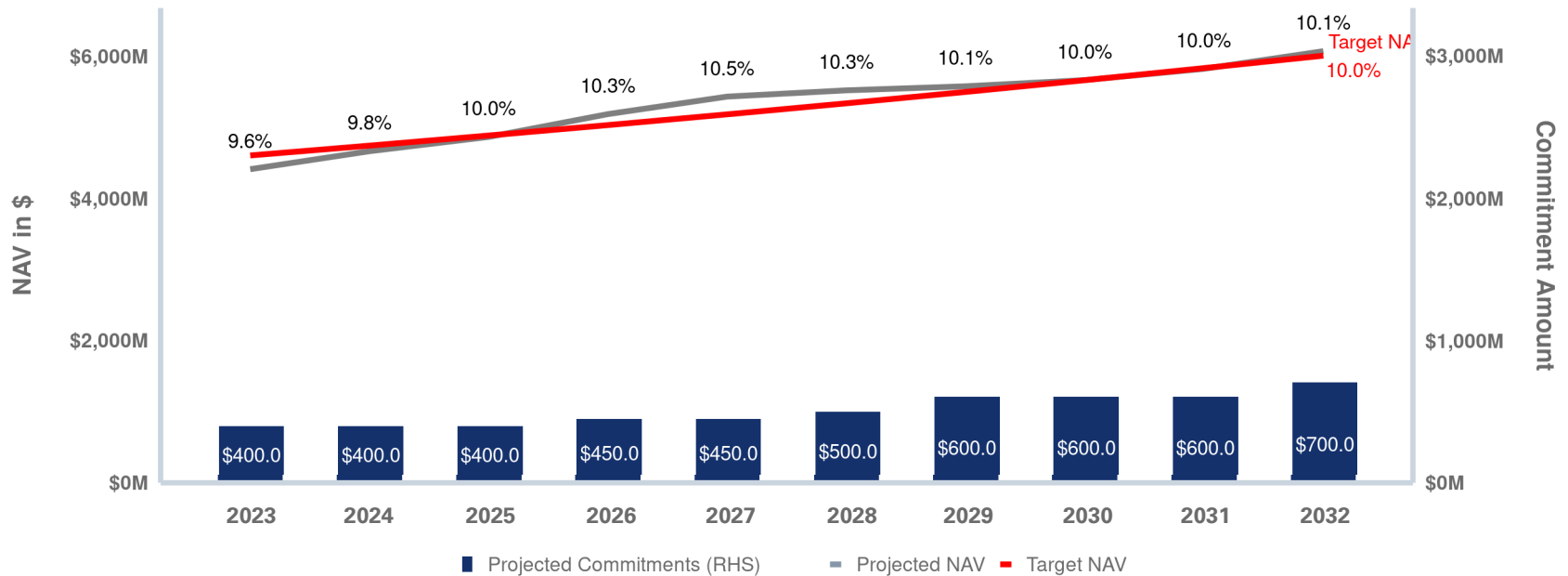
Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Net Asset Value (NAV)	\$3,839.0	\$4,410.8	\$4,663.9	\$4,865.1	\$5,185.6	\$5,431.6	\$5,519.8	\$5,576.9	\$5,664.0	\$5,822.7	\$6,070.5
Uncalled Capital	\$1,975.9	\$1,366.6	\$1,127.4	\$941.3	\$876.1	\$830.1	\$886.4	\$1,002.5	\$1,074.7	\$1,114.7	\$1,217.7
NAV + Uncalled Capital	\$5,814.8	\$5,777.5	\$5,791.4	\$5,806.4	\$6,061.7	\$6,261.6	\$6,406.3	\$6,579.4	\$6,738.7	\$6,937.5	\$7,288.2
Target NAV	\$4,470.0	\$4,604.1	\$4,742.2	\$4,884.5	\$5,031.0	\$5,182.0	\$5,337.4	\$5,497.5	\$5,662.5	\$5,832.3	\$6,007.3
NAV (%)	8.6%	9.6%	9.8%	10.0%	10.3%	10.5%	10.3%	10.1%	10.0%	10.0%	10.1%
NAV + Uncalled Capital (%)	13.0%	12.5%	12.2%	11.9%	12.0%	12.1%	12.0%	12.0%	11.9%	11.9%	12.1%
Target Allocation (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

Notes: Real estate portfolio actual data as of June 30, 2022 plus commitments made subsequent to June 30, 2022. Total portfolio assets (not shown on this page but used as the denominator for calculating the percentage allocations) represents the estimated total plan assets at December 31, 2022, growing at the projected 3% annual growth rate. Dollars in millions.



COMMITMENTS & ALLOCATION (3% GROWTH)

Real Estate Commitments by Vintage



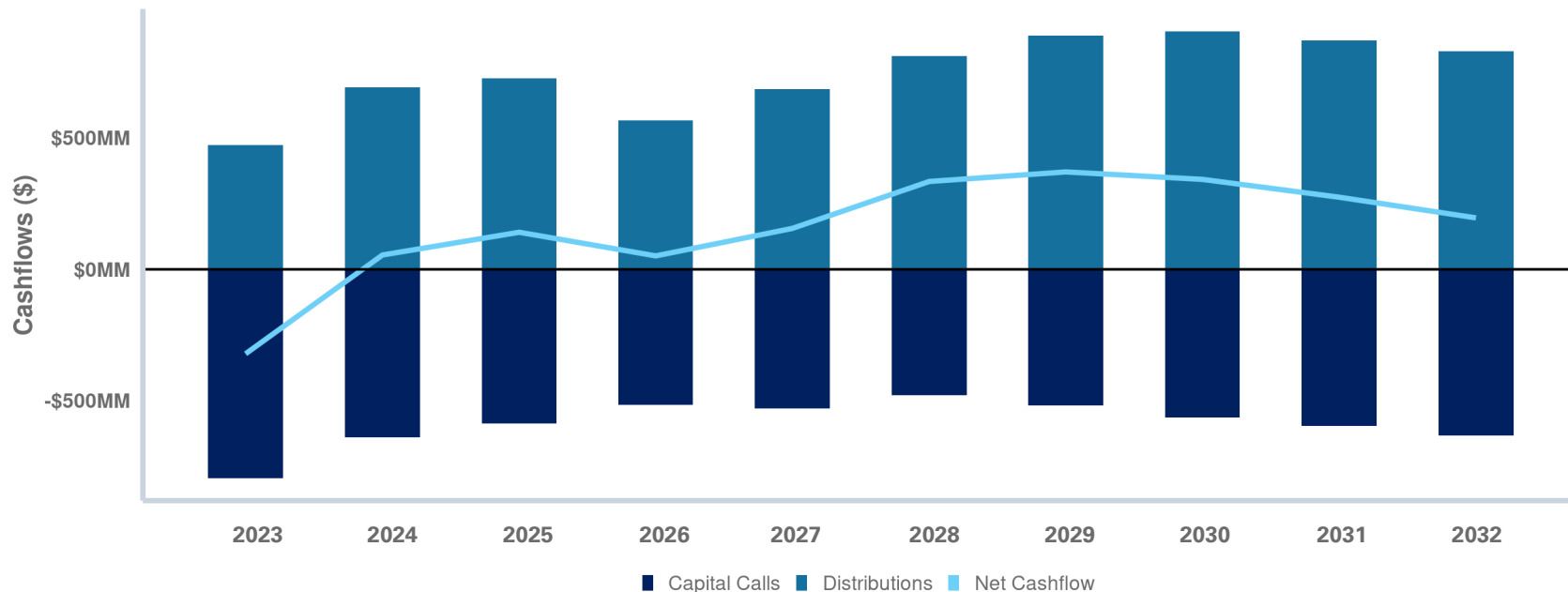
Description	More Certain					Less Certain				
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Total Commitments (\$M)	\$400.0	\$400.0	\$400.0	\$450.0	\$450.0	\$500.0	\$600.0	\$600.0	\$600.0	\$700.0
Target (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Projected NAV / Total Portfolio Assets	9.6%	9.8%	10.0%	10.3%	10.5%	10.3%	10.1%	10.0%	10.0%	10.1%

Notes: Real estate portfolio actual data as of June 30, 2022 plus commitments made subsequent to June 30, 2022. Total portfolio assets (not shown on this page but used as the denominator for calculating the percentage allocations) represents the estimated total plan assets at December 31, 2022, growing at the projected 3% annual growth rate. Dollars in millions.



CASH FLOW PROJECTIONS (3% GROWTH)

Real Estate Projected Capital Calls & Distributions



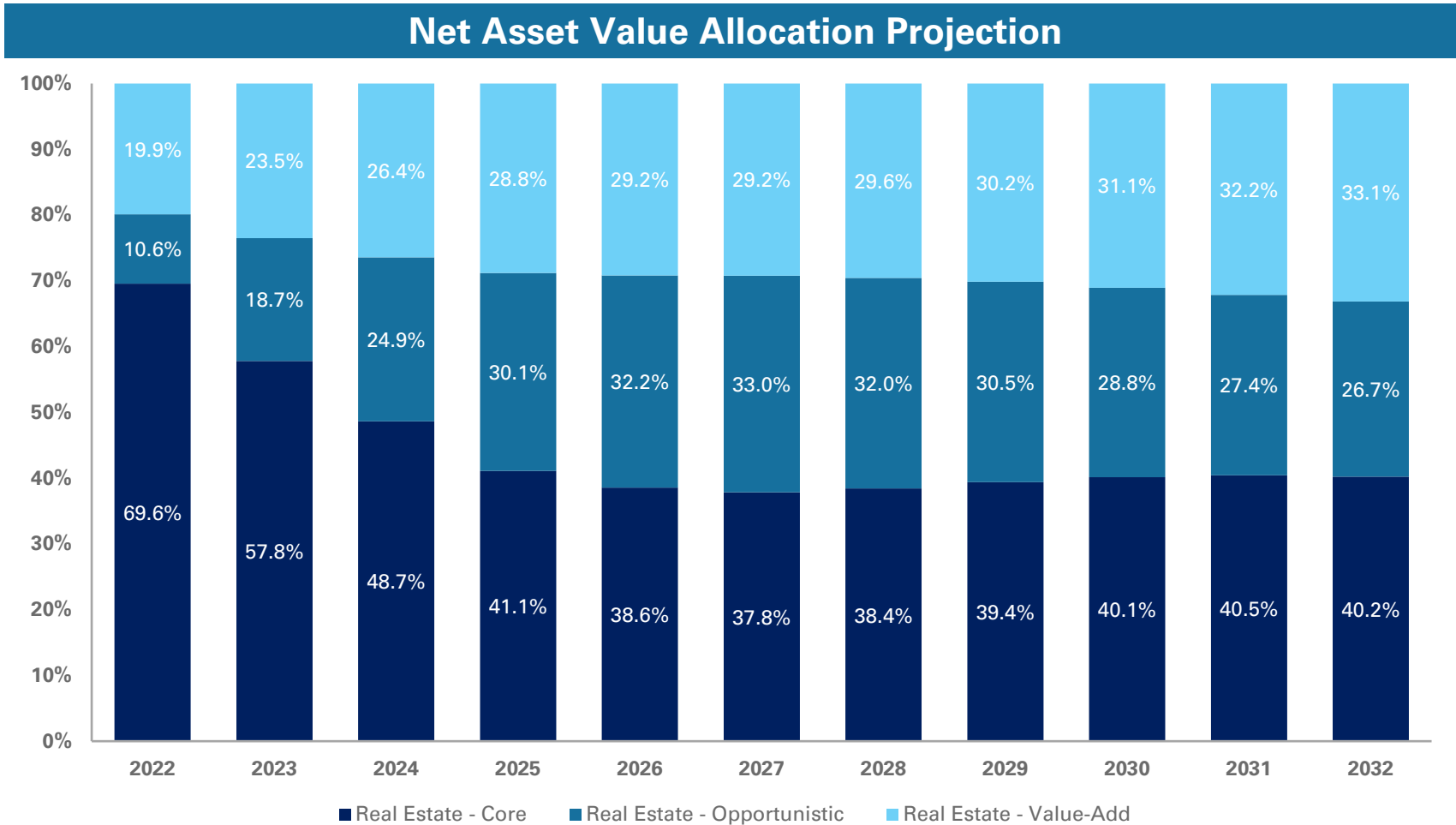
Projected Cashflows

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Capital Calls	-\$795.7	-\$639.2	-\$586.2	-\$515.1	-\$530.7	-\$478.6	-\$519.3	-\$563.6	-\$596.1	-\$633.6
Distributions	\$474.1	\$693.9	\$727.4	\$566.4	\$686.6	\$813.2	\$890.3	\$906.1	\$870.8	\$829.5
Net Cash Flow	-\$321.6	\$54.7	\$141.2	\$51.3	\$155.9	\$334.6	\$371.0	\$342.5	\$274.7	\$195.9



Note: Dollars in millions.

ALLOCATION PROJECTIONS (3% GROWTH)



Notes: Real estate portfolio data as of June 30, 2022. REITs are included as part of the Value-Add allocation.



APPENDIX 1:

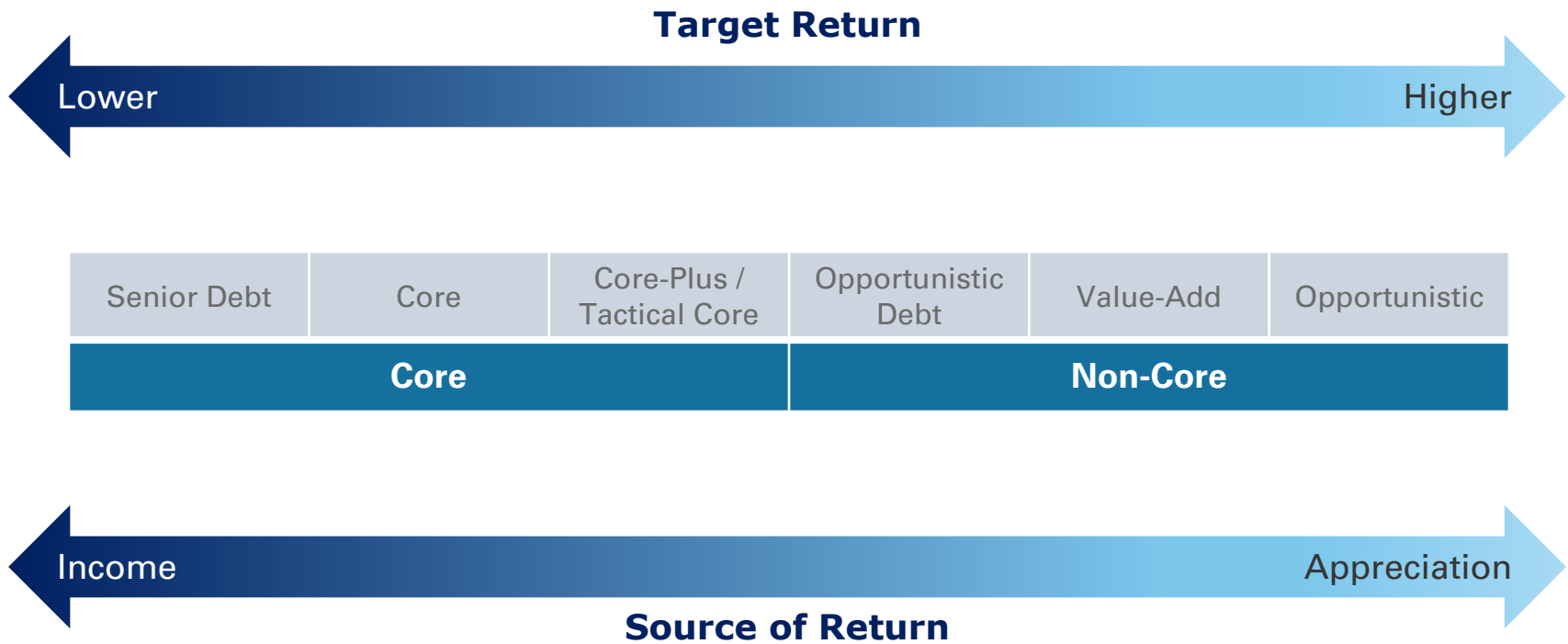
Real Estate Overview



REAL ESTATE STRATEGY TYPES

- **Real Estate is not “one-size-fits-all” and therefore there is no single “target portfolio” suitable for all investors**
- **There is a spectrum of investment strategies within real estate, which can generally be grouped into “Core” and “Non-Core” categories**
 - **Core:**
 - Typically open-ended in nature, providing some degree of liquidity
 - In general, highly diversified
 - Typically, more “beta” exposure and less business-plan risk (i.e., stabilized assets)
 - Lower-risk, lower-return strategies; can provide reliable current income
 - **Non-Core:**
 - Typically closed-end in nature
 - Range of diversification/concentrations
 - Higher-risk, higher-return strategies

SPECTRUM OF REAL ESTATE STRATEGIES



LIQUID & SEMI-LIQUID VEHICLE STRUCTURES

- **Open-ended and liquid investment structures**

- Assets are valued on a quarterly basis (except REITs, which have daily market prices)
- Open-end funds typically provide quarterly liquidity, subject to commitment or redemption queues
- Direct investments and assets in separate accounts can be sold, subject to market conditions

Investment Type	Description
Publicly Traded REIT Funds	Comprised of REITs and REOCs (Real Estate Operating Companies) that file with the SEC and whose shares trade on national stock exchanges such as the NYSE, AMEX or NASDAQ; publicly traded security provides significant liquidity to investors. May be structured as a commingled fund, separate account, or mutual fund.
Separate Accounts	An exclusive investment vehicle designed and managed by a third party fiduciary for an individual institution (generally created to allow the institution to pursue a specific investment strategy or individual property). Investors have significant control over investments.
Direct Investments	Non-intermediated (or direct) investment in an individual real estate asset. Owners have complete control over investment.
Open-End Funds	Typically an insurance company separate accounts, trust, or private REIT that allow ERISA plans to commingle their capital. Most vehicles are large (\$2+ billion of net asset value) and focus on core and/or value added strategies. Lock-up periods of one-two years are common and redemptions are usually permitted with 90 days notice, but are subject to available cash.

ILLIQUID VEHICLE STRUCTURES

▪ Closed-end investment structures

- Structured like private equity funds where investors make a commitment which is drawn down over time
- Valuations and performance is reported on a quarterly basis
- Liquidity is defined by the life of the fund
- Investors have limited rights as defined by the limited partner agreement (LPA)
- Funds are typically smaller in size (\$100M to \$2B) with ten-year terms on average
- Funds typically focus on higher risk/return strategies or specific sectors where the manager has expertise
- Funds typically include asset management fees and promote structures

Investment Type	Description
Sector Focused Equity Funds	An investment strategy targeting specific market segments, including individual property sectors (i.e. office, multifamily, retail, industrial, self storage, senior housing, land, etc.).
Diversified Equity Funds	Diversified investment strategy that targets multiple sectors. More typical in the value-add or opportunistic space.
Debt / Mezzanine Funds	An investment strategy focusing on income producing and/or structured products (i.e. not pure equity). Investment strategies can range from new origination of debt to the acquisition of existing debt.
Fund-of-Funds	An investment strategy of holding a portfolio of other investment funds.
Secondary Funds	An investment strategy targeting investor LP interests which are generally purchased at a discount from valuation from motivated sellers. Generally, the interests purchased have limited exposure to unfunded capital commitments.

PORTFOLIO CONSTRUCTION BEST PRACTICES

- **Maintain regular investment pacing and avoid trying to time the market**
 - Closed-end funds are long-term investments with multi-year investment periods
 - Vintage year diversification matters, as a consistent annual investment pace is the best way to mitigate market timing risk
 - It is the manager’s job to find opportunities and adjust to the market
- **Opportunistic mandates and managers with the expertise and flexibility to invest across sectors, capital structures, and/or public and private markets may be best-positioned to capitalized on potential distress**
- **Re-up with strong managers in your portfolio when practicable and focus on key relationships**
 - While there is no “right number” of underlying funds, too much manager proliferation can make a portfolio more difficult to manage and monitor
 - More diversified funds (including secondaries) can provide substantial diversification with a single commitment



APPENDIX 2:

Disclaimers & Disclosures



DISCLAIMER

- **Past performance is no guarantee of future results.**
- **The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**
- **Information used to prepare this report was obtained directly from the investment managers or custodians, and market index data was provided by other external sources. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.**

PACING PLAN DISCLAIMERS

- **NEPC's private markets pacing analysis projects a potential level of future assets and cash flows for a single scenario based on a series of assumptions. This analysis is intended to help estimate future exposure levels. It is not a guarantee of future cash flows, appreciation or returns.**
- **The timing and amounts of projected future cash flows and market values of investments could vary significantly from the amounts projected in this pacing analysis due to manager-specific and industry-wide macroeconomic factors.**
- **Estimates of projected cash flows and market values for existing private markets commitments were made at the Fund level and do not incorporate any underlying portfolio company projections or analysis.**
- **The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**
- **Data used to prepare this report was obtained directly from the investment managers and other third parties. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **This report may contain confidential or proprietary information and is intended only for the designated recipient(s). If you are not a designated recipient, you may not copy or distribute this document.**

ALTERNATIVE INVESTMENT DISCLOSURE

In addition, it is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds, real estate and private equity:

1. Performance can be volatile and investors could lose all or a substantial portion of their investment
2. Leverage and other speculative practices may increase the risk of loss
3. Past performance may be revised due to the revaluation of investments
4. These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms
5. A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value
6. These funds are not subject to the same regulatory requirements as registered investment vehicles
7. Managers may not be required to provide periodic pricing or valuation information to investors
8. These funds may have complex tax structures and delays in distributing important tax information
9. These funds often charge high fees
10. Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy

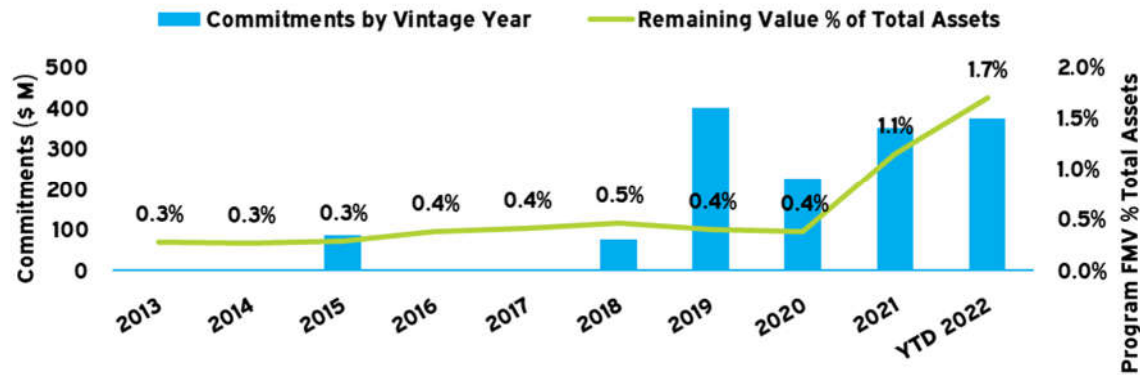
State of Connecticut Retirement Plans and Trust Funds

December 14, 2022

Real Assets Pacing Study

Introduction

CRPTF made its first commitment to a real assets fund in 2011, and has since made 14 additional commitments totaling over \$1.6 billion in capital. In early 2020, the CRPTF approved a target allocation of 4.2% to the Real Assets Program. In September 2022, the CRPTF approved an increase to a target allocation of 7.0% of total plan assets.



Program Status¹

No. of Investments	15
Committed (\$ MM)	1,635.0
Contributed (\$ MM)	831.2
Distributed (\$ MM)	188.2
Remaining Value (\$ MM)	709.5

Performance Since Inception¹

	Program
DPI	0.23x
TVPI	1.08x
IRR	4.5%

¹ As of June 30, 2022.

Portfolio Composition

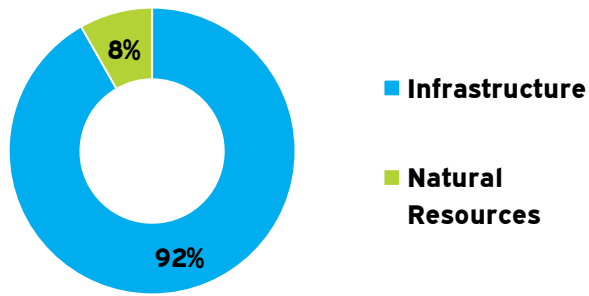
Investment	Vintage	Strategy	Committed ¹ (\$ M)
IFM Global Infrastructure (U.S.), L.P.	Open-End	Infrastructure	300.0
EIG Energy Fund XV, L.P.	2010	Natural Resources	60.0
ArcLight Energy Partners Fund V, L.P.	2011	Infrastructure	65.0
Arclight Energy Partners Fund VI, L.P.	2015	Infrastructure	85.0
ISQ Global Infrastructure Fund II (USTE), L.P.	2017	Infrastructure	75.0
Homestead Capital USA Farmland Fund III, L.P.	2018	Natural Resources	75.0
Global Infrastructure Partners IV, L.P.	2019	Infrastructure	200.0
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	2020	Infrastructure	100.0
Stonepeak Infrastructure Fund IV	2020	Infrastructure	125.0
Tiger Infrastructure Partners Fund III	2020	Infrastructure	100.0
Climate Adaptive Infrastructure I	2021	Infrastructure	125.0
GCOF III Co-Invest	2021	Infrastructure	50.0
Grain Communications Opportunity Fund III, L.P.	2021	Infrastructure	75.0
ISQ Global Infrastructure Fund III (USTE), L.P.	2021	Infrastructure	150.0
Morgan Stanley Investment Management	2021	Infrastructure	150.0 ²
Paine Schwartz Partners Food Chain Fund VI	2022	Natural Resources	150.0
Total			1,885.0

¹ As of November 4, 2022.

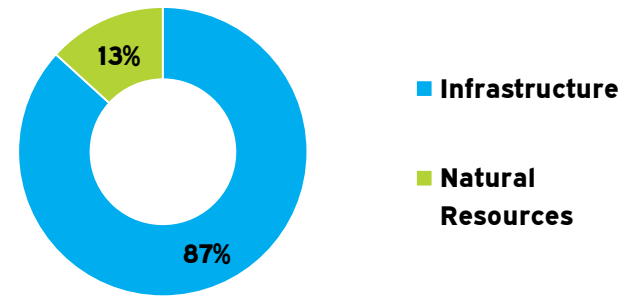
² Morgan Stanley Investment Management is a total commitment of \$375 million to be deployed in co-investment opportunities within Real Estate and Infrastructure. The \$150 million represents the infrastructure allocation.

Fund Diversification by Strategy As of June 30, 2022

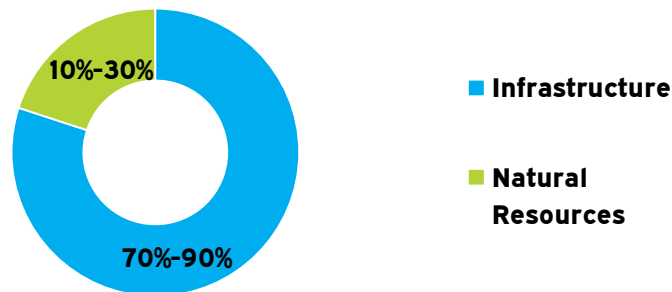
Percent of FMV



Percent of Exposure¹

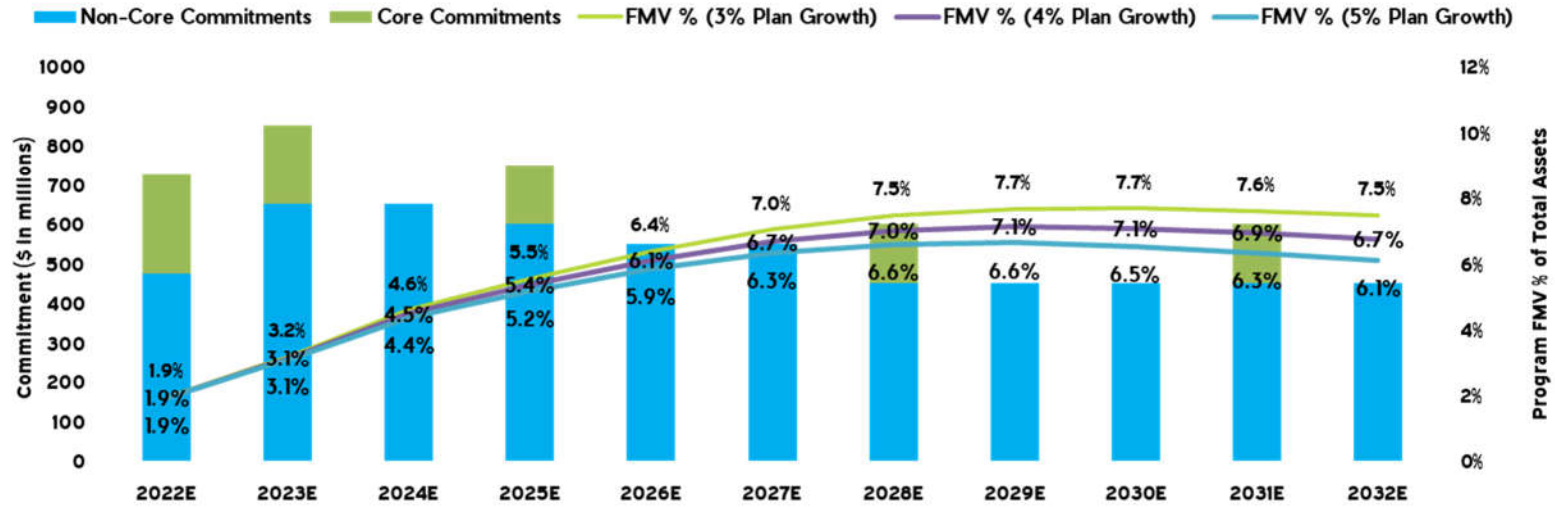


Target Diversification



¹ Exposure represents the sum of the remaining value and unfunded commitments. Includes subsequent to June 30, 2022 commitments to IFM Global Infrastructure (\$100 million) and Paine Schwartz Partners Food Chain Fund VI (\$150 million).

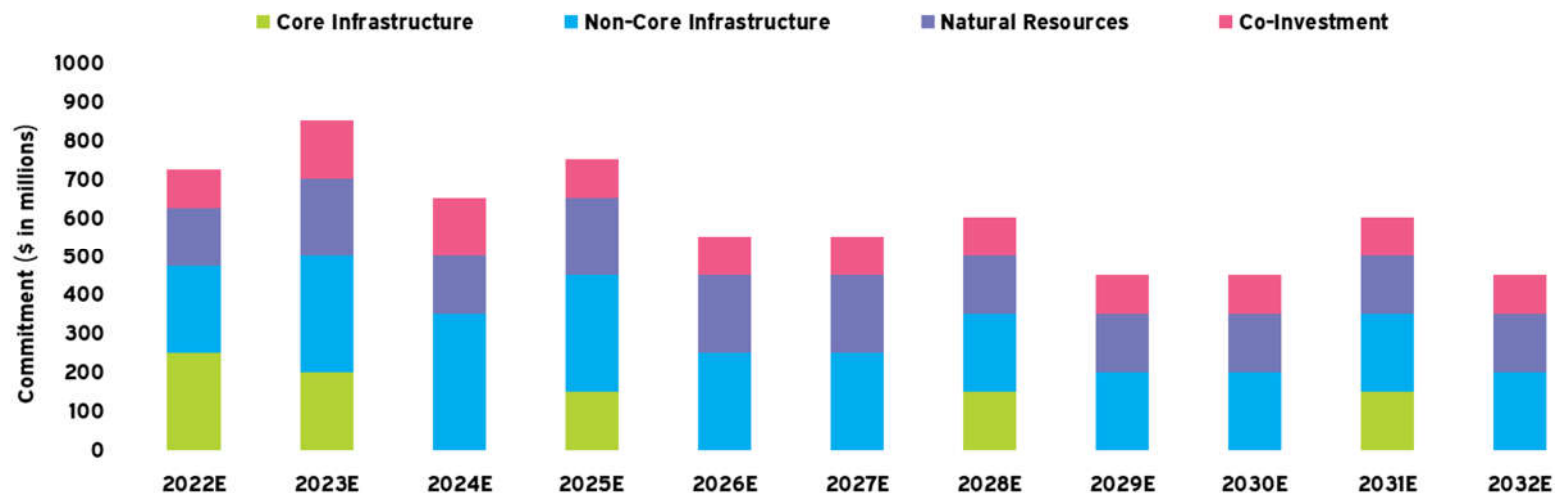
Pacing Study Summary



(\$ in millions)	2022E ¹	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Private Market Investments											
Non-Core Commitments	475	650	650	600	550	550	450	450	450	450	450
Core Commitments	250	200	0	150	0	0	150	0	0	150	0
Total Commitments	725	850	650	750	550	550	600	450	450	600	450
Net Cash Flow	(147)	(541)	(602)	(351)	(279)	(163)	(31)	107	222	281	325
Fair Market Value	873	1,485	2,211	2,748	3,257	3,695	4,037	4,269	4,406	4,494	4,544
Unfunded	991	1,227	1,160	1,375	1,361	1,337	1,360	1,250	1,167	1,238	1,168

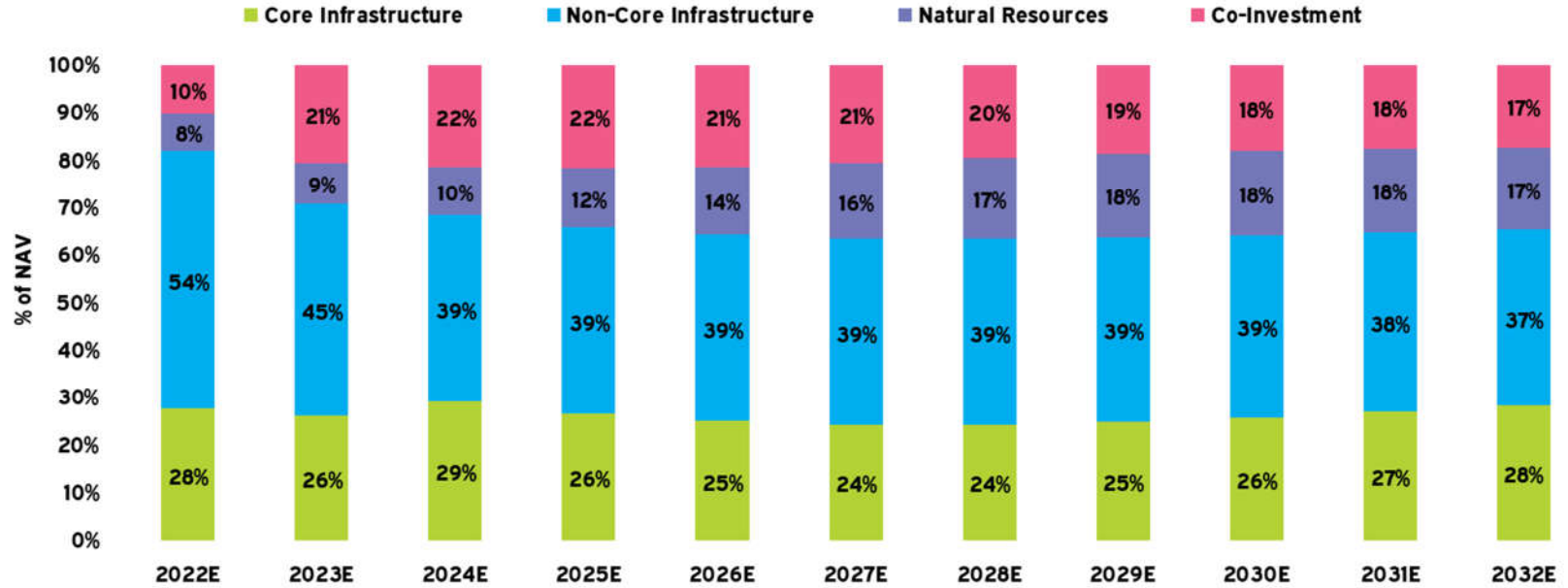
¹ 2022E includes closed commitments to: Tiger Infrastructure Partners III (\$100 million); Climate Adaptive Infrastructure (\$125 million); IFM Global Infrastructure (\$100 million); Morgan Stanley CT Real Assets Co-Investment (\$50 million); and Paine Schwartz Partners Food Chain Fund VI (\$150 million). The remaining allocation for 2022 is expected to be to BlackRock Global Infrastructure Fund IV.

Commitment by Strategy



	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Non-Core Infrastructure	225	300	350	300	250	250	200	200	200	200	200
Natural Resources	150	200	150	200	200	200	150	150	150	150	150
Co-Investment	100	150	150	100	100	100	100	100	100	100	100
Non-Core Total	475	650	650	600	550	550	450	450	450	450	450
Core Infrastructure	250	200	0	150	0	0	150	0	0	150	0
Total	725	850	650	750	550	550	600	450	450	600	450

NAV Exposure by Strategy



Return Ranges by Strategy

Strategy	IRR	TVPI	Fund Life
Non-Core Infrastructure	8.4%	1.5x	17
Natural Resources	8.8%	1.4x	15
Co-Investment	10.0%	1.7x	NA
Core Infrastructure	6.9%	NA	NA



Real Assets Portfolio Goals

- Target commitment pacing of \$200 million for core and \$650 million for non-core in 2023
- Target investment size of \$100 million to \$200 million
- Continue diversification efforts to balance legacy energy exposure
- Review investment managers and opportunities within various non-core infrastructure and natural resources sub-sectors
- Continue focus on vintage year and strategy diversification with consistent pacing efforts
- Build out co-investment opportunities with investment managers of conviction





SHAWN T. WOODEN
TREASURER

State of Connecticut
Office of the Treasurer

DARRELL V. HILL
DEPUTY TREASURER

December 8, 2022

Members of the Investment Advisory Council

Re: HarbourVest CT Co-Investment Fund L.P. & HarbourVest CT Private Debt Fund L.P.

Dear Fellow IAC Member:

At the December 14, 2022 meeting of the Investment Advisory Council ("IAC"), I will present for your consideration investment opportunities for both the Private Investment Fund ("PIF") and the Private Credit Fund ("PCF") of the Connecticut Retirement Plans and Trust Funds: HarbourVest CT Co-Investment Fund L.P. ("CT Co-Investment") and HarbourVest CT Private Debt Fund L.P. ("CT Private Debt"). These opportunities will expand Connecticut's existing private equity and private credit co-investment partnership with HarbourVest Partners ("HarbourVest"), a leading private markets investment management firm with more than \$100 billion of assets under management.

The existing CT Co-Investment and CT Private Debt opportunities were presented to the IAC in September 2021. Commitments of \$450 million to each of CT Co-Investment and CT Private Debt closed in January 2022. Each vehicle was structured to target investment pacing of \$150 million per year over an initial three-year commitment period. Both programs have performed to expectations during the first year, with the CRPTF gaining additional exposure to attractive private equity and credit co-investment opportunities through a skilled manager and a fee efficient structure.

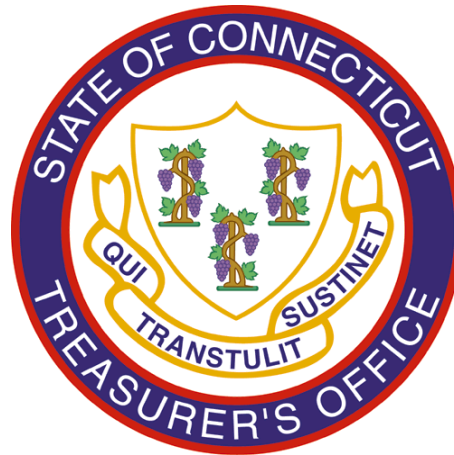
I am considering additional commitments of \$300 million to both CT Co-Investment and CT Private Debt, which would increase each vehicle's targeted annual investment pacing to \$300 million for the last two years of the initial investment period. The recommended commitments align with the 2023 pacing plans developed for PIF and PCF, which reflect the increased strategic asset allocation targets for both asset classes approved in September 2022.

Attached for your review is the recommendation from Ted Wright, Chief Investment Officer, and the due diligence report prepared by Hamilton Lane. I look forward to our discussion of these materials at next week's meeting.

Sincerely,

A handwritten signature in blue ink that reads "Shawn T. Wooden".

Shawn T. Wooden
State Treasurer



Full Due Diligence Report
Chief Investment Officer Recommendation
December 6, 2022

HarbourVest CT Co-Investment Fund L.P.
HarbourVest CT Private Debt Fund L.P.



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Executive Summary - Private Equity

Manager Overview

- HarbourVest Partners L.P. (“HarbourVest” or the “Firm”)
- Spun out of John Hancock Insurance in 1997
- Headquartered in Boston, MA with 13 offices globally
- Over 900 employees, including more than 85 investment professionals dedicated to Direct Co-Investment and Private Credit strategies
- \$100B in assets under management, with \$29B focused on Direct Co-Investment and Private Credit

Fund Summary

HarbourVest CT Co-Investment Fund L.P. (“CT Co-Investment”)

- Increased commitment to the existing CT Co-Investment vehicle that closed in January 2022
- Private Equity co-investments, primarily in Buyout and Growth/Expansion Equity transactions
- No change in terms:
 - GP Commitment: 1%
 - Management Fee: 0.47% on invested capital through year 5 of agreement; reduced by 20% per annum thereafter.
 - Carried Interest/Waterfall: 5%/Full Fund (European)
 - Preferred Return: None

Strategic Fit

- Private Investment Fund (“PIF”)
- Recommended Increased Commitment: \$300 million total (\$150 million for each of years two and three of existing program)
- Investment Policy Statement (“IPS”) Category: Corporate Finance
 - IPS Range for Corporate Finance: 70% to 100% of total PIF exposure
 - Corporate Finance Exposure: approximately 87% as of June 30, 2022
- PIF Strategic Pacing Plan
 - Sub-strategy: Co-Investment
 - Long-term Co-Investment target: 10% to 20% of total PIF exposure
 - Current Co-Investment exposure: 7% of total PIF exposure



Manager Overview

- HarbourVest
- Spun out of John Hancock Insurance in 1997
- Headquartered in Boston, MA with 13 offices globally
- Over 900 employees, including more than 85 investment professionals dedicated to Direct Co-Investment and Private Credit strategies
- \$100B in assets under management, with \$29B focused on Direct Co-Investment and Private Credit

Fund Summary

- HarbourVest CT Private Debt Fund L.P. (“CT Private Debt”)
- Increased commitment to the existing CT Private Debt commitment that closed in January 2022
 - Private Credit co-investments primarily in Senior, Unitranche, & Junior Credit transactions
 - No change in terms:
 - GP Commitment: 1%
 - Management Fee: 0.30% on invested capital through year 5 of agreement; reduced by 20% per annum thereafter.
 - Carried Interest/Waterfall: 5%/Full Fund (European)
 - Preferred Return: 5%

Strategic Fit

- Private Credit Fund (“PCF”)
- Recommended Increased Commitment: \$300 million total (\$150 million for each of years two and three of existing program)
- IPS Category: Senior and Mezzanine credit
 - IPS Ranges for Senior and Mezzanine: 30% to 70% and 0% to 30%, respectively, of total PCF exposure
 - Senior and Mezzanine Exposure: approximately 54% and 11%, respectively, as of June 30, 2022
- PCF Strategic Pacing Plan
 - Sub-strategy: Co-Investment
 - Long-term Co-Investment target: 10% to 20% of total CF exposure
 - Current Co-Investment exposure: 17% of total PCF exposure

Recommendation

- Based on the strategic fit within the PIF and PCF portfolios, as well as due diligence done by Pension Funds Management (“PFM”) investment professionals and Hamilton Lane, the Chief Investment Officer of the Connecticut Retirement Plans and Trust Funds (“CRPTF”) recommends consideration of additional commitments of up to:
 - \$300 million to CT Co-Investment, and
 - \$300 million to CT Private Debt

Investment Considerations

- Recommended commitments support one of the key long-term objectives of the PIF and PCF strategic plans: accessing attractive private equity and credit investments through fee efficient co-investments.
- The HarbourVest Direct Co-Investment and Private Credit platform continues to build on its leadership position in the co-investment market by leveraging a large and experienced investment team and HarbourVest’s deep relationships with sponsors globally.
- HarbourVest has demonstrated its investment expertise and high levels of client service during the first year of the CT Co-Investment and CT Private Debt programs.

Existing Commitment Overview

- The existing \$450 million commitment to CT Co-Investment closed in January 2022.
 - Structured to target \$150 million of co-investments per year over a three-year investment period.
- CT Co-Investment provides Connecticut the opportunity to (i) enhance PIF returns through a lower fee and carry structure, (ii) increase control of investment pacing, and (iii) strengthen relationships with and insights into existing and prospective managers.
- HarbourVest manages CT Co-Investment subject to Connecticut's investment guidelines.
 - Primary focus on Buyout and Growth/Expansion Equity transactions in the U.S., Western Europe, Canada, and Asia.
 - Targeting 50% of investments with Connecticut's sponsors and 50% from HarbourVest relationships.

First Year Review

- As of November 30, 2022, the CT Co-Investment portfolio was comprised of:
 - 8 investments representing \$105 million of committed/reserved capital, of which \$100 million had been funded.
 - Investments with Connecticut sponsors represented 50% of the transactions by count and 54% by capital committed.
 - 7 of 8 investments were in Buyouts representing 87% of capital committed.
- The portfolio is very young, but all investments are performing to plan.

Recommended Commitment Increase

- The recommended \$300 million commitment increase to CT Co-Investment aligns with the 2023 PIF pacing plan, which incorporates the new 15% strategic asset allocation target for PIF.
 - The strategic plan objectives include having co-investments represent 10% to 20% of the PIF's total exposure.
 - The 2023 pacing plan identifies targeted co-investments of \$100 million to \$200 million per year in addition to the existing \$450 million CT Co-Investment commitment.
- The recommended commitment would increase the CT Co-investment targeted co-investments from \$150 million to \$300 million per year for 2023 and 2024, i.e., the second and third year of the existing investment period.

Existing Commitment Overview

- The existing \$450 million commitment to CT Private Debt closed in January 2022.
 - Structured to target \$150 million of co-investments per year over a three-year investment period.
- CT Private Debt provides Connecticut the opportunity to (i) enhance PCF returns through a lower fee and carry structure, (ii) scale investment pacing, and (iii) strengthen its position as a value-added partner to sponsors seeking to place credit with existing investors.
- HarbourVest manages CT Private Debt subject to Connecticut's investment guidelines.
 - Primary focus on Senior and Junior credit provided to sponsored-backed companies in the U.S., Canada and Western Europe.
 - Targeting 30% of investments from Connecticut's sponsors/managers and 70% from HarbourVest relationships.

First Year Review

- As of November 30, 2022, the CT Private Debt portfolio was comprised of:
 - 16 investments representing \$151 million of commitments with \$29 million unfunded.
 - Investments with Connecticut sponsors represented 25% of the transactions by count and 21% by capital committed.
 - First lien and unitranche investments represented 76% of capital committed with the balance in second lien (8%) and hybrid investments (16%).
- Based on recency of investments, performance is not yet meaningful; the portfolio's weighted average current yield was 10.1%.

Recommended Commitment Increase

- The recommended \$300 million increase commitment to CT Private Debt aligns with the 2023 PCF pacing plan, which incorporates the new 10% strategic asset allocation target for PCF.
 - The strategic plan objectives include having co-investments represent 10% to 20% of the PCF's total exposure.
 - The 2023 pacing plan identifies targeted co-investments of \$100 million to \$200 million per year in addition to the existing \$450 million CT Private Debt commitment.
- The recommended commitment would increase the CT Private Debt targeted co-investments from \$150 million to \$300 million per year for 2023 and 2024, i.e., the second and third year of the existing investment period.

Key Terms Summary – CT Co-Investment

Connecticut/GP Commitment	<ul style="list-style-type: none">Connecticut commitment increased from \$450 million to \$750 million / HarbourVest commitment is 1%
Structure	<ul style="list-style-type: none">Fund of One
Investment Strategy	<ul style="list-style-type: none">Co-investments primarily in Buyout (70%-90%) and Growth Equity (10% to 30%) transactions
Markets	<ul style="list-style-type: none">North America and Europe (80% to 100%) as well as Asia (0% to 20%)
Fund Term	<ul style="list-style-type: none">Initial tranche (8 years) with options to add tranches and extend tranche term with Connecticut's consent
Investment Period	<ul style="list-style-type: none">3 years for each tranche
Management Fee	<ul style="list-style-type: none">0.47% on invested capital in years 1 through 5, reduced by 20% per annum thereafter
Fee Discounts & Offsets	<ul style="list-style-type: none">100% fee offset
Carry & Waterfall Type	<ul style="list-style-type: none">5%/Full Fund (European)
Preferred Return	<ul style="list-style-type: none">None



Key Terms Summary – CT Private Debt

Connecticut/GP Commitment	<ul style="list-style-type: none">Connecticut commitment increased from \$450 million to \$750 million / HarbourVest commitment is 1%
Structure	<ul style="list-style-type: none">Fund of One
Investment Strategy	<ul style="list-style-type: none">Co-investments and direct investments in Senior, Unitranche, and Junior credits/Hybrid securities
Markets	<ul style="list-style-type: none">United States (80% to 100%) and Europe/Canada (0% to 20%)
Fund Term	<ul style="list-style-type: none">Initial tranche (8 years) with options to add tranches and extend tranche term with Connecticut's consent
Investment Period	<ul style="list-style-type: none">3 years for each tranche
Management Fee	<ul style="list-style-type: none">0.30% on invested capital in years 1 through 5, reduced by 20% per annum thereafter
Fee Discounts & Offsets	<ul style="list-style-type: none">100% fee offset
Carry & Waterfall Type	<ul style="list-style-type: none">5%/Full Fund (European)
Preferred Return	<ul style="list-style-type: none">5%



HarbourVest Partners LLC (“HarbourVest”)

- In its disclosure to the Office of the Treasurer, HarbourVest Partners, LLC (“HarbourVest”), discloses the following matter:
 - In 2020 HarbourVest filed a proof of claim on behalf of funds and accounts under management related to Highland Capital Management’s bankruptcy filing. HarbourVest settled those claims and transferred its interest in the relevant Highland managed fund to the Highland estate as part of the settlement. HarbourVest subsequently sold its claims to a third-party purchaser.
- HarbourVest states that it has no material claims under its fidelity, fiduciary or E&O insurance policies to report, and that it has no ongoing internal investigations to report. HarbourVest states it has adequate procedures in place to undertake internal investigations of its employees, officers and directors.

HarbourVest Partners LLC (“HarbourVest”)

Review of Required Compliance Attachments

HarbourVest disclosed no third-party fees, campaign contributions or known conflicts

The compliance requirement for commitment expansions on existing funds are:

- Attachment 3 (Third-Party Fees Affidavit)
- Attachment 4A (Conflict of Interest)
- Attachment 6 (Campaign Contributions)

Overall Assessment : Evaluation and Implementation of Sustainable Principles

HarbourVest incorporates ESG factors throughout its investment process with a focus on portfolio monitoring. The firm has been a signatory of the UN PRI since 2013 and employs a climate change strategy that is in alignment with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD). HarbourVest recently joined Global ESG Benchmark for Real Assets (GRESB) and the ESG Data Convergence Project. The firm’s Executive Management Committee is charged with oversight and implementation of the ESG policy. HarbourVest has added several key staff in the past year to further ESG integration. The firm provides periodic ESG training sessions to staff and relies on tools from Sustainability Accounting Standards Board (SASB) and RepRisk to support the evaluation of materiality and ESG ratings.

The firm’s ESG policy details a case-by-case approach to investing in manufacturers or retailers of firearms.

Overall, HarbourVest’s disclosure suggests robust integration of ESG factors in its investment process.

SCORE

1

Criteria	Response
Firm has an ESG policy	Yes
If Yes, firm described its ESG policy	Yes
If Yes, firm provided examples of ESG factors considered in the decision-making process, explained the financial impact of these ESG factors	Yes
Designated staff responsible for sustainability policies and research	Yes
Firm provides training/resources on sustainability issues, explained sources of ESG-related data	Yes
Signatory/member of sustainability-related initiatives or groups	Yes
Policy for evaluating current or prospective relationships with manufacturers or retailers of civilian firearms	Yes

Criteria	Response
Policy that requires safe and responsible use, ownership or production of guns	No
Enhanced screening of manufacturers or retailers of civilian firearms	Yes
Enhance screening of any industry/sector subject to increased regulatory oversight, potential adverse social and/or environmental impact	Yes
Merchant credit relationship with retailers of civilian firearms and accessories	No
If Yes, firm confirms compliance with laws governing firearms sales	N/A



HarbourVest CT Co-Investment Fund L.P.

Recommendation Report

November 2022

All information contained within this report has been gathered from sources believed to be reliable, including but not limited to the general partner(s), other industry participants and the Hamilton Lane Investment Database, but its accuracy cannot be guaranteed.

The information contained in this report may include forward-looking statements regarding the fund presented or its portfolio companies. Forward-looking statements include a number of risks, uncertainties and other factors beyond the control of the fund or the portfolio companies, which may result in material differences in actual results, performance or other expectations. The opinions, estimates and analyses reflect our current judgment, which may change in the future.

The past performance information contained in this report is not necessarily indicative of future results and there is no assurance that the fund will achieve comparable results or that it will be able to implement its investment strategy or achieve its investment objectives. The actual realized value of currently unrealized investments will depend on a variety of factors, including future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs and the timing and manner of sale, all of which may differ from the assumptions and circumstances on which the current unrealized valuations are based.

Any tables, graphs or charts relating to past performance included in this report are intended only to illustrate the performance of the fund or the portfolio companies referred to for the historical periods shown. Such tables, graphs and charts are not intended to predict future performance and should not be used as the basis for an investment decision.

By accepting receipt of this investment report and in consideration of access to the information contained herein (together with the investment report, the “Confidential Information”), the recipient agrees to maintain the strict confidentiality of any and all Confidential Information in accordance with the terms of this paragraph. The recipient acknowledges that (i) the Confidential Information constitutes proprietary trade secrets, and (ii) disclosure of any Confidential Information may cause significant harm to Hamilton Lane Advisors, L.L.C. (“Hamilton Lane”), its affiliates or any of their respective businesses. Unless otherwise required by law, the recipient shall not disclose any Confidential Information to any third party. If required by law to disclose any Confidential Information, the recipient shall provide Hamilton Lane with prompt written notice of such requirement prior to any such disclosure so that Hamilton Lane may seek a protective order or other appropriate remedy. Prior to making any disclosure of any Confidential Information required by law, the recipient shall use its reasonable best efforts to claim any potential exemption to such requirement and otherwise shall limit disclosure only to such information that is necessary to comply with such requirement.

The calculations contained in this document are made by Hamilton Lane based on information provided by the general partner (e.g. cash flows and valuations), and have not been prepared, reviewed or approved by the general partner.

Stacked bar charts or pie charts presented in the Strategy section in this report may not equate to 100% per the data labels on the charts due to rounding; however, all stacked bar charts and pie charts equate to 100% using exact proportions.

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Fund Information

Organization Overview

General Partner:

HarbourVest Partners, LLC

Firm Inception:

1978

Team:

74 dedicated investment professionals

Senior Partners:

Peter Lipson, Alex Rogers, Ian Lane,
Corentin du Roy, Greg Stento and Kelvin
Yap

Location:

Boston (headquarters), Beijing, Bogota,
Dublin, Frankfurt, Hong Kong, London,
Seoul, Singapore, Tel Aviv, Tokyo, Toronto,
and Sydney

Fund Overview

Fund:

HarbourVest CT Co-Investment Fund L.P.
("Fund")

Current Fund Size:

\$750 million

Asset Class:

Private equity

Strategy:

Co-investment

Substrategy:

Buyout; growth equity

Geography:

North America, Europe and Asia

Industries:

Diversified

Portfolio Construction

Investment Period:

3 years (2 years remaining)

Target Equity Investment Per Year:

\$150 million in year 1; \$300 million in years
2 and 3

Equity Investments:

\$5 million to \$15 million in year 1; \$20
million to \$25 million in years 2 and 3

Enterprise Values:

Varies

Recommendation

Based on the analysis and information presented herein, Hamilton Lane believes that an increased commitment to HarbourVest CT Co-Investment Fund L.P. works towards achieving the goals set forth for the Connecticut Retirement Plans and Trust Funds. An increased commitment to the Fund will maintain a relationship with a high-quality General Partner. Taking into account the investment strategy and portfolio diversification objectives of the Private Investment Fund, Hamilton Lane recommends an increased commitment to the Fund.

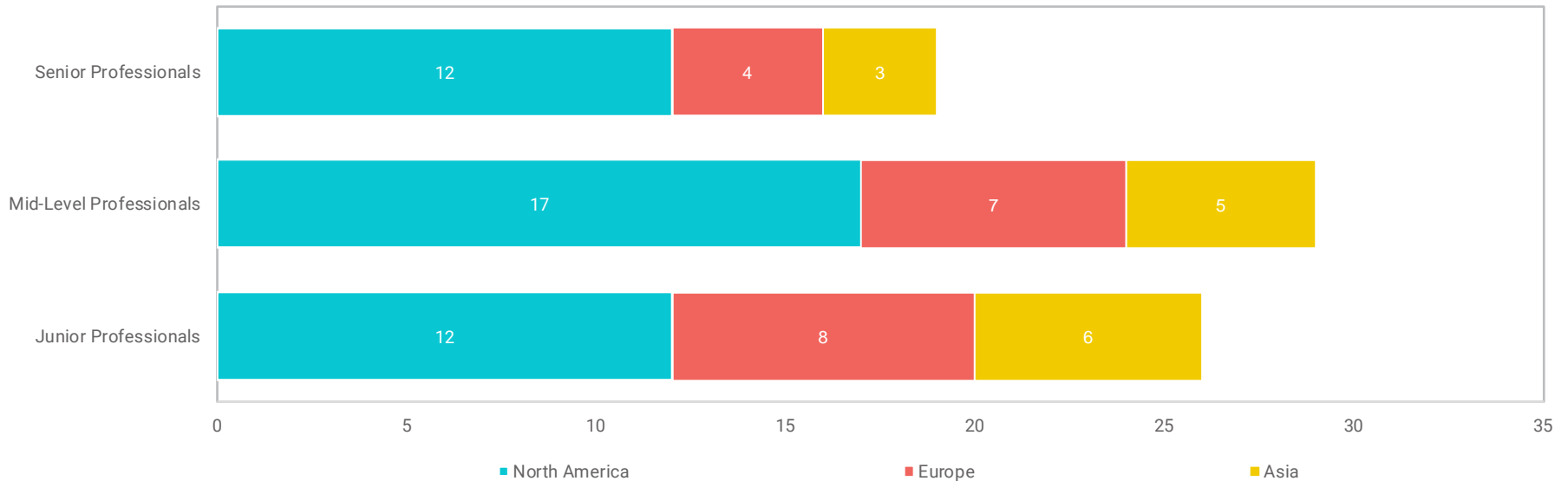


General Partner

- The General Partner has grown its dedicated equity co-investment team to comprise 74 professionals across North America, Europe and Asia
 - Managing Directors average 20 years of total industry experience
- HarbourVest recently opened a Sydney office to formalize its presence in the Australian equity co-investment landscape
- As of 6/30/22, the General Partner had \$101.1 billion in assets under management

Investment Team by Role/Region

As of 9/30/22



- HarbourVest maintains the same core investment committee for the Fund, comprised of Managing Directors Peter Lipson, Alex Rogers, Ian Lane and Greg Stenton
 - Kelvin Yap and Corentin du Roy act as rotating members; Messrs. Yap and du Roy participate in the investment committee meetings that better match investment opportunities in their region/time zones
- Investment opportunities approved by the investment committee continue to go to HarbourVest's Portfolio Construction Committee to determine ultimate position sizing and portfolio fit
 - CCO Bill Royer retired from HarbourVest in January 2022
 - Mr. Royer was a non-voting, adjunct member and advisor of the Portfolio Construction Committee
 - Adam Freedman is now Chief Compliance Officer at the General Partner
- The General Partner has not experienced any material departures above the Vice President level



Investment Strategy

- HarbourVest was previously restricted from investing more than \$150 million per annum, without consent from CRPTF, with the goal of even pacing across the Fund's investment period; however, the restriction will now increase to a limit of \$300 million per annum, in-line with the increase in the Fund's size
 - The General Partner has remained highly selective in its deal selection, while experiencing increased deal sourcing volumes
- While HarbourVest maintains full discretion over the Fund, the General Partner has worked with CRPTF in a transparent manner, providing updates related to pipeline and deal sourcing
- The General Partner continues to expect 50% of the deal flow to be sourced by HarbourVest and 50% by the managers in CRPTF's Private Investment Fund portfolio
 - Roughly 46% of deals closed/committed/approved are from HarbourVest deal flow, while 54% of deals closed/committed/approved represent CRPTF deal flow
- HarbourVest does not expect any notable changes to regional, strategy or industry targets previously established for the Fund
 - The General Partner seeks to limit exposure to a single industry to 20% to 30%
 - HarbourVest has deployed roughly 75% of invested/committed capital to-date within North America, with the remainder of capital deployed in Europe, which is in-line with the expected regional diversification for the Fund



Track Record

- The General Partner has closed, committed or approved eight investments within the Fund as of 10/31/22, including a number of investment subsequent to 6/30/22
- The Fund remains early in its life, with the first investment signed in April 2022; therefore, there is no IRR or multiple performance to report

- HarbourVest has generated attractive net returns in its commingled equity co-investment funds, achieving top-half performance on a net IRR and TVPI basis across prior funds
- As of 6/30/22, Co-Investment Fund V was 79% called and 100% committed
- As of 6/30/22, Co-Investment Fund VI was 5% called, making its first capital call in April 2022
- The General Partner recently closed Co-Investment Fund VI on \$4.2 billion of aggregate commitments

HarbourVest Partners Prior Investment Performance As of 6/30/22						HL Benchmark Buyout As of 6/30/22		
(\$mm)						Top-Quartile		
Fund	Vintage	Fund Size	DPI	TVPI	Net IRR	DPI	TVPI	Net IRR
2013 Direct Fund	2013	\$1,010	1.5x	2.2x	19.0%	1.4x	2.1x	21.9%
Co-Investment Fund IV	2016	1,768	0.9x	1.9x	17.8%	1.1x	2.1x	24.1%
Co-Investment Fund V	2018	3,030	0.2x	1.7x	29.4%	0.5x	1.8x	30.9%
Co-Investment Fund VI	2021	4,200	0.0x	0.9x	n/a	0.0x	1.2x	33.2%



Appendices

Benchmark Analysis:	An analysis that compares the net IRR of the prior funds to the top-quartile net IRR benchmarks for similar funds (based on strategy and vintage) as reported by the Cobalt LP database. The benchmark data shown is the most recent data available at this time
DPI:	$\text{DPI} = \frac{\text{Amount of Distributions Received}}{\text{Total Amount of Capital Paid-In}}$
ESG:	Environmental, Social and Governance
Gross IRR:	Internal Rate of Return (“IRR”) of investments at the “fund level,” excludes fees paid by LPs to the General Partner such as management fees and carried interest. For investments held less than one year, Hamilton Lane nominalizes the IRR to match the hold period of the investment in order to represent a more meaningful number
Investment Pacing:	An analysis of the total capital invested during the given years. Includes all prior investments, realized or unrealized
J-curve Benchmark:	Peer (median by age) is calculated by taking the median IRR of similar funds (based on strategy and vintage) in Hamilton Lane’s database at each quarter, which are simulated as investing at the same point in time. The length of time to break the J-curve is calculated from inception to the first time each fund generated a positive net IRR
Loss Ratio Analysis:	An analysis of the capital invested in realized transactions generating different multiples of invested capital
Net IRR:	Annualized Internal Rate of Return (“IRR”) of investments at the LP level inclusive of fees such as management fees and carried interest paid to the General Partner
Net Returns to Limited Partners:	The performance of the General Partner’s prior investment vehicles at the net LP level, inclusive of all fees, carried interest and expenses. Performance data is as reported by the General Partner using actual capital contributions, distributions and net asset value for either all limited partners, or a sample set of limited partners, in the respective funds
Outlier Analysis:	An analysis of the gross returns of investments in prior funds, comparing overall performance against the performance when certain ‘outlier’ transactions are excluded. Outliers are defined as transactions that generate exceptionally positive or negative results
PME Analysis:	Calculated by taking the fund’s monthly cash flows and investing them in the relevant Total Return Index (where all dividends are re-invested). Contributions were scaled by a factor such that the ending portfolio balance would be equal to the private equity net asset value (equal ending exposures for both portfolios). This prevents shorting of the public market equivalent portfolio in order to match the performance of an outperforming private equity portfolio. Distributions were not scaled by this factor. The IRRs were then calculated based on these adjusted cash flows. The selected PME represents the most relevant public market benchmark
Realized Attribution Analysis:	Analysis of the capital invested in, and performance of, the prior realized transactions according to the criteria indicated
Realized Investments:	Hamilton Lane classifies investments as “realized” if it has: i) an unrealized value of less than 20% of the total value; ii) a carrying value that has been written to zero or has been previously written-off; or iii) been fully exited and the GP has no remaining interest in the company
RVPI:	$\text{RVPI} = \frac{\text{Current Net Asset Value}}{\text{Total Amount of Capital Paid-In}}$
TVPI:	$\text{TVPI} = \frac{\text{Amount of Distributions Received} + \text{Current Net Asset Value}}{\text{Total Amount of Capital Paid-In}}$

Time-Zero IRR:	Represents the gross IRR calculated as if every investment were initiated on the same date
Write-Down Ratio:	The ratio of capital invested in realized investments that have been sold for a value that is less than 1.0x their original cost basis, divided by the total capital invested in all realized investments
Write-Off Ratio:	The ratio of capital invested in realized investments that have been sold for a value that is less than 0.5x their original cost basis, divided by the total capital invested in all realized investments

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HarbourVest CT Private Debt Fund L.P.

Recommendation Report

November 2022

All information contained within this report has been gathered from sources believed to be reliable, including but not limited to the general partner(s), other industry participants and the Hamilton Lane Investment Database, but its accuracy cannot be guaranteed.

The information contained in this report may include forward-looking statements regarding the fund presented or its portfolio companies. Forward-looking statements include a number of risks, uncertainties and other factors beyond the control of the fund or the portfolio companies, which may result in material differences in actual results, performance or other expectations. The opinions, estimates and analyses reflect our current judgment, which may change in the future.

The past performance information contained in this report is not necessarily indicative of future results and there is no assurance that the fund will achieve comparable results or that it will be able to implement its investment strategy or achieve its investment objectives. The actual realized value of currently unrealized investments will depend on a variety of factors, including future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs and the timing and manner of sale, all of which may differ from the assumptions and circumstances on which the current unrealized valuations are based.

Any tables, graphs or charts relating to past performance included in this report are intended only to illustrate the performance of the fund or the portfolio companies referred to for the historical periods shown. Such tables, graphs and charts are not intended to predict future performance and should not be used as the basis for an investment decision.

By accepting receipt of this investment report and in consideration of access to the information contained herein (together with the investment report, the “Confidential Information”), the recipient agrees to maintain the strict confidentiality of any and all Confidential Information in accordance with the terms of this paragraph. The recipient acknowledges that (i) the Confidential Information constitutes proprietary trade secrets, and (ii) disclosure of any Confidential Information may cause significant harm to Hamilton Lane Advisors, L.L.C. (“Hamilton Lane”), its affiliates or any of their respective businesses. Unless otherwise required by law, the recipient shall not disclose any Confidential Information to any third party. If required by law to disclose any Confidential Information, the recipient shall provide Hamilton Lane with prompt written notice of such requirement prior to any such disclosure so that Hamilton Lane may seek a protective order or other appropriate remedy. Prior to making any disclosure of any Confidential Information required by law, the recipient shall use its reasonable best efforts to claim any potential exemption to such requirement and otherwise shall limit disclosure only to such information that is necessary to comply with such requirement.

The calculations contained in this document are made by Hamilton Lane based on information provided by the general partner (e.g. cash flows and valuations), and have not been prepared, reviewed or approved by the general partner.

Stacked bar charts or pie charts presented in the Strategy section in this report may not equate to 100% per the data labels on the charts due to rounding; however, all stacked bar charts and pie charts equate to 100% using exact proportions.

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• General Partner	5
• Investment Strategy	7
• Track Record	9
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Fund Information

Organization Overview

General Partner:

HarbourVest Partners, LLC

Firm Inception:

1978

Team:

17 dedicated investment professionals

Senior Partners:

Jamie Athanasoulas, Peter Lipson, John Morris, Karen Simeone and Greg Stento

Location:

Boston (headquarters), Beijing, Bogota, Dublin, Frankfurt, Hong Kong, London, Seoul, Singapore, Tel Aviv, Tokyo, Toronto, and Sydney

Fund Overview

Fund:

HarbourVest CT Private Debt Fund L.P. ("Fund")

Fund Size:

\$750 million

Asset Class:

Private debt

Strategy:

Direct lending

Substrategy:

Senior/1st lien and junior debt

Geography:

North America, Europe and Asia

Industries:

Diversified

Portfolio Construction

Investment Period:

3 years (2 years remaining)

Debt Investments:

~\$20 million in years 2 and 3

Target Amount Invested Per Year:

\$150 million in years 1; \$300 million in years 2 and 3

Target Returns:

High single-digit gross IRR

Recommendation

Based on the analysis and information presented herein, Hamilton Lane believes that an increased commitment to HarbourVest CT Private Debt Fund L.P. works towards achieving the goals set forth for the Connecticut Retirement Plans and Trust Funds. An increased commitment to the Fund will maintain a relationship with a high-quality General Partner. Taking into account the investment strategy and portfolio diversification objectives of the Private Credit Fund, Hamilton Lane recommends an increased commitment the Fund.



General Partner

- The General Partner has grown its dedicated credit investment team to comprise 17 professionals
 - Five team members joined the credit investment team over the last year
 - HarbourVest hired one Vice President who joined the team in October 2022
 - The General Partner plans to hire a Managing Director of operations as well as an additional Vice President on the investment team in the near term
- As of 6/30/22, the General Partner had \$101.1 billion in assets under management
 - HarbourVest's private credit platform has \$4.7 billion in assets under management, as of July 2022
- HarbourVest maintains the same core investment committee for the Fund, comprised of Managing Directors Peter Lipson, Karen Simeone, James Athanasoulas, Greg Stento and John Morris
 - Investment committee members average 29 years of total industry experience
- Investment opportunities approved by the investment committee continue to go to HarbourVest's Portfolio Construction Committee to determine ultimate position sizing and portfolio fit
 - CCO Bill Royer retired from HarbourVest in January 2022
 - Mr. Royer was a non-voting, adjunct member and advisor of the Portfolio Construction Committee
 - Adam Freedman is now Chief Compliance Officer at the General Partner



Investment Strategy

- HarbourVest was previously restricted from investing more than \$150 million per annum without consent from CRPTF, with the goal of even pacing across the Fund's investment period; however, the restriction will now increase to a limit of \$300 million per annum, in-line with the increase in the Fund's size
- The General Partner expects deal velocity to be slower than it has been in 2022 but expects to see new opportunities for larger companies
- As of 10/21/22, 10 of 16 deals were made in senior debt given the current market environment and robust opportunity set in first lien and unitranche debt
- HarbourVest does not have equity exposure in the portfolio to date, with the exception of PIK preferred securities in three investments
- The General Partner remains focused on North American opportunities, reflecting the broader platform's allocation of 75% to 80% North American opportunities
- While HarbourVest maintains full discretion over the Fund, the General Partner has worked with CRPTF in a transparent manner, providing updates related to pipeline and deal sourcing
- Initial investments have been heavily tilted toward deals from the General Partner's deal funnel given the continued development of manager relationships within CRPTF's Private Credit Fund portfolio



Track Record

- The General Partner has closed, committed or approved 16 investments within the Fund as of 10/21/22
- The Fund remains early in its life and therefore, there is no IRR or multiple performance to report

- HarbourVest has generated attractive net returns in its commingled credit funds, achieving top-half performance on a net IRR basis across prior funds
- The General Partner has proven its ability to identify attractive investments and preserve capital, with limited to no loss ratios in its commingled funds
- As of 3/31/22, Opportunities Fund I had a debt loss ratio of 2.6%, while Opportunities Fund II and Direct Lending Fund I had debt loss ratios of 0.0%

HarbourVest Partners Prior Investment Performance As of 3/31/22						HL Benchmark Credit As of 3/31/22		
(\$mm)						Top-Quartile		
Fund	Vintage	Strategy	DPI	TVPI	Net IRR	DPI	TVPI	Net IRR
Credit Opportunities Fund I	2015	Junior Credit	1.5x	1.9x	24.5%	1.0x	1.4x	9.7%
Credit Opportunities Fund II	2019	Junior Credit	0.1x	1.2x	19.6%	0.5x	1.3x	22.2%
Directing Lending Fund I	2020	Senior Credit	0.1x	1.1x	12.8%	0.3x	1.2x	22.9%



Appendices

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State of Connecticut Retirement Plans and Trust Funds

December 2022

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Table of contents

- I. HarbourVest firm overview
- II. Equity co-invest program overview
- III. Private credit program overview
- Appendix

HarbourVest firm overview



HarbourVest at-a-glance

<p>\$101.1B total AUM across all strategies*</p>		<p>900+ advisory board seats</p>	
	<p>25 years average industry experience of managing directors</p>		<p>Strong track record 40 years</p>
<p>Private markets specialists in equity, credit, and real assets</p>		<p>Expertise in primary, secondary, direct co-investments, real assets and infrastructure and private credit</p>	
<p>1000+ Managers tracked</p>	<p>950+ colleagues</p>		<p>175+ investment professionals</p>

As of June 30, 2022
*Reflects committed capital from LPs for all active funds/accounts, excludes any funds / accounts that are in extension, liquidation, or fully liquidated.

Global scale

Our market coverage is broad and deep



Americas	
128 Investment professionals	\$81.1B committed
EMEA	
38 Investment professionals	\$34.3B committed
Asia Pacific	
27 Investment professionals	\$11.4B committed

Expertise across capital structure (equity and debt) and investment types		
Primary investments	Secondary & real assets	Direct – equity & credit
\$52.3B committed	\$43.4B committed	\$31.1B committed

As of June 30, 2022. Based on primary, secondary, and direct commitments made by HarbourVest since inception. Commitment amounts reflect the aggregate commitments made by HarbourVest to primary, secondary, and direct investments since inception, and are presented gross of leverage. Arrows indicate HarbourVest team location. *Singapore office opened May 2021. Frankfurt office opened July 2021. Sydney office opened August 2022.

HarbourVest's co-investment program



Leader in building co-investment portfolios

Longstanding co-investment history*

\$26.2 billion committed to co-investments in last 10 years*

620+ co-investments made in last 10 years



HarbourVest Strengths



Large, experienced global team

74 investment professionals globally

20 average years of MD experience

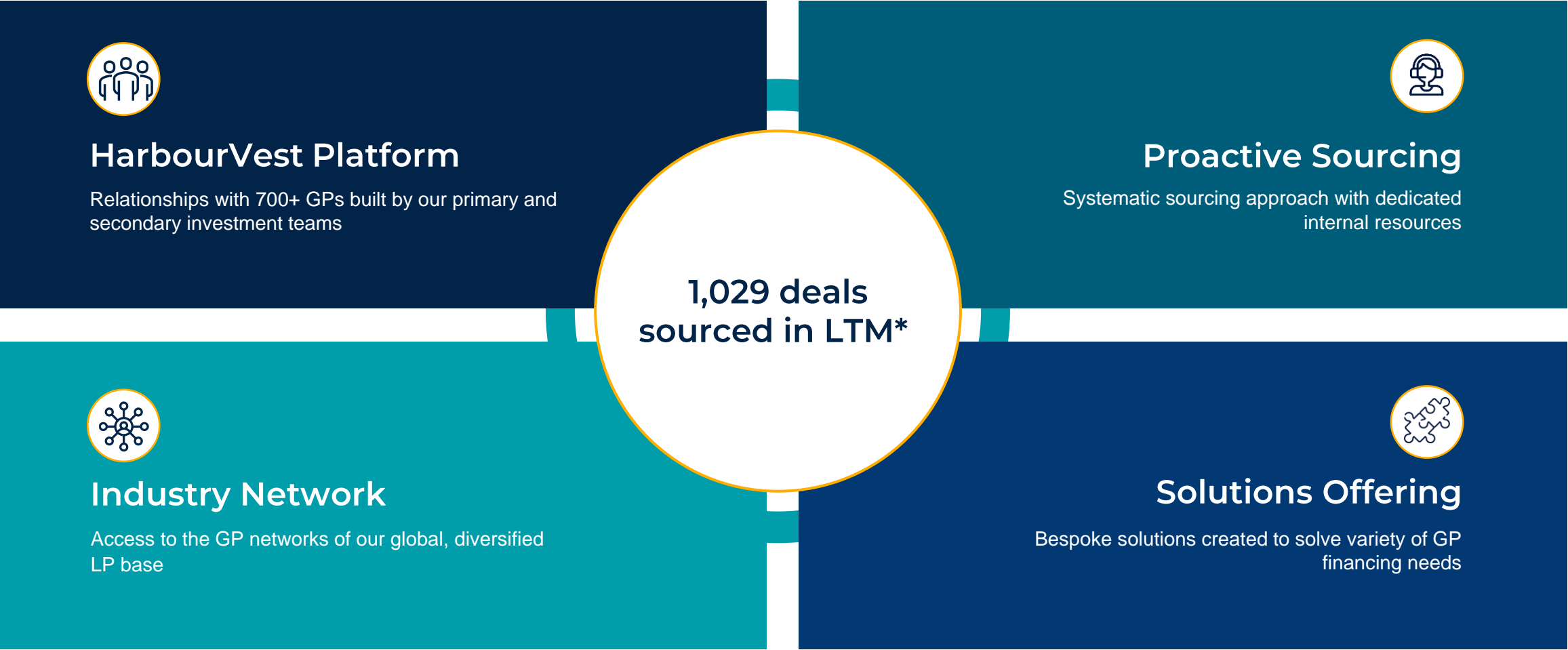
Active deal-sourcing platform**

1,029 deals sourced in LTM

64% small/mid-market deals reviewed in LTM

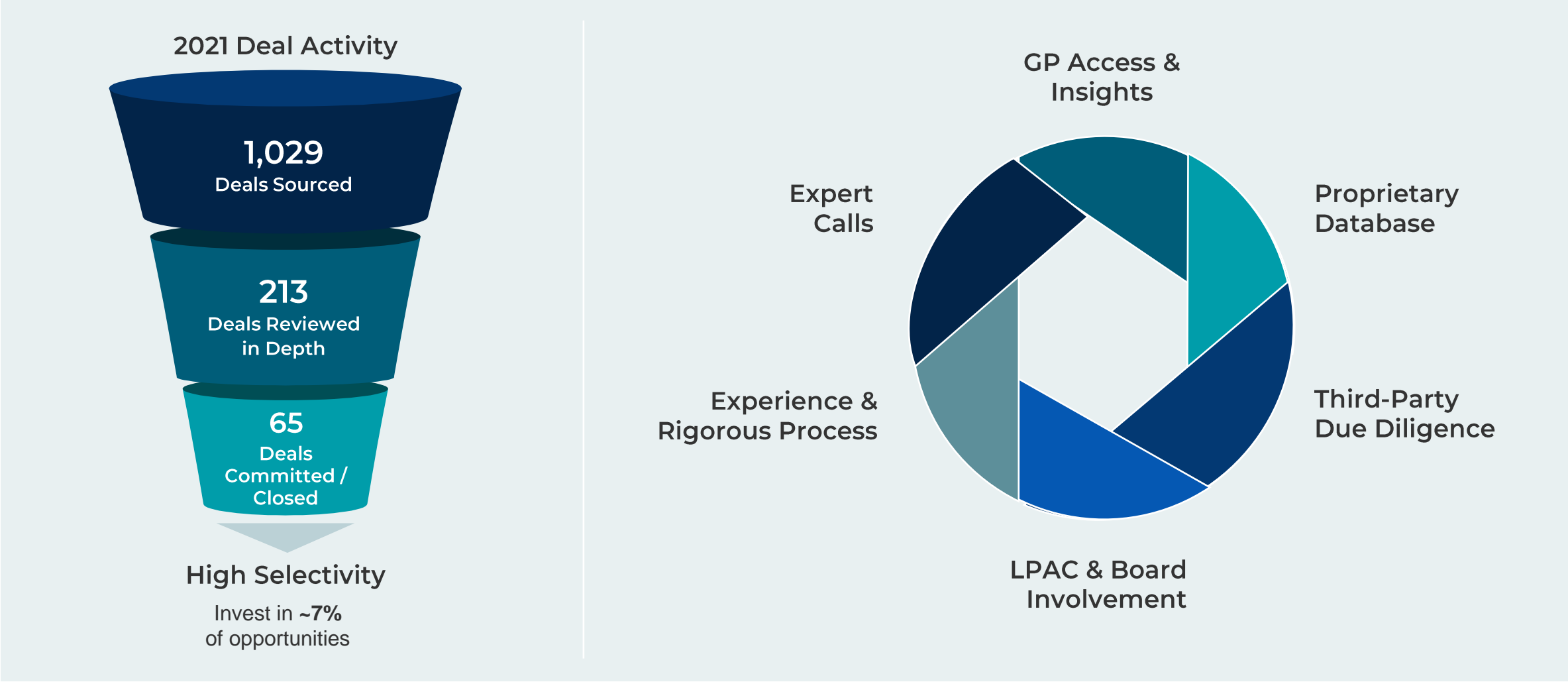
As of June 30, 2022, unless otherwise noted. Team data is as of September 30, 2022.
 * Reflects aggregate capital committed to, and number of investments made in, direct co-investments from January 1, 2012 to June 30, 2022. HarbourVest has committed \$31.1 billion to 1,121 direct co-investments since inception as of June 30, 2022.
 ** As of December 31, 2021. Small/mid-market deals statistic represents percentage of deals reviewed in depth that has an enterprise value of \$1.5 billion or less at the time of our review.

Established deal sourcing platform



* Last twelve months ("LTM") data represents all equity co-investment deals sourced from January 1, 2021 to December 31, 2021.

Rigorous selection process complemented by deep internal resources



Annual deal funnel statistics based on all equity co-investment deals evaluated for a HarbourVest fund/account between January 1, 2021 and December 31, 2021, including buyout, growth equity, and venture capital. "Deals Reviewed in Depth" represent deals reviewed by HarbourVest's investment committee during the respective period. Deals closed and committed represent initial investments only and exclude client-sourced deal flow opportunities. Past performance is not a reliable indicator of future results.

Experienced direct co-investment team

North America



Aditya Agarwal



Megan Beecher



Julia Burke



Brendan Butler



Elliott Campbell



Sean Carolan



Anne Chen



Matt Cheng



Casey Chung



Karen Chung



Abigail Cough



Benjamin Gardner



Charles Gay



Michael Guinness



Zachary Halpryn



Garren Hong



Henry Hu



Joel Hwang



Florence Kong



David Krauser*



Ian Lane



Lenny Li



Ruyin Liao



Peter Lipson*



Sophia Maizel*



Joelle Marx



Thorne Michaels



Joseph Mitrani



Stephanie Ng-Lun



Seth Palmer



Jackie Peradotto



Tikerenn Quinn



Mark Realbuto



Alex Robins



Alex Rogers



Jonathan Sanford



John Schwartz



Marie Smith



Tyler Smith



Ryan Wolfson



David Zug*



Hasan Al-Saidi



Carolina Alves



Jacob Bjorklund

Asia



Cartus Chan



Jackie Huang



Li Huang



Xiren Huang



Nathania Irene



Noel Lam



Yuan Ming Tan



Benson Wong



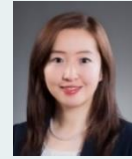
Steve Wong



Rachel Wu



Kelvin Yap



Junyi Zang



Walter Zhang



Chris Zhu

Europe



Daniele Bonfante



Corentin du Roy



Gonçalo Faria Ferreira



Laure Fournier



Houda Hamdouch



William Ip



Ryan Jones



Laura Kelly



Andreas Kuzma



Rodrigo Lameira



Maxime Lattanzio



Craig MacDonald



Alexander Mackinger



Caleb Morrison



Gurdeep Nagra*



Alexis Owuadey

Strong and consistent co-investment returns

Since inception as of June 30, 2022

	Commitment Period	Fund Size (Millions)	% Called	Net DPI	Net TVPI	Net IRR	S&P 500 (PME)	MSCI AC World (PME)
HCF I	2004-2008	\$350.0	100%	1.8x	1.9x	10.8%	5.0%	4.3%
HCF II	2007-2012	\$734.0	98%	1.7x	1.7x	10.2%	11.1%	7.2%
HCF III	2013-2016	\$1,010.1	97%	1.5x	2.2x	19.0%	12.6%	9.4%
HCF IV*	2016-2019	\$1,767.7	84%	0.9x	1.9x	17.8%	13.0%	9.3%
HCF V*	2018-2022	\$3,030.3	79%	0.2x	1.7x	29.4%	9.7%	5.8%
HCF VI*	2021-Present	\$3,929.2	5%	0.0x	0.9x	NM	NM	NM

* HCF IV and HCF V performance also includes the performance of any AIF-related funds.

HCF I refers to 2004 Direct Fund, HCF II refers to 2007 Direct Fund, HCF III refers to 2013 Direct Fund, HCF IV refers to Co-Investment Fund IV, HCF V refers to Co-Investment Fund V, and HCF VI refers to Co-Investment Fund VI. HCF VI made its first capital call in April 2022 and has less than one year of net LP cash flows; as such benchmarking statistics are considered not meaningful. NM: "Not Meaningful", as applicable, since there has been less than one year of cash flows, the IRR is not yet meaningful. Adjusted index returns to reflect a comparable public market equivalent ("PME"). For EEA prospective investors, this performance information is intended for distribution with the annual performance information in 'Additional Track Record Detail.' Past performance is not a reliable indicator of future results. See 'Additional Important Information' at the end of the presentation, including important disclosures related to Net Performance Returns, Public Market Comparison, and Fees and Expenses.

HarbourVest credit overview



Private credit in the HarbourVest ecosystem

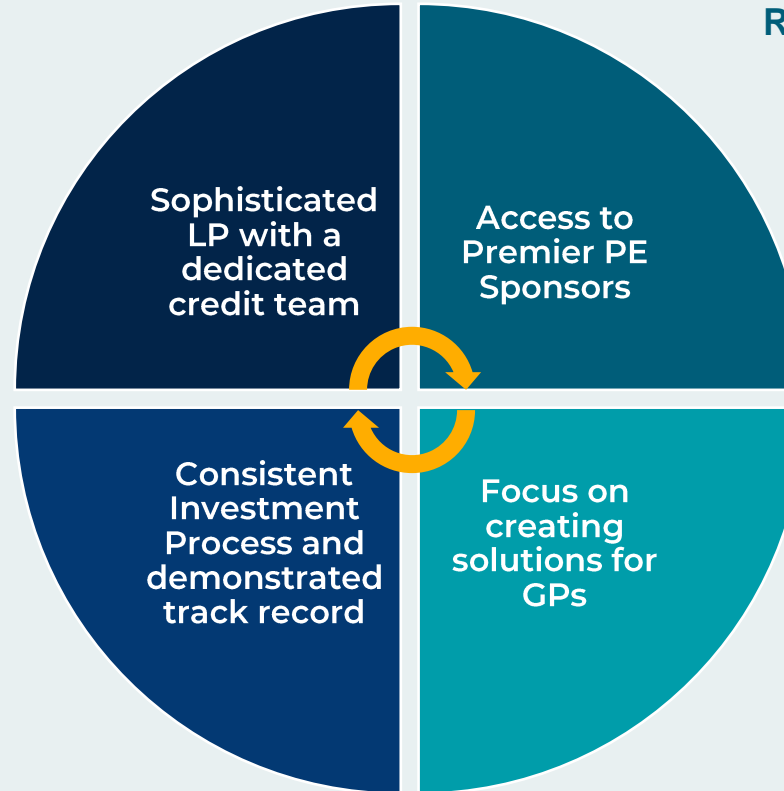
HarbourVest Private Credit platform stands at \$4.7 billion* in AUM and leverages the firm's position as a significant LP to hundreds of GPs to source, evaluate, and transact on private credit opportunities

Active deal-sourcing platform

Active LP in **2,000+ Funds****
365+ Primary GP Relationships
400+ Secondary GP Relationship
18 credit investment professionals***

Established performance

\$3.4 billion invested*
116 portfolio companies*
\$823 million in net proceeds**
1.0% cumulative loss ratio on all debt investments since 2003**



Robust pipeline allows for selectivity

1,300+ Opportunities sourced**
Closed transactions with **59** Sponsors*
Invest in less than **5%** of opportunities sourced**

Solutions provider for GPs

Ability to move quickly and invest across the entire capital stack
\$50 – 85+ million hold size across the platform

Source: HarbourVest.

HarbourVest platform statistics as of March 31, 2022

* Deployment statistics as of July 31, 2022

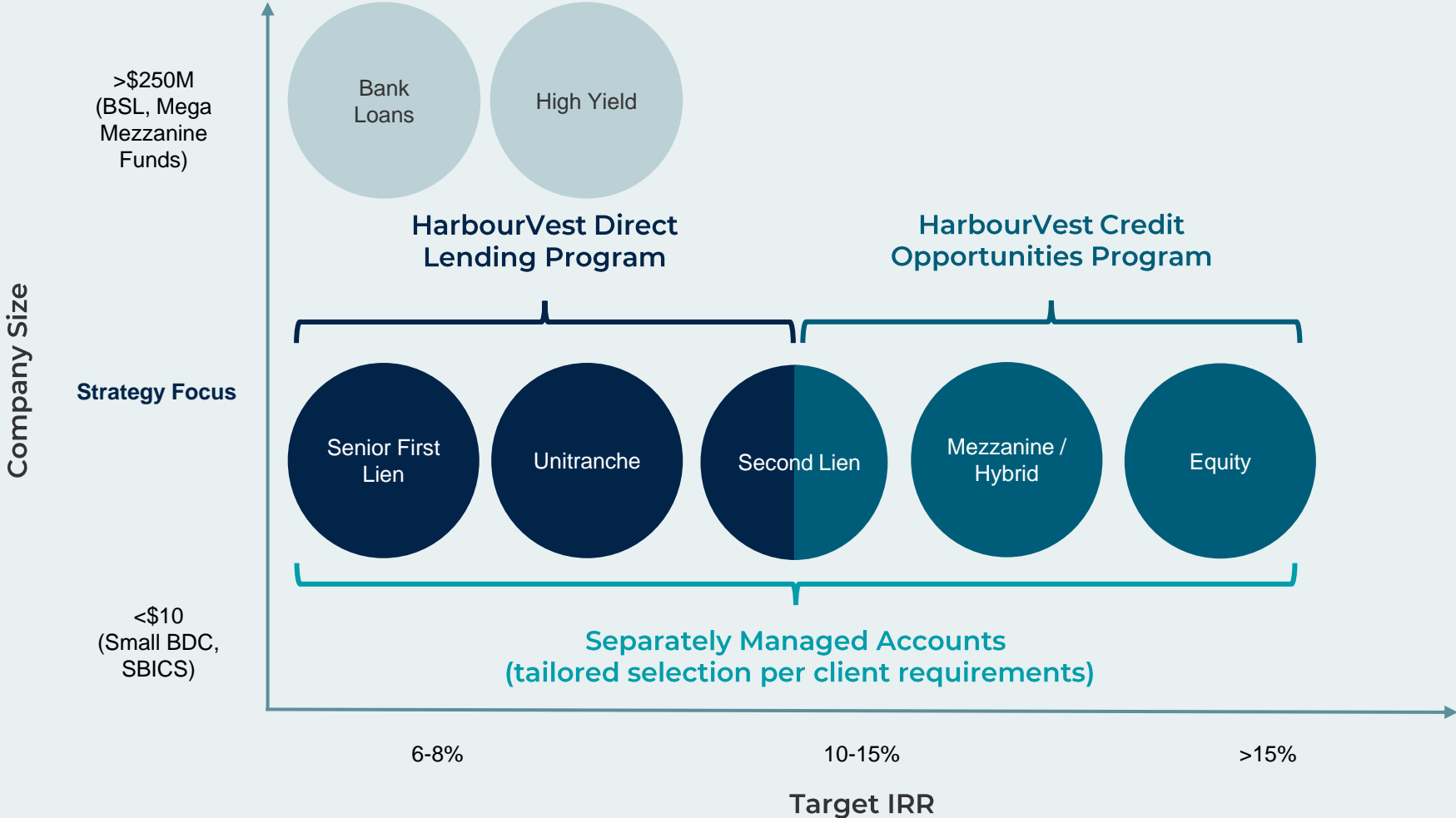
**Performance and sourcing metrics as of March 31, 2022

*** As of July 31, 2022. Includes Investor Relations individuals focused on Credit investments.

Risks include but are not limited to: Market risk – The value of assets is typically dictated by a number of factors, including the confidence levels of the market in which they are traded. Leverage - Leverage may result in large fluctuations in value and therefore entails a high degree of risk including the risk that losses may be substantial.

Breadth of HarbourVest private credit program

HarbourVest's scale provides investors with flexible solutions across the capital structure



Provided for illustrative purposes only. The target return information presented above is hypothetical in nature and is shown for illustrative, informational purposes only. See 'Additional Important Information' at the end of the presentation, including important disclosures related to Target Returns, Net Performance Returns, Gross Performance Returns, and Fees and Expenses.

HarbourVest private credit 2021 update

Leveraging the HarbourVest platform to build senior and junior credit commingled funds and SMA solutions



Fundraising

\$1.6 billion

in LP commitments raised in 2021
(Junior Credit, Senior Credit, SMAs)



Sourcing

331 deals

reviewed by in depth
(vs. 254 in calendar-year 2020)



Investments

\$1.1 billion

Committed across strategies
(+115% vs. Calendar-Year 2020)



Team

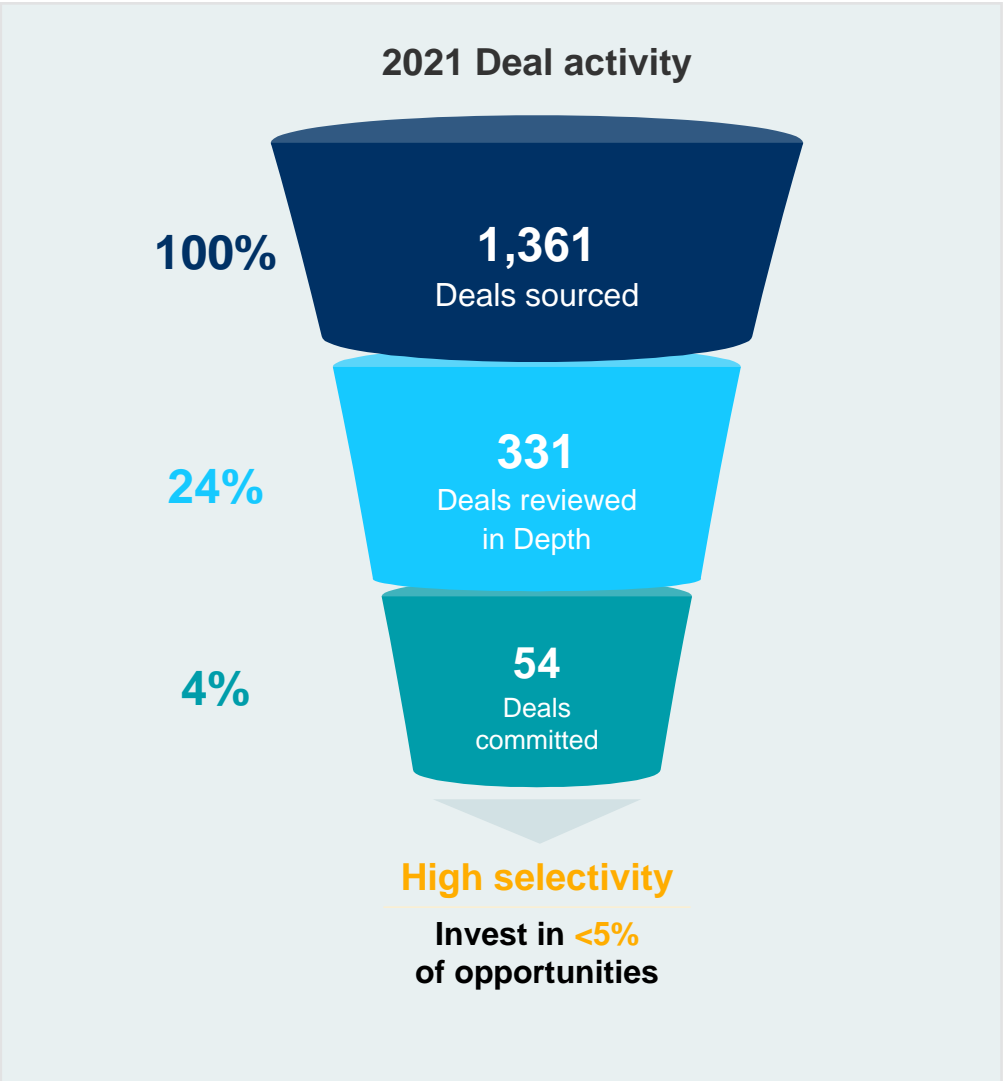
17 team members*

5 new joiners in LTM

As of December 31, 2021. Investment and distribution activity reflects all direct credit activity related to a HarbourVest fund and/or account from January 1, 2021 to December 31, 2021. Past performance is not a reliable indicator of future results.

*As of June 30, 2022

Selectivity is a core tenet of HarbourVest's private credit strategy



HarbourVest allocation advantage

- Received an allocation to over 85% of our desired pipeline
- Typically, part of a small club transaction
- Only other lender invited into the transactions 26% of the time
- Committed to 32 new platform investments and 22 follow-on investments
- Average LTV of 42% at initial investment

Annual deal funnel statistics based on all equity co-investment and credit deals evaluated for a HarbourVest fund/account between January 1, 2021 and December 31, 2021 where HarbourVest conducted a full-scope diligence and investment committee review, including buyout, growth equity, credit, and venture capital. Past performance is not a reliable indicator of future results.

Experienced credit team

Credit Investment Committee*



Jamie Athanasoulas
Managing Director
26 years
experience



Peter Lipson***
Managing Director
24 years
experience



John Morris
Managing Director
33 years
experience



Karen Simeone
Managing Director
22 years
experience



Greg Stento
Managing Director
39 years
experience

Investment Team



Will Hasten
Principal
11 years
experience



Lee Incandela
Principal
14 years
experience



Sean Gillespie
Vice President
9 years
experience



Gina McClary
Vice President
10 years
experience



Richard Sterndale
Senior Associate
7 years
experience



Kylie Johnson
Associate
5 years
experience



Will Roeder
Associate
5 years
experience



Darrien Tan
Associate
3 years
experience



Molly Manuel
Analyst
2 years
experience

Product and Portfolio



Bill Cole**
Principal
15 years
experience



Greg Mazur
Vice President
15 years
experience



Jeffrey Ouellette**
Vice President
7 years
experience



Tim Hegarty
Senior Associate
11 years
experience



William Morelli
Senior Associate
14 years
experience

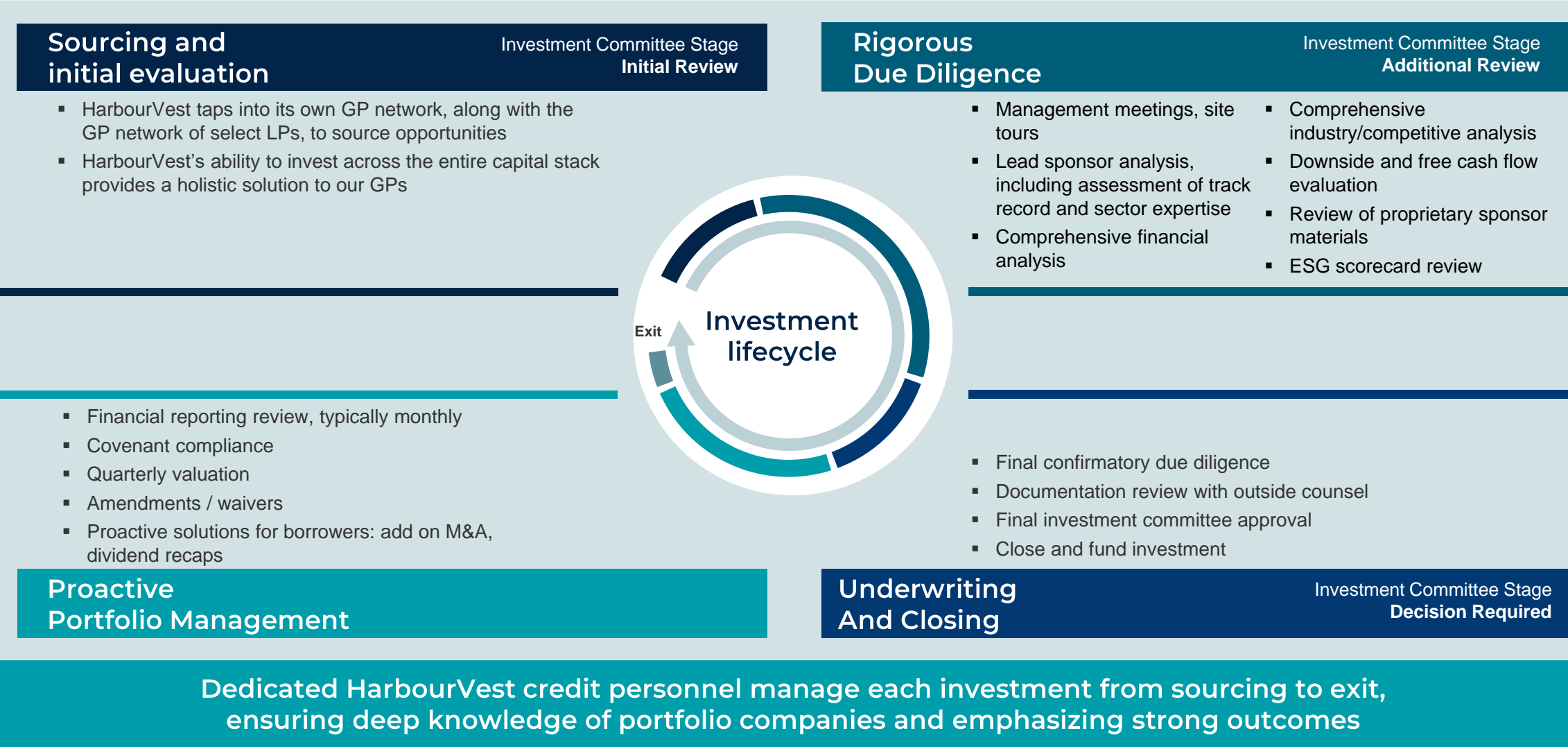
HarbourVest's private credit strategies are led by seasoned professionals with broad market expertise

- Private Credit experience across multiple cycles
- Extensive relationship across both Private Equity and Private Credit Industry
- Expertise in investing across the capital structure

As of September 30, 2022.

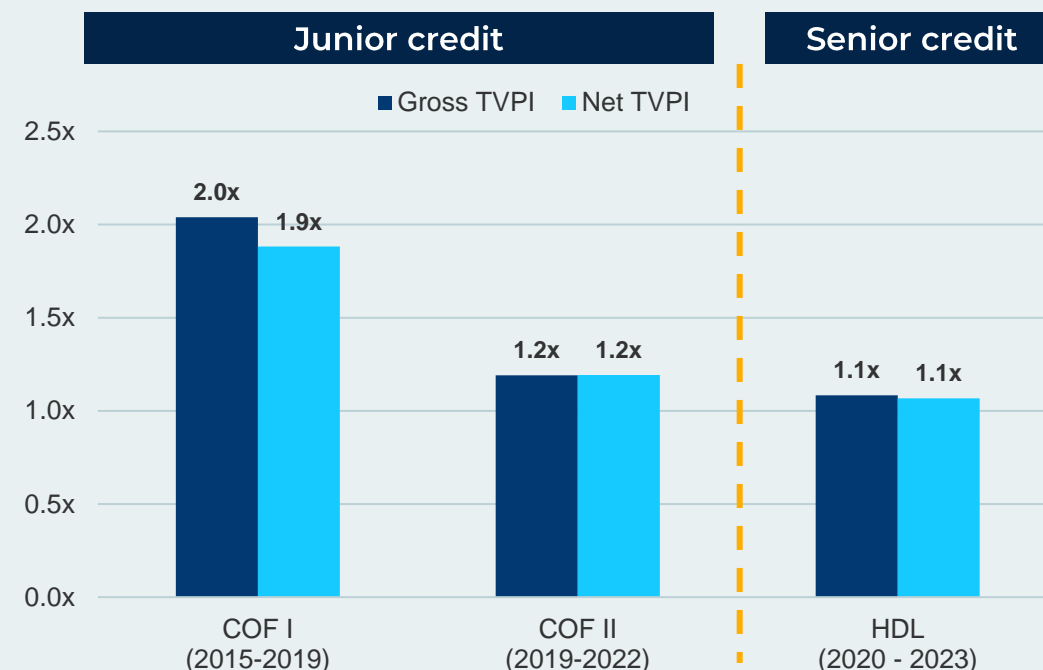
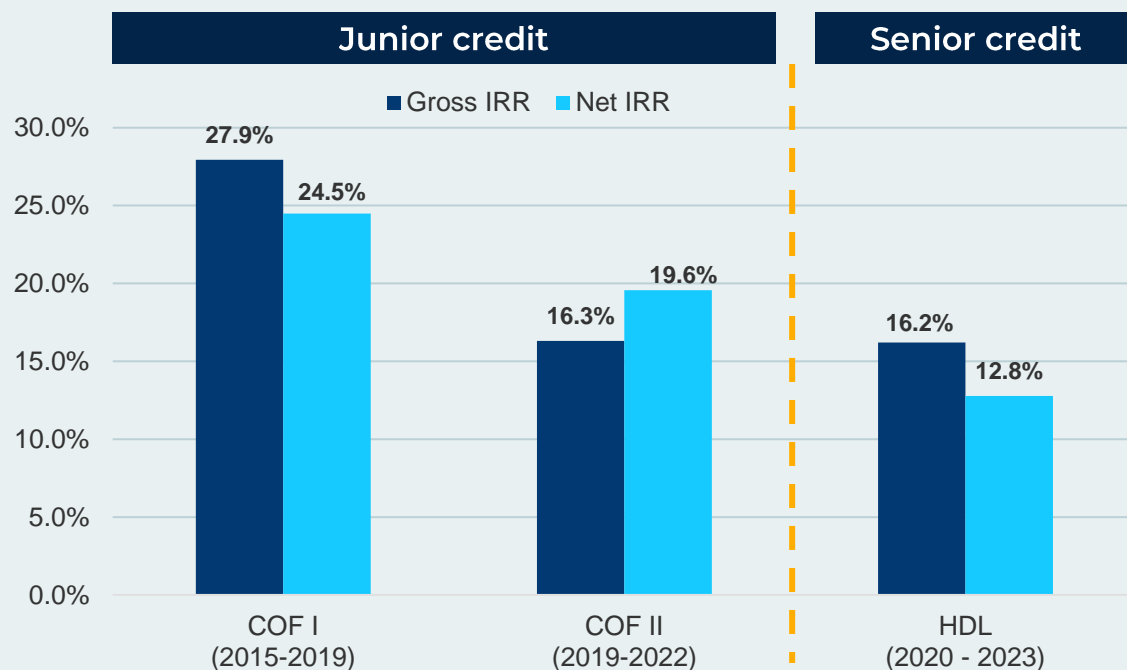
* Members of the Credit Investment Committee. Jamie Athanasoulas, Peter Lipson, and Karen Simeone are involved in all facets of the credit business, while John Morris and Greg Stento are Investment Committee members only. ** These individuals are focused on credit investments as well as investor relations. *** This individual is focused on credit investments as well as a Direct Co-Investment Investment Committee member.

HarbourVest credit investment and monitoring process



HarbourVest private credit fund performance

	Commitment Period	Strategy	Number of Investments	Total Cost (\$M)	Net DPI	Net TVPI	Net IRR	Gross IRR	Debt Loss Ratio*
COF I	2015-2019	Junior Credit	18	\$327.8	1.5x	1.9x	24.5%	27.9%	2.6%
COF II**	2019-2022	Junior Credit	24	\$568.3	0.1x	1.2x	19.6%	16.3%	0.0%
HDL***	2020-2023	Senior Credit	64	\$387.1	0.1x	1.1x	12.8%	16.2%	0.0%



* Debt loss ratio is calculated as the percentage of total cost lost, both realized and unrealized, for any debt securities that are valued at less than 1.00x total cost.

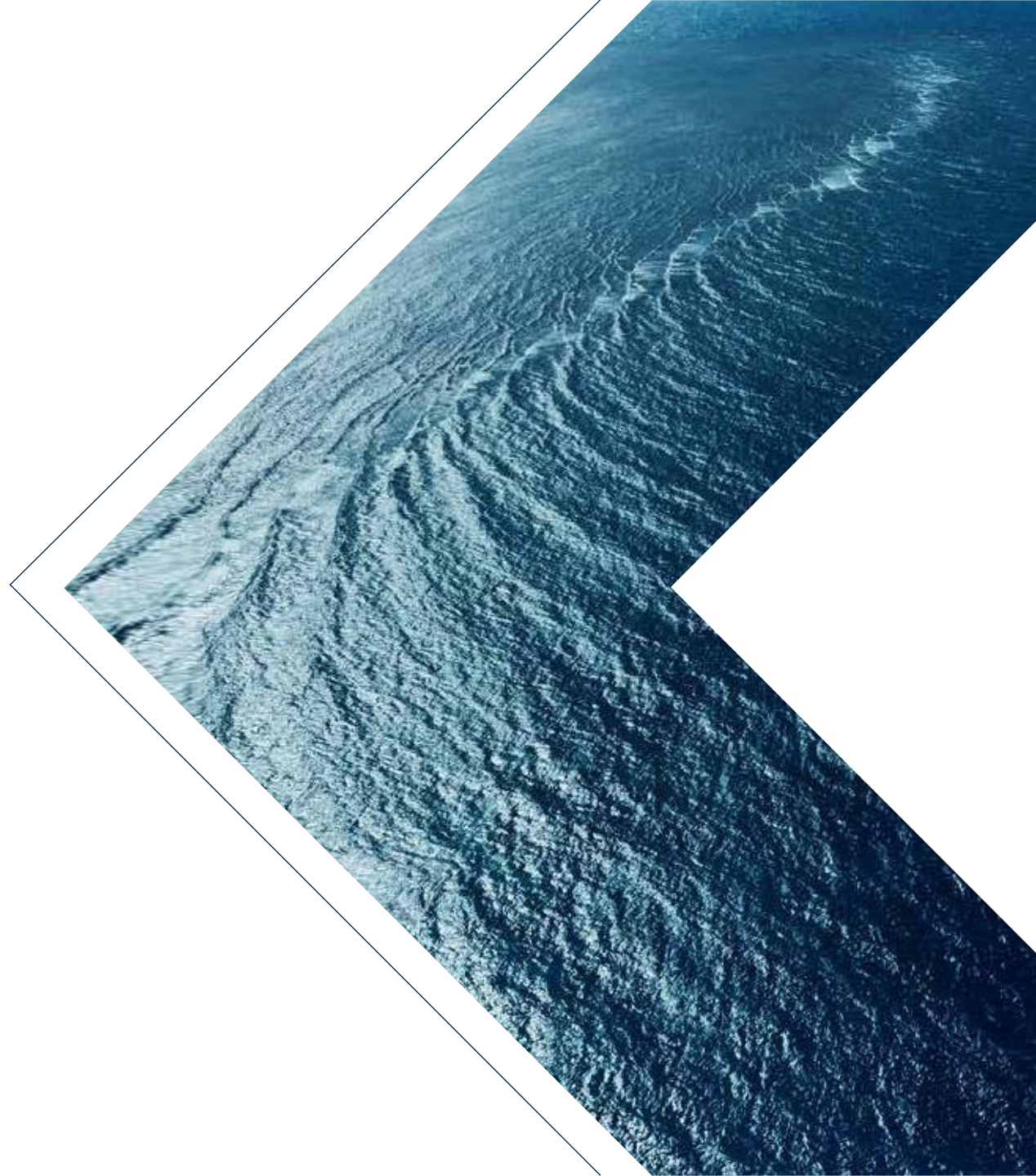
** Net IRR is greater than Gross IRR due to the subscription line of credit used to bridge capital calls

*** HDL performance includes the impact of subscription line of credit and asset-backed leverage facilities

Since inception as of March 31, 2022. Past performance is not a reliable indicator of future results. See 'Additional Important Information' at the end of the presentation, including important disclosures related to Net Performance Returns, Gross Performance Returns, and Fees and Expenses.

This data is based on based on actual past performance of prior investments and does not represent simulated past performance within the context of the ESMA Guidelines on Marketing Communications.

Appendix



Contacts

We are accessible across the globe

Americas	EMEA	APAC
BOGOTÁ HarbourVest Partners, LLC Oficina de Representación +57 1 552 1400	DUBLIN HarbourVest Partners (Ireland) Limited +353 1 566 4410	BEIJING HarbourVest Investment Consulting (Beijing) Company Limited +86 10 5706 8600
BOSTON HarbourVest Partners, LLC +1 617 348 3707	FRANKFURT HarbourVest Partners (Ireland) Limited, Zweigniederlassung Deutschland +49 69 589964040	HONG KONG HarbourVest Partners (Asia) Limited +852 2525 2214
TORONTO HarbourVest Partners (Canada) Limited +1 647 484 3022	LONDON HarbourVest Partners (U.K.) Limited +44 20 7399 9820	SEOUL HarbourVest Partners Korea Limited +82 2 6410 8020
	TEL AVIV HarbourVest Partners (Israel) Limited +972 3 3720123	SINGAPORE HarbourVest Partners (Singapore) Pte. Limited +65 6978 9800
		SYDNEY HarbourVest Partners (Australia) Pty. Limited +61 2 4072 7772
		TOKYO HarbourVest Partners (Japan) Limited +81 3 3284 4320

Additional important information



Additional important information

Epidemics, Pandemics and Other Health Risks: Many countries have experienced infectious illnesses in recent decades, including swine flu, avian influenza, SARS and 2019-nCoV (the “Coronavirus”). In December 2019, an initial outbreak of the Coronavirus was reported in Hubei, China. Since then, a large and growing number of cases have been confirmed around the world. The Coronavirus outbreak has resulted in numerous deaths and the imposition of both local and more widespread “work from home” and other quarantine measures, border closures and other travel restrictions causing social unrest and commercial disruption on a global scale. The World Health Organization has declared the Coronavirus outbreak a pandemic. The ongoing spread of the Coronavirus has had and will continue to have a material adverse impact on local economies in the affected jurisdictions and also on the global economy as cross-border commercial activity and market sentiment are increasingly impacted by the outbreak and government and other measures seeking to contain its spread. In addition to these developments having potentially adverse consequences for underlying portfolio investments of the Fund and the value of the Fund’s investments therein, the operations of HarbourVest and the Fund have been, and could continue to be, adversely impacted, including through quarantine measures and travel restrictions imposed on HarbourVest personnel or service providers based around the world, and any related health issues of such personnel or service providers. Any of the foregoing events could materially and adversely affect the Fund’s ability to source, manage and divest its investments and its ability to fulfill its investment objectives. Similar consequences could arise with respect to other comparable infectious diseases.

Certain information contained herein (including financial information and information relating to investments) has been obtained from published and non-published sources. Such information has not been independently verified by HarbourVest. Except where otherwise indicated herein, the information provided herein is based on matters as they exist as of the date of preparation and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available, or circumstances existing or changes occurring after the date hereof. Any forecast provided herein is based on HarbourVest’s opinion of the market as of the date of preparation and is subject to change, dependent on future changes in the market.

In considering any performance data contained herein, you should bear in mind that past performance is not a reliable indicator of future results. Certain information contained herein constitutes forward-looking statements, which can be identified by the use of terms such as “may”, “will”, “should”, “expect”, “anticipate”, “project”, “estimate”, “intend”, “continue”, or “believe” (or the negatives thereof) or other variations thereof. Due to various risks and uncertainties, including those discussed above, actual events or results or actual performance of the Fund may differ materially from those reflected or contemplated in such forward-looking statements. As a result, investors should not rely on such forward-looking statements in making their investment decisions.

Additional important information

Important Information and Risk Factors An investment in the private markets involves high degree of risk, and therefore, should be undertaken only by prospective investors capable of evaluating the risks of the Fund and bearing the risks such an investment represents.

The following is a summary of only some of the risks and is qualified in its entirety by the more detailed “Certain Investment Considerations, Risks and Conflicts of Interest” sections of the Private Placement Memorandum, if applicable.

Risks Related to the Structure and Terms of a Private Markets Fund. Investments in a fund of funds structure may subject investors to additional risks which would not be incurred if such investor were investing directly in private equity funds. Such risks may include but are not limited to (i) multiple levels of expense; and (ii) reliance on third-party management. In addition, a fund may issue capital calls, and failure to meet the capital calls can result in consequences including, but not limited to, a total loss of investment.

Illiquidity of Interests; Limitations on Transfer; No Market for Interests. An investor in a fund will not be permitted to transfer its interest without the consent of the general partner of a fund. Furthermore, the transferability of an interest will be subject to certain restrictions contained in the Limited Partnership Agreement of a fund and will be affected by restrictions imposed under applicable securities laws. There is currently no market for the interests, and it is not contemplated that one will develop. The interests should only be acquired by investors able to commit their funds for an indefinite period of time, as the term of the Fund could continue for over 14 years. In addition, there are very few situations in which an investor may withdraw from a fund. The possibility of total loss of an investment in a fund exists and prospective investors should not invest unless they can readily bear such a loss.

Risk of Loss. There can be no assurance that the operations of a strategy will be profitable or that the strategy will be able to avoid losses or that cash from operations will be available for distribution to the limited partners. The possibility of partial or total loss of capital of the strategy exists, and prospective investors should not subscribe unless they can readily bear the consequences of a complete loss of their investment.

Leverage. The strategy may use leverage in its investment strategy. Leverage may take the form of loans for borrowed money or derivative securities and instruments that are inherently leveraged, including options, futures, forward contracts, swaps and repurchase agreements. The strategy may use leverage to acquire, directly or indirectly, new investments. The use of leverage by the strategy can substantially increase the market exposure (and market risk) to which the strategies’ investment portfolio may be subject.

Availability of Suitable Investments. The business of identifying and structuring investments of the types contemplated by the strategy is competitive and involves a high degree of uncertainty. Furthermore, the availability of investment opportunities generally will be subject to market conditions and competition from other groups as well as, in some cases, the prevailing regulatory or political climate. Interest rates, general levels of economic activity, the price of securities and participation by other investors in the financial markets may affect the value and number of investments made by the strategy or considered for prospective investment.

Additional important information

Reliance on the General Partner and Investment Manager. The success of the strategy will be highly dependent on the financial and managerial expertise of the Fund's general partner and investment manager and their expertise in the relevant markets. The quality of results of the general partner and investment manager will depend on the quality of their personnel. There are risks that death, illness, disability, change in career or new employment of such personnel could adversely affect results of the strategy. The limited partners will not make decisions with respect to the acquisition, management, disposition or other realization of any investment, or other decisions regarding the strategies' businesses and portfolio.

Market risk. Private equity, as a form of equity capital, shares similar economic exposures as public equities. As such, investments in each can be expected to earn the equity risk premium, or compensation for assuming the non-diversifiable portion of equity risk. However, unlike public equity, private equity's sensitivity to public markets is likely greatest during the late stages of the fund's life because the level of equity markets around the time of portfolio company exits can negatively affect private equity realizations. Though private equity managers have the flexibility to potentially time portfolio company exits to complete transactions in more favorable market environments, there's still the risk of capital loss from adverse financial conditions.

Potential Conflicts of Interest. The activities of the strategies may conflict with the activities of other HarbourVest-managed funds or accounts.

Any data presented about investments prior to 1998 is related to transactions that occurred when the HarbourVest team was affiliated with Hancock Venture Partners, Inc.

Ported Performance: HarbourVest's founders began making venture capital investments for John Hancock Financial Services in late 1970s. In 1982 they formed Hancock Venture Partners, Inc, which was fully owned by John Hancock Mutual Life Insurance Company, to independently develop and manage third-party private equity capital. In January 1997, the Hancock Venture Partners management team formed a new independent management company, HarbourVest Partners, LLC. All then-employees of Hancock Venture Partners became owners and/or employees of HarbourVest Partners, LLC. As of January 1, 2021 all employees of HarbourVest Partners, LLC hired prior to 1997 are still affiliated with HarbourVest and serve either as a Managing Director or in a Senior Advisor capacity. HarbourVest Partners, LLC has no affiliation with John Hancock Financial Services.

The source of certain performance information is HarbourVest. In considering the performance information contained herein, prospective investors should bear in mind that past performance is not a reliable indicator of future results, and there can be no assurance that an investment sponsored (or an account managed) by HarbourVest will achieve comparable results or be able to implement its investment strategy or meet its performance objectives. The funds that made these investments may have had different terms and investment objectives than those proposed or modeled herein.

The foregoing performance information includes realized and unrealized investments. Unrealized investments are valued by HarbourVest in accordance with the valuation guidelines contained in the applicable partnership agreement. Actual realized returns on unrealized investments will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations used in prior performance data contained herein are based. Accordingly, the actual realized returns on these unrealized investments may differ materially from returns indicated herein.

Additional important information

In certain cases, a HarbourVest fund or account, or the partnerships in which it invests, may utilize a credit facility or other third-party financing. This is generally to bridge capital calls from limited partners or to fund a portion of an investment and may also be used to facilitate transactions involving the recapitalization of portfolio investments. This may make the resulting IRR and multiples higher or lower than the IRR or multiples that would have been presented had drawdowns from partners or available cash been initially used to acquire or pay for the investment.

IRRs are calculated from the date of a fund's first cash flow from a limited partner, which may include capital contributions in connection with fund formation, as may occur with certain AIF-Related Funds (as defined below), and therefore can be earlier than the date of the first capital call from a limited partner for the purpose of investment. The start date for IRR calculations can also be later than the date of initial investment when a credit facility or other third-party financing is used to fund such investment.

Performance is expressed in US dollars, unless otherwise noted. Returns do not include the effect of any withholding taxes. Cash flows are converted to US dollars at historic daily exchange rates, unless otherwise indicated. The return to investors whose local currency is not the US dollar may increase or decrease as a result of currency fluctuations.

Net IRR (Internal Rate of Return) are based on the Fund's Limited Partner ("LP") cash flow after all management fees, commissions, fund operating expenses, and carried interest. These returns reflect the combined return for all limited partners in a fund and do not necessarily reflect an individual limited partner's actual return. The Net IRR is calculated using daily LP cash flows. Where applicable, a final LP cash flow is based on the fair market value of all LP capital accounts as determined by the Fund or account's General Partner ("GP") in accordance with the Firm's valuation policy. Actual management fees and carried interest will vary and are established in negotiations with the limited partners of a Fund or separate account client. Management fees may range from an average of 0.1% to 1.25% per year of committed, called, or invested capital over the expected life of the Fund. Fees for Funds in extension years may be reduced. Fund investors will typically bear all the costs and expenses relating to the operations of a Fund and its GP (or similar managing fiduciary). A Fund shall bear its pro rata share of any such expenses incurred in connection with any portfolio investment to the extent the same portfolio investment is being made by other Funds. Organization expenses of a Fund will also typically be borne by the LPs. The specific payment terms and other conditions of the management fees, carried interest, and other expenses of a Fund are set forth in the governing documents of the Fund. Fees and expenses are also described in Part 2A of HarbourVest's Form ADV.

Net DPI and Net TVPI are calculated based on daily LP cash flows.

Gross IRR is based on the annual return calculated using daily cash flows from the Fund(s) to and from the various partnerships or companies held by the Fund, either directly or through a special purpose vehicle in which the Fund invested during the period specified. The Gross IRR does not reflect the deduction of management fees, carried interest, and other expenses borne by investors in the Fund(s), which will reduce returns. If such fees and expenses were deducted from performance, returns would be lower. For example, if a fund appreciated by 10% a year for five years, the total annualized return for five years prior to deducting fees and expenses at the end of the five year period would be 10%. If total fund fees and expenses were 1% for each of the five years, the total annualized return of the fund for five years at the end of the five-year period would be 8.90%.

Additional important information

Portfolio Company Performance is based on the cost and value of the individual company referenced. These returns do not reflect the fees, expenses, and carried interest of the partnership investments of the Fund(s), which will reduce returns. These returns do not represent the performance of any specific Fund or the return to limited partners of any specific Fund.

Gross Performance Returns – This information (Distributed / Funded, Total Value / Funded, TV/TC (Total Value / Total Cost), TVPI (Total Value Paid In), Gross Portfolio IRR, and Gross IRR), if shown, is presented on a gross basis and reflects the performance of the investment portfolio, inclusive of the effects of fund-level leverage which is used to achieve those returns, to the extent such a fund is a levered fund. Gross Portfolio IRR represents the annual return calculated using daily cash flows from the Fund(s) to and from the various companies, either directly or through a special purpose vehicle in which the Fund(s) invested during the period specified, inclusive of the effects of fund-level leverage which is used to achieve those returns, to the extent such a fund is a levered fund. These returns reflect the fees, expenses, and carried interest of the underlying fund investments (where applicable), certain expenses of any special purpose vehicle that held an interest in the underlying fund, as applicable, and the upfront costs, fees, expenses, and interest expense of the fund's leverage facilities, to the extent such a fund is a levered fund, but do not reflect the management fees, carried interest, and other expenses borne by investors in the Fund(s), which will reduce returns. See Important Information for additional disclosures related to fees and expenses of a Fund.

Total Value / Total Cost and Gross IRR: This information is presented on a gross basis and reflects the performance of the investment portfolio, inclusive of the effects of fund-level leverage which is used to achieve those returns, to the extent such a fund is a levered fund. These returns do not reflect management fees, carried interest, transaction costs, and other expenses borne by investors in the HarbourVest funds and accounts. If such fees and expenses were reflected, the performance shown would be lower. Gross IRR represents the annual return calculated using daily cash flows from the funds and accounts managed by HarbourVest to and from the various companies in which the HarbourVest funds and accounts invested during the period specified, inclusive of the effects of fund-level leverage, to the extent such a fund is a levered fund. These returns do not represent the performance of any specific fund or account or the return to limited partners.

Hypothetical information for illustrative purposes only. This information represents adjusted Model Track Record of each index as if the respective index had been purchased and sold at the time of the limited partners' capital calls and distributions, with the remainder held at the date noted. The indices used assume reinvestment of all dividends. Under this methodology, the capital calls for the purchase of the public market index are the same as the capital calls for the Fund. The distributions for the sales of the public market index are scaled to represent the same proportion of the Fund's NAV at the time of the distribution. For example, if the Fund distributes 5% of NAV, then 5% of the index NAV is distributed. The adjusted public market indices shown are not subject to the risk, investment strategy, or investment characteristics of the Fund. The securities comprising the public market indices have substantially different characteristics than the investments held by a Fund, and accordingly, a direct comparison may not be meaningful. The adjusted indices are shown to demonstrate the approximate returns an investor may have received had the investor invested in certain publicly-traded equity securities in lieu of a Fund or the investments made by HarbourVest. An investor is not able to directly invest in an unmanaged index.

The MSCI AC World® Index (ACWI) is designed to measure the performance of publicly-traded large and mid-capitalization equity securities in global developed and emerging markets. The MSCI ACWI Index is maintained by Morgan Stanley Capital International ("MSCI") and has historically captured approximately 85% coverage of the free float-adjusted market capitalization of its publicly-traded global equity opportunity set.

The S&P 500® Index is designed to measure the performance of publicly-traded equity securities of the large capitalization sector of the US market and includes 500 large companies having common stock listed on eligible U.S. exchanges. The S&P 500 Index is maintained by Standard & Poors ("S&P") and has historically captured approximately 80% coverage of available market capitalization of publicly-traded equities in the US market.

Additional important information

The Russell 2000® Index is designed to measure the performance of publicly-traded equity securities of the small capitalization sector of the US market and includes the 2,000 smallest companies in the Russell 3000® Index. These indexes are maintained by FTSE Russell, a subsidiary of the London Stock Exchange Group. The Russell 3000 Index consists of the 3,000 largest publicly-listed US companies, and has historically captured approximately 98% coverage of the total capitalization of the entire US stock market.

Bloomberg is the source of the index data contained or reflected in this material. MSCI, S&P, FTSE Russell, and JP Morgan are the owners of the index data contained or reflected in this material and all trademarks and copyrights related thereto. This is HarbourVest's presentation of the data. Bloomberg, MSCI, S&P, FTSE Russell, and JP Morgan are not responsible for the calculations conducted by HarbourVest, the formatting or configuration of this material, or for any inaccuracy in presentation thereof.

Model Track Record: Model results are hypothetical and inherently limited. They should not be relied upon as indicators of future performance. Individual fund and strategy performance can be better or worse than the model. No investor received the indicated Model Track Record. Certain assumptions have been made for modeling purposes. No representation or warrant is made as to the reasonableness of the assumptions made. Changes in the assumptions may have a material impact on the hypothetical returns presented. Different hypothetical model scenarios will provide different results. While the model portfolio may consist of investments made by HarbourVest during the relevant period(s), it does not reflect an actual portfolio managed by HarbourVest during the relevant period(s) and does not represent the impact that material economic and market factors might have had on HarbourVest's decision making if HarbourVest had been managing a fund that incorporated the investment strategy shown during the specified period(s).

In addition, the HarbourVest fund(s) had investment results materially different from the results portrayed in the model portfolio during the relevant period(s). The fund(s)' actual investments may have substantially different terms than those reflected in the model portfolio. No representation is made that any Fund will or is likely to achieve returns similar to those presented, and there can be no assurance that the fund(s) or HarbourVest will achieve profits or avoid incurring substantial losses. Other periods selected for the model portfolios may have different results, including losses. Current Model Track Record may differ from that shown.

Strategy Model Criteria: Model assumes each portfolio participates in every investment opportunity on a pro rata basis based on actual aggregate HarbourVest commitments for each vintage year. Actual investment opportunities may be limited due to scarcity and desired portfolio construction; creating a more concentrated portfolio in comparison to the model. The incremental benefit of portfolio diversification may become limited at the higher range of underlying partnerships / investments.

Fees and Expenses: Actual management fees and carried interest will vary and are established in negotiations with the limited partners of a Fund or separate account client. Management fees may range from an average of 0.1% to 1.25% per year of committed, called, or invested capital over the expected life of the Fund, pursuant to the limited partnership agreement or investment management agreement. Fees for Funds in extension years may be reduced, including to nil. Fund investors will typically bear all the costs and expenses relating to the operations of a Fund and its general partners (or similar managing fiduciary). A Fund shall bear its pro rata share of any such expenses incurred in connection with any portfolio investment to the extent the same portfolio investment is being made by other Funds. Organization expenses of a Fund will also typically be borne by Fund investors. When a Fund is generally expected to invest alongside a Fund primarily intended for European-based investors, which takes into account the regulatory requirements of the Alternative Investment Fund Managers Directive (an "AIF Related Fund"), organization expenses may be aggregated and allocated pro-rata between a Fund and its AIF Related Fund based on the relative commitments of the partners of the Fund and the partners of its AIF Related Fund (unless HarbourVest, as general partner, determines in good faith that a different share is appropriate). Fees and expenses are also described in HarbourVest's Form ADV, Part 2A brochure.

Additional important information

Gross Performance Returns – This information (Distributed / Funded, Total Value / Funded, TV/TC (Total Value / Total Cost), TVPI (Total Value Paid In), Gross Portfolio IRR, and Gross IRR), if shown, is presented on a gross basis and reflects the performance of the investment portfolio, including primary fund investments, secondary investments, and/or direct co-investments. Gross Portfolio IRR represents the annual return calculated using daily cash flows from the Fund(s) to and from the various partnerships or companies, either directly or through a special purpose vehicle in which the Fund(s) invested during the period specified. These returns reflect the fees, expenses, and carried interest of the underlying fund investments (where applicable), certain expenses of any special purpose vehicle that held an interest in the underlying fund, as applicable, but do not reflect the management fees, carried interest, and other expenses borne by investors in the Fund(s), which will reduce returns.

Fees and Expenses (Net and Gross only): Actual management fees and carried interest will vary and are established in negotiations with the limited partners of a Fund or separate account client. Management fees may range from an average of 0.1% to 1.25% per year of committed, called, or invested capital over the expected life of the Fund, pursuant to the limited partnership agreement or investment management agreement. Fees for Funds in extension years may be reduced, including to nil. Fund investors will typically bear all the costs and expenses relating to the operations of a Fund and its general partners (or similar managing fiduciary). A Fund shall bear its pro rata share of any such expenses incurred in connection with any portfolio investment to the extent the same portfolio investment is being made by other Funds. Organization expenses of a Fund will also typically be borne by Fund investors. When a Fund is generally expected to invest alongside a Fund primarily intended for European-based investors, which takes into account the regulatory requirements of the Alternative Investment Fund Managers Directive (an “AIF Related Fund”), organization expenses may be aggregated and allocated pro-rata between a Fund and its AIF Related Fund based on the relative commitments of the partners of the Fund and the partners of its AIF Related Fund (unless HarbourVest, as general partner, determines in good faith that a different share is appropriate).

Gross performance returns, if shown, are presented before management fees, carried interest, and other expenses borne by investors in the Fund(s). An actual portfolio would bear such fees and expenses. If such fees and expenses were deducted from performance, returns would be lower. For example, if a fund appreciated by 10% a year for five years, the total annualized return for five years prior to deducting fees and expenses at the end of the five year period would be 10%. If total fund fees and expenses were 1% for each of the five years, the total annualized return of the fund for five years at the end of the five-year period would be 8.90%. The specific payment terms and other conditions of the management fees, carried interest, and other expenses of a Fund are set forth in the governing documents of the Fund. Fees and expenses are also described in HarbourVest’s Form ADV, Part 2A brochure.

Fees and Expenses (Gross only): Gross performance returns are presented before management fees, carried interest, and other expenses borne by investors in the Fund(s). An actual portfolio would bear such fees and expenses. If such fees and expenses were deducted from performance, returns would be lower. For example, if a fund appreciated by 10% a year for five years, the total annualized return for five years prior to deducting fees and expenses at the end of the five year period would be 10%. If total fund fees and expenses were 1% for each of the five years, the total annualized return of the fund for five years at the end of the five-year period would be 8.90%. The specific payment terms and other conditions of the management fees, carried interest, and other expenses of a Fund are set forth in the governing documents of the Fund. Fees and expenses are also described in HarbourVest’s Form ADV, Part 2A brochure.

Additional important information

Private Equity Index Data: Unless otherwise indicated, all private equity fund benchmark data reflects the fees, carried interest, and other expenses of the funds included in the benchmark. Please note that Fund returns would be reduced by the fees, carried interest, and other expenses borne by investors in the Fund. Such fees, carried interest, and other expenses may be higher or lower than those of the funds included in the benchmark. Burgiss (unless otherwise noted) is the source and owner of any private equity index data contained or reflected in this material and all trademarks and copyrights related thereto. The material may contain confidential information and unauthorized use, disclosure, copying, dissemination, or redistribution is strictly prohibited. This is HarbourVest's presentation of the data. Burgiss is not responsible for the calculations conducted by HarbourVest, the formatting or configuration of this material, or for any inaccuracy in presentation thereof.

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An investment in the Fund will involve significant risks, including loss of the entire investment. Before deciding to invest in the Fund, prospective investors should pay particular attention to the risk factors contained in the Memorandum. Prospective investors should make their own investigations and evaluations of the information contained herein. Prior to the closing of a private offering of interests in the Fund, HarbourVest will give investors the opportunity to ask questions and receive additional information concerning the terms and conditions of such offering and other relevant matters. Each prospective investor should consult its own attorney, business advisor, and tax advisor as to legal, business, tax, and related matters concerning the information contained herein and such offering.

Net Performance Returns - DPI (Distributions / Paid-In Capital), TVPI (Total Value / Paid-In Capital), and Net IRR (Internal Rate of Return) through the applicable date are the returns to limited partners after all management fees, commissions, fund operating expenses, and carried interest. These returns reflect the combined return for all limited partners in a fund and may not reflect an individual limited partner's actual return. The Net IRR is calculated using daily cash flows to and from limited partners. In this calculation, the final cash flow to limited partners is the fair market value of all limited partners' capital accounts at the applicable date as determined by the general partner of the respective HarbourVest fund or account in accordance with the valuation policy. The net multiples (DPI and TVPI) are calculated based on the same cash flows.

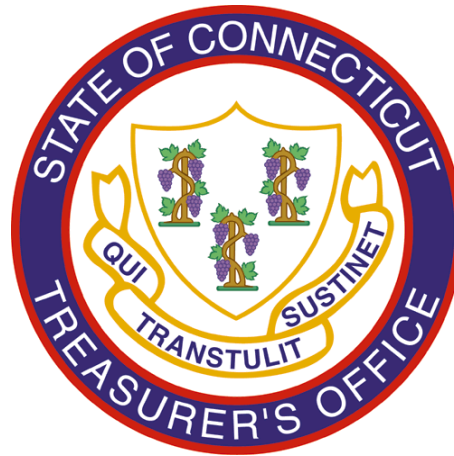
Additional important information

Target Returns- The target return information presented herein is hypothetical in nature, based on an analysis of historical information including historical market returns and prior fund returns of the investments, and is shown for illustrative, informational purposes only. Assumptions made for modeling purposes are unlikely to be realized. There can be no assurance that the investment strategy will be successful. There is no guarantee that the targeted/projected returns will be realized or achieved, and the ultimate returns and income of the proposed fund will differ based upon market conditions and available investment opportunities over the life of the investment period.

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Infrastructure/Natural Resources Investment Opportunities Overview

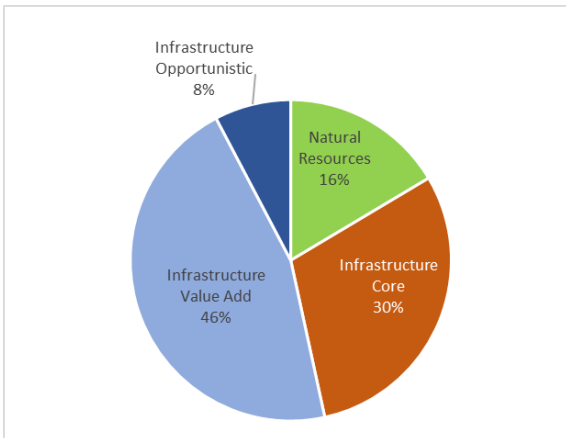
Investment Advisory Council
December 14, 2022



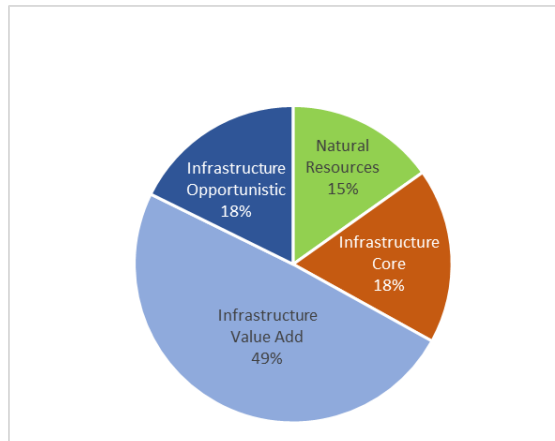
Infrastructure/Natural Resources Investment

- Infrastructure/Natural Resources (INR) market value represented approximately 1.8% of the total CRPTF value as of September 30, 2022.
 - The recommended 2022 strategic asset allocation plan (approved September 2022) increased the INR target allocation from 4.2% to 7%.
 - INR's current exposure (market value plus unfunded commitments) totals \$1.78 billion (4.1% of the total CRPTF).
- The portfolio is developing in line with the targeted exposure ranges established for each sub-strategy
 - The 2022 pacing target for the 4.2% allocation is \$525 million "m" to INR (\$250m Infra, \$225m NR, and \$50m co-investment).
 - Infrastructure Commitments for 2022, to date, have totaled \$475m with a co-investment allocation of \$50m.
 - The 2023 proposed pacing, based on the 7% target allocation approved in September, targets \$850m of INR commitments in 2023.
 - CRPTF's current sector exposure is well balanced with the largest weightings to Transportation Infra, Energy Equipment and Services, and Communication.
- CRPTF targets top managers, with compelling strategies and seeks to have limited manager strategy overlap.

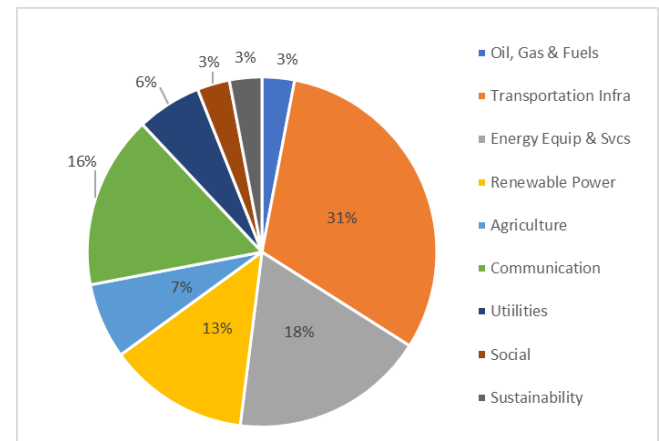
% Market Value*



% Total Exposure*



Sector % by Market Value*



*Estimated as of June 30, 2022



Infrastructure/Natural Resources Investment Recommendations

CT Real Assets Co-Investment LP \$200 Million Commitment expansion of existing commitment

- Fund of One Managed by Morgan Stanley (MSIM)
- Current Fund includes two share classes combined totaling \$375 million over a three-year commitment period, focused on non-core investments, split approximately \$225 million in Real Estate and \$150 million in INR.
- The expansion recommended is up to an additional \$200m for the remaining two years, for INR co-investments, core and non-core, that are exclusively sourced from CRPTF LP investments.
- MSIM has shown capability to execute investment at the targeted level, for Infrastructure Co-investments, based on first year commitments. In addition, CRPTF Co-investment opportunities from recent fund investments are expected to be robust.
- The proposed additional commitment provides reduced fees and capacity to invest in both non-core and core opportunities from CRPTF's existing vetted relationships.

BlackRock Global Infrastructure Fund IV \$200 Million Commitment (\$150 Million Fund, \$50 Million Co- Investment Sidecar)

- Core-plus infrastructure investment, complements existing Infrastructure Investments. Team has deep Industry Relationships and large pipeline of opportunities – with 80% of prior investments through proprietary sources rather than auctions. Lower risk profile, with a yield focus (7%+ average annual gross dividend yield target).
- Focus on high-quality, essential, contracted and diversified infrastructure assets under the themes of Decarbonization, Decentralization and Digitization
- OECD focus with sector targets of Energy/Environmental, Low Carbon Power, Digital Infrastructure, Transportation, Logistics and Regulated Utilities
- Strong Track Record
- Return Targets: Gross IRR 12%-14%, Gross MOIC of 2.0x





SHAWN T. WOODEN
TREASURER

State of Connecticut
Office of the Treasurer

DARRELL V. HILL
DEPUTY TREASURER

December 6, 2022

Members of the Investment Advisory Council ("IAC")

Re: Consideration of an expansion via a new "Series 3" to the CT Real Assets Co-Investment LP with Morgan Stanley Investment Management ("MSIM")

Dear Fellow IAC Member:

At the December 14, 2022 IAC meeting, I will present for your consideration an expansion to our existing co-investment relationship with Morgan Stanley for the Connecticut Retirement Plans and Trust Funds (the "CRPTF") within CT Real Assets Co-Investment LP ("MSIM-CT" or the "Fund").

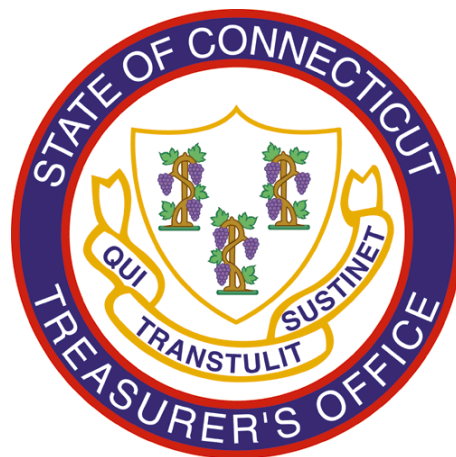
As you may recall, in February 2022, the CRPTF closed a \$375 million commitment to focus on value-add and opportunistic real estate and infrastructure and natural resources ("INR") co-investments from the CRPTF's existing Real Asset portfolio and from other opportunities identified by MSIM. The earlier commitment included a \$225 million focus on real estate ("Series 1") and a \$150 million to INR ("Series 2") to be invested over a three-year investment period.

I am proposing a \$200 million commitment expansion over the remaining investment period term of MSIM-CT to a new "Series 3." Series 3 would focus on INR opportunities generated by the CRPTF's managers across core, core-plus, value-add, and opportunistic investments. The prior created Series 2 would also narrow its focus to non-CRPTF managers in the infrastructure and natural resources space. The additional investment into Series 3 would support the long-term objectives of increasing the CRPTF's asset allocation into INR in a fee and resource efficient way, while also strengthening our partnerships with existing managers.

Attached for your review is the recommendation from Ted Wright, Chief Investment Officer, and the due diligence report prepared by Meketa. I look forward to discussing these materials at the next meeting.

Sincerely,

Shawn T. Wooden
State Treasurer



Due Diligence Report
Chief Investment Officer Recommendation
December 5, 2022
CT Real Assets Co-Investment LP



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Manager Overview

- Manager/Parent Organization: Morgan Stanley Investment Management ("MSIM")
- Fund: CT Real Assets Co-Investment Fund LP (the "Fund")
- Morgan Stanley Investment Management is a global asset manager with \$1.4 trillion in assets under management, operating in 22 countries, with 1,184 investment professionals across 52 offices.
- The Morgan Stanley real assets co-investment practice was established in 2009 and operates within the Solutions and Multi-Asset Group.
- The MSIM Solutions Team is a group of 26 investment, administration, and research professionals responsible for implementing the real assets co-investment platform.
- The MSIM Solutions Team is led by the six-member Investment Committee ("IC") comprised of Rui De Figueiredo, Ph.D., Co-Head and Chief Investment Officer, and Managing Directors, Ted Eliopoulos, Ryan Meredith, Catherine Hong, Steve Turner, and Damon Wu.

Fund Summary

- CT Real Assets Co-Investment LP ("MSIM-CT")
- Current Fund includes two share classes combined totaling \$375 million over a three-year commitment period. Share Class 1 targets non-core real estate co-investments with \$75m per year; Share Class 2 targets non-core Infrastructure and Natural Resource (INR) co-investment at \$50m per year.
- The expansion recommended is a \$200m, \$100m per year, third share-class focused on core and non-core INR co-investments only that are exclusively sourced from CRPTF LP investments (the "Expansion" or "Share Class 3").
- No change in investment parameters in Series 3 other than:
 - Investment Size increased up to \$40 million (versus \$20 million in Series 1 & 2)
 - Target Minimum Net IRR of 10% due to inclusion of core/core plus investments (vs. minimum 12% net target in Series 1 & 2)
- Management Fee: Reduced for Share Class 3, and starts at a base fee of 35bps, with a 20% reduction each year after year 3, with no incentive fee

Strategic Fit

- Infrastructure and Natural Resources ("INR") portfolio: Infrastructure allocation
- Recommended Commitment: \$200 million total (\$100 million for each of the two remaining years of the existing program).
- Infrastructure and Natural Resources Strategic Pacing Plan:
 - Sub Strategy: Infrastructure Co-investment
 - Risk/Return: Value-add
 - Current INR Allocation by Market Value as of September 30, 2022: 1.8%
 - Current Long-Term Infrastructure and Natural Resources Target Allocation: 7% (increased from 4.2% target in September 2022)
 - Current Allocation Long Term Co-investment Target 10-20%
 - Current Co-investment Exposure: 11%

Recommendation

- Based on the strategic fit within the Infrastructure portfolio, as well as the due diligence conducted by Pension Funds Management (“PFM”) investment professionals, and INR consultant Meketa, the Chief Investment Officer of the Connecticut Retirement Plans and Trust Funds (“CRPTF”) recommends consideration of an additional commitment of up to \$200 million to Morgan Stanley CT Co-investment via Share Class 3.
- An additional \$200 million commitment will provide CRPTF additional investment in the infrastructure co-investment sector with existing manager/strategies at reduced total fees.

Investment Considerations

- Recommended commitment supports the long-term key objectives of the Infrastructure/Natural Resources strategic plans, including accessing attractive investments through fee efficient co-investments.
- The Morgan Stanley Solutions Team has demonstrated its investment expertise and co-investment capabilities.
- The expansion will focus entirely on Connecticut Sponsor relationships. Recent CRPTF Infrastructure and Natural Resource investment activity is expected to provide for co-investment opportunities.
- The current Share Class 1 and Share Class 2 mandate focuses on non-core investment opportunities, while Share Class 3 will provide for a vehicle to invest in both core and non-core co-investment opportunities from existing CRPTF relationships.

Existing INR Commitment Review

- The existing \$150 million Share Class 2 (closed February 2022) provides Connecticut the opportunity to enhance INR returns through lower fees and carry relative to traditional primary fund investments.
- The existing commitment is also structured to target \$50 million of INR co-investments per year over a three-year investment period.
- Morgan Stanley has discretion to manage MSIM-CT, subject to Connecticut's investment guidelines.
- Targets a mix of investments with Connecticut's sponsors and from MSIM Solution Teams Third Party GP relationships, in order to (ii) increase control of investment pacing, and (iii) strengthen relationships with and insights into existing and prospective managers.

First Year Review

- As of November 30, 2022, the MSIM-CT Infrastructure portfolio was comprised of:
 - 3 investments representing \$60 million of committed/reserved capital, of which \$17.3 million has been funded.
 - Investments with Connecticut's existing sponsors represented 33% of the transactions by count and 33% by capital committed.

The portfolio is very young, but all investments are performing to plan.

Recommended Commitment Increase

- The recommended \$200 million commitment increase to MSIM-CT aligns with the 2023 INR pacing plan, which incorporates the new 7% strategic asset allocation target for INR.
- The strategic plan objectives include having co-investments represent 10% to 20% of the INR's total exposure.
- The 2023 pacing plan identifies targeted co-investments of \$150 million per year in addition to side cars.
- The recommended commitment would increase the MSIM targeted co-investments from \$50 million to \$150 million per year for 2023 and 2024, i.e., the second and third year of the existing investment period.

CRPTF Proposed Co-Investment Guidelines

Reflective of a 3-year commitment period

		Old Range	New Range
Commitments by Investment Type	Co-investments	95% - 100%	97% - 100%
	Stapled Primaries	0% - 5%	0% - 3%
Commitments by Strategy	Real Estate	50% - 70%	20% - 40%
	Infrastructure & Nat Resources	30% - 50%	MSIM-Sourced: 10% - 30% CRPTF-Sourced: 30% - 50%
Commitments by Geography	North America	20% - 80%	20% - 80%
	Europe	10% - 60%	10% - 60%
	Developed Asia Pacific	0% - 30%	0% - 30%
	Emerging Markets	0% - 20%	0% - 20%
Commitment Sizing	Total Target Commitments	\$375MM	\$575MM
	Individual Target Investment Size	\$10 - \$25MM	\$10 - \$40MM
	Materiality Constraint	\$10MM	\$10MM
GP Concentration Limit	Asset Class	25%	25%
	Portfolio Level	20%	20%
Net Return Threshold	Real Estate (Share Class 1)	10%	10%
	MSIM-Sourced Infra & NR (Share Class 2)	10%	10%
	CRPTF-Sourced Infra & NR (Share Class 3)	-	8%

The statements above reflect the opinions and views of MSIM and CRPTF as of the date hereof and not as of any future date.



Key Terms Summary – MSIM-CT

Connecticut/GP Commitment	Current Total MSIM commitment increase from \$375 million to \$575 million; Infrastructure target from \$150 million to \$350 million
Structure	Fund of One
Investment Strategy	Co-investments; Across all three share classes: Real Estate share class (35%), and INR (65%)
Fund Term	Until assets acquired or agreed to be acquired by the Fund have been sold or otherwise disposed
Investment Period	3 years from initial closing
Management Fee	Share Class 3 (recommended add INR/CT Sponsors) 0.35% on invested capital in years 1 through 3, reduced by 20% per annum thereafter; Share class 1 (RE), 2 (INR/MS sourced) 0.47% on invested capital in years 1 through 3, reduced by 20% per annum thereafter; combined weighted 0.42% on invested capital years 1-3
Carry & Waterfall Type	No Carry – Share Class 3 (recommended CT expansion), 5%/Full Fund (European) Share Class 1 & 2
Preferred Return	NA for share class 3; None for Share Class 1 & 2



Morgan Stanley Investment Management Inc. ("Morgan Stanley")

Review of Required Compliance Attachments

Morgan Stanley disclosed no third-party fees, campaign contributions or known conflicts

The compliance requirement for commitment expansions on existing funds are:

- Attachment 3 (Third-Party Fees Affidavit)
- Attachment 4A (Conflict of Interest)
- Attachment 6 (Campaign Contributions)

Overall Assessment : Evaluation and Implementation of Sustainable Principles

The firm described a comprehensive integration of ESG into its investment process. MSIM is a signatory of the UN PRI and three dozen other sustainability organizations including the Carbon Disclosure Project and the UK Stewardship Code. The firm employs six different groups to oversee ESG research and policies, including its Sustainability Team, Sustainability Council and Global Sustainable Finance Group. MSIM provides extensive training on ESG topics and partnered with the UNPRI to train portfolio managers and analysts. The firm's disclosure included detail concerning ESG integration – both as part of the due diligence process prior to deal execution as well as ongoing evaluation.

The firm does not have a policy regarding investments in civilian firearms manufacturers or retailers.

Overall, MSIM's disclosure was exemplary.

SCORE

2

Criteria	Response
Firm has an ESG policy	Yes
If Yes, firm described its ESG policy	Yes
If Yes, firm provided examples of ESG factors considered in the decision-making process, explained the financial impact of these ESG factors	Yes
Designated staff responsible for sustainability policies and research	Yes
Firm provides training/resources on sustainability issues, explained sources of ESG-related data	Yes
Signatory/member of sustainability-related initiatives or groups	Yes
Policy for evaluating current or prospective relationships with manufacturers or retailers of civilian firearms	No

Criteria	Response
Policy that requires safe and responsible use, ownership or production of guns	No
Enhanced screening of manufacturers or retailers of civilian firearms	No
Enhance screening of any industry/sector subject to increased regulatory oversight, potential adverse social and/or environmental impact	Yes
Merchant credit relationship with retailers of civilian firearms and accessories	No
If Yes, firm confirms compliance with laws governing firearms sales	N/A



Private Markets Investment Memorandum

**Morgan Stanley Investment Management
CRPTF Real Assets Co-Investment
Partnership Expansion**

December 2, 2022

MEKETA

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Introduction

Overview

Meketa Investment Group (“Meketa”) first initiated its evaluation of Morgan Stanley Investment Management’s (“MSIM” or the “Manager”) proposed Real Assets Co-Investment Partnership (“RACP”), a “fund of one”, discretionary separate account (the “Account”) in August 2021 at the request of Connecticut Retirement Plans and Trust Funds (“CRPTF”). MSIM offers a range of bespoke strategies to institutional investors from its Customized Solutions Platform and this Account’s mandate is to make private markets co-investments on a discretionary basis on behalf of CRPTF in real estate (“RE”), infrastructure (“IS”), natural resources (“NR”), and related other real assets. CRPTF Staff conducted a search process and identified and selected the Manager for this real assets mandate. Meketa did not evaluate any other participants or offerings during the search process.

CRPTF executed its Account with MSIM on February 7, 2022, and established two Share Classes: Share Class 1 for Real Estate and Share Class 2 for MSIM/CRPTF-Sourced IS & NR, with a total commitment of \$375 million. As of September 30, 2022, MSIM has made five co-investments on CRPTF’s behalf, including three in infrastructure at \$20 million each, and two in real estate at \$15 million and \$20 million, for a total of \$95 million. Of the \$60 million in infrastructure commitments, \$17.4 million has been funded as of September 30, 2022.

As CRPTF evaluated the Account’s deal flow and considered the continuing evolution and growth of its Real Assets Program, including the Infrastructure and Natural Resources portfolios, there was a desire to increase the quantum of co-investments with existing IS and NR managers with whom CRPTF does not have direct co-investment vehicles, herein “CRPTF-Sourced co-investments”. Under the original Account terms, MSIM had ability to access these managers, but certain Account terms disincentivized MSIM to robustly pursue these.

As such, CRPTF is considering a proposal negotiated with MSIM to increase the original commitment to the Account by \$200 million, from \$375 million to \$575 million, to be dedicated to CRPTF-Sourced IS and NR (collectively “IS/NR”) co-investments as a new Share Class 3, with Share Class 2 moving forward only including MSIM-Sourced managers. This Investment Memorandum documents new diligence covering the additional commitment and targeted co-investment source, and provides a refreshed review of the Firm, investment team, historical performance, and related areas of interest.

Diligence Process

For the original underwriting of the Account, as part of a comprehensive due diligence process, Meketa completed a thorough review of all marketing materials and other supporting documentation related to the offering, including the Manager’s response to Meketa’s Due Diligence Questionnaire (“DDQ”), and the draft Investment Guidelines (as of August 25, 2021). Meketa also conducted two virtual meetings with the MSIM team: an introductory session with the senior team on August 5, 2021; and an in-depth



due diligence session on August 18, 2021 with the senior team that covered the organization, strategy development and execution, historical performance, and operations among other topics. Virtual meetings were held in lieu of in-person meetings due to the travel policy restrictions and other considerations related to COVID-19 at the time of Meketa's diligence. Meketa also conducted a number of reference calls to further assess the Manager, team, and strategy.

To conduct diligence for this proposed increase in the commitment amount to the Account for the new Share Class focusing on CRPTF-Sourced IS/NR co-investments, Meketa requested an updated redlined DDQ from MSIM, including performance data as of June 30, 2022, and additional materials describing the current status of MSIM's co-investment program generally, and specifically the CRPTF Account. We held a virtual meeting with MSIM representatives on November 17, 2022 to discuss personnel, strategy, pipeline, and performance relevant to the existing Account and the proposed new Share Class 3, and a follow-up meeting on November 28, 2022 to further discuss past performance and the forward pipeline.

Summary Analysis & Opinion

Meketa believes that creating a dedicated share class within CRPTF's existing MSIM Account to commit an additional \$200 million over two years for co-investments exclusively with CRPTF's own existing (and future) infrastructure and natural resources managers is an attractive and efficient way to increase deployment into these target areas. Expanding the Account in this way, and giving it a slightly lower return target, will increase the range of opportunities that can be considered and increase the amount of capital that can be deployed into typically fee- and carry-free co-investments.

There have been few changes to the team and platform since Meketa's original underwriting of the Account in 2021. We continue to believe that MSIM has a solid, experienced investment team and a strong real assets co-investment track record. The deal flow evaluated for the Account has been robust at 20 opportunities examined, with the three selected to date matching the mandate well and reflecting MSIM's stated investment themes and due diligence criteria. Meketa's review of the rejected deals found MSIM using a disciplined and reasonable approach in their screening process and results. The expanded focus on CRPTF's own managers means that Meketa will have underwritten the original commitment to the funds alongside which the new share class will invest, providing an added layer of comfort with the managers who are likely to provide a fertile ground for co-investment opportunities.

The primary considerations around the proposed Account expansion are: MSIM's Portfolio Solutions team had little prior experience with CRPTF's real assets manager roster and is still new in their collaboration with them; and the team's experience to date—and continued expected focus—will be on North American and European opportunities, while some of CRPTF's managers invest in other geographies in what could be attractive co-investment opportunities.

Investment Strategy

Existing Account Strategy Summary

CRPTF's Account mandate targets co-investments alongside commingled funds across all three asset classes (RE, IS, and NR) primarily with value-add and opportunistic risk-return profiles (although up to 30% core is permitted) in North America, Western Europe, and other regions to a lesser extent. MSIM may source opportunities from CRPTF's own existing real assets General Partners ("GPs"), looking to invest alongside CRPTF's commingled funds ("CRPTF-Sourced"), as well as with GPs in whose funds CRPTF is not invested ("MSIM-Sourced"). MSIM may also source co-investment opportunities for the Account from among the universe of GPs other Portfolio Solutions clients are invested with, as well as MSIM's broader, firm-wide network of GP relationships (also MSIM-Sourced). Primary fund investments may be made where MSIM can secure co-investment access (i.e., "stapled primaries").

Across all asset classes, MSIM focuses on segments of the market the team believes are inefficient, including middle-market scale, with absolute size relative to the asset class, sector, property type, etc., and on deals where MSIM believes the GP has sufficient ability to control outcomes (see additional asset-specific strategy descriptions below). The team emphasized the premium it places not only on the quality of a GP, but on the specific quality and expertise of the deal team associated with each particular opportunity. MSIM will also position clients where their aggregate investment can offer a mutually beneficial solution to a GP's capital need that regular LPs, investment banks, or other financing sources cannot. MSIM will look for attractive opportunities where it has a competitive advantage by virtue of its relationships, information reach, resources it can bring to bear from other Morgan Stanley divisions, and reputation as a deal partner trusted to execute.

Within infrastructure and natural resources, MSIM focuses on assets with long useful lives that are essential to society and the economy, including energy businesses (primarily power generation and midstream energy), utilities, transportation assets, social infrastructure, and select infrastructure service companies. MSIM anticipates that co-investments are likely to come from deals with exposures reflecting the impact of key mega trends such as population growth, urbanization, technology changes, and rising public debt.

Expansion Strategy: New Share Class 3

The primary differentiators for Share Class 3, CRPTF-Sourced IS/NR co-investments, are:

- A lower net return target of 10%, compared to 12% for the other two share classes for RE (Class 1) and MSIM-Sourced IS/NR (Class 2, which will no longer include CRPTF-Sourced managers);
- A dedicated additional commitment exclusively for Class 3 in the amount of \$200 million; and
- An ability to make larger individual co-investments, setting the target range at \$10 million to \$40 million, compared to \$10 million to \$25 million for Classes 1 and 2.



Examples of existing IS/NR managers expected to be prioritized for Class 3 activity include those profiled below.

- Manager A: Executes a global diversified strategy investing in single assets or companies and building platforms from scratch or an anchor investment in developed and emerging markets.
- Manager B: A renewables and related assets specialist investing globally in OECD countries.
- Manager C: Makes growth investments in early-stage infrastructure businesses in North America and Europe focusing on communications, energy and energy transition, and transportation.

Co-Investment Pipeline

MSIM provided Meketa with a list of 11 near term potential co-investment deals, including five that would fit the mandate of the new Class 3 sleeve. These include opportunities in industrial, renewables, social, and transportation in North America and Europe. MSIM sees robust deal flow from the managers targeting the many sectors that are underinvested, ready to grow, and eager for private capital. Additionally, the slightly lower return target should allow more serious consideration of a larger set of deal candidates.



Manager Background

The Firm

Founded in 1935, Morgan Stanley is a publicly traded financial services institution providing a variety of solutions across investment banking, securities, investment management, and wealth management. To date, the company's global footprint spans 41 countries and includes approximately 82,000 employees. Within the broader Morgan Stanley platform, three distinct business segments comprise total firm activity, including the Institutional Securities Group, Wealth Management, and Investment Management, the latter of which is serving as the Manager of the CRPTF Co-Investment Partnership. In March 2021, the Firm acquired Eaton Vance and its affiliates (collectively "EV"), and integrated EV businesses into the overall MSIM platform.

Morgan Stanley Investment Management

Founded in 1975, Morgan Stanley Investment Management (MSIM) provides global asset management products and services to a wide range of investors and institutions. The Firm is based over 56 offices in 25 countries, with 4,268 employees, of which 1,306 are investment professionals.¹ Portfolio management and investment strategy activities are handled primarily in the New York, Philadelphia, Boston, Seattle, Minneapolis, London, Hong Kong, Singapore, Tokyo, and Mumbai offices; other office locations handle administration, client service, and distribution. As of September 30, 2022, MSIM has over \$1.3 trillion in AUM across its variety of strategies, consisting of: Global Liquidity, \$453.8 billion; Solutions and Multi-Asset, \$317.5 billion; Active Fundamental Equity, \$249.2 billion; Global Fixed Income, \$171.3 billion; Real Assets, \$62.1 billion; and Private Credit and Equity, \$25.2 billion.

Customized Solutions

The Customized Solutions Division within MSIM houses the Portfolio Solutions group that manages custom multi-asset portfolios, Outsourced Chief Investment Officer ("OCIO") programs, and liquid alternative investment strategies for institutional and high net worth investors. As of September 30, 2022, the group had approximately \$13.6 billion in assets across 25 partnerships and has committed \$2.7 billion to real assets investments since inception in 2009, inclusive of primaries, secondaries, and co-investments. In addition to Portfolio Solutions, the Customized Solutions Platform also comprises: Parametric, which manages customized direct indexing portfolios, \$242.0 billion; Global Balanced and Multi-Asset, \$26.4 billion; Hedge Fund Solutions (\$23.6 billion); Applied Equity Advisors, \$6.1 billion; FundLogic, an alternatives and systematic investment solutions business, \$4.3 billion; Managed Futures, \$0.8 billion; and Managed Solutions, \$0.7 billion.

¹ Firm data includes that for Eaton Vance and its affiliates.



Investment Resources & Experience

Portfolio Solutions Team Overview

The Portfolio Solutions team comprises 26 total professionals across investment research, investment administration, data management, and the Investment Committee, with 18 investment professionals including four Managing Directors; three Executive Directors; six Vice Presidents; two Senior Associates; one Associate; and two Analysts. They are located in New York (12), London (5), and Hong Kong (1). The six-member Investment Committee will be responsible for day-to-day portfolio oversight and management of the Account: four—Messrs. Figueiredo, Meredith, Wu, and Ms. Hong—have worked together as Portfolio Managers at Morgan Stanley for 15 years, in addition to their previous time together at Citigroup; Mr. Turner joined the team 10 years ago, while Mr. Eliopoulos joined in 2019.

Additional investment administration and data management employees provide operational expertise to the group, covering administration, and reporting for the Account. The Portfolio Solutions team will also leverage the broader Firm platform, including investment research specialists across AIP Private Markets & Hedge Fund Solutions (130), and MS Private Infrastructure (44),² for depth in investment sourcing, diligence, transaction structuring, and execution, as well as operations personnel for portfolio services and administration, reporting and analysis, IT, compliance, marketing, legal and tax.

Senior Investment Professionals

Name (*=IC) Title	Yrs At Manager	Total Yrs' Experience	Relevant Experience/Degree
Rui de Figueiredo* Managing Director; Co- Head & CIO of Solutions & Multi-Asset Grp	15	25	→ Led Research on behalf of Citi Alternative Investments → Case Leader, Boston Consulting Group → Assoc. Professor Emeritus, Haas Business Sch., UC Berkeley → AB Harvard University; MA/PhD Stanford University → CIO, CalPERS
Ted Eliopoulos* Managing Director	3	25	→ Chief Deputy Treasurer, California State Treasurer's Office → Attorney, Latham & Watkins real estate division → BS Dartmouth College; JD University of Virginia → Associate, Morgan Stanleys Real Estate
Catherine Hong* Managing Director	14	19	→ Associate, Citigroup Property Investors → BA Wellesley College; MBA Wharton School of the University of Pennsylvania
Ryan Meredith* Managing Director; Head Portfolio Solutions Group	15	25	→ Director, Quantitative Research Group, Citigroup → Actuary, Towers Perrin and Alexander Forbes Consultants → BSc University of Witwatersrand; MSc Courant Institute NYU

² Team numbers as of September 30, 2022. AUM as of September 30, 2022 for AIP/Hedge Funds, and Private Infrastructure was \$33.6 billion, and \$6.1 billion, respectively.



Name (*=IC) Title	Yrs At Manager	Total Yrs' Experience	Relevant Experience/Degree
Steve Turner, CFA* Executive Director	10	14	→ Analyst, Mercer Investment Management → BSc University of Southampton; MSc International Capital Markets Association Centre at Henley Business School
Pennapa Tantiyakul, CAIA Executive Director	12	14	→ Hedge Fund Research Analyst, Lipper → Quantitative Analyst, ING Fund of Hedge Funds BS Chulalongkorn University; MS University of Chicago
Damon Wu* Executive Director	15	15	→ Associate, Merrill Lynch → BS National Taiwan University; MBS/MS Case Western Reserve University; MS Carnegie Mellon University

Departures

In August 2021 at the time of Meketa's original diligence on this Partnership, five senior professionals had departed the Portfolio Solutions team since its inception in 2009: two Executive Directors; one Managing Director; and two Vice Presidents. Since then, two more investment professionals have left the team, both with four years of tenure: an Executive Director who left to pursue other opportunities; and a Vice President who left to relocate geographically for personal reasons. There has been one new hire since August 2021, an analyst who came on board in 2022.

Additionally, as of January, Mr. Eliopoulos' role within the Firm and relative to MSIM will change, with a consequent reduction in time commitment to MSIM, but with a continuing role as a member of the IC. As part of Morgan Stanley's making changes to EV's senior leadership, it is reorganizing its affiliate Calvert Research & Management ("Calvert"), including appointing Mr. Eliopoulos as President and CEO, and moving the current one to the role of Chairman. Calvert offers a full range of responsible investing solutions for individuals, advisors and institutions, with \$30.8 billion in AUM as of September 30, 2022.³

MSIM Diversity⁴

Staff Demographics	Total	Male (%)	Female (%)	Versus Other Meketa Managers	Non- Minority (%)	Minority (%)	Versus Other Meketa Managers
Entire Staff	2,390	64	36	Top Q >42% Median = 35%	72	28	Top Q >39% Median = 25%
All Investment Professionals	987	74	26	Top Q >20% 1stQ	72	28	Top Q >26% 1stQ
Senior Investment Professionals	693	79	21	Top Q >29% Median = 19%	77	23	Top Q >24% Median = 11%

The table above represents the Firm diversity across Morgan Stanley Investment Management. These statistics are compared against "Other Meketa Managers", research generated from our 2022 annual

³ <https://www.calvert.com/>

⁴ Data as of September 30, 2022, MSIM U.S.-based employees only, minority defined as non-white. Data do not include 13 employees who elected to not disclose ethnicity.



diversity, equity, and inclusion questionnaire that collected 2021 data from almost 400 of our investment managers.⁵ When compared to other managers, MSIM is in the 2nd quartile across minority and female statistics at the entire staff and senior investment professional levels. For all investment professionals at MSIM, the Firm is in the top quartile for both female and minority representation.

Personnel Summary

The Portfolio Solutions team has been largely stable and MSIM believes it is appropriately staffed at 26 to successfully execute the guidelines of its 25 mandates, including CRPTF's original mandate and this expansion. They will continue to look for high quality talent with plans to hire one investment professional with real asset experience within the next 18 months. The departure of Mr. Eliopoulos from the main MSIM platform for Calvert while remaining a member of the Portfolio Solutions IC seems a bit of a disservice to Calvert, and raises considerations around his time and attention to the MSIM IC role. MSIM represents that it is not uncommon for senior professionals from other parts of the company to sit on a different group's IC. The Portfolio Solutions team estimates that the IC evaluates 20 real assets investments per year, on average, and that Mr. Eliopoulos' spends six to seven hours on each one, or ~130 hours annually. They represent that this is a relatively small amount of Mr. Eliopoulos' total time, and that he will remain dedicated and focused on his IC responsibilities.

⁵ Meketa Investment Group Diversity Equity and Inclusion Annual Questionnaire, May 2022, 2021 Results. Not all managers reported data in every category.

Investment Process

MSIM represents that the investment process is unchanged since Meketa's original underwriting in August 2021. The investment team is responsible for sourcing, with senior members covering specific areas of focus. The team conducts sourcing through a variety of channels: its established brand; existing GP relationships and personal networks; market survey and outreach; and the broader Firm's platform and resources. The team has additional sourcing channels through MSIM's broader investment platform including Private Markets & Hedge Fund Solutions, and Private Infrastructure.

The co-investment team is integrated with the primary fund investment team, allowing for efficient co-investment due diligence processes and on-going monitoring. Following sourcing a prospective investment, the co-investment process has two phases: the preliminary screening phase; and a more rigorous quantitative and qualitative analysis. The team screens each opportunity for fit and develops an initial view of it based on client co-investment criteria during the initial phase. If the criteria are likely to be met, the team presents the opportunity to the Investment Committee (the "IC") to discuss interest and concerns. The next phase entails a detailed examination specific to each sponsor and asset, confirming initial findings in a comprehensive manner and developing an independent underwriting.

If the deal team reaches consensus on the opportunity, they prepare an investment memorandum, covering: rationale and investment thesis including desired investment amount; due diligence analysis; merits, risks and mitigants; and Environmental, Social, and Governance diligence. The due diligence process covers sponsor-specific and asset-specific aspects, which include: quality (team, resources, track record, integrity); fit (sponsor's experience and fit in the targeted asset and strategy); alignment of interest; and sponsor profile. The asset is analyzed based on a number of factors, including: the submarket's supply and demand dynamics and macroeconomic perspective; transaction structure, including entry valuation, leverage, and terms; ESG risk profile; value creation plan; and return profile. The team also reviews the deal process, including transparency during diligence, timing, and capacity.

A recommendation is presented to the IC upon completion of the comprehensive due diligence. The IC for CRPTF's Account will be comprised of six senior members of the team: Messrs. De Figueiredo, Eliopoulos, Meredith, Turner, Wu, and Ms. Hong. Five consents are required for approval.

Following the due diligence but prior to the IC approval, the team enters the transaction execution phase that addresses legal, economic, and structuring considerations. The transaction support team reviews governing documents and subscription materials while the deal team finalizes the underwriting and negotiates terms. The transaction support team also negotiates terms after the IC's final approval. The co-investment will not be executed if all parties cannot reach an agreement on key terms.

The team relies on the primary fund manager or other primary sponsor of the investment to determine the investment's exit strategy. Where there is a Board of Directors for the asset or portfolio company, the Team typically seeks board observer seats for co-investments to closely monitor developments and remain engaged with the sponsors (MSIM's collective capital in a co-investment would not typically be large enough to garner a voting Board seat).



Historical Performance

MSIM Real Assets Co-Investments⁶ As of June 30, 2022

Asset Class	Year of First Inv.	Number of Inv.	Committed Capital (\$M)	Invested Capital (\$M)	Realized Value (\$M)	Unrealized Value (\$M)	Total Value (\$M)
Infrastructure	2013	11	200.9	152.1	55.6	207.4	263.0
Natural Resources	2013	4	166.5	137.2	1.4	248.2	249.7
Total	2013	15	367.4	289.3	57.0	455.6	512.7

Asset Class	Net - Gross IRR ⁷ (%)	Net - Gross TVM ^{4, 8} (X)	Loss Ratio ⁹ (%)
Infrastructure	28.7	1.7	0.0
Natural Resources	29.4	1.8	0.0
Total	29.1	1.8	0.0

The above track record comprises MSIM's Portfolio Solutions' group real assets co-investments performance, exclusive of real estate. It includes the three co-investments made on CRPTF's behalf, but we note that on an individual basis these are marked at cost, or close to it, as they are less than two years old. The split between the committed capital of Infrastructure and Natural Resources is relatively even at 54.7% and 45.3% respectively. In total, the two asset classes have generated a Net-Gross IRR of 29.1% and a Net-Gross TVM of 1.8x. Both asset classes have produced loss ratios of 0.0%, but the portfolio is still relatively unrealized with Infrastructure having a 0.37x DPI¹⁰ while Natural Resources is only at a 0.01x DPI.

⁶ Performance data provided by MSIM: Meketa did not calculate directly from cash flows.

⁷ Net-Gross IRR and Net-Gross TVPIs are after deducting all underlying managers' fees, expenses and carried interest paid or accrued to date and taking into account cash balances drawn in advance of funding underlying investments but before MSIM fees, expenses and carried interest paid or accrued to date.

⁸ Total Value Multiple (TVM) equals Realized Value plus Unrealized Value, then divided by Invested Capital.

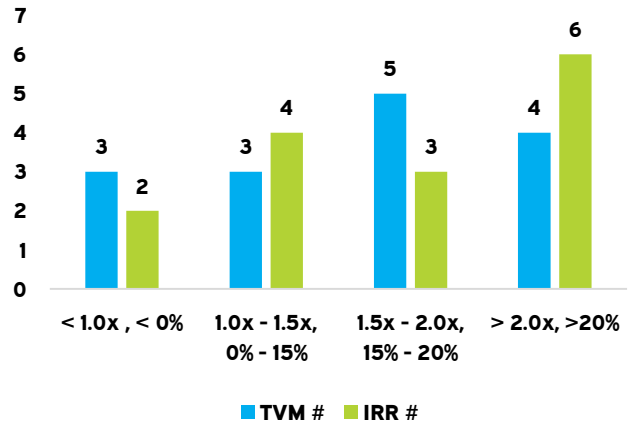
⁹ Loss Ratios represent the proportion of invested capital that has resulted in realized and unrealized losses in a portfolio. The Ratio is calculated by taking the sum of lost capital (invested capital minus an investment's total value) for all investments that have generated a negative return, then dividing that amount by total invested capital across the entire portfolio.

¹⁰ Distribution to Paid-In (DPI) measures the cumulative investment returned to the investor relative to invested capital.



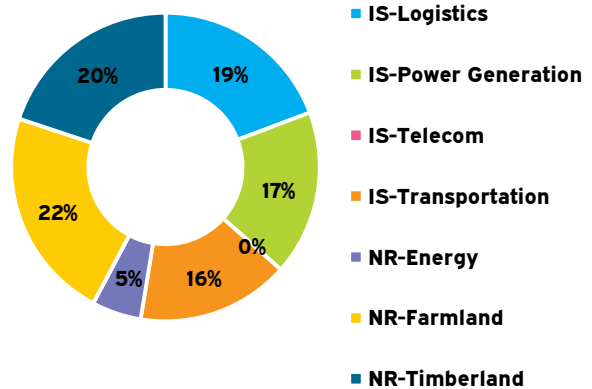
Performance Range

Since 2013, MSIM has completed 15 total investments including 14 unrealized and one fully realized. The platform has four investments with Net TVMs greater than 2.0x and six investments with Net IRRs greater than 20%. Included in this range is the one realized asset with a 5.6x Net TVM and a 342% Net IRR. On the bottom end of the portfolio, three investments are generating Net TVMs less than 1.0x and two investments are producing Net IRRs less than 0%.



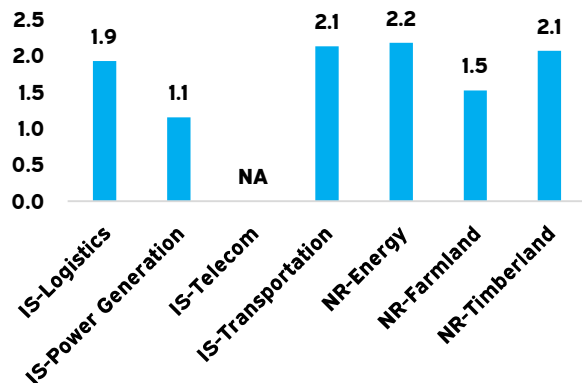
Sectors-Deployment

In terms of capital invested, Farmland, Timberland, and Logistics each represent ~20% of the portfolio. Both Farmland and Logistics have two investments each while Timberland includes only one \$57.6 million investment. While Transportation and Power Generation together represent one-third of the invested capital, the two sectors almost have half the number of investments at seven. The one sector not depicted on the chart is Telecom which stems from an investment that has not deployed capital.



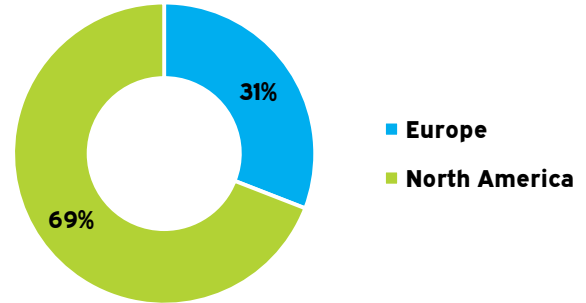
Sectors - Performance

On a multiple basis, four out of the six sectors with invested capital are generating multiples slightly below or higher than a 2.0x Net TVM. The other two sectors that are performing at or below a 1.5x Net TVM are Power Generation and Farmland. Power Generation has a particularly low multiple at 1.1x Net TVM. This sector has four investments in the portfolio and represents 17% of invested capital.



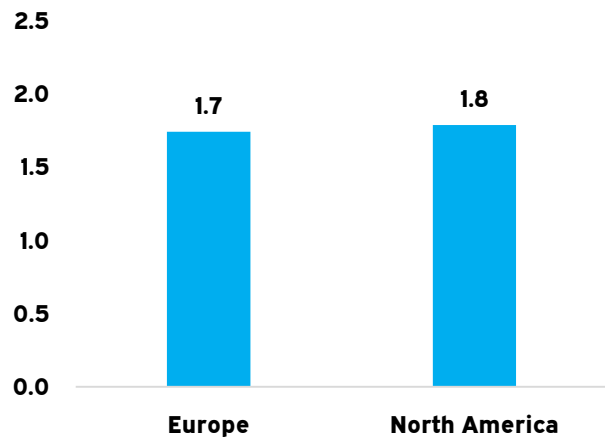
Geography - Deployment

The portfolio is split between two major geographies, North America and Europe. North America has the largest amount of invested capital at \$357.1 million, at 69%. MSIM suggests that the higher weighting in North America arises from the team's strong relationships with U.S. managers and North American managers tend to be specialists in real assets compared to their European counterparts. The team is aiming to be closer to 40% in Europe and 60% in North America.



Geography - Performance

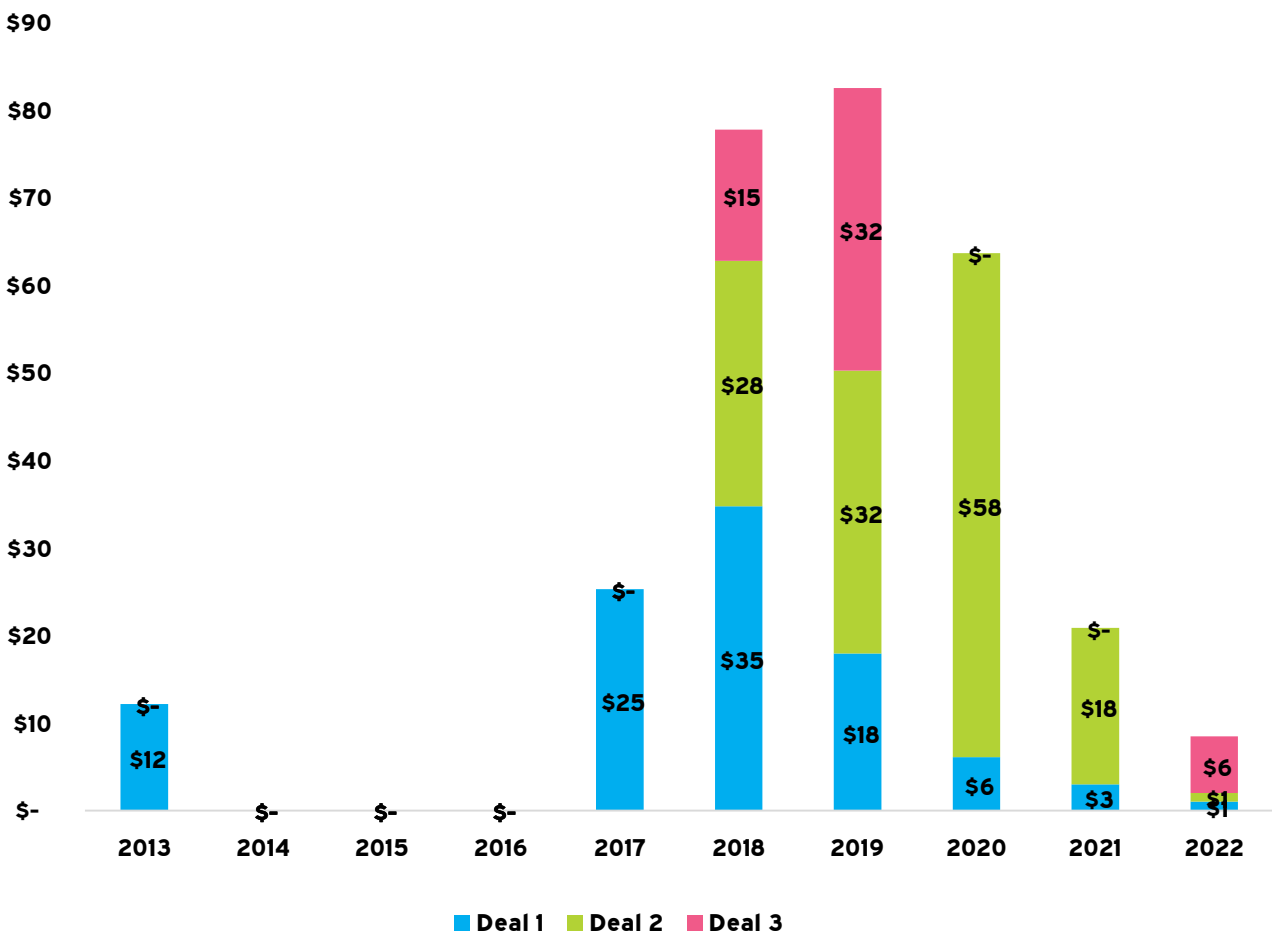
The performance is about the same for both geographies based on Net TVM. A major difference between the two geographies is the weighting of the sectors. While both share two sectors, Power Generation and Transportation, Europe has 72% of its invested capital allocated to Farmland while North America has not deployed capital there. In addition, Europe has not invested in Energy, Logistics, or Timberland.





Deal Size and Frequency

Outside the single investment made in 2013, all infrastructure and natural resource investments have been made between 2017 and 2022 (the team did make real estate investments across the full period). The majority of the IS/NR portfolio was invested between 2018 and 2020 totaling \$224 million which represents 77% of the portfolio. MSIM describes the uneven deployment across years to be a product of capital demand from managers. During 2018 to 2020, there was high capital demand while not as much in the other periods. The team is looking to make three to four IS/NR investments per year during the remaining investment period.





Summary of Partnership Terms

Provision	Terms	Comment
Share Classes	<ol style="list-style-type: none"> Real Estate MSIM-Sourced IS/NR CRPTF-Sourced IS/NR 	Share Class 3 is newly established and the subject of this Investment Review
Net Return Target	10% for CRPTF-Sourced IS/NR, with an 8% minimum threshold for individual co-investments	Purposefully lower than the 12% target for MSIM-Sourced IS/NR and RE, with a 10% minimum threshold for individual co-investments
Sleeve Size	\$200 million over the initial commitment period	Additional amount added to the original \$375 million commitment
Expected Co-Investment Size	Average \$30 million, targeting between \$10 million and \$40 million	Larger than original expected range of \$10 million to \$25 million
GP Commitment	2% of capital commitments	Unchanged: The commitment is a combination of individual cash and MSIM entity (CT Real Assets SLP) balance sheet contributing capital.
Investment Period	Roughly 2 years for CRPTF-Sourced IS/NR, concurrent with original end.	Original period February 7, 2022 and running through December 31, 2025
Total Term		
Diversification Limits		
<i>Type</i>	<ul style="list-style-type: none"> → Co-investments 95% - 100% → Stapled Primaries 0% - 3% 	Co-investment target the same; stapled primaries top end down from 5%
<i>Strategy</i>	<ul style="list-style-type: none"> → Real Estate 20% - 40% → IS/NR CRPTF-Sourced 30% - 50% → IS/NR MSIM-Sourced 10% - 30% 	Real Estate target range lowered from 50% - 70% to carve out larger allocation for CRPTF-sourced deals
<i>Geography</i>	<ul style="list-style-type: none"> → North America 20% - 80% → Europe 10% - 60% → Developed Asia Pacific 0% - 30% → Emerging Markets 0% - 20% 	Unchanged
<i>Single GP by Asset Class</i>	→ Max 25%	Unchanged
<i>Single GP Across Asset Classes</i>	→ Max 20%	Unchanged
Management Fee	35 bps with same step-down structure	Management fee 47 bps on invested capital. The fee steps down 80% after the investment period ends (i.e., 47 bps * 0.8 = ~38 bps, and subsequent adjustment annually thereafter
Preferred Return	None	None
Carried Interest and Structure	None	5% carry after 100% of capital is returned to CRPTF



Environmental, Social, and Corporate Governance

ESG Policy and Program

MSIM represented that its ESG program has not changed since Meketa's August 2021 underwriting. Morgan Stanley has a multi-faceted program covering traditional elements of ESG policies, as well as continually evolving and improving goals around sustainable and responsible investing, and enhanced levels of broad or targeted impact investing. The Firm's Environmental and Social Policy Statement was most recently updated in December 2020 and covers the following areas: sustainable finance and investing; environmental and social risk management ("ESRM"); climate change; human rights; operations; and governance, implementation, and reporting. The section on ESRM addresses due diligence processes and ESG analysis, and includes specific guidance for sectors with meaningful ESG considerations. Additionally MSIM has been a signatory to the United Nations Principals of Responsible Investment ("PRI") since 2013.

While each product-cognizant investment team is responsible for ESG integration and implementation across its own strategy/ies, as described shortly for the Portfolio Solutions team and its separate accounts, there are a number of organizational entities that drive continuous improvement, consistency, and provide support across the Firm, as described immediately below.

- Sustainability Team: Develops ESG investment integration standards; produces data, tools, and research; and partners with investment teams to enhance ESG integration practices.
- Sustainability Council: In 2017 convened cross-functional leaders to guide implementation of ESG and related programs across product development, investment processes, measurement, education, and reporting.
- Global Stewardship Team: Oversees proxy voting across the Firm, supports investment teams engaging with portfolio companies, leads various initiatives including Firm-level ESG reporting and the annual PRI assessment.
- Global Sustainable Finance Group and Institute for Sustainable Investing: Established in 2009 and 2013, respectively, the Group and Institute drive and support a variety of regular and special activities across the Firm and are a resource for knowledge sharing and initiative collaboration with business units.

The Custom Solutions Platform implements the MSIM ESG program in several ways, which are woven into the sourcing, diligence, manager selection, and monitoring process. Beginning with, and most likely memorializing a client's goals in their Investment Guidelines, the Platform can incorporate a range of ESG-relevant target levels and approaches, including:

- Restriction Screening—Avoiding investments based on specific criteria;



- ESG Integration—Proactively considering ESG criteria alongside financial analysis to identify and characterize opportunities and risks;
- Thematic Exposure—Focusing on themes and sectors dedicated to solving sustainability-related challenges; and
- Impact Investing—Allocating capital to opportunities designed to deliver specific positive social and/or climate impacts.

Specifically for CRPTF’s co-investment mandate, MSIM is offering to target renewables and sustainable infrastructure, consistent with Connecticut’s interest in sustainability, as well as collaborate on co-investments with emerging and diverse GPs, consistent with the Connecticut Inclusive Investment Initiative (“CI3”).

With respect to evaluating specific managers and deal opportunities, MSIM described that it uses a matrixed-approach that combines: classifying GPs in one of three ESG “skill set” categories—Best in Class, Moderate, or Weak; and classifying a specific opportunity in one of three risk categories (and corresponding grades)—High (A), Medium (B), or Low (C). The risk assignments are made for each of an applicable sector or business line, if multiple and for each of the E, S, and G elements of ESG. The skill set review covers the manager’s overall ESG framework, resources, experience and attitude, investment process, and monitoring and reporting. The deal-level risk analysis considers such areas as potential for environmental or human impacts, as well as integrity and corruption issues and the individual and country level.

MSIM synthesizes its granular analysis of manager skill set elements with the business’ E, S, and G grades to place the manager-deal opportunity in one of nine GP-Opportunity categories in the corresponding matrix. The combined skill and risk results inform MSIM’s level of engagement with and interest any particular opportunity and guide the Team’s interaction with the manager, deal team, and portfolio company during diligence and in the post-investment monitoring process. Better-skilled managers will be tagged for a standard monitoring program, with engagement and awareness activities being included with increasing levels of deal-level risks. Weak-skilled managers combined with high deal risk opportunities may be reconsidered for capital allocation entirely, or only advance with approval contingent on having a concrete plan in place to improve the GP’s skills and reduce deal risk.

Responsible Contractor Policy

MSIM represent that its RCP approach has not change since Meketa’s August 2021 underwriting. MSIM does not have an RCP. Instead, the Investment Team evaluates underlying GPs’ human capital practices using MSIM’s ESG framework, with labor policies as one element of environmental, social, and governance practices. MSIM represents that it will put in place the standards and practices necessary to comply with the State of Connecticut RCP as applied to this mandate, which is a GP-sponsored co-investment structure where asset-level decisions are delegated to the underlying GPs. MSIM stated that the strength of governance in relation to being a responsible contractor is expected to be delivered through the MSIM team’s diligence of the underlying GPs with RCPs and the relevant standards being stipulated through side letter inclusions with the underlying GPs.

Analysis and Conclusions

Due Diligence Basis

Meketa has carefully reevaluated the Account's manager, investment professionals' experience and qualifications and related resources, strategy, existing investments and pipeline, investment process, historical track record, and other aspects of this opportunity as described in prior sections of this memorandum as relates to the proposed new Share Class 3 for CRPTF-Sourced IS/NR Co-Investments.

Overall, we find the addition of Share Class 3, with an initial commitment of \$200 million, an attractive opportunity that supports CRPTF's goal of establishing co-investment expertise and deploying capital to expand the investment opportunities within the real assets portfolio. Our finding is based on our evaluation of this offering's primary advantages, balanced with any concerns or considerations. These elements of our findings are documented below, along with our summary conclusion.

Analysis

Strengths

- **Efficient Account Expansion** – While the original Account targeted 50% to 70% real estate, the new share class leverages the existing Account to expand IS/NR co-investment capacity by up to \$200 million, benefiting the Real Assets capital deployment goals.
- **Team Experience and Resources** - The team has a broad range of experience within real assets, brings significant years of investing experience and is well versed in separately managed accounts, and is supported by the broader Morgan Stanley platform.
- **Track Record** – The team has deployed \$289.3 million into 11 infrastructure and four natural resource co-investments since 2013 delivering net-gross¹¹ returns of 29.1% IRR and 1.8%x, with IS and NR returns being substantially the same on an asset class basis.
- **CRPTF Account Activity** – MSIM has committed \$60 million to three infrastructure investments at \$20 million each to one CRPTF manager and two MSIM managers in digital infrastructure, flexible power generation, and a renewable energy development platform. The team selected these from among 20 deals considered a potential fit for the Account.
- **Terms** – The management fee rate of 35 bps with no preferred return and no carried interest is attractive, and compares favorably to market-observed rates of between 50 bps and 100 bps and often some carry (e.g., 5% to 10%) for similar accounts.

¹¹ Net-Gross IRR and Net-Gross TVPIs are after deducting all underlying managers' fees, expenses and carried interest paid or accrued to date and taking into account cash balances drawn in advance of funding underlying investments but before MSIM fees, expenses and carried interest paid or accrued to date.



Weaknesses

- **Limited Experience with CRPTF's Real Assets Managers** – Prior to taking on this mandate, MSIM had not co-invested with any of CRPTF's IS/NR roster and is still getting to know them and their processes.
 - Mitigating factor(s): Of the 20 deals considered for CRPTF's real assets portfolio, 12 were being offered by CRPTF's IS/NR managers. The MSIM team believes it offers the managers an advantage in being able to respond quickly and CRPTF's importance to those managers provides MSIM sufficient access and attention.
- **MSIM's IS/NR Track Record Predominantly North America** – Of the total IS/NR co-investment capital, 69% went into North America and 31% into Europe. The team lacks experience in some of the other geographies that CRPTF's managers cover, including Asia Pacific and Latin America.
 - Mitigating factor(s): The team believes its focus will continue to be on North America where they find more sector specialists, which they prefer over diversified strategies, and for the near term they find less (but not no) uncertainty about the economy and sector growth projections. They represent that they are willing and able to invest outside of North America or Europe for an attractive, solid opportunity that meets their diligence requirements.

Conclusion

Meketa believes that creating a dedicated share class within CRPTF's existing MSIM Account to commit an additional \$200 million over two years for co-investments exclusively with CRPTF's own existing (and future) infrastructure and natural resources managers is an attractive and efficient way to increase deployment into these target areas. Expanding the Account in this way, and giving it a slightly lower return target, will increase the range of opportunities that can be considered and increase the amount of capital that can be deployed into typically fee- and carry-free co-investments.

There have been few changes to the team and platform since Meketa's original underwriting of the Account in 2021. We continue to believe that MSIM has a solid, experienced investment team and a strong real assets co-investment track record. The deal flow evaluated for the Account has been robust at 20 opportunities examined, with the three selected to date matching the mandate well and reflecting MSIM's stated investment themes and due diligence criteria. Meketa's review of the rejected deals found MSIM using a disciplined and reasonable approach in their screening process and results. The expanded focus on CRPTF's own managers means that Meketa will have underwritten the original commitment to the funds alongside which the new share class will invest, providing an added layer of comfort with the managers who are likely to provide a fertile ground for co-investment opportunities.

The primary considerations around the proposed Account expansion are: MSIM's Portfolio Solutions team had little prior experience with CRPTF's real assets manager roster and is still new in their collaboration with them; and the team's experience to date—and continued expected focus—will be on North American and European opportunities, while some of CRPTF's managers invest in other geographies in what could be attractive co-investment opportunities.

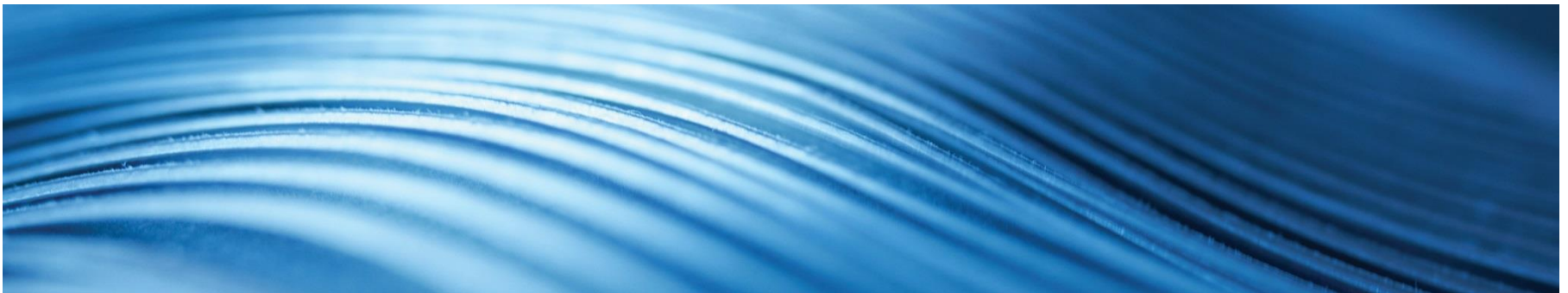
Morgan Stanley

INVESTMENT MANAGEMENT

CRPTF: Real Assets Co-Investment Partnership

Solutions & Multi-Asset Group | December 2022

FOR THE EXCLUSIVE USE OF THE RECIPIENT AND MAY NOT BE USED WITH THE GENERAL PUBLIC



Disclaimers

Certain assumptions have been made regarding the historical performance information included in this Presentation, and such performance information is presented by way of example only. No representation is made that the performance presented will be achieved as a result of implementing an investment strategy substantially identical or similar to that described in this Presentation or that every assumption made in achieving, calculating, or presenting the historical performance information in this Presentation has been considered or stated in preparing this Presentation. Any changes to assumptions that may have been made in preparing this Presentation could have a material impact on the investment returns that are presented herein by way of example. **Historical performance information is not indicative of future results, and the historical performance information in this Presentation should not be viewed as an indicator of any future performance that may be achieved as a result of implementing an investment strategy substantially identical or similar to that described in this Presentation.**

Information regarding expected market returns and market outlooks is based on the research, analysis, and opinions of the Investment Adviser as of the date of this Presentation. These conclusions are speculative in nature, are subject to change, may not come to pass, and are not intended to predict the future of any specific Morgan Stanley investment.

Alternative investments are speculative, involve a high degree of risk, are highly illiquid, typically have higher fees than other investments, and may engage in the use of leverage, short sales, and derivatives, which may increase the risk of investment loss. These investments are designed for investors who understand and are willing to accept these risks. Performance may be volatile, and an investor could lose all or a substantial portion of its investment. No representation or warranty, express or implied, is made or can be given with respect to the accuracy or completeness of the information in this Presentation or to the effect that any Agreement will conform to the terms described in this Presentation. No person has been authorized to make any representations which are inconsistent with the statements contained in this Presentation. As noted above, engagement of the Investment Adviser would be governed by the terms of the Agreement. In making any investment decision, the recipient should not rely on this Presentation.

Morgan Stanley does not render advice on tax and tax accounting matters to clients. This material was not intended or written to be used, and it cannot be used, with any taxpayer for the purpose of avoiding penalties which may be imposed on the taxpayer under U.S. federal tax laws. Federal and state tax laws are complex and constantly changing. You should always consult your legal or tax advisor for information concerning your individual situation.

The investment strategies described herein have not been registered with, or approved or disapproved by, the U.S. Securities and Exchange Commission, the U.S. Commodity Futures Trading Commission, any U.S. national securities exchange, or any other U.S. federal or state governmental agency or regulatory authority. No agency, exchange, or authority has passed upon the accuracy or adequacy of this Presentation or the merits of investing with the Investment Adviser. Any representation to the contrary is a criminal offense.

Additional information is available upon request.

The recipient should not construe the contents of this Presentation as legal, tax, or financial advice and should consult its own professional advisors as to the legal, tax, financial, or other matters relevant to the suitability of an investment in the Fund for the recipient.

Morgan Stanley Overview

Morgan Stanley serves clients worldwide providing a wide range of investment banking, securities, investment management and wealth management services.



1935 ESTABLISHED



41 COUNTRIES



81,567 EMPLOYEES

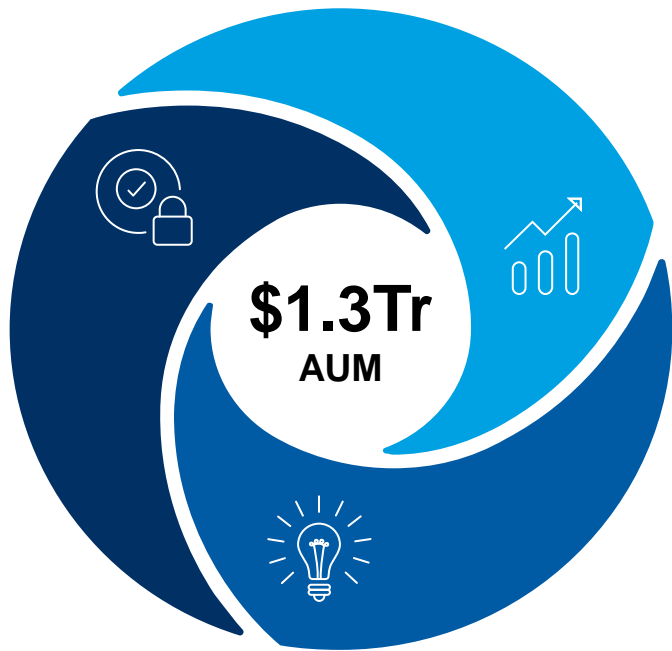


\$4.9Tn IN MSWM CLIENT ASSETS ⁽²⁾

\$1.3Tn IN MSIM CLIENT ASSETS ⁽¹⁾

1. As of September 30, 2022. Assets under management (AUM) includes all discretionary and non-discretionary assets of Morgan Stanley Investment Management (MSIM) and all advisory affiliates. MSIM Fund of Fund assets represent assets under management and assets under supervision. MSIM direct private investing assets represents the basis on which the firm earns management fees, not the market value of the assets owned.
2. Within Morgan Stanley Wealth Management. Data as of September 30, 2022.

High-Quality Investment Capabilities Across Public and Private Market Investments



FIXED INCOME & LIQUIDITY

Value-Add Fixed Income
Liquidity

PUBLIC & PRIVATE ALPHA

High Conviction Active Equities
Private Alternatives

CUSTOMIZED SOLUTIONS

Customized Wealth Solutions
Institutional Portfolio Solutions

As of September 30, 2022.

1. Assets under management (AUM) includes all discretionary and non-discretionary assets of Morgan Stanley Investment Management (MSIM) and all advisory affiliates. MSIM Fund of Fund assets represent assets under management and assets under supervision. MSIM direct private investing assets represents the basis on which the firm earns management fees, not the market value of the assets owned.

MSIM Alternative Investments

Among the broadest range of alternative investment strategies in the industry



The statements above reflect the views and opinions of MSIM as of the date hereof and not as of any future date.

Subject to third-party confidentiality obligations, information barriers established by Morgan Stanley in order to manage potential conflicts of interest, and applicable allocation policies.

1. Alternative Investments Investable Capital includes fee-earning assets under management, unfunded commitments, co-investments, and fund leverage. The AUM for Alternative Investments as of June 30, 2022 is \$173Bn.

Sustainable Investing Snapshot

INTEGRATION & INNOVATION

80% Around 80% of long-term client assets¹ apply ESG Integration and screening approaches

Climate Solutions

AIP Private Markets launched a strategy dedicated to a broad array of climate solutions; all investments are measured against a tangible environmental impact such as CO emissions or pollution reduction



Straight A scorecard in 2021:

- A+** In **Strategy and Governance** module – reflects firm commitment
- A+** Scores for Listed Equity and Fixed Income – Corporate and Securitized
- A+** Scores for Property, Infrastructure and Fixed Income – Sovereign

1. Ex-liquidity.

OUR ACTIVE OWNERSHIP

700+ Companies engaged by investment teams and MSIM's Global Stewardship team in 2020 – represents **55%** of listed equity AUM

- In 2020, we supported **61% of climate-related proposals**
- Our key engagement focus areas include:
 - Decarbonization and climate risk
 - Circular Economy and Pollution
 - Diverse and inclusive business
 - Decent work and resilient jobs

INDUSTRY COLLABORATION

MSIM actively participates in industry networks to promote sustainable investing, including:



THOUGHT LEADERSHIP

Investment teams regularly publish ESG research and reporting. Examples include:

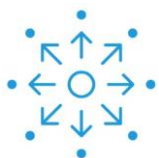
- **AIP Private Markets:** Debunking Six Myths About Climate Investing
- **Applied Equity Advisors:** ESG Investing: Living in a Material World
- **Counterpoint Global:** Culture Quant Framework
- **Emerging Markets:** An Emerging Markets Approach to ESG: Our Progress
- **Fixed Income:** 5 Sustainable Investing Themes That Will Define 2021
- **GBaR:** Five Sectors That Cannot Escape Climate Change
- **Global Opportunity:** ESG and Sustainable Investing Report
- **International Equity:** Engage quarterly newsletter, Global Sustain magazine
- **MSIM:** Creating a Dynamic Sustainable Investing Strategy; Climate Transition in a Portfolio Context; Proxy Season 2020



Thought leadership available on msim.com

Morgan Stanley Investment Management

Our Value Proposition



High Conviction Active Management

- We maintain a relentless focus on generating alpha across public and private markets
-



Extensive Global Capabilities

- We harness the full resources of Morgan Stanley to deliver innovative solutions and an unmatched suite of value-added services to our clients
-



Talent and Commitment

- We foster an inclusive culture that rewards excellence, encourages creativity and enables our professionals to build fulfilling long-term careers
-



Custom Solutions

- Expertise in addressing the unique and evolving needs of investors around the world
-

Real Assets Solutions Team

An experienced real asset investment partner

EXPERTISE IN CONSTRUCTING REAL ASSET PORTFOLIOS WITH A FIDUCIARY MINDSET

- A fully integrated investor across real asset primaries, secondaries and co-investments
- Unconstrained approach to identifying and investing in managers (flexible capital, JVs, syndication, etc.)

UNPARALLELED PROPRIETARY SOURCING NETWORK

- Proactive sourcing network that provides unique access to off-market, oversubscribed and invite-only opportunities
- Advantaged additional sourcing through Morgan Stanley platform through AIP team, MSIM real assets global platform, and broader Morgan Stanley relationships around the world

PARTNER OF CHOICE

- Well-established history of real asset investments across real estate, infrastructure and natural resources
- Strong and collaborative partnership with GPs (i.e. history of resolving issues, scale for smaller funds, and flexible capital for a fund life extension or outside/between a fund mandate)

ROBUST, REPEATABLE DUE DILIGENCE PROCESS

- Our long-tenured professionals track, analyse and diligence opportunities through a three-pronged approach: quantitative, qualitative and operational due diligence

STRONG TRACK RECORD OF INVESTMENT SUCCESS

- History of achieving our clients' mandated performance objectives

Past performance is not a guarantee of future results. The statements above reflect the views and opinions of Investment Management as of the date hereof and not as of any future date and will not be updated or supplemented. Subject to third-party confidentiality obligations, information barriers established by Morgan Stanley in order to manage potential conflicts of interest, and applicable allocation policies.

Our Team

Investment Committee

- The Investment Committee is responsible for day-to-day portfolio oversight and management

Investment Research

- Global investment research team responsible for sourcing, underwriting and monitoring of real asset investment opportunities

Investment Administration & Data Management

- Team responsible for administration, structuring, reporting and operational aspects of solution

Specialist Investment Research

- Access to broader MS platform for support in investment sourcing, diligence, transaction structuring and execution depth

Investment Committee					
					
Rui de Figueiredo 25 yrs experience	Ted Eliopoulos 25 yrs experience	Ryan Meredith 24 yrs experience	Catherine Hong 19 yrs experience	Damon Wu 15 yrs experience	Steve Turner 14 yrs experience
Investment Research					
Pennapa Tantiyakul, CAIA <i>Executive Director (New York)</i>	Yige Zou, CFA <i>Vice President (New York)</i>	Blanca Garcia Requesens <i>Vice President (New York)</i>	Nick Di Giampasquale, CAIA, CFA <i>Vice President (London)</i>		
Greg Waterman, CFA <i>Vice President (New York)</i>	Joshua Myers <i>Vice President (New York)</i>	Ravel Shen, CFA <i>Vice President (New York)</i>	Carlo Arlunno <i>Senior Associate (London)</i>		
Emir Osmani <i>Senior Associate (London)</i>	Patrick Kenney, CFA <i>Associate (New York)</i>	Hayley Soriano <i>Analyst (New York)</i>	Eli Hsia <i>Analyst (New York)</i>		
Investment Administration				Data Management	
Victoria Eckstein <i>COO (New York)</i>	Francie Tai <i>Executive Director (New York)</i>	Kristen Debono <i>Vice President (New York)</i>	Ishaan Viegas <i>Senior Associate (New York)</i>		
Michael Schreier <i>Senior Associate (New York)</i>	Fiona Deans <i>Associate (London)</i>	Veronica Lai <i>(New York)</i>	Carlton Schultz <i>Legal Support (New York)</i>		
350+ Specialist Investment Research Professionals					
OPERATIONS PORTFOLIO SERVICES AND ADMINISTRATION REPORTING AND ANALYSIS INFORMATION TECHNOLOGY COMPLIANCE MARKETING LEGAL TAX 					

As of September 2022. The statements above reflect the views and opinions of MSIM as of the date hereof and not as of any future date. Market developments may cause reassessment of these views at any time and consequently, these views may change at any time.

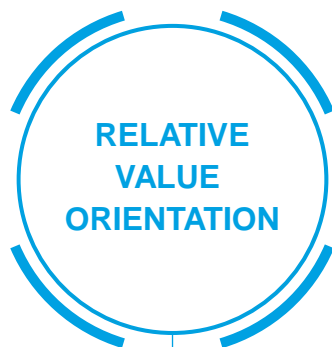
Our Real Asset Investment Philosophy

A focus on differentiated exposure and alpha generation



Source and partner with strong, well-positioned GPs

GP partner of choice via integrated platform, rapid execution and strong management alignment



Emphasize less efficient markets ⁽¹⁾

Focused on constrained markets and opportunistic investments to enhance entry pricing and return generation



Seek sponsors who are institutional, well-resourced, aligned, and experienced

Construct exposure to highly differentiated return drivers (for example regulatory risk in infrastructure) to reduce correlation with other asset classes



Preference for opportunities that are focused on operational management where asset level engagement is expected to drive business enhancements

Source: Morgan Stanley. This information reflects the views of the portfolio manager as of the date hereof and not of any future date and are subject to change without notice in response to changing circumstances and market conditions. This information should not be construed as investment advice and should not be deemed a recommendation to buy or sell any strategy.

Real Asset Sourcing

Strong sourcing allows for robust deal flow, high selectivity, and consistent investment pace

Sourcing Elements

WELL-ESTABLISHED PLATFORM

Experienced team with over **\$2+ billion** committed to **125+ investments** since inception⁽¹⁾

PERSONAL NETWORKS

IC members collectively have over **120 years of experience** with strong networks of industry professionals and general partners

GP RELATIONSHIPS

Tracked over **2,000 GPs** since inception with over **150+ active GP relationships**⁽²⁾. GP's sourced proactively through existing GP relationships, market research searches, MS client relationships and proprietary funds across MS platform

GLOBAL REAL ASSETS FRANCHISE

Real Assets Solutions Team leverages functional experts from **MSIM's broader investment platform** in areas such as:

- AIP Private Markets & Hedge Fund Solutions | 115 professionals | \$33.7bn AUM
- MS Private Real Estate | 220 professionals | \$45.9 bn AUM
- MS Private Infrastructure | 60 professionals | \$6.2bn AUM

MORGAN STANLEY NETWORKS

Extensive networks of Morgan Stanley with **over 70,000** employees in **40+ countries** ⁽³⁾

Platform with Broad Reach



Past performance is not indicative of future results. The statements above reflect the views and opinions of MSIM as of the date hereof and not as of any future date and will not be supplemented. All forecasts are speculative, subject to change at any time and may not come to pass due to economic and market conditions.

1. As of June 30, 2022, including unfunded commitments.

2. PSG estimate as of June 30, 2022.

3. As of June 30, 2022. Subject to third party confidentiality obligations and internal policies and procedures established by Morgan Stanley, including information barriers and allocation policies, to manage potential and actual conflicts of interest and/or in respect of regulatory requirements.

Morgan Stanley

INVESTMENT MANAGEMENT

APPENDIX

Risk Factors

Summary of Risk Factors

This is a summary of various risks associated with investing in portfolios of alternative investments. This summary is not, and is not intended to be, a complete enumeration or explanation of the risks involved. The recipient should consult with its own advisors before deciding whether to invest in these strategies. In addition, to the extent that the investment program of such a portfolio changes and develops over time, additional risk factors not described here may apply. Only a recipient who understands the nature of the investment, does not require more than limited liquidity in the investment, and has sufficient resources to sustain the loss of its entire investment should consider making the kind of investments described in this Presentation.

The following are among the risks applicable generally to a portfolio of hedge fund investments:

Reliance on Third-Party Management. The goal of investing in a portfolio of hedge funds managed by the Investment Adviser is to seek capital appreciation. Hedge funds selected for the portfolio are managed by third-party managers unaffiliated with the Investment Adviser over which the Investment Adviser does not exercise control.

No Assurance of Returns. The investment program of a portfolio of hedge funds is speculative and entails substantial risks. No assurance can be given that its investment objective would be achieved. Its performance depends upon the performance of the hedge funds included in the portfolio and upon the ability of the Investment Adviser effectively to select hedge funds and allocate and reallocate the portfolio's assets among them. Each hedge fund's use of leverage, short sales, and derivative transactions, in certain circumstances, can result in significant losses, volatility, or both.

Performance-Based Compensation. In addition to asset-based fees based on the hedge fund's net assets under management, a hedge fund's investment manager will typically charge each of the hedge fund's investors a performance or incentive fee or allocation based on net profits of the hedge fund which it manages. Similarly, in addition to asset based fees based on the portfolio's net assets, the Investment Adviser or one of its affiliates will also receive performance-based compensation (the "Performance Incentive"). The receipt of a performance or incentive fee or allocation by a hedge fund's investment manager or of the Performance Incentive by the Investment Adviser or one of its affiliates may create an incentive for the hedge fund's investment manager or the Investment Adviser, respectively, to make investments which are riskier or more speculative than those which might have been made in the absence of such an incentive.

Lack of Transparency. Hedge funds are not registered as investment companies with the U.S. Securities and Exchange Commission (the "SEC") under the Investment Company Act of 1940 (the "ICA"), and investors in hedge funds will not have the benefit of the protections afforded by the ICA to investors in registered investment companies. Although the Investment Adviser will periodically receive information from each hedge fund in which the portfolio is invested regarding such hedge fund's investment performance and investment strategy, the Investment Adviser may have little or no means of independently verifying this information. Hedge funds are not contractually or otherwise obligated to inform their investors of details surrounding proprietary investment strategies. In addition, the Investment Adviser has no control over the investment management, brokerage practices, custodial arrangements, or operations of hedge funds and must rely on the experience and competence of each hedge fund's investment manager in these areas.

Multiple Levels of Fees and Expenses. By investing in a portfolio of hedge funds managed by the Investment Adviser, an investor bears its proportionate share of the asset-based fees and the Performance Incentive payable to the Investment Adviser and any of its affiliates, as the case may be, as well as other expenses of the portfolio. An investor, however, also indirectly bears its proportionate share of the asset-based fees, performance or incentive fees or allocations, and other expenses borne by investors in the hedge funds included in the portfolio. An investor which meets the eligibility conditions imposed by the respective hedge funds included in the portfolio, including minimum initial investment requirements which may be substantially higher than those imposed by any fund, could avoid the extra layer of fees and expenses by investing directly in those hedge funds.

Independence of Hedge Funds' Investment Managers. A hedge fund's investment manager will receive any performance or incentive fees or allocations to which it is entitled, without regard to both the performance of the other hedge funds in the portfolio and the performance of the overall portfolio. An investment manager to a hedge fund with positive performance may receive compensation, even if the overall portfolio's aggregate returns are negative.

Potential for Increased Transactions Costs. Investment managers of the hedge funds included in the portfolio make investment decisions independently of each other. Consequently, at any particular time, one hedge fund in the portfolio may be purchasing interests in an issuer which at the same time are being sold by another hedge fund in the portfolio. Investment by hedge funds in this manner could cause the overall portfolio to incur certain transaction costs indirectly without accomplishing any net investment result.

Limited Liquidity of Hedge Funds. Additional investments in, or withdrawals from, the hedge funds in the portfolio may be made only at certain times, as specified in the governing documents of the respective hedge funds. As a result, before investments in hedge funds are effected or in furtherance of the portfolio's objectives generally, some assets held in the portfolio may temporarily be from time to time cash, cash equivalents, or high-quality fixed-income securities and money market instruments (whether or not managed by affiliates of the Investment Adviser)

Summary of Risk Factors (cont'd)

Limited Voting Rights of Investors. A hedge fund typically restricts the ability of its investors to vote on matters relating to the hedge fund. As a result, investors in the hedge fund will have no say in matters which could adversely affect their investment, via the portfolio, in the hedge fund. Additionally, for regulatory purposes related to the Investment Adviser's management of certain funds registered with the SEC under the ICA, the Investment Adviser may enter into contractual relationships under which other Funds irrevocably waive their respective voting rights (if any) to vote interests in underlying hedge funds.

Distributions in Kind. Hedge funds may distribute securities in kind to investors. Securities distributed in kind may be illiquid or difficult to value. In the event that a hedge fund were to make such a distribution in kind to a Fund, the Investment Adviser would seek to dispose of the securities so distributed in a manner which is in the best interests of such Fund.

Reliance on Third-Party Managers with Respect to Asset Valuation. Certain securities in which a hedge fund invests may not have a readily ascertainable market price and will be valued by the hedge fund's investment manager. Such a valuation generally will be conclusive, even though the hedge fund's investment manager may face a conflict of interest in valuing the securities, inasmuch as the value of such securities will affect the compensation payable to the hedge fund's investment manager. In most cases, the Investment Adviser will have no ability to assess the accuracy of any such valuation. In addition, the net asset values or other valuation information received by the Investment Adviser from hedge funds will typically be estimates only, subject to revision until completion of the annual audits of the respective hedge funds. Revisions to the gain and loss calculations will be an ongoing process, and no net capital appreciation or depreciation figure can be considered final until completion of the annual audits of the respective hedge funds.

Leverage. Investments can be highly volatile and may engage in leverage and other speculative investment practices, which can increase investment loss.

Regulation as a Bank Holding Company. Morgan Stanley elected in September 2008 to be regulated as a Bank Holding Company (a "BHC") under the U.S. Bank Holding Company Act of 1956, as amended (the "BHCA"), and the Federal Reserve has granted Morgan Stanley's application for "financial holding company" ("FHC") status under the BHCA. FHC status is available to BHCs which meet certain criteria. FHCs may engage in a broader range of activities than BHCs which are not FHCs.

The activities of BHCs and their affiliates are subject to certain restrictions imposed by the BHCA and related regulations. Because Morgan Stanley may be deemed to "control" a Fund within the meaning of the BHCA, these restrictions could apply to such Fund as well. These restrictions may materially adversely affect the Fund, among other ways, by imposing a maximum holding period on some or all of the Fund's investments; limiting the amount of an entity's beneficial ownership interests which the Fund may hold; restricting the ability of Morgan Stanley, the Adviser, the AIP affiliate which serves as general partner or manager of the relevant Fund (in either case, the "General Partner"), or their affiliates to invest in the Fund or to participate in the management and operations of the entities in which the Fund or an Investment Fund invests; or affecting either the ability of the Adviser to pursue certain strategies within the Fund's investment program or the ability of the Fund, Morgan Stanley, the General Partner, the Adviser, or any of their respective affiliates to invest in certain Investment Funds. Certain BHCA regulations may also require aggregation of the positions owned, held, or controlled in client and proprietary accounts by Morgan Stanley and its affiliates (including without limitation the General Partner and the Adviser) with positions held by the Fund (and, in certain instances, one or more Investment Funds). Moreover, Morgan Stanley may cease in the future to qualify as an FHC, which in either case may subject the Fund to additional restrictions or cause the General Partner to dissolve the Fund. Additionally, there can be no assurance either that the bank regulatory requirements applicable to Morgan Stanley and the Fund will not change or that any such change will not have a material adverse effect on the Fund.

Morgan Stanley may in the future, in its sole discretion, restructure the Fund, the General Partner, or the Adviser in order to reduce or eliminate the impact or applicability of these bank regulatory restrictions on the Fund or other funds and accounts managed by the Adviser or any of its affiliates. Morgan Stanley may seek to accomplish this result by causing another entity to replace the Fund's current General Partner, transferring ownership of the General Partner or the Adviser, reducing the amount of Morgan Stanley's investment in the Fund (if any), effecting any combination of the foregoing, or implementing such other means as it determines in its sole discretion. Any such transferee may be unaffiliated with Morgan Stanley. In connection with any such change, the General Partner may in its sole discretion assign its right to receive any performance fee or allocation or cause another entity to be admitted to the Fund for the purpose of receiving such performance fee or allocation. In connection with any such change, the General Partner may in its sole discretion, assign its right to receive any performance fee or allocation or cause another entity to be admitted to the fund for the purpose of receiving such performance fee or allocation.

Recent Legislative Events. On July 21, 2010, President Obama signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"). Section 619 of the Dodd-Frank Act is known as the "Volcker Rule." Once the Volcker Rule takes effect, which will be no later than July 21, 2012, it will limit the extent to which a "banking entity," including Morgan Stanley and any of its affiliates, may sponsor or invest in a hedge fund or a private equity fund. It will also limit the aggregate equity, partnership, or other ownership interests of Morgan Stanley in hedge funds and private equity funds to a maximum of 3% of Morgan Stanley's Tier 1 Capital. In addition, Morgan Stanley will be able to own no more than 3% of the total equity, partnership, or other ownership interests of any hedge fund or private equity fund organized and offered by Morgan Stanley. Banking entities such as

Summary of Risk Factors (cont'd)

Morgan Stanley will also not be permitted, directly or indirectly, to guarantee, to assume, or otherwise to insure the obligations or performance of such funds or of any funds in which such funds invest. Upon effectiveness, the Volcker Rule will also prohibit Morgan Stanley from engaging in certain "covered transactions" with any Fund, such as extensions of credit. The Volcker Rule may require Morgan Stanley and its affiliates, including the General Partner, the Adviser, or both, to restructure or terminate their respective affiliations with the Fund. During a statutory transition period for Morgan Stanley to become compliant with the requirements of the Volcker Rule, a Fund and any offshore fund formed for the purpose of investing in such Fund may need to change its name so as to avoid sharing a name with Morgan Stanley. Also, the General Partner and any other affiliate of Morgan Stanley invested in the Fund may need to reduce its investment in the Fund so as to meet the limitation that no more than 3% of Morgan Stanley's Tier 1 Capital be invested in hedge funds and private equity funds. Any of the Fund, the General Partner, or the Adviser may also be required to take other actions. Morgan Stanley currently believes that any investments by it or any of its affiliates should comply with the 3% limitation on Morgan Stanley's total ownership interest in the Fund. Because the Dodd-Frank Act and the Volcker Rule are such recent legislative changes and because the Dodd-Frank Act and the Volcker Rule direct a variety of other bodies and regulatory agencies of the U.S. Government to consider certain additional implementing regulations, the full scope of the impact of both the Dodd-Frank Act and the Volcker Rule is not yet known, and other direct or indirect consequences of the Dodd-Frank Act and the Volcker Rule may affect Morgan Stanley, the General Partner, the Adviser, or any of their respective affiliates and may result in a material adverse effect on the Fund.

The following risks are applicable to emerging markets investments:

Emerging Markets. The Fund or the hedge funds selected for the Fund's portfolio may invest in assets in emerging markets. Investing in emerging markets involves risks and special considerations not typically associated with investing in other more established economies or securities markets. Such risks may include: (i) increased risk of confiscatory taxation or nationalization or expropriation of assets; (ii) greater social, economic, and political uncertainty, including war; (iii) higher dependence on exports and the corresponding importance of international trade; (iv) greater volatility, less liquidity, and smaller capitalization of securities markets; (v) greater volatility in currency exchange rates; (vi) greater risk of inflation; (vii) greater controls on foreign investment and limitations on repatriation of invested capital and on the ability to exchange local currencies for U.S. dollars; (viii) increased likelihood of governmental involvement in, and control over, the economies; (ix) governmental decisions to cease support of economic reform programs or to impose centrally planned economies; (x) differences in auditing and financial reporting standards which may result in the unavailability of material information about issuers; (xi) less extensive regulation of the securities markets; (xii) longer settlement periods for securities transactions and less reliable clearance and custody arrangements; and (xiii) less developed corporate laws regarding protection of investors and fiduciary duties of officers and directors.

Non-U.S. Investments. The fund or hedge funds selected for the Fund's portfolio expects to make investments (directly or indirectly) in a number of different countries. Such investments may be made in countries or economies which may prove unstable. Depending on the country in which the investment is made, there may exist the risk of adverse political developments, including nationalization, confiscation without fair compensation, or war. Laws and regulations of other countries may impose restrictions which would not exist in the U.S. Investments in non-U.S. corporations may require significant government approvals under corporate, securities, exchange control, foreign investment, and other similar laws and may require financing and structuring alternatives which differ significantly from those customarily used in the U.S. No assurance can be given that a given political or economic climate, or that particular legal or regulatory risks, might not adversely affect an investment by the Fund.

Small-Capitalization Stocks. The Fund or the hedge funds selected for the Fund's portfolio may invest in other funds which make investments in small- to medium-sized companies of a less seasoned nature. Investments in small-capitalization issuers often involve significantly greater risks than the securities of larger, better-known companies because they may lack the management experience, financial resources, product diversification, and competitive strengths of larger companies. The equity securities of these smaller issues are usually traded in the over-the-counter markets or on regional securities exchanges, and the frequency and volume of trading in these securities is often substantially less than that of larger companies, which may result in wider price fluctuations in small-capitalization stocks than in stocks of larger issuers. When selling large positions in small-capitalization stocks, the Fund or the hedge funds selected for the Fund's portfolio may have to sell holdings at discounts from quoted prices or may have to make a series of small sales over a period of time.

Currencies. The Fund or one or more of the hedge funds selected for the Fund's portfolio may invest a portion of its assets in non-U.S. currencies, or in instruments denominated in non-U.S. currencies, the prices of which are determined with reference to currencies other than the U.S. dollar. The Fund or such hedge funds may or may not seek to hedge all or any portion of its foreign currency exposure. To the extent unhedged, the value of the Fund or such hedge fund's assets will fluctuate with U.S. dollar exchange rates, as well as the price changes of its investments in the various local markets and currencies. In addition, some governments from time to time impose restrictions intended to prevent capital flight, which may for example involve punitive taxation (including high withholding taxes) on certain securities transfers or the imposition of exchange controls making it difficult or impossible to exchange or repatriate the local currency. These and other restrictions may make it impracticable for the Fund or the hedge funds selected for the Fund's portfolio to distribute the full amount of the Limited Partners' capital accounts in U.S. dollars, and, therefore, a portion of the distribution may be made in non-U.S. securities or currency.



SHAWN T. WOODEN
TREASURER

State of Connecticut
Office of the Treasurer

DARRELL V. HILL
DEPUTY TREASURER

December 6, 2022

Members of the Investment Advisory Council ("IAC")

Re: BlackRock Global Infrastructure Fund IV, L.P.

Dear Fellow IAC Member:

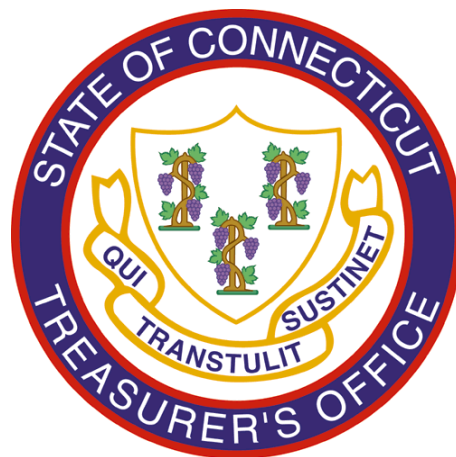
At the December 14, 2022 IAC meeting, I will present for your consideration an Infrastructure and Natural Resources investment opportunity for the Connecticut Retirement Plans and Trust Funds (the "CRPTF"): BlackRock Global Infrastructure Fund IV, L.P. ("Fund IV", or the "Fund"). Fund IV has a target size of \$7.5 billion, with a \$10.0 billion hard cap, and is being raised by BlackRock Inc ("BlackRock", or the "Firm").

I am considering a commitment of up to \$150 million in the Fund and up to another \$50 million to a co-investment sidecar. The core-plus, closed-end strategy targets equity positions in high-quality, essential, contracted, and diversified infrastructure assets within sectors that include Low Carbon Power, Energy & Environmental, Regulated Utilities, Transportation & Logistics, and Digital Infrastructure primarily in OECD countries. The commitment would provide the CRPTF with exposure to a diversified, essential, and contracted investment base with a yield focus (7%+ average annual gross dividend yield target), and the opportunity for further alpha generation.

Attached for your review is the recommendation from Ted Wright, Chief Investment Officer, and the due diligence report prepared by Meketa. I look forward to discussing these materials at the next meeting.

Sincerely,

Shawn T. Wooden
State Treasurer



Full Due Diligence Report
Chief Investment Officer Recommendation
December 1, 2022

BlackRock Global Infrastructure Fund IV, L.P.



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Manager Overview

- Manager/Parent Organization: BlackRock, Inc. ("BlackRock")
- Fund: BlackRock Global Infrastructure Fund IV ("Fund IV", or the "Fund")
- General Partner: BGIF IV, LLC, ("GP", or the "General Partner")
- The BlackRock Global Infrastructure Funds Team is a business unit of BlackRock (the "Team", or "BGIF").
- Led by Mark Florian with support from a senior level leadership team that averages 10 years of tenure and 19 years of industry experience.
- First Reserve (predecessor organization) was founded 1983. However, Mark Florian joined First Reserve in 2008. First Reserve was acquired by BlackRock in 2017.
- BGIF Offices: Greenwich (HQ), Houston, London, Singapore, Dublin, and Mexico City
- BGIF has 60 professionals dedicated to the strategy including 40 investment professionals as of June 2022.
- BGIF AUM: \$11.2 billion as of June 2022

Fund Summary

- \$7.5 billion target/ \$10.0 billion hardcap
- Equity positions in high-quality, essential, contracted and diversified infrastructure assets. Under the structural themes of Decarbonization, Decentralization and Digitization, targeted sectors include Low Carbon Power, Energy & Environmental, Regulated Utilities, Transportation & Logistics, and Digital Infrastructure
- Global with OECD focus, targeting the Americas, EMEA and Asia Pacific. The Fund is permitted to invest up to 25% in non-OECD countries.
- Return Targets: Gross IRR 12%-14%, Gross MOIC of 2.0x
- GP Commit: 2.0% (up to \$200 million)
- Term: 12 years with 3 one-year extensions (subject to LPAC approval)
- Management Fee -
 - during investment period: 1% on invested and 0.7% on committed
 - post investment period: 1.7% on invested capital (fees decrease with increasing commitments).
- 15% carry, 8% preferred return, European Waterfall

Strategic Fit

- Infrastructure and Natural Resources ("INR") portfolio: Infrastructure allocation
- Recommended Commitment: \$200 million with up to \$150 million to the Fund, and with up to another \$50 million to a sidecar
- New/Existing Manager for the Real Estate and Infrastructure Funds: Existing, including a custom \$200 million REIT strategy and the CRPTF committed \$100 million in 2020 to Global Renewable Power Fund III, L.P.
- Fund Structure: closed-end
- Infrastructure and Natural Resources Strategic Pacing Plan:
 - Sub Strategy: Infrastructure
 - Risk/Return: Core-plus
 - Current Allocation by Market Value as of September 30, 2022: 1.8%
 - Current Allocation Long Term Infrastructure and Natural Resources Target Allocation: 7% (increased from 4.2% target in September 2022)

Recommendation

- Based on the strategic fit within the Infrastructure portfolio, as well as the due diligence conducted by Pension Funds Management (“PFM”) investment professionals, and INR consultant Meketa, the Chief Investment Officer of the Connecticut Retirement Plans and Trust Funds (“CRPTF”) recommends a commitment of up to \$200 million to Blackrock Global Infrastructure IV strategy, comprised of up to a \$150 million to BlackRock Global Infrastructure IV, L.P. and up to a \$50 million commitment to a Co-Investment Sidecar.
- At a \$200 million total commitment, the CRPTF would be provided additional investment in the infrastructure sector to a high conviction manager/strategy at reduced total fees given the use of the Co-Investment Sidecar.

Investment Considerations

- Deep Industry Relationships and large pipeline of opportunities – with 80% of prior investments through proprietary sources rather than auctions.
- Lower risk profile, focused on diversified, essential, contracted investments with a yield focus (7%+ average annual gross dividend yield across prior vintage funds).
- Strong Performance Track Record
- Active management of portfolio companies

Firm History

- The predecessor investment organization, First Reserve, Inc., was formed in 1983 to focus exclusively on the energy sector. However, BGIF's investment platform as it stands today is led by Mark Florian, Chief Investment officer, who joined First Reserve in 2008, to create and lead the strategy. In 2017, BlackRock acquired the First Reserve's Infrastructure funds, although the original investment team remains intact.
- Mark Florian has 41 years of industry experience, and prior to BGIF, he spent 23 years at Goldman Sachs including managing Goldman Sachs' global Infrastructure Investment Banking business.
- PFM staff notes that Global Energy & Power Infrastructure Fund LP ("Fund I"), and Global Energy & Power Infrastructure Fund II LP ("Fund II") were formed prior to the strategy being absorbed by the broader BlackRock platform. While Global Energy & Power Infrastructure Fund III LP ("Fund III") is the first fund under Blackrock, all investment decisions and organizational leadership remains under Mark Florian.

Firm Leadership

- Mark Florian is supported by a senior team that includes 10 Managing Directors who have mostly invested together across economic cycles and includes James Berner, Adi Blum, Eduard Ruijs, Mark Saxe, Ryan Shockley, Matt Raben, Edward Winter, Tomas Peshkatari, Tim Vincent, and Adam Waltz (collectively, the "Senior Team"). The most recently hired managing director is Adam Waltz (2022), who leads investments in the digital infrastructure sector.
- Mark Florian chairs and votes on the Investment Committee ("IC"), which also includes Alex Krueger (President and CEO of First Reserve), the legacy Managing Directors (James Berner, Adi Blum, Eduard Ruijs, Mark Saxe, Ryan Shockley). IC approval requires a majority vote.

Firm Governance/Team

- BGIF has a global presence, and industry network that includes operations in North and South America, Asia Pacific, Europe and Australia. In these geographies, BGIF believes it has an established reputation as a preferred partner which can be drawn on to source and execute value creation initiatives.
- BGIF expects to create value by utilizing the Team's asset management experience in enhancing its investments to grow cash flow, including working with its capital markets professionals to improve debt financing and assist with hedging transactions.

BlackRock Global Infrastructure Team

Infrastructure experts with **deep investment toolkit** to source, structure and enhance investments

60 dedicated infrastructure professionals

20 years average industry experience

60% of investment team hires from diverse populations since 2019

Investment Management

40 investment professionals	Years Exp		Years Exp
Mark Florian, MD Global Head of BGIF	41	Christian Synetos, Director	15
James Berner, MD	26	Doug Vaccari, Director	13
Adi Blum, MD	20	Adam Baer, VP	6
Tomas Peshkatari, MD	18	Bradley Holenstein, VP	9
Matt Raben, MD	23	Burak Kakkas, VP	6
Eduard Ruijs, MD	25	Robert Kindman, VP	8
Mark Saxe, MD	21	Patrick Luo, VP	7
Ryan Shockley, MD	22	Thomas Luypaert, VP	10
Adam Waltz, MD	13	Margaret Sone, VP	7
Edward Winter, MD	16	Wadi Karam, VP	13
Akhil Mehta, Director	11	Misan Eyesan, VP	7
Johann Rayappu, Director	20	+ 17 Associates	-

Capital Markets & Asset Management

5 investment professionals	Years Exp
Tim Vincent, MD	26
Matt Prescottano, Director	13
Robert Hanna, Director	42
Newton Houston, Director	31
Luke O'Keefe, Director	41

Finance & Operations

9 dedicated professionals	Years Exp
Steve Yost, Director Head of Finance	1
Jody Bailey, Director	14
David Joyce, VP	6
Chris Lauder, VP	10
Amy Wang, VP	22
+ 4 Associates	-

Product Strategy & Investor Relations

6 dedicated professionals	Years Exp
Freek Spoorenberg, Director, Head of IR	12
Sydney McConathy MD	19
Lauren Gallagher, Director	23
Felicia Guerci, VP	8
Lisa Hochhauser, VP	25
Zach Taffet, Associate	6

Leveraging the Power of BlackRock



Sourcing



Risk
Management



Sustainability



Operational Support

Source: BlackRock, CRPTF, BlackRock notes that the team is subject to change. 1) Representative of professionals who are Director and above title. 2) Includes one contingent worker.



Sector Selection

- Consistent with the Fund II and III evolution, the GP will focus on five industry sectors: Low Carbon Power, Energy & Environmental, Regulated Utilities, Transportation & Logistics and Digital Infrastructure.
- The focus is on contracted assets with visible revenue streams that provide cash yield from operations.
- The global energy transition has been a central theme for BGIF. Over recent funds, the Team has observed the convergence of energy infrastructure with other infrastructure sectors, leading to an increasingly diversified set of investment opportunities.

Market Opportunity

- A commitment to Fund IV provides the opportunity to invest with a stable team focused on downside protected infrastructure investments in three structural themes with strong fundamental drivers:
 - Decarbonization - \$50 trillion of investments needed to decarbonize our global economy to meet net zero targets by 2050.
 - Decentralization - increased outsourcing of infrastructure by companies.
 - Digitalization - Fast growth of digital world requires physical infrastructure to transmit, store and utilize data.

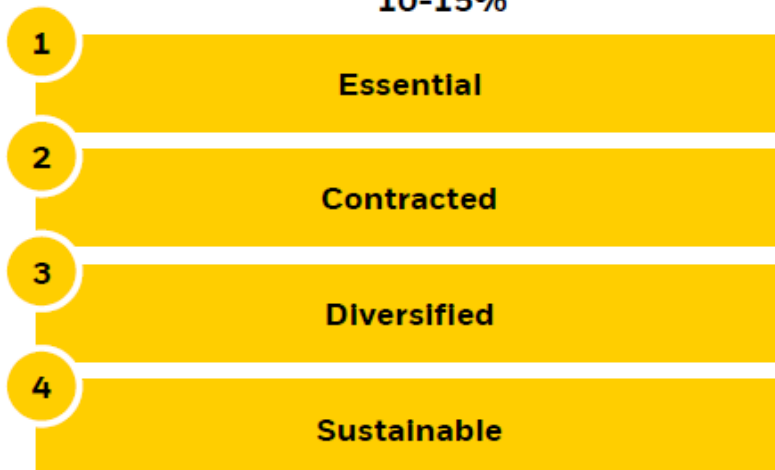
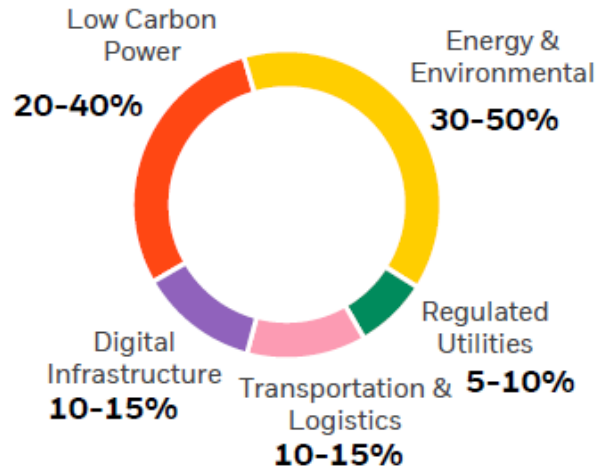
Target Investment Characteristics

- Fund IV's strategy is to manage a diversified portfolio of global infrastructure investments with a gross return of 12-14%.
- The Fund will focus on OECD countries and is permitted to invest up to 25% in non-OECD countries. As in the past, the Team will seek to focus on managing economic, political, legal, and regulatory risks in all of its investments, and expects to invest primarily in US dollar denominated investments. To the extent that the Fund invests in non-US dollar investments, the Fund may hedge against possible variations in currency.

Target Sectors & Outlook

Infra IV will seek to build a portfolio of diversified, contracted infrastructure assets and businesses by capitalizing on long-term structural megatrends

Target Sector Allocation & Characteristics



Targeting the Highest Value Opportunities

Sector	Indicative Investments
Low Carbon Power 	<ul style="list-style-type: none"> Renewable Power (Solar, Wind, Hydro, Geothermal, Waste to Energy) Natural Gas Power Plants (incl. peakers) Electric Vehicle Charging Fleet Electrification Battery Storage
Energy & Environmental 	<ul style="list-style-type: none"> Carbon Capture LNG Renewable Fuels Storage Natural Gas Midstream Decarbonization Joint Ventures Green Industrial Products Recycled Materials
Transportation Logistics 	<ul style="list-style-type: none"> Terminals Rail Tunnels Bridges Shipping Airports Ferries
Regulated Utilities 	<ul style="list-style-type: none"> Local Distribution Companies Transmission & Distribution Companies Utility Services Water utilities Grid Stabilizing and Ancillary Services
Digital Infrastructure 	<ul style="list-style-type: none"> Data Centers Wireless Towers Fiber Infrastructure

Source: BlackRock, 1 October 2022. For illustrative purpose.

Origination

- The Fund is targeting 15-20 investments and anticipates that its investment pace will result in full investment within 5 years. Average investment size is expected to be \$200-\$500 million, consistent with prior funds.
- BGIF follows a thematic investment approach focusing on sectors and regions undergoing structural long-term changes that outpace cyclical shifts, providing attractive investment opportunities and creating portfolio resiliency.
- The Team creates proprietary opportunities through corporate and industry partners; leveraging BlackRock's global reach and scale. The approach is to work to meet the corporate/industry partner needs while simultaneously structuring attractive risk adjusted investments for the Fund.

Value Creation Strategy

- The Team utilizes in house engineers, risk, and investment experts to structure investments to manage the downside and maximize the upside potential.
- The Fund targets investments with steady cash flows and high operating margins that will provide an opportunity to structure significant current cash returns on the portfolio overall.
- Fund IV is expected to follow the same active management approach focused on operational improvements, revenue growth and balance sheet optimization. This is achieved through taking control or co-control positions, alongside management to help firms grow over time, The Team's historical investment success has been positively influenced by the ability to attract proven management teams capable of working together to design and execute optimization and growth plans.

Exits

- Fund IV targets investment hold periods of 7-10 years and the average holding period for investments is typically about seven years.
- While BGIF anticipates a long-term hold for each investment, the Team actively evaluates how to strengthen and defend returns by actively monitoring the macro- and micro-economic environments in which investments operate and by enhancing returns or reducing risk, including options to exit earlier than the Team's average timeframe should it be advantageous for our investors.

Track Record and Performance

Data as of June 30, 2022

- PFM staff elected to compare the results of the prior three funds to the Cambridge Associates Global Infrastructure closed-end fund benchmark, which is primarily comprised (76%) of value-add and opportunistic strategies. PFM staff acknowledge the inherent short-comings of comparing BGIF's lower risk/lower return core-plus strategy to a benchmark of a different risk profile but recognized that there are otherwise few comparable closed-end, core-plus, infrastructure opportunities.
- As can be seen below, despite the strategy's lower risk/return profile, Fund II and Fund III are ranked either first or second quartile on all relevant metrics, except for Fund II being ranked third quartile on a TVM basis. PFM staff also compared the prior funds' performance of the CRPTF's infrastructure benchmark of CPI +400 vs. the net IRR of the prior three funds and note the strategies outperformance in Fund II and Fund III as can be seen in the tables below.
- As can be see below, Fund I underperformed when compared to both the Cambridge and the CRPTF benchmark. PFM staff notes that Fund I's underperformance was primarily due to one large investment that filed for bankruptcy after reducing volumes during the Covid-19 pandemic. Discussions between the GP and PFM staff demonstrated that the GP was afforded a "lesson learned" which the Firm then integrated into its go-forward diligence process, including a focus on stronger and more diversified revenue composition of future counter-parties. This one specific investment also accounts entirely for the 13% realized loss ratio for Fund I in the tables below.
- Overall, as the Firm has refined its underwriting, the trajectory of realized losses in subsequent funds has been trending downwards as can be seen in the tables below. Overall, despite some losses in Fund I and Fund II, 90% of investments were marked or realized above cost as of 6/30/22 across all three funds. Lastly, despite a negative IRR in Fund I, the TVM remains a gross 1.2x as of June 30, 2022.
- BGIF's realized portfolio is also tracking well as of 6/30/22, with 18 of 39 prior fund investments having generated a 14.7% gross IRR and 1.6x gross multiple and demonstrates the Firm's ability to both realize investments and de-risk investments early on- largely via a focus on early income distributions.

Blackrock Global Infrastructure (millions, USD)								
Fund	Vintage Year	Fund Size	Fund Status	# Deals	Paid in Capital	Realized Value	Unrealized Value	Total Value
Fund I	2010	\$1,228	Harvesting	9	\$1,302	\$1,137	\$133	\$1,270
Fund II	2014	\$2,541	Harvesting	16	\$2,712	\$2,651	\$962	\$3,612
Fund III	2019	\$5,124	Invested	14	\$2,817	\$530	\$2,695	\$3,225
Total		\$8,892		39	\$6,831	\$4,318	\$3,790	\$8,108

	Gross/Net			Quartile Rank			CPI+ 400	Realized Loss Ratio
	TVM	IRR	DPI	TVM	IRR	DPI		
Fund I	1.2x / 1.0x	3.4% / -0.6%	1.0x / 0.9x	4	4	3	6.25%	13%
Fund II	1.5x / 1.3x	20.7% / 15.8%	1.1x / 1.0x	3	1	1	6.32%	9%
Fund III	1.2x / 1.1x	14.3% / 10.0%	0.2x / 0.2x	2	2	1	8.41%	0%



Fund IV

- The recommended commitment would be categorized under the core/core plus Infrastructure sub-category of the Infrastructure and Natural Resources (“INR”) allocation.
- The Investment Policy Statement, adopted September 14, 2022, (the “IPS”) sets a target allocation of 20-40% for Core/Core Plus Infrastructure investments within the INR portfolio.

A commitment to Fund IV would be aligned with the RAF strategic pacing plan objectives.

- The current CRPTF policy targets total exposure to Infrastructure and Natural Resources to be 7.0%.
- As of September 30, 2022, the CRPTF’s total allocation by market value to Infrastructure and Natural Resources was 1.8%.
- The goal of forming significant relationships with strong and differentiated managers as the CRPTF builds out its INR sleeve.
- The opportunity of obtaining co-investment opportunities to enhance performance.

Experienced Team with Deep Sector Knowledge

- BGIF includes 60 infrastructure professionals in America, Europe, and Asia Pacific. The Team has extensive expertise in operations, deal structuring, capital management, asset management and portfolio management.
- The Team, initially formed in 2008 at First Reserve Corporation, and benefitted from significant industry knowledge and networks in the Energy Sector.
- The Team has grown, primarily organically since 2008, with few senior departures, and has expanded expertise as the energy infrastructure sector have evolved.

Large Industry Network

- The Senior Team has extensive industry relationships and continues to expand their relationships to develop deal opportunities as well as repeat partnerships.
- BlackRock corporate ownership, with over 70 offices globally and \$8.5tn AUM as of June 30, 2022, provides name recognition and expands network.
- Traditional companies need experts to decarbonize and look to BGIF as a leader in that space.
- 80% of investments in prior funds were sourced in exclusively negotiated transactions.

Fund Risk Profile/Structure

- Attractive economics with lower fees than many closed-end funds.
- High yield and long contract lives provide risk mitigation.
- The broad geographic footprint provides for multiple outlets for investment opportunities.

Key Risks and Mitigants

Global Market Risk

- With a global focus, the Fund is not restricted in terms of global market investment and can invest in countries that carry additional risk.
- The geographic focus is primarily on OECD member countries and the Fund expects to invest primarily in US dollar denominated investments. To the extent that the Fund invests in non-US dollar investments, the Fund will typically hedge dividends against possible variations in currency.
- There is a 25% cap on the amount of non-OECD investment by the Fund. The Team will seek to focus on managing economic, political, legal, and regulatory risks in all Fund investments, which will significantly influence the choice of countries in which the Fund will invest.

BlackRock Headlines Regarding ESG practices

- BGIF's parent company, BlackRock has recently been challenged by news of some clients, particularly certain U.S. State Treasurers Offices, for its stance on ESG factors in its investments and proxy voting. This creates some concern for the Team being associated with the BlackRock name given headline risk.
- These concerns are mitigated as the BGIF team operates as a separate business unit with an independent investment and compensation program within BlackRock. Further, discussions with the GP have indicated that the Team and the Fund's pipeline primarily benefit from the BlackRock name.
- Overall, while there have been announced plans to end BlackRock relationships, overall inflows of new capital to Blackrock continue to outpace outflows. Further, those referenced announcements have primarily been on the public equity/fixed income business lines which are unrelated to BGIF.

Inconsistent Prior Fund Performance

- As detailed in the Track Record and Performance section, Fund I underperformed when compared to both the Cambridge and the CRPTF benchmarks. However, PFM staff notes that Fund I's underperformance was primarily due to one large investment that filed for bankruptcy due to reduced volumes during the Covid-19 pandemic.
- Further, despite the strategy's lower risk/return profile, Fund II and Fund III are ranked either first or second quartile on all relevant metrics, except for Fund II being ranked third quartile on a TVM basis, when compared to the Cambridge benchmark (which is comprised of over 2/3 value-add/opportunistic opportunities). This demonstrates the ability to generate strong returns despite a lower risk profile.



Fundraising and Key Terms Summary

Target Size / Hard Cap	<ul style="list-style-type: none">\$ 7.5 billion / \$10.0 billion
GP Commitment	<ul style="list-style-type: none">2% of commitments (up to \$200 million)
Fundraising Status	<ul style="list-style-type: none">First close took place in September 2022, fundraising period includes up to 18 months thereafter
Target Final Close	<ul style="list-style-type: none">Targeted June 2023
Fund Term	<ul style="list-style-type: none">12 years, plus 3 one-year extensions (subject to LPAC approval)
Investment Period	<ul style="list-style-type: none">5 years
Management Fee	<ul style="list-style-type: none">Investment Period: 1% on invested & 0.7% on committed, Post Investment Period: 1.7% on invested capital
Fee Discounts & Offsets	<ul style="list-style-type: none">Mgt fee discounts available based on size
Carry & Waterfall Type	<ul style="list-style-type: none">15%, European Waterfall
Preferred Return	<ul style="list-style-type: none">8%
GP Catch-up	<ul style="list-style-type: none">80%
Clawback	<ul style="list-style-type: none">Yes
LPAC	<ul style="list-style-type: none">Offered subject to fund commitment size

Additional Provisions

- Delaware Limited Partnership
- Fund may not invest more than 20% of aggregate commitments in a single platform including bridge financing
- Fund may not invest more than 25% of aggregate commitments outside of OECD countries
- Fund may not invest more than 10% in investments outside of the energy, digital, transportation or environmental & natural resources industries



BlackRock

- In its disclosure to the Office of the Treasurer, BlackRock Alternatives Management LLC (“BlackRock” or the “Company”), discloses the following regulatory matters:
- In September of 2014, a BlackRock affiliate settled with the SEC for \$1.7M related to three alleged violations of an SEC regulation prohibiting short sales of an equity security during the restricted period preceding a public offering. BlackRock stated it will not violate the regulation in the future.
- In April of 2015, a BlackRock affiliate settled with the SEC for \$12M regarding BlackRock’s handling of a former portfolio manager’s personal investments and involvement in a family business. BlackRock states there was no allegation of loss to BlackRock investors and the settlement did not have any adverse impact on BlackRock’s ability to manage its clients’ funds.
- In January of 2017, BlackRock reached a \$340,000 settlement with the SEC regarding a provision in an old version of BlackRock’s employee separation agreement that the SEC believed violated Dodd Frank’s whistleblower provisions. BlackRock removed the provision from future agreements.
- In April of 2017, BlackRock settled with the SEC for \$1.5M regarding whether an ETF managed by a BlackRock affiliate was covered by certain exemptive relief the SEC previously granted BlackRock. BlackRock did not admit or deny fault.
- BlackRock states that it has no material claims under its fidelity, fiduciary or E&O insurance policies to report, that it has no ongoing internal investigations to report, and that none of BlackRock’s prior or pending litigation has had or is expected to have an adverse impact on BlackRock’s ability to manage client accounts. BlackRock states it has adequate procedures in place to undertake internal investigations of its employees, officers and directors.

BlackRock

Compliance Certifications and Disclosures

BlackRock disclosed no campaign contributions, known conflicts, gifts or third-party fees

Commitment to Diversity

The below summary is derived from the BlackRock's 2021 Global Diversity, Equity and Inclusion report.

Employees – As part of its racial equity commitment in July 2020, the firm committed to:

- Increase senior female representation to 32.5% by 2024 globally
- Double the number of Black and Latinx Senior leaders by 2024
- Increase overall Black and Latinx representation by 30% in the U.S. by 2024

The firm's reports multiple firm-wide initiatives to enhance recruiting, leadership development, compensation and employee engagement across its workforce. This includes an expanded number of partnerships with key diversity organizations to increase access to diverse talent.

Industry

The firm was part of the 2020 launch of Management Leadership for Tomorrow's Black Equity at Work Certification in 2020 and is currently at "plan approved" status in that program. The firm also recently joined the September 2022 launch of the new Hispanic Equity at Work Certification. The firm joined Treasurer Wooden's Corporate Call to Action and accordingly published its 2019-2020 EEO-1 data. The firm joined other industry diversity pledges such as the Hispanic Promise and Increasing Diversity in Innovation's Diversity Pledge.

Vendors

The firm reported a record year for their diverse broker program in 2021 (41% CAG Equities and 25% CAGR Fixed Income), topping steady increases in diverse broker usage since 2017. The firm's Alternative Investors and Multi-Asset Strategies and Solutions businesses invested 7.4% of total AUM (\$9.6B of \$129.5B) in diverse third-party managers, and a comparable additional amount in partially-owned diverse managers.

Nexus to Connecticut

BlackRock reported 48 employees based in CT and that the Global Infrastructure Fund IV management team is primarily based in CT.

BlackRock

Workforce Diversity

BlackRock provided data as of December 31, 2021

- 7,620 total employees, consistent with the last three years
- The proportion of women and minority Managers remained largely consistent
- The proportion of women and minority Professionals remained largely consistent
- The number of women and minority Executives increased slightly despite declines in Executives in total
- The firm’s 2024 racial equity commitments (noted in the prior slide) should significantly improve the rate of progress that is demonstrated below for the last three years

WOMEN

	EXEC	MGMT	PROF	FIRM
2021	20% 20 of 99	30% 723 of 2430	44% 2143 of 4908	41% 3128 of 7620
2020	20% 20 of 99	29% 648 of 2215	43% 2201 of 5112	41% 3119 of 7620
2019	17% 18 of 103	29% 599 of 2074	43% 2214 of 5192	41% 3087 of 7577

MINORITIES¹

	EXEC	MGMT	PROF	FIRM
2021	31% 31 of 99	27% 644 of 2430	47% 2310 of 4908	41% 3088 of 7620
2020	29% 29 of 101	26% 578 of 2215	46% 2365 of 5112	40% 3081 of 7620
2019	28% 29 of 103	25% 522 of 2074	45% 2334 of 5192	40% 2999 of 7577

¹ 2021 Minority breakdown: 31 exec (6 Black, 3 Hispanic, 22 Asian); 644 mgmt (75 Black, 84 Hispanic, 446 Asian, 2 Am Ind, 37 Two+); 2,310 prof (309 Black, 353 Hispanic, 1,531 Asian, 10 Am Ind, 107 Two+)



Overall Assessment : Evaluation and Implementation of Sustainable Principles

BlackRock’s disclosure described a comprehensive integration of ESG factors, in light of the core focus of this fund on emissions reductions and energy transition. The firm uses a proprietary ESG Questionnaire to assess and mitigate ESG risks. BlackRock is a signatory to the UN PRI, the Taskforce on Climate-related Financial Disclosures (TCFD), and nearly three dozen other sustainability-oriented groups and initiatives. The firm has numerous touchpoints of ESG oversight, with the sustainable investing team leading ESG integration and the Global Executive Committee managing ESG policy implementation. BlackRock regularly provides ESG trainings for staff through the firm’s proprietary Academy modules. Since March 2020, the firm has sourced climate data from the independent research firm, Rhodium Group.

BlackRock does not have a formal policy with respect to civilian firearms retailers or manufacturers given that it does not have any such vendor relationships.

Overall, the firm's disclosure was evidence of exemplary ESG integration.

SCORE

1

Criteria	Response
Firm has an ESG policy	Yes
If Yes, firm described its ESG policy	Yes
If Yes, firm provided examples of ESG factors considered in the decision-making process, explained the financial impact of these ESG factors	Yes
Designated staff responsible for sustainability policies and research	Yes
Firm provides training/resources on sustainability issues, explained sources of ESG-related data	Yes
Signatory/member of sustainability-related initiatives or groups	Yes
Policy for evaluating current or prospective relationships with manufacturers or retailers of civilian firearms	No*

Criteria	Response
Policy that requires safe and responsible use, ownership or production of guns	No*
Enhanced screening of manufacturers or retailers of civilian firearms	No*
Enhance screening of any industry/sector subject to increased regulatory oversight, potential adverse social and/or environmental impact	Yes
Merchant credit relationship with retailers of civilian firearms and accessories	No*
If Yes, firm confirms compliance with laws governing firearms sales	N/A

*No, given that the firm does not invest in civilian firearms manufacturers or distributors.



Private Markets Investment Memorandum

**BlackRock Global
Infrastructure Fund IV**

April 22, 2022

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Executive Summary

Diligence Process

Meketa Investment Group (“Meketa”) initiated this review of BlackRock Real Assets (“BlackRock”, the “Manager”, or the “Firm”) in March 2022. The Fund focuses on core plus and value add infrastructure globally, primarily in developed countries, and is targeting investments in energy transition businesses and low carbon power, transportation and logistics, and digital infrastructure. BGIF IV launched in January 2022 targeting \$7.5 billion and was planning several “first” closes from May to July or August.

As part of a comprehensive due diligence process, Meketa completed a thorough review of the Fund’s offering materials and other supporting documentation, including the Private Placement Memorandum and Limited Partnership Agreement, and other data room content, as well as the Manager’s response to Meketa’s Due Diligence Questionnaire. Meketa held virtual investment and operational due diligence sessions with key members of those teams on April 7, 8, and 13, 2022, to gain a deeper understanding of the Firm’s history, strategy, personnel resources, processes, historical performance, and operations.

Manager Background

Fund Name	Manager	Office Location(s)	Target Market	Target Geography
BlackRock Global Infrastructure Fund IV	BlackRock, Inc.	Greenwich CT (Team HQ), Houston, New York, Dublin, London, Mexico City, and Singapore.	Core Plus and Value Added Infrastructure	North America, Europe, Latin America, Asia, Middle East

BlackRock, Inc. is a U.S.-founded and headquartered investment management company with global offerings for institutional and retail clients across equity, fixed income, alternatives, multi-asset strategies, and cash management, providing services including investment advisory, risk management, trading, securities lending, and transition management. Established in 1988, today BlackRock has 18,000 employees in 89 offices in 36 countries. With \$10.0 trillion in assets under management (“AUM”) as of December 31, 2021, it is one of the largest asset managers in the world.

BlackRock’s Global Infrastructure Funds business is part of BlackRock Infrastructure, which is under the Real Assets Group, which in turn is one of BlackRock Alternative Investors’ (“BAI”) business lines, as listed in the table below. In addition to BGIF, the private infrastructure platform also offers a global renewables fund, debt strategies via separate accounts, and a solutions practice.¹ The platform’s two Mexican and one Latin American infrastructure funds (vintages 2010, 2014, 2019) have wound down.

BGIF’s franchise was originally formed in 2008 under First Reserve Corporation (“First Reserve”). First Reserve was founded in 1983 and for many years focused exclusively on private equity investing

¹ Infrastructure Solutions, formed from a Swiss Re infrastructure carve-out, offers fund and advisory solutions across multiple strategies, capital structures, regions, and sectors, in primaries, co-investments, and secondaries.



in the energy sector. First Reserve saw an opportunity to start an infrastructure platform that would focus on income-producing investments with capital appreciation as well, using the First Reserve competitive advantages (specialized industry knowledge and strong network of relationships in the energy sector) to create exclusively-sourced investments. First Reserve hired Mark Florian in 2008 to launch and lead the infrastructure platform, including developing the strategy and building out the team. Mr. Florian had been a Partner at Goldman Sachs managing its global Infrastructure Investment Banking business, and serving on the Investment Committee for Goldman Sachs Infrastructure Partners.²

On June 2, 2017, BlackRock acquired the First Reserve Energy Infrastructure franchise and renamed its offerings the Global Energy & Power Infrastructure Funds, or “GEPIF”. The series’ fundraisings and closings were as follows: GEPIF I held a final close on \$1.2 billion in April 2011; GEPIF II held a final close on \$2.5 billion in June 2014; and GEPIF III held a final close on \$5.1 billion in April 2020. BlackRock currently does not plan to rename the prior GEPIF funds to the BGIF moniker, but could decide to do so in the future.

Today the BGIF team numbers 60 people total, including 36 investment professionals, located in seven cities across America, Europe, and Asia Pacific (Greenwich, Houston, New York, London, Dublin, Singapore, and Mexico City). The investment team is comprised of nine Managing Directors, four Directors, nine Vice Presidents, and 14 Associates. Supporting the investment team are five capital markets and asset management professionals, nine finance and operations professionals, and six product strategy and investor relations professionals.

Offering Terms

Fund Size	Management Fees < \$100 million	Carry and Carry Structure	Preferred Return	Fee Income	Inv. Period and Total Term
\$7.5 billion, no hard cap as yet	During Inv. Pd. 1.00%/0.70% on invested/committed; Thereafter 1.70% on invested	15%; whole-fund	8%	100% off-set	5 years (+2); 12 years (+3)

Strategy

The fourth fund from Mr. Florian’s team will pursue an expanded strategy compared to prior funds that is consistent with the evolving energy infrastructure sector and near-term opportunity set. BGIF IV will focus on decarbonization, decentralization, and digitalization themes with an energy nexus, in the five sectors listed below, with target capital allocation ranges shown in parenthesis.

- **Energy and Environmental (30% to 50%)** – Assets that advance energy transition including clean fuels, carbon sequestration, recycling, natural gas midstream, liquified natural gas and storage.
- **Low Carbon Power (20% to 40%)** – Generation, storage, and grid stability for renewable power, natural gas power plants, electric vehicle charging, and battery storage.

² Now known as West Street Infrastructure Partners.



- **Transportation and Logistics (10% to 15%)** – Energy efficiency and decarbonization investments for terminals, rail, shipping, ports, specialized logistics, and industrial services.
- **Digital Infrastructure (10% to 15%)** – Energy efficiency and low carbon power investments associated with smart meters, fiber infrastructure, data centers, and wireless towers.
- **Regulated Utilities (5% to 10%)** – Local distribution, electric, transmission and distribution, and other utility services projects that increase low carbon electricity and energy sustainability.

Fund IV will target 15 to 20 portfolio companies across its five infrastructure focus sectors. The portfolio is expected to be global with targets of 50% in North America, 25% in Europe, Middle East and Africa (“EMEA”), 15% in Asia Pacific, and 10% in Latin America. The team will focus on investments in operating assets and businesses with a limited number of greenfield investments. Fund IV expects equity investments between \$200 million and \$500 million and will look to limit any portfolio company exposure to less than 10%. The Fund targets gross returns of 12% to 14% and a cash yield of at least 7%.

Track Record

Blackrock Global Infrastructure As of December 31, 2021

Fund	Vintage Year	Invested (\$M)	Realized Value (\$M)	Total Value (\$M)	Net Multiple (X)	Net IRR (%)	Top Quartile ³ (%)
Fund I	2010	1,054.1	1,100.6	1,247.1	1.0	-0.4%	12.4
Fund II	2014	2,404.4	2,308.1	3,725.9	1.3	17.2%	16.0
Fund III	2019	2,559.8	515.0	3,154.3	1.1	11.7	NM
Total		6,018.4	3,923.7	8,127.2	1.2	8.4	

Investment Analysis

Strengths

- **Deep Industry Network** – The senior team has extensive industry connections that has generated 80% of investment opportunities through exclusively negotiated transactions.
- **Performance of Funds II and III** – Fund II has a gross return of 21.9% as of December 31, 2021, with 96% of its invested capital returned, and Fund III is well on track with a zero loss ratio.
- **Expanding Sector Exposure** – BGIF continues to evolve its energy-sector targets with the opportunity set in a decarbonizing world, expanded into key adjacent spaces in other sectors.
- **Disciplined Portfolio Construction** – BGIF has built portfolios that are diverse across sectors and geography. In Fund IV, no portfolio company may exceed 10% of the fund.

³ Cambridge Associates | Infrastructure | All Geographies | Top Quartile | As of December 31, 2021

- **BlackRock Platform Resources** – BlackRock professionals in 38 countries can provide sourcing support, and 110 other professionals on the larger Real Assets team can also assist BGIF.

Weaknesses

- **Fund I Performance** – As of December 31, 2021, Fund I's gross and net IRRs of 3.6% and -0.4% are well below targets and there is not much room to recover significantly going forward.
- **Potential Core Infrastructure Vehicle** – BlackRock's plan to launch a core infrastructure vehicle that will rely on BGIF's (and the renewables fund's) teams for deal flow and some due diligence support creates concern around time and attention sufficiency to the flagship funds.

Opportunities

- **Decarbonization imperatives:** The energy market now meaningfully includes cost-competitive renewable energy, such as hydro-electric, solar, and wind power, as well as lower-carbon fuels like natural gas, and initiatives to decarbonize power sources and reduce greenhouse gas emissions.
- **Prospective deal partners abound:** Industrials and strategics in many sectors, including ones BGIF has transacted with in the past, need partners to help them diversify their power source portfolios.
- **Infrastructure profiles available:** Situations with contracted revenues at scale and stable regulatory schemes exist in the geographies and sectors BGIF is targeting.

Threats

- **Competition for deals:** In the last few years, many investment managers have launched new funds or pivoted existing strategies to focus on decarbonization and energy transition themes.
- **Global and regional crises and persistent challenges:** COVID-19 remains at pandemic or endemic levels in most places, depressing and disrupting economic activity and growth. Consequences from the recent Russian invasion of Ukraine could delay or change BGIF's opportunities.

Conclusion

Based on our due diligence, discussed in detail throughout this document, Meketa believes BGIF IV is an attractive opportunity to invest with a manager with a proven track record in the energy arena that is evolving its strategy with the market opportunity set that is increasingly offering up investments that reflect decarbonization, decentralization, and digitization themes not only in the energy and power sectors, but also in transportation, logistics, and communications sectors. The investment team is stable with long co-tenures and has successfully completed its integration from the First Reserve platform into BlackRock. The team has grown organically and with strategic outside hires to keep pace with its AUM scale and new areas of focus. Fund II's performance is impressive, and Fund III is early but appears well on track, and the strategy has delivered healthy cash yield.



The several areas of concern or consideration include, but are not limited to: lesser direct economic alignment with the team than preferred; Fund I's poor performance and some problem investments in the other funds; and the new core fund's reliance on the BGIF team for deal flow and diligence support.

Investment Strategy

The fourth fund from Mr. Florian's team has rebranded its name from the prior "Global and Energy Power Infrastructure Fund III" to "Global Infrastructure Fund IV" as the strategy has transitioned to focus on decarbonization, decentralization, and digitalization. Prior funds were focused across contracted power, contracted midstream, utilities and other contracted energy businesses. Fund IV will still have an energy theme but will look to capitalize on expanded sector focus and the energy transition across industries. Fund IV will focus on five infrastructure sectors listed below.

- **Energy and Environmental (30% to 50%)** – This sector relates to infrastructure assets required to advance energy transition including clean fuels, carbon capture and sequestration, recycling, natural gas midstream, liquified natural gas and storage.
- **Low Carbon Power (20% to 40%)** – The Fund will focus on generation, storage, and grid stability for renewable power, natural gas power plants, electric vehicle charging, and battery storage.
- **Transportation and Logistics (10% to 15%)** – Focusing on terminals, rail, shipping, ports, specialized logistics, and industrial services, Fund IV will look to support decarbonization on a path to net zero through advancement of energy efficient forms of transportation.
- **Digital Infrastructure (10% to 15%)** – A new focus for the team, Fund IV will target smart meters, fiber infrastructure, data centers, and wireless towers that can benefit from low carbon power and energy efficiency.
- **Regulated Utilities (5% to 10%)** – Fund IV will look to acquire local distribution companies, electric and water utilities, transmission and distribution companies, and utility services with the goal of improving access to low carbon electricity and more sustainable forms of energy.

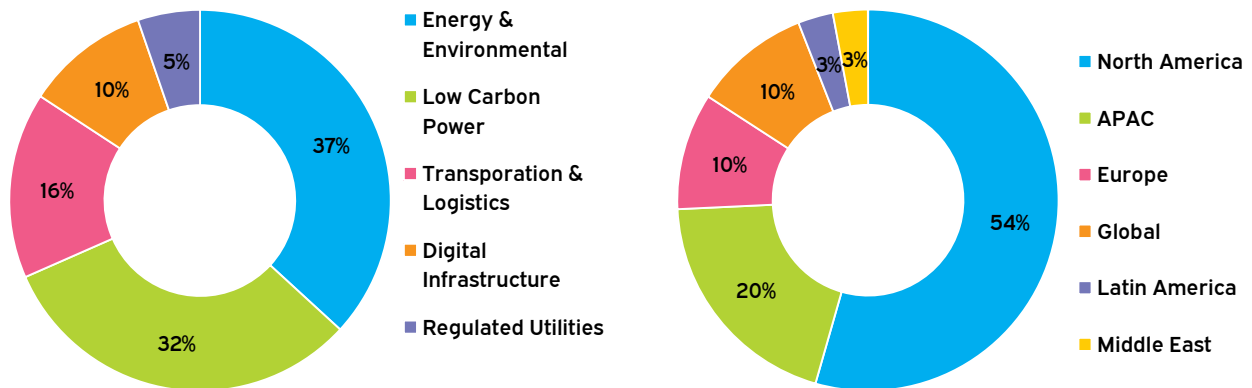
The common thread across the five infrastructure sectors is the three structural trends. Decarbonization will require significant capital to reach net zero targets by 2050 across industrial and commercial sectors. Some areas of interest for BlackRock are manufacturing, agriculture, transportation, and power and heat. Decentralization relates to a greater outsourcing of infrastructure by companies and more globalization of resources. Companies will question whether they need to own all the infrastructure that is embedded in a business to be successful—and BlackRock can own and operate it for them. Digitalization can lead to energy efficiency and the fast growth of the digital world needs infrastructure to transmit, store, and utilize data.

Fund IV will target 15 to 20 portfolio companies across its five infrastructure focus sectors. The portfolio is expected to be global with targets of 50% in North America, 25% in Europe, Middle East and Africa ("EMEA"), 15% in Asia Pacific, and 10% in Latin America. The team will focus on investments in operating assets and businesses with a limited number of greenfield investments. Fund IV expects equity investments between \$200 million and \$500 million and will look to limit any portfolio company exposure to less than 10%. The Fund targets gross returns of 12% to 14% and an overall cash yield of at least 7%.

Investments are expected to be long term holds of seven to 10 years, but the deal team actively evaluates the exit opportunities and macro-environment for an earlier exit opportunity which may be beneficial to the limited partners. Potential exit strategies will typically include strategic sales, sales to financial investors, or public equity offerings. The Fund expects to begin generating cash distributions to investors in the form of dividends within the first year of each investment’s operating life and these early distributions will de-risk the overall investment. Cumulative distributions of dividends are expected to form more than half of the return on an investment.

Existing Investments and Pipeline

BlackRock has a robust pipeline of potential investment opportunities that include 63 prospects that an exclusivity contract has been signed. These investments are over \$2 billion in potential equity value. The pipeline is diversified over their target sectors and regions as shown in the pie charts below by potential invested capital.



Manager Background

BlackRock was founded in New York City in 1988 as an investment management services firm initially focused on fixed income. In 1995, the firm became associated with The PNC Financial Services Group, Inc. (“PNC”) and began managing open-end mutual funds including equity and cash funds. Over the next three decades, BlackRock expanded its global offerings for institutional and retail clients, through organic growth, strategic partnerships, and mergers and acquisitions, across equity, fixed income, alternatives, multi-asset strategies, and cash management. Notable milestones include: going public in 1999 as NYSE:BLK, with the PNC Financial Services Group (“PNC”) as a major shareholder; acquiring State Street Research and Management in 2005; combining with Merrill Lynch Investment Managers in 2006; combining with Barclays Global Investors (“BGI”) in 2009; and across 2012 through 2018, acquiring various private equity businesses from companies including Guggenheim Partners, Swiss Re, MGPA, First Reserve, Tennenbaum Capital Partners, Citigroup, and eFront. More recently, in 2021, BlackRock closed on its acquisition of Aperio, a pioneer in tax-managed, customized index equity separately managed accounts.

With \$10.0 trillion, as of December 31, 2021, managed across these sectors, BlackRock is one of the largest asset managers globally. The Firm remains headquartered in New York and operates in more than 38 countries in 89 offices across the Americas, Europe, Asia-Pacific, the Middle East, and Africa with 18,000 employees.

BlackRock Infrastructure

BlackRock has managed infrastructure investments opportunistically for over a decade and dedicated private infrastructure mandates since 2011. The platform (which lies under BlackRock Real Assets Group) has been assembled through a combination of acquisitions and organic growth, as chronicled below.

- The platform was first established in 2011 with 12 professionals joining BlackRock from NTR to form the Renewables Power strategies. This group most recently closed on their third fund, closing on \$4.8 billion in April 2021.
- Later in 2012, BlackRock acquired the infrastructure and private equity investment arm of Swiss Re. The infrastructure arm of the Swiss Re acquisition became the Infrastructure Solutions Program, which offers fund and advisory solutions across multiple strategies, capital structures, regions, and sectors, in primaries, co-investments, and secondaries.
- Also in 2012, BlackRock formed an infrastructure debt group in 2012, which offers investment opportunities mainly through SMAs.



- In 2015, BlackRock acquired Infraestructura Institucional, Mexico's leading independently managed infrastructure investment firm, establishing a presence in Mexico, with two existing Mexico-focused funds, and launching a Latin American fund in 2019. All three of these have wound down with de minimus AUM.
- In 2017, BlackRock acquired the First Reserve Energy Infrastructure Funds from First Reserve, as described in more detail below.

Today, the Infrastructure platform controls \$26 billion in client assets, as of December 31, 2021.

Global Infrastructure Funds

The investment team was originally formed in 2008 under First Reserve Corporation to raise global energy and power infrastructure funds. First Reserve was founded in 1983 and focused exclusively on private equity investing and infrastructure investing in the energy sector. First Reserve saw an opportunity to start an infrastructure platform that would focus on income-producing investments with capital appreciation, using the First Reserve competitive advantages (specialized industry knowledge and strong network of relationships in the energy sector) to create exclusively-sourced investments. Mark Florian was brought in to launch and lead the infrastructure platform. Mr. Florian formed the strategy and built out the team. As mentioned above, in 2017, BlackRock acquired First Reserve Energy Infrastructure franchise from First Reserve and had two Funds at that time. GEPIF I was launched in 2009 and held a final close of \$1.2 billion in 2011. The second fund was raised in 2014 and closed at approximately \$2.5 billion. Fund III was the first vehicle under the BlackRock umbrella and closed in 2019 on \$5.1 billion.

Investment Resources and Experience

BlackRock's Global Infrastructure team includes 36 investment professionals led by Managing Director Mark Florian. The team is globally located across seven cities across America, Europe, and Asia Pacific (Greenwich, Houston, New York, London, Dublin, Singapore, and Mexico City). The investment team is comprised of nine Managing Directors, four Directors, nine Vice Presidents, and 14 Associates. Supporting the investment team are five capital markets and asset management professionals, nine finance and operations professionals, and six product strategy and investor relations professionals.

Investment Professionals

Name	Title	Years at Manager	Total Years' Experience	Relevant Experience/Degree
Mark Florian	Managing Director, Head of BlackRock Global Infrastructure	13	41	→ Partner at Goldman Sachs → MBA: University of Chicago; BS: Duke University
James Berner	Managing Director	11	25	→ Managing Director at General Electric Capital Corporation → Vice President at Deutsche Bank Securities → MBA: The Wharton School; MA: Johns Hopkins University; BA: Cornell University
Adi Blum	Managing Director	11	20	→ Vice President at High Road Capital Partners → Associate at Citigroup → MBA: New York University; BS: Georgetown University
Eduard Ruijs	Managing Director	10	24	→ Investment Director and Partner at NIBC Infrastructure Partners → Senior Principal at Boston Consulting Group → Master in Law and MSc: Vrije Universiteit Amsterdam; M.Juris: Oxford University; BBA: Nijenrode University
Mark Saxe	Managing Director	11	21	→ Director at Loews Corporation → Bachelor of Commerce: McGill University
Ryan Shockley	Managing Director	18	22	→ Vice President at First Reserve Energy → MBA: Northwestern University; MA: Kalamazoo College
Matthew Raben	Managing Director	16	23	→ Managing Director at First Reserve Energy → Associate at Simpson Thacher & Bartlett → JD: Stanford Law School; AB: Dartmouth College
Tomas Peshkatari	Managing Director	8	18	→ Vice President at Carlyle Group → Analyst at Credit Suisse Securities → BA: Macalester College



Name	Title	Years at Manager	Total Years' Experience	Relevant Experience/Degree
Timothy Vincent	Managing Director	11	26	→ Partner at Greentech Capital Advisors → Managing Director at Goldman Sachs → MBA: Columbia Business School; BA: University of Connecticut
Adam Waltz	Managing Director	<1	12	→ Managing Director at Morgan Stanley → MBA: University of Chicago; BS and BA: Ohio State University
Edward Winter	Managing Director	3	16	→ Managing Director at Macquarie Group → Masters of Finance: INSEAD; Bachelor of Law and Bachelor of Commerce: Monash University
Robert Hanna	Director	9	42	→ Portfolio Manager at Consolidated Asset Management Services → Bachelor in Radiation Protection Engineering: Texas A&M University
Newton Houston	Director	4	31	→ Vice President at ENGIE North America → MBA and Bachelor in Mechanical Engineering: Auburn University
Akhil Mehta	Director	9	11	→ Analyst at Barclays Capital → BS: Columbia University
Luke O'Keefe	Director	7	41	→ Vice President at General Electric → Director at Burns & Roe Enterprises → MBA: New York University; Bachelor and Masters: Manhattan College
Matt Prescottano	Director	6	13	→ Associate at GE Energy Financial Services → MBA: Dartmouth College; BA: Hamilton College
Johann Rayappu	Director	6	20	→ Vice President at Mark Weisdorf Associates → BC and BS: University of New South Wales
Christian Synteos	Director	10	15	→ Associate Director at UBS Investment Bank → MEng: Imperial College London
Doug Vaccari	Director	11	13	→ Analyst at UBS Investment Bank → BA: University of Pennsylvania

Firm Diversity

The table below provides data for the U.S. based personnel in the Real Assets Group, noting that the Firm does not collect data for ethnicity consistently outside of the U.S. Compared to the entire Firm, gender balance is similar, but Firm-wide minority representation is higher, e.g., 40% for all investment professionals and 27% for senior investment professionals. Data are not available for the BGIF team, as that group is too small a population to protect the confidentiality of individually identifiable information.



As of December 31, 2021

All BlackRock Real Assets US Staff Demographics	Count (#)	Male (%)	Female (%)	Minority ⁴ (%)	Non-Minority (%)
Entire Staff	173	61	39	29	71
All Investment Professionals	136	71	29	28	72
Senior Investment Professionals	56	82	18	18	82

BlackRock has instituted a multi-year Diversity, Equity, and Inclusion (“DEI”) strategy that the Firm believes is actionable, measurable, and designed to be relevant and applicable in different parts of the world. The Firm reviews its DEI strategy at least annually, along with the corporate policies and programs that support it, so that the strategy remains aligned with the Firm’s business priorities and long-term objectives. BlackRock says that its most important asset—its people—is at the core of the DEI strategy, and the Firm is committed to actions to accelerate DEI to not only attract and retain diverse employees, but to allow them to flourish, feel safe, supported and have a true sense of belonging. Examples of how BlackRock is doing this include, but are not limited to: expanding partnerships with external organizations including Historically Black Colleges and Universities; developing strategies to increase the diversity of our applicant pool; strengthening talent acquisition and management processes to eliminate bias; and implementing leadership development, sponsorship and coaching initiatives to engage and develop diverse talent.

Personnel Summary

The BGIF team has a long tenured senior team, who have several managing directors that have been working together for over a decade at First Reserve and BlackRock. When BGIF came over from First Reserve, the team had 35 professionals that became BlackRock team members. Since that time, the team has grown to over 60, as the Firm has appropriately added resources as the portfolio has grown. The growth of the team has been a combination of external senior hires and promotions from within as junior and mid-level team members gain experience. Overall, the team appears robust with appropriate level of resources for Fund IV.

Respecting the addition of a core strategy to the BlackRock infrastructure platform and the potential implications for the BGIF team’s time and attention to Fund IV and managing prior funds’ investments, BlackRock represents that in the near term, while the core strategy is still under development, on average the BGIF team may collectively contribute 5% of its time to the core strategy. BlackRock has named two “captains” from the BGIF team and the global renewables team to liaise with the dedicated core team, Eduard Ruijs from BGIF, and Martin Torres, Head of Americas, from the renewables team. These individuals may, at times, spend more than 5% of their time coordinating directing core deal flow from their teams to the core team. BlackRock represents, specifically via Anne Valentine, Head of BlackRock Real Assets, that the Firm is dedicated to ensuring that all strategies, including especially its flagship infrastructure funds, BGIF, have the resources necessary to fulfill their mandate, and the Firm will secure additional resources for BGIF or the core strategy as deal flow and workload require.

⁴ Minority categories include American Indian/Alaskan Native, Asian, Black/African American, Hawaiian/Pacific Islander, Hispanic/Latino, or Multi-Racial.

Investment Process

BlackRock's global infrastructure team implements a rigorous multi-stage diligence process that has been used since the inception of the product back at First Reserve. The investment team brings an extensive network of industry connections that has led to over 80% of their deals sourced through exclusive transactions. BGIF uses a consultative approach of cultivating long-term partnerships with industry leading companies that create projects and favorable investment terms by negotiating directly with industry participants. The team also has access to the larger BlackRock network that includes over 18,000 professionals in over 38 countries which is used to origination, executing, and monitoring.

BGIF's Investment Committee ("IC") has 15 participants. For any formal decision, there are five voting members: three permanent voting members; and two votes from among a group of five Managing Directors that rotate as voting members. There is one outside IC member, Alex Krueger, who is the President and CEO of First Reserve Corporation, where the now-BGIF team was incepted before being acquired by BlackRock in 2017, and has a been on the IC since Fund I.

For the origination process, potential investments are entered into a deal log that is then reviewed at a weekly meeting of the entire BGIF team. The team member that sourced the opportunity will describe the basic characteristics and outline next steps of diligence. If a deal is not rejected, a preliminary investment memorandum is created that dives deeper into the natural of the opportunity, investment merits and issues, and risk and return metrics. The memo is then reviewed and discussed by the IC to reach a consensus if the deal should enter extensive diligence and expend significant resources.

Once a preliminary investment memo has been approved by the IC, the deal team will conduct comprehensive due diligence. The enhanced diligence will include key investment drivers, update on initial diligence issues, macroeconomic and market updates, ESG concerns, and revisions of the investment model. The process will also include extensive risk mitigation analysis for all risks identified in the initial review and during comprehensive diligence. The results are documented in a final investment memorandum are presented and discussed with the IC. The investment passes by a super-majority by the eight voting members.

Once a deal has closes, the team oversees and monitors the investment daily through communication with the management team and participate with board responsibilities. The investment team conducts weekly meetings to review all portfolio company activities to provide real time responses on all decisions. Deal teams stay with a transaction from sourcing to exit. There are typically three to five team members on a deal depending on the complexity and specialization of a deal. Deal teams will actively evaluate an investment to determine the appropriate exit timing that must then be approved by the IC.

Partnership Terms Summary

Provision	Terms																							
Fund Size and Hard Cap	\$7.5 billion. While there is no explicitly stated hard cap for the Fund, the GP does not anticipate commitments exceeding \$10 billion.																							
GP Commitment	The GP will commit at least 2.5% of aggregate capital commitments (not to exceed \$150 million). Within this amount, members of the investment team will commit at least 0.50% of aggregate commitments (not to exceed \$15 million).																							
Investment Period	5 years																							
Total Term	12 years																							
Diversification Limits	Unless otherwise approved by the Advisory Committee or two-thirds in interest of LPs, the Fund may invest no more than 15% of capital in any one portfolio company and its controlled affiliates (20% including bridge financings); 10% of capital in infrastructure assets that are not related to the energy, digital, transportation, or environmental and natural resources industries; and 25% of capital outside of OECD countries.																							
Management Fee	<p>BlackRock has a tiered fee rate with several commitment ranges, and during the investment period applies different rates to invested and committed capital.</p> <table border="1"> <thead> <tr> <th rowspan="2">\$M</th> <th colspan="2">Investment Pd.</th> <th>Thereafter</th> </tr> <tr> <th>Invested</th> <th>Committed</th> <th>Invested</th> </tr> </thead> <tbody> <tr> <td><100</td> <td>1.00%</td> <td>0.70%</td> <td>1.70%</td> </tr> <tr> <td>100-250</td> <td>0.85%</td> <td>0.60%</td> <td>1.45%</td> </tr> <tr> <td>250-500</td> <td>0.70%</td> <td>0.50%</td> <td>1.20%</td> </tr> <tr> <td>>500</td> <td>0.50%</td> <td>0.50%</td> <td>1.00%</td> </tr> </tbody> </table>	\$M	Investment Pd.		Thereafter	Invested	Committed	Invested	<100	1.00%	0.70%	1.70%	100-250	0.85%	0.60%	1.45%	250-500	0.70%	0.50%	1.20%	>500	0.50%	0.50%	1.00%
\$M	Investment Pd.		Thereafter																					
	Invested	Committed	Invested																					
<100	1.00%	0.70%	1.70%																					
100-250	0.85%	0.60%	1.45%																					
250-500	0.70%	0.50%	1.20%																					
>500	0.50%	0.50%	1.00%																					
Preferred Return	8%																							
Carried Interest	15%																							
Carry Structure	Whole-Fund (European waterfall)																							
Catch-Up Provision	80% to the GP until it has received 15% of LP distributions in excess of capital contributions.																							
Fee Income	100% offset																							
Key Person Provision	If either (i) Mark Florian or (ii) at least four of James Berner, Adi Blum, Tomas Peshkatari, Matt Raben, Eduard Ruijs, Mark Saxe, Ryan Shockley, and Ed Winter cease to devote at least 75% of his or their professional time to the BGIF funds or accounts managed within BGIF, the manager shall notify the Advisory Board and shall have 60 days to appoint a replacement for the relevant key person(s). If the Advisory Board does not approve the proposed replacement(s) within 60 days, the Investment Period shall be automatically suspended, and the GP shall promptly notify LPs. The Investment Period will be reinstated 60 days after such notice unless a majority in interest of LPs vote or elect to terminate the Investment Period.																							
No-Fault Termination	LPs representing at least 75% of aggregate commitments may elect to dissolve the Fund or terminate the Investment Period at any time. Additionally, LPs representing at least 75% of aggregate commitments may elect to remove the GP at any time at a special meeting of the combined limited partners.																							



Historical Performance

BlackRock Global Infrastructure As of December 31, 2021

Fund	Year of First Investment	Number of Investments	Invested Capital (\$M)	Realized Value (\$M)	Unrealized Value (\$M)	Total Value (\$M)
Fund I	2010	9	1,054.1	1,100.6	146.5	1,247.1
Fund II	2014	17	2,404.4	2,308.1	1,417.8	3,725.9
Fund III	2019	10	2,559.8	515.0	2,639.3	3,154.3
Total		36	6,018.4	3,923.7	4,203.5	8,127.2

Fund	Gross IRR (%)	Net IRR (%)	Top Quartile ⁵ (%)	Gross TVM ⁶ (X)	Net TVM (X)	Top Quartile ³ (X)	Loss Ratio ⁷ (%)
Fund I	3.6	-0.4	12.4	1.2	1.0	1.8	15.9
Fund II	21.9	17.2	16.0	1.5	1.3	1.6	12.4
Fund III	16.2	11.7	NM	1.2	1.1	1.1	0.0
Total	12.3	8.4		1.4	1.2		7.7

Within the Global Infrastructure Fund series, BlackRock has invested approximately \$6.0 billion in 36 investments across three separate fund vehicles. In aggregate, these funds have generated approximately \$3.9 billion in realized proceeds resulting from 14 realizations. Loss ratios have steadily decreased across funds, with Funds I, II, and III exhibiting loss ratios of 15.9%, 12.4%, and 0.0%, respectively.

⁵ Cambridge Associates | Infrastructure | All Geographies | Top Quartile | As of December 31, 2021

⁶ Total Value Multiple (TVM) equals Realized Value plus Unrealized Value, then divided by Invested Capital.

⁷ Loss Ratios represent the proportion of invested capital that has resulted in realized and unrealized losses in a portfolio. The Ratio is calculated by taking the sum of lost capital (invested capital minus an investment's total value) for all investments that have generated a negative return, then dividing that amount by total invested capital across the entire portfolio.

Environmental, Social, and Corporate Governance

ESG Policy and Program

ESG Policy and Sustainability Programs

Given the nature of the strategy, BlackRock is very committed to driving environmental, social, and corporate governance (ESG) best practices across the industry and has taken steps in recent years to further strengthen its commitment to ESG. At the start of 2018, BlackRock appointed Teresa O’Flynn as the Global Head of Real Assets Sustainable Investing and leader of the dedicated Real Assets Sustainable Investing Team. In 2021, Ms. O’Flynn moved a new role as founding member of Decarbonization Partners, a partnership between BlackRock and Temasek launched in April 2021 to pursue late-stage venture and growth private equity opportunities. In October 2021, Kristen Weldon joined as the new Global Head of Real Assets Sustainable Investing. Prior to joining BlackRock, she was head of ESG and impact investing for Partners Capital. In her new role, Ms. Weldon will be based in London and will work to drive BlackRock Alternative Investments ESG agenda and develop a framework for assessing climate risk. Additionally, a Real Assets platform-wide initiative was launched in 2018 involving a comprehensive review of existing processes and the formation of a new Real Assets ESG Committee, with senior representation across all investment platforms and regions. The ESG Committee and Sustainable Investing Team work closely to implement the firm’s ESG strategy and to share best practices across the platform.

Firm-wide, BlackRock recognizes the ESG impacts of its investments and is committed to managing the impacts in a compliant and responsible manner. The Firm’s Real Assets Sustainable Investing Policy, most recently updated on February 2021, defines and outlines BlackRock Real Assets’ position on sustainable investing and provides employees with guidelines on incorporating ESG considerations into the investment process.

As outlined in the Investing Policy, the Firm’s approach to integrating ESG within its investment process is summarized below.

- Sourcing and Screening – Initial ESG assessments are performed to identify any ESG “deal breakers” and any issues that require more extensive due diligence. In Greenfield projects, BlackRock factors in ESG considerations into the design and project planning phases.
- Due Diligence – To improve the integration of ESG considerations and to streamline its analysis throughout the investment process and across teams, BlackRock developed a proprietary Investment ESG Questionnaire which is completed by investment team for all new acquisitions across the global real estate and infrastructure equity investment platforms. Any ESG risks are identified, quantified, and integrated into valuation models as appropriate.
- Investment Committee Approval – Any material ESG risks and opportunities are recorded throughout the investment process and shared with the Investment Committee (“IC”).

- Asset Ownership – While asset-level day-to-day activities are managed by qualified third party operators or property managers, BlackRock places a strong emphasis on active ownership and asset management, which often includes board representation by BlackRock.
- Measurement and Monitoring – BlackRock uses ESG key performance indicators to track ongoing risk management and where possible measure and monitor the environmental impacts associated with the investments. Where appropriate, ESG information is also shared in client reporting.

BlackRock Alternative Investors (“BAI”) Sustainable investing team is responsible for the firm-wide sustainable investing strategy across Real Estate, Infrastructure, Hedge Funds, Private Equity, and Private Credit. The team is led by the Global Head of Sustainable Investing for BAI, Kristen Welden, and in total has six team members. Supporting Ms. Welden is Katherine Sherwin, Global Head of Real Assets Sustainable Investing, Brianna Barrett, Head of BAI Sustainable Investing for the Americas, along with two Vice Presidents and one Associate.

Reporting

BGIF measures and reports key performance indicators (“KPIs”) in their investor reports that identify and incorporate United Nations Sustainable Development Goals (“SDGs”) that are impacted by the underlying assets in the BGIF funds. The firm also prepares an annual Real Assets Sustainable Investing report outlining BlackRock’s sustainable investing performance on a qualitative and quantitative basis.

ESG Summary

Overall, BlackRock seems to show a strong stance in incorporating ESG factors into its investment process. The recent firm-wide initiatives and team additions in the last couple of years further point to BlackRock’s commitment to be responsible players in the sustainable investing space. Meketa reviewed the primary and referenced materials provided by BlackRock (e.g. Real Assets Sustainable Investment Policy, Annual Sustainable Investing Report, quarterly impact reports, etc.) and finds that BlackRock appears to be complying with its policy.

Responsible Contractor Policy

BlackRock has a Responsible Contractor Policy (“RCP”) that covers its U.S. Real Assets investments current as of January 1, 2019. The five-page policy details guidelines for BlackRock’s fiduciary duties to achieve financial returns while maintaining fair selection and treatment of independent contractors. BlackRock is a signatory to the United Nations-supported Principals for Responsible Investment and, as outlined above, also considers ESG issues as part of the investment process. The RCP focuses on BlackRock Real Assets personnel engaging contractors utilizing: (a) industry best practices for contractor selection (including consideration of cost, skill, experience, dependability, safety record, and environmental record); and (b) local, national, and state laws for contractor engagement and performance (including as relates to minimum wage, fair wages and benefits, labor relations, health, and occupational safety). The Policy also requires neutrality where labor interests attempt to organize workers employed by a contractor.

The policy that BlackRock implements for Real Assets is similar to Meketa's RCP template, with differences as outlined below. BlackRock credits Meketa's RCP as a helpful guide in developing the language in their Real Assets RCP, dating back to Meketa's review of Global Renewable Power Fund II in 2016 for a single non-discretionary client mandate.

- In the section on applicability, BlackRock's policy specifies the policy does not apply to hybrid equity/debt commingled funds, joint-venture investments, mortgage/mezzanine debt, indirect, and specialty investments lacking equity features. Meketa's policy does not specify types of vehicles and defines as "non-applicable" any vehicle over which the Fund does not have the ability to exercise control.
- In the section on responsibilities of investment professionals, BlackRock's policy does not specify that professionals will furnish annual reports to each Fund investor with a Fund Manager comment regarding the Fund's compliance or non-compliance with the Policy.
- In the section on responsibilities of operating company managers, BlackRock's policy does not require providing annual report information to the Fund Manager with Investment Manager commentary regarding compliance or non-compliance. BlackRock does include a requirement to maintain documentation regarding contactors that have secured applicable Service contracts.
- In the section on responsibilities of contractors, BlackRock's policy does not require that contactors submit Responsible Contractor Self Certification Forms.
- BlackRock's policy specifies the minimum contract value that the policy applies to. For new construction capital a minimum of \$50 million and ongoing capital at \$25 million project.
- BlackRock's policy includes a debarment clause that states managers will use commercially reasonable efforts to exclude contractors from a bidding process if the contract or any of their senior executives have been listed as a debarred contractor within the past 36 months.

Operations

Organization

The BlackRock Global Infrastructure team, which comprises 36 investment professionals, is supported by nine finance and operations professionals and six product strategy and investor relations professionals. Director Laura Butler is responsible for investment governance, portfolio company oversight, and financial reporting across the infrastructure platform, while Director Freek Spoorenberg leads infrastructure product strategy and investor relations globally within the platform. The BlackRock Global Infrastructure platform has a dedicated portfolio financial management team as well as an accounting and product service team. The Firm anticipates adding two professionals to the financial management team in the near term. The Fund will be further supported by additional resources at BlackRock related to capital markets, legal, compliance, finance, accounting, public relations, administration, and human resource functions.

Finance and Accounting

A key component of BlackRock's internal investment monitoring and cash flow management process is Aladdin, a proprietary investment platform that connects all aspects of portfolio management, trade execution, investment operations, and analysis and risk management. Aladdin provides a single database to track investment-level information related to transactions, positions, risk measures, prices, and securities. It is through this system that BlackRock shares trade and execution information with third-party administrators. BGIF will use a third-party administrator for all financial reporting related to the Fund. The Firm's Global Fund Accounting Services team oversees and reviews the work of all administrators to ensure consistency and best practices. All work products generated by administrators are subject to sign off by the BGIF financial operations teams. The BGIF team also uses Yardi, iLevel and Investran financial accounting systems in conjunction with Aladdin. BlackRock maintains that all financial accounting inputs related to quarterly financial statements and partners' capital account statements are subject to a number of separate reviews, including annual third-party audits.

Valuation

The Fund will be subject to a multi-step investment valuation process and overall portfolio company review on a quarterly basis. The BGIF valuation process incorporates a variety of valuation methods, including public market comparables, recent private company comparable transactions, discounted cash flows, and other industry and company-specific information and assumptions. More specifically, the two primary valuation methods used by the Firm include the market approach and the income approach. The market approach references recent transactions involving the portfolio investment or comparable companies. It considers inputs such as public prices for the securities issued by such

companies as well as various key performance metrics of portfolio companies (e.g. EBITDA). Under the income approach, fair value is determined by discounting future cash flows or earnings to a single present amount using current market expectations about those future amounts. This requires assumptions to be made by the GP surrounding revenues, operating income, depreciation and amortization, capital expenditures, income taxes, working capital needs, and the terminal value of the investment company. Investment valuations are subject to initial sign off by the Managing Director leading the particular investment. Following initial sign off, valuations are sent to the Portfolio Financial Management team for review before going to the Valuation Committee for final approval. Importantly, the members of the Valuation Committee are independent of the Funds for which the valuations are being reviewed. In other words, there is no overlap between fund teams and Valuation Committee members for a given fund. Only after approval by the Valuation Committee are valuations incorporated into fund reports. Unaudited quarterly financial statements are produced for Q1, Q2, and Q3. On an annual basis (in Q4), these valuations are also reviewed by KPMG and sent to the Firm's independent auditor (Deloitte).

Legal and Compliance

BlackRock indicated that as a global investment manager, the Firm and its various subsidiaries are subject to regulatory oversight including examinations and various requests for information. BlackRock is often provided with comment letters following these examinations in which regulators request corrections or modifications to certain aspects of its practices. The Firm notes that in all such instances, these comments have either been or are in the process of being addressed. Further, BlackRock shared that the SEC is currently conducting an examination related to the three BlackRock funds that include Bitcoin futures in their investment universe. The purpose of the investigation is to understand the funds' investment operation and risk management controls around such investments. It is the Firm's belief that no such investigations, subpoenas, or requests for information related to regulatory inquiries will have any adverse impact on its ability to manage clients' assets.

Separately, the Firm claims that its use of Aladdin (described in detail above) enhances data integrity and reduces operational and compliance risk. The Aladdin platform also allows BGIF to track compliance with portfolio diversification limits for various fund vehicles.

Technology Infrastructure

BlackRock strives to maintain a focus on providing best in class internally developed systems and technology related to risk management and portfolio construction. Chief among these are financial reporting and accounting systems such as Aladdin, Yardi, iLevel and Investran. Further, the Firm leverages technology to facilitate collaboration and communication across all office locations via virtual meetings, calls, emails, and secure chat. BlackRock claims that this technology enabled employees to smoothly transition to a remote working environment during the early phases of the COVID-19 pandemic and has continued to prove beneficial as the Firm transitions to a hybrid working environment.

Other Items

Legal Issues

As would be expected, a company with the breadth and scale of BlackRock's financial offerings and activities has been the subject of various regular and incident-specific investigations and actions. Over the last 10 years, BlackRock reported a number of such actions that have been settled, or are still being litigated, including, but not limited to: regulatory examinations requiring modification of certain business practices; violations of the Commodity Exchange Act and Commodities Futures Trading Commission regulations; violations of the Department of Labor's security trading rules; violations of New York state law regarding use of analyst surveys; findings by the Securities and Exchange Commission ("SEC") of security trades during prohibited periods and employee personal investments; findings by the SEC of employee separation agreement language disallowed following Dodd-Frank; violations of the UK Financial Services Authority client money rules and principles; and violations of Italian securities regulations respecting certain shareholding reporting information. In certain of these instances, BlackRock admitted to wrongdoing and paid fines and/or penalties; in other instances, BlackRock neither admitted nor denied wrongdoing, and resolved the matter with a financial settlement.

Respecting labor and industrial matters involving BGIF, there have been no labor disputes since the Group's inception in 2011, nor are there any other industrial actions or disputes related to the Fund or the team. BlackRock Infrastructure, the Real Assets Group, and BlackRock Alternative Investors have also had no reports of labor disputes or industrial actions over the last five years.

Potential Conflicts

Compliance Program

BlackRock maintains a robust compliance program aimed at identifying, escalating, avoiding and/or monitoring potential or actual conflicts of interest. A key component of this program is the Conflicts of Interest Policy, which is generally designed to ensure the proper management and mitigation of risks faced by the Firm's clients. In accordance with this policy, BlackRock requires all employees to, among other things:

- Identify potential or actual conflicts of interest both in relation to existing arrangements and when considering changes to, or making new, business arrangements.
- Report any conflicts of interest promptly to his/her supervisor and Legal & Compliance.
- Avoid (where possible) or otherwise take appropriate steps to mitigate a conflict to protect our clients' interests; and

→ Where appropriate, disclose conflicts of interest to clients prior to proceeding with a proposed arrangement.

Deal Allocation

While BGIF Fund I and II are fully invested, Fund III is approximately 78% invested, committed, and reserved as of December 2021. However, the Firm does not expect to begin investing Fund IV until Fund III is fully invested and committed, which BlackRock expects to achieve by year-end 2022. As such, BlackRock does not expect there to be any allocation issues between the Fund and any predecessor vehicles executing similar strategies. Further, BlackRock represents that there is no significant strategic overlap between the Fund and any other direct infrastructure equity strategies managed by the BlackRock infrastructure platform. This is due in large part to the fact that the strategy executed by the BGIF fund series is the only one within the Firm that focuses on private infrastructure equity investments across diversified sectors in the core plus to value add return profile.

As noted in the personnel section, however, BlackRock is in the process of launching a core infrastructure strategy, with an as yet unspecified return target. BlackRock represents that the intention is to have sufficient daylight between this new core fund and BGIF.

In the event, however, that concerns or disagreements regarding deal allocation between the Fund and another fund or client account arise, the matter will be discussed and resolved on a case-by-case basis by the Firm's Infrastructure Allocation Committee. This will be done in consultation with relevant business, legal, and compliance personnel, as necessary. The composition of the Infrastructure Allocation Committee may be altered without the consent of, or notice to, Limited Partners. It is worth noting as well that the LP Advisory Board will advise the General Partner regarding conflicts of interest.

Distribution/Marketing

BlackRock relies exclusively on in-house investor relations and business development professionals and does not use outside placement agents.

There is no compensatory relationship between Meketa Investment Group and any BlackRock entity.

Analysis and Conclusions

Due Diligence Basis

Meketa has carefully evaluated the Fund's manager, its investment professionals' experience and qualifications and related resources, strategy, existing investments and pipeline, investment process, historical track record, and other aspects of this opportunity as described in prior sections of this investment memorandum.

Overall, we find BGIF IV an attractive opportunity that we can recommend for investors where it is consistent with their infrastructure portfolio objectives, pacing plan, and any diversification targets or limits. This finding is based on our evaluation of the Fund's primary strengths and weaknesses, along with market-based opportunities and threats. These elements of our findings are documented below, followed by our overall conclusion and recommendation.

SWOT Analysis

Strengths

- **Deep Industry Network** – The senior team has an extensive network of industry connections they use to source prospective investment opportunities through a consultative approach. BGIF has historically originated 80% of investment opportunities through exclusively negotiated transactions.
- **Performance of Funds II and III** – Fund II has returned nearly all capital and has a gross return of 21.9% as of December 31, 2021. Fund III is still in its value creation stage but has a zero loss ratio to date, and has a diversified portfolio across sectors and geographies.
- **Expanding Sector Exposure** – BlackRock Global Infrastructure continues to evolve its energy-sector targets with the opportunity set in a decarbonizing world, and has expanded into adjacent spaces in other sectors, namely transportation, logistics, and communications, where there are low carbon power and energy efficiency needs. The team is expanding expertise commensurately.
- **Disciplined Portfolio Construction** – BGIF has shown ability to develop portfolios that are diverse across sectors and geography. The team looks to have no portfolio company exceed 10% of the fund, which also limits single asset exposure risks. Fund IV offers compelling exposure covering multiple sectors with an emphasis on decarbonization, decentralization, and digitization.
- **BlackRock Platform Resources** – BlackRock has over 18,000 employees in over 38 countries that can provide locally sourced origination, diligence, and monitoring assistance. BlackRock also has over 50 in-house Capital Markets professionals that are available to BGIF. The Real Assets team has approximately 110 professionals in addition to the BGIF team that also are available to BGIF.

Weaknesses

- **Fund I Performance** – As of December 31, 2021, Fund I had produced a gross IRR of 3.6% and net IRR of -0.4%. The Fund is below target expectations and doesn't have much value remaining to recover significantly going forward.
 - Mitigating factor(s): Fund I was negatively affected by government subsidies expiring on several of its assets back when returns relied on subsidies to reach target. BlackRock learned the lesson to not rely on the subsidies as part of their underwriting and have not included these since Fund I.
- **Potential Core Infrastructure Vehicle** – BlackRock is planning to launch a core infrastructure vehicle that is expected to initially make one to two investments per year. Former Managing Director for BGIF, David O'Brien, has left the team to launch the core platform. BlackRock represents that deals will be originated by members of the BGIF and Global Renewables teams as the senior team members are already seeing core risk/return deal flow.
 - Mitigating factor(s): Originating transactions for another vehicle is not expected to take significant time away from team members responsibility to the flagship vehicle. These additional responsibilities are not expected to make up more than 5% of their time, on average.

Opportunities

- **Decarbonization imperatives:** The energy market, once dominated by hydrocarbons with a significant carbon footprint like coal and petroleum, now meaningfully includes cost-competitive renewable energy, such as hydro-electric, solar, and wind power, as well as lower-carbon fuels like natural gas. Government and corporate initiatives to decarbonize their electricity source generally, and in many cases specifically achieve net zero greenhouse gas emissions by 2050, creates significant demand for capital in the sectors BGIF is targeting.
- **Prospective deal partners abound:** Industrials and strategics in many sectors, including energy companies, are increasingly looking to achieve their goals of diversifying their power source portfolios with joint ventures and other partnership arrangements that keeps non-core, non-mission centric investments off their balance sheet, creating opportunities for investors like BGIF that can provide capital at scale with financial structuring and asset management expertise.
- **Infrastructure profiles available:** Situations with contracted revenues at scale and stable regulatory schemes exist in the geographies and sectors BGIF is targeting, consistent with their core plus to value add mandate, and desire for healthy cash yield from early in the hold period.

Threats

- **Competition for deals:** In the last few years, a plethora of investment managers have launched new funds or pivoted existing strategies to focus on decarbonization and energy transition themes. BlackRock could easily face competition for deals from players and at a level it is not used to.
- Mitigating factor(s): BGIF has historically originated 80% of investment opportunities through exclusively negotiated transactions and expects to source a meaningful number of deals from existing and prior partners that continue to have needs in traditional spaces and at the same time are also pivoting or expanding into low carbon arenas. .
- **Global and regional crises and persistent challenges:** COVID-19 remains at pandemic levels in some places, and appears to be transitioning to endemic levels in other, depressing and disrupting economic activity and growth. Knock on effects, including supply chain jams and labor shortages continue. More recently, the Russian invasion of Ukraine has fundamentally shifted many countries' expectation of sovereign safety and protection. While the war may accelerate investment opportunities that help Europe reduce its dependence on Russian oil and gas, collectively COVID and Russian aggression could slow expected growth or otherwise delay programs at the governmental and corporate level that drive BGIF's target opportunity set.

Conclusion

Based on our due diligence, discussed in detail throughout this document, Meketa believes BGIF IV is an attractive opportunity to invest with a manager with a proven track record in the energy arena that is evolving its strategy with the market opportunity set that is increasingly offering up investments that reflect decarbonization, decentralization, and digitization themes not only in the energy and power sectors, but also in transportation, logistics, and communications sectors. The investment team is stable with long co-tenures and has successfully completed its integration from the First Reserve platform into BlackRock. The team has grown organically and with strategic outside hires to keep pace with its AUM scale and new areas of focus. Fund II's performance is impressive, and Fund III is early but appears well on track, and the strategy has delivered healthy cash yield.

The several areas of concern or consideration include, but are not limited to: lesser direct economic alignment with the team than preferred; Fund I's poor performance and some problem investments in the other funds; and the new core fund's reliance on the BGIF team for deal flow and diligence support.



Appendices

Professional Biographies

Fund Senior Professionals

Mark B. Florian, Managing Director

Mark B. Florian, Managing Director, Head of BlackRock Global Infrastructure Funds (“BGIF”), joined BGIF in 2008 to start the franchise. Since inception, Mr. Florian has overseen all of the Fund’s activities, including overall strategy, portfolio construction, investment origination, structuring, execution, monitoring, and exit strategy. He is the Chairman of the Investment Committee for BGIF.

Prior to BGIF, Mr. Florian was a Partner at Goldman Sachs, fulfilling two primary roles at the firm: 1) managing its global Infrastructure Investment Banking business, and 2) serving on the Investment Committee for Goldman Sachs Infrastructure Partners. His 23-year Goldman Sachs career spanned a wide range of areas within the firm, including the government finance, corporate finance investment banking, and the mergers and acquisitions group. While at Goldman Sachs, he led over \$25 billion of mergers and acquisition transactions, and also had structured over \$35 billion in financing and hedging transactions. He has been asked to testify to the U.S. Congress on infrastructure issues multiple times and was appointed to a Federal Government commission, which developed recommendations to the U.S. Congress on key changes to its infrastructure finance system.

Mr. Florian holds a Bachelor’s degree in Computer Science and Economics, magna cum laude, from Duke University and an M.B.A. from the University of Chicago.

James C. Berner, Managing Director

James C. Berner, Managing Director, joined BGIF in 2011. His responsibilities include deal origination, structuring, execution, monitoring, and exit strategy. At BGIF, Mr. Berner leads, or has led, investments in North American Power I, Fort Detrick Energy, Kingfisher Wind, Mariah North Wind, Lackawanna Energy Center, Guernsey Power Station, Lexington Generating and GasLog. He is a member of the Investment Committee. Prior to joining BGIF, Mr. Berner was a Managing Director at General Electric Capital Corporation, in the Energy Financial Services division. Prior to General Electric Capital Corporation, he was a Vice President, Project and Structured Finance, at Deutsche Bank Securities Inc. Mr. Berner holds a B.A. in History and Government from Cornell University, an M.B.A from The Wharton School and a M.A. in International Affairs from School of Advanced International Studies, Johns Hopkins University.



Adi J. Blum, Managing Director

Adi J. Blum, Managing Director, joined BGIF in 2011. His responsibilities include deal origination, structuring, execution, monitoring, and exit strategy. At BGIF, Mr. Blum leads, or has led, investments in SunReserve, First Caribbean Power & Midstream, Los Ramones II, La Bufa Wind, Mexico Clean Fuels Infrastructure, Limetree Bay and Vopak Industrial Infrastructure. He is a member of the Investment Committee. Prior to joining BGIF, Mr. Blum was a Vice President at High Road Capital Partners, a middle market private equity firm. Prior to High Road Capital Partners, he was an Associate in Citigroup's Mergers & Acquisitions group. Mr. Blum holds a B.S. in International Affairs from Georgetown University, School of Foreign Service and an M.B.A from New York University, Stern School of Business.

Matthew S. Raben, Managing Director

Matthew S. Raben, Managing Director, joined BGIF in 2008. His responsibilities primarily include legal transaction execution across all portfolio companies, working with the various Team members. He is also the head of co- investment activities. With the Team, he focuses on investment execution, investment structuring, due diligence review, negotiation of deal documentation, portfolio monitoring and exit strategy. Prior to joining BGIF, Mr. Raben worked at First Reserve serving in a similar capacity for First Reserve's private equity funds. Prior to First Reserve, Mr. Raben was an associate at Simpson Thacher & Bartlett LLP where he concentrated primarily in mergers and acquisitions and private equity fund formation. Mr. Raben holds an A.B. from Dartmouth College and a J.D., with distinction, from Stanford Law School.

Eduard Ruijs, Managing Director

Eduard Ruijs, Managing Director, joined BGIF in 2011. His responsibilities include deal origination, structuring, execution, monitoring, and exit strategy. At BGIF Mr. Ruijs leads, or has led, investments in Renovalia Reserve, Dublin Waste to Energy, PetroFirst Infrastructure I, PetroFirst Infrastructure II, Kellas Midstream, ADNOC Oil Pipelines Company and GasLog. He is a member of the Investment Committee. Prior to joining BGIF, Mr. Ruijs was an Investment Director and Partner at NIBC Infrastructure Partners, where he was responsible for investing the NIBC European Infrastructure Fund. Prior to NIBC Infrastructure Partners, he was a Senior Principal with the European Energy Practice at the Boston Consulting Group in London. Before that, he was a Senior Manager at A.T. Kearney in London. Mr. Ruijs holds a B.B.A. in Business Administration from Nijenrode University. He also holds a Master in Law and an MSc in Economics from Vrije Universiteit Amsterdam along with an M.Juris in Law and Economics from Oxford University.



Mark S. Saxe, Managing Director

Mark S. Saxe, Managing Director, joined BGIF in 2011. His responsibilities include deal origination, structuring, execution, monitoring, and exit strategy. At BGIF, Mr. Saxe leads, or has led, investments in Caliber Midstream, First ECA Midstream, Navigator Energy Services, Arrowhead Gulf Coast Holdings, Dominion Midstream, Glass Mountain Pipeline, Equitrans Midstream Preferred, NextEra Partners, Western Renewable Partners and Meade Pipeline. He is a member of the Investment Committee. Prior to joining BGIF, Mr. Saxe was a Director in the Corporate Development Department of Loews Corporation. Prior to Loews Corporation, he was in the Investment Banking Division at Lehman Brothers. Mr. Saxe holds a Bachelor of Commerce from McGill University.

Ryan Shockley, Managing Director

Ryan Shockley, Managing Director, joined BGIF in 2008. His responsibilities include investment origination, execution, monitoring, and exit strategy. At BGIF, Mr. Shockley leads, or has led, investments in FR Warehouse, Hearthstone NextEra Partners, Western Renewable Partners, Meade Pipeline and Centric Infrastructure. He is a member of the Investment Committee. Prior to joining BGIF, Mr. Shockley worked at First Reserve as a Vice President in their private equity funds. Prior to First Reserve, Mr. Shockley worked at JP Morgan Investment Bank in the Financial Sponsors Group. Mr. Shockley holds a BA from Kalamazoo College, cum laude and an M.B.A. from the Kellogg School of Management at Northwestern University.

Tomas Peshkatari, Managing Director

Tomas Peshkatari, Managing Director, joined BGIF in 2014. His responsibilities include investment origination, execution, monitoring and exit strategy. At BGIF, Mr. Peshkatari has been actively involved with the team's investments in Los Ramones II, Mexico Clean Fuels Infrastructure, Arrowhead Gulf Coast Holdings, and Lackawanna Energy Center, Limetree and Vopak Industrial Infrastructure. Prior to BGIF, Mr. Peshkatari worked at The Carlyle Group for 8 years investing from the firm's Infrastructure and power funds. Prior to that, Mr. Peshkatari was an Analyst with Credit Suisse Securities, where he was focused on M&A and financing transactions in the power and utility sector. Mr. Peshkatari has an undergraduate degree from Macalester College, where he graduated magna cum laude.



Timothy F. Vincent, Managing Director

Timothy F. Vincent, Managing Director, joined BGIF in 2011. His responsibilities primarily include capital markets strategy and execution across all portfolio companies. He co-led the Dublin Waste to Energy investment with Eduard Ruijs. Given his strong capabilities, Tim was promoted to Global Head of Capital Markets for BlackRock's Alternatives division. This enables Tim to use the broader BlackRock relationships to drive the best possible financing terms for BGIF. He, along with Matt Prescottano, work with all of our Team members and portfolio companies. Prior to joining BGIF, Mr. Vincent was a Partner at Greentech Capital Advisors, a boutique investment bank focusing on the renewable energy and clean technology sectors. Prior to Greentech Capital Advisors, he was a Managing Director in the Investment Banking Division at Goldman Sachs. Mr. Vincent also spent 11 years as a Managing Director at BNP Paribas. Mr. Vincent holds a B.A. in Economics from the University of Connecticut and an M.B.A from Columbia Business School.

Adam Waltz, Managing Director

Adam Waltz, Managing Director, joined BGIF in 2022. His responsibilities include origination, structuring, execution, monitoring, and exit strategy for investments in the digital infrastructure sector. Prior to joining BGIF, Mr. Waltz was a Managing Director in Morgan Stanley's Media and Communications investment banking group for over 10 years. In that role, he focused on financing and M&A transactions across the digital infrastructure sector, including wireless infrastructure, fiber networks, and data centers. Prior to that role, Mr. Waltz was an officer in the United States Navy for 5 years. He graduated with an MBA from the University of Chicago Booth School of Business and completed an undergraduate degree from the Ohio State University.

Edward Winter, Managing Director

Edward Winter, Managing Director, joined BGIF in 2018. His responsibilities include investment origination, execution, monitoring and exit strategy. At BGIF, Mr. Winter has led investments in Calisen, Medgaz, Kellas Midstream and ADNOC Oil Pipelines. Prior to joining BGIF, Mr. Winter was a Managing Director with Macquarie Group's Macquarie Capital, most recently in their London office, where he was leading Macquarie Capital's European conventional energy business as part of the Energy & Infrastructure Group. Prior to this, Mr. Winter was also Co-head of Macquarie Capital's Resources Infrastructure business. Mr. Winter graduated from Monash University with a Bachelor of Laws and Bachelor of Commerce majoring in Finance and from INSEAD with a Masters of Finance.

Freek Spoorenberg, Director

Freek Spoorenberg, Director, joined BlackRock in 2012. He leads the Product Strategy & Investor Relations activities globally for the Infrastructure Equity platform. Mr. Spoorenberg is focused on business growth with responsibility for product development, fundraising and investor relations. Mr. Spoorenberg joined BlackRock shortly after the establishment of BlackRock's Infrastructure platform in 2012. Mr. Spoorenberg has contributed to the growth and development of both BlackRock's Infrastructure and Renewable Power business. Prior to joining BlackRock, he was a Structured Products Sales Analyst at Societe Generale Corporate & Investment Banking providing cross-asset solutions to Benelux institutional clients, private banks and asset managers. Mr. Spoorenberg earned an MSc degree in International Business from Maastricht University, and also holds a Bachelor of Business Administration.

Laura Butler, Director

Laura Butler, Director, joined BlackRock in 2013. She is a member of the BlackRock Real Assets Portfolio Financial Management team, supporting business finance and operations. She has played a lead role in building out the Infrastructure Platform, and is responsible for investment governance, investment execution, portfolio company oversight, valuations, and financial reporting across a number of the Infrastructure businesses. In 2017 Ms. Butler joined BGIF in Greenwich to focus on establishing financial operations and is now located in Dublin. Previously, she was Financial Controller of Bank of Ireland (UK) plc where in 2010 she set up the Financial Reporting function for the newly established bank. She started her tenure in Bank of Ireland in 2006 and held a number of positions in their Global Markets Division last serving as Senior Income Support Analyst for their Trading Group. Prior to joining the Bank, she worked as a treasury accountant at Lone Star International Finance Limited. She began her career in 2000 at Dexia Bank Belgium, Dublin Branch where she trained as an accountant. Ms. Butler is a fellow of the Association of Chartered Certified Accountants (FCCA).

Robert Hanna, Director

Robert Hanna, Director, joined BGIF in 2013. Mr. Hanna is responsible for technical/commercial risk underwriting, contract negotiations, construction monitoring, operations management, and investment realization. He is a Radiation Protection Engineer with more than 30 years professional experience. From 2010 to 2013, Mr. Hanna was a Portfolio Manager with Consolidated Asset Management Services, responsible for the stewardship of client portfolios of thermal power projects. He was Director, Asset Origination from 1999 to 2010 for Reliant Energy, an independent power producer and retail electricity marketer with operations in the Texas, California, Florida and Northeast US markets. Mr. Hanna holds a Bachelor's degree in Radiation Protection Engineering from Texas A&M University.



Newton Houston, Director

Newton Houston, Director, joined BGIF in 2018. Mr. Houston is responsible for technical/commercial risk management, contract negotiations, construction monitoring, operations management, and investment realization. He is a Mechanical Engineer with more than 30 years professional experience. Most recently he was Vice President of ENGIE North America responsible for business development and project management for energy infrastructure assets (pipelines, wind, solar, biomass and gas-fired power generation resources). Previously, Mr. Houston was a Manager of Energy Trading and Marketing with The Southern Company, responsible for marketing energy risk management products. Mr. Houston holds a Masters of Business Administration degree in Finance and a Bachelor's degree in Mechanical Engineering from Auburn University.

Akhil Mehta, Director

Akhil Mehta, Director, joined BGIF in 2013. His responsibilities include investment origination, execution, monitoring and exit strategy and has been actively involved with the Team's investments in Calisen, FR Warehouse, Hearthstone Utilities, Kingfisher Wind, La Bufa Wind, North American Power I and Meade Pipeline. Prior to joining BGIF, Mr. Mehta was an Analyst at Barclays Capital, where he focused on M&A and financing transactions in the power and utility sector. Mr. Mehta earned a Bachelor of Science in Operations Research with a minor in Economics from Columbia University.

Luke O'Keefe, Director

Luke O'Keefe, Director, joined BGIF in 2015. Mr. O'Keefe is responsible for technical risk underwriting, contract assessment, construction monitoring, and operations management. He is a Chemical Engineer with more than 30 years professional experience. From 2006 to 2015, Mr. O'Keefe was a VP in GE's Energy Financial Services Group providing technical & commercial due diligence, construction and operations expertise to Equity and Debt teams investing over \$6 billion in thermal (natural gas, oil, coal, biomass, waste to energy), and renewable (onshore & offshore wind, solar) power projects. He was Director, Energy Consulting from 2004 to 2006 for Burns & Roe Enterprises. Mr. O'Keefe was also Director for Texaco, Inc. He began his career with Union Carbide as a project manager for refinery technology & hydrogen purification systems. Mr. O'Keefe earned an MBA in Finance/International Business from New York University and Bachelor and Master's degrees in Chemical Engineering from Manhattan College.



Matt Prescottano, Director

Matt Prescottano, Director, joined BGIF in 2016. Recently, Matt moved with Tim Vincent to the BlackRock Capital Markets group for Alternatives, where he is primarily responsible for structuring and negotiating debt financings and hedging transactions for BGIF. His leadership in this group enables BGIF to use the broader BlackRock relationships to drive the best possible financing terms for its Funds. Prior to BGIF, he was an Associate in GE Energy Financial Services' oil & gas principal investing group. He also held roles in power & utilities investment banking at Merit Capital Advisors and Dexia Global Structured Finance and began his career with the power & project finance team at John Hancock Financial Services. Mr. Prescottano earned an undergraduate degree from Hamilton College and an M.B.A. from the Tuck School of Business at Dartmouth College.

Johann Rayappu, Director

Johann Rayappu, Director, joined BGIF in 2017. Prior to joining BGIF, he worked on BlackRock's energy infrastructure strategy. Prior to joining BlackRock in 2016, Mr. Rayappu was a founding member of P3 Global Management Inc., which focused on developing and financing the deployment of 'smartcity' technologies, and also worked at Mark Weisdorf Associates, which specialized in alternative investment strategies in infrastructure. Previously, Mr. Rayappu spent 10 years at Macquarie Capital in both Australia and the U.S., executing on over \$10 billion in principal investment and M&A transactions in energy, infrastructure, and real estate. Mr. Rayappu holds a Bachelor of Commerce and a Bachelor of Science majoring in Finance and Mathematics, respectively, from the University of New South Wales ("UNSW"), Australia, and studied at New York University's Stern School of Business.

Christian Synetos, Director

Christian Synetos, Director, joined BGIF in 2012. His responsibilities include investment origination and structuring, due diligence, execution, monitoring, and exit strategy. He has been actively involved with the team's investments in Renovalia, PetroFirst, PetroFirst II and GasLog. Prior to BGIF, Mr. Synetos spent 5 years with UBS Investment Bank in London where he focused on advising clients in the European utilities industry. Mr. Synetos graduated from Imperial College London with an MEng degree in mechanical engineering in 2007.

Doug Vaccari, Director

Doug Vaccari, Director, joined BGIF in 2011. His responsibilities include investment origination and structuring, due diligence, execution, monitoring, and exit strategy. He has been actively involved with the team's investments in Navigator CO2 Ventures, Glass Mountain Pipeline, and Equitrans Midstream, Navigator Energy Services, First ECA Midstream, Caliber Midstream, Fort Detrick Energy, Dominion Midstream Partners, and FR Warehouse. He is focused on originating investments that contribute to the energy transition, while meeting our investment parameters. Prior to BGIF, Mr. Vaccari was an Analyst with UBS Investment Bank in the Global Energy Group, where he was focused on M&A and financing transactions. Mr. Vaccari holds a B.A. in Economics and Music from the University of Pennsylvania.



Jim Barry, Managing Director

Jim Barry, Managing Director, is the Chief Investment Officer of BlackRock Alternatives Investors (“BAI”). BAI currently manages c. \$300 billion in total assets and client commitments with a team of over 1,100. As CIO, Mr. Barry has accountability for all investment activities across the platform, which is comprised of the firm's investment capabilities across Real Estate, Infrastructure, Hedge Funds, Private Equity and Credit. As CIO, Mr. Barry oversees four strategic business pillars within BAI that focus on investment performance and process; implementing a fully integrated ESG investing strategy and framework; a pan-alts strategy and research function; and BlackRock Capital Markets (“BCM”), our firmwide Capital Markets business. Prior to his role as CIO, he was Global Head of BlackRock Real Assets. In 2016, he took responsibility for BlackRock's Global Real Estate Investment business by integrating both Infrastructure and Real Estate to create one cohesive, scalable Real Asset operating platform with a range of client orientated strategies defined by their risk positioning. Under his leadership this business grew from c. \$30 billion to c. \$65 billion in assets in under 5 years. Mr. Barry founded BlackRock's Infrastructure business in 2011 upon joining the firm. Prior to which he spent 11 years as the CEO of NTR plc. He led the transformation of NTR from its origins as an Irish toll road developer into a leading international developer, owner and operator of a portfolio of diverse infrastructure businesses. Prior to joining NTR, Mr. Barry worked at Bain and Company and in the investment banking division of Morgan Stanley. Mr. Barry earned a BComm from University College Cork in 1989 and an MBA from Harvard Business School in 1994.

Alex T. Krueger, President and CEO of First Reserve

Alex T. Krueger, President and CEO of First Reserve, joined First Reserve in 1999. Mr. Krueger is responsible for the overall management of the firm and sits on First Reserve's investment committee, which is responsible for the supervision of First Reserve's investment program strategy and Team. In addition, he maintains responsibilities for investment origination, structuring, execution, monitoring and exit strategy across the global energy industry, with particular expertise in the natural resources upstream sector. Mr. Krueger sits on First Reserve's investment committee, served as a permanent voting member on the Investment Committee of the Predecessor Funds from the date of formation of the Predecessor Funds through the date of the closing of the Transaction and has since served on the Investment Advisory Group of the Predecessor Funds, the role of which is to screen and approve transactions before submission for approval by the Investment Committee of the Predecessor Funds. Mr. Krueger will be an initial member of the Fund's Investment Committee. Prior to joining First Reserve, Mr. Krueger worked in the Energy Group of Donaldson, Lufkin & Jenrette in Houston. Mr. Krueger holds a B.S.Eng in Chemical Engineering from the School of Engineering and Applied Science and a B.S.Econ in Finance and Statistics from the Wharton School of the University of Pennsylvania.

Manager Meetings

Meeting Location: Zoom

Date: April 7, 2022

Manager Attendees: Mark Florian, Freek Spoorenberg, Sydney McConathy, Eduard Ruijs, Mark Saxe, Rob Hanna, Mark Raben

Meketa Attendees: Lisa Bacon, Adam Toczykowski, Harrison Page

Purpose of Meeting: Day one of formal virtual on-site due diligence. Agenda topics included: investment strategy; investment process; ESG; historical performance; and pipeline overview.

Meeting Location: Zoom

Date: April 8, 2022

Manager Attendees: Mark Florian, Sydney McConathy

Meketa Attendees: Lisa Bacon, Adam Toczykowski, Harrison Page

Purpose of Meeting: Day two of formal virtual on-site due diligence. Agenda topics included: firm overview and background; conflicts of interest; and team and resources.

Meeting Location: Zoom

Date: April 13, 2022

Manager Attendees: Laura Butler, Sydney McConathy

Meketa Attendees: Blaze Cass, Lisa Bacon, Adam Toczykowski, Harrison Page

Purpose of Meeting: Day three of formal virtual on-site due diligence. Agenda topics included various items related to firm operations, such as: finance and accounting resources; internal controls and procedures; and valuation policy.

An aerial photograph showing a two-lane asphalt road with a yellow center line and white edge lines. The road runs vertically through the center of the image. On either side of the road is a dense, vibrant green forest. To the right of the road, the forest meets a bright turquoise body of water, likely a lake or a bay, with a small sandy beach area visible. The overall scene is bright and scenic, suggesting a natural or park-like setting.

BlackRock Global Infrastructure Fund IV

**Prepared for State of Connecticut
December 2022**

BlackRock
Infrastructure

BlackRock Global Infrastructure Fund IV (“Infra IV”)

Infra IV will invest in diversified and essential infrastructure globally...



... to capitalize on the long-term, structural trends in our society...



...by building upon our key differentiators and consistent processes...



...seeking to deliver sustainable yield and long term capital appreciation to investors

□ Launching a 4th vintage global infrastructure fund

3Ds



Decarbonization

Decentralization

Digitalization



Access

- Partnering
- Scale & reach



Structuring

- Contracted
- Risk mitigation



Value Creation

- Operational
- Financial



Trusted infrastructure partner to 100+ investors and US \$13bn in capital commitments*

Source: BlackRock, 1 December 2022. Photos are for illustrative purposes only and it cannot be guaranteed investments will be reflective of these photos. *Capital commitments subject to drawdown

Investing in long-term structural trends

The **3D's** underpin our investment opportunity with the **energy transition** being a common thread touching all sectors

Decarbonization

US \$50 trillion+ of investment is needed to decarbonize our global economy by 2050¹

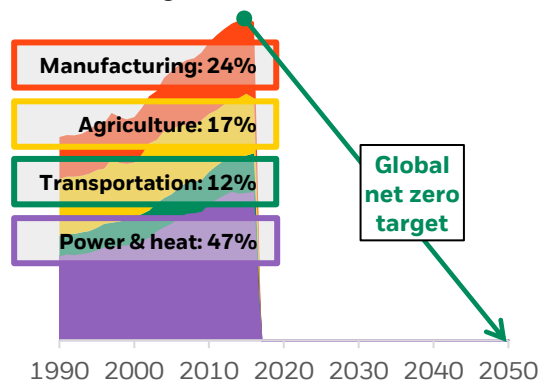
Decentralization

Greater outsourcing of infrastructure by companies, with quality assets closer to end users

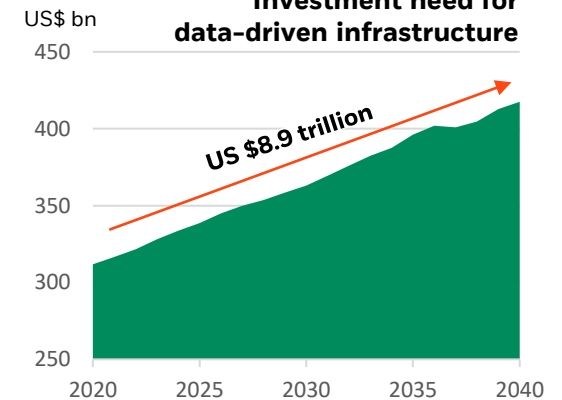
Digitalization

Fast growth of digital world needs physical infrastructure to transmit, store and utilize data²

Net global GHG emissions

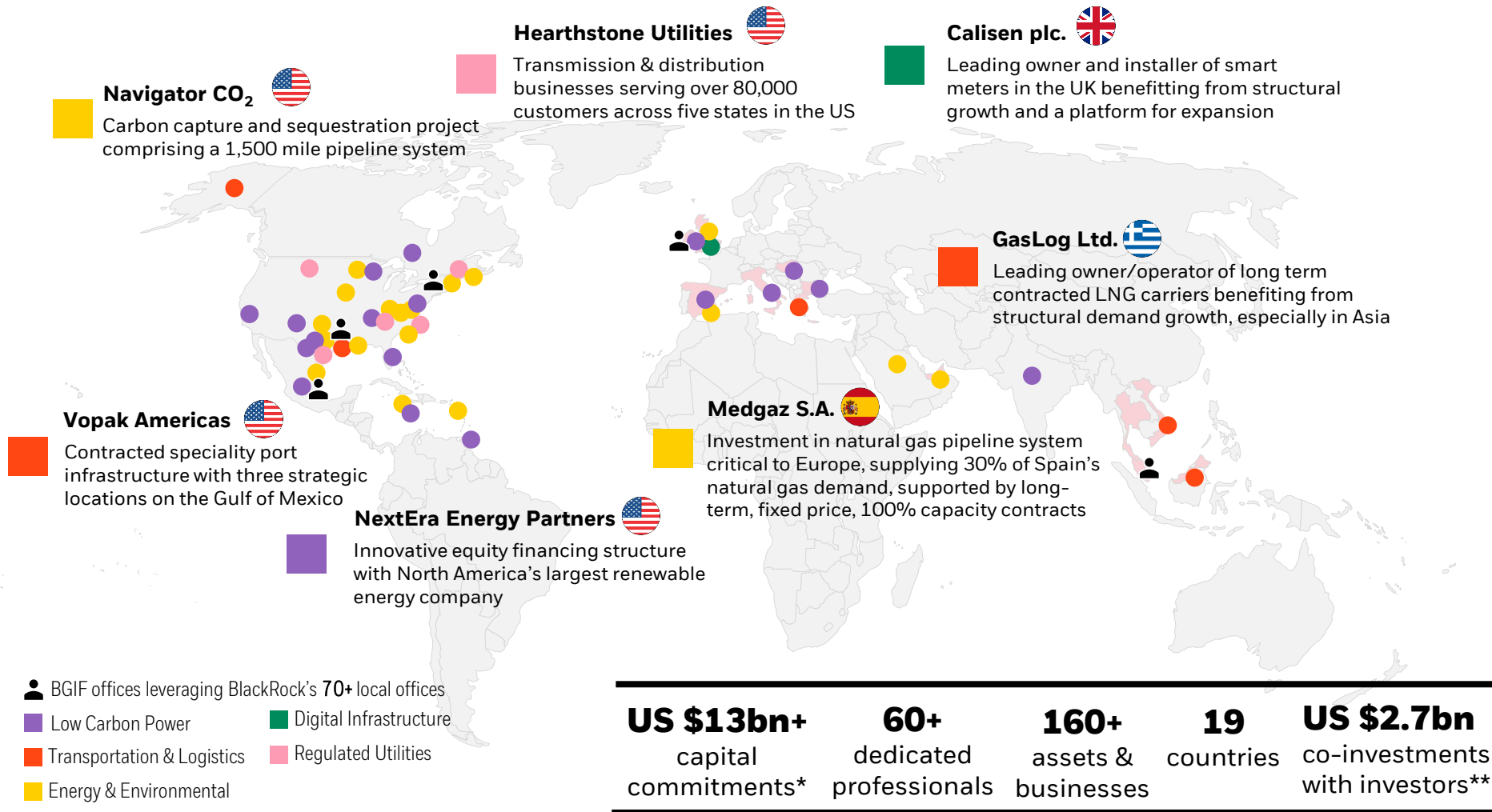


Investment need for data-driven infrastructure



Source: BlackRock, 1 December 2022. 1) Carbonomics, Goldman Sachs, 24 June 2021. 2) Global Infrastructure Outlook, G20 Initiative, 30 June 2021. **Important Information:** Reference to the names of companies mentioned in this communication is merely for explaining the investment strategy and should not be construed as investment advice or investment recommendation of those companies. They are representative of assets and business in the predecessor funds and there is no guarantee that the Infra IV will receive similar investment opportunities

Established global platform with local relationships



Source: BlackRock, 1 December 2022. **Important Information:** The above dots represent the locations of all investments across the BlackRock Global Infrastructure Funds. The selected highlighted investments illustrate the Team's capabilities across various sectors and on a global basis. The information above is not a prediction of future performance or any assurance that comparable investment opportunities will be available to the BlackRock Global Infrastructure Fund IV. It is non-representative nor an exhaustive list of all underlying investments made by the Investment Team in the predecessor funds and it should not be assumed that Investment Team will invest in these investments or in comparable investments, or that any future Investments made by Investment Team will be successful. To the extent that the investments reflected above prove to be profitable, it should not be assumed that the Investment Team's other investments will be profitable or will be as profitable. *Capital commitments subject to drawdown. Figure includes \$4.5 billion of signed commitments toward Infra IV **offered to investors for Fund investments, including US \$2.3 billion executed

Highly experienced and dedicated team of experts

65 dedicated infrastructure professionals

20 years average industry experience¹

60% of investment team hires from diverse populations since 2019

Investment Management

42 investment professionals	Years Exp		Years Exp
		Christian Synetos, Director	15
Mark Florian, MD <i>Global Head of BGIF</i>	41	Doug Vaccari, Director	13
James Berner, MD	26	Adam Baer, VP	6
Adi Blum, MD	20	Misan Eyesan, VP	6
Tomas Peshkatari, MD	18	Bradley Hostenstein, VP	9
Matt Raben, MD	23	Burak Kakdas, VP	6
Eduard Ruijs, MD	25	Wadi Karam, VP	13
Mark Saxe, MD	21	Robert Kindman, VP	8
Ryan Shockley, MD	22	Patrick Luo, VP	7
Adam Waltz, MD	13	Thomas Luybaert, VP	10
Edward Winter, MD	16	Margaret Sone, VP	7
Akhil Mehta, Director	11	Jin Hui Poh, VP	9
Johann Rayappu, Director	20	+ 18 Associates	-
		+6 Executive Support	-

Capital Markets & Asset Management

5 investment professionals	Years Exp
Tim Vincent, MD	26
Matt Prescottano, Director	13
Robert Hanna, Director	42
Newton Houston, Director	31
Luke O'Keefe, Director	41

Portfolio Financial Management

5 dedicated professionals	Years Exp
Steve Yost, Director	25
David Joyce, VP	10
Chris Lauder, VP	10
+ 2 Associates	-

Product Strategy & Investor Relations

6 dedicated professionals	Years Exp
Freek Spoorenberg, Director, Head of IR	12
Sydney McConathy, Managing Director	19
Lauren Gallagher, Director	23
Felicia Guerci, VP	8
Lisa Hochhauser, VP	25
Zach Taffet, Associate	6

Global Accounting & Product Services

6 dedicated professionals	Years Exp
Jody Bailey, Director	14
Arsalan Khan, Director	10
Amy Wang, VP	22
+ 3 Associates	-

Leveraging the Power of BlackRock



Sourcing



Risk Management



Sustainability

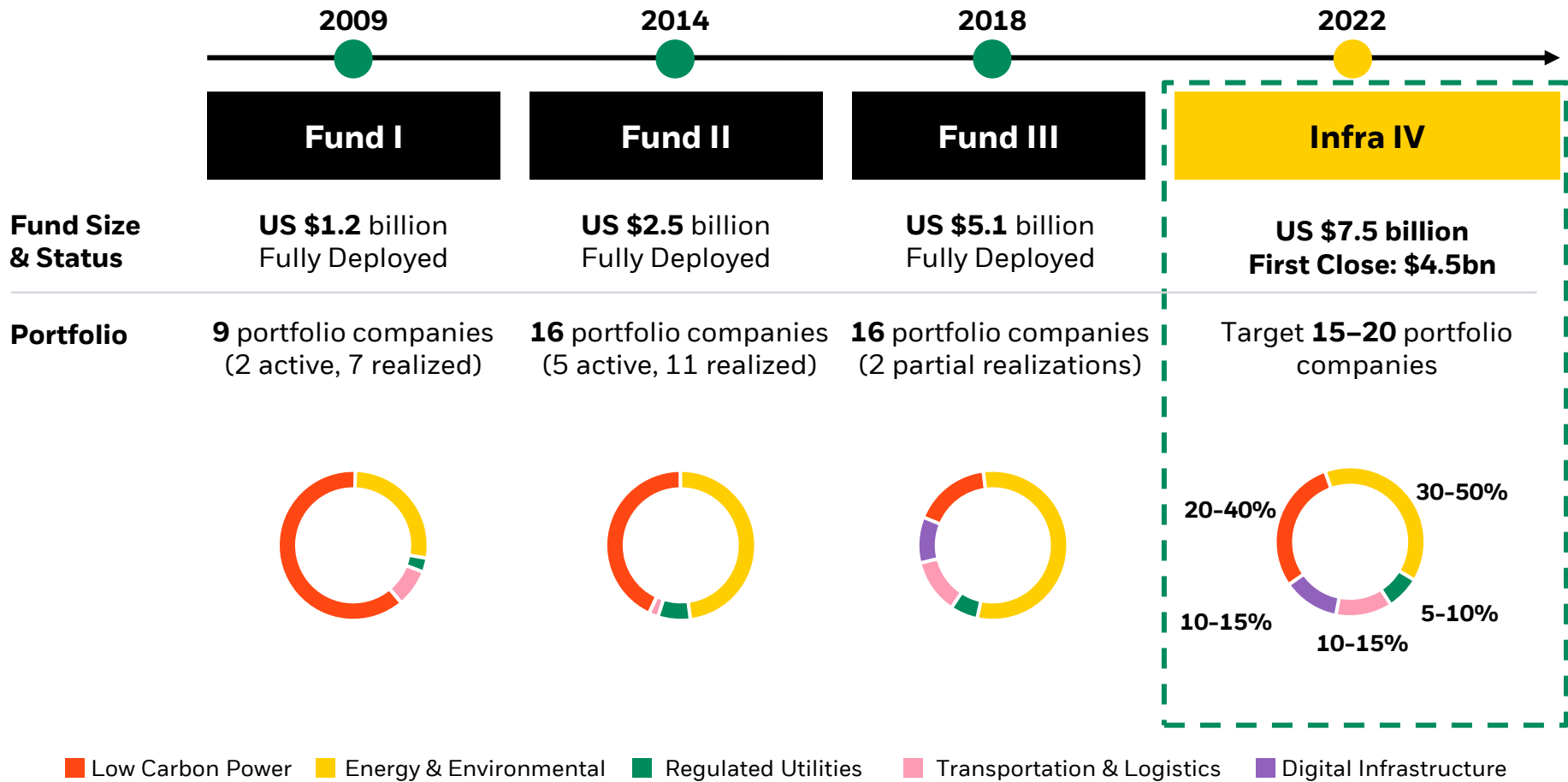


Operational Support

Firmwide Commitment and Action on Diversity, Equity & Inclusion

Source: BlackRock, 1 December 2022. Members are subject to change. 1) Representative of professionals who are Director and above title

A proven infrastructure fund series evolving with the market



Source: BlackRock, 1 December 2022. Fund I, II & III are closed for new investors. Infra IV will deploy the same strategy as the “Prior funds”, defined as GEPIF I, II & III, closed to new investors, managed by the same Team, the BlackRock Global Infrastructure Funds Team, previously known as GEPIF. The Team will target consistent investments as the Prior funds with the same global OECD focus, and the underwriting philosophy, asset management practices and investment committee remains the same. The global energy transition has been a central theme across vintages and is creating opportunities in a diversified group of sectors which we have defined as Energy & Environmental, Low Carbon Power, Regulated Utilities, Transportation & Logistics, and Digital Infrastructure, in line with the infrastructure industry. Infra IV sectors will be different from the Prior funds given the expected market opportunity. Infra IV is an Article 8 classification under the SFDR. Please reference page 1.1-1.5 for performance metric definitions.

Consistent underwriting in a fast-changing world...

**Extensive
access**

**Comprehensive
structuring**

**Active value
creation**

Strategy

Leverage industry network to create exclusive investment opportunities

Disciplined structuring, focused on contracted visible revenue streams

Active management leading to operational excellence, revenue growth and financial optimization

Results

80%+ negotiated investments, leveraging the power of BlackRock

Long term revenue contracts underpin investments: **14 year average for Fund III**

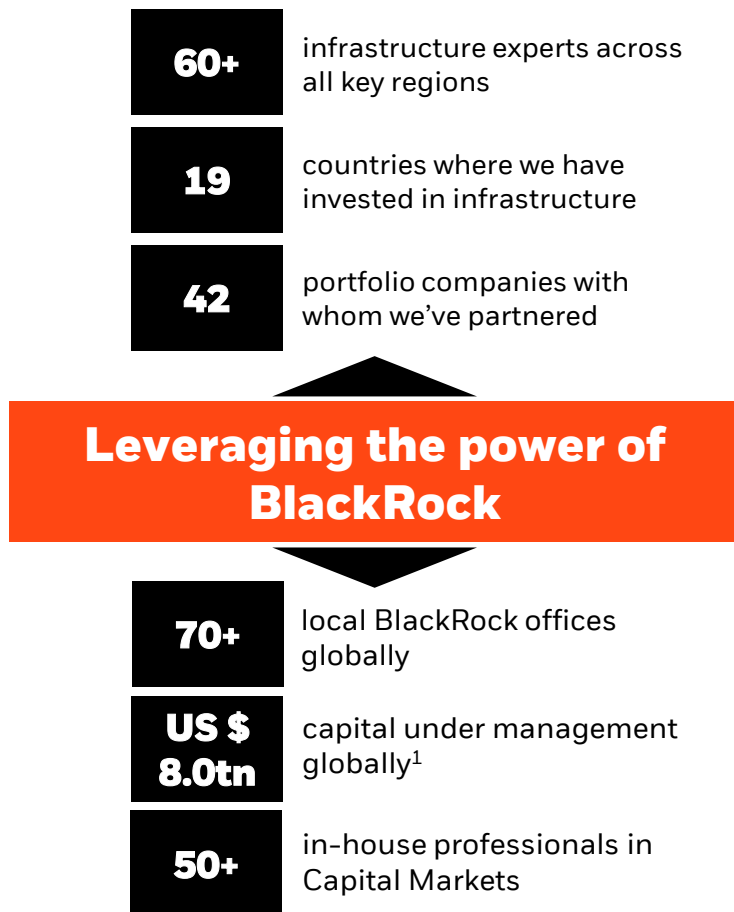
75%+ control/co-control investments across Funds

Our investment strategy has been tested successfully through market cycles

Source: BlackRock, 1 December 2022

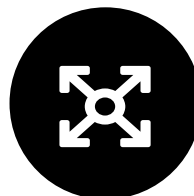
...and a deal-sourcing advantage over others

80% of investments sourced off-market by creatively meeting the needs of corporate and industry partners and leveraging BlackRock's global reach and scale



Repeat partnerships

Long-term investor with proven partnership approach and a focus on alignment of interest



First mover

Front runner in new geographies and sectors - from Asia & Middle-East to clean fuels and smart-meters



Bespoke solutions

Driving win-win solutions through outside the box thinking and innovative structuring



Public-to-private

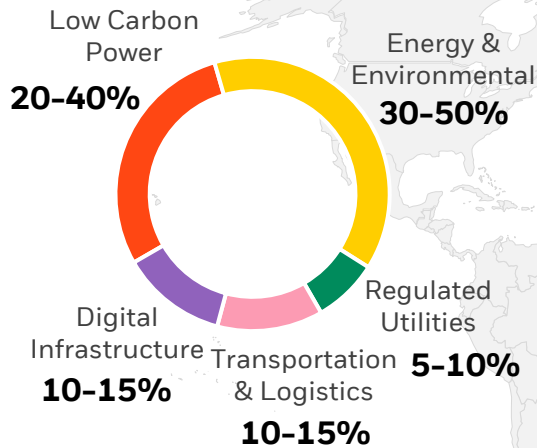
Leaning into complexity to take advantage of market dislocation and inefficiencies

Source: BlackRock, 1 December 2022 1) BlackRock's assets under management as of 30 September 2022.

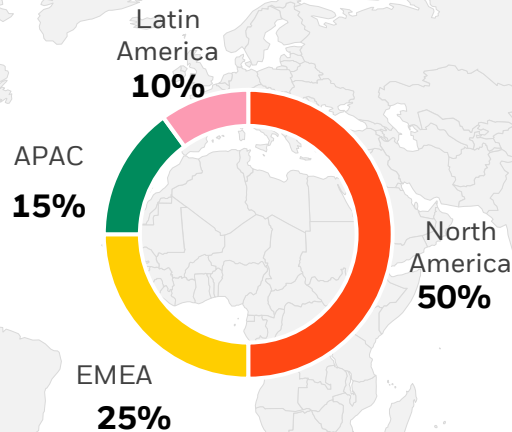
BlackRock Global Infrastructure Fund IV

Infra IV will seek to build a portfolio of diversified, contracted infrastructure assets and businesses by capitalizing on long-term structural megatrends driving the market opportunity

Target Sectors¹



Target Geographies¹



Target Characteristics

- 1 **Essential**
- 2 **Contracted**
- 3 **Diversified**
- 4 **Sustainable**

Target consistent cash yield

Potential for attractive capital growth

US Dollar Denominated

12 year Fund life

Supporting BlackRock's commitment to Net Zero

Source: BlackRock, 1 December 2022. 1) Target Sector and Geographies represent the Manager's current strategy and Infra IV portfolio construction, but there is no guarantee that the fund will eventually be positioned in this way, and there is no guarantee that, if positioned in alignment with the targets reflected above, that such positioning will be profitable.

Sustainability benchmarking

Our sustainability efforts are recognized externally and **outperform our peers**

Infra IV is an **Article 8 classification** under the SFDR



In 2022, Fund III achieved **100% GRESB** score, ranking **1st of 166** funds within our peer group¹



In 2021, **PRI** awarded BlackRock Infrastructure a **five star-rating** and score of **100%**



Our high GRESB and UN PRI scores compared to peers underline extensive efforts to deliver sustainable investing practices throughout the investment lifecycle

Source: BlackRock, 1 December 2022. Given the scale of sustainability reporting across the Real Assets business, this year BlackRock has reported only the most recent vintage for our Infrastructure franchises as the submissions predominantly assess platform-level management practices, investment policies and reporting. Within a series of fund vintages, in past years' surveys all funds have received the same scoring, given the platform-level view. As a reflection of the entire GEPIF business and Funds I, II and III, we are proud to report that GEPIF III scored 100% and received a 1st Place Peer Ranking out of 166 fund-level submissions in its direct Global Infrastructure Fund-level benchmark. The GRESB Infrastructure Assessment is completed through a three-step process: Validation, Objective Scoring & Peer Benchmarking

Risks, Definitions & Important Information

Risks

Capital at Risk

The value of investments and the income from them can fall as well as rise and are not guaranteed. Investors may not get back the amount originally invested.

Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy. Changes in the rates of exchange between currencies may cause the value of investments to diminish or increase. Fluctuation may be particularly marked in the case of a higher volatility fund and the value of an investment may fall suddenly and substantially. Levels and basis of taxation may change from time to time.

Infrastructure funds risk

Infrastructure Funds invest exclusively or almost exclusively in equity or debt, or equity or debt related instruments, linked to infrastructure assets. Therefore, the performance of an Infrastructure Fund may be materially and adversely affected by risks associated with the related infrastructure assets including construction and operator risks, environmental risks, legal and regulatory risks; political or social instability; governmental and regional political risks; sector specific risks; interest rate changes; currency risks; and other risks and factors which may or will impact infrastructure and as a result may substantially affect a fund's aggregate return. Investments in Infrastructure assets are typically illiquid and investors seeking to redeem their holdings in an Infrastructure Fund can experience significant delays and fluctuations in value.

Liquidity Risk

The Fund's investments may have low liquidity which often causes the value of these investments to be less predictable. In extreme cases, the Fund may not be able to realise the investment at the latest market price or at a price considered fair.

Valuation risk

Given the uncertainty inherent in the valuation of assets that lack a readily ascertainable market value, the value of such assets as reflected in the Fund's net asset value may differ materially from the prices at which the Fund would be able to liquidate such assets.

ESG Risk

The environmental, social and governance ("ESG") considerations discussed herein may affect an investment team's decision to invest in certain companies or industries from time to time. Results may differ from portfolios that do not apply similar ESG considerations to their investment process.

Lack of available investments

There can be no assurance that the Fund will be able to locate, attain and exit investments that satisfy its investment objectives, or that the Fund will be able to fully invest its committed capital.

Restriction on Withdrawal

The Fund is not intended to be a short-term investment and has no certainty of returns. Commitments to the Fund are generally not transferable or redeemable and Investors will be committed to the Fund for its duration and may not be able to withdraw from their participation prior to the expiry of the Fund

Definitions

dividend yield

Gross Annual Portfolio Level dividend yield is the aggregate dividend yield generated from the active portfolio investments over the relevant calendar year that does not reduce the cost basis of investments divided by the average aggregate invested capital balance to date for such portfolio investments over such relevant calendar year. The Gross Annual Portfolio Level dividend yield does not reflect the management fees, “carried interest,” taxes, transaction costs and all Partnership Expenses as contemplated in the governing Limited Partnership Agreements of GEPIF I, II & III borne or to be borne by investors in GEPIF I, II & III, which will reduce current dividend yields during the calendar year, and in the aggregate are expected to be substantial. The Net Annual Portfolio Level dividend yield is the aggregate dividend yield generated from the active portfolio investments over the relevant calendar year that does not reduce the cost basis of investments divided by the average aggregate invested capital balance to date for such portfolio investments over such relevant calendar year and reflects the management fees, “carried interest,” taxes, transaction costs and all Partnership Expenses.

IRR

IRR is the annualized implied discount rate calculated from a series of cash flows. It is the return that equates the present value of all invested capital in an investment (including allocated investment-specific expenses) to the present value of all returns (including unrealized returns) or the discount rate that will provide a net present value of all cash flows, plus any residual value, equal to zero.

Gross IRR is calculated based on the dates that capital is paid-in with respect to each underlying investment, the dates that distributions are received from such investment and the current unrealized value of such investment as of the date Gross IRR is calculated. The calculation of Gross IRR reflects all underlying investment-level management fees, fund expenses, carried interest, taxes and other expenses, but does not reflect any management fees, fund expenses, carried interest, taxes and other expenses charged by BlackRock with respect to any existing or prospective investment program. Gross IRR information is based on unaudited data. The Gross IRR presented is likely to change in the future with respect to the unrealized current value of such underlying investment.

Net IRR is calculated based on the dates that capital is drawn from limited partners, the dates that distributions are made to limited partners and the capital account balances of the limited partners as of the date performance results are calculated. The calculation of net IRR reflects the deduction of the Funds’ management fees and fund expenses, estimated carried interest and other charges and expenses and the returns on the fund’s short-term and other investments (including cash), but does not reflect any deduction for taxes. The net IRR is based on unaudited data. The IRR presented is likely to change in the future with respect to the unrealized portion of partially realized and unrealized investments.

Invested Capital

Invested Capital represents the original cash amount invested into all projects, converted (in the case of investments denominated in a currency other than US Dollars) at the applicable exchange rate on each investment date, together with any accrued future commitments for investments, excluding transaction costs and net of distributions deemed by the general partner to be a return of capital.

Realized Proceeds

Total distributions received from each project since inception, other than those distributions deemed by the general partner to be returns of capital and therefore reducing Invested Capital.

Definitions

Fair Market Value (“FMV”)

Fair Market Value is the amount for which an asset could be exchanged between knowledgeable willing parties in an arm’s length transaction. The methods used to estimate FMV include (1) the market approach, publicly traded investments in active markets are reported at market closing price or whereby fair value is derived by reference to observable valuation measures for comparable companies or assets (2) the income approach (e.g. the discounted cash flow method), and (3) cost for a period of time after an acquisition when an Investment is in early stages (where such amount is determined to be the best indicator of fair value). The Fair Market Value of an asset is based on assumptions the general partner believes are reasonable under the circumstances, key assumptions include, but are not limited to, useful life of the asset, contracted revenue, operating and maintenance costs, financing costs, tax costs and exit value assumptions. The determination of Fair Market Value involves a significant degree of subjective analysis, uncertainties and judgmental determinations. The significant amount of judgment and discretion inherent in valuing assets, particularly illiquid assets such as the project investments held by the Fund renders valuations uncertain and susceptible to material fluctuations over possibly short periods of time. Fair Market Value does not necessarily represent the amount that may eventually be realized from a sale or other disposition, it will depend on, among other factors, future operating results, the value of assets and market conditions at the time of disposition, any related transaction costs and the timing and manner of sale.

Total Value

Is, for each project, equal to the aggregate amount shown for Fair Market Value and Realized Proceeds.

Gross MOIC

Is, for each project, equal to the aggregate amount shown for Fair Market Value and Realized Proceeds, expressed as a multiple of Invested Capital.

DPI

DPI% means the percentage of “Distributed to Paid in” which is the ratio of money distributed to Limited Partners by the Fund, relative to contributions. DPI does not include monies not yet distributed, held in escrow or potential earnout payments relating to the investments that are fully or partially realized.

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INVESTMENT ADVISORY COUNCIL
MEETING SCHEDULES CALENDAR YEARS
2023/2024

MEETING DATE

February 8, 2023

March 8, 2023

May 10, 2023

June 14, 2023

September 13, 2023

November 8, 2023

February 7, 2024

March 6, 2024

May 8, 2024

June 12, 2024

September 11, 2024

November 13, 2024