

IN PERSON & VIRTUAL BOARD MEETING

*The Committee meeting will be held prior to the Board of Investments meeting scheduled prior.



TO VIEW VIA WEB



TO PROVIDE PUBLIC COMMENT

Members of the public may address the Committee orally and in writing. To provide Public Comment, you should visit the above link and complete the request form by selecting whether you will provide oral or written comment from the options located under Options next to the Committee meeting.

Attention: If you have any questions, you may email PublicComment@lacera.com. If you would like to make a public comment during the committee meeting, review the [Public Comment instructions](#).

AGENDA

A REGULAR MEETING OF THE REAL ASSETS COMMITTEE

AND THE BOARD OF INVESTMENTS*

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

300 N. LAKE AVENUE, SUITE 810, PASADENA, CALIFORNIA 91101

8:00 A.M., WEDNESDAY, JUNE 14, 2023

This meeting will be conducted by the Real Assets Committee and Board of Investments both in person and by teleconference under California Government Code Section 54953 (f).

Any person may view the meeting in person at LACERA's offices or online at <https://LACERA.com/leadership/board-meetings>

The Committee may take action on any item on the agenda, and agenda items may be taken out of order.

- I. CALL TO ORDER
- II. PROCEDURE FOR TELECONFERENCE MEETING ATTENDANCE UNDER AB 2449, California Government Code Section 54953(f)
 - A. Just Cause
 - B. Action on Emergency Circumstance Requests
 - C. Statement of Persons Present at AB 2449 Teleconference Locations
- III. APPROVAL OF MINUTES
 - A. Approval of the Minutes of the Real Assets Committee Meeting of December 14, 2022

IV. PUBLIC COMMENT

Members of the public may address the Committee orally and in writing. To provide Public Comment, you should visit <https://LACERA.com/leadership/board-meetings> and complete the request form by selecting whether you will provide oral or written comment from the options located under Options next to the Committee meeting.

If you select oral comment, we will contact you via email with information and instruction as to how to access the meeting as a speaker. You will have up to 3 minutes to address the Committee. Oral comment request will be accepted up to the close of the Public Comment item on the agenda.

If you select written comment, please input your written public comment or documentation on the above link as soon as possible and up to the close of the meeting. Written comment will be made part of the official record of the meeting. If you would like to remain anonymous at the meeting without stating your name, please leave the name field blank in the request form. If you have any questions, you may email PublicComment@lacera.com.)

V. REPORTS

- A. Global Real Estate Sustainability Benchmark Update
Scott Zdrazil, Principal Investment Officer
James Rice, Principal Investment Officer
Cindy Rivera, Investment Officer
Dale Johnson, Investment Officer
(Presentation) (Memo dated May 19, 2023)
- B. Real Estate Performance Review Presentation
James Rice, Principal Investment Officer
Thomas Hester, StepStone Group, Managing Partner
James Maina, StepStone Group, Vice President
(Presentation) (Memo dated, June 2, 2023)
- C. Real Assets Performance Review Presentation
James Rice, Principal Investment Officer
Mark White, Albourne, Head of Real Assets
Jennifer Yeung, Albourne, Senior Portfolio Analyst
(Presentation) (Memo dated June 2, 2023)

June 14, 2023

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VI. ITEMS FOR STAFF REVIEW

(This item summarizes requests and suggestions by individual trustees during the meeting for consideration by staff. These requests and suggestions do not constitute approval or formal action by the Board, which can only be made separately by motion on an agenda item at a future meeting.)

VII. ITEMS FOR FUTURE AGENDAS

(This item provides an opportunity for trustees to identify items to be included on a future agenda as permitted under the Board's Regulations.)

VIII. GOOD OF THE ORDER

(For information purposes only)

IX. ADJOURNMENT

****The Board of Investments has adopted a policy permitting any member of the Board to attend a standing committee meeting open to the public. In the event five or more members of the Board of Investments (including members appointed to the Committee) are in attendance, the meeting shall constitute a joint meeting of the Committee and the Board of Investments. Members of the Board of Investments who are not members of the Committee may attend and participate in a meeting of a Committee but may not vote, make a motion, or second on any matter discussed at the meeting. The only action the Committee may take at the meeting is approval of a recommendation to take further action at a subsequent meeting of the Board.***

Documents subject to public disclosure that relate to an agenda item for an open session of the Board of Investments that are distributed to members of the Board of Investments less than 72 hours prior to the meeting will be available for public inspection at the time they are distributed to a majority of the Board of Investments Members at LACERA's offices at 300 N. Lake Avenue, Suite 820, Pasadena, CA 91101, during normal business hours of 9:00 a.m. to 5:00 p.m. Monday through Friday.

Requests for reasonable modification or accommodation of the telephone public access and Public Comments procedures stated in this agenda from individuals with disabilities, consistent with the Americans with Disabilities Act of 1990, may call the Board Offices at (626) 564-6000, Ext. 4401/4402 from 8:30 a.m. to 5:00 p.m. Monday through Friday or email PublicComment@lacera.com, but no later than 48 hours prior to the time the meeting is to commence.

MINUTES OF THE REGULAR MEETING OF THE REAL ASSETS

COMMITTEE AND THE BOARD OF INVESTMENTS

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

300 N. LAKE AVENUE, SUITE 810, PASADENA, CALIFORNIA 91101

8:00 A.M., WEDNESDAY, DECEMBER 14, 2022

This meeting was conducted by the Real Assets Committee both in person and by teleconference under California Government Code Section 54953(e).

PRESENT: Patrick Jones, Chair (By Teleconference)

Joseph Kelly (In-Person)

Keith Knox (In-Person)

Gina V. Sanchez (In-Person)

ABSENT: Shawn Kehoe

MEMBERS AT LARGE:

Herman Santos (By Teleconference)

Elizabeth Greenwood (By Teleconference)

Onyx Jones (By Teleconference)

David Green (By Teleconference)

STAFF, ADVISORS, PARTICIPANTS:

Jonathan Grabel, Chief Investment Officer

Santos Kreimann, Chief Executive Officer

(STAFF, ADVISORS, PARTICIPANTS CONTINUED)

Steven P. Rice, Chief Counsel

James Rice, Principal Investment Officer

Pushpam Jain, Investment Officer

Cindy Rivera, Investment Officer

Amit Aggarwal, Investment Officer

Meketa Investment Group (General Investment Consultants)
Tim Filla, Managing Principal

Albourne (Real Assets ex-Real Estate, Illiquid Credit & Hedge
Funds Consultant)

James Walsh, Partner

Mark White, Partner

I. CALL TO ORDER

The meeting was called to order by Chair Jones at 8:00 a.m.

II. APPROVAL OF MINUTES

- A. Approval of the Minutes of the Real Assets Committee Meeting of June 8, 2022.

Mr. Kelly made a motion, Mr. Knox seconded, to approve the minutes of the regular meeting of June 8, 2022. The motion passed (roll call) with Messrs. P. Jones, Knox, Kelly, Ms. Sanchez voting yes. Mr. Kehoe was absent from the vote.

III. PUBLIC COMMENT

There were no requests from the public to speak.

IV. CONSENT ITEM

- A. Recommendation as submitted by Steven P. Rice, Chief Counsel: That, under AB361 and Government Code Section 54953(e)(3) of the Brown Act, the Real Assets Committee consider whether to find that the Governor's COVID-19 State of Emergency continues to directly impact the ability of the Committee to meet safely in person and that the County of Los Angeles and other agencies still recommend social distancing such that the Committee shall hold teleconference meetings for the next 30 days, subject to continuation of the State of Emergency, and if so, direct staff to comply with the agenda and public comment requirements of the statute.
(Memo dated December 5, 2022)

Ms. Sanchez made a motion, Mr. Knox seconded, to approve Consent Item A. The motion passed (roll call) with Messrs. P. Jones, Knox, Ms. Sanchez voting yes and Mr. Kelly voting no. Mr. Kehoe was absent from the vote.

V. NON-CONSENT ITEM

- A. Recommendation as submitted by James Rice, Principal Investment Officer, Pushpam Jain, Investment Officer, and Cindy Rivera, Senior Investment Analyst: That the Committee advance to the Board of Investments for approval the Real Assets Emerging Manager Program Discretionary Separate Account Manager Request for Proposal-Minimum Qualifications. (Memo dated November 16, 2022)

Messrs. J. Rice and Jain and Ms. Rivera provided a presentation and answered questions from the Board.

V. NON-CONSENT ITEM (Continued)

Ms. Sanchez made a motion, Mr. Kelly seconded, to advance to the Board of Investments for approval the Real Assets Emerging Manager Program Discretionary Separate Account Manager Request for Proposal-Minimum Qualifications. The motion passed (roll call) with Messrs. P. Jones, Knox, Kelly, Mses. Sanchez voting yes. Mr. Kehoe was absent from the vote.

VI. REPORT

- A. Core Real Estate Implementation Update
James Rice, Principal Investment Officer
Amit Aggarwal, Investment Officer
(Memo dated November 29, 2022)

Messrs. J. Rice and Aggarwal provided a presentation and answered questions from the Board.

VII. ITEMS FOR STAFF REVIEW

There were no requests for items for staff review.

VIII. ITEMS FOR FUTURE AGENDAS

There was nothing to report.

IX. GOOD OF THE ORDER
(For information purposes only)

There was nothing to report.

X. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 8:42 a.m.



May 19, 2023

TO: Trustees – Real Assets Committee

FROM: Scott Zdrazil ^{SZ}
Principal Investment Officer

James Rice ^{JR}
Principal Investment Officer

Dale Johnson ^{DJ}
Investment Officer

Cindy Rivera ^{CR}
Investment Officer

FOR: June 14, 2023 – Real Assets Committee

SUBJECT: **GLOBAL REAL ESTATE SUSTAINABILITY BENCHMARK (“GRESB”) UPDATE**

LACERA’s Investment Policy Statement recognizes the financial risks and opportunities that environmental, social, and governance (ESG) factors present in LACERA’s investments. The assessment of LACERA’s asset managers is conducted routinely by staff to determine how the asset managers are integrating these factors into their management of assets in LACERA’s portfolio. LACERA formally affiliated with the GRESB organization in 2022, after two years of a trial affiliation, to augment LACERA’s Real Estate asset manager assessment process related to ESG factors.

Staff has prepared a presentation in the **Attachment** to review takeaways from LACERA’s asset managers’ most recent GRESB reports and to summarize the results obtained for existing separate account and commingled fund asset managers who participate. LACERA finds the affiliation helpful in assessing, on a comparative basis and over time, the asset manager’s organizational structure around ESG and their ability to capture useful ESG data at an asset-specific level as these factors can have an effect on the leasing market for each asset. LACERA intends to continue to use GRESB as an aid in assessing asset managers’ consideration of financially relevant ESG factors and climate-related investment risks and opportunities.

Attachment

Noted and Reviewed:

Jonathan Grabel
Chief Investment Officer

JR:SZ:dr



Global Real Estate Sustainability Benchmark Update

Real Assets Committee Meeting
June 14, 2023



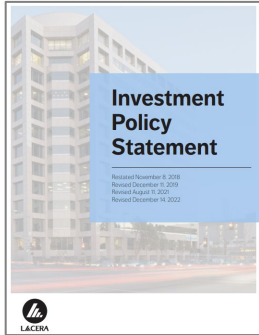
Objective

Provide key takeaways from annual Global Real Estate Sustainability Benchmark (GRESB) reporting from participating LACERA real estate account managers

Discussion Outline

1. LACERA Approach to ESG Integration
2. Background on GRESB Involvement
3. Key Takeaways from Annual GRESB Review of Asset Managers
4. Next Steps

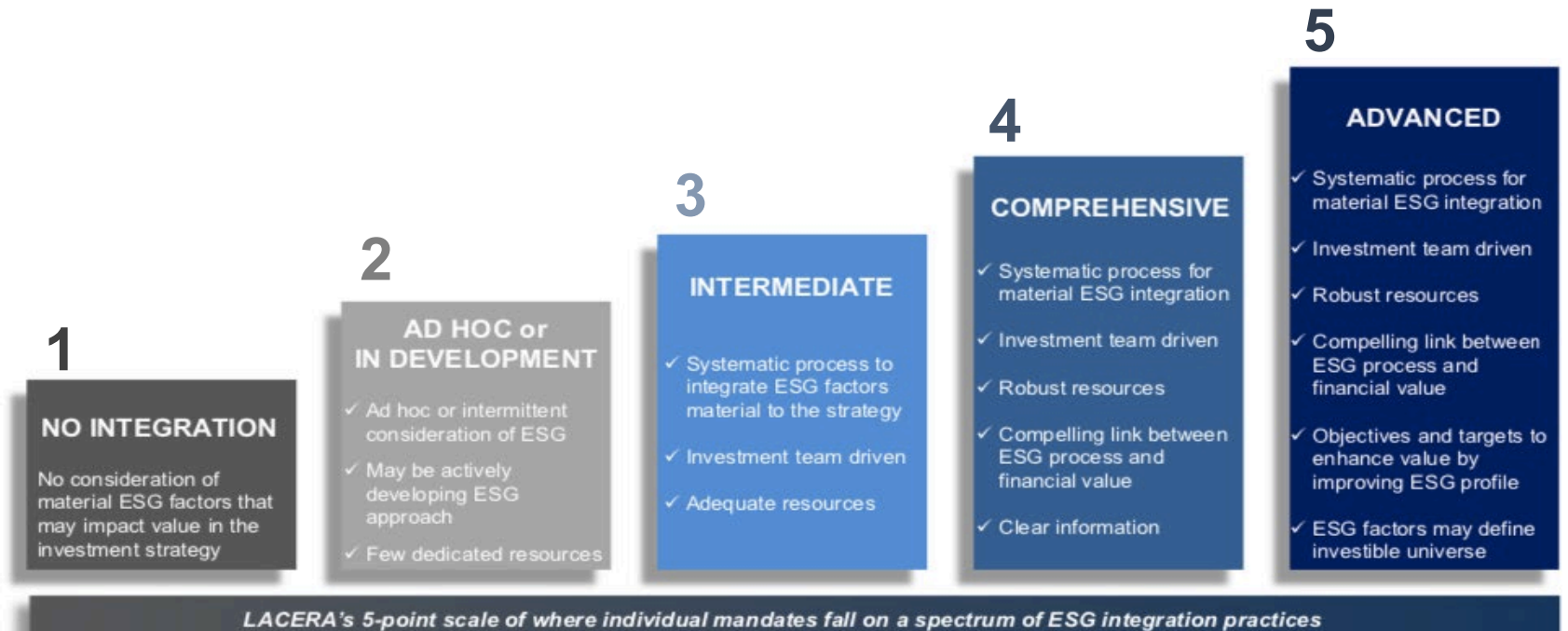
Background on ESG Assessments of All Mandates



“LACERA recognizes that environmental, social, and corporate governance factors (ESG) may present financial risks and opportunities for the Fund. LACERA seeks to identify, evaluate, and manage financially relevant ESG factors in its investment process—including portfolio construction, investment due diligence, and stewardship strategies—to safeguard and enhance Fund performance.” ([Investment Policy Statement](#), page 5)

LACERA’s 5-Point ESG Assessment Scale

LACERA assesses each asset manager on how they identify, evaluate, and integrate financially relevant ESG factors into portfolio construction and management



* Each mandate's ESG assessment score is reported to the Board of Investments in quarterly performance reports

Background on LACERA Participation with GRESB



About GRESB



- Benchmarks how fund managers address operating factors that can enhance or pose risks to sustainable financial value in real estate/infrastructure portfolios
- “*For industry, by industry*” – Reporting metrics and framework identified by investors for relevance to real estate and infrastructure investing, including:
 - Energy efficiency practices
 - Regulatory/permitting process
 - Tenant relations/engagement
 - Anti-corruption safeguards
 - Environmental/hazardous waste management
 - Water conservation
- 170 affiliated investors and 2,200 funds reporting to GRESB

Annual Reporting Cycle

- Fund managers complete an annual report to GRESB
- GRESB benchmarks practices among peer groups by region and industry segment
- Results typically available to LACERA during second half of calendar year
- LACERA reviews and discusses results with participating LACERA fund managers

LACERA Involvement

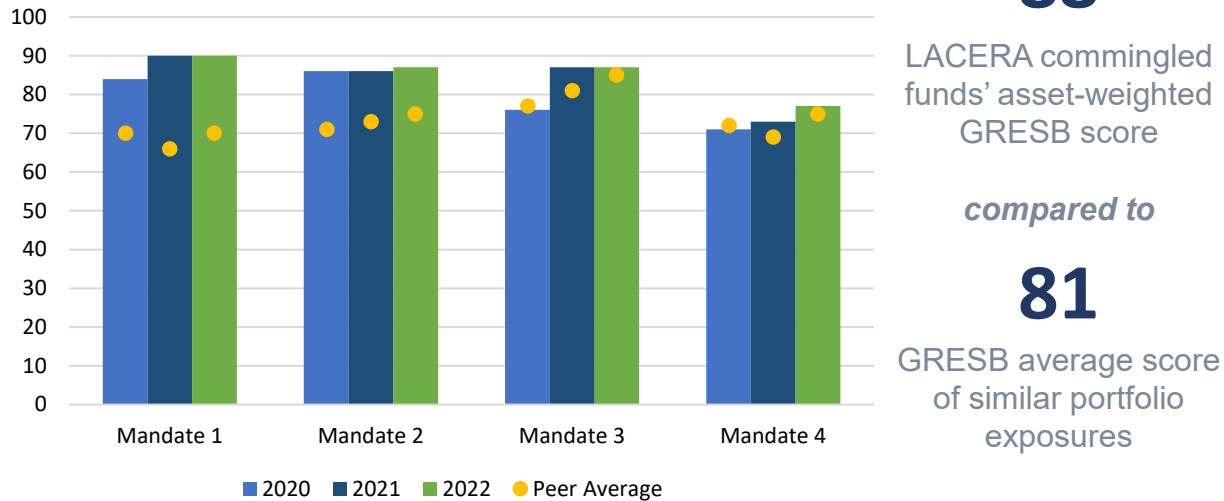
- 3rd year of annual reporting (LACERA affiliated in 2022 after 2-year trial affiliation)
- LACERA encourages all real estate mandates to report; to date, 8 of 18 report to GRESB
- Complements/informs LACERA assessments of how managers manage ESG risks
 - Comparisons among peers
 - Compare trendlines over time
 - Identify best practices and evolving ESG strategies and issues
- Access data points for portfolio analytics (carbon emissions, resource/water usage, etc.)

LACERA Real Estate Portfolio GRESB Score Trends

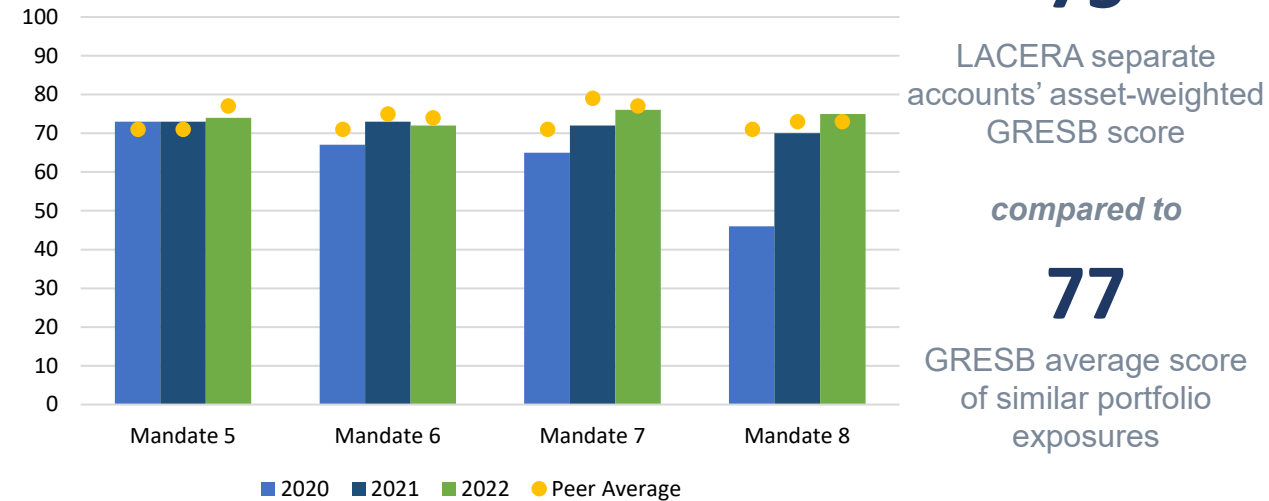


LACERA's portfolio scored **77** on asset-weighted basis, compared to **79** for benchmark of similar portfolios
 Commingled funds generally outperformed separate accounts and their peers, as illustrated below

Commingled Funds



Separate Accounts



- LACERA's commingled funds outperformed their peers, with average GRESB score of 88 compared to 81 (out of possible score of 100)
- LACERA's separate accounts had average score of 75, trailing their peer portfolios (77) but made gains over three years, with several indicating GRESB provides a roadmap to help identify improvements
- 5 of 8 mandates improved scores year-over-year, while their peer groups have also improved
- As peer groups continue to improve, mandates may be at risk of falling behind if they do not continuously improve

Business Risks and Opportunities of ESG Factors



Competitive advantage and premium market positioning through proactive management of ESG-related operating risks
Evidence shows buildings that evolve to meet or exceed sustainability standards experience materially significant financial impacts^{1,2}



- “Brown Discounts” in leases and rent rates if properties defer maintenance and upkeep
- Properties may decline into a lower-quality asset
- “Brown” properties may shift a property’s investment profile from a “core” asset to an “opportunistic” or “value-add” play

- “Green premiums” in leases and rent rates driven by market demand and tenant interest in buildings that are energy efficient, have good air quality, and regular upkeep
- Resiliency of properties when fund managers proactively stress test for future climate/weather-related scenarios and damages
- Studies indicate properties that better manage ESG-related operating risks attract better-credit, higher-paying tenants

1. Gayle Kantro. “From value creation to value preservation – real estate investors rethink the ‘value of green’.” JLL, January 11, 2022. <https://www.us.jll.com/en/newsroom/from-value-creation-to-value-preservation-real-estate-investors-rethink-the-value-of-green>

2. Kisa Zehra. “RICS Sustainability Report 2022.” Royal Institution of Chartered Surveyors (RICS), September 2022. <https://www.rics.org/content/dam/ricsglobal/documents/surveying/2022%20RICS%20Sustainability%20Report.pdf>

Spectrum of Sophistication Among Asset Managers



LACERA's evaluation reveals a range in the robustness of asset managers' ESG integration process
ESG is not a binary "yes/no" equation

Capacity-Building

- Establish policies to manage ESG risks
- Engage consultants to operationalize policies
- Develop checklists and processes
- External consultants may help guide development
- Only provide investors with firm-wide ESG report, not specific to mandate

Intermediate

- Gather and track data to manage risks and costs (e.g., utility/energy)
- Upfront property due diligence incorporate comprehensive due diligence checklists rooted in financially relevant operating risks
- Property-level business plans and budgets address ESG risks
- Use GRESB survey to identify areas for improvement and alignment with best practices
- Report case studies of ESG integration but limited ESG-related KPIs

Leading

- **Property-level focus**
Detailed data and business plan of ESG performance
- **Financial performance relevance**
Cost/benefit and return on investment analysis
- **Portfolio management driven**
Deep knowledge of ESG factors by portfolio managers
- **Integrated resources**
Portfolio managers, internal experts, consultants as necessary
- **Effective, innovative tools**
Use of lease clauses to facilitate data reporting, regulatory or finance incentives where available
- **Property-level transparency and reporting**
Report specific KPIs to limited partners

Asset-level Focused Strategies



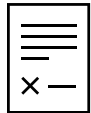
Data Access



More property data enables intentional management of ESG performance

- Sophisticated firms track and use data to manage properties via data collection and management systems for insights into property-level performance

Green Clauses



Leases are an effective means to increase access to property data

- In properties with energy meters under tenant control, sophisticated asset managers incorporate clauses into lease terms to collect tenant usage data (energy, water, sewer, etc.)
- Such “green clauses” are being used by asset managers with better data coverage
- Though effective, green clauses can be slow to improve asset-level ESG profiles due to long lease terms

Health and Air Quality



Wellness is becoming an important component of building certifications

- In a pandemic environment, wellness has become a prime consideration in return-to-office plans
- Wellness certification adoption is more recent but fast-growing – examples include fitwel and WELL

Climate Pledges



Climate change pledges vary in asset managers’ approaches towards achievement

- Some leading firms have recently developed multi-pronged approaches to proactively reduce energy consumption and emissions at the property level
- Solutions include energy efficiency (operational cost reductions), capital expenditure initiatives (short-, medium-, and long-term), energy supply and renewables, and offset purchases



Ongoing strategies to further integrate and inform investment process

1. Engagement and Dialogue

Continued dialogue and monitoring of asset managers' progress and strengths to inform asset manager selection and monitoring

2. Integration

- Multi-prong LACERA ESG strategies
- Review GRESB reports, when available, in future commingled fund underwriting
- Multiple information sources
 - Upfront LACERA DDQs
 - LPACs and annual meetings
 - Responsible Contractor Policy
 - LACERA annual ESG update reports
- Fund-wide climate risk/opportunity analysis
- Consistent approach across asset classes

3. Expansion

- Encourage more asset managers to report to GRESB
- Incorporate infrastructure asset managers

4. Transparency

Provide Trustees with periodic updates as part of total Fund ESG integration strategies





June 2, 2023

TO: Trustees – Real Assets Committee
FROM: ^{JR} James Rice
Principal Investment Officer
FOR: June 14, 2023 – Real Assets Committee

SUBJECT: REAL ESTATE PERFORMANCE SUMMARY 4Q22

Stepstone Real Estate, LACERA's Real Estate consultant has prepared a portfolio performance presentation through 4Q22 included as **Attachment**. The 4Q22 period used in the Stepstone report corresponds to the valuations reported in LACERA's overall 1Q23 performance report since the most recent private market real estate fund valuations available for the 1Q23 LACERA report are as of 4Q22. The presentation covers past performance as well as portfolio positioning and the current market environment.

Presenting at the Real Assets Committee Meeting from Stepstone will be:

Thomas Hester, Managing Director
James Maina, Vice President

Attachment

Noted and Reviewed:

Jonathan Grabel
Chief Investment Officer

JR:dr

StepStone Real Estate

Presentation to Los Angeles County Employees
Retirement Association (LACERA)

Market Conditions Overview And LACERA Fourth
Quarter 2022 Real Estate Portfolio Performance

June 14, 2023



Executive Summary



MARKET THEMES & MACRO SETTING

- US/Europe face higher-for-longer interest rates amid slow growth and persistent inflation, despite bank challenges
- Asia-Pacific expected to lead growth with Japan maintaining lower interest rates and China reopening
- Public markets have corrected to reflect higher interest rates; private real estate price correction lags
- Material funding gaps emerging for leveraged real estate owners; will require raising capital or asset sales. Sets up prime conditions for the preferred strategies below and ultimately drives private real estate to higher yields



PROPERTY OUTLOOKS

- Industrial benefits from secular trends and tight supply; focus on quality locations, including last-mile product
- Rental residential across all formats more resilient, especially at the affordable end of the market
- Necessity-based retail is resilient. Retail with omni-channel adapted tenants is attractive
- US/European office hard hit by both cyclic and secular trends. More defaults likely
- Niche sectors benefit from secular trends



PREFERRED STRATEGIES

- Debt strategies benefit from higher rates and spreads with greater selectivity as many lenders reduce activity
- Secondaries and recaps provide capital to fill funding gaps, keep assets, and complete business plans. Conditions allow greater selectivity; high-quality managers and assets will need capital
- Distress-oriented buyers will capitalize on motivated sellers who cannot manage funding gaps



PORTFOLIO CONSTRUCTION

- Real estate best practices including quality assets, locations, managers – tend to be rewarded in downturns
- Focus on resilient sectors and those supported by secular trends
- Position to capitalize on secondaries as investors rebalance and GPs need fresh capital
- For new core/core+ open-end fund commitments, delay entry pending price changes and emphasize quality portfolios, preferring long-dated fixed term debt and below market rents

Correction 2022: Public Values Respond to Higher Rates

	Q3 2022	Q4 2022	2022
PUBLIC INDICES			
Broad public equities: MSCI ACWI	-6.7%	9.9%	-18.0%
Barclays Capital US Aggregate Bond Index	-4.8%	1.9%	-13.0%
US Public RE – All REITs	-11.2%	4.5%	-25.1%
Global Public RE - EPRA/NAREIT	-11.6%	7.5%	-23.6%
COMMERCIAL PROPERTY PRICE INDICES¹			
US - Green Street CPPI	-1.2%	-7.8%	-13.2%
Europe - Green Street CPPI	-4.4%	-1.6%	-13.0%
CORE FUND INDICES²			
US - NCREIF ODCE	0.3%	-5.2%	6.5%
Europe - INREV ODCE	-1.3%	-5.5%	-1.3%
Asia - ANREV ODCE	1.3%	0.6%	6.3%
NON-CORE FUND INDICES²			
Global - Burgiss VA/Oppportunistic	-0.9%	NA	3.8% ³

Public real estate led market repricing

- REITs can overcorrect, volatile, correlated to stock market
- Different property mix than private

CPPI reflects repricing in private trades, closed and in process

- Low volume limits price discovery
- Mainly higher quality assets trading

Fund indices lag

- Core beginning slow repricing
- No changes yet to non-core

Investors left with overweight to private real estate, the “denominator effect”

- Reducing size and number of new real estate commitments

Sources: NCREIF, INREV, ANREV, Burgiss, Green Street, NAREIT, Bloomberg and FTSE, March 2023. Note: Public REITs are comprised of materially different exposures than private real estate. In aggregate, public REITs are 56% allocated to retail (22%), residential (14%), industrial (10%), and office (10%) property as of Q4 2022 according to NAREIT, compared to 91% exposure to industrial (31%), office (26%), residential (21%), and retail (13%) property in the private Global Real Estate Fund Index produced by ANREV, INREV, and NCREIF.

1. Public Indices' returns are reported in US dollars.

2. All Fund Indices' returns are net of fees and reported in local currencies. Green Street CPPIs are reported in local currencies.

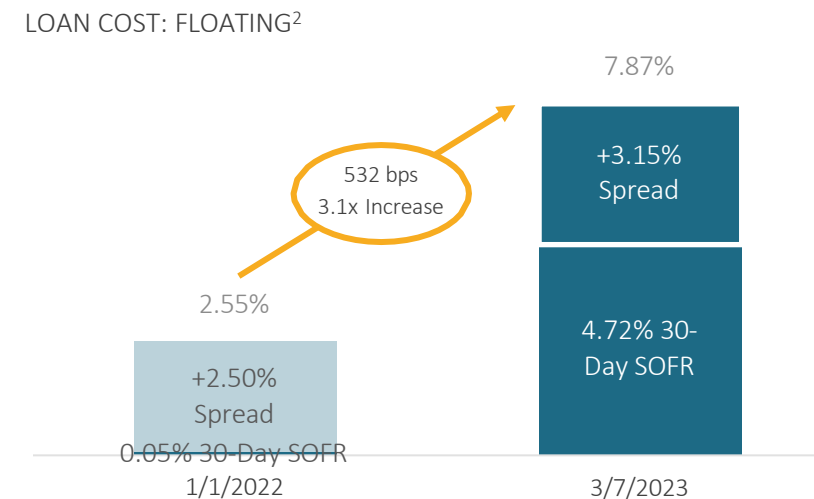
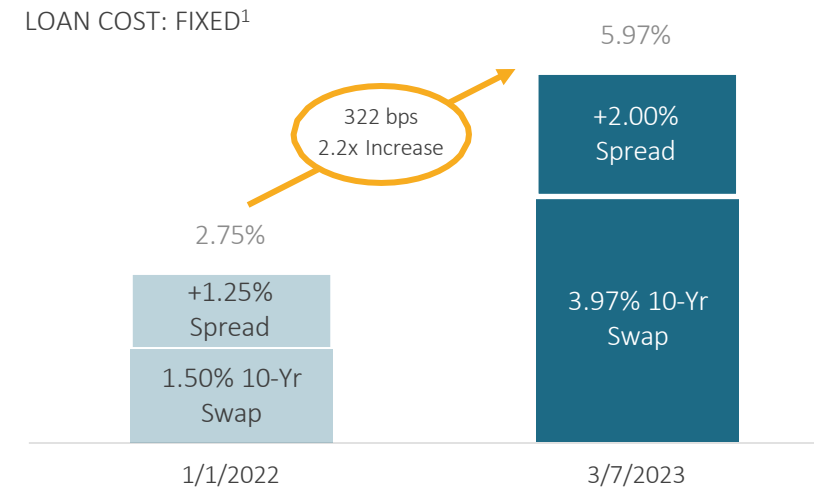
3. Burgiss VA/Oppportunistic return is YTD return as of Q3 2022, since Q4 2022 return is yet to be released.

Correction 2023: Pressures Build Around Debt

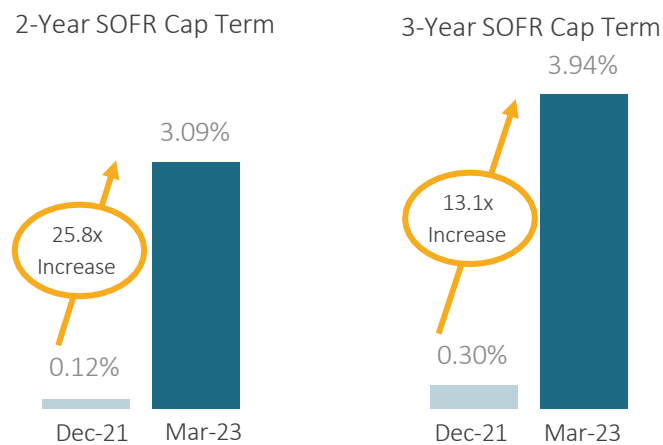
Funding gaps from a variety of sources are growing

- Floating rate debt costs are much higher
- Fixed rate debt costs are much higher (at maturity for existing owners)
- Interest rate caps prohibitively expensive
- Refinance proceeds much lower, if available
- Business plan delays with weakening leasing

Greater Impact on More Leveraged Owners



INTEREST RATE CAP COST



Sources: StepStone data, Eastdil,, Federal Reserve, Bloomberg, March 2023.

1. Fixed loan cost for stabilized multifamily at 50% to 59% loan-to-value.

2. For illustrative purposes, floating rate example does not consider a SOFR cap. Floating loan cost for transitional multifamily at 65% loan-to-cost and acceptable debt yield.

Correction 2023+: Hard Choices Lead to New Opportunity

Funding gaps increasingly acute for more leveraged, non-core owners

Ways To Resolve Funding Gap

Fund It

- Uncommitted capital can be reallocated to save worthy assets
- Dry powder deployed to save assets at the expense of new deals
- Complex ownership structures constrain options

Raise It

- GP-led secondaries allow quality managers to retain quality assets and complete business plans
- Starring role for participating, preferred high yield equity/debt with new pricing and terms
- Stay alive until '25!

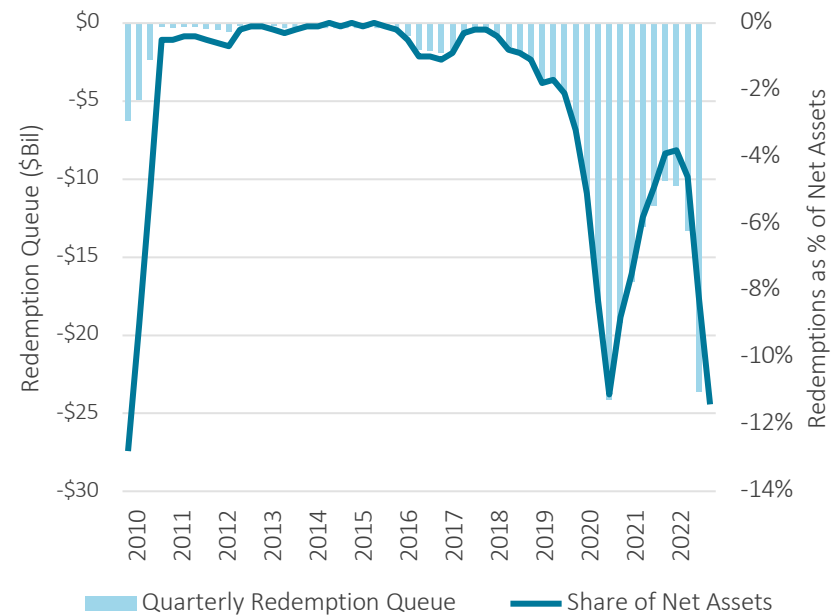
Sell it

- Sellers (including foreclosing lenders) take losses, leading to market repricing
- Growing willingness to take losses on less worthy assets (office), but few bidders
- Quality assets also becoming available
- Conditions favor strong, non-core vintage year

Correction 2023+: Repricing and Investor Liquidity

Until the denominator effect resolves, investors seeking liquidity from open-ended funds

NCREIF ODCE FUND REDEMPTION QUEUES



Redemption queues are similar across managers. Quality differences may emerge as cycle progresses

- Property type, location and lease structure will drive performance differences
- With lower leverage, debt issues are more about relative performance than distress and hard choices

Open-end fund redemption queues likely indicative of desired exits (secondary sales) in less liquid closed-end funds

Reported NAVs are slow to change

- Appraisal-based valuations require sufficient transaction volume for price discovery.
- Open-end core/core-plus funds trade based on NAV, delay entry until prices are more in line with interest rates to avoid near term losses.

Repricing will right-size real estate allocations, resolving the denominator effect

Performance Summary - Total Portfolio



StepStone Group LP (“StepStone”) was engaged by LACERA Real Estate to provide Real Estate services for prospective investment opportunities, as well as portfolio management.

The following table illustrates the Portfolio's since inception investment performance as of December 31, 2022, as well as the quarter-over-quarter and year-over-year change.

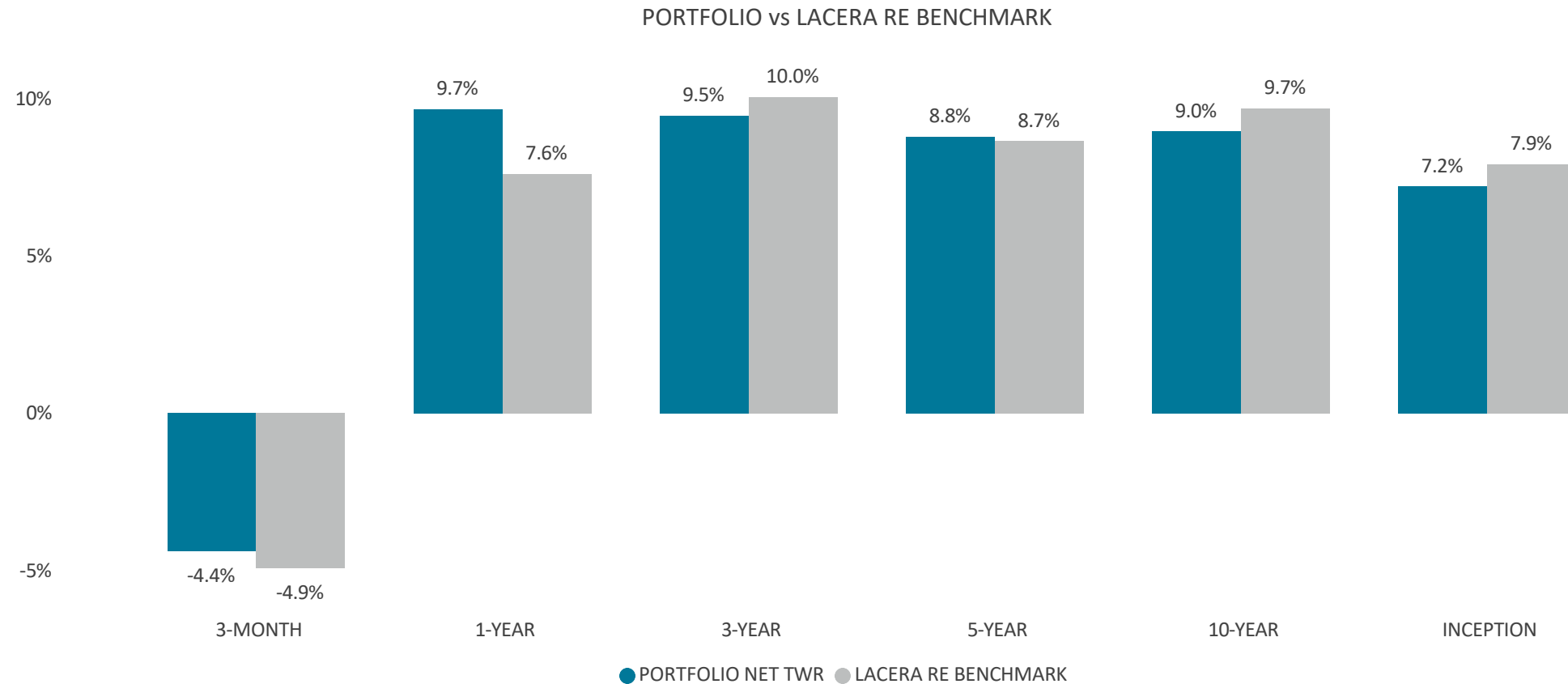
As of December 31, 2022. In USD millions.

	INCEPTION TO CURRENT QUARTER	INCEPTION TO PRIOR QUARTER	INCEPTION TO PRIOR YEAR	QUARTERLY Δ	ANNUAL Δ
Number of Managers	43	41	41	2	2
Number of Investments	100	98	97	2	3
Number of Active Investments	42	41	40	1	2
Committed Capital	\$19,011.7	\$18,430.1	\$18,314.8	\$581.6	\$696.8
Unfunded Commitment	987.8	382.5	345.4	605.3	642.5
Total Exposure	6,240.4	6,116.8	5,806.6	123.6	433.8
Total Contributed	19,043.1	18,960.2	18,227.6	82.9	815.6
Total Distributed	21,884.1	21,537.4	20,352.2	346.7	1,531.9
Total Market Value	5,252.6	5,734.3	5,461.2	(481.8)	(208.7)
Since Inception G/L	8,093.6	8,311.5	7,585.9	(217.9)	507.7
Total Value	\$27,136.7	\$27,271.8	\$25,813.5	(\$135.0)	\$1,323.3
DPI	1.1x	1.1x	1.1x	0.0x	0.0x
TVM	1.4x	1.4x	1.4x	0.0x	0.0x
IRR	7.9%	8.0%	7.9%	(11 bps)	4 bps
TWR	7.2%	7.3%	7.1%	(17 bps)	6 bps

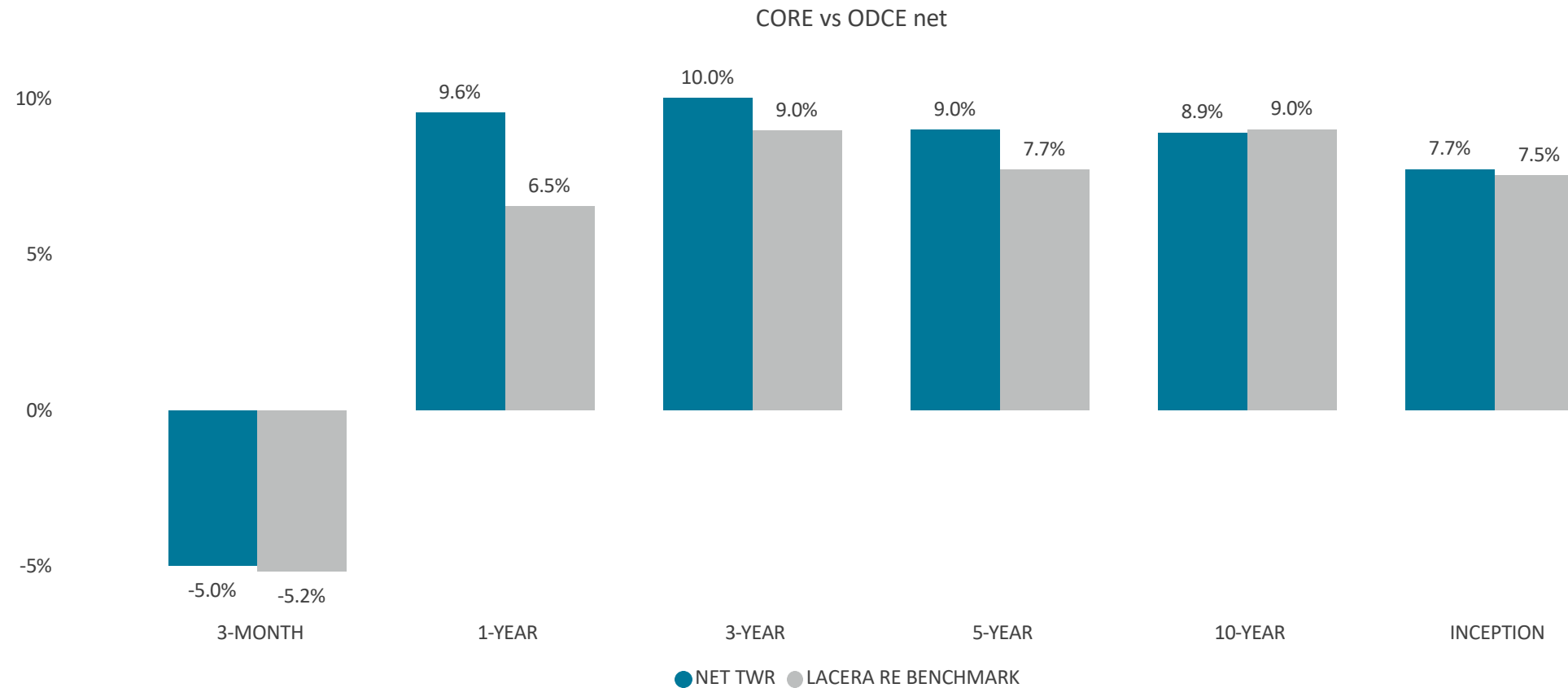
Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses. Note: TWRs are net of management fees.

Periodic Returns vs Benchmarks - Total Portfolio

The following chart illustrates the Portfolio's periodic returns December 31, 2022, compared to benchmarks.

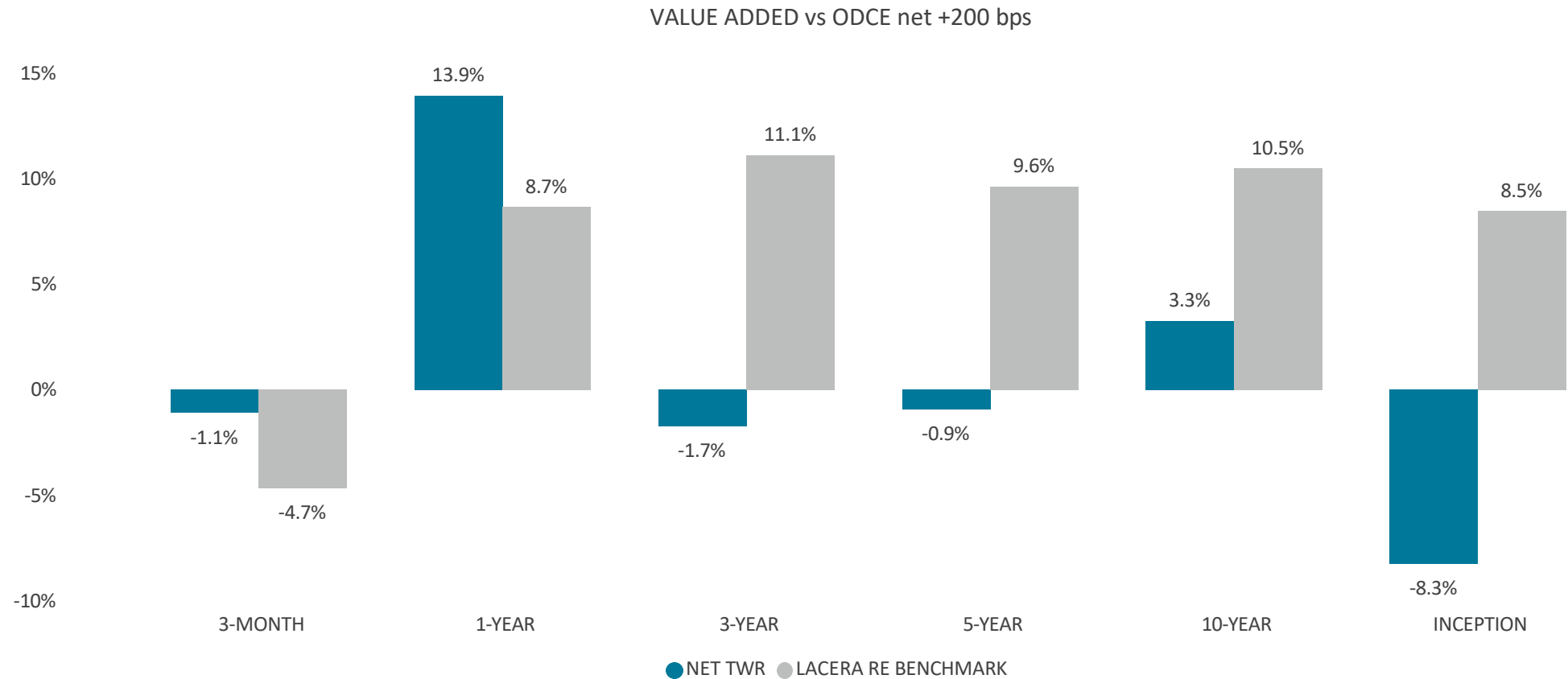


Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses. The referenced indices/benchmarks are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.



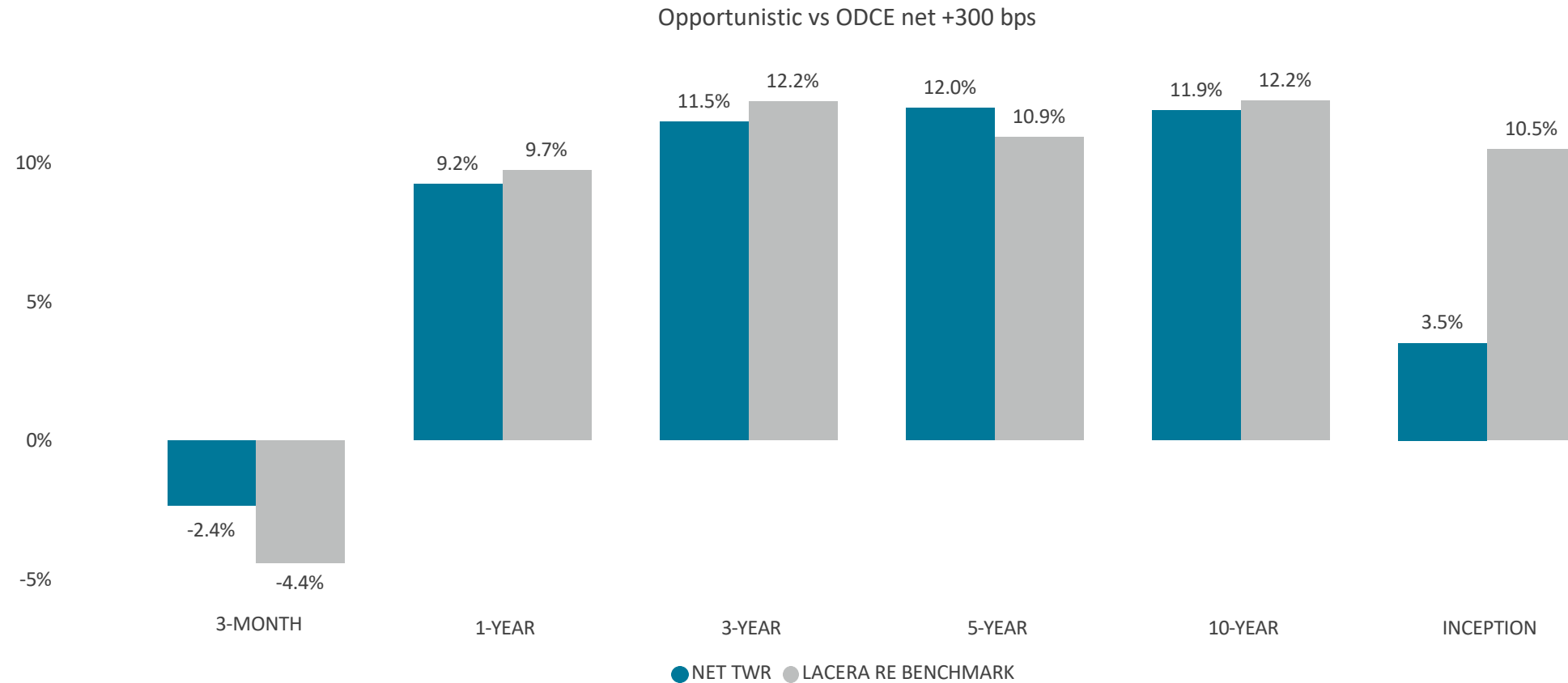
Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses. The referenced indices/benchmarks are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

Periodic Returns vs Benchmarks - Value Added



Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses. The referenced indices/benchmarks are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

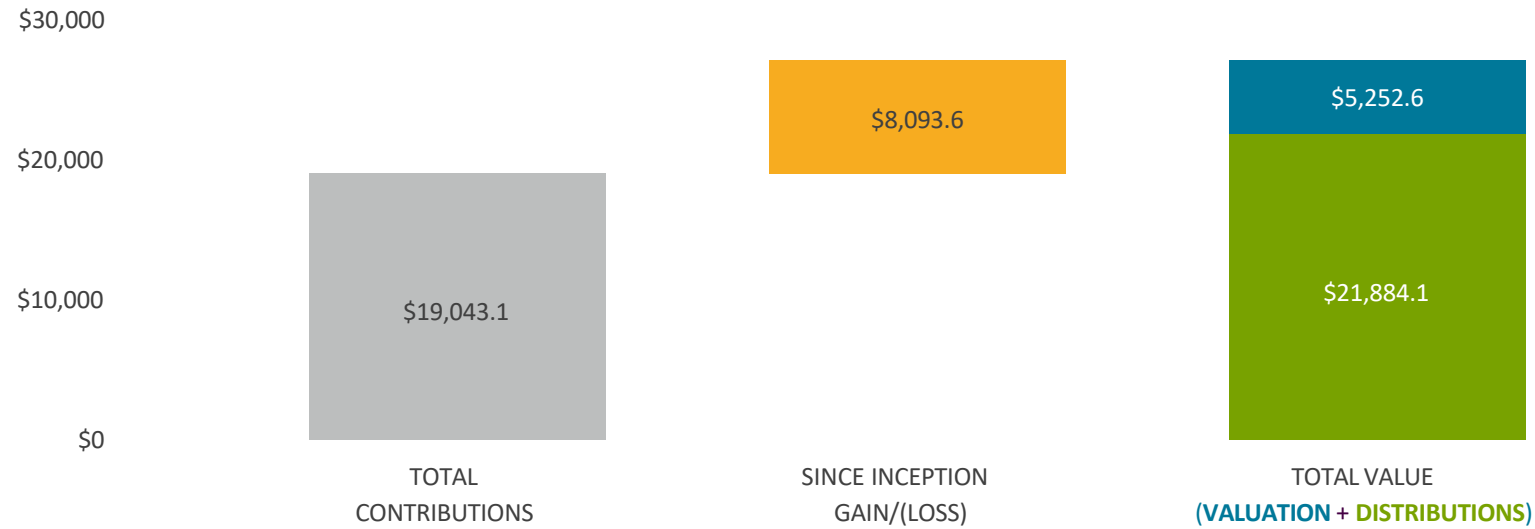
Periodic Returns vs Benchmarks - Opportunistic



Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses. The referenced indices/benchmarks are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

Since Inception Valuation Movement

Through December 31, 2022, LACERA Real Estate's portfolio has generated a gain of \$8,093.6 million.

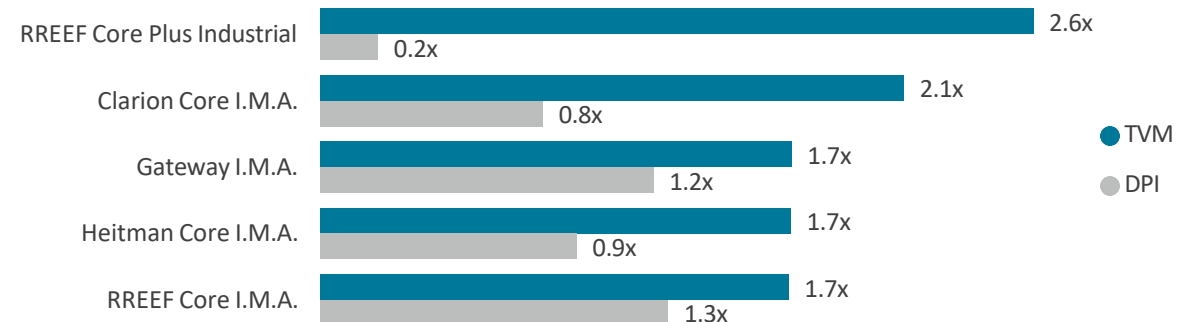


SINCE INCEPTION TOP PERFORMING INVESTMENTS

TOP 5 ACTIVE INVESTMENTS BY IRR



TOP 5 ACTIVE INVESTMENTS BY TVM



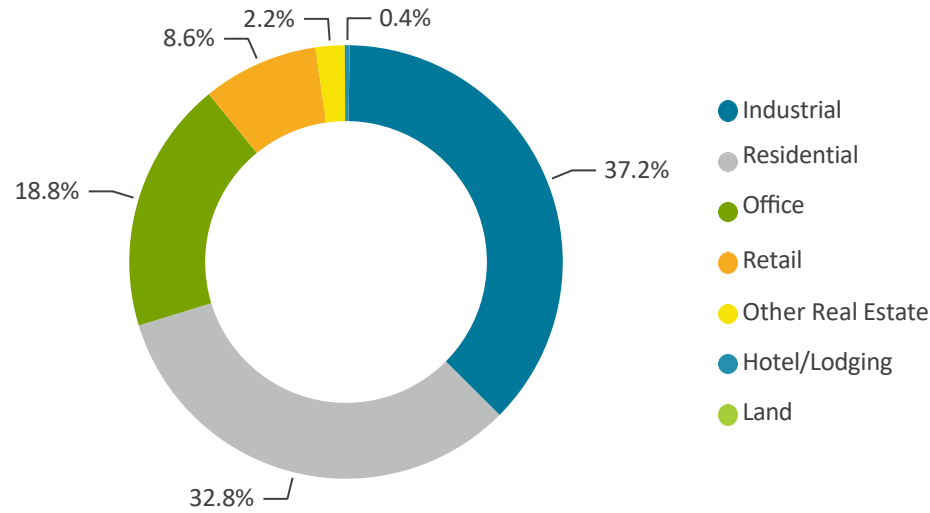
Portfolio Underlying Holdings Diversification

The following charts illustrate the portfolio's current asset exposure as of December 31, 2022.

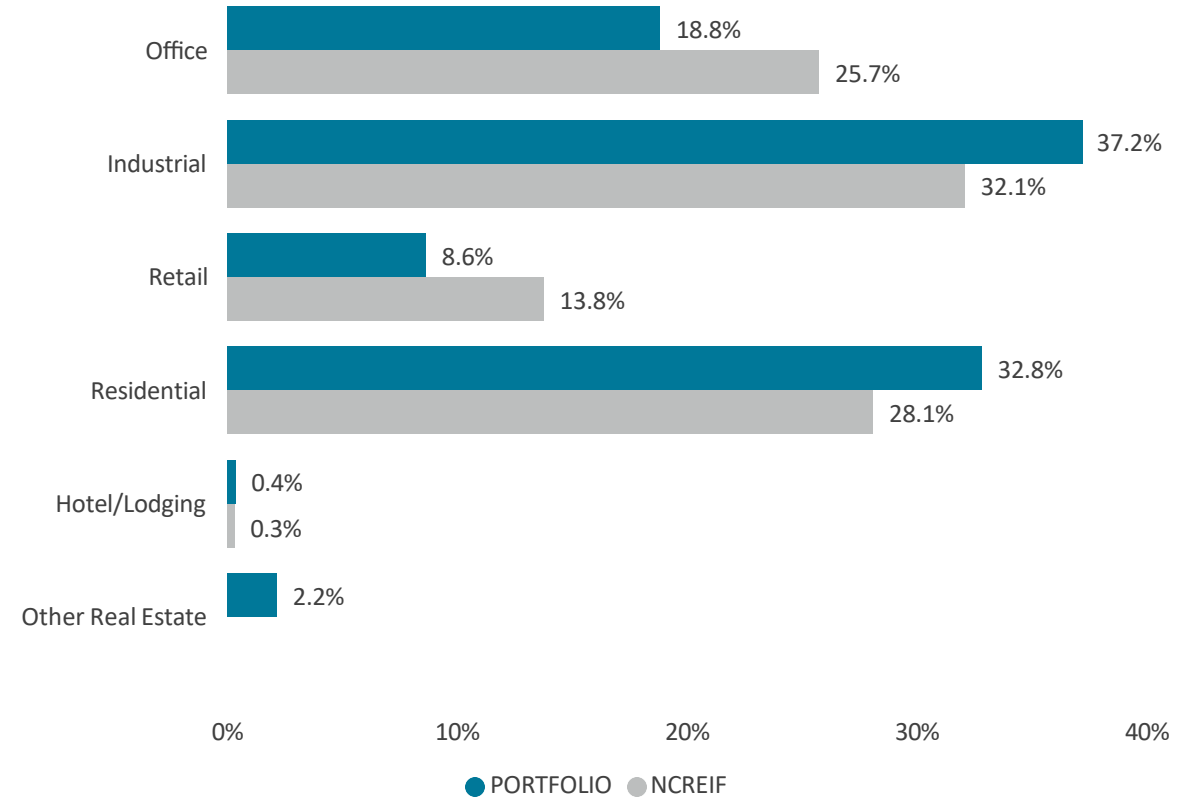
CORE / NON-CORE

All

PROPERTY TYPE DIVERSIFICATION



PROPERTY TYPE EXPOSURE VS. BENCHMARK



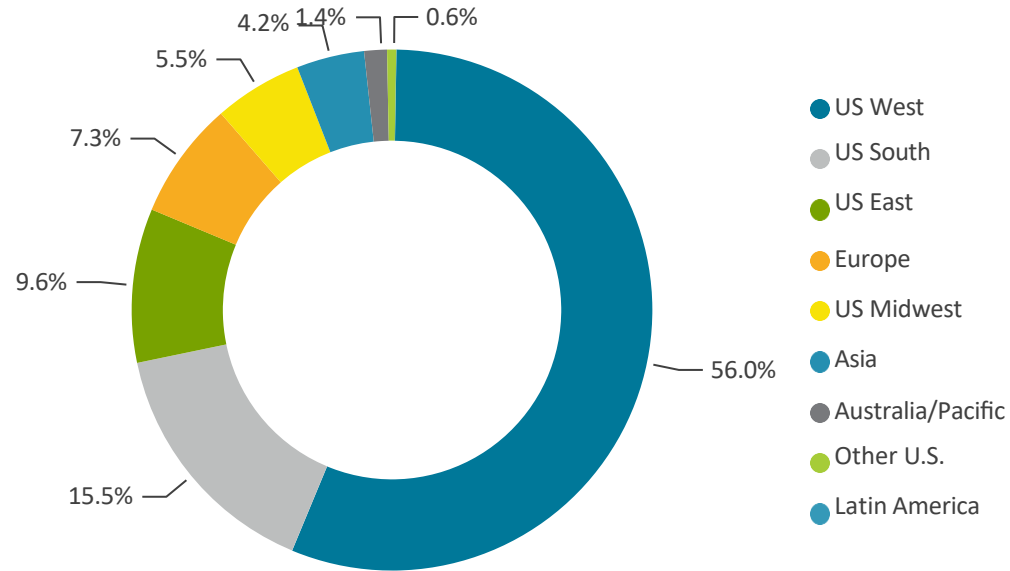
Portfolio Underlying Holdings Diversification

The following charts illustrate the portfolio's current asset exposure as of December 31, 2022.

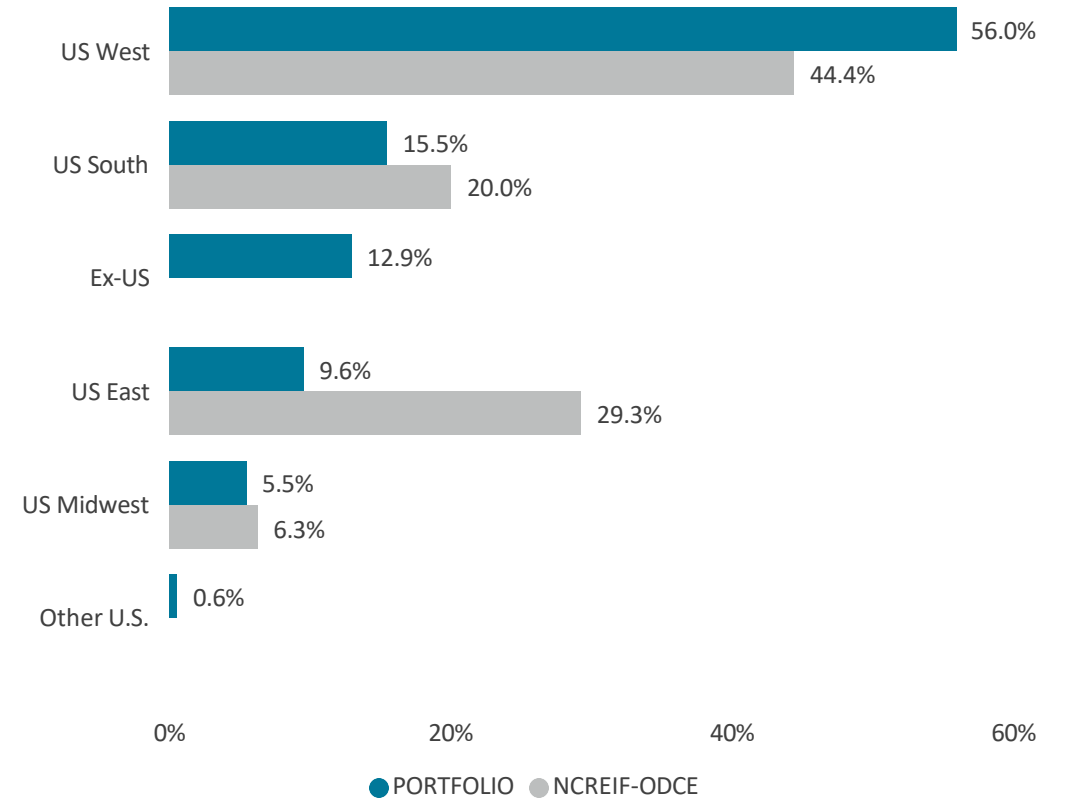
CORE / NON-CORE

All

GEOGRAPHIC DIVERSIFICATION



GEOGRAPHIC EXPOSURE VS. BENCHMARK



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All data is as of March 2023 unless otherwise noted.

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June 2, 2023

TO: Trustees – Real Assets Committee

FROM: James Rice 
Principal Investment Officer

FOR: June 12, 2023 Real Assets Committee

SUBJECT: **REAL ASSETS PERFORMANCE REVIEW 1Q23**

Albourne Partners, LACERA's Real Assets consultant has prepared a portfolio performance presentation through 1Q23 included as **Attachment**. The presentation covers past performance as well as portfolio positioning and the current market environment.

Presenting at the Real Assets Committee Meeting from Albourne will be:

Mark White, Head of Real Assets
Jennifer Yeung, Senior Portfolio Analyst

Attachment

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

LACERA

Real Assets (ex-Real Estate) Portfolio Review 1Q 2023

June 2023

Total Performance Summary

Performance for each period reflects Time-weighted Returns as of March 31, 2023

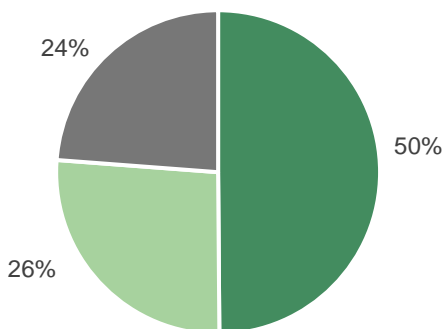
	Q1	FYTD	1 Year	3 Years	Since Inception
Natural Resources & Commodities	-1.2%	2.5%	-8.5%	28.6%	3.3%
Natural Resources & Commodity Policy	-1.5%	5.4%	-7.7%	25.3%	-1.8%
Infrastructure	0.6%	1.7%	-4.1%	10.5%	5.6%
DJ Brookfield Global Infrastructure Composite	3.1%	1.2%	-6.1%	12.2%	4.1%
TIPS	3.4%	-0.4%	-6.6%	1.7%	3.2%
Bloomberg U.S. Treasury: U.S. TIPS	3.3%	0.0%	-6.1%	1.8%	3.0%

Since Inception date of April 1, 2019.

Albourne has classified investments based on forward outlook of portfolio composition, which may differ from legacy classification.

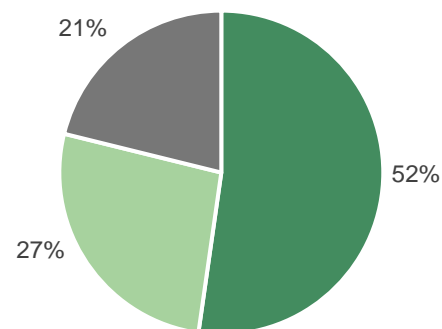
Performance data differs from LACERA's Total Fund Performance Report as Private Market valuations are lagged by a quarter, where available, 1Q-2023 NAVs were used. Performance for Publicly-traded securities is reported through end of 1Q-2023.

Total Portfolio Composition by NAV



■ Infrastructure ■ Natural Resources & Commodities ■ TIPS

Total Portfolio Composition by NAV + Unfunded

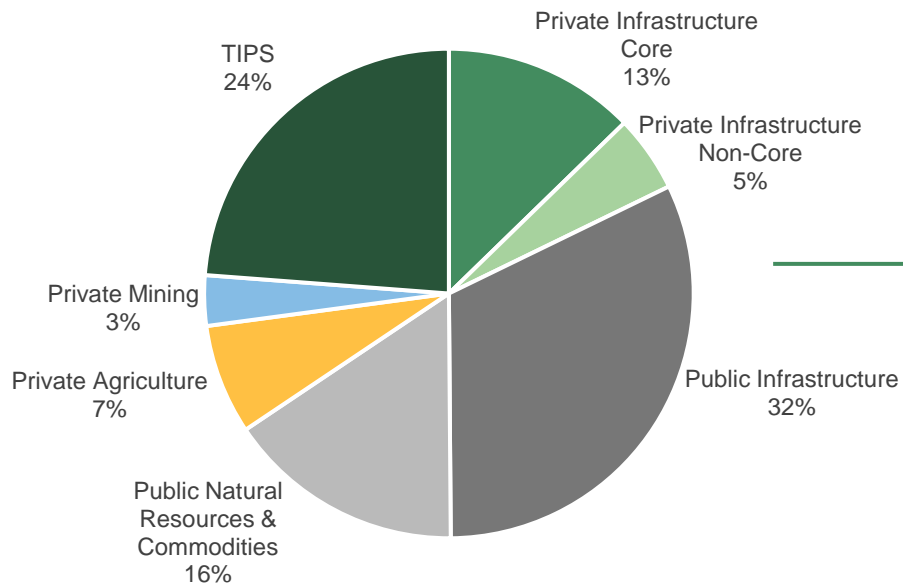


■ Infrastructure ■ Natural Resources & Commodities ■ TIPS

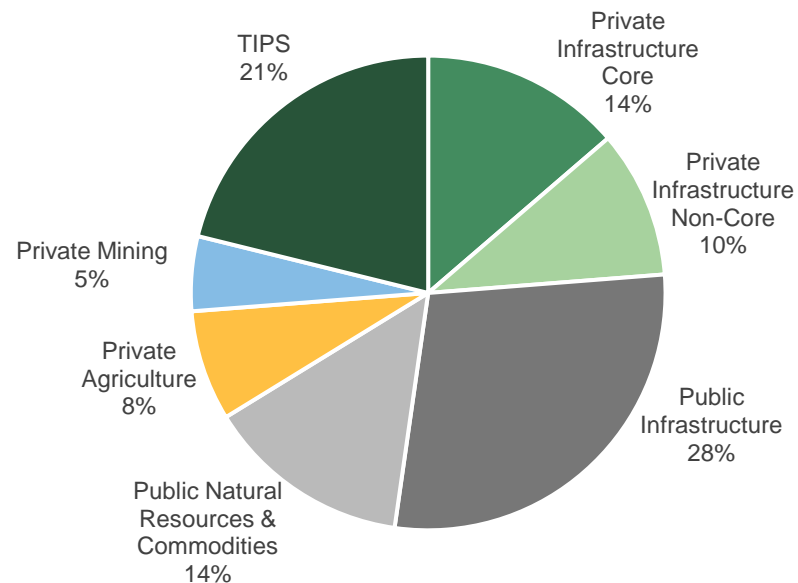
Past performance is not indicative of future returns.

Performance Review – Public Securities

Total Portfolio Composition by NAV



Total Portfolio Composition by NAV + Unfunded



Performance for each period reflects Time-weighted Returns as of March 31, 2023

	Q1	FYTD	1 Year	3 Years	Since Inception
Public Natural Resources & Commodities	-2.5%	-0.3%	-13.4%	31.2%	3.3%
Natural Resources & Commodity Policy	-1.5%	5.4%	-7.7%	25.3%	-1.8%
Public Infrastructure	1.3%	-1.8%	-8.1%	12.5%	6.2%
DJ Brookfield Global Infrastructure Composite	3.1%	1.2%	-6.1%	12.2%	4.1%
TIPS	3.4%	-0.4%	-6.6%	1.7%	3.2%
Bloomberg U.S. Treasury: U.S. TIPS	3.3%	0.0%	-6.1%	1.8%	3.0%

Since Inception date of April 1, 2019.
Past performance is not indicative of future returns.

Performance Review – Private Infrastructure Core

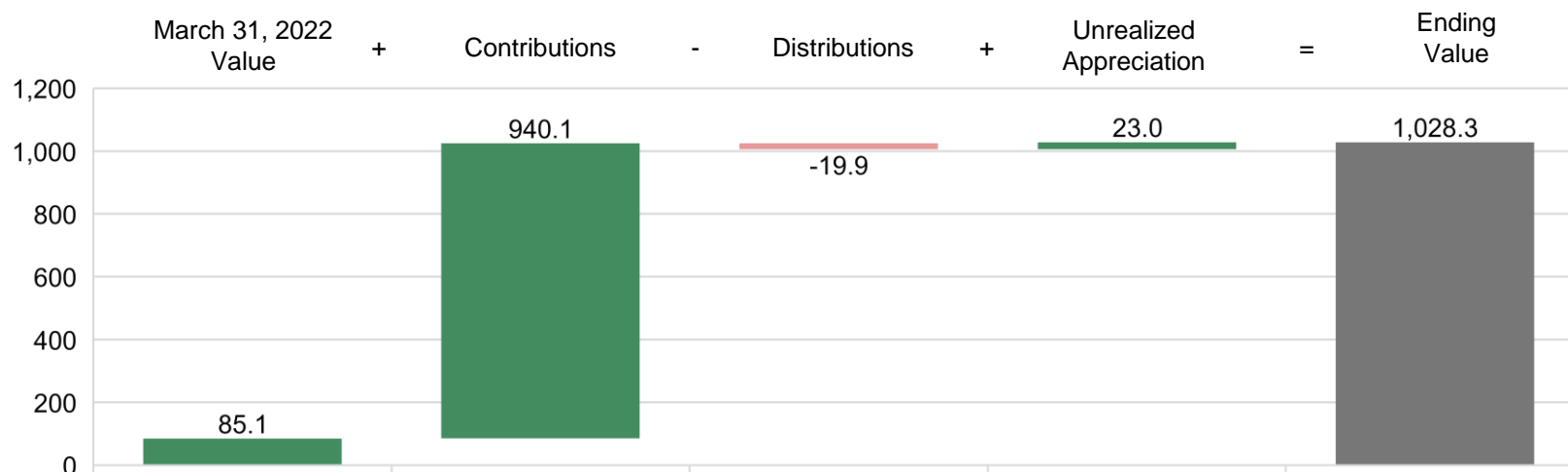
	Vintage	DPI	TVPI	IRR	PME Alpha	Current NAV	Commitment	Unfunded Commitment	Paid In	Distributions
DIF Infrastructure VI	2020	0.03	1.37	31.1%	27.8%	102.2	163.3	90.1	74.9	2.6
AxInfra US II	2021	0.03	1.05	6.4%	7.6%	258.8	250.0	0.0	253.0	6.5
Axiom Infrastructure Canada II	2021	0.03	1.01	3.4%	-0.8%	146.6	147.5	0.0	149.7	4.5
KKR Diversified Core Infrastructure Fund SCSp	2021	0.02	0.98	-2.6%	-5.9%	485.2	500.0	0.0	500.0	6.9
DIF Core-plus Infrastructure Fund III	2022	0.00	1.06	14.0%	19.9%	35.5	160.4	127.2	33.1	0.0
Total		0.02	1.04	5.9%		1,028.3	1,221.1	217.3	1,010.7	20.4

Source: LACERA

Performance data differs from LACERA's Total Fund Performance Report as Private Market valuations are lagged by a quarter; where available, 1Q-2023 NAVs were used.

Dow Jones Brookfield Global Infrastructure Total Return index used to calculate PME Alpha.

Portfolio Activity Summary (US\$ millions)



Past performance is not indicative of future returns.

Performance Review – Private Infrastructure Non-Core

	Vintage	DPI	TVPI	IRR	PME Alpha	Current NAV	Commitment	Unfunded Commitment	Paid In	Distributions
Grain Spectrum Holdings III	2020	0.00	1.36	16.0%	11.3%	66.2	60.0	11.2	48.8	0.0
Pan-European Infrastructure III	2020	0.10	1.10	7.4%	4.8%	69.4	110.9	41.5	69.2	6.7
Antin Infrastructure Partners Mid Cap I	2021	0.00	1.05	5.4%	3.0%	39.9	107.9	69.7	38.1	0.0
Grain Communications Opportunity Fund III, L.P.	2021	0.00	0.93	-6.7%	-7.6%	39.3	60.0	25.0	42.6	0.2
Partners Group Direct Infrastructure 2020	2021	0.01	1.08	8.9%	16.3%	76.4	200.0	128.4	71.6	0.5
HitecVision New Energy Fund	2022	0.00	1.30	51.3%	37.0%	92.0	130.0	59.7	70.5	0.0
Total ¹		0.02	1.14	13.10%		383.2	668.7	335.6	340.9	7.4

1. Total DPI, TVPI and IRR figures include contribution from co-investments, for which line items have been excluded from this table.

Performance data differs from LACERA's Total Fund Performance Report as Private Market valuations are lagged by a quarter; where available, 1Q-2023 NAVs were used. Dow Jones Brookfield Global Infrastructure Total Return index used to calculate PME Alpha.

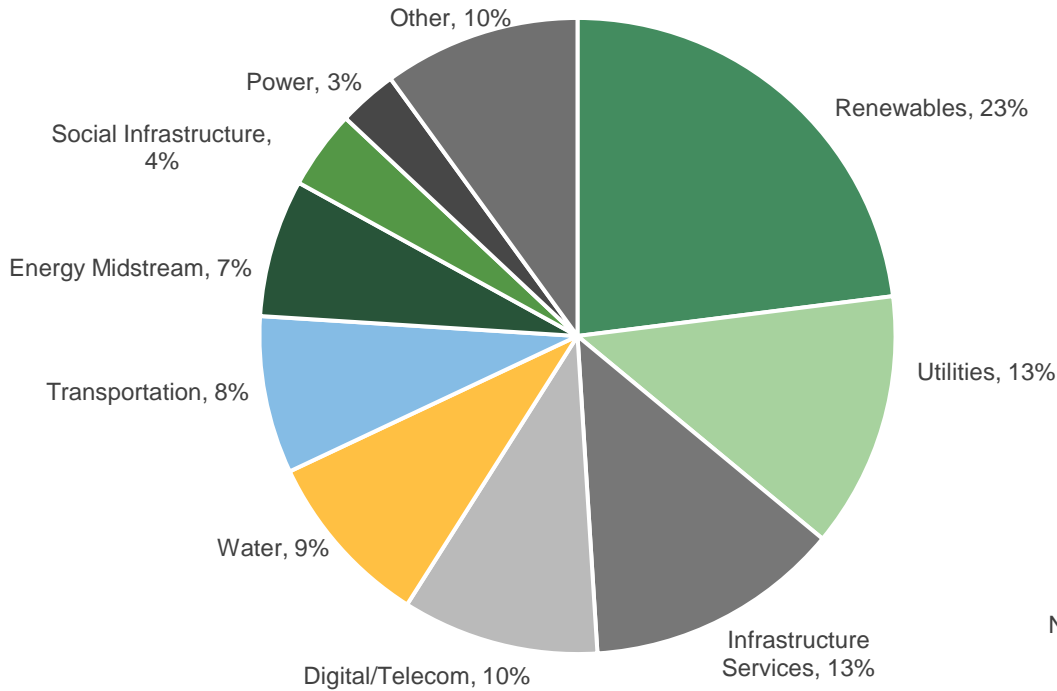
Portfolio Activity Summary (US\$ millions)



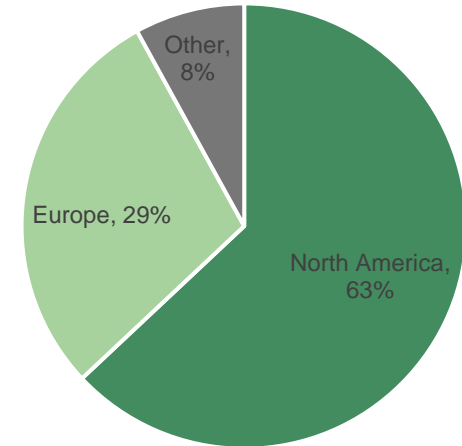
Source: LACERA
Past performance is not indicative of future returns.

Private Infrastructure Portfolio Composition

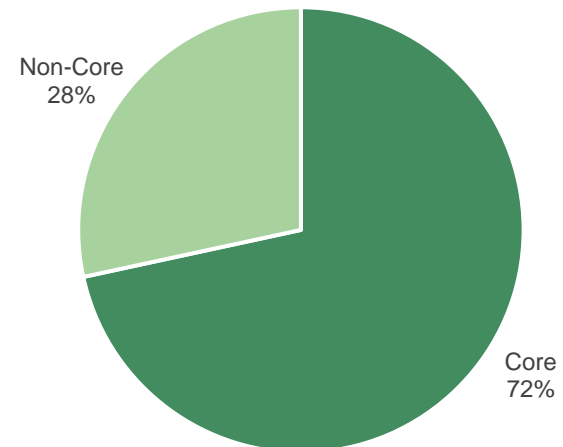
Private Infrastructure by Sector



Private Infrastructure by Geography

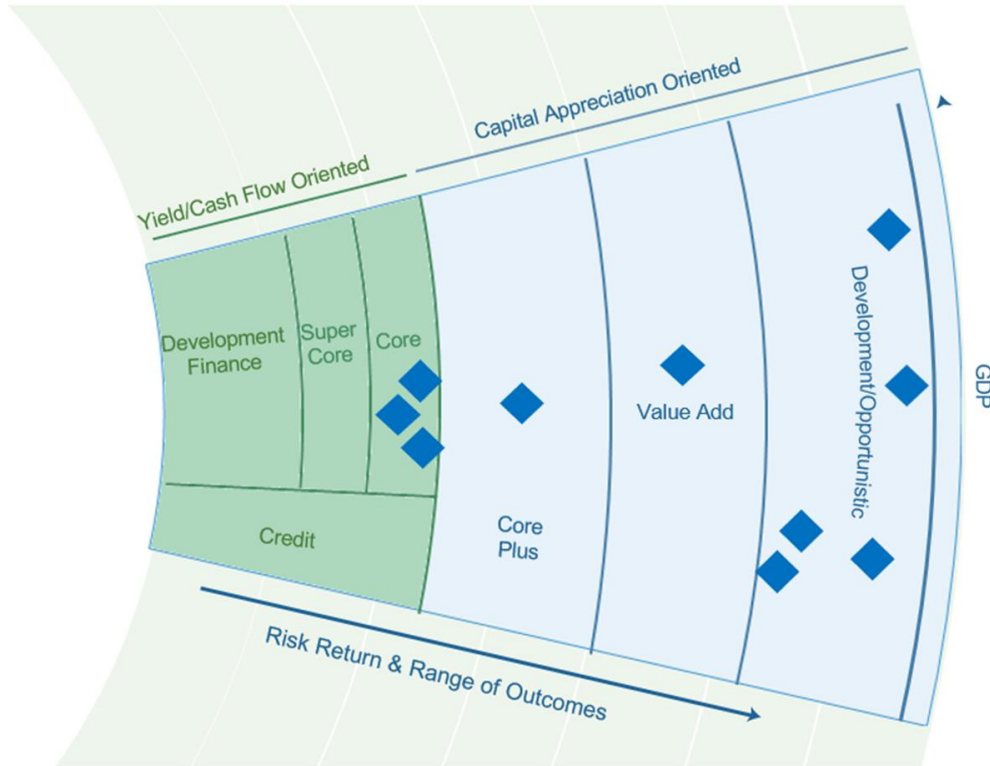


Private Infrastructure by Strategy



As of March 31, 2023.
Past performance is not indicative of future returns.

Infrastructure Portfolio Mapping & Risk Profile



This chart provides an additional perspective to evaluate the underlying risk profile and highlights the extent of GDP sensitivity, execution risk and geopolitical or regional risk that exists in the portfolio.

Two-dimensional mapping illustrates a fund's risk/return profile (x-axis) and a fund's market sensitivity (y-axis). Strategies and funds further to the right and closer to the top will have a higher risk/return profile and higher market sensitivity as it relates to the market driver (e.g., the underlying commodity, GDP, US inflation, etc.)

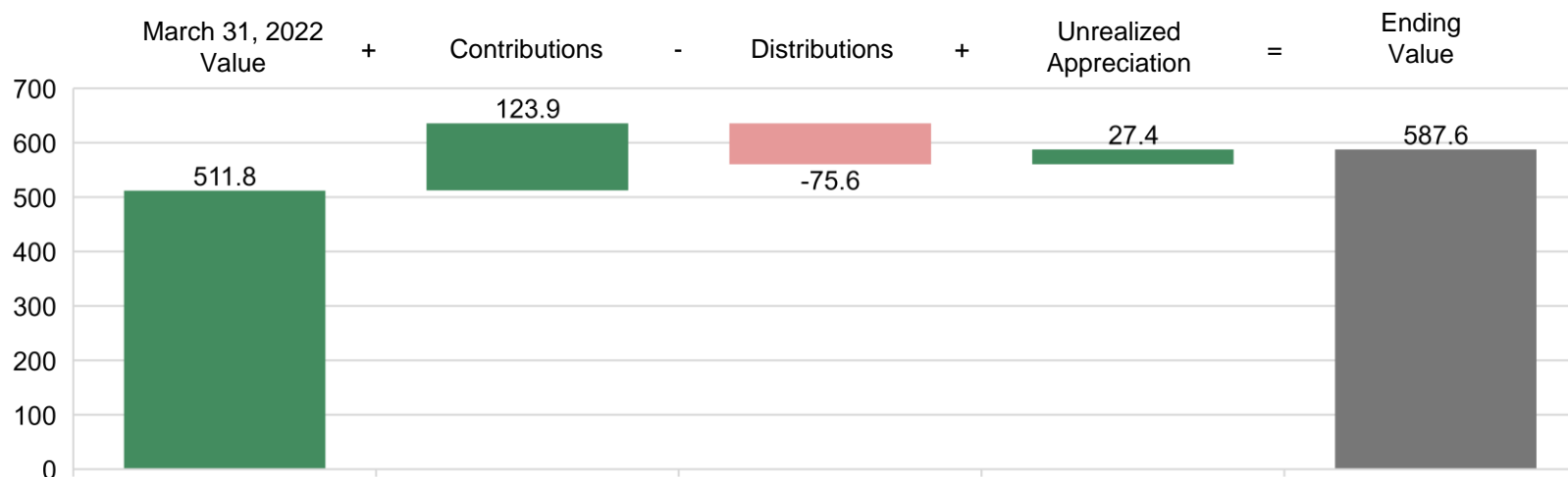
Performance Review – Private Agriculture

	Vintage	DPI	TVPI	IRR	PME Alpha	Current NAV	Commitment	Unfunded Commitment	Paid In	Distributions
TIAA-CREF Global Agriculture	2021	0.09	1.18	17.1%	14.2%	279.0	188.0	11.8	256.9	24.1
TIAA-CREF Global Agriculture II	2021	0.20	1.17	13.6%	10.4%	271.7	264.8	10.3	280.0	56.1
Cibus Enterprise II	2022	0.00	0.92	-8.9%	-22.8%	4.3	11.0	6.3	4.7	0.0
Cibus Fund II	2022	0.00	0.88	-14.4%	-31.1%	17.6	89.0	69.0	20.0	0.0
Total ¹		0.14	1.16	14.1%		572.6	552.7	97.4	561.6	80.2

1. Total DPI, TVPI and IRR figures include contribution from co-investments, for which line items have been excluded from this table.

Performance data differs from LACERA's Total Fund Performance Report as Private Market valuations are lagged by a quarter; where available, 1Q-2023 NAVs were used. S&P Global Natural Resources index used to calculate PME Alpha.

Portfolio Activity Summary (US\$ millions)



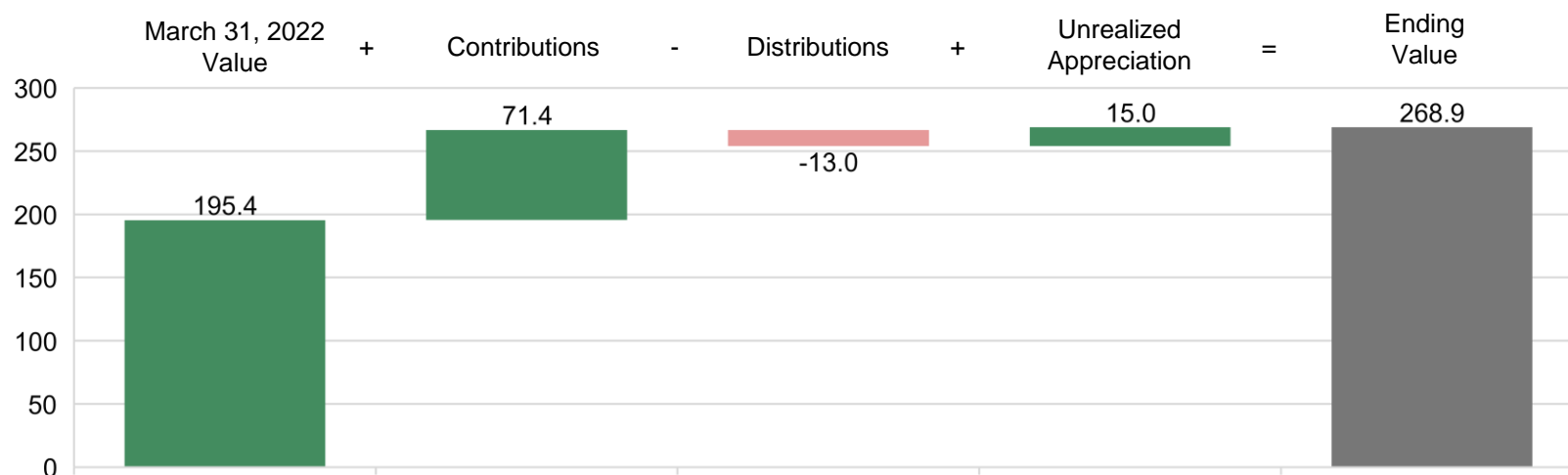
Source: LACERA
Past performance is not indicative of future returns.

Performance Review – Private Mining

	Vintage	DPI	TVPI	IRR	PME Alpha	Current NAV	Commitment	Unfunded Commitment	Paid In	Distributions
The Energy & Minerals Group Fund III, L.P.	2014	0.14	0.69	-5.1%	-8.8%	82.8	150.0	0.9	150.4	21.4
Orion Mine Finance Fund III	2021	0.06	1.20	17.2%	10.3%	144.5	150.0	35.4	126.1	7.4
Orion Mineral Royalty Fund	2021	0.01	0.93	-7.5%	-17.6%	23.0	100.0	76.0	25.1	0.3
Sprott Private Resource Streaming and Royalty Annex Fund	2023	0.00	0.98	-1.6%		18.7	100.0	81.3	18.9	0.0
Total		0.13	0.94	-1.80%		268.9	500.0	193.7	320.6	29.1

Performance data differs from LACERA's Total Fund Performance Report as Private Market valuations are lagged by a quarter; where available, 1Q-2023 NAVs were used. S&P Global Natural Resources index used to calculate PME Alpha.

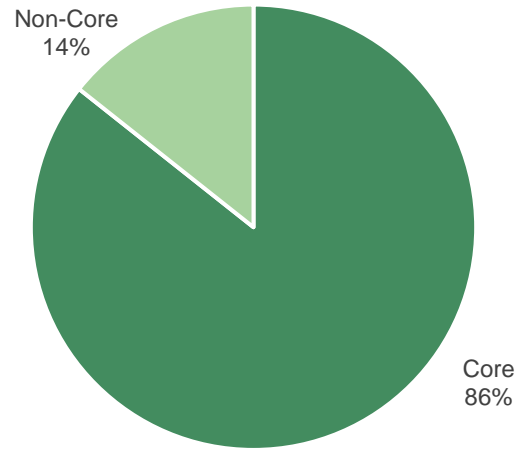
Portfolio Activity Summary (US\$ millions)



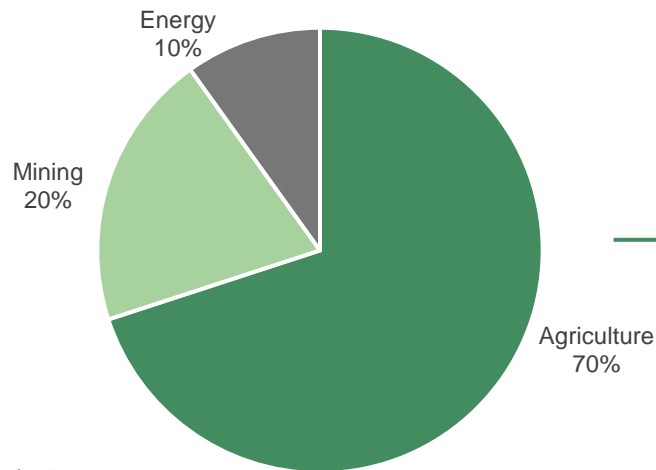
Source: LACERA
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Private Natural Resources Portfolio Composition

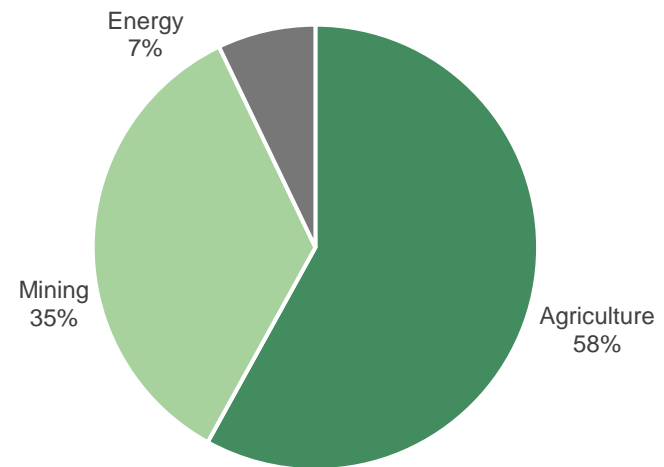
Private Natural Resources by Strategy



Private Natural Resources by Sector (NAV)

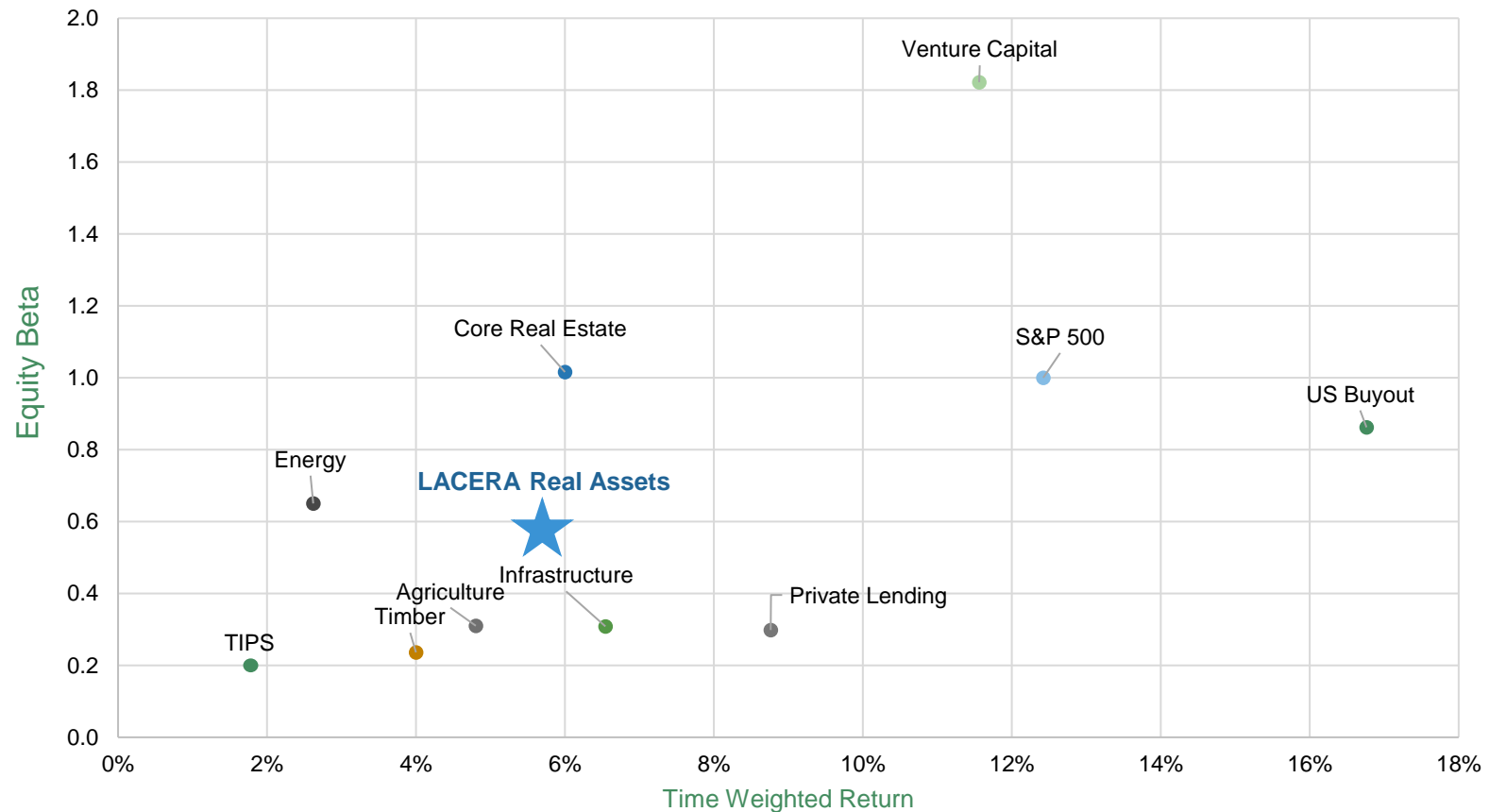


Private Natural Resources by Sector (NAV + Unfunded)



As of March 31, 2023.
Past performance is not indicative of future returns.

Portfolio Risk Exposure vs Private Market Strategies



Except for LACERA portfolio (April 2019 to March 2023), all data as of 2Q 2019 through 3Q 2022.

Equity Beta has been calculated using the Dimson Beta approach, which de-smooths the various Private Market return series using a four-quarter lag.

Past performance is not a reliable indicator of future results.

Sources: Albourne, Bloomberg, Burgiss.

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