IN PERSON & VIRTUAL BOARD MEETING

SEPTEMBER 9, 2025 AT 8:30 AM
BOARD OF INVESTMENTS MEETING

TO VIEW VIA WEB

https://lacera.com/leadership/board-meetings

TO PROVIDE PUBLIC COMMENT

Members of the public may address the Board orally and in writing. To provide Public Comment, please visit the above link and complete the request form.

Attention: If you have any questions, you may email PublicComment@lacera.gov.

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION
300 N. LAKE AVENUE, SUITE 650, PASADENA, CA

LACERA
Los Angeles County Employees Retirement Association

NAVIGATING OUR CHARTED COURSE

BOARD OF INVESTMENTS OFFSITE

SEPTEMBER 9-10

AGENDA

A SPECIAL MEETING OF THE BOARD OF INVESTMENTS

AND BOARD OF RETIREMENT

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

HYATT REGENCY | 200 S. PINE AVENUE LONG BEACH, CA 90802

8:30 A.M., TUESDAY, SEPTEMBER 9, 2025

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

Any person may view the meeting online at https://LACERA.com/leadership/board-meetings

The Boards may take action on any item on the agenda, and agenda items may be taken out of order. Times stated below are estimates that may change.

8:30 a.m. **Call to Order**

Pledge of Allegiance

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

8:30 a.m. **Public Comment**

(Members of the public may address the Boards orally and in writing. To provide Public Comment, you should visit https://LACERA.com/leadership/board-meetings and complete the request form.

If you select oral comment, we will contact you via email with information and instructions as to how to access the meeting as a speaker. You will have up to 3 minutes to address the Boards. Oral comment requests 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 within the form 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.gov.)

8:35 a.m. **Welcome & Opening Remarks**

Jonathan Grabel, Chief Investment Officer

8:45 a.m. **Energy Transition**

Scott Zdrazil, Principal Investment Officer
Terra Elijah, Senior Investment Analyst
Cheryl Lu, Senior Investment Officer
Claudia Meer, Board Member of Enfra Solutions, a CVC DIF portfolio company
Reuben Munger, Founder and Managing Partner, Vision Ridge Partners
Jehangir Vevaina, Managing Partner & Global Chief Investment Officer, Renewable Power and Transition Group, Brookfield Asset Management

This session will provide insights into the evolving global market environment and energy transition trendlines along with background on LACERA's guiding policies and current portfolio exposures.

A panel of LACERA's investment partners will provide their perspective on current investment opportunities and challenges.

10:15 a.m. **Break**

10:30 a.m. **Credit: Design and Implementation**
Vache Mahseredjian, Principal Investment Officer
Kristen Jones, Partner and Head of US Private Credit, Albourne
Chad Timko, Senior Investment Officer
Krista Powell, Investment Officer
Quoc Nguyen, Investment Officer

This session will provide an overview of the broad credit universe, the intentional design and implementation strategy of LACERA's credit portfolio, performance results, and portfolio alignment with the broader investment mission and strategic initiatives.

12:00 p.m. **Lunch**

1:00 p.m. **Blockchain and Tokenization**
Jason Choi, Senior Investment Analyst
Patrik Bless, Managing Director, Partners Group
Pablo Nobre dos Reis, Digital Products and Solutions Analyst, DWS
Colleen Sullivan, Co-Head of Venture, Brevan Howard Digital

The session will explore the benefits of blockchain, identify current and prospective use cases, and discuss market developments and regulatory considerations.

A panel of LACERA's investment partners will provide their insights on blockchain and tokenization.

2:30 p.m. **Break**

2:45 p.m. **Implications of Artificial Intelligence**
Didier Acevedo, Senior Investment Officer
Greg Wallem, Managing Director, StepStone Group
Seth Boro, Managing Partner, Thoma Bravo
Jim Prusko, Senior Portfolio Manager and Partner, Magnetar Capital
Naunidh Singh Balla, Co-Founder and CTO, Tetrix

This session will examine artificial intelligence's influence on investment strategies and innovation, assess labor market shifts and future skill demands, analyze dynamics and investor sentiment, and explore second-order effects.

2:45 p.m. **Implications of Artificial Intelligence (Continued)**
A panel of investment partners will discuss the implications of artificial intelligence.

4:15 p.m. **Closing Remarks & Good of the Order**

Documents subject to public disclosure that relate to an agenda item for an open session of the Boards s that are distributed to members of the Boards 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 Trustees at LACERA's offices at 300 N. Lake Avenue, Suite 820, Pasadena, CA 91101, during normal business hours of 8:00 a.m. to 5:00 p.m. Monday through Friday and will also be posted on lacera.com at the same time, Board Meetings | LACERA.

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 from 8:00 a.m. to 5:00 p.m. Monday through Friday or email PublicComment@lacera.gov, but no later than 48 hours prior to the time the meeting is to commence.

Energy Transition

Energy Transition

TODAY'S DISCUSSION

Tuesday, September 9, 2025, 8:45am

Session Outline

1. **Introduction**
   - **Scott Zdrazil**, Principal Investment Officer
   - **Terra Elijah**, Senior Investment Analyst
2. **Panel Discussion – Market and Policy Environment Insights from LACERA Asset Managers**
   - **Moderator**: **Cheryl Lu**, Senior Investment Officer
   - **Claudia Meer**, Board Member of Enfra Solutions, a CVC DIF portfolio company
   - **Reuben Munger**, Founder and Managing Partner, Vision Ridge Partners
   - **Jehangir Vevaina**, Managing Partner & Global Chief Investment Officer, Renewable Power and Transition Group, Brookfield Asset Management

Objectives

A. Gain insight on the evolving global market environment and energy transition trendlines

B. Provide background on LACERA's guiding policies and current portfolio exposures

C. Hear perspectives from current LACERA asset managers on current investment opportunities and challenges

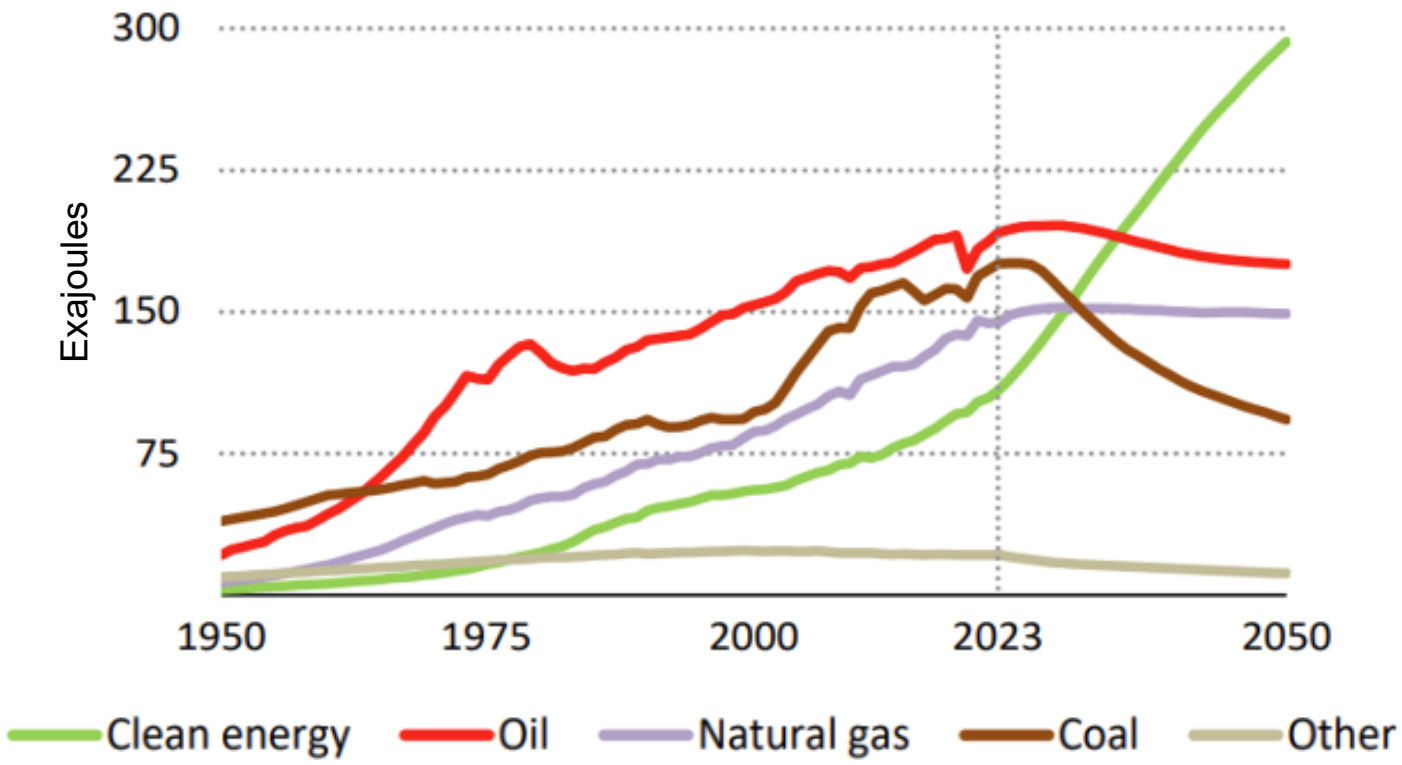
Part 1: Introduction

Global Energy Transition Trends and Projections

As of 2024, the International Energy Agency models global energy mix:

- Prominence of oil and gas peaks in 2030
- Clean energy escalates under all scenarios
- Oil and gas maintains role through 2050

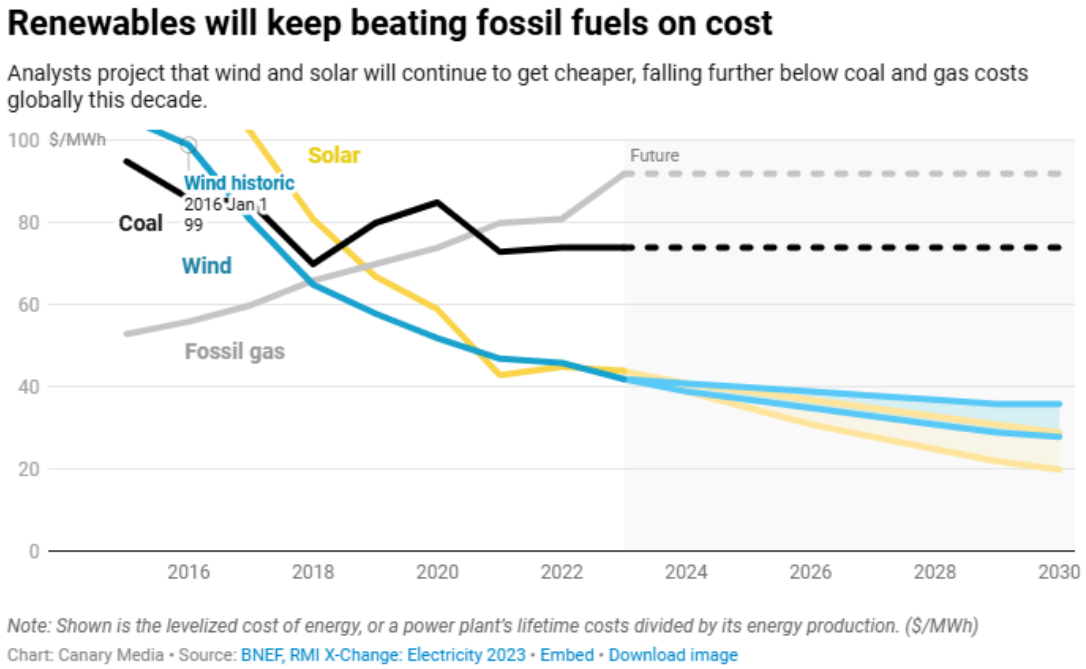
Global Energy Mix to 2050
Modeling by International Energy Agency (IEA)
Under Current Policies



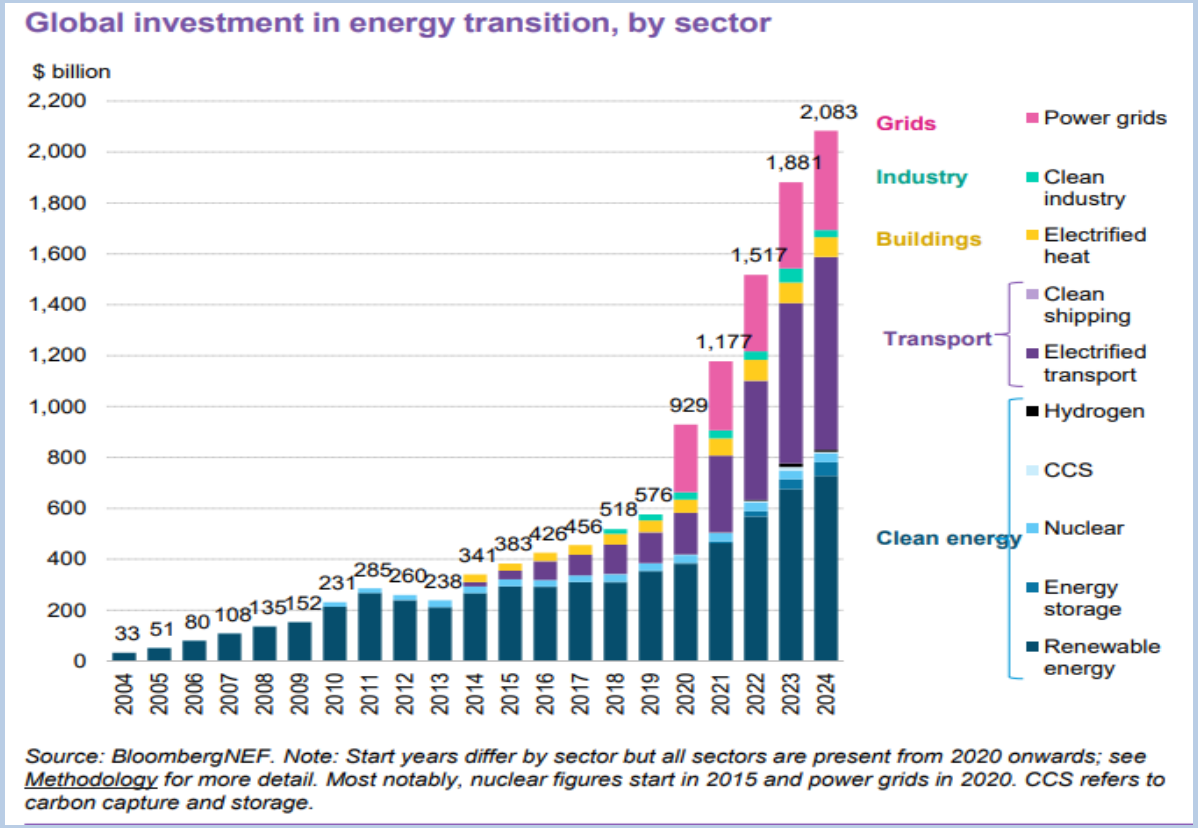
[1] International Energy Agency (IEA). World Energy Outlook 2024. October 2024. Available at: www.iea.org/reports/world-energy-outlook-2024 (downloaded July 7, 2025)

Notable Underlying Trends as of Late 2024

Economics of renewables more attractive…



Investments in clean energy outpacing fossil fuels…

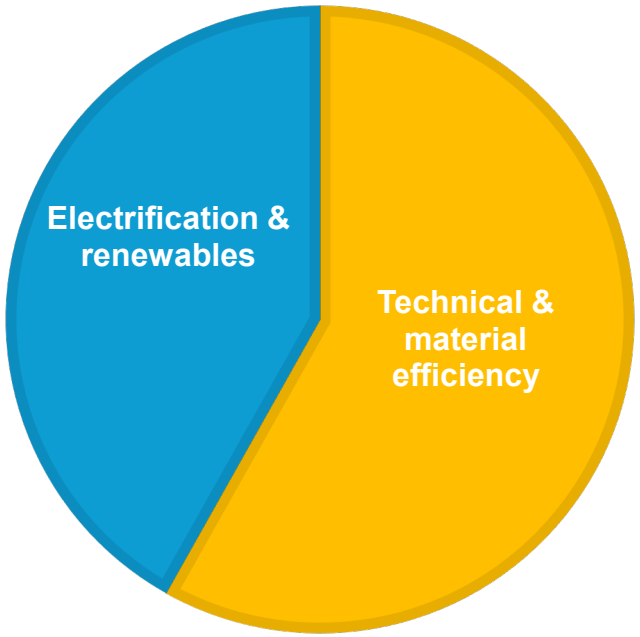


[1] RMI. X-change Electricity: On track for net zero. July 2023. Available at: https://rmi.org/insight/x-change-electricity/ (downloaded July 11, 2025)
[2] BloombergNEF. Energy Transition Investment Trends 2025. January 2025. Available at: htttps://about.bnef.com/insights/finance/energy-transition-investment-trends/ (downloaded July 11, 2025)

Notable Underlying Trends as of Late 2024

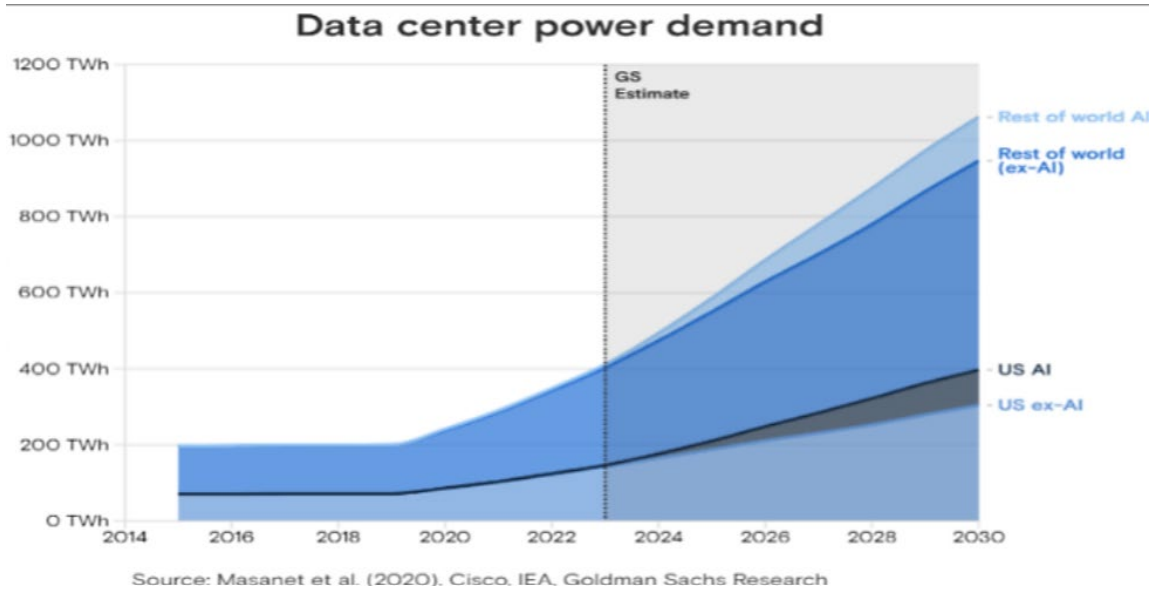
Technological innovations drive greater energy efficiency gains than renewables…

The International Energy Agency estimates that over half of the forecast energy savings between 2023-2030 will come from technological innovation



Dynamic Space, with Recent Developments in…

- Global policy environment (e.g., tariffs, tax credits)
- Geopolitical developments (Ukraine/Russia, EU, China)
- Technological innovation
- Supply chain constraints (e.g., mineral inputs)
- Rising energy demands from artificial intelligence data centers



[1] International Energy Agency (IEA). World Energy Outlook 2024. October 2024. Available at: www.iea.org/reports/world-energy-outlook-2024 (downloaded July 7, 2025)
[2] Goldman Sachs. GS Sustain: Generational Growth – AI/data centers' global power surge and the sustainability impact. April 2024. Available at: www.goldmansachs.com/insights/goldman-sachs-research/gs-sustain-generational-growth-ai-data-centers-global-power (downloaded July 11, 2025)

Policies Guiding Our Energy Transition Approach

Guided by Mission

Approach to energy transition investing guided by LACERA's mission to produce, protect, and provide the promised benefits to our members

Recognize Both Investment Opportunities and Risks

LACERA's investment policies recognize that the energy transition and climate change present both **financial risks and opportunities to individual portfolio holdings** as well as to **the broader economy** in which LACERA invests[1]

Credible, Pragmatic, Informed, Integrated Approach to Energy Transition

Integrated Policy Guidance Across the Total Fund

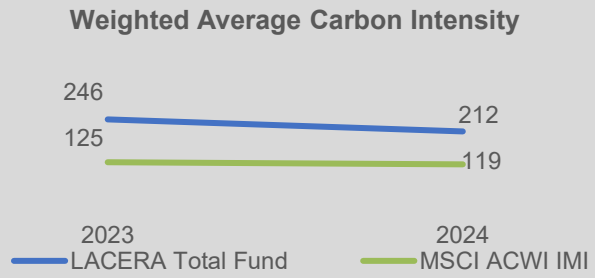
- Investment Policy Statement calls for LACERA to measure and evaluate financial risks and opportunities
- BOI Investment Strategic Plan since 2000 has called for "climate-aware" asset allocation
- All investments diligence for climate risks and opportunities
- Real assets Structure Review
  - "Climate Aware" infrastructure and natural resource
  - Avoid "stranded asset risks"

[1] See LACERA Investment Policy Statement and Corporate Governance and Stewardship Principles www.lacera.com

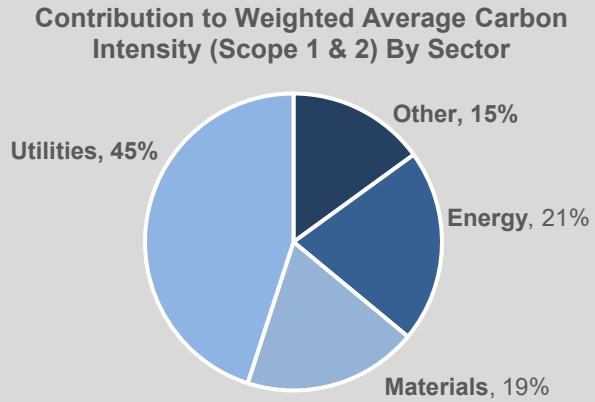
LACERA Fund Exposures to Energy Transition

Risks

Measured carbon intensity declined yet above benchmark [1, 2, 3]



Three industries represent 85% of LACERA's carbon intensity [1, 2]

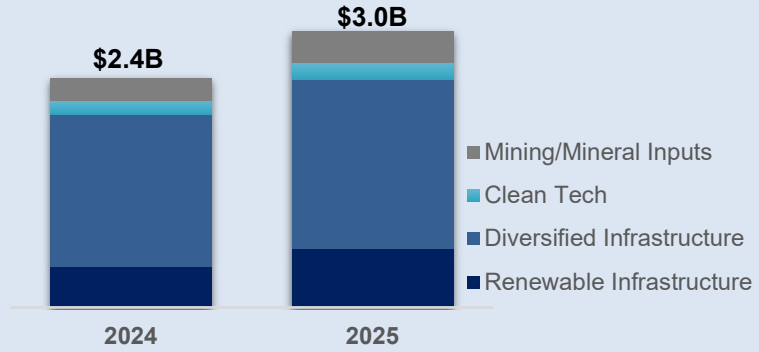


[1] Sources: MSCI and staff analysis of manager-reported data. Data coverage is limited to 46% of the portfolio.
[2] Weighted average carbon intensity (WACI) is the portfolio's exposure to carbon-intensive companies measured by weighted average of companies' emissions to sales
[3] MSCI ACWI IMI is the MSCI All Country World Investible Market Index and represents a broad global public equity universe

Opportunities

About $10.2 billion (13%) in exposures across the Fund

- **Public Equities**
  About **$5.1 billion** invested in public companies that generate more than 10% of revenue from transition-related business lines (e.g., utilities, electric vehicle manufacturers)
- **Real Estate**
  - **$1.6 billion** in properties with energy efficiency certifications
  - **$550 million** in properties generating renewable energy on-site
- **Real Assets**
  - **$3 billion** in diversified energy transition exposures
  - Recent fund commitments will expand exposures to **$5 billion**



Part 2: Market and Policy Environment Insights from LACERA Asset Managers

Panel Discussion – Energy Transition

Panelist	Panelist	Panelist
		
Claudia Meer	**Reuben Munger**	**Jehangir Vevaina**
Enfra Solutions	**Vision Ridge Partners**	**Brookfield Asset Management**

Brookfield

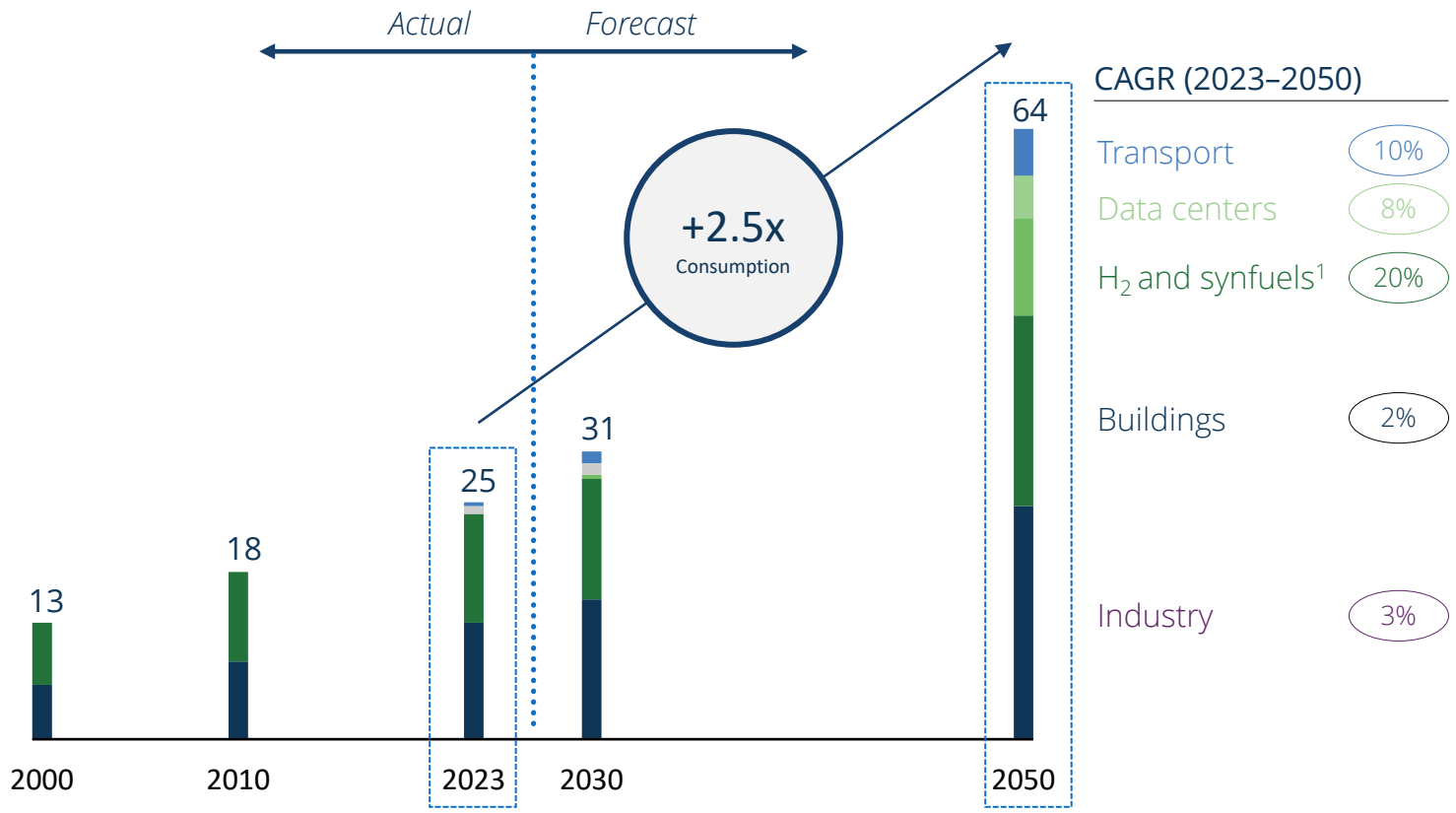
Energy Transition Panel

Brookfield Renewable Power & Transition

Jehangir Vevaina

Global Electricity Demand is Growing at an Accelerating Rate

Global Power Consumption by Sector: Continued Momentum (thousand TWh)



Global increase in demand is driven by all industry sectors, with specific sectors as lead contributors:

- **Transport:** driven by increased penetration of electric vehicles (EVs)
- **Data centers:** driven by the rise of AI, cloud solutions, and cryptocurrency
- **Hydrogen and synfuel production:** driven by growing demand for green hydrogen in transportation and industrial applications

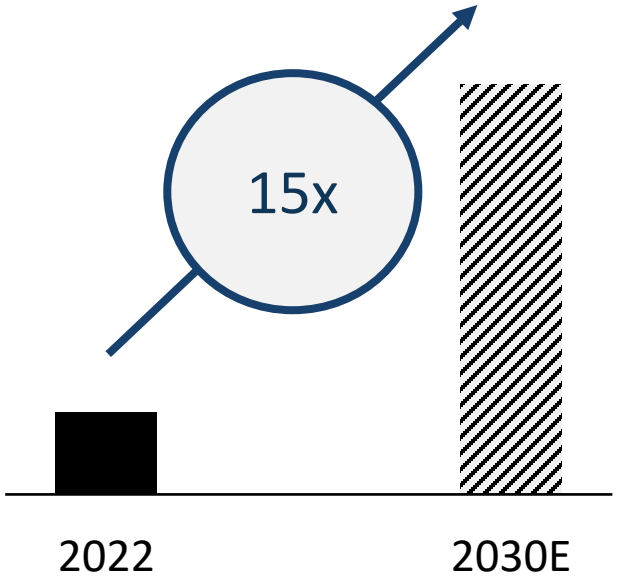
Generated capacity must double current levels to meet anticipated demand; as more of the world's current supply becomes depleted, it will require incremental capacity above this threshold

Source: Based on Bloomberg World Energy Outlook Net Zero Emissions ("NZS") scenario.
1. Based on CAGR between 2030 – 2050 as no power consumption related to H2 and synfuels was recorded in 2023.

...Driven by Major Global Themes

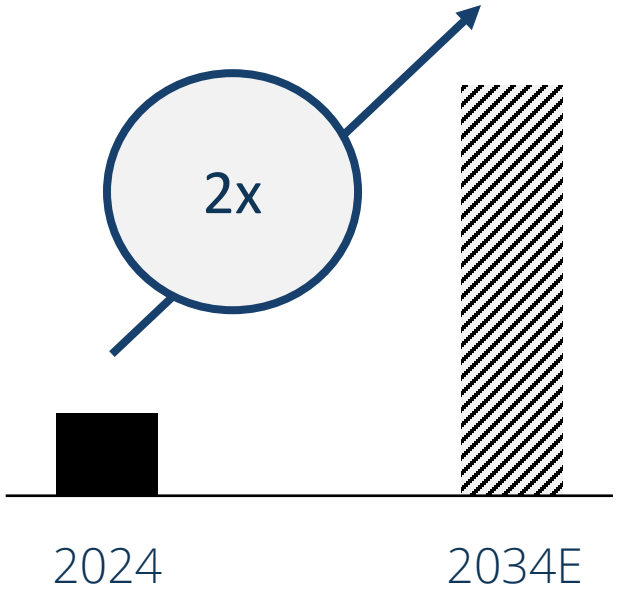
Advances in Technology

Global power demand from data centers[1]



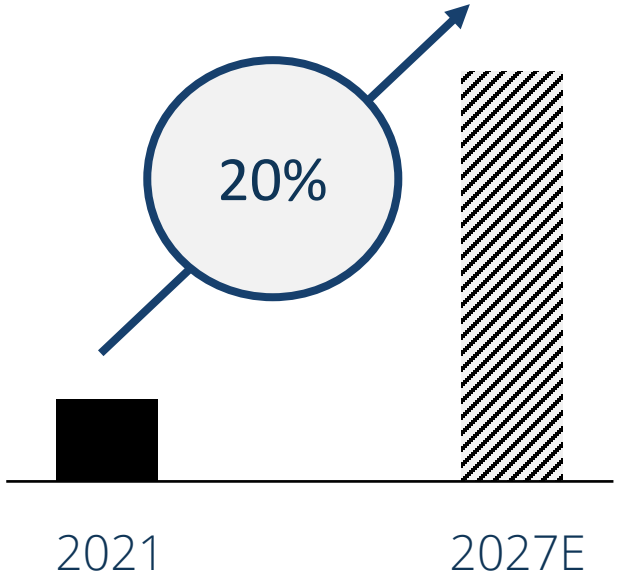
Electrification

Global surge of the industrial electrification market[2]



Onshore Manufacturing

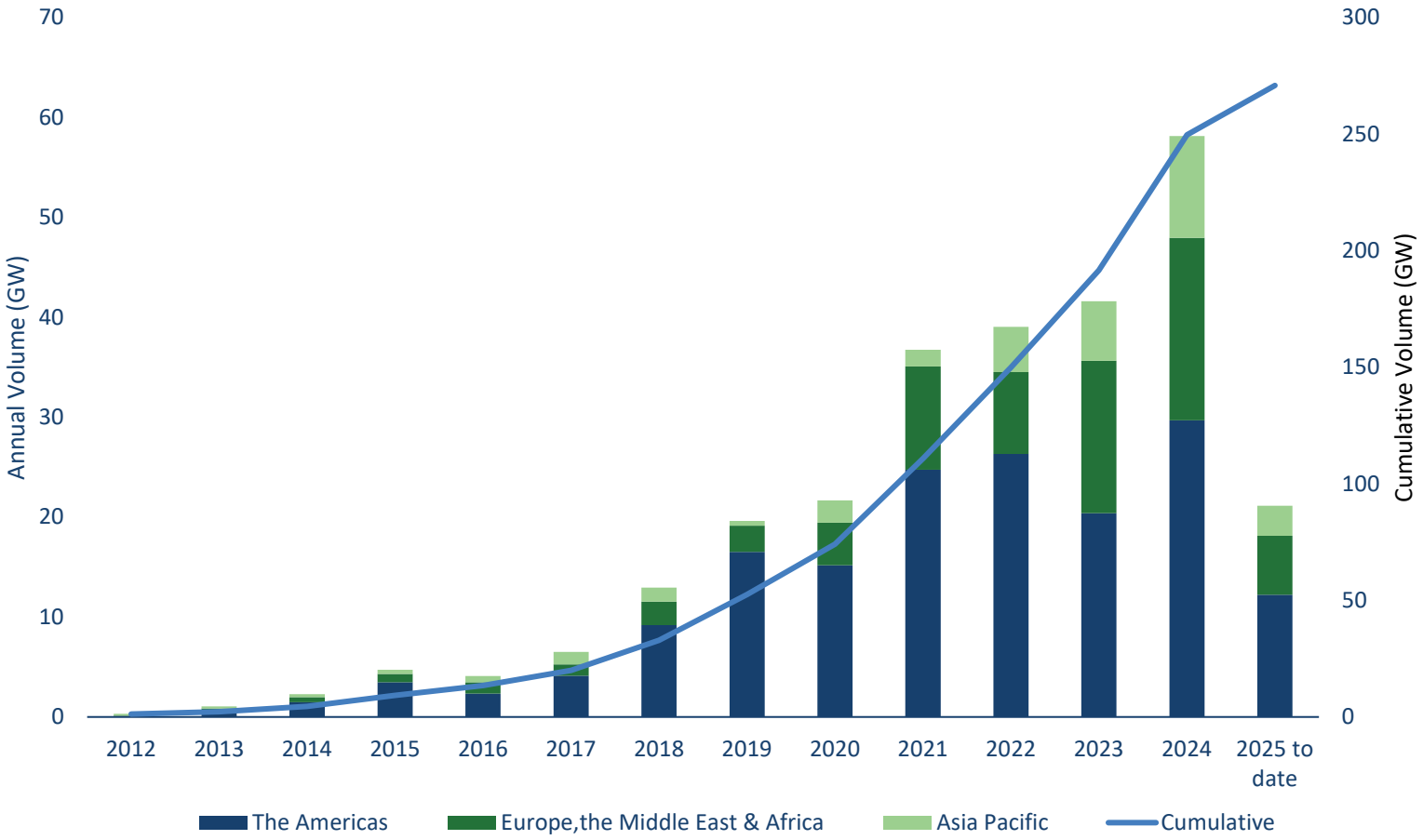
Growing share of production capacity through domestic facilities[3]



Please refer to the endnotes at the end of the presentation.

1. Source: BCG US Data Center Power Outlook, July 2024
2. Precedence Research, Industrial Electrification Market Size, Share and Trends 2025 to 2034
3. Capgemini Research Institute, Reindustrialization Executive Survey

With Significant Growth in Demand from Corporates for Energy



- Corporate power purchase agreement (PPA) volumes for clean power have grown 25x in the past decade
- 2024 PPA volumes were up 40%, driven by the technology companies
- Data center power demand is growing from ~2% of global consumption to almost 10% by 2030 and up to 20% in the U.S.

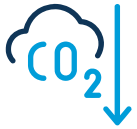
Source: Bloomberg NEF

Navigating the Global Policy Landscape

Regional policy changes are driving up project costs, but the risks are largely known

Europe is accelerating transition amid energy security concerns

Domestic manufacturing and job creation incentives are growing



New regulatory incentives and support for emerging lower carbon technologies

Source: Brookfield Internal Research.

The Noise versus Reality

Headlines


Renewable Energy Investors Receive Mixed Signals In The U.S.

By Ariel Cohen, Contributor. ⊙ Ariel Cohen is a D.C.-based contributor who... covers energy and security

Follow Author

Published Jun 05, 2025, 09:00am EDT, Updated Jun 05, 2025, 09:16am EDT


CHANNEL CHECKS INDICATE U.S. DATA CENTER LEASE CANCELLATIONS BY MICROSOFT

THE TD COWEN INSIGHT


AI boom under threat from tariffs, global economic turmoil

By Aditya Soni

April 23, 2025 6:34 AM EDT · Updated 6 days ago

Aa


$14 Billion in Clean Energy Projects Have Been Canceled in the US This Year, Analysis Says

A new analysis finds that more than $14 billion in clean energy projects in the U.S. have been canceled this year

By Associated Press | May 29, 2025

Reality

Fundamentals for U.S. renewables are incredibly strong

- Electrification, digitalization & reindustrialization in the U.S. are tailwinds on top of electrifying economy
- Strong demand is creating an attractive contracting market for operating assets and development projects

The U.S. government is pro-energy development

- Focused on ensuring U.S. is the leader in artificial intelligence (AI) & promoting reindustrialization
- Policies will remove road-blocks and promote growth in domestic energy capacity which will benefit our business (nuclear and hydro)

Critical minerals are a key component in energy supply chains—for both clean and conventional energy equipment

Critical mineral resources are more geographically dispersed than traditional energy commodities, with multiple resource-rich countries possessing material extraction capacity

→ *Though refining and processing capacity remains heavily concentrated in China, which accounts for approximately 90% of global mineral refining*

Critical minerals are emerging as a significant geopolitical flashpoint

→ *Driven by China's dominance in refining and the lengthy timelines required to develop alternative capacity elsewhere*

While supply chains in the U.S. are localizing for downstream manufacturing, it will take at least 3-5 years for material capacity of critical mineral supply chains to onshore

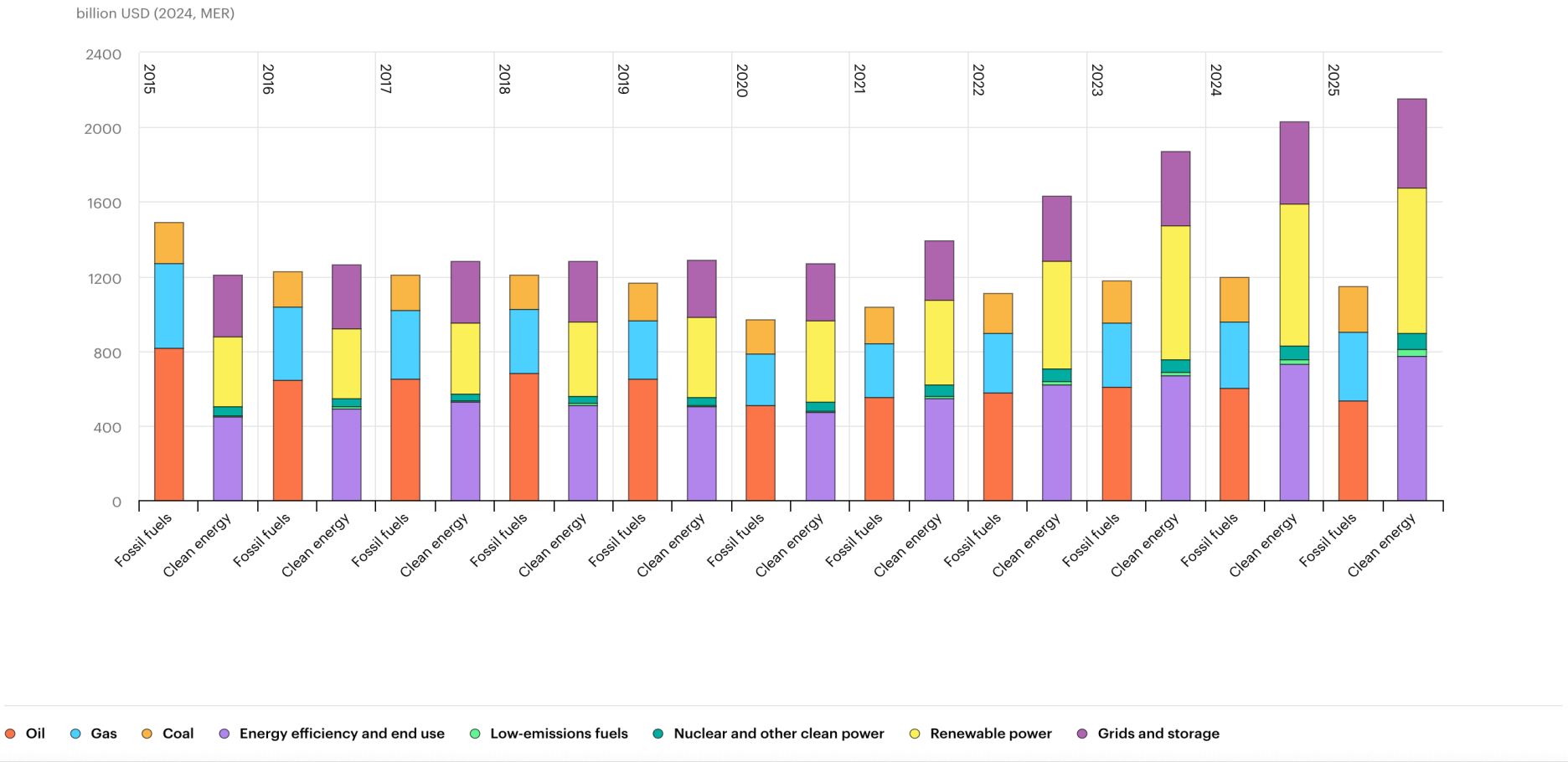
→ *Evolution of permitting and environmental legislation will play a key role in the timeframe for this industry to localize*

Source: Brookfield Internal Research.

LACERA Panel Discussion

Claudia Meer

Global Investment in Clean Energy & Fossil Fuels 2015-2025[1]

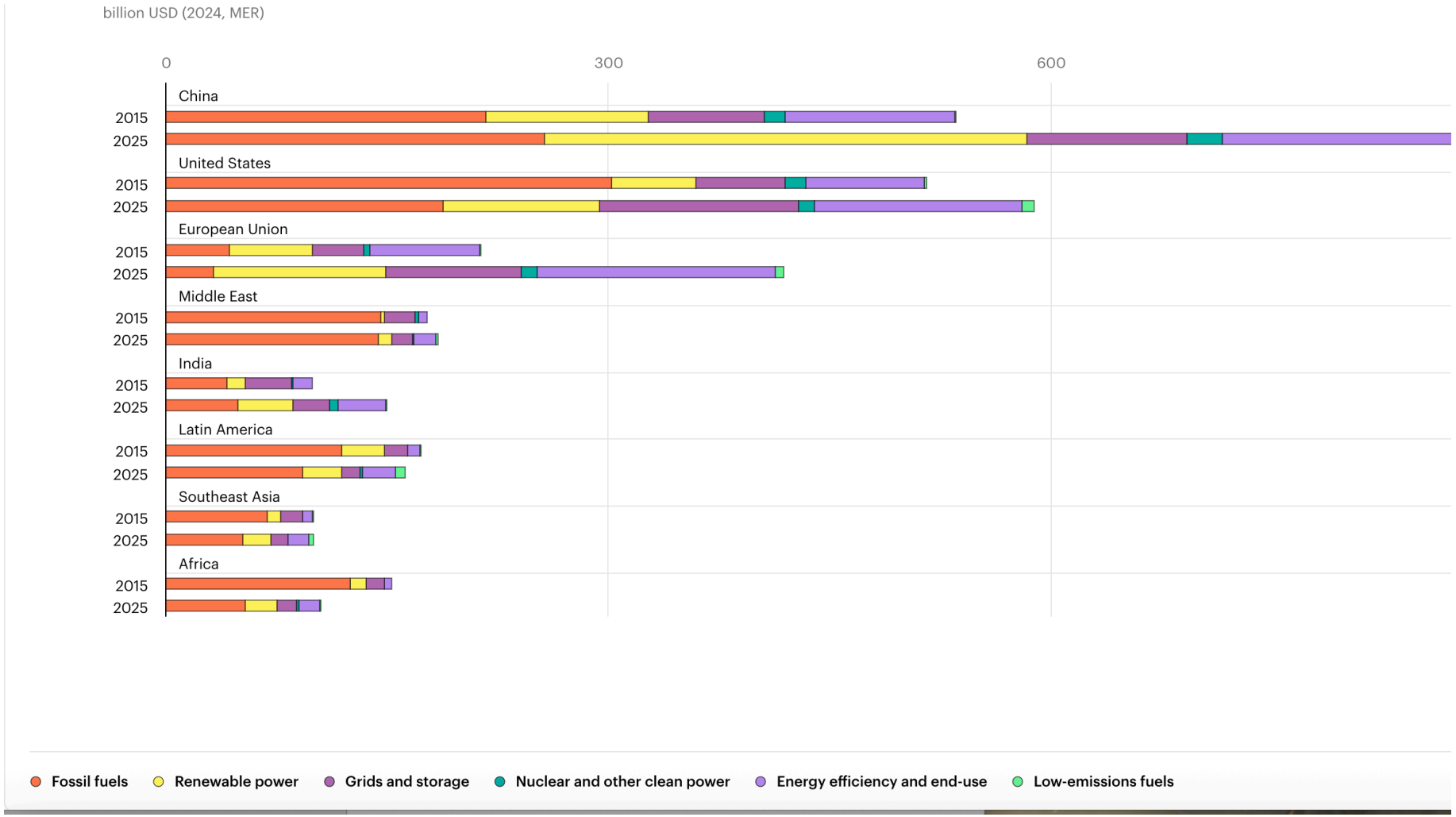


- Investment has generally shifted from fossil fuels toward clean energy over the period
- Global clean energy investment exceeded $2T in 2024 and 2025 with renewables, energy efficiency and grid/storage at lead
- Renewables and nuclear supplied ~40% of global electricity in 2024

Energy Investment Across Regions & Sectors, 2015 & 2025

Chinese expenditures represent nearly 33% of global spend[1]

China is Largest Energy Investor By Far



- Global energy demand grew by 2.2% in 2024 – faster than average rate over past decade.
- Emerging and developing economies - especially China and India - accounted for over **80%** of energy demand growth

[1] International Energy Agency (IEA) Global Energy Review 2025

Current US Policy Framework

All forms of energy paramount to win AI race against China – decarbonization not a priority

Key Policies and Initial Results

July Budget Bill and Impacts

- Significantly curtailed Federal policy on Federal tax credits for renewable energy and decarbonization
- Wind, solar, hydrogen tax credits sunset for projects placed in service after 2027 or if construction starts after July 4, 2026; residential solar, storage energy efficiency and other programs end 2025
  - Foreign entity[1] restrictions on content and investment
  - Nuclear and Geothermal – projects tax credit eligible through 2033 construction start
- $22B US clean energy projects cancelled first six months of 2025[2] and projecting 20-23% of solar/storage projects in development to be cancelled next 5 -10 years and upwards of 50% of wind projects[3]

New Energy Dominance Financing Program Bill

- $280B funding for DOE Loan Program focus on LNG storage, blue methane, ammonia, biofuels, possibly coal for steel manufacturing

Pentagon

- Investment/lending arm focused on domestic critical mineral production
- $540M invested to date; recent MP Minerals US mine investment and loan[4]

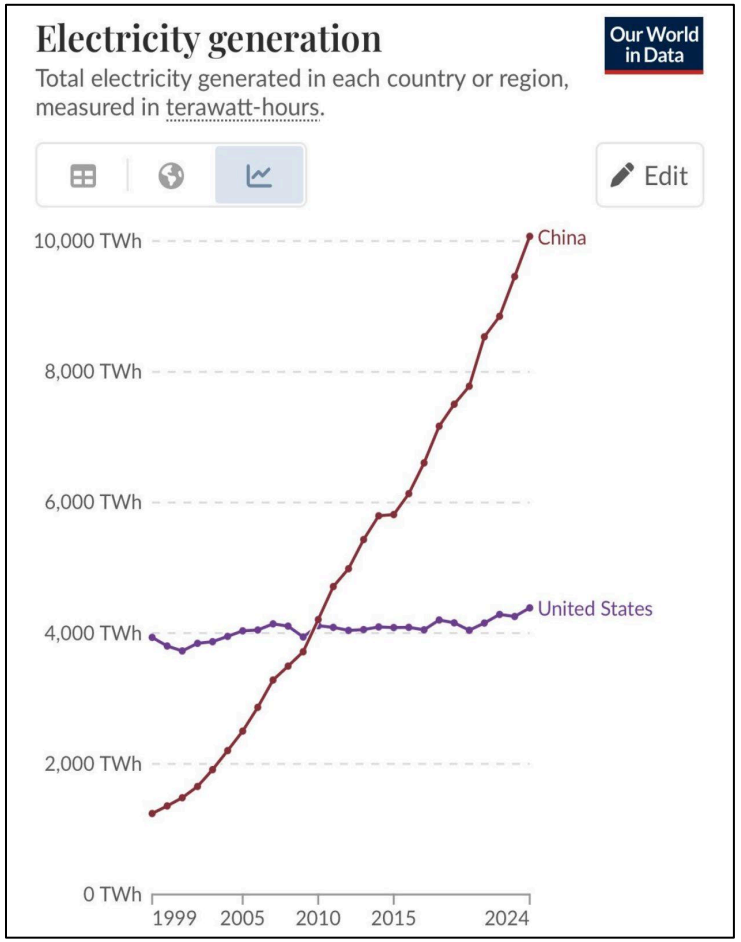
1 FEOC or Foreign Entities of Concern are China, Russia, North Korea and Iran

2 E2.org July 24, 2025 news release

3 Crossroads: The Infrastructure Podcast, "OBBB's impact on renewable energy deployment" interview with David Riester of Segue Sustainable Infrastructure; Politico E&E News, "3 big questions about the megalaw's impact on renewable energy," July 22, 2025

4 Reuters, "Pentagon to keep investing in US critical minerals projects, defense official says" July 15, 2025

China Policy and Energy Transition Focus[1]



Factors in Chinese Energy Growth

Rapidly adding electricity generation with solar additions approaching 100 TWh per month

- In just May added nearly 2x what US added in all of 2024[1]
- Current electricity generation is 2.5x US while per capita usage in US is 2.2x that of China
- Curtailing carbon intensity to record lows in 2025[2]

Energy security and energy production are top priority

- Coal and crude oil steady and continued rapid rise in gas

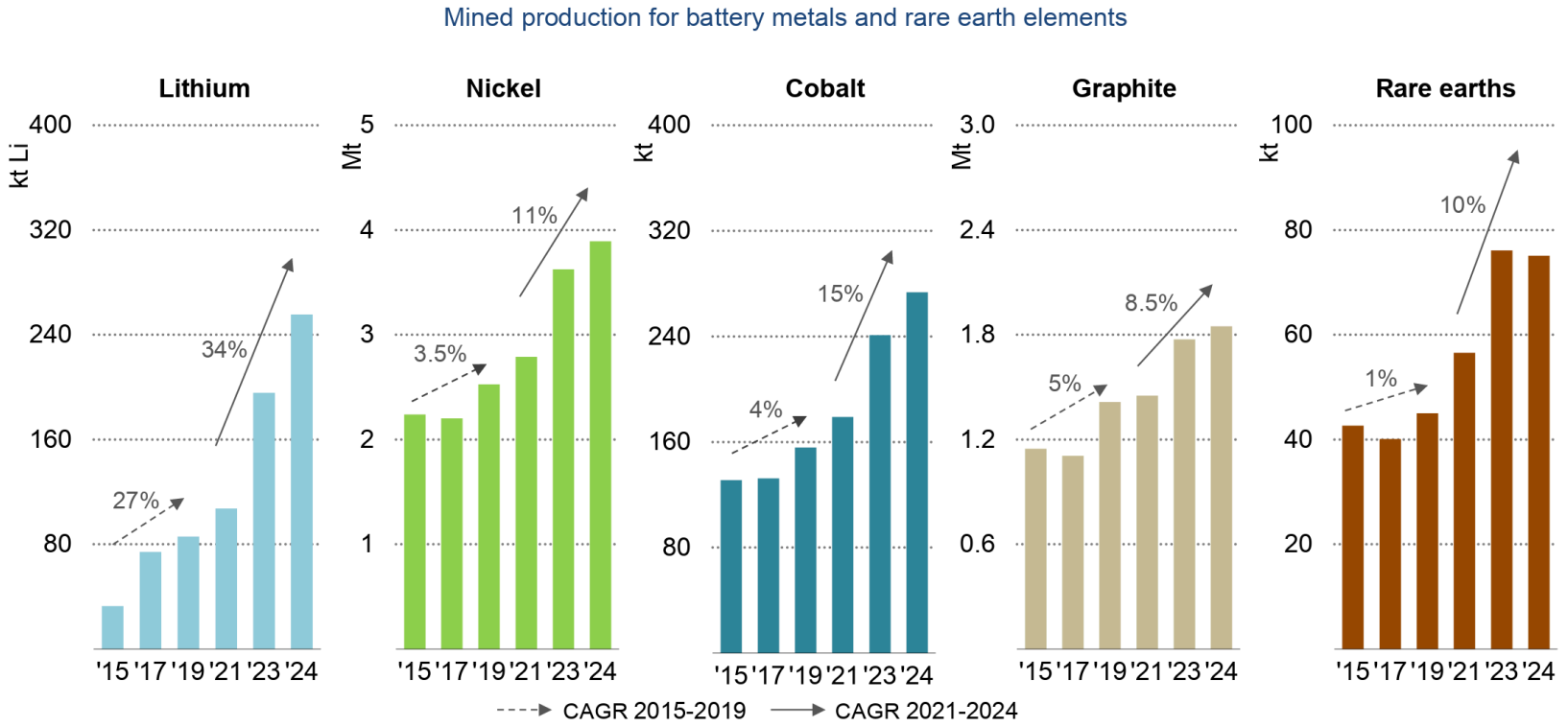
14th Five-Year Development Plan (2021-2025)

- Non-fossil fuel sources to equal 30% energy production and 20% energy consumption
- Targeting 60% non-fossil fuel power capacity in 2025[3]

[1] Solar Energy Industry Association; Our World in Data [2] Reuters "China cuts electricity emissions to record lows in 2025'" July 16, 2025; [3] S&P Global "China aims for 60% non-fossil fuel power capacity in 2025" February 27, 2025

Critical Mineral Supply Vs. Demand[1]

Mined Output Growth for Battery Metals and Rare Earth Elements Accelerating



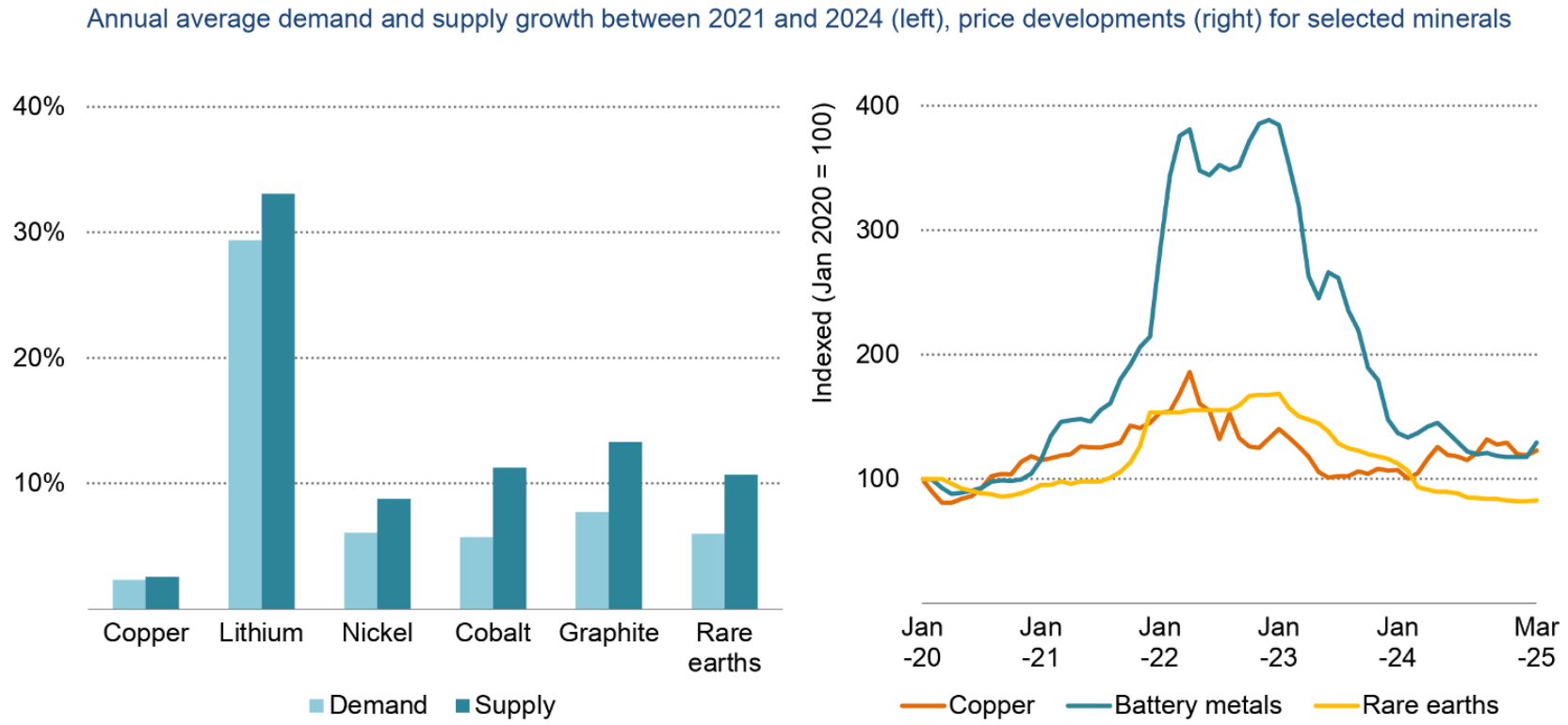
Notes: kt = kilotonnes; Li = lithium; Mt = million tonnes; CAGR = compound annual growth rate. Graphite is for natural flake graphite. Rare earths are magnet rare earths only.

- Despite increasing concerns about high supply concentration for critical minerals, growth in investment slowed in 2024 due to lower prices; exploration activity was flat yr-on-yr
- Growth in refined material production and refining are increasingly concentrated - particularly for nickel and cobalt

[1] International Energy Agency Global Critical Minerals Outlook 2025

Critical Mineral Supply Growth[1]

Supply Accelerated Faster Than Demand Causing Price Pressure



- Longer term:
  - Copper demand projected to exceed supply; 35% shortfall by 2035 with limited opportunity for expansion; Chinese grid growth driver of demand
  - Lithium currently well supplied but projected demand to outstrip supply in 2030s – new development sources promising
- Chinese export controls create new challenges and potential supply shocks
  - Dominant refiner for 19 of 20 minerals, with ~70% avg market share
  - Dominant downstream supplier for cells, cathodes and hard carbon anodes

[1] IEA Global Critical Minerals Outlook 2025, Supply Growth Rates based on refined output; rate earths are magnet rare earths only. Battery metals include lithium, nickel, cobalt, graphite and manganese. IEA analysis based on S&P Global and Bloomberg data.

LACERA Board Offsite - Energy Transition Panel
Vision Ridge

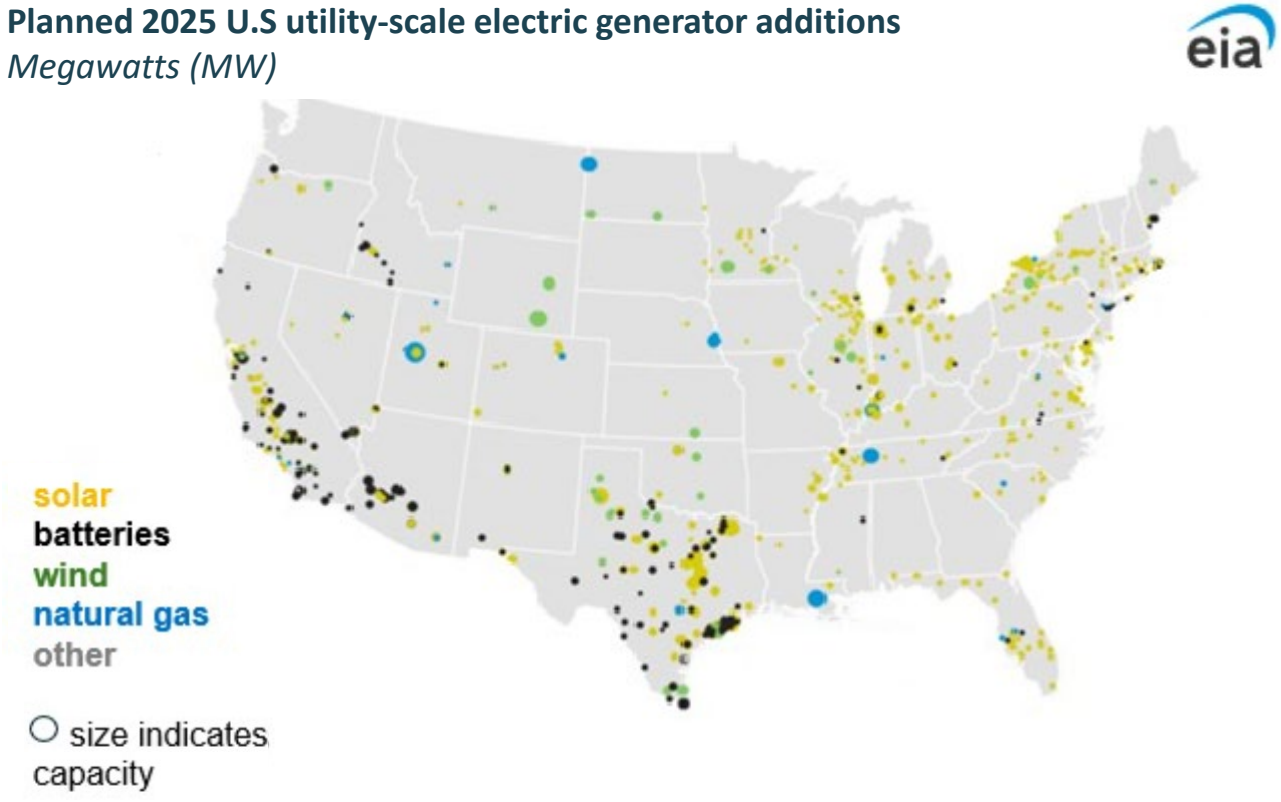
Reuben Munger

Solar & Battery Capacity Additions in the U.S.

GEOGRAPHIC DIVERSITY OF SOLAR ADDITIONS

- Renewable growth is spreading beyond traditional “blue” states, with strong development across diverse regions.
- Texas is the largest contributor, 11.6 GW; California plans to add 2.9 GW

Planned 2025 U.S utility-scale electric generator additions
Megawatts (MW)



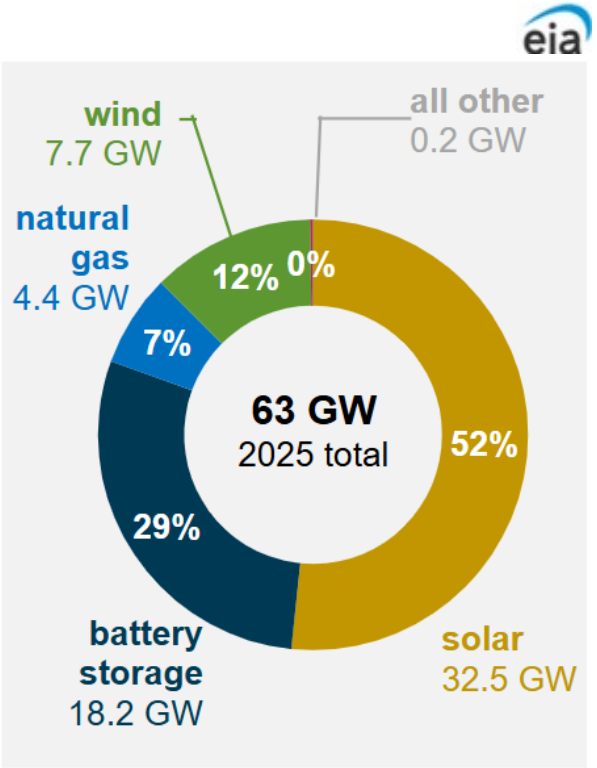
Data source: U.S. Energy Information Administration, Preliminary Monthly Electric Generator Inventory, December 2024 via EIA.gov, accessed July 23rd, 2025

U.S. Electricity Capacity Additions – 2025

RENEWABLES TO DOMINATE U.S. GRID EXPANSION IN 2025

- Total capacity forecast: 63 GW of new utility-scale power plants in 2025 – nearly a 30% increase over the 48.6 GW added in 2024
- Dominated by solar + batteries: These two technologies combined are projected to account for 81% of all capacity additions. Solar alone contributes over 50%

U.S. planned utility-scale electric-generating capacity additions (2025)
Gigawatts (GW)



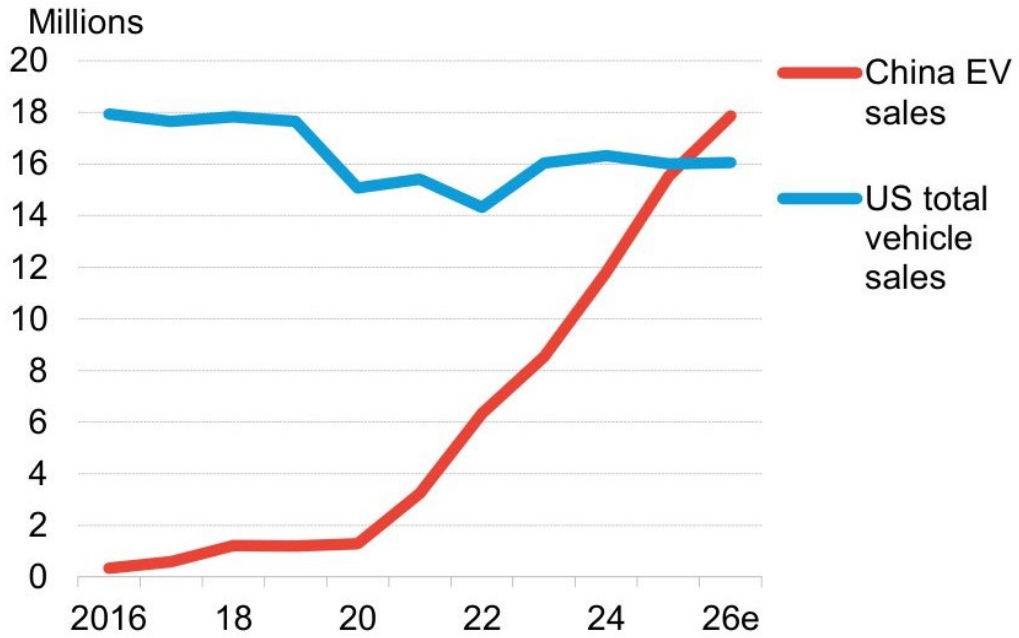
Data source: U.S. Energy Information Administration, *Preliminary Monthly Electric Generator Inventory*, December 2024 via EIA.gov, accessed July 23rd, 2025

EV vs ICE – U.S. Context

ELECTRIC VEHICLES ARE A GLOBAL GROWTH STORY; U.S. MARKET ADOPTION TRAILS GLOBAL PEERS BUT CONTINUES TO EXPAND

- **Global EV sales:** ~17.1 million electric vehicles sold worldwide in 2024 – up 25% YoY[1]
- **BNEF forecast**: Nearly 22 million EVs expected in 2025 – +25% growth[2]
- **U.S. EV share:** ~7% of global EV sales, with North America slower growth (only +3% YTD in early 2025)[3]

US total vehicle market compared to Chinese EV market[3]



Data sources:
1. EIA via ReliableGrid.org, accessed July 23rd, 2025: https://reliablegrid.org/news/solar-and-battery-storage-will-lead-new-generation-in-2025-eia
2. BNEF, accessed July 23rd, 2025: https://about.bnef.com/insights/clean-transport/global-electric-vehicle-sales-set-for-record-breaking-year-even-as-us-market-slows-sharply-bloombergnef-finds
3. BloombergNEF. Note: Includes passenger and commercial vehicles, and buses via x.com, accessed July 23rd, 2025

Speaker Biographies

Speaker Biographies

Claudia Meer

Board Member

Enfra Solutions, a CVC DIF portfolio company

Ms. Meer has been a financial services, P3 development and energy executive with roles as CEO, CFO, Chief Investment Officer and Head of Business and Corporate Development at an array of organizations including AlphaStruxure, Dalkia Energy Solutions U.S., Clark Energy and Structured Finance, Edgemoor Infrastructure &Real Estate and JP Morgan. In 2021 she pivoted to serve as an advisor to PE and Infrastructure firms such as New Mountain Capital and CVC DIF on investments in U.S. energy transition and microgrid development businesses. She has served as a corporate or advisory board member to energy as a service, recycled composite matting, community solar and storage developers residential and C&I solar storage, hydrogen fuel cell, engineering and fleet electrification businesses.

She holds an MPP from Harvard University and a BA from the University of Pennsylvania. She resides in Philadelphia and New York.

Speaker Biographies

Reuben Munger

Founder and Managing Partner

Vision Ridge Partners

Reuben founded Vision Ridge in 2008 in order to bring decades of value investing experience to bear on what he saw as the financial opportunities presented by sustainable solutions. A former Partner at the investment firm, The Baupost Group, LLC, Reuben has also been a consultant to Texas Pacific Group and an Investment Banker with James D. Wolfensohn, Inc. His passion and expertise in electrified mobility, renewable electricity generation, the built environment, and other assets make him a leader in sustainable investing.

Reuben is a board member of Western Resource Advocates, Chairman of the WRA Action Fund, a Commissioner at the Coalition for Reimagined Mobility, a board member of the League of Conservation Voters, and an investment committee member for RMI. Additionally, Reuben serves on the boards of numerous other private companies. He graduated magna cum laude from Washington and Lee University with a B.A. in Politics and Economics and a B.S. in Business Administration.

Speaker Biographies

Jehangir Vevaina

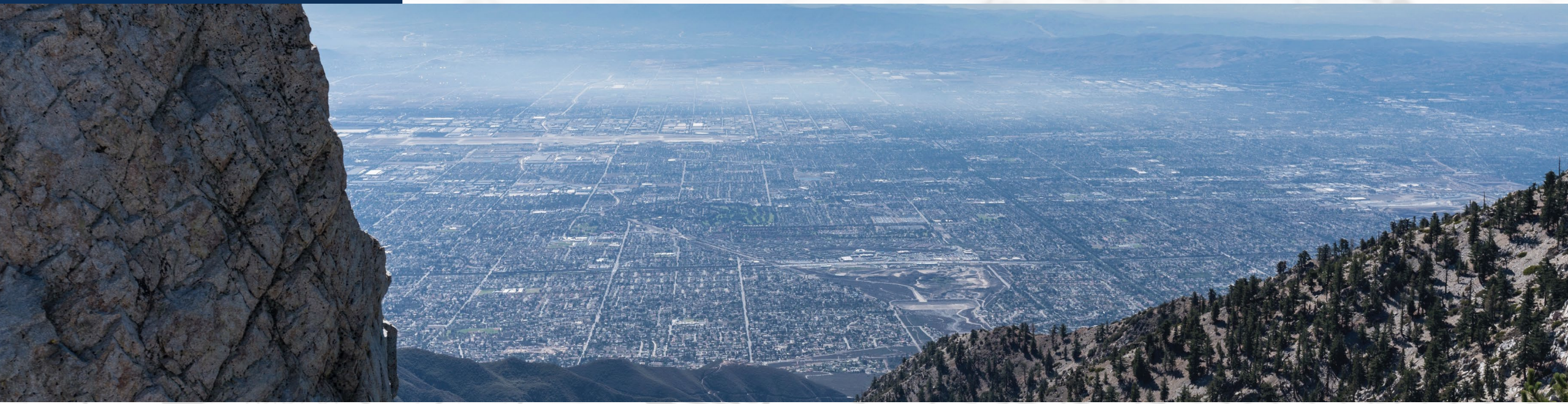
Managing Partner and Global Chief Investment Officer, Renewable Power and Transition Group

Brookfield Asset Management

Jehangir Vevaina is a Managing Director and Global Chief Investment Officer of Brookfield's Renewable Power and Transition Group. In this role, he is responsible for regional oversight and investment strategy leadership. In addition, Mr. Vevaina is involved in the screening, evaluation, and execution of global investment initiatives. Mr. Vevaina has previously held several investment and asset management roles within the group.

Prior to joining Brookfield in 2015, Mr. Vevaina worked in the power and energy infrastructure group of a large financial institution.

Mr. Vevaina earned in Bachelor of Commerce degree from McGill University.



Credit

Design and Implementation

Los Angeles County Employees Retirement Association

Credit: Design and Implementation

TODAY'S DISCUSSION

Tuesday, September 9, 2025, 10:30am

Session Outline

1. **Overview and Background for Today's Discussion**
    - **Vache Mahseredjian**, Principal Investment Officer
2. **Albourne Presentation – The Credit Universe and LACERA's Credit Portfolio**
    - **Kristen Jones**, Partner and Head of US Private Credit, Albourne
3. **LACERA Presentation – The Design and Implementation of LACERA's Credit Portfolio**
    - **Chad Timko**, Senior Investment Officer
    - **Krista Powell**, Investment Officer
    - **Quoc Nguyen**, Investment Officer

Objectives

A. Introduce the broad credit universe to contextualize LACERA's credit strategy and performance

B. Discuss the purposeful design and implementation of LACERA's credit portfolio and consider results

C. Highlight the portfolio's alignment with LACERA's broader investment mission and strategic goals

Part 1: Overview and Background for Today's Discussion

Executive Summary

10.3% LACERA Credit portfolio's 5-year return, annualized

2020 Beginning of LACERA's current approach to credit

LACERA's intentional implementation adds value

Credit: Design and Implementation

- Albourne presentation
- LACERA team presentation

Part 2: The Credit Universe and LACERA's Credit Portfolio

Overview of Credit Markets

ALBOURNE

What is **Credit…**

*Credit is the **ability of a borrower to access funds or resources from a lender** with the promise to repay them later, typically with interest, based on trust and the borrower's financial reliability.*

What does it mean to be a **Lender…**

*Credit lending is the process by which a lender **provides funds to a borrower** with the expectation that the borrower will repay the money, typically with interest, over a specified period.*

Familiar examples: credit cards, student loans, car loans, mortgages…

Private Credit's value proposition

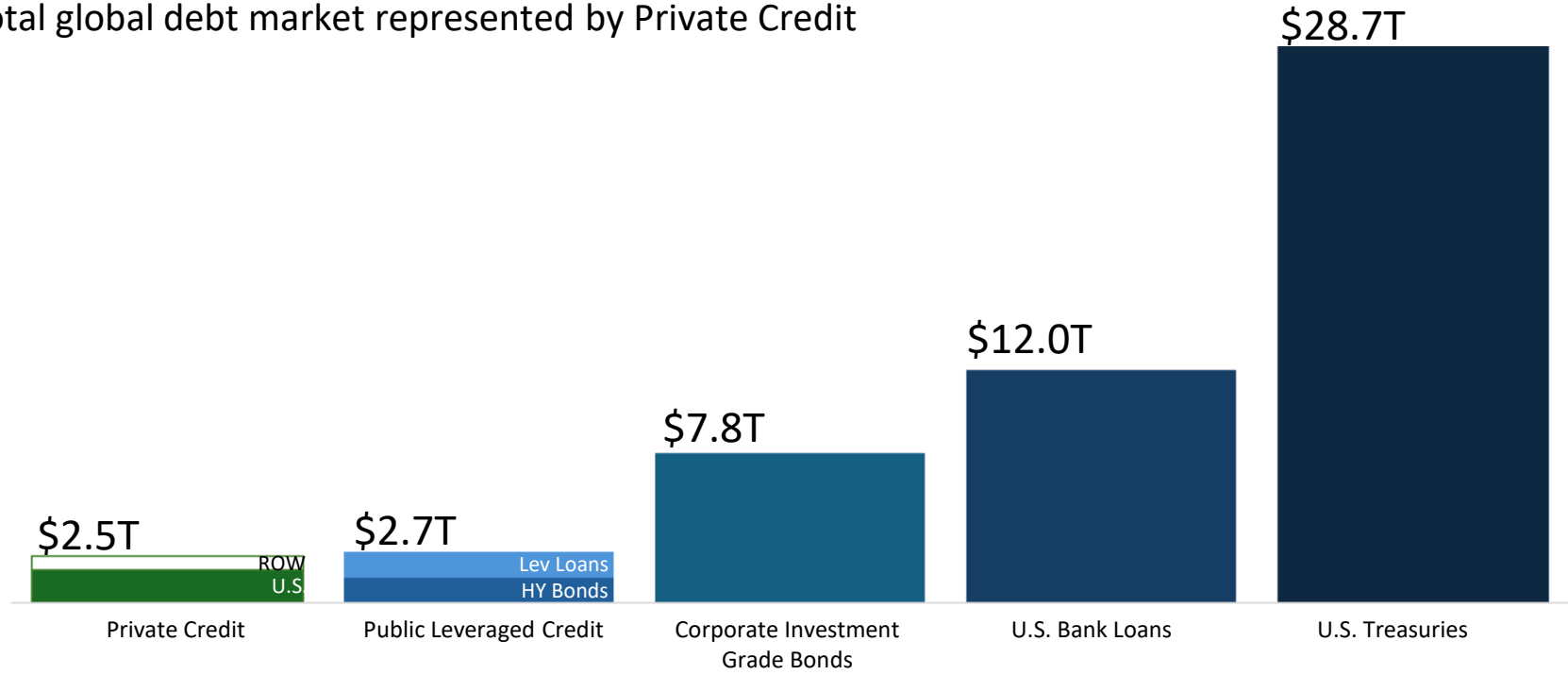
Customization • Speed • Certainty • Creativity • Confidentiality

Past performance is not indicative of future returns.

Overview of Credit Markets

5x increase in global Private Credit markets since pre-2008 (Global Financial Crisis)

<1% of total global debt market represented by Private Credit



Bonds & Loans • **Sovereign, Corporate & Asset Backed** • **Investment Grade (IG) & Non-IG**

Past performance is not indicative of future returns.

Overview of Credit Markets

ALBOURNE

S&P Credit Rating Scale

AAA
AA
A
BBB
BB
B
CCC
CC
C
D

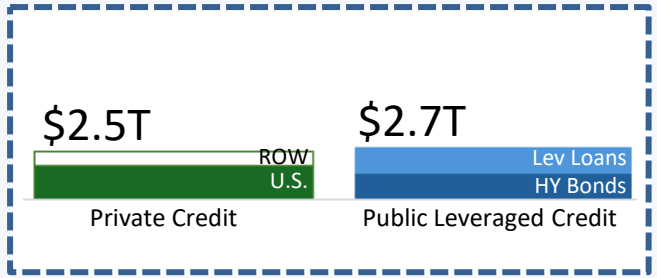
Investment Grade

- Bonds rated **BBB- or higher (S&P/Fitch*)** are considered investment grade
- Indicates **low to moderate credit risk** and strong capacity to meet financial obligations.

Non-Investment Grade

- Bonds rated **BBB-or lower (S&P/Fitch*)** are considered non-investment grade
- Indicates **higher credit risk** and greater sensitivity to economic conditions.
- Classified as high yield, offering **higher returns** to compensate for increased risk.

U.S. Corporate Non-Investment Grade Market

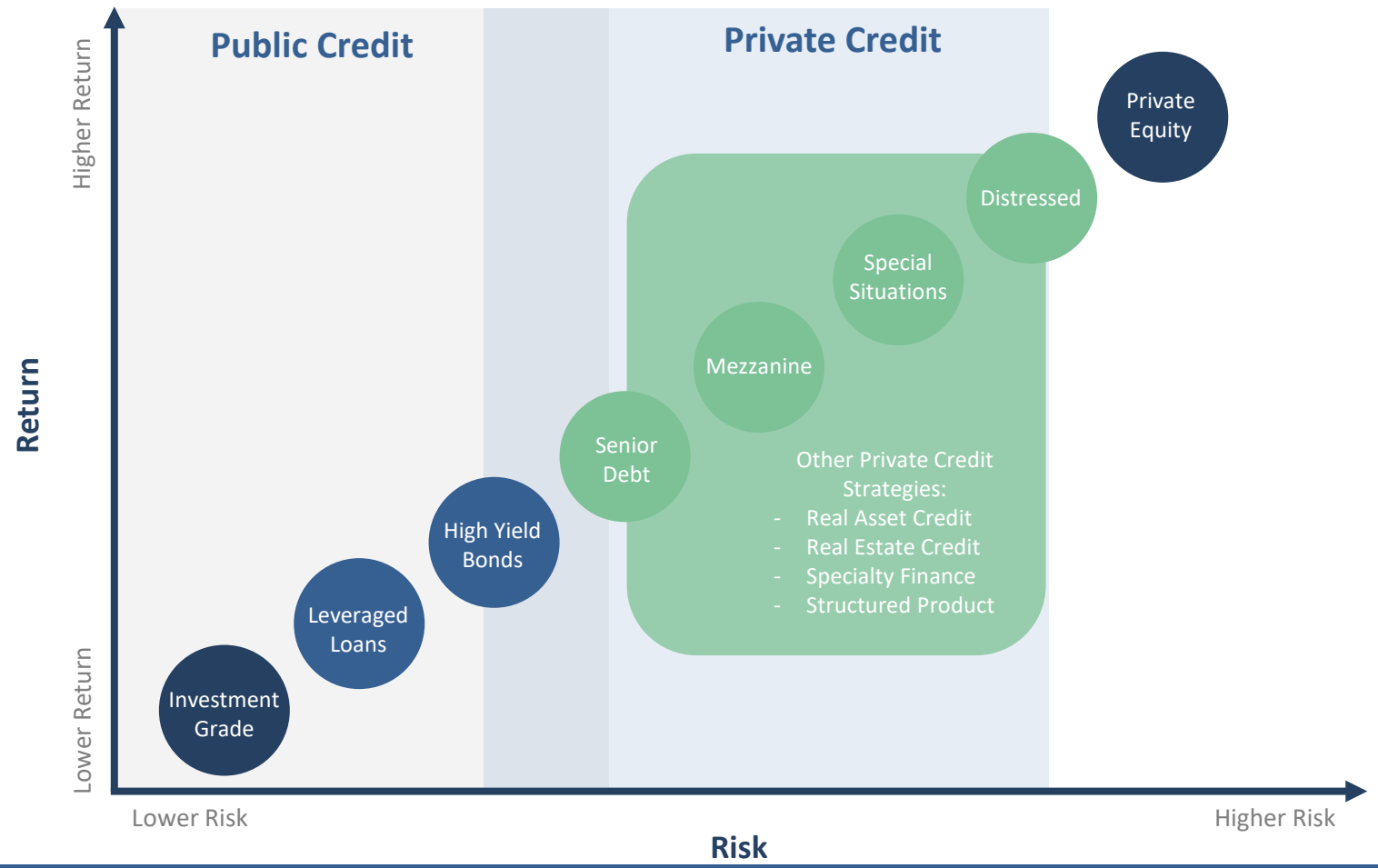


Credit Ratings

assess the creditworthiness of borrowers, helping investors evaluate the risk of default

*Baa3 or lower/higher (Moody's). Past performance is not indicative of future returns.

Risk vs Return Spectrum*

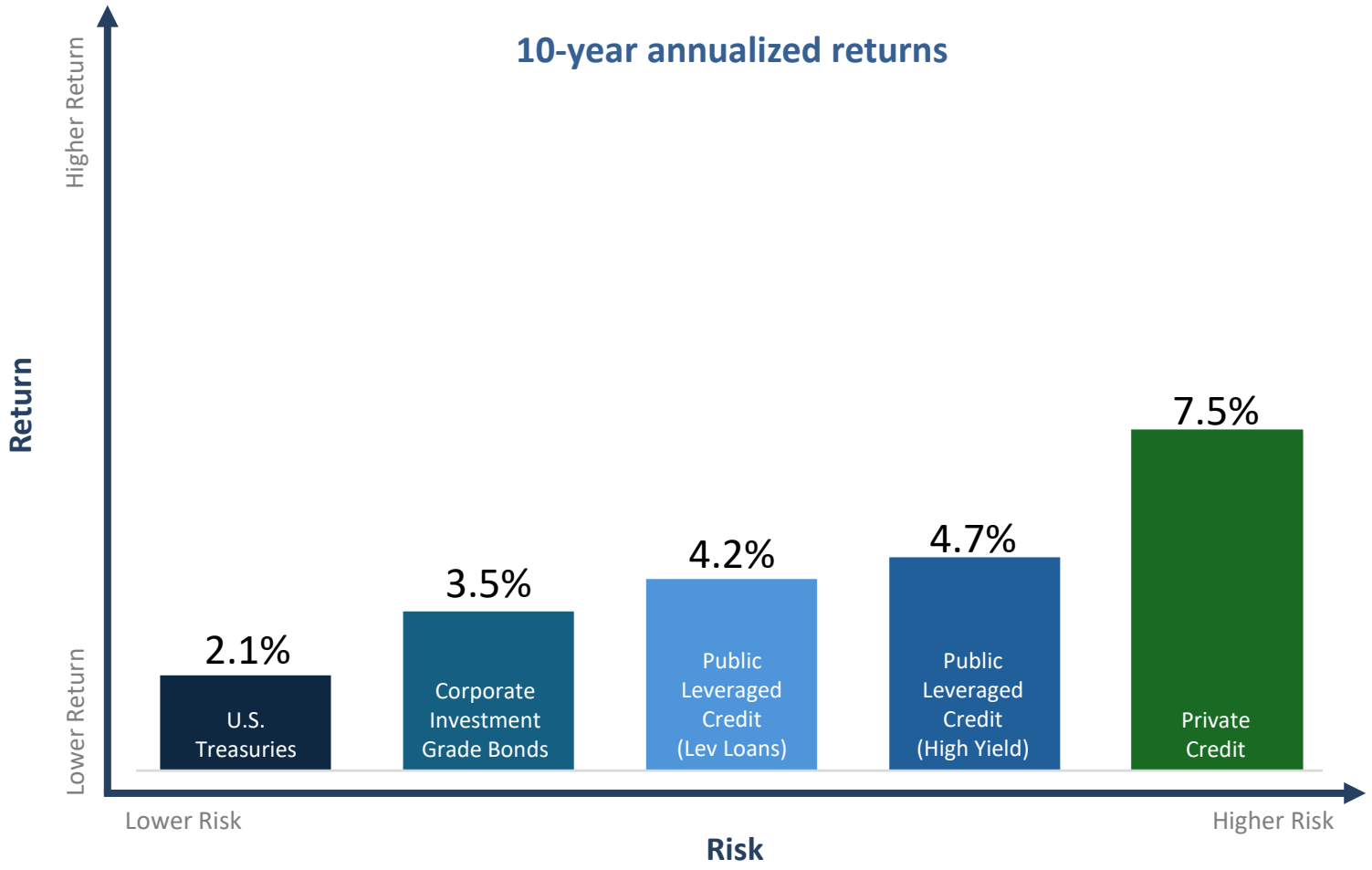


Theme: Convergence between public and private Non-Investment Grade credit

Theme: LACERA's approach purposefully spans liquid and illiquid credit

*Strategy placement is stylized and does not imply a strict linear tradeoff between the depicted strategies and credit types. Past performance is not indicative of future returns.

Historical Returns



Theme: Compensation for taking **Interest Rate** Risk, **Credit** Risk & **Liquidity** Risk

Past performance is not indicative of future returns.

Credit Considerations

ALBOURNE

- Seniority
- Security
- Leverage
- Resilience
- Income Generation
- Return Enhancement
- Diversification
- Fees & Liquidity

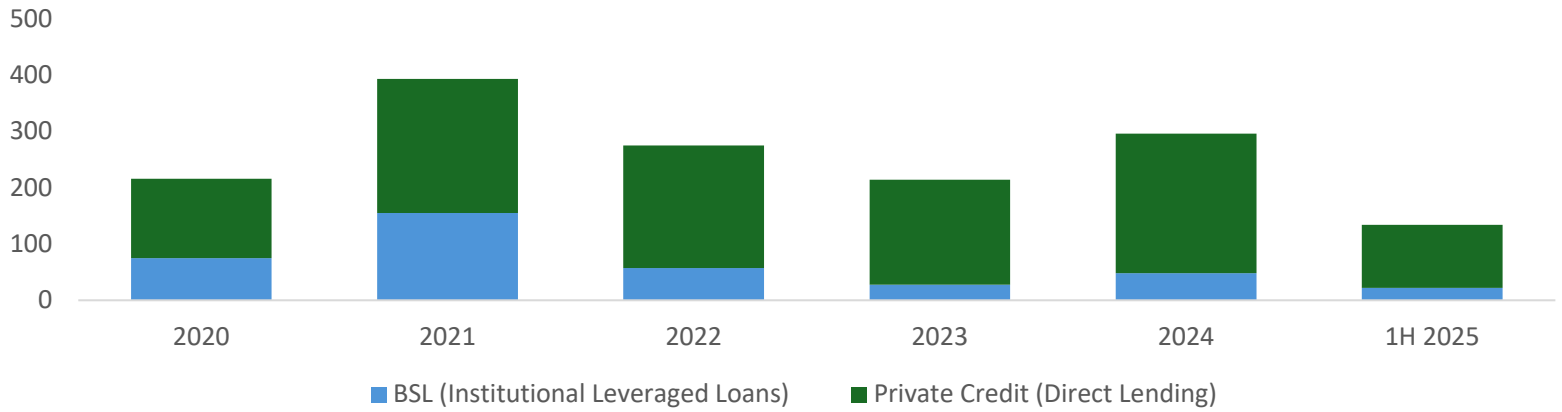
Theme: LACERA's implementation though evergreen DMAs emphasizes moderate risk & return, current income, and breadth across types of credit assets & strategies

The Rise of Private Credit

ALBOURNE

- Private Credit AUM has surpassed $2.5trn
- Demand fueled by a range of dynamics, including:
  - Bank retrenchment and challenging public primary (syndicated) issuance
  - Private Equity sponsors sitting on dry powder and looking for debt ‘partners’
  - Few viable alternatives for yield and the lack of mark-to-market volatility
  - Elevated investor allocations

Count of LBOs financed in Broadly Syndicated Loan vs Private Credit markets



Source: PitchBook | LCD • Geography: US • As of 30 June 2025

The Types of Private Credit

ALBOURNE

- Private Credit funds pursue a wide range of strategies with different risk/return profiles
- Target returns range from 5%-20%+ net based on borrower and risk profile
- Return drivers can be a combination of income and appreciation

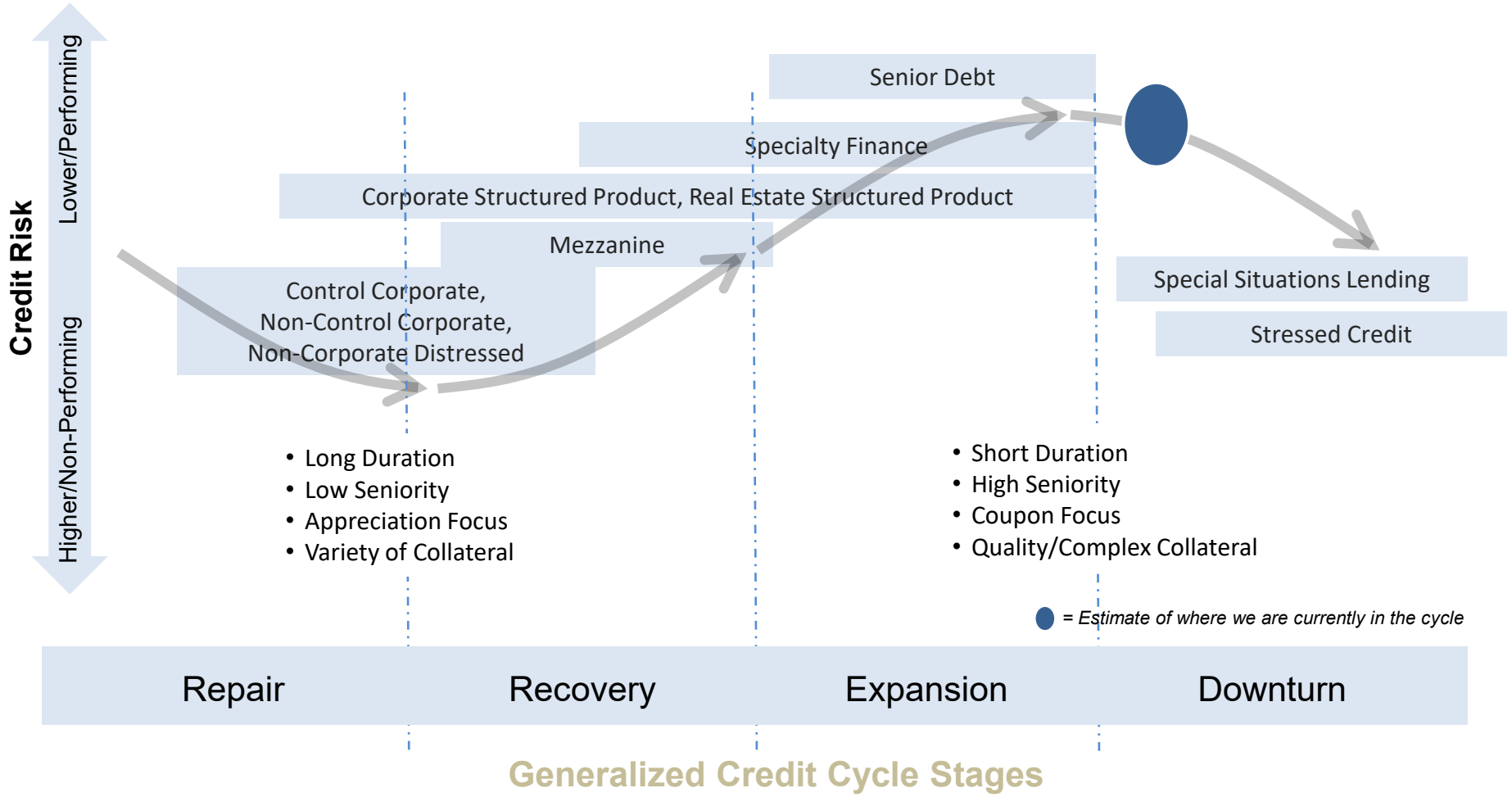
Private Lending	Specialty Finance	Structured Product	Real Assets Credit	Real Estate Credit	Distressed & Special Situations
Senior Debt	Consumer Specialty Finance	Corporate Structured Product	Infrastructure	Residential Mortgages	Special Situations Lending
Opportunistic Lending	Corporate Specialty Finance	Real Estate Structured product	Energy	Commercial Real Estate Lending	Stressed Credit
Growth Debt	Litigation	Consumer Structured Product	Aviation	Other Real Estate Credit	Non-Control Distressed
Junior Debt	Content Royalties	Capital Relief	Shipping		Control Distressed
Structured Equity	Healthcare Royalties/ Lending		Mining		
Syndicated Debt	Insurance Credit		Agriculture		
	PE Portfolio Lending				

Theme: Like the credit markets, LACERA's credit implementation is broad & dynamic

The size of each market is not shown to scale. Past performance is not indicative of future returns.

Credit Investing and the Economic Cycle

ALBOURNE



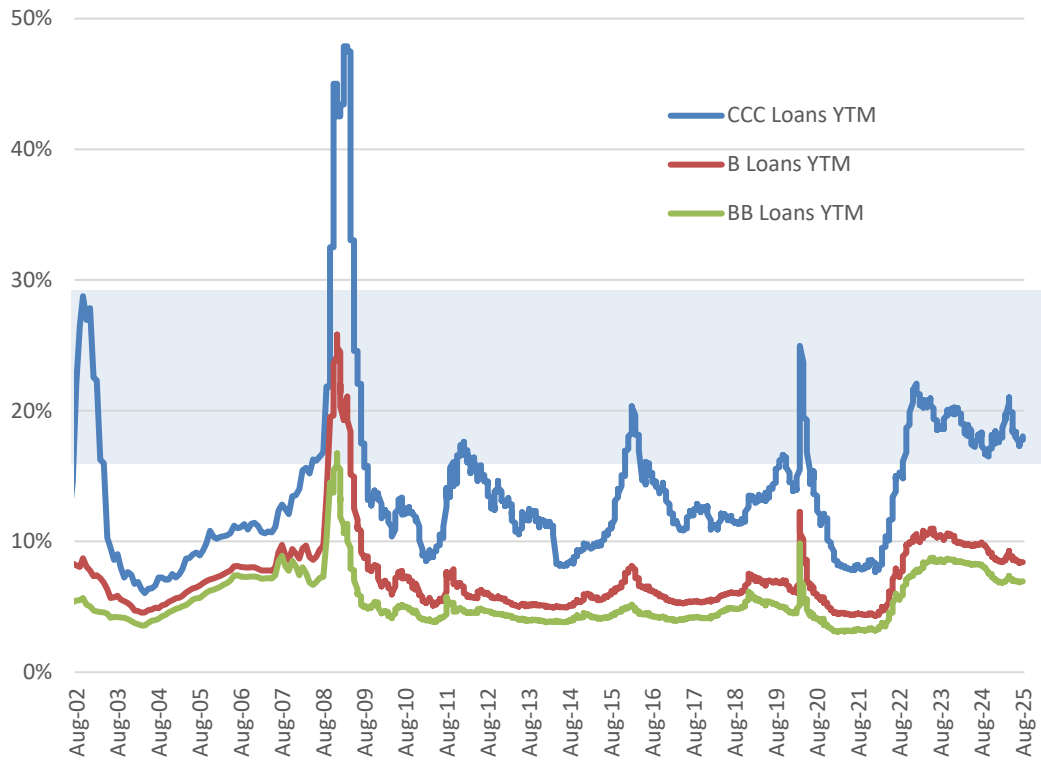
Theme: Credit opportunities evolve across dynamic market environments

For illustrative purposes only. Past performance is not indicative of future returns.

Rapidly Changing Market Environment

ALBOURNE

Leverage Loans Yield-to-Maturity



- The difference in spread for the highest & lowest quality assets is at historically wide levels
- Spreads are tight **except** for the lowest quality (CCC and below) loans and high yield bonds…

Elevated CCC Loan yield

Higher spread and elevated base rate supports strong overall yield profile in lowest quality loans

Spreads & yields vary over time, by credit quality, and between public & private markets

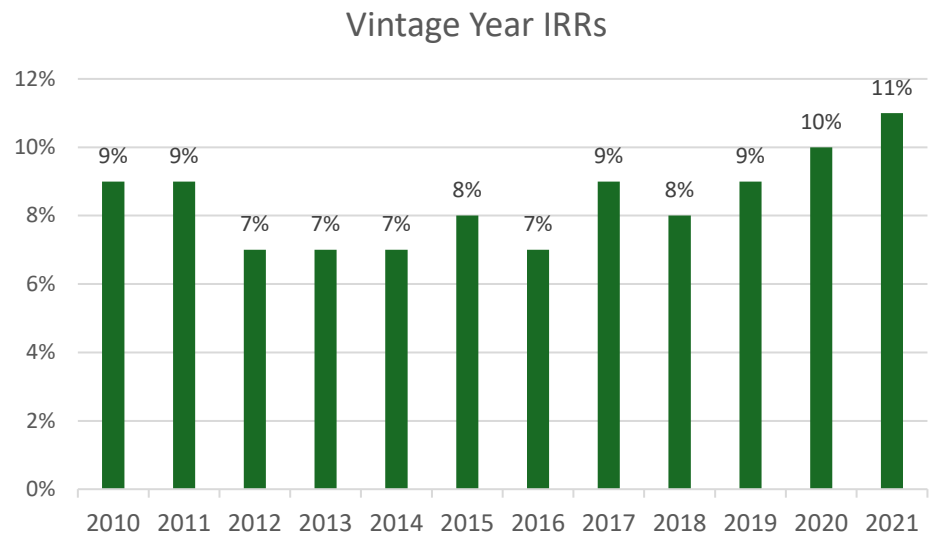
Source: Leverage Loan YTM, PitchBook | LCD As of 8 August 2025; High Yield Index Effective Yield, Ice Data Indices, LLC via FRED®. Past performance is not indicative of future returns.

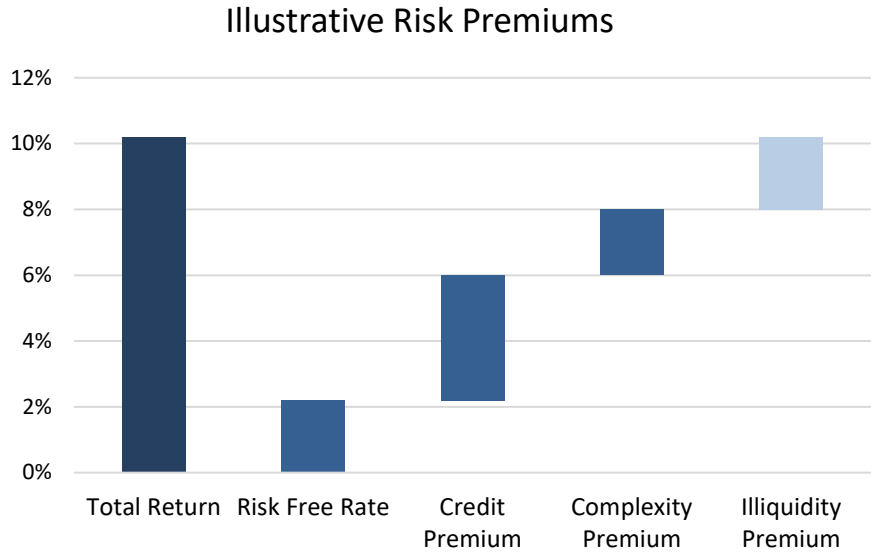
Private Credit Returns

ALBOURNE

- The median IRR ranges from 7%-11% for the 2010-2021 vintages
  - Private Credit is typically floating rate and offers some **"illiquidity premium"** relative to syndicated loans
  - A **"complexity premium"** may represent an increasing proportion of Private Credit's superior returns over the new issue market over time
  - **Upside optionality**

- Return dispersion has been relatively tight over the last decade but is expected to widen out



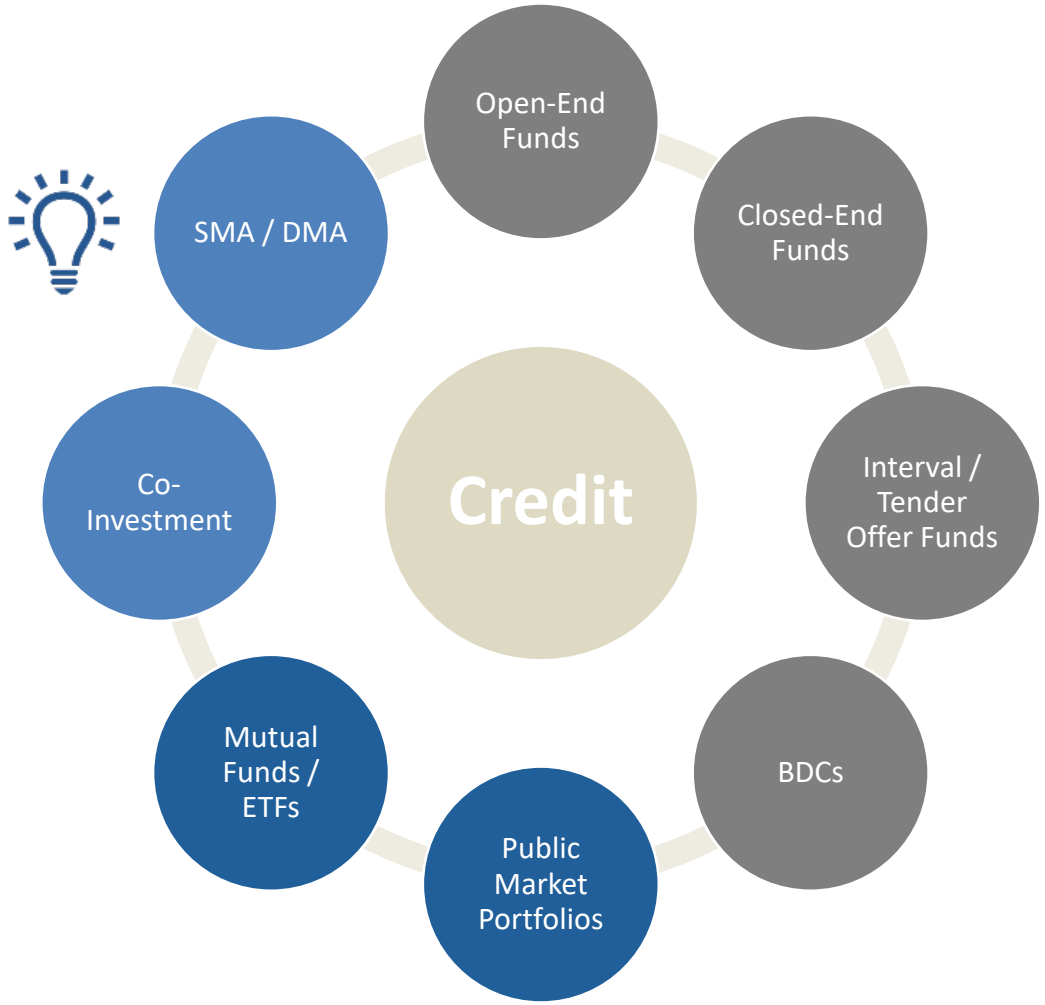


Source: Albourne Private Credit Index (USD, AW) indicative vintage year IRRs as of 4 August 2025. Past performance is not indicative of future returns.

Credit Investment Implementation

How are pension funds **accessing credit investments…**

Theme: LACERA leverages its scale to achieve a customized implementation solution via evergreen DMAs



Credit Investment Implementation

ALBOURNE

	Most Peers	LACERA
Structure	Co-mingled funds, often 2-4 year investment period and 5-8year fund life (10+ on the long end)	Evergreen, including dedicated managed accounts
Fees & Other Terms	Often standardized fee schedules, soft hurdles	Custom - leveraging scale
Mandate	Varies (narrow to broad), dependent upon firm's fund vehicle offerings	Broad and dynamic across the firm's credit capabilities customized to LACERA's objectives
Investor base	Varied, potentially introducing liquidity risks from fund investors	LACERA as sole, helping mitigate redemptions from others

LACERA benefits from…

- *Ongoing active management and will not be forced sellers*
- *Only paying performance fees for above-expectation returns*
- *Opportunistic and diversified exposure across market cycles*
- *Other investor actions do not impact LACERA*

Theme: LACERA's evergreen DMAs are designed to emphasize contractual yield, diversification, better fees, transparency & alignment (e.g., hard hurdle fee structure)

Part 3: The Design and Implementation of LACERA's Credit Portfolio

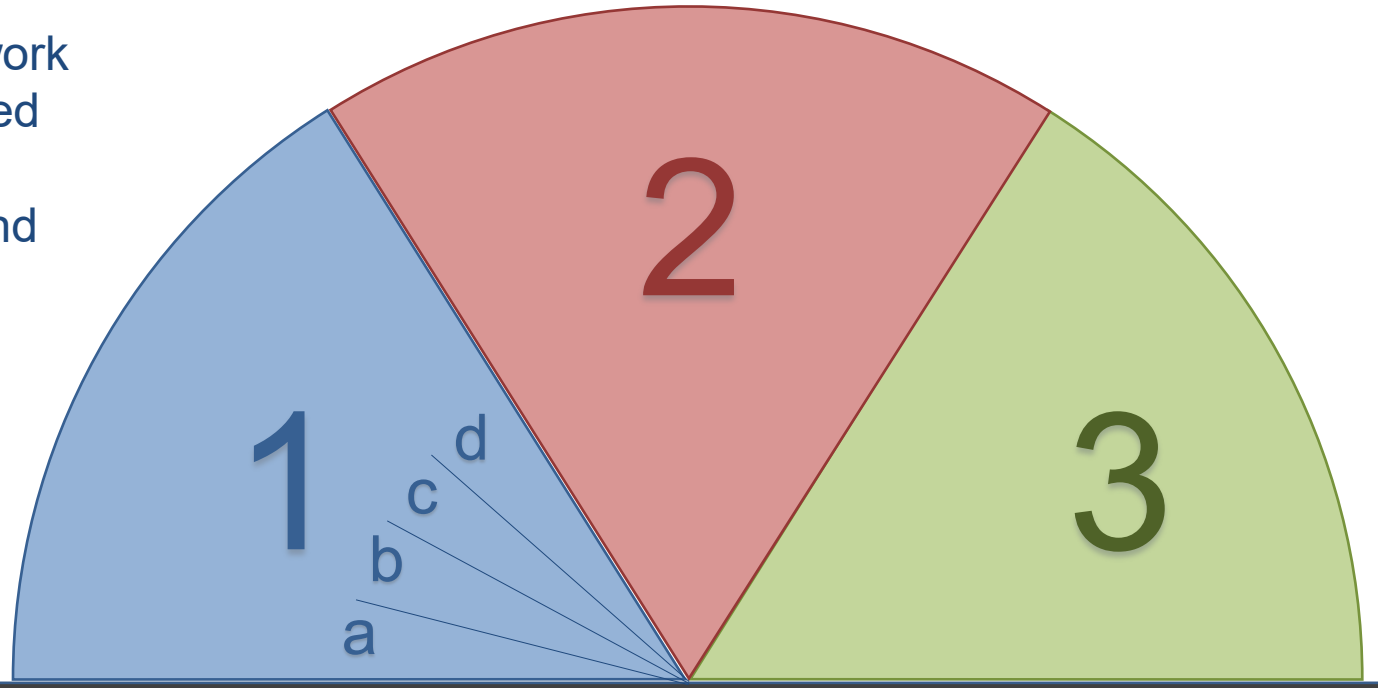
Discussion Outline

2. Results

1. Credit

a) Portfolio Framework
b) Objective-Oriented
c) LACERA-Centric
d) Incentivization and Alignment

3. Summary



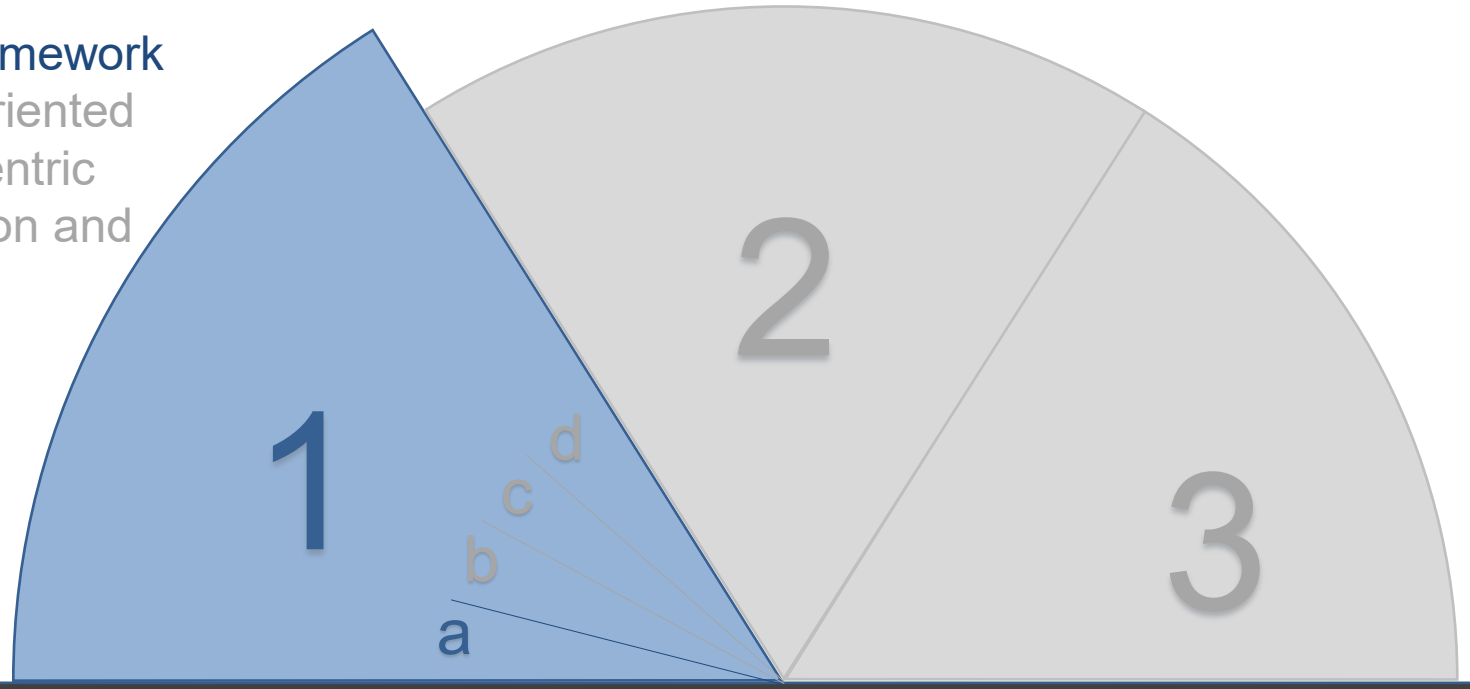
Section Break

2. Results

1. Credit

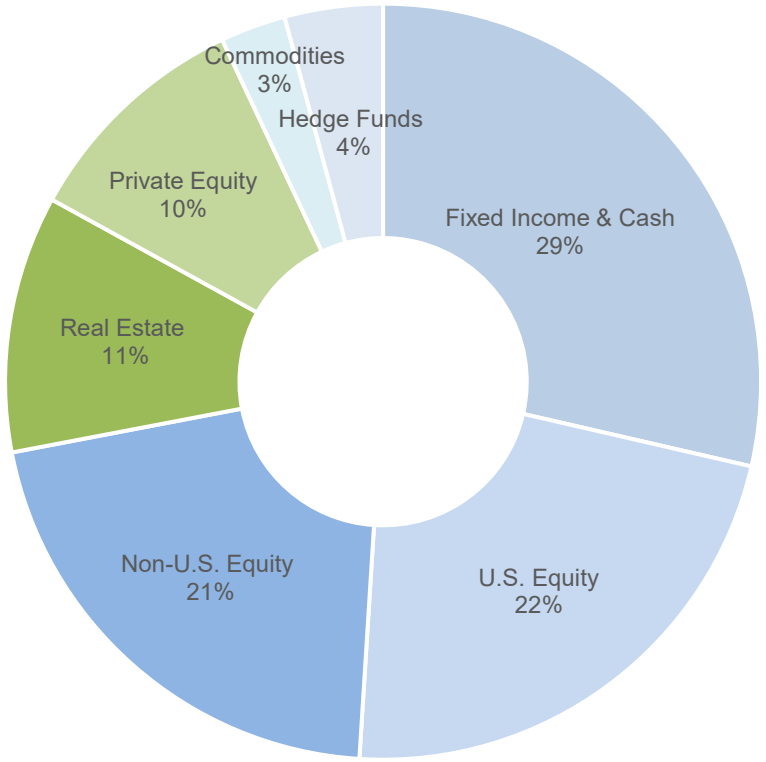
a) Portfolio Framework
b) Objective-Oriented
c) LACERA-Centric
d) Incentivization and Alignment

3. Summary



Credit – Portfolio Framework: Evolving to a Functional Total Fund Framework

Classical



2018 - 2024

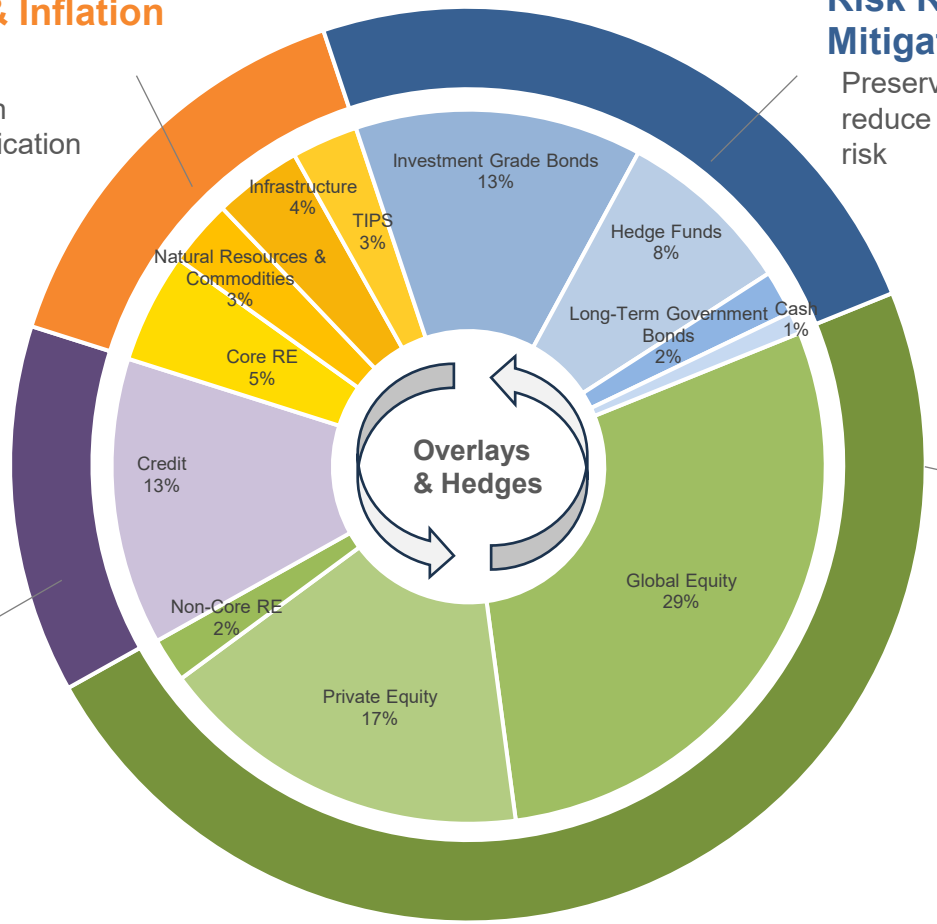
Functional

Real Assets & Inflation Hedges, 15%

Provide an inflation hedge and diversification

Risk Reduction & Mitigation, 24%

Preserve capital and reduce total Fund risk



Credit, 13%

Produce current income and moderate returns

Growth, 48%

Primary driver of long-term total returns

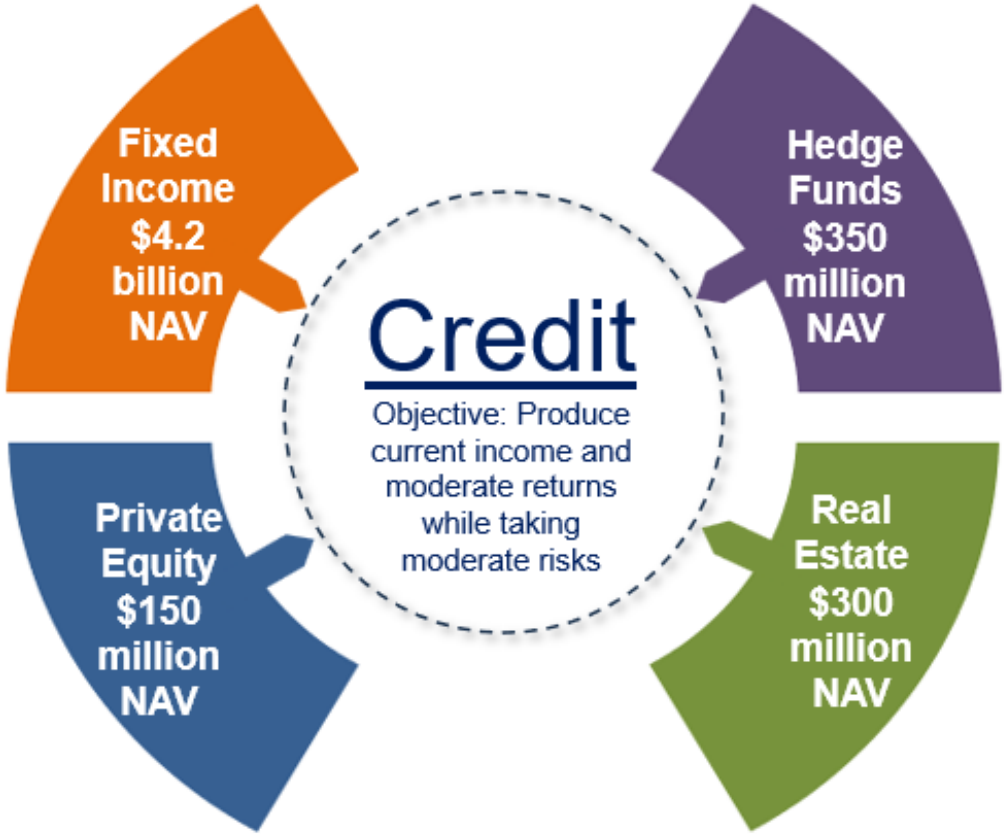
Overlays and Hedges

Manage risks and assist total Fund to adhere to policy targets

Note: Classical framework shows target asset allocation as of June 30, 2018; and Functional framework shows 2024 Board-approved Strategic Asset Allocation Policy Targets.

Credit – Portfolio Framework: Evolving to a Functional Total Fund Framework (2018)

Mandates with credit-like exposure were rolled into the Credit functional asset class



Credit from **Fixed Income**

Evolution opportunities:

- Expand investment universe
- Increase portfolio diversification
- Create fee alignment

Credit from **Hedge Funds**

Evolution opportunities:

- Invest directly (not fund-of funds)
- Be an enduring investor in evergreen vehicles
- Improve fee alignment and savings

Credit from **Private Equity**

Evolution opportunities:

- Seek a moderate return
- Emphasize yield, not distress
- Be an enduring investor in evergreen vehicles
- Improve fee alignment and savings

Credit from **Real Estate**

Evolution opportunities:

- Emphasize yield
- Increase portfolio diversification
- Decrease single-asset headline and operational risks
- Create fee alignment

Credit – Portfolio Framework: Timeline of the Credit Functional Asset Category

2018

- **2018 Strategic Asset Allocation**
- Functional framework adopted
- New category for Credit and four subcategories
- Moved legacy mandates to credit from prior asset categories

2019

- **2019 Credit Structure Review**
- Approval of LACERA's first new investment for the illiquid credit category

2020

- **2020 Credit Structure Review**
- Refinements of the emerging market debt portfolio to better align it with the benchmark

2021

- **2021 Strategic Asset Allocation**
- Created sub-categories for liquid credit and illiquid credit
- **2021 Credit Structure Review**

2022

- Established an emerging manager program in illiquid credit
- Implementation of LACERA's first dedicated managed account investment

2023

- **2023 Credit Structure Review**
- Adopted updated guidelines for liquid credit and illiquid credit

2024

- **2024 Strategic Asset Allocation**
- Combined the liquid and illiquid credit categories into a single category named Credit
- Updated the Credit benchmark

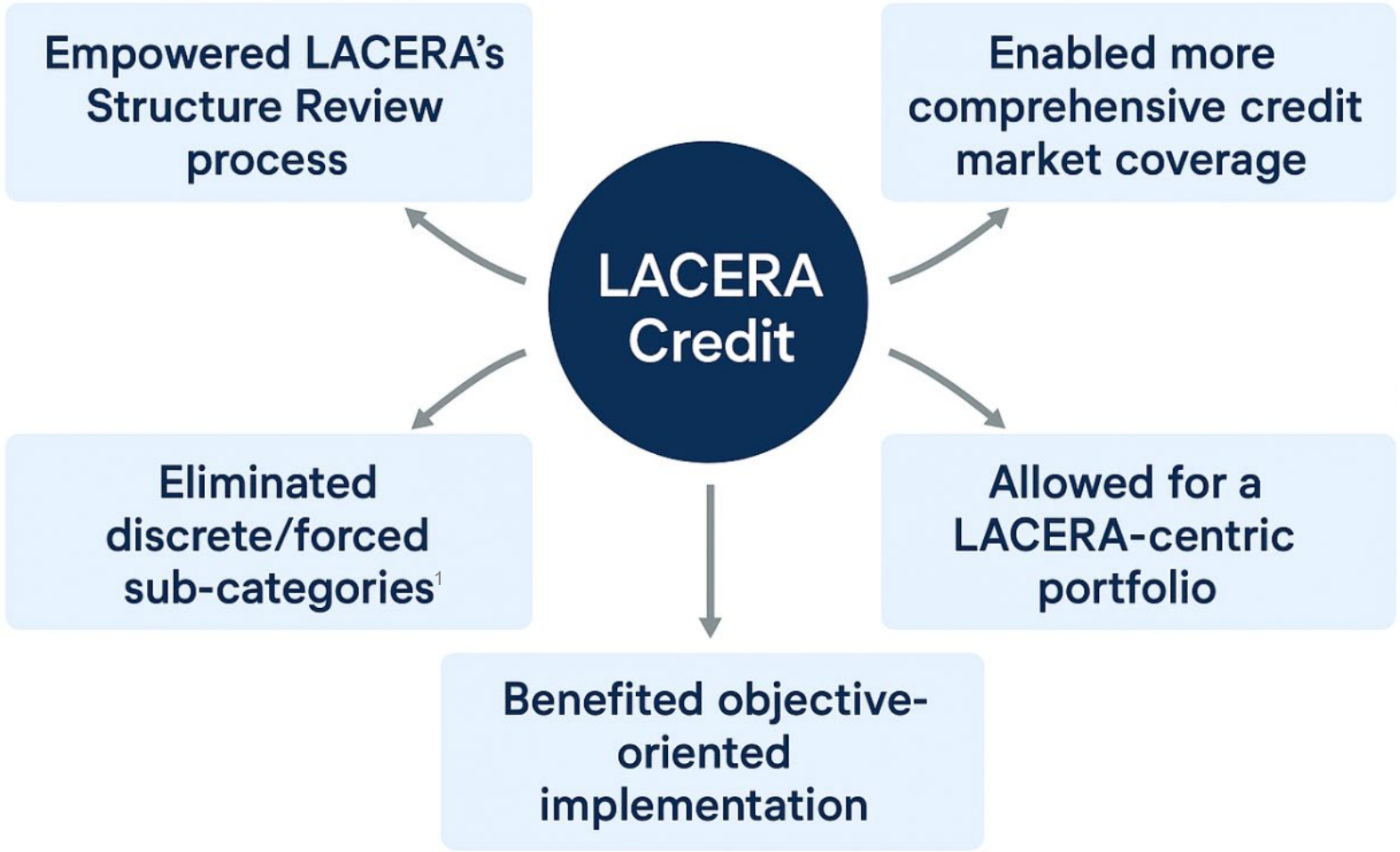
← Ongoing implementation of initiatives consistent with the strategic asset allocation, strategic initiatives, and credit structure reviews →

Credit – Portfolio Framework: LACERA Credit Today

In 2024, the Board of Investments approved:

1. A new Strategic Asset Allocation, which included a single asset category for Credit
2. Guidelines for the Credit portfolio

Consolidating Credit into a unified asset category:



[1] For example, a discrete sub-category for emerging market debt (EMD) was removed. The portfolio is still able to invest opportunistically in EMD.

Credit – Portfolio Framework: Emerging Manager Program

LACERA launched its Credit Emerging Manager Program (EMP) in 2022. The program is now valued at approximately $500 million, including almost $150 million in committed but uncalled capital. Diligence is ongoing to support future investments. Consistent with policy, program objectives are below:

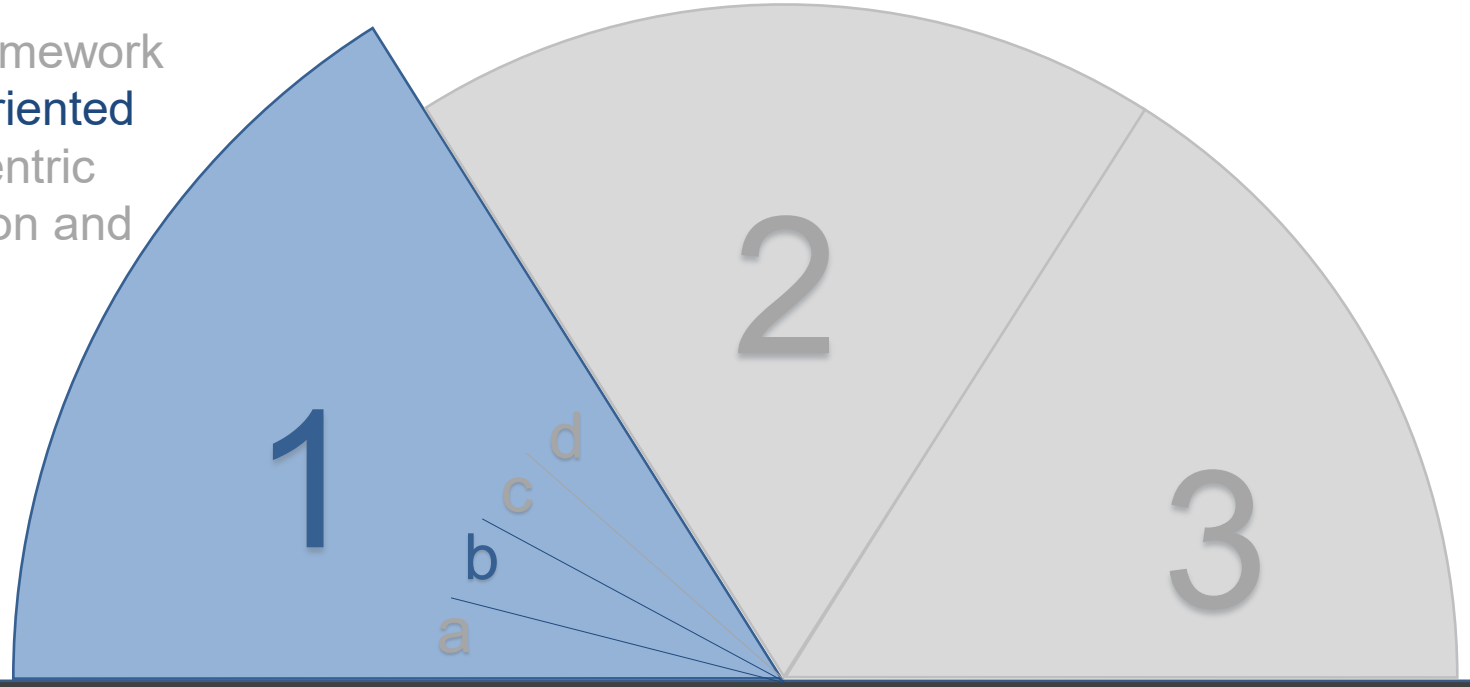
Section Break

2. Results

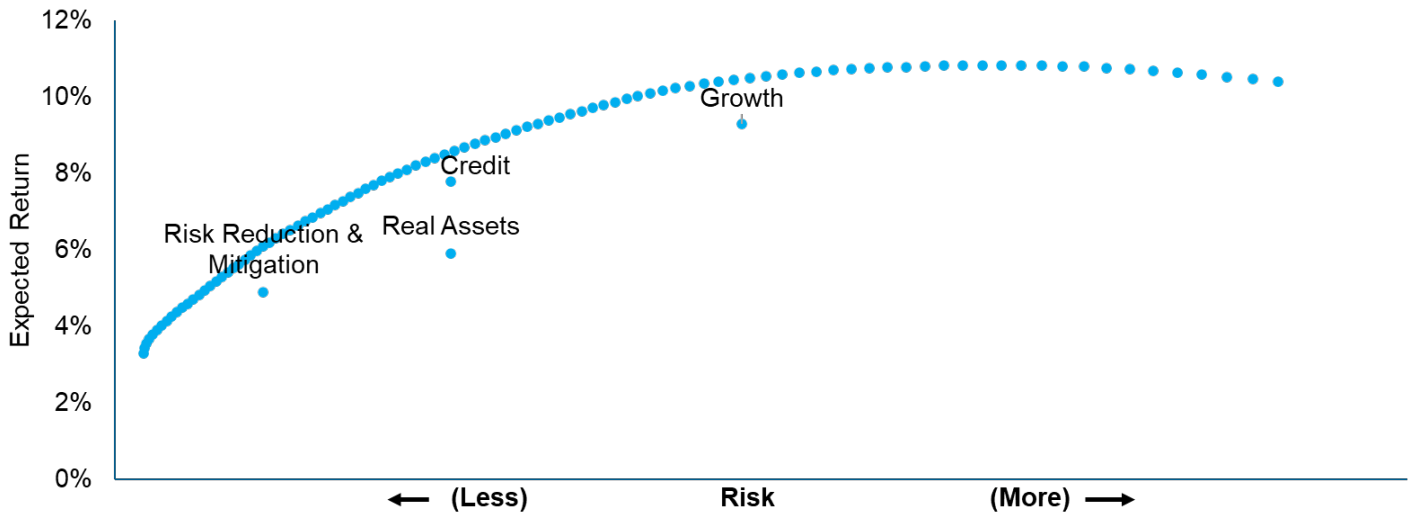
1. Credit

a) Portfolio Framework
b) Objective-Oriented
c) LACERA-Centric
d) Incentivization and Alignment

3. Summary



Credit – Objective-Oriented: Portfolio Role and Objectives



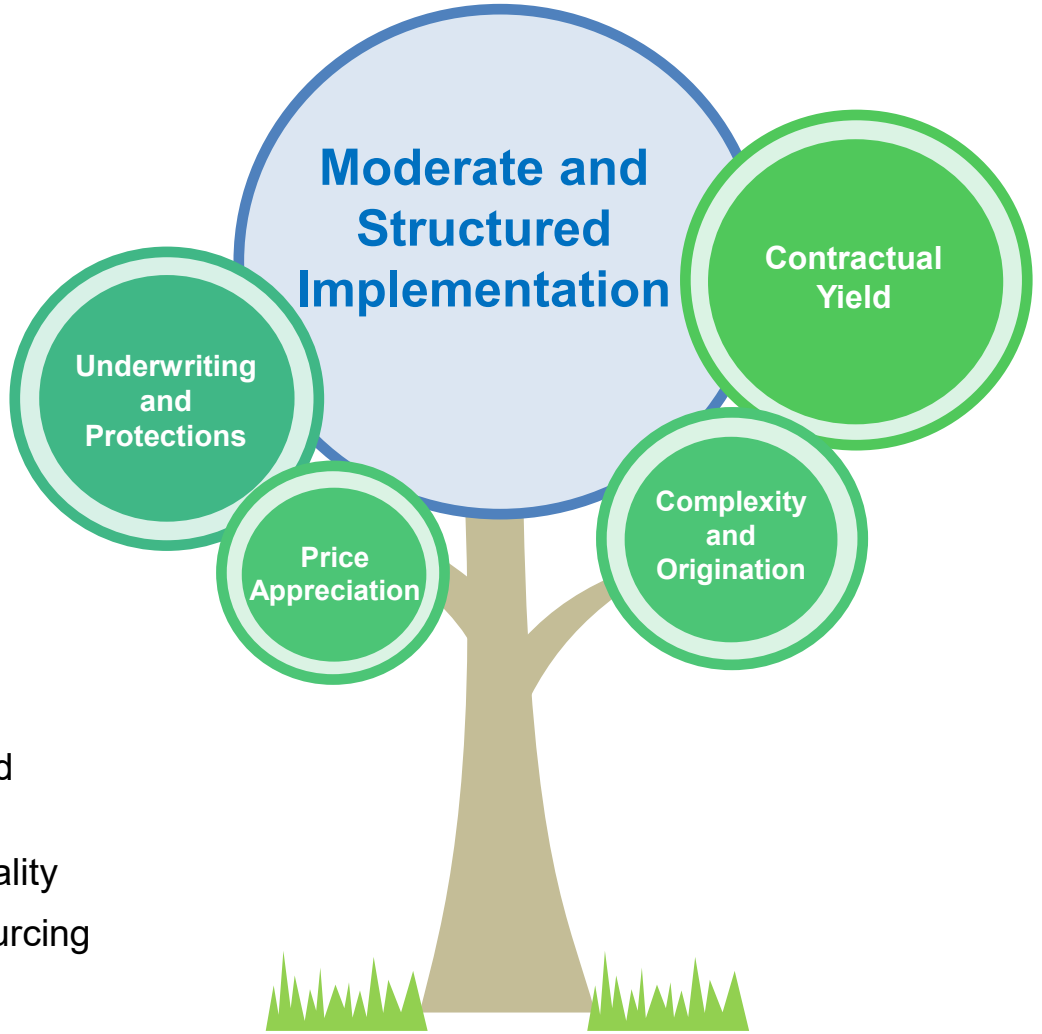
Credit Role:

The Credit portfolio aims for balanced outcomes over medium to longer term periods, seeking moderate levels of:

- Current income
- Long-term total returns
- Risk
- Liquidity

Credit Objectives:

- Collect contractual yield
- Emphasize fundamental underwriting and creditor protections
- Profit from complexity and upside optionality
- Be compensated for selective private sourcing or direct origination
- Limited price appreciation expectations

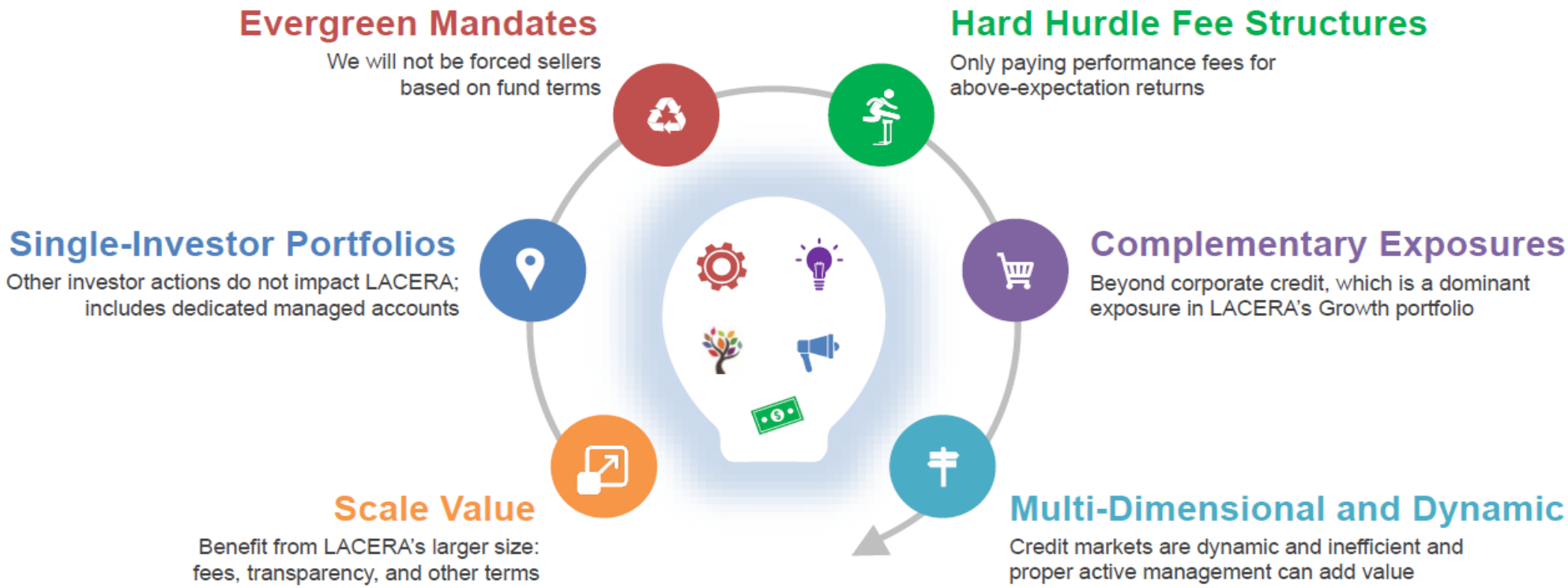


LACERA's Credit Role and Objectives

Credit – Objective-Oriented: Implementation Principles and Key Attributes

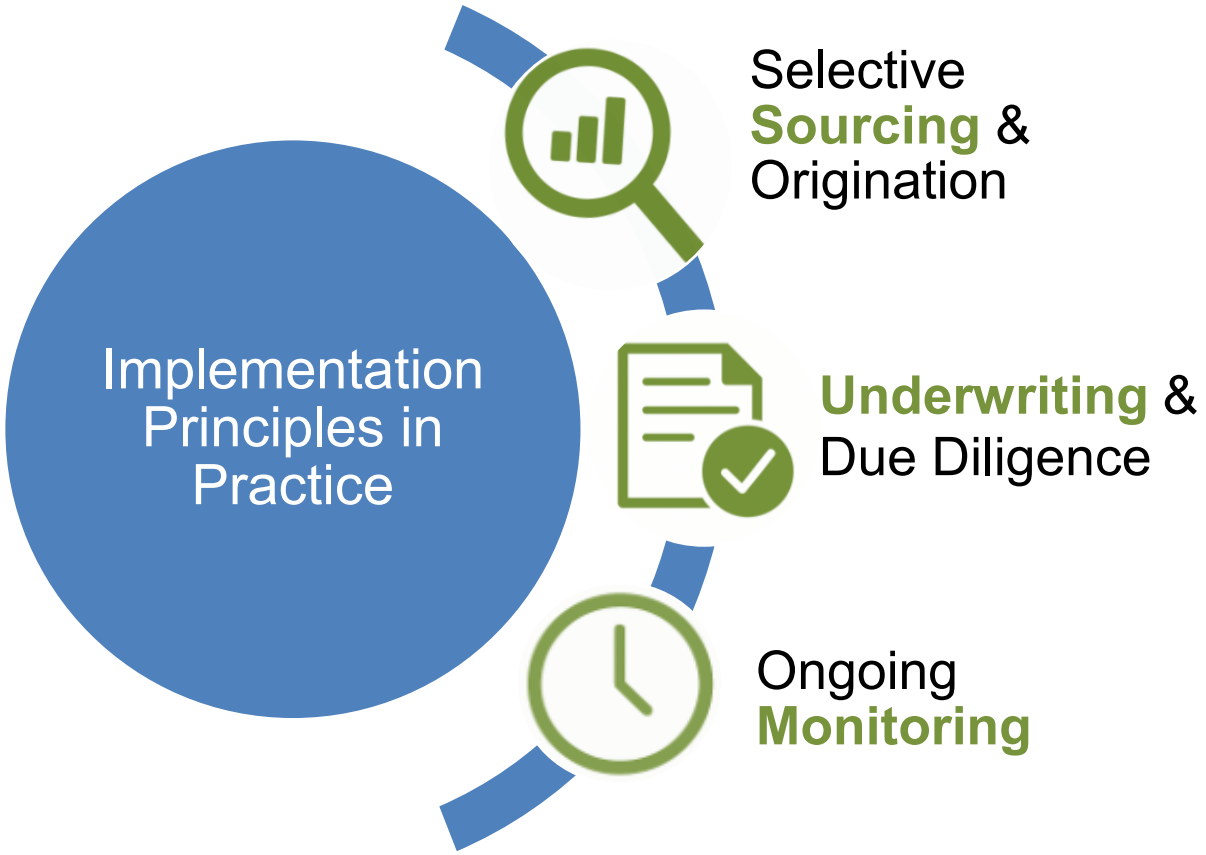
To execute a moderate and broad implementation, LACERA's Credit portfolio construction focuses on:

- Identifying complementary exposures
- Sourcing multi-dimensional and dynamic strategies
- Structuring evergreen mandates with investor-friendly fee structures



Credit – Objective-Oriented: Executing a Principles-Driven Implementation

INDEPENDENT | PROACTIVE | OBJECTIVE-ORIENTED | PERSISTENT



LACERA proactively **sources**, **underwrites**, and **monitors** high-conviction opportunities across the credit universe while pursuing the following as set forth in the Credit Structure Review:

1. Credit Role
2. Credit Objectives
3. Moderate and Broad Implementation
4. Implementation Attributes

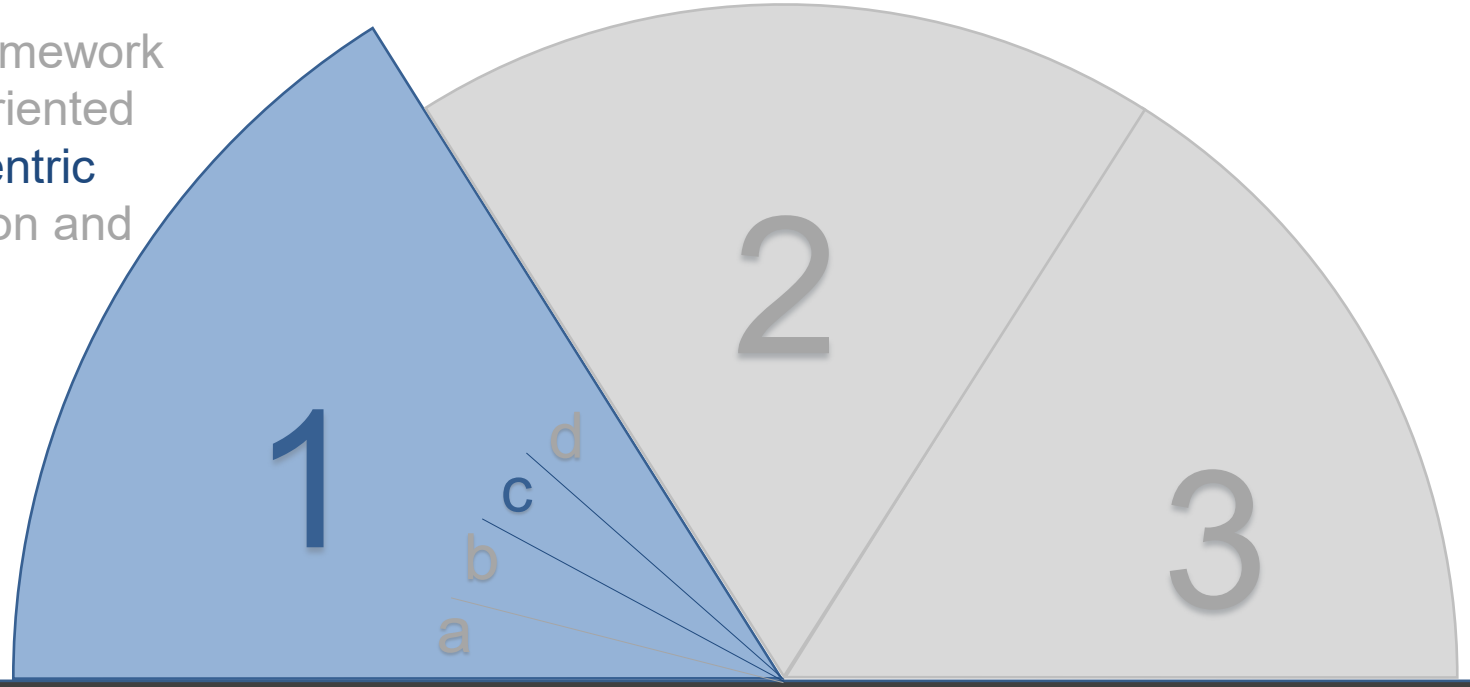
Section Break

2. Results

1. Credit

a) Portfolio Framework
b) Objective-Oriented
c) LACERA-Centric
d) Incentivization and Alignment

3. Summary



Credit – LACERA-Centric: LACERA's Customized Structure Overview

LACERA's credit implementation utilizes **single-investor**, **evergreen vehicles** via LACERA's **dedicated managed account platform**

Single-investor – consists of only LACERA capital

Evergreen vehicle – reinvests proceeds and does not have a fixed end date

DMA **Dedicated managed account platform –** allows customized and enhanced control across investment mandates

Credit – LACERA-Centric: LACERA's Customized Structure Versus Alternatives

What It Is

single-investor, evergreen vehicle via LACERA's **dedicated managed account platform**

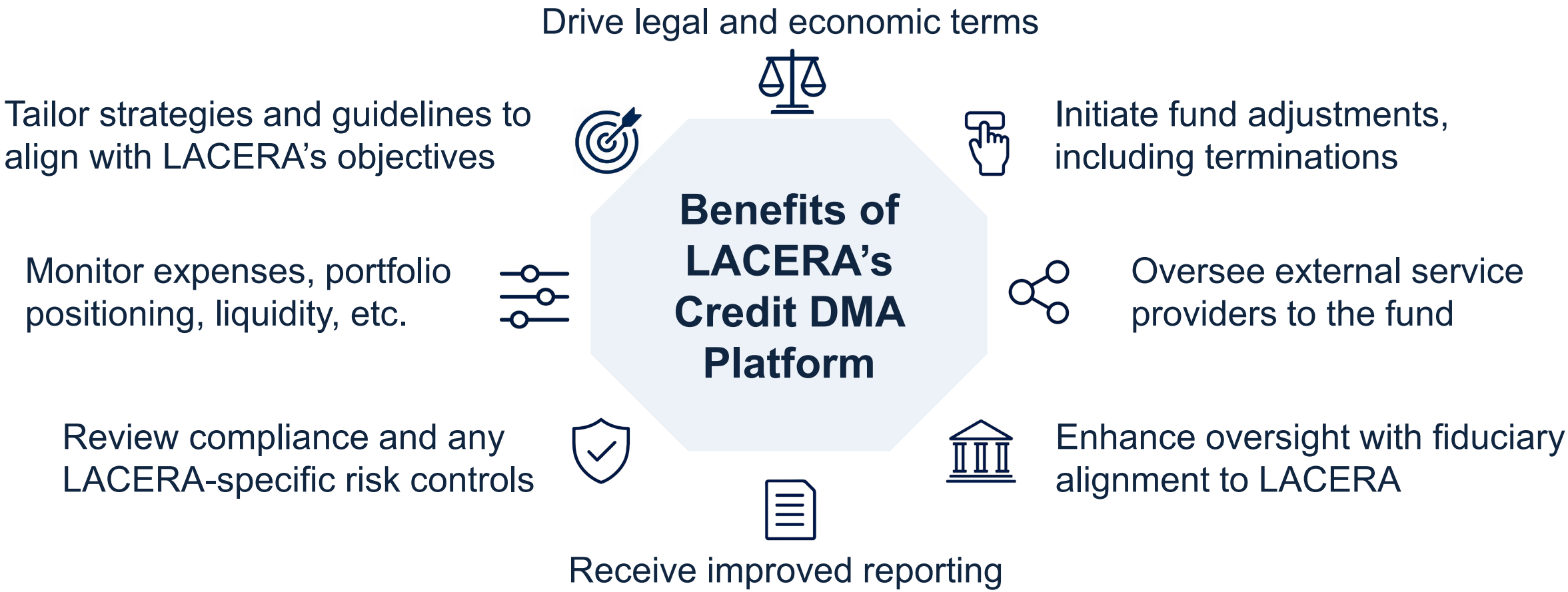
What It Is Not

- **Closed-ended Commingled Fund**
- **Open-ended Commingled Fund**
- **Fund-of-Funds**
- **Fund-of-One**

LACERA Credit Vehicle (strive for)		Other Credit Vehicle Types (avoid)
Enables LACERA to drive terms	**Economic and Legal Terms**	Less negotiability
Customized for LACERA	**Cash Flows**	Impacted/diluted by other investors
Unseasoned and unstressed assets	**New Capital Deployment**	Potentially into legacy, stressed assets
LACERA controlled	**Liquidity**	Typically, fixed terms (5-10 years)
Reports to LACERA	**Service Providers** (auditor, administrator, custodian)	Reports to general partner
At LACERA's option	**Termination Right**	Subject to general partner

Credit – LACERA-Centric: Dedicated Managed Account Platform

LACERA began building a Dedicated Managed Account (DMA) platform in credit in 2022. This intentional account and fund structure design benefits LACERA's ability to perform the following:



LACERA's Dedicated Managed Account (DMA) platform is managed by Innocap. Emerging Manager Program mandates utilize commingled funds, not DMAs.

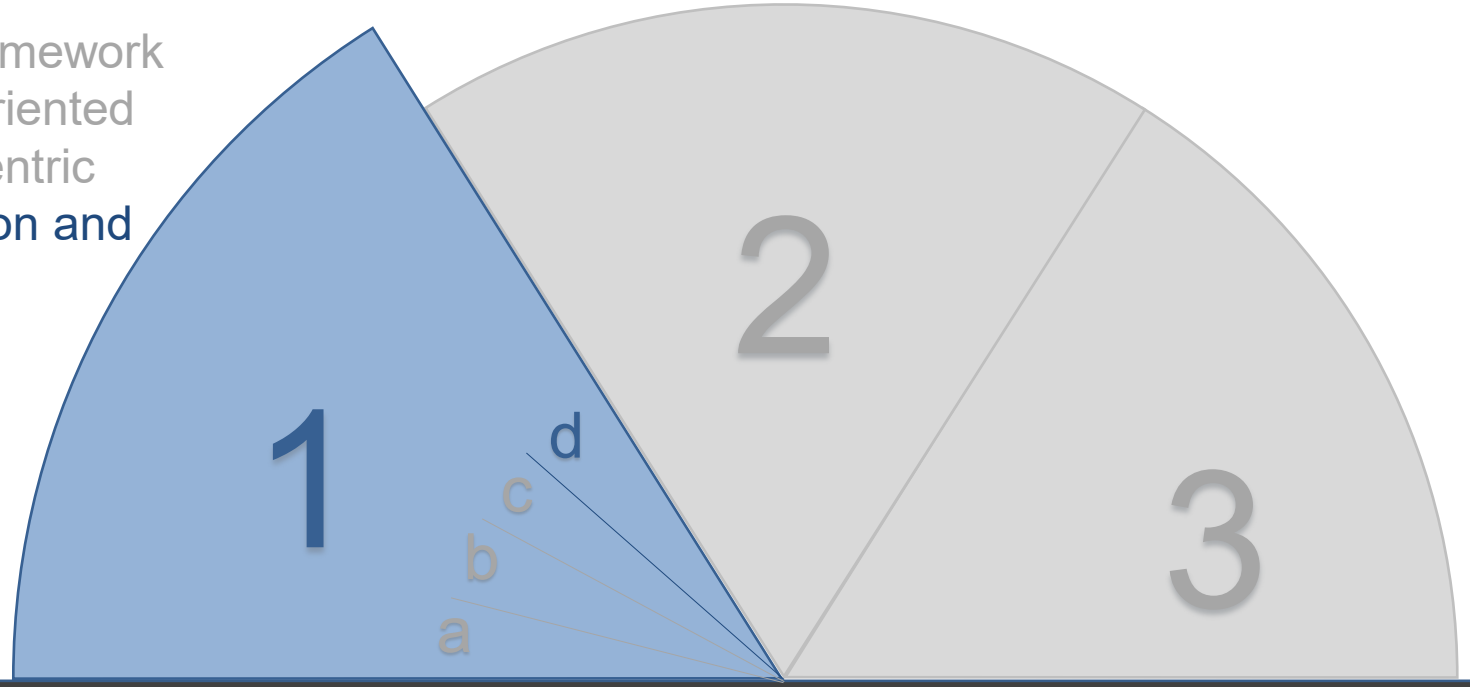
Section Break

2. Results

1. Credit

a) Portfolio Framework
b) Objective-Oriented
c) LACERA-Centric
d) Incentivization and Alignment

3. Summary



Credit – Incentivization & Alignment: Hard Hurdle Performance Fee Structure

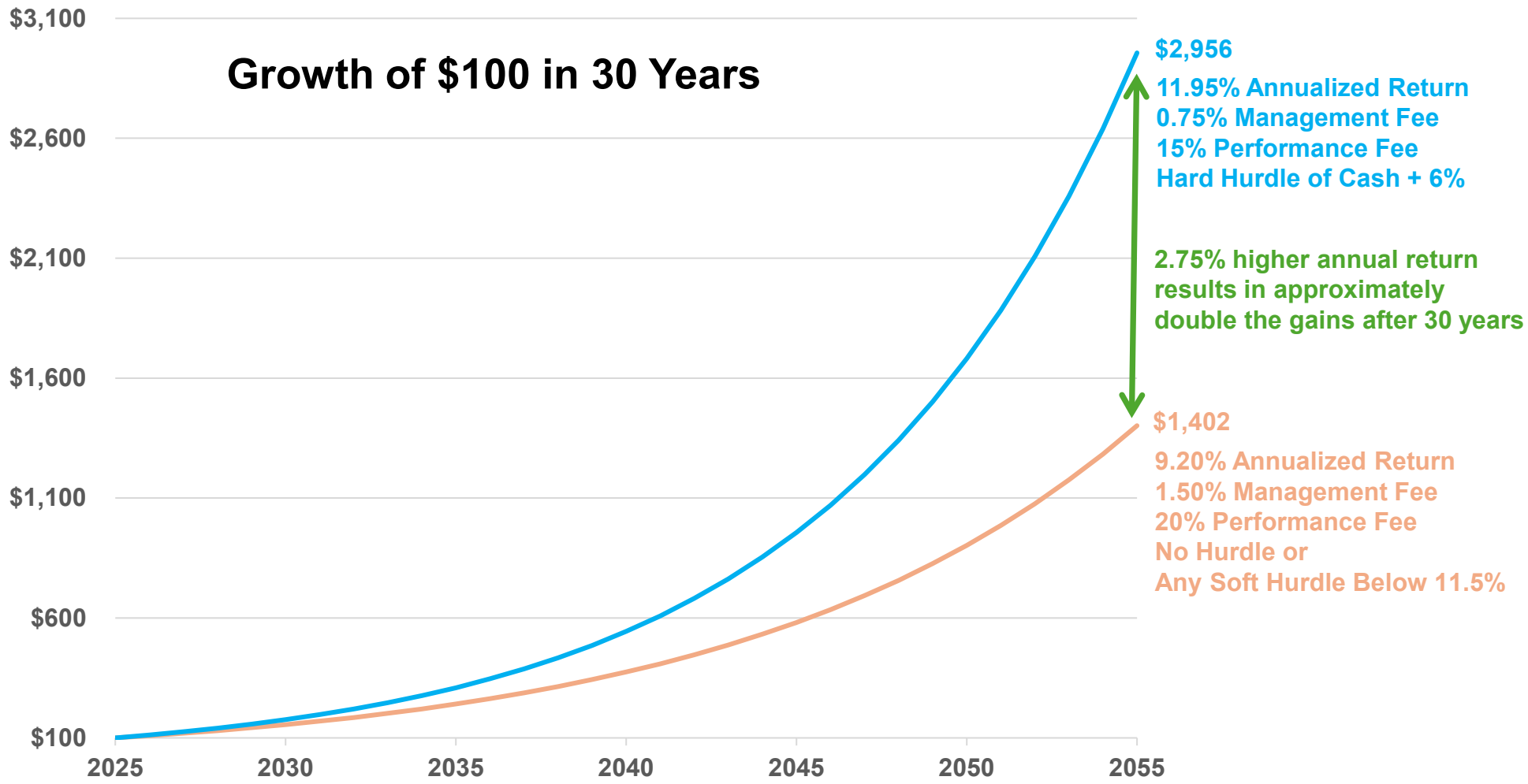
LACERA builds credit portfolios with a **hard hurdle of cash plus a spread**[1] which contributes to achieving goals

- Fee structure and terms are a component of mosaic diligence
- LACERA takes a holistic view, with fees as one factor
- Fee savings can benefit outperformance

[1] A hard hurdle fee structure pays performance fees only on any returns in excess of a minimum threshold or benchmark.

Credit – Incentivization & Alignment: Value Creation From Fee Structure

Well-designed fee structures result in higher net returns

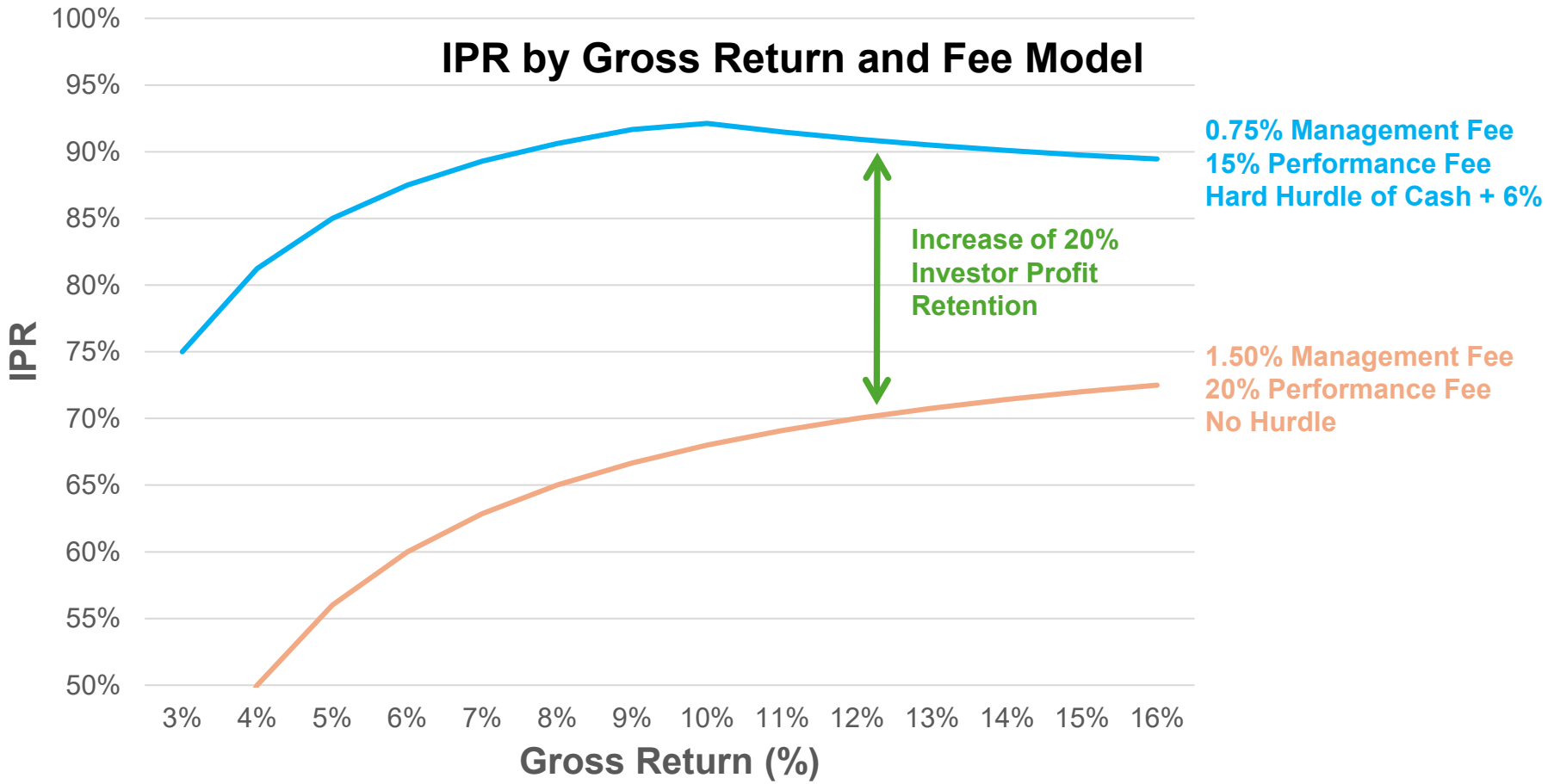


The chart considers a 13% gross return and compares the resulting net return and growth of $100 over 30 years for the fee structures listed, both showing management fees, performance fees, and hurdle (if any).

Credit – Incentivization & Alignment: Investor Profit Retention

Investor Profit Retention (IPR) measures the portion of investment returns that an investor retains after considering management and performance fees

Well-designed fee structures can benefit profit retention by approximately 20%



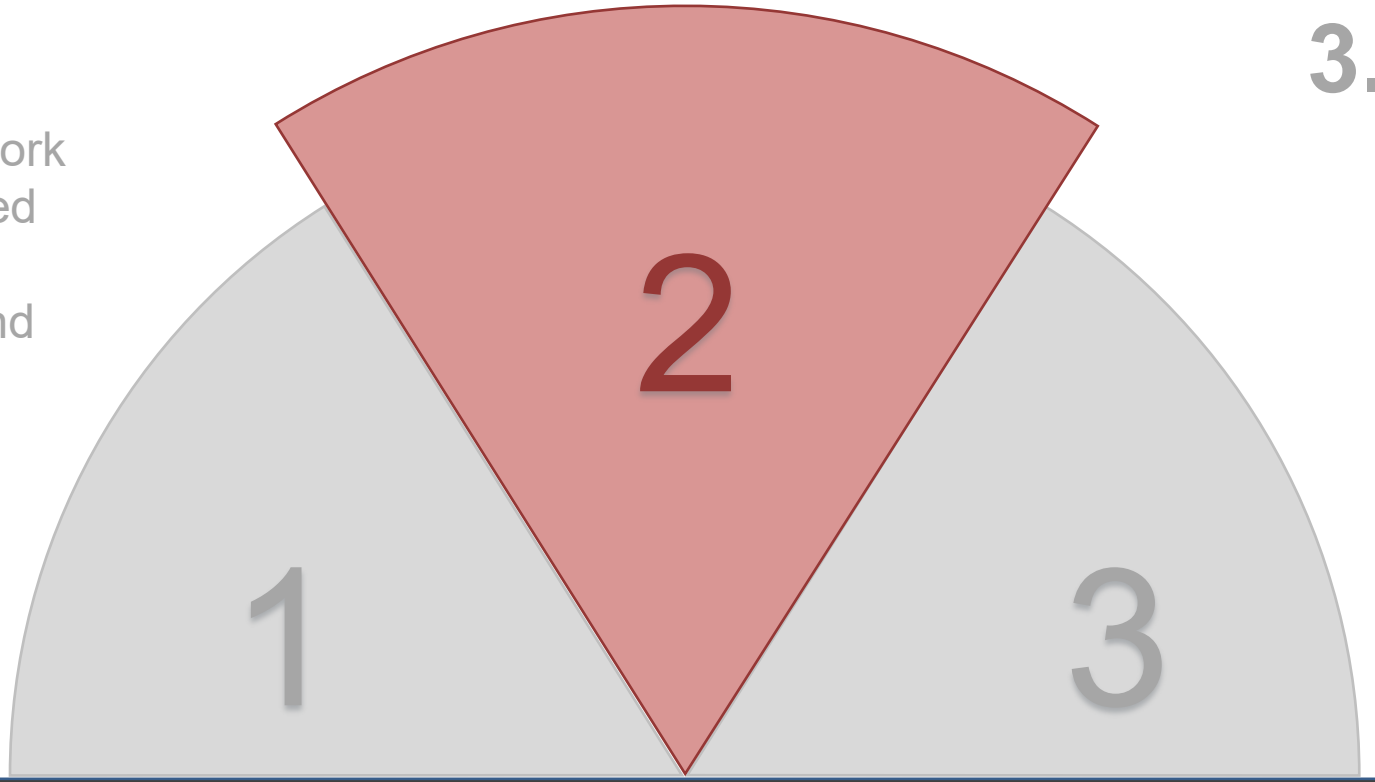
The chart considers the value-add through increased Investor Profit Retention (IPR) from fee structures, showing management fees, performance fees, and hurdle (if any).

Section Break

2. Results

1. Credit

a) Portfolio Framework
b) Objective-Oriented
c) LACERA-Centric
d) Incentivization and Alignment



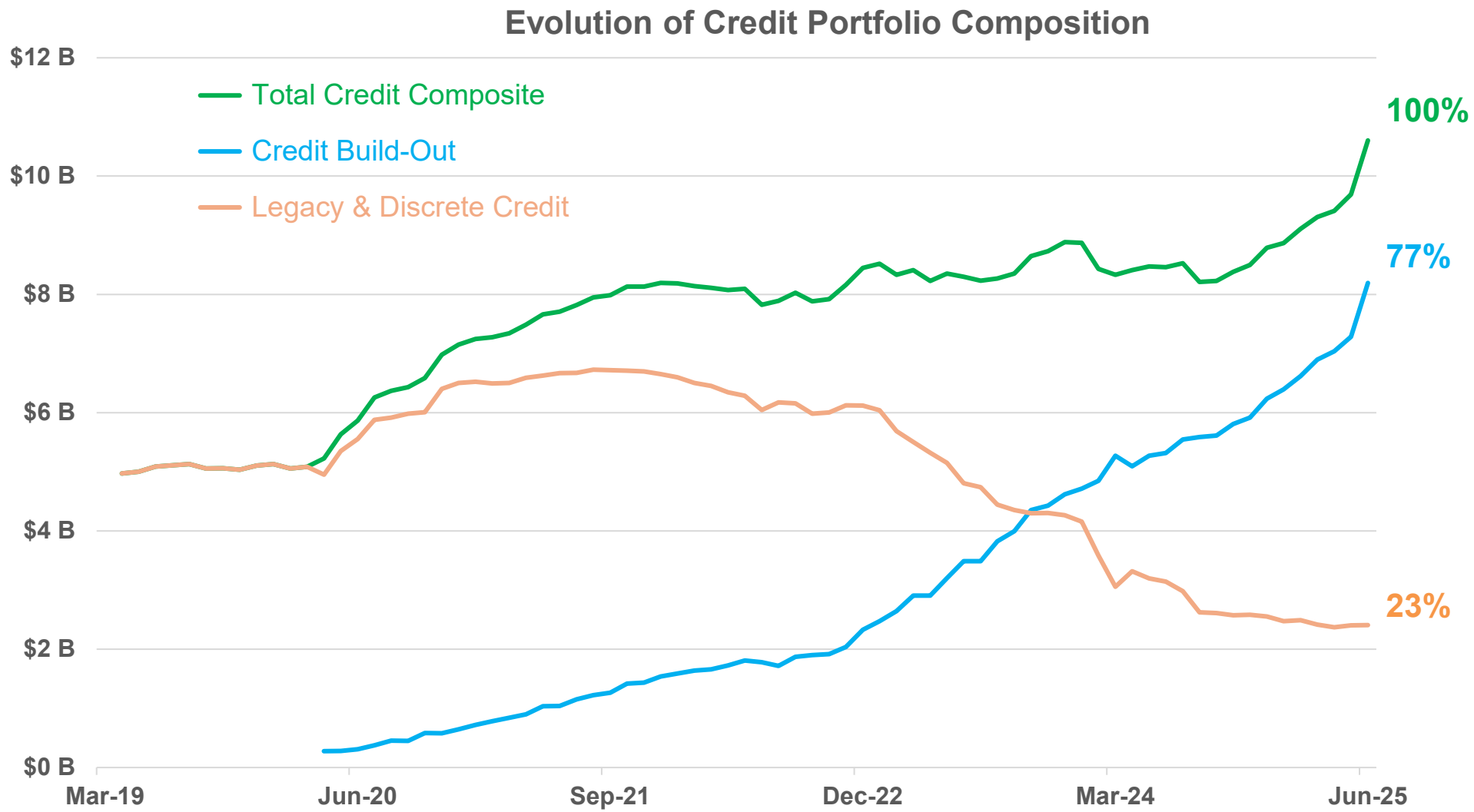
3. Summary

Results:
Intentional Portfolio Evolution

LACERA's total credit portfolio has evolved considerably and grown to over $10 billion.

The intentional credit portfolio build-out since 2020 has grown to be over $8 billion and 77% of total credit.

The legacy credit holdings inherited in 2018 and discrete credit mandates have decreased in size via strategic redemptions.



Results:
Value-Add From Fee Structure

$454 m

FEE SAVINGS

- Value-add from LACERA's fee structure design and implementation
- Since 2020

~$100 m

GROWTH OF SAVINGS

- Additional profit from re-investing $454 m of fee savings
- Since 2020

~$275 m

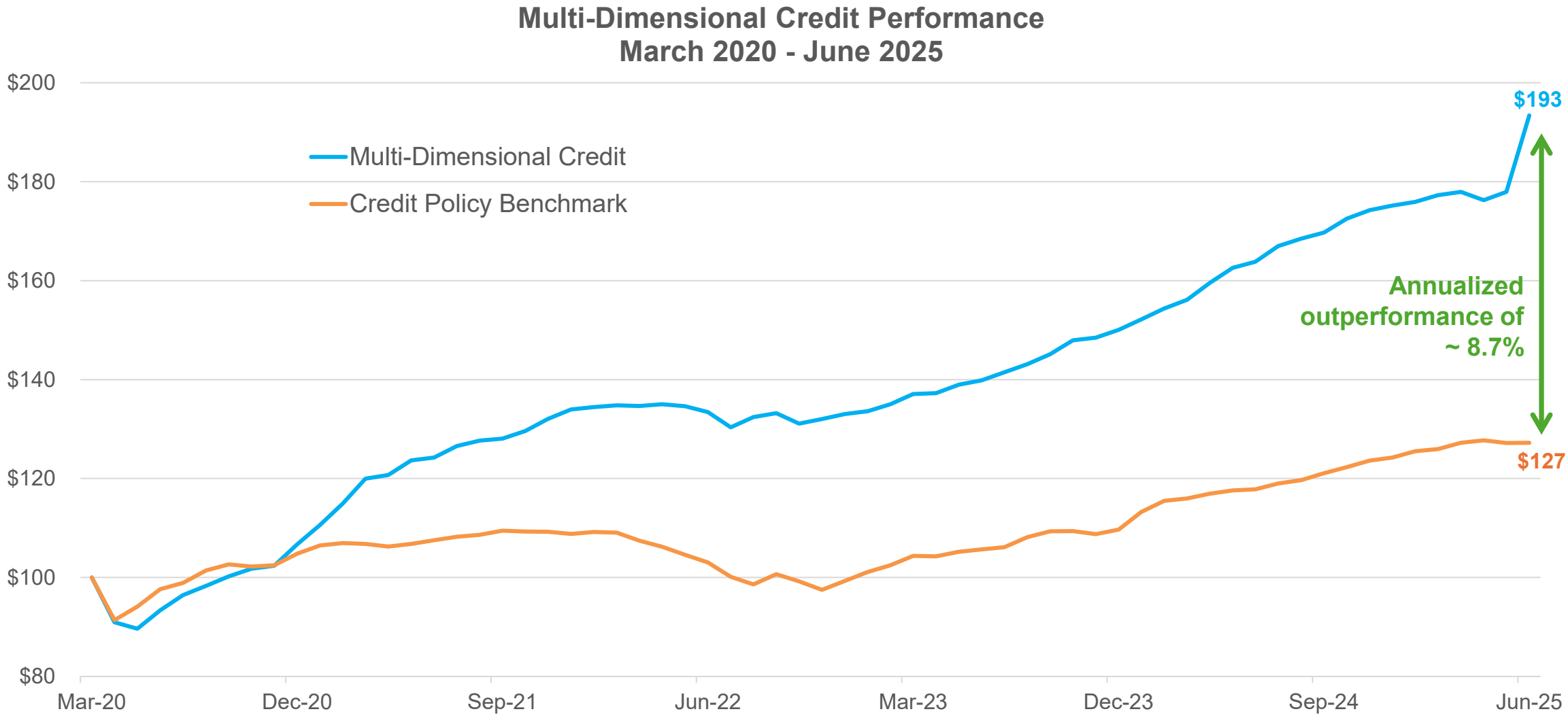
Per year

FUTURE ANNUAL FEE SAVINGS (ESTIMATED)

- Annual value creation
- Realized fee savings would vary with return outcomes

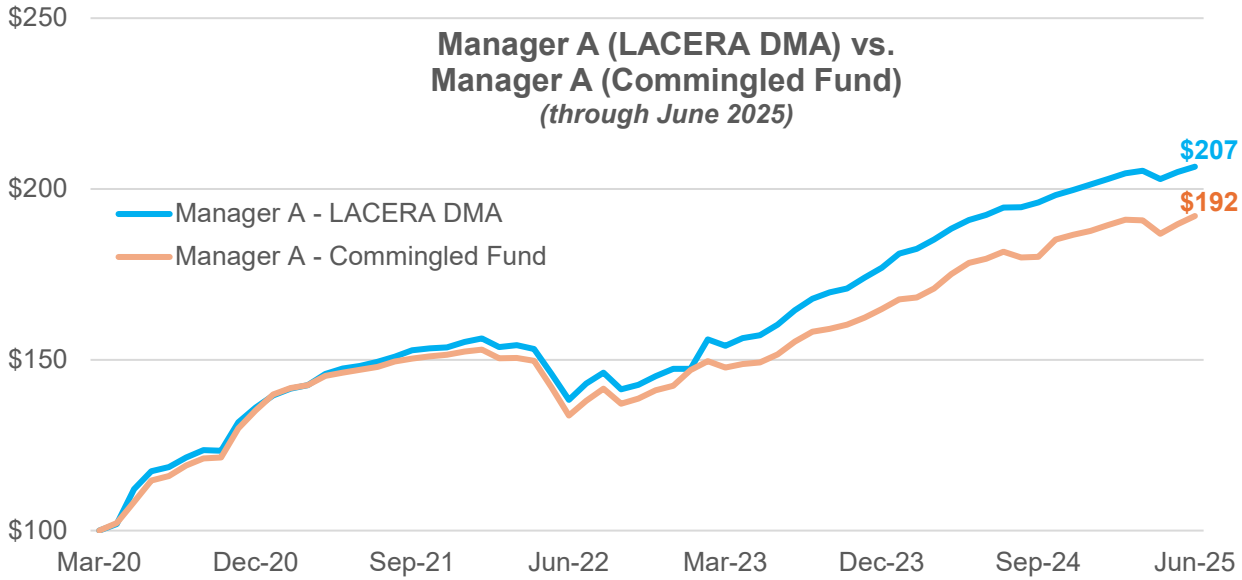
Fee savings is calculated by comparing actual management and performance fees paid by LACERA to standard terms of 1.5% management fee and 20% performance fee, with either no hurdle or a soft hurdle of 8% that was exceeded by actual returns. Growth of savings calculates subsequent profits from fee savings based on realized returns. Future annual fee savings (estimated) considers the 2.75% run rate of value creation through improved returns from fee savings and the size of LACERA's credit portfolio.

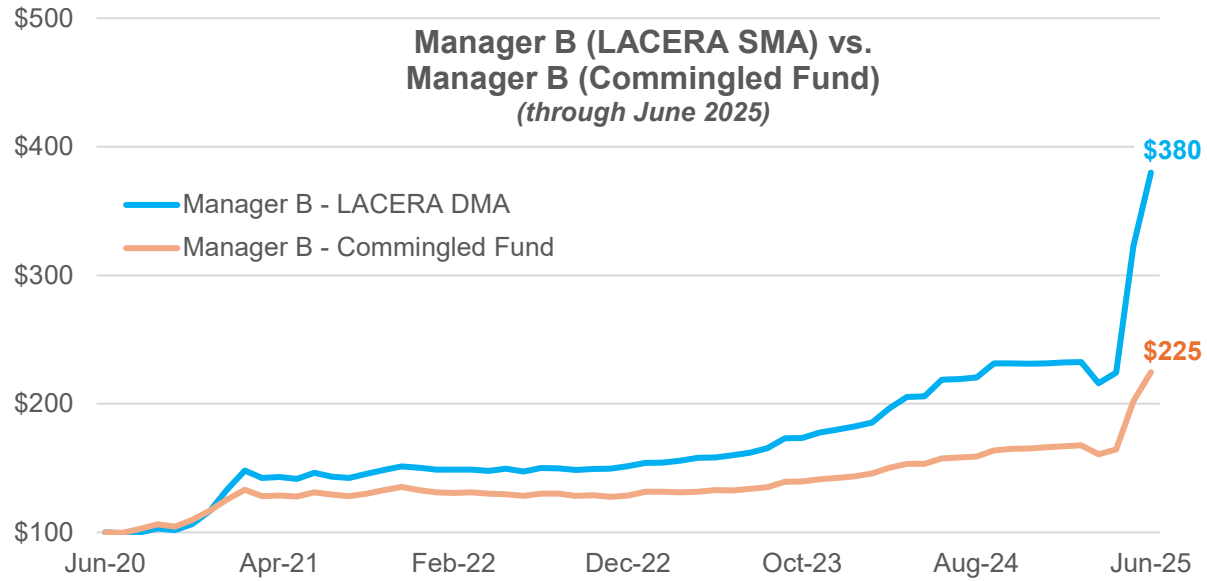
Results:
Growth of $100 – Customized Mandates Outperform

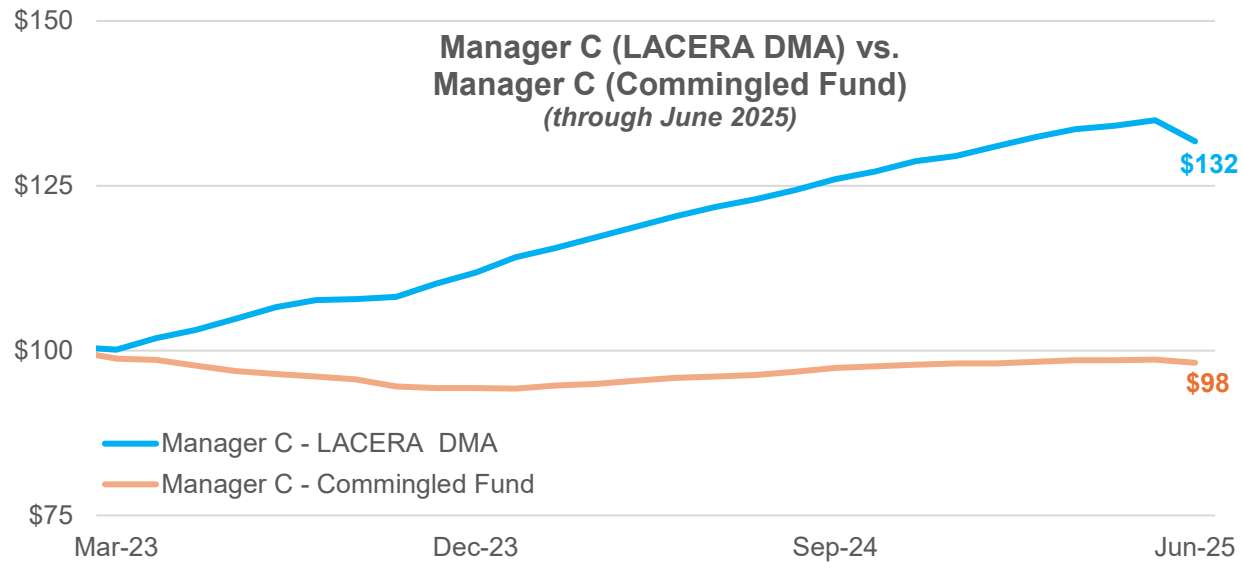


Multi-Dimensional Credit includes mandates that were onboarded since 2020 and some legacy credit exposures that were previously categorized in the "illiquid credit" category.

Results:
LACERA Mandates Versus Off-the-shelf Alternative







LACERA mandates have consistently outperformed off-the-shelf alternatives at the same manager due to:

- **Structural alpha** from aligned fee structures
- Deploying capital into **new assets** benefiting only LACERA
- **Greater flexibility** provided by the **DMA structure** to **dynamically** re-position the portfolio over time

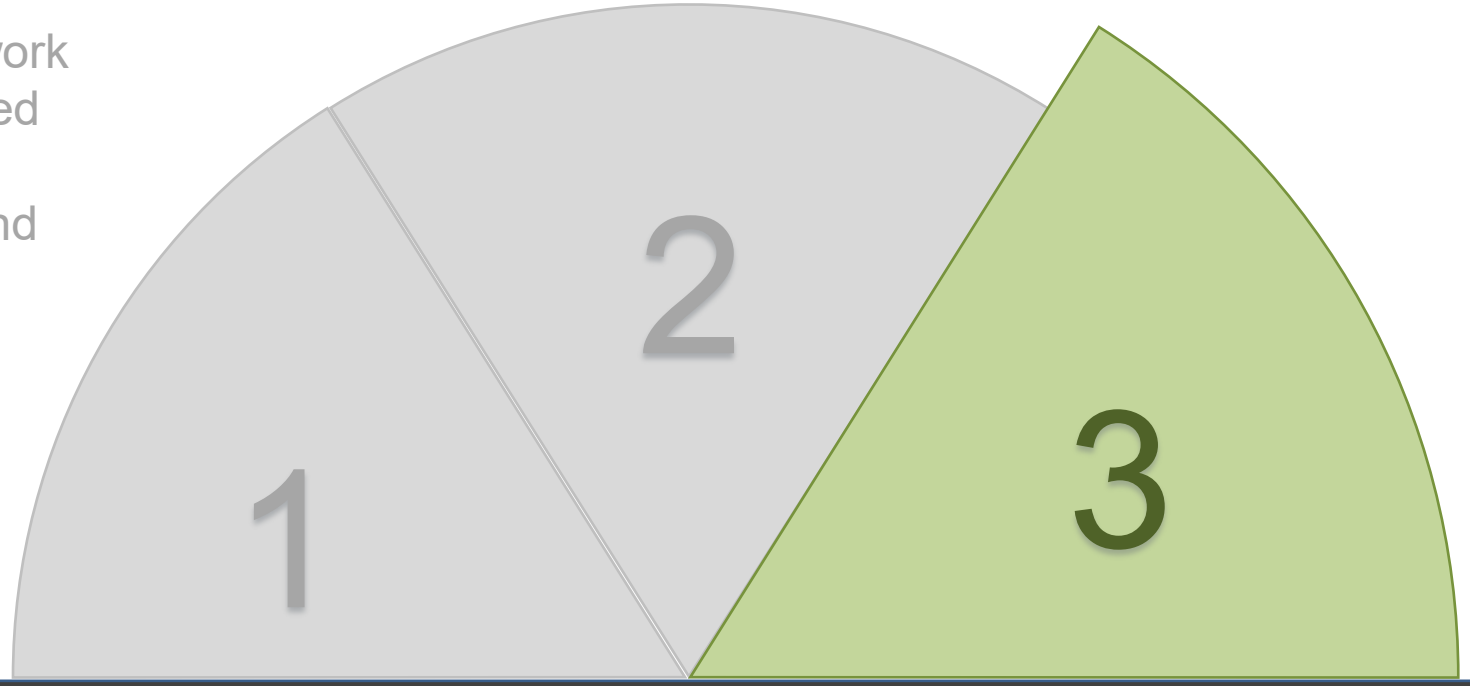
Section Break

2. Results

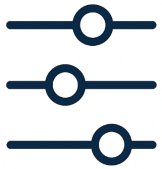
1. Credit

a) Portfolio Framework
b) Objective-Oriented
c) LACERA-Centric
d) Incentivization and Alignment

3. Summary



Summary:
Credit: Design and Implementation



Portfolio Framework

- Creation of Credit
- Transition to functional total Fund categories
- Addition of a Credit EMP program

Objective-Oriented

- Uplifting roles, objectives and desired attributes
- Implementation principles across sourcing, underwriting, and monitoring

LACERA-Centric

- Single-investor
- Evergreen
- DMA = Dedicated Managed Account

Incentivization and Alignment

- Alignment of Interests
- Hard hurdles = reward outperformance
- IPR = Investor Profit Retention

Summary:
2025 Strategic Framework and Initiatives

LACERA's credit portfolio has advanced LACERA's overall mission, strategic framework, and initiatives by achieving attractive and risk-efficient returns.

Execute Strategic Asset Allocation

Dynamic Investment Program

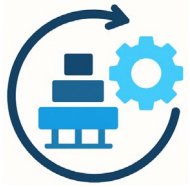
Strategic Initiatives

- Optimize Investment Model
- Maximize Stewardship and Ownership Rights
- Strengthen Influence on Fees and Cost of Capital
- TIDE (Towards Inclusion, Diversity, and Equity)
- Enhance Operational Effectiveness

LACERA Mission: To produce, protect and provide the promised benefits to our members

Summary:
Credit: Looking Ahead

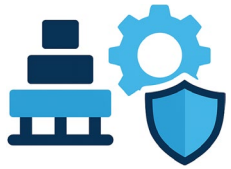
Building on the portfolio's foundation and in the interest of continued enhancements, future initiatives for LACERA's credit portfolio include:



Continue **build-out efforts** for current design and implementation

Vigilant **monitoring** of the portfolio

Improve **reporting** and analytics



Refine methodology to create a **resilient and enduring** portfolio

NAVIGATING OUR CHARTED COURSE

Appendix

Glossary

Term	Acronym	Definition
Asset-Backed Securities	ABS	Investments that are collateralized by an underlying pool of financial assets such as corporate loans or consumer receivables
Business Development Company	BDC	A publicly traded investment company that helps small and mid-sized U.S. businesses grow by providing them with capital—usually through loans or equity investments
Cash		A term to reference the yield of the 3-month Treasury Bill or the Secured Overnight Funding Rate (SOFR)
Closed-Ended Commingled Fund		A pooled investment with multiple investors, a fixed capital amount, and a set end date, where contributions and withdrawals are generally not allowed after the initial commitment
Commerical Real Estate Debt	CRE	A loan secured by income-producing properties like office buildings, apartments, or retail centers, used to finance their purchase, development, or refinancing
Dedicated Managed Account Platform	DMA	A DMA platform allows an investor such as LACERA to invest in a single-investor structure where assets in the fund are held in custody for the sole benefit of the investor. Benefits include the potential for: increased options for control of assets, reduction of investment and non-investment related costs, and increased transparency. A DMA platform manager, such as Innocap for LACERA, acts as a fiduciary, has oversight responsibilities, and administers day-to-day functions of the fund
Distressed Debt		Distressed debt refers to the bonds or loans of companies in financial trouble, often trading at a significant discount because of a high risk of default
External Service Providers to a Fund		Examples include a Custodian Bank, Fund Adminstrator, Auditor, Legal Counsel, and Prime Broker
Hard Hurdle Fee Structure		A hard hurdle fee structure pays performance fees to a fund manager only on returns above a set minimum rate. Comparatively, a soft hurdle pays fees on all returns once that rate is exceeded
High Yield Bonds		Corporate bonds that offer higher interest rates because they carry a lower credit rating and higher risk of default compared to investment-grade bonds
Investor Profit Retention	IPR	The share of gross profits retained by an investor such as LACERA after fund expenses, management fees, and performance fees are deducted. 100% minus the IPR rate is the percentage of profits retained by the investment manager
LACERA Credit Policy Benchmark		Custom Blend of: 70% Credit Suisse Leveraged Loans; 30% Bloomberg US Corporate High Yield + 100 bps (1 Month lagged)

Glossary (continued)

Term	Acronym	Definition
Last Twelve Months	LTM	Last 12 months of experience
Legacy Credit		Describes credit mandates that LACERA initially invested prior to 2020 that do not best align with the Board-approved Credit Structure Review
Leveraged Loans		Loan provided by banks or institutional lenders to below investment grade companies, typically secured by collateral and offering floating interest rates
Liquidity		The ease and speed with which an investor can redeem their investment from a fund within a specified time frame
Mezzanine Debt		A hybrid form of financing that sits between senior debt and equity, offering higher returns than traditional loans but with higher risk, often including equity-like features such as warrants or conversion rights
Net Asset Value	NAV	The net value of an investment fund's assets less its liabilities
Open-Ended Commingled Fund		A pooled investment with multiple investors where the fund has no fixed end date, allowing for ongoing contributions, withdrawals, and/or reinvestment of profits
Senior Debt		Senior debt is a loan or bond that has the highest priority for repayment in a company's capital structure, meaning it gets paid first in case of default or liquidation
Separately Managed Account or Fund-of-One	SMA	An investment vehicle that is managed for a single investor. A notable difference between an "SMA/Fund-of-One" and a "DMA" with regards to alternative investment strategies is that in a DMA, the investor via the DMA Platform manager maintains custody and control of the vehicle/assets, whereas in an SMA/Fund-of-One, the investment manager custodies and controls the vehicle/assets
Special Situations		Special situations credit involves lending to companies experiencing financial or operational distress, restructuring, or other unique circumstances, often aiming for higher returns in exchange for higher risk
Spread		A term to reference a specific incremental return amount (e.g., one percent, two percent)
Soft Hurdle (aka Preferred Return)		A minimum rate of return that investors must receive before a fund manager can earn performance fees (carried interest). Once this hurdle is met, the manager earns carried interest on all profits, not just those above the hurdle
Standard Deviation		A statistical measure of dispersion in a set of values. It indicates how much the individual values deviate around their mean (average). Used as a key measure of risk in finance

Dedicated Managed Account (DMA)

Dedicated Managed Account Structure

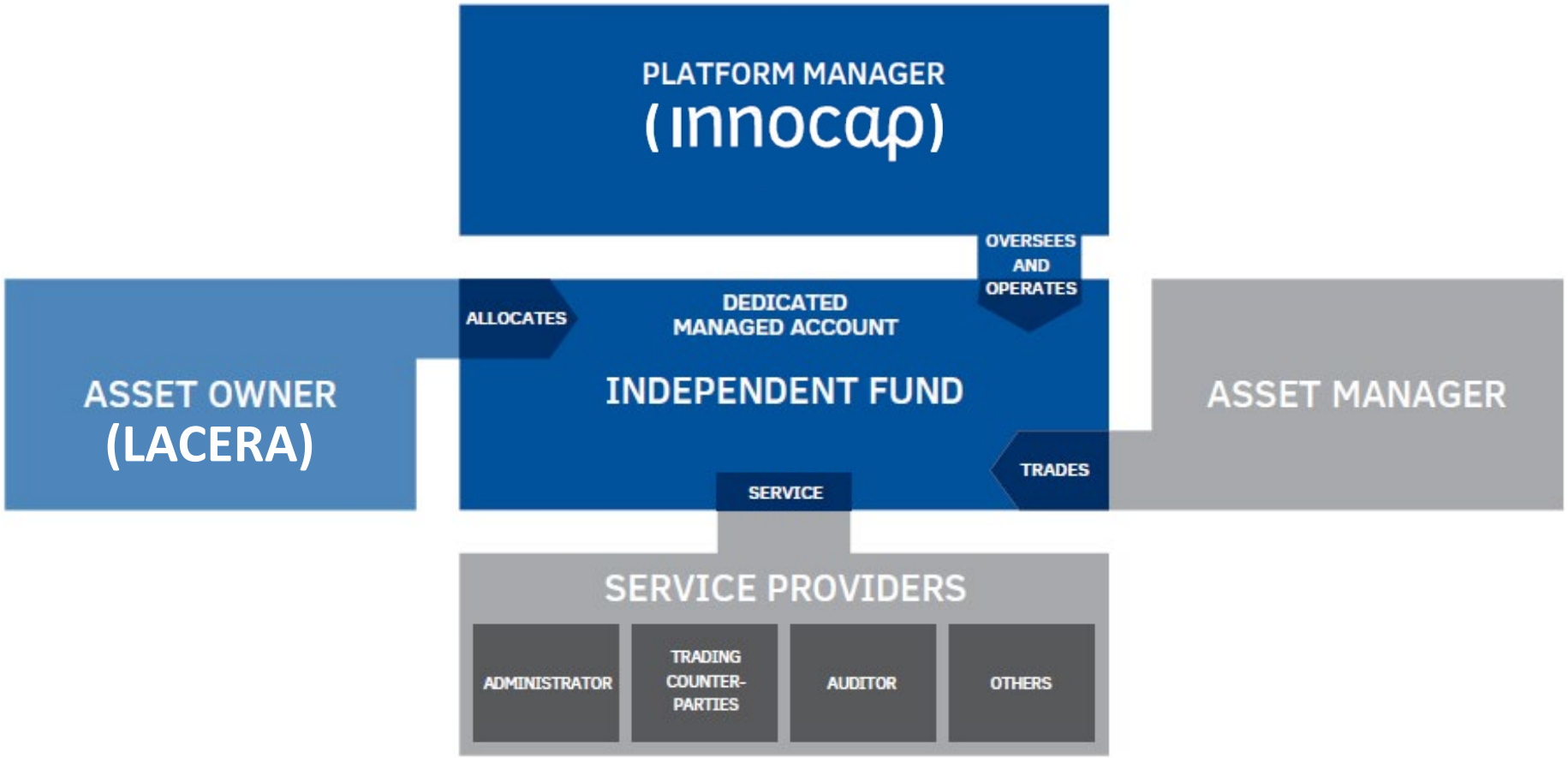
KEYPOINTS

A DMA is an independent fund with a single investor.

Investments are segregated from client's balance sheet, but assets ownership remains.

Trading activities and governance responsibilities are clearly separated.

Typical legal & operational set-up



Capital Market Expectations

In 2024, LACERA's Board of Investments approved the below capital market expectation for credit, as part of its strategic asset allocation study.

Strategic Asset Allocation Overview and 2024 Capital Markets Expectations

MEKETA

10-year Geometric Expected Returns
Credit

	2024 E(R) (%)	2021 E(R) (%)	Δ From 2021 (%)	Standard Deviation (%)
High Yield Bonds	6.5	3.4	+3.1	11
Bank Loans	6.5	3.5	+3.0	10
Collateralized Loan Obligations(CLOs)	8.1	3.6	+4.5	13
Emerging Market Bonds (major)	7.0	3.6	+3.4	12
Emerging Market Bonds (local)	6.3	4.4	+1.9	12
Private Debt	9.2	6.8	+2.4	15

→ Private Debt is a composite consisting of Direct Lending, Asset Based Lending and Special Situations Lending.

Disclaimer - Part 2: Albourne Presentation

The information in this presentation (the "Information") is for general informational purposes only and is provided by an Albourne Group Company. For this purpose, "Albourne Group Company" means Albourne Partners Limited or one of its subsidiaries and affiliates from time to time, including Albourne America LLC, Albourne Partners (Canada) Limited, Albourne Partners Japan, Albourne Partners (Asia) Limited, Albourne Partners (Singapore) Pte. Ltd., Albourne Partners (Bermuda) Limited, Albourne Partners (Cyprus) Limited, Albourne Cyprus Limited and its branch in Germany (such companies being, collectively, the "Albourne Group").

The Information is not, nor should it be construed as, an invitation, recommendation, inducement, offer or solicitation in any jurisdiction to any person or entity to acquire or dispose of, or to deal in, any security or any interest in any fund, or to engage in any investment activity, nor does it constitute any form of tax or legal advice and it must not be relied upon as such. The Information does not take into account the particular investment objectives or specific circumstances of any person or entity.

The Information is for the use of an Albourne Group Company client or potential client (the "Intended Recipient") who is (i) an "Accredited Investor" as defined in Regulation D under the U.S. Securities Act of 1933 and a "Qualified Purchaser" as defined in Section 2(a)(51) of the U.S. Investment Company Act of 1940, (ii) a "Permitted Client" within the meaning of the Canadian National Instrument 31-103, (iii) an investment professional, high net worth company or unincorporated association, high value trust or other person specified in articles 19 and 49 of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005, or (iv) where lawful in other jurisdictions, a financially sophisticated, high net worth and professional investor capable of evaluating the merits and risks of fund investments without undue reliance on the Information. If you are not an Intended Recipient, or if in your jurisdiction it would be unlawful for you to receive the Information, the Information is not for your use and you should not use or rely on it.

Any Information is also provided subject to: (a) where you are a client of any Albourne Group Company, the provisions of your service agreements with the relevant Albourne Group Company, as supplemented by any applicable website terms and conditions of access; and (b) in all other cases, the terms and conditions of access accepted by you on Albourne's Investor Portal (as such terms and conditions are as supplemented by any non-disclosure agreement or other agreement (if any) between you and the relevant Albourne Group Company) or the terms and conditions otherwise agreed between you and the relevant Albourne Group Company, in each case such terms prevailing over the terms of this notice in the event of any conflict between such terms and those contained in this notice.

The Albourne Group makes no representations, guarantees, or warranties as to the accuracy, completeness, or suitability of the Information provided. Please note the Albourne Group does not provide legal advice to clients or potential clients or otherwise and the Information is not a comprehensive review of all legal, regulatory or such developments on the subject discussed herein. None of the Information is a substitute for seeking actual legal advice from a qualified attorney and in no circumstances should the Information be used to make any investment or other decision.

This Information may not be reproduced in whole or in part and no part of this material may be reproduced, distributed, transmitted or otherwise made available to a third party or incorporated into another document or other material or posted to any bulletin board without the prior written consent of an Albourne Group Company.

To the extent that any third party (including but not limited to, any service provider or fund) is referred to in the Information, you should not necessarily view this as an endorsement by the Albourne Group of such third party. The Information may also contain information obtained from third parties which may not be independently verified. The Albourne Group makes no representations or warranties, express or implied, as to the accuracy or completeness of the Information and disclaims all liability for any loss or damage which may arise directly or indirectly from any use of or reliance upon any such data, forecasts or opinions, or from the Information generally.

To the extent that performance information or forecasts are contained in the Information, there can be no assurance or guarantee that such performance record will be achievable in the future. Past performance is not necessarily indicative of, or a guarantee of, future returns. In the United States, any funds referred to in the Information are made through private offerings pursuant to one or more exemptions of the United States Securities Act of 1933, as amended. Such funds have not been recommended or approved by any federal or state securities commission or regulatory authority. Furthermore, none of the foregoing authorities has confirmed the accuracy or determined the adequacy of the Information. Additionally, you should be aware that any offer to sell, or solicitation to buy, interest in any funds may be unlawful in certain states or jurisdictions.

You should carefully review the relevant offering documents before investing in any funds mentioned in the Information. You are responsible for reviewing any fund, the qualifications of its manager, its offering documents and any statements made by a fund or its manager and for performing such additional due diligence as you may deem appropriate, including consulting with your own legal, tax, and other advisers.

Speaker Biography

Speaker Biography

Kristen Jones

Partner and Head of US Private Credit
Albourne Partners

Kristen Jones is Head of Private Markets IDD – US Private Credit at Albourne America LLC. She is a Partner, based in Minneapolis. Kristen joined Albourne in 2009 and has held several roles within the firm, including Private Equity Associate Analyst (2009–2014), Private Markets IDD Analyst (2014–2019), and Pod Leader for US Distressed Credit (2019–2021).

Prior to joining Albourne, Kristen sat on the cash and collateral desk at LaCross Global Fund Services in Edina, MN in 2008 and completed an Investment Analyst Internship at Waycrosse, Inc., the Cargill and MacMillan Family Office in Wayzata, MN, from 2006 to 2008.

Kristen earned her Bachelor of Science in Business (BSB) with High Distinction, majoring in Finance, from the University of Minnesota's Curtis L. Carlson School of Management in 2009.

Blockchain and Tokenization

Los Angeles County Employees Retirement Association

Blockchain and Tokenization

TODAY'S DISCUSSION

Tuesday, September 9, 2025, 1:00pm

Session Outline

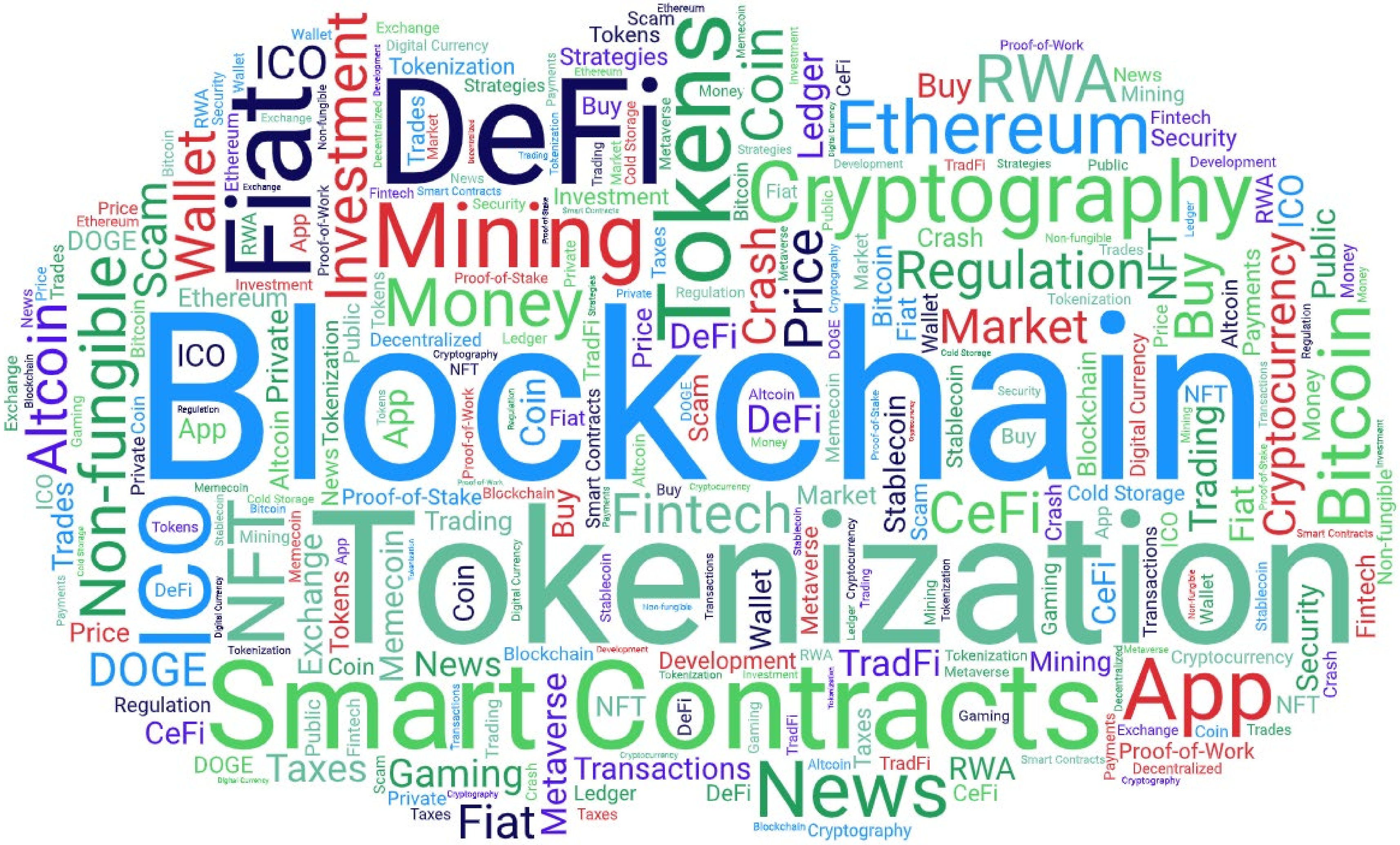
1. **Blockchain and Tokenization Overview**
   - **Jason Choi**, Senior Investment Analyst
2. **Panel Discussion – Blockchain and Tokenization Insights**
   - **Moderator**: **Jason Choi**, Senior Investment Analyst
   - **Patrik Bless**, Managing Director, Partners Group
   - **Pablo Nobre dos Reis**, Digital Products and Solutions Analyst, DWS
   - **Colleen Sullivan**, Co-Head of Venture, Brevan Howard Digital

Objectives

A. Explore the benefits of blockchain as an innovative technology
B. Identify current and future use cases
C. Highlight market developments and regulatory considerations

Part 1: Blockchain and Tokenization Overview

Introduction



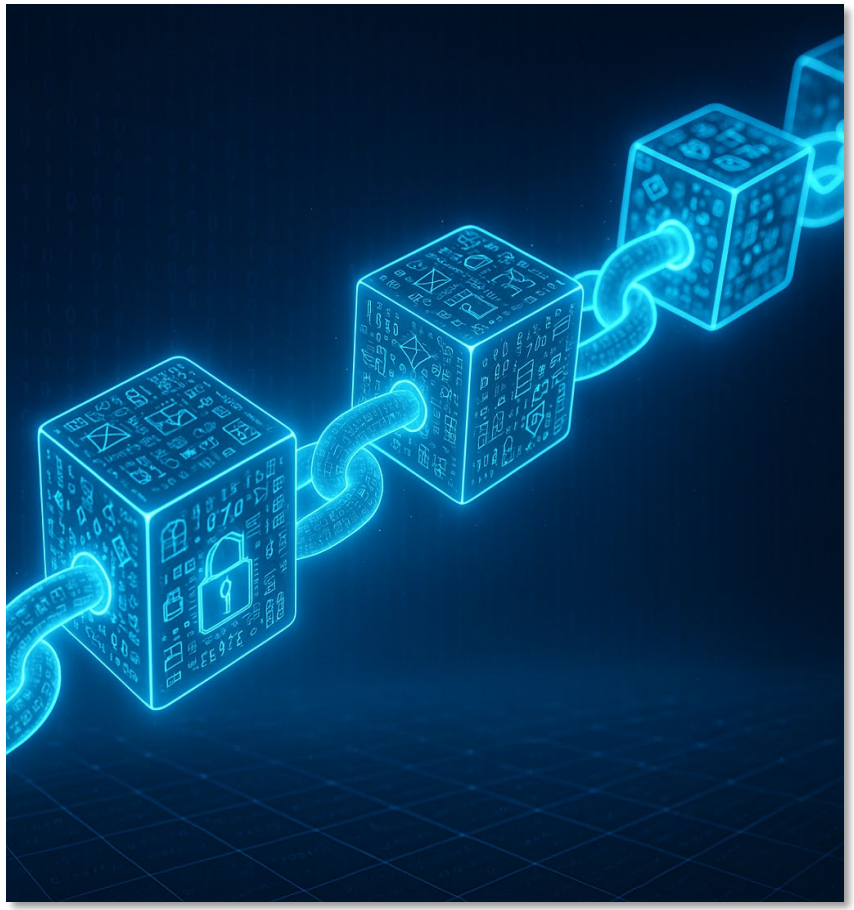
What is a Blockchain?

A blockchain is a digital ledger – a system to record and track financial transactions and data

Core Concepts

- *Decentralization*
- *Immutability*
- *Transparency*
- *Programmable*

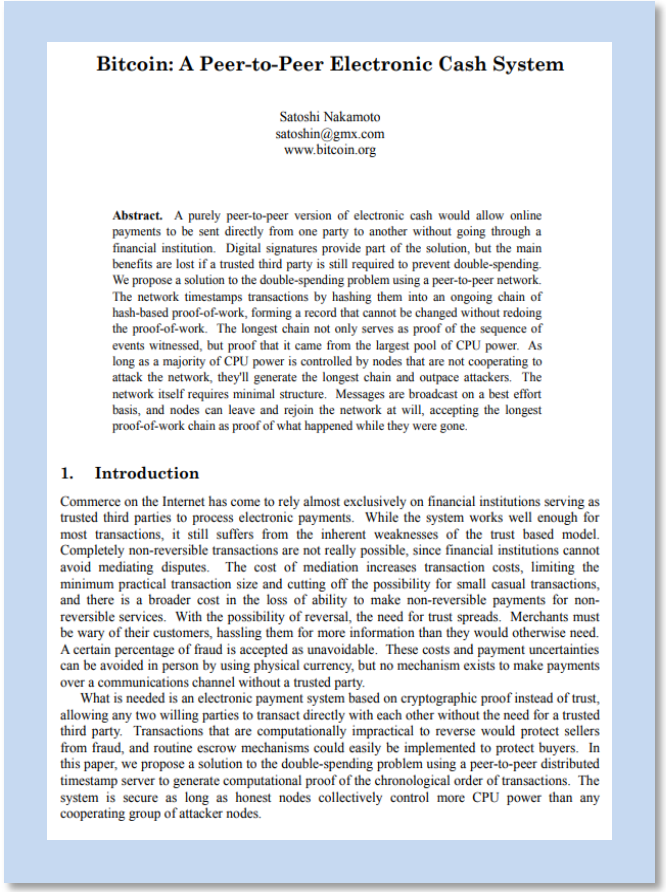
A blockchain can reduce single point of failure/fraud, and generally enables trust without the need for a central authority



History

The Beginning of Blockchain…

- In October 2008, a paper authored by Satoshi Nakamoto titled *Bitcoin: A Peer-to-Peer Electronic Cash System*[1] was released
- The paper proposed “an electronic payment system based on cryptographic proof instead of trust…”
- Introduced a way to send money without needing a bank; using cryptography and a distributed network of computers



Bitcoin: A Peer-to-Peer Electronic Cash System

Satoshi Nakamoto
satoshin@gmx.com
www.bitcoin.org

Abstract. A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.

1. Introduction

Commerce on the Internet has come to rely almost exclusively on financial institutions serving as trusted third parties to process electronic payments. While the system works well enough for most transactions, it still suffers from the inherent weaknesses of the trust based model. Completely non-reversible transactions are not really possible, since financial institutions cannot avoid mediating disputes. The cost of mediation increases transaction costs, limiting the minimum practical transaction size and cutting off the possibility for small casual transactions, and there is a broader cost in the loss of ability to make non-reversible payments for non-reversible services. With the possibility of reversal, the need for trust spreads. Merchants must be wary of their customers, hassling them for more information than they would otherwise need. A certain percentage of fraud is accepted as unavoidable. These costs and payment uncertainties can be avoided in person by using physical currency, but no mechanism exists to make payments over a communications channel without a trusted party.

What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party. Transactions that are computationally impractical to reverse would protect sellers from fraud, and routine escrow mechanisms could easily be implemented to protect buyers. In this paper, we propose a solution to the double-spending problem using a peer-to-peer distributed timestamp server to generate computational proof of the chronological order of transactions. The system is secure as long as honest nodes collectively control more CPU power than any cooperating group of attacker nodes.

Sources and Notes: 1. https://bitcoin.org/bitcoin.pdf.

How Does it Work?

Someone **requests a transaction**

The requested transaction is broadcast to a **P2P network consisting of computers, known as nodes**

The network of nodes **validates the transaction and the user's status using known algorithms**

A verified transaction can involve cryptocurrency, contracts, records or other information

Once verified, the transaction is combined with other transactions **to create a new block of data for the ledger**

The new block is then added to the existing blockchain, in a way that is permanent and unalterable

The **transaction is complete**

Sources and Notes: PricewaterhouseCoopers (PWC), "Making sense of bitcoin, cryptocurrency and blockchain".

Emergence of Smart Contracts

…Enter Smart Contracts on the Blockchain

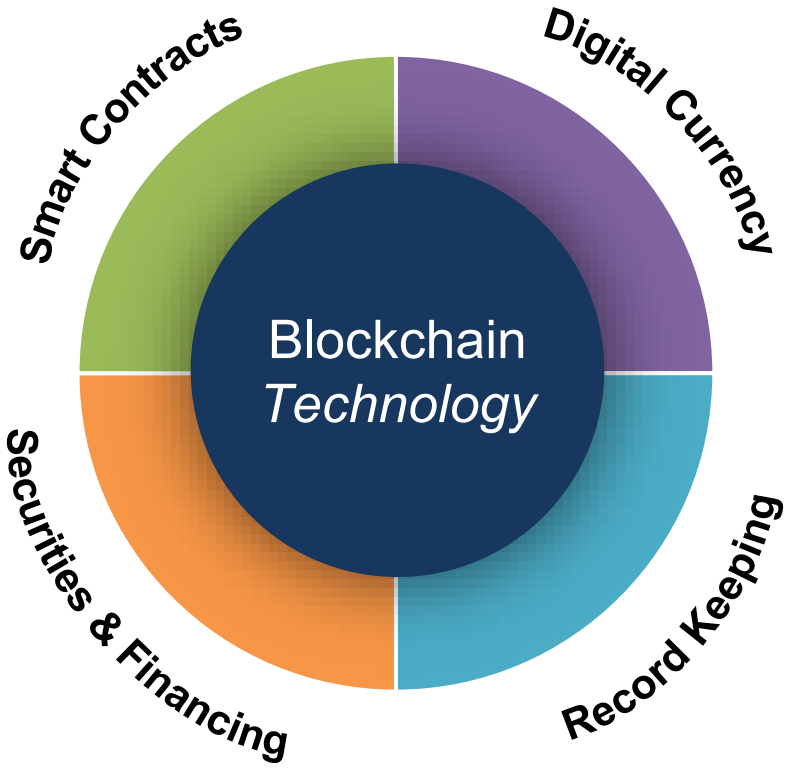
- Ethereum was released in July 2015 as a platform, promoting development of applications using smart contracts
- Smart contracts are digital contracts stored on a blockchain that are automatically executed when predetermined terms and conditions are met
- Since Ethereum, we have seen the rise of many other asset classes that run on blockchain infrastructure (e.g., stablecoins)

Bitcoin 2008

Ethereum 2015

Applications of the Blockchain

- Automation
- Decentralized Finance
- Identity
- Tokenized Instruments
- Crowdfunding
- Debt Markets



- Payments
- Peer-to-Peer Lending
- Remittance
- Supply Chain
- Ownership Rights
- Intellectual Property

What is Tokenization?

A digital representation of value, ownership, and access rights built on an existing blockchain platform

The benefits of tokenization

- Faster settlement
- Reduced counterparty risk
- Lower operational cost
- Greater access and liquidity

Wide range of different token types

- Utility tokens
- Governance tokens
- Stable asset tokens (“Stablecoins”)
- Security tokens
- Non-fungible tokens (“NFTs”)

Asset Identification

Token Design

Blockchain Integration

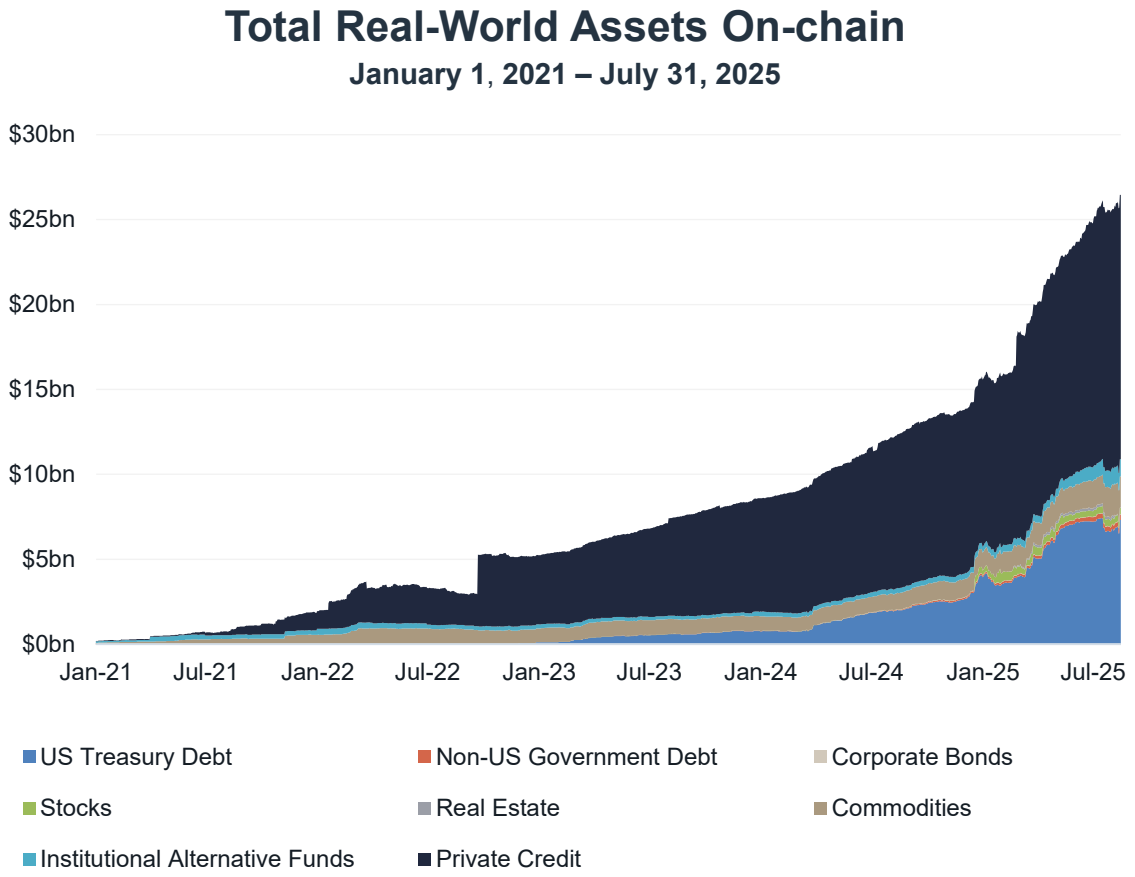
Off-chain Data Integration

Token Issuance

Tokenization – Real-World Assets

Total RWA On-chain	Total Asset Holders	Total Issuers
$26bn	364,310	262

- Real-world assets (RWAs) on-chain represent physical and traditional financial assets (e.g., real estate, stocks, bonds, and commodities) as digital tokens on a blockchain
- RWA tokenization is in early stages
- A trend of growth can be observed in terms of RWA total value coming on-chain in various asset categories



Sources and Notes: RWA.xyz as of August 16, 2025.

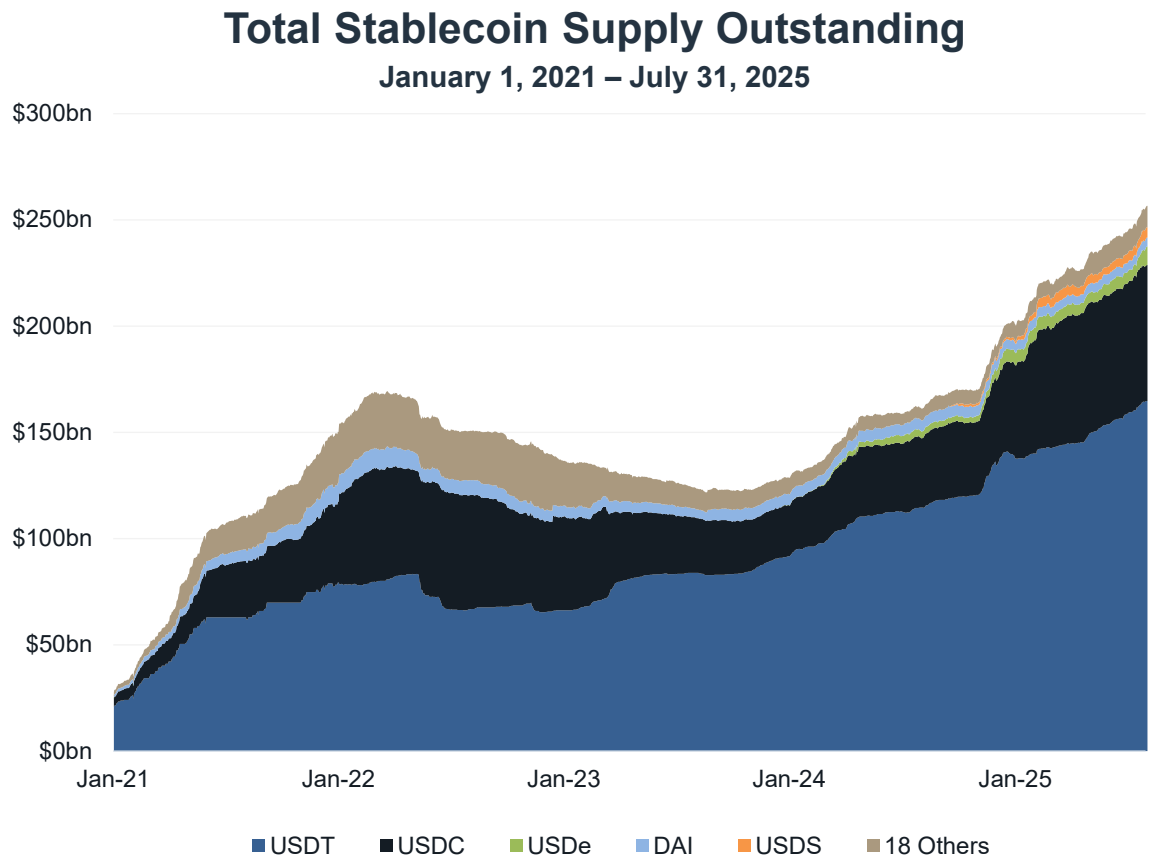
Tokenization – Stablecoins

There are over $250bn worth of stablecoins in circulation today, up from single digit billions in 2020

- Stablecoins are digital dollars that operate on blockchain networks
- Primary adoption involved facilitation of trading, lending, or borrowing in other digital assets
- Stablecoin use cases continue to expand alongside an overall upward trend of stablecoin adoption

Everything in the digital assets space, outside of Bitcoin and Ethereum, is less than 10 years old

As with any emerging technology, adoption introduces inherent uncertainties with evolving considerations



Sources and Notes: 1. DeFiLlama, as of June 1, 2025.

Part 2: Blockchain and Tokenization Insights

Panel Discussion – Blockchain and Tokenization Insights

Panelist

Patrik Bless

Partners Group

Panelist

Pablo Nobre dos Reis

DWS

Panelist

Colleen Sullivan

Brevan Howard Digital

Blockchain is an innovative technology that can add value also in the Private Market's industry

What is blockchain technology?

A **decentralized digital ledger** that **securely stores information** across a network **without the need for intermediaries or reliance on a central authority**.

Decentralization: Information is maintained collectively by many participants, not a single entity.

Immutability: Once stored, data cannot be changed or deleted, ensuring consistency and trust.

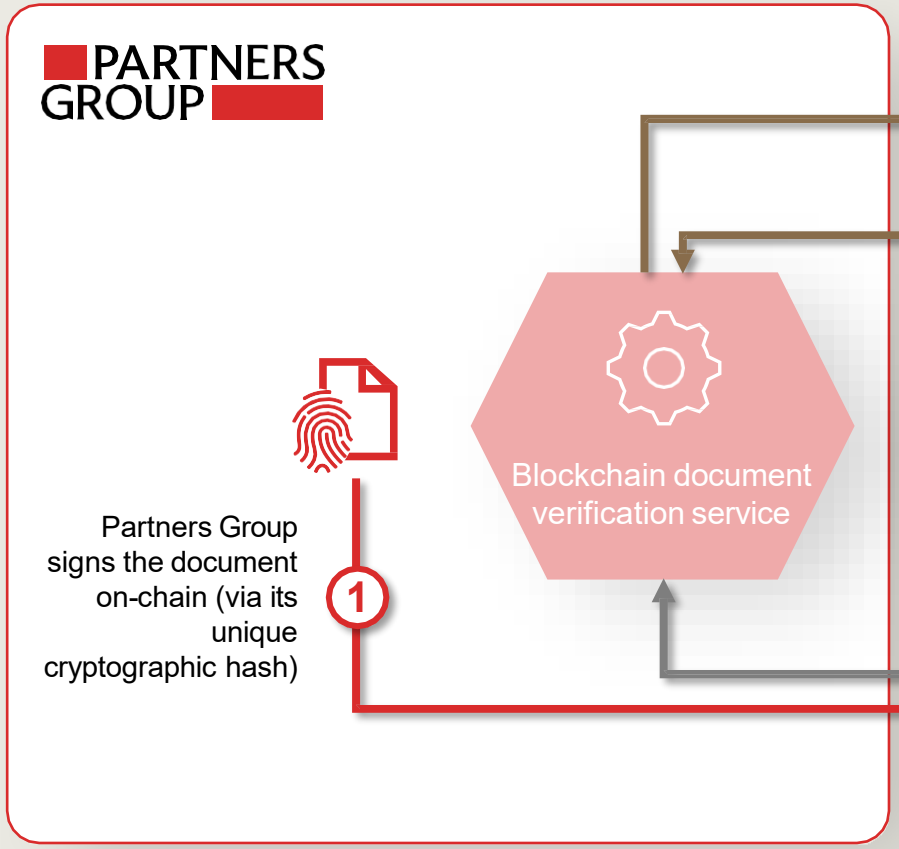
Transparency: All participants can access the same version of the anonymized stored data at any time.

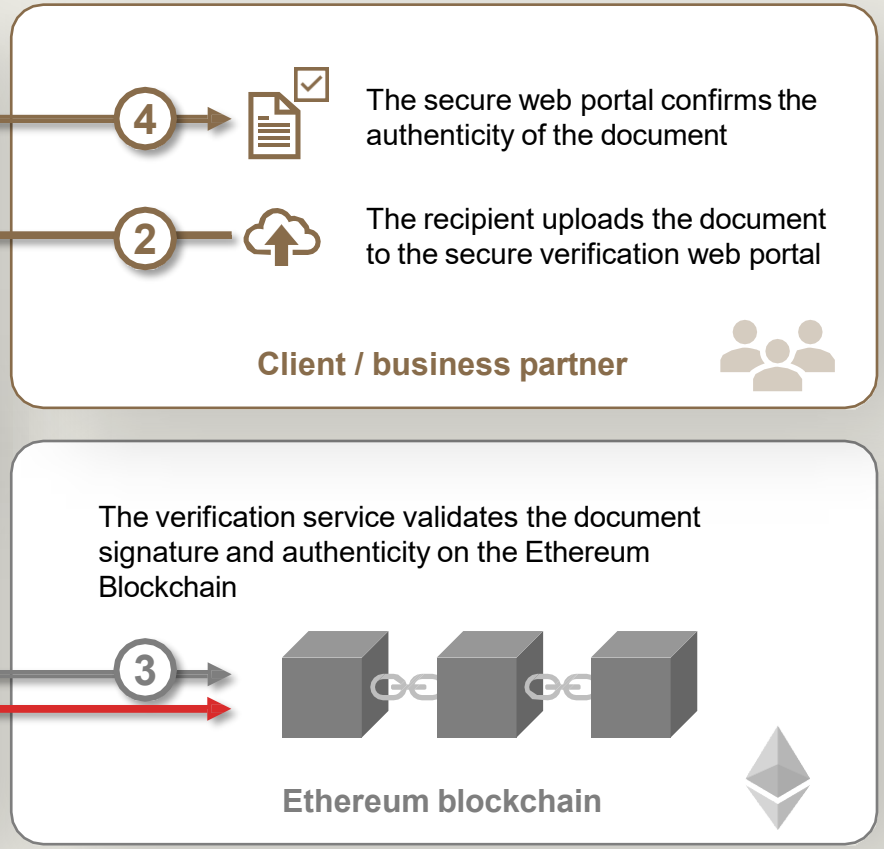
Security: Cryptographic methods and consensus rules prevent unauthorized access and fraud.

Where this technology can add value

Source: Partners Group (2025). **Note**: For illustrative purposes only.

How the document signing and verification process works in detail





Used for:

- Capital calls
- Non-SWIFT payment instructions
- Client reports
- And more

Client benefits:

- Increased trust, especially in a GenAI world where fakes are easy to create
- Non-repudiation
- Increased efficiency

Source: Partners Group (2025). **Note**: For illustrative purposes only.

Public vs. private blockchains

Comparing governance and participation

Public blockchain

An open network in which anybody can access the blockchain

- Censorship-resistant global network that secures access for everyone and makes data accessible to all participating nodes
- Distinction in how participants can update data in the ledger:
  - "**Permissionless**": all participants can participate in the consensus process and verify transactions
  - "**Permissioned**": Only selected nodes can verify transaction
- Examples: Bitcoin, Ethereum, Solana, Hedera

Private blockchain

A closed network only for invited parties

- Used within a company or a consortium of companies to automate processes and make use of a single database that is shared with all participating parties
- The use of the blockchain is only possible for approved participants which also simplifies the consensus process
- Mostly "permissioned" blockchains, in which specific participants are validators of transactions and that everybody trusts
- Examples: R3 Corda, Hyperledger Fabric, Hyperledger Besu, Quorum

Source: DWS Investment GmbH, as of July 25, 2025.

Potential use cases for stablecoins

Traditional Finance (TradFi), Centralized Finance (CeFi), and Decentralized Finance (DeFi)

Why do we need stablecoins?	– Traditional finance use cases such as real-world payment. – Centralized finance use cases such as settlement asset for cryptocurrency transactions. – Decentralized finance use cases such as to earn passive yield for investors.

Use case	Traditional Finance (TradFi)	Centralized Finance (CeFi)	Decentralized Finance (DeFi)
Examples	– Settlement asset – Cross-border payments – Corporate treasury and payments – Retail payments	– Settlement asset for cryptocurrency trading on centralized exchanges – Offer borrowing and lending of stablecoin via CeFi partners	– Collateral in DAO[1] Treasury – Decentralized exchanges and liquidity pools – Borrowing and lending in DeFi ecosystem
End user	– Financial institutions – Corporates – Retail users	– Financial institutions – Crypto-native institutions – Retail users – Corporates	– DAOs – Retail users – (Institutions and corporates)
CBDC			
Tokenized deposit			
Stablecoin			

Source: DWS Investment GmbH, as of July 25, 2025; 1) A decentralized autonomous organization, or DAO, is a blockchain-based form of organization or company that is often governed by a native cryptocurrency token; 2) CBDC stands for central bank digital currency.

Current Landscape

US Regulatory Developments:

- *US Administration Policy Shift*
- *Strategic Bitcoin Reserve(s)*
- *SAB 121 Repealed*
- *SEC Case Dismissals*
- *Stablecoin Frameworks Introduced*
- *Market Infrastructure Bill*

By the Numbers:

- Stablecoins reach all-time highs $265bn as of 18 August 2025[1]
- Tokenization of real-world assets has gone from $2bn at the start of 2022 to $26bn as of August 2025[2]
- DeFi TVL rebounding this year $47bn in June 2023 to $149bn now[3]
- M&A transactions are increasing: Coinbase/Deribit, Bridge/Stripe, Ripple/Hidden Road, Kraken/NinjaTrader, Robinhood/Bitstamp
- New Hampshire becomes first US state to have Strategic Bitcoin Reserve
- 85% of the US congressional candidates supported by the industry won their races in November[4]
- According to Bloomberg, there are more than 70 cryptocurrency ETFs slated for review by the SEC this year[5]

Sources & Notes: 1. The Block Pro as at 18 August 2025. **2.** RWA.xyz as at 18 August 2025. **3.** DefiLlama as at 18 August 2025. **4.** CBS News as at 8 December 2024. **5.** Cointelegraph as at 21 April 2025. TVL = Total Value Locked. Web3 is a blockchain-based Internet that uses decentralised technology to operate. Your attention is drawn to the sections entitled "Important Information" and to "Further Important Information" set out at the end of this presentation. Information and opinions unless otherwise indicated are expressed as at 9 June 2025.

Glossary

Term	Acronym	Definition
Anti-Money Laundering	AML	Commonly refers to policies or procedures to help detect and report suspicious activity including the predicate offenses to money laundering and illicit financing, such as securities fraud and market manipulation.
Cryptography		The practice of developing and using coded algorithms to protect and obscure transmitted information so that it may only be read by those with the permission and ability to decrypt it.
Decentralized Finance	DeFi	Reference to financial services that are facilitated without third party involvement.
Exchange Traded Fund or Commodity	ETF / ETC	A type of investment fund that holds a collection of assets like stocks, bonds, commodities, or other securities, and trades on a stock exchange like an individual stock.
Generative Artificial Intelligence	GenAI	A subfield of artificial intelligence that uses large language data models to produce text, images, videos, or other forms of data.
Hash / Hash Code		A hash is a mathematical formula in the context of cryptography. A hash code can be thought of as a digital fingerprint of a data set, where the code is used to validate that the original data set is unaltered.
Know Your Customer	KYC	Commonly refers to policies or procedures associated with verifying the identity and suitability of a business customer, ultimately to reduce or avoid illicit activity.
Non-Fungible Token	NFT	A unique digital identifier that is recorded on a blockchain to certify ownership and authenticity.
Peer-to-Peer	P2P	Computer network in which each computer can act as a server for others, as opposed to a central server.
Real-World Assets	RWA	Traditional or physical assets of economic value, such as real estate, intellectual property, commodities, and fine art.
Staff Accounting Bulletin No. 121	SAB 121	Regulatory issuance by the US Securities and Exchange Commission that required an entity to recognize a liability and corresponding asset for its obligation to safeguard crypto assets.
Securities and Exchange Commission	SEC	US regulatory agency with enforcement oversight of federal securities laws.
Smart Contracts		Digital contracts stored on a blockchain that are automatically executed when predetermined terms and conditions are met.
Society for Worldwide Interbank Financial Telecommunications	SWIFT	A network that banks use to communicate with each other securely, mainly to give instructions for transferring funds between accounts.
Total Value Locked	TVL	A metric used to gauge the total value of digital assets held on a particular blockchain platform or ecosystem.
Various Stablecoin Products	USDT, USDC, USDe, USDS, DAI	Stablecoins launched by different entities (Tether, Circle, Ethena, Sky Protocol, MakerDAO) with different underlying mechanisms but ultimately similar in end-design of maintaining a stable value of $1 US dollar.

Speaker Biographies

Speaker Biographies

Patrik Bless

Managing Director
Partners Group

Patrik Bless is the Co-Head of the Business Applications business unit and the Chief Information Security Officer, based in Zug, Switzerland. He has 18 years of industry experience.

Prior to joining Partners Group, he held leadership positions at Open Systems and Detecon management consultancy.

Patrik holds a Master's degree in Computer Science from the Swiss Federal Institute of Technology (ETH) in Lausanne, Switzerland and an MBA from the University of St.Gallen (HSG), Switzerland.

Speaker Biographies

Pablo Nobre dos Reis

Digital Products and Solutions Analyst
DWS

Pablo Nobre dos Reis is part of the Digital Strategy, Products and Solutions team at DWS, where he focuses on digital assets, particularly cryptocurrencies and tokenized assets. He was involved in developing DWS' first cryptocurrency ETC offering in Europe. Pablo regularly engages with clients and at industry events on digital assets. He joined DWS in 2019.

Pablo holds a Bachelor of Science in Business Administration with a concentration in Banking and Finance from Frankfurt School of Finance and Management. Furthermore, he is CESGA certified.

Speaker Biographies

Colleen Sullivan

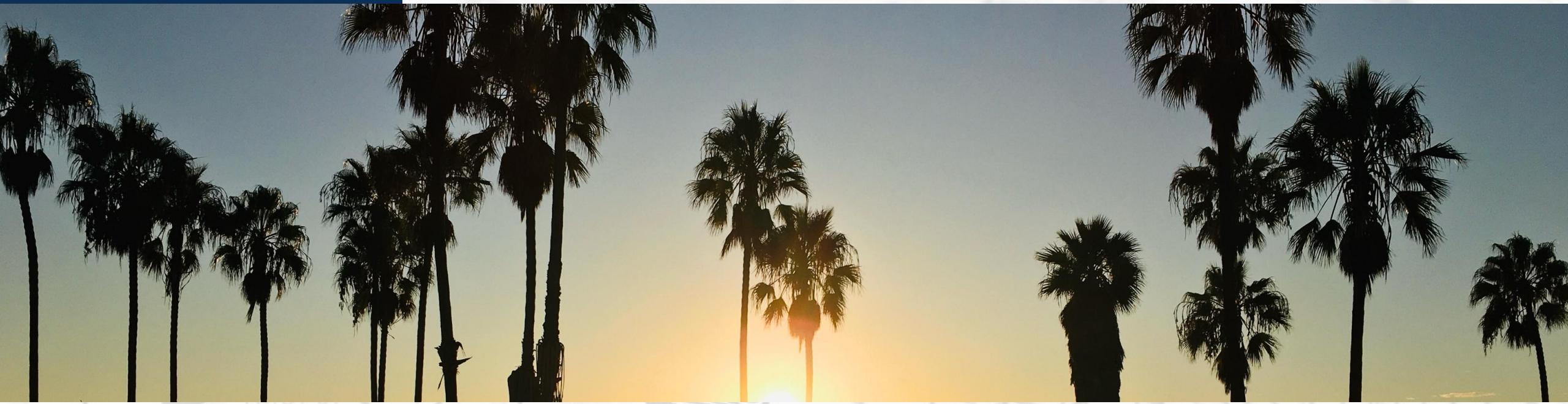
Co-Head of Venture
Brevan Howard Digital

Colleen Sullivan joined Brevan Howard Digital in November 2021 as the Co-Head of Venture. She has over 12 years of crypto experience and has invested in over 150 crypto startups.

Prior to joining Brevan Howard Digital, Colleen was a Co-Founder and CEO of CMT Digital from 2013 to 2021. Prior to starting CMT Digital, Colleen co-founded Sullivan Wolf Kailus. Colleen also previously practiced law in the Investment Funds and Derivatives group at Sidley Austin LLP and co-founded iOptions Group LLC.

Colleen holds a Juris Doctor (JD) from DePaul University College of Law and a Bachelor of Science in Accounting from the University of St. Francis.

Navigating Our Charted Course
Board of Investments Offsite



Implications of Artificial Intelligence

Los Angeles County Employees Retirement Association

Implications of Artificial Intelligence

TODAY'S DISCUSSION

Session Outline

1. **Current State of Artificial Intelligence**[1]
   - **Didier Acevedo**, Senior Investment Officer
   - **Greg Wallem**, Managing Director, StepStone Group
2. **Panel Discussion - Implications of Artificial Intelligence**
   - **Moderator**: **Greg Wallem**, Managing Director, StepStone Group
   - **Seth Boro**, Managing Partner, Thoma Bravo
   - **Jim Prusko**, Senior Portfolio Manager and Partner, Magnetar Capital
   - **Naunidh Singh Balla**, Co-Founder and CTO, Tetrix

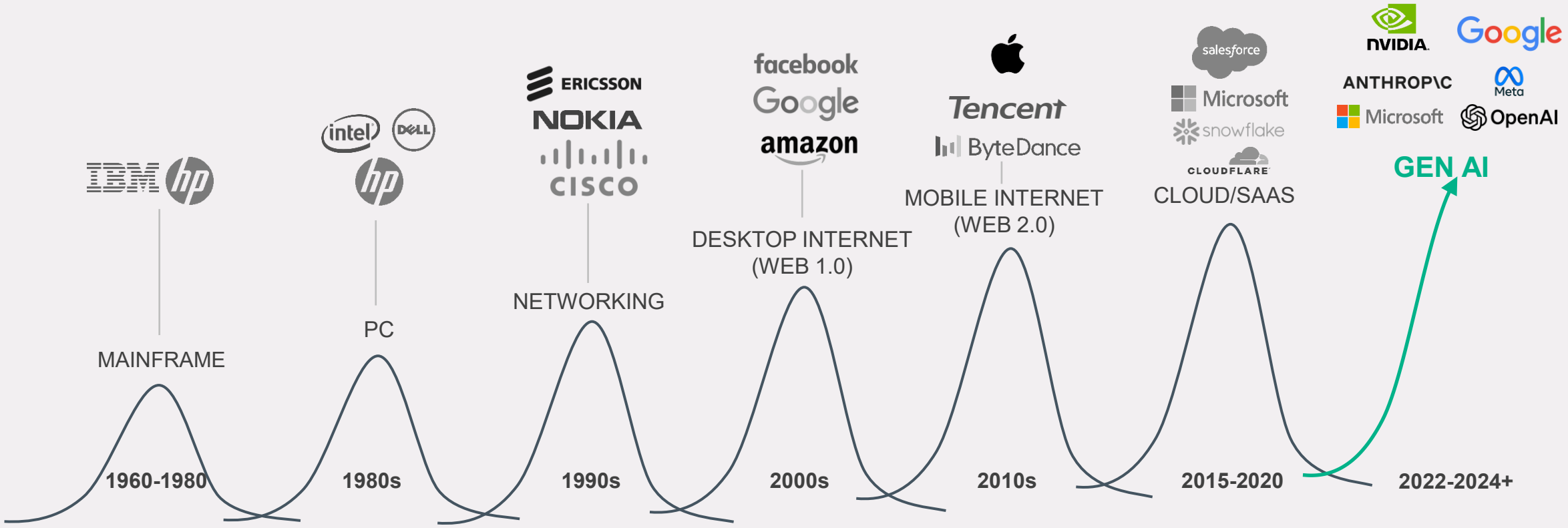
Objectives

A. Examine AI's influence on investment strategies and innovation
B. Assess labor market shifts and future skill demands
C. Analyze valuation dynamics and investor sentiment in AI
D. Explore second-order effects and infrastructure implications

[1] *Includes trivia questions*

Part 1: Current State of Artificial Intelligence

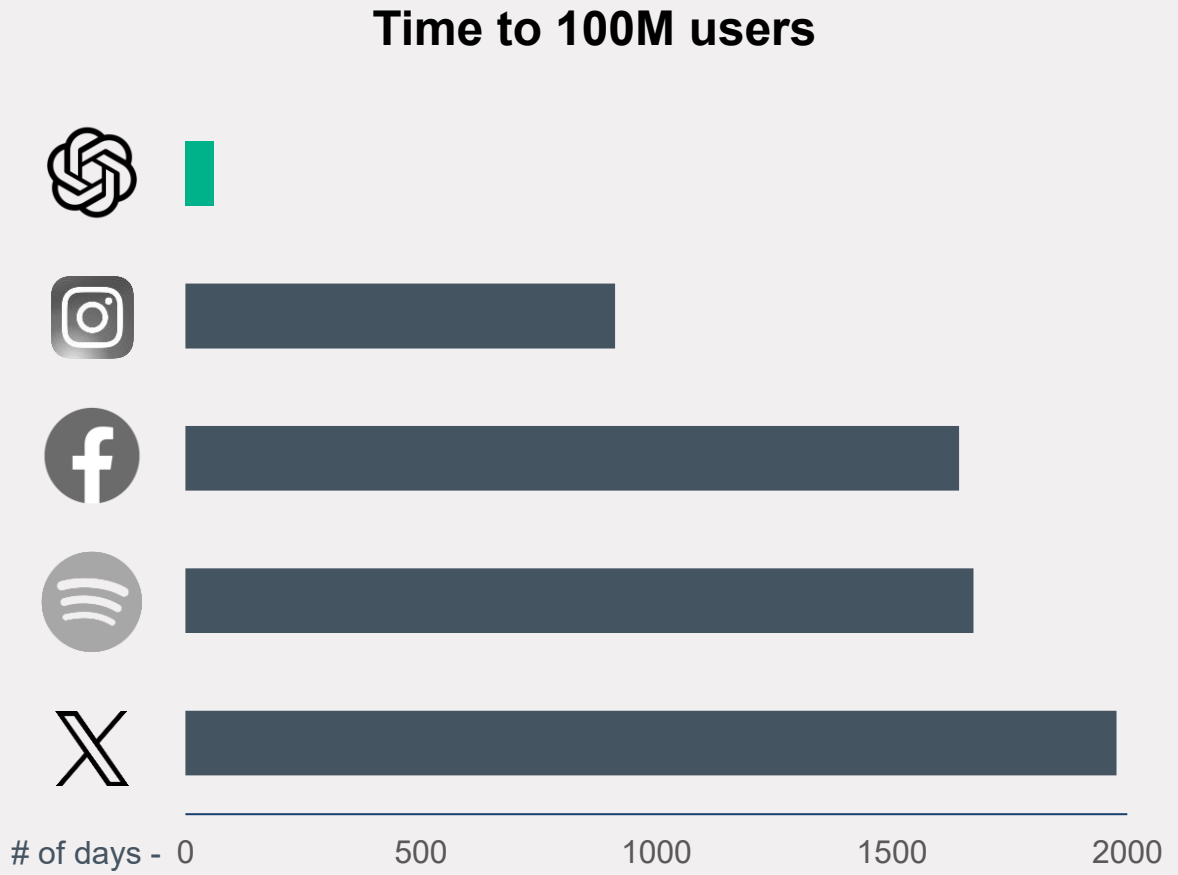
AI has now matured and is the next tech platform shift



For illustrative purposes only.

…with Generative AI enjoying unprecedented rates of adoption

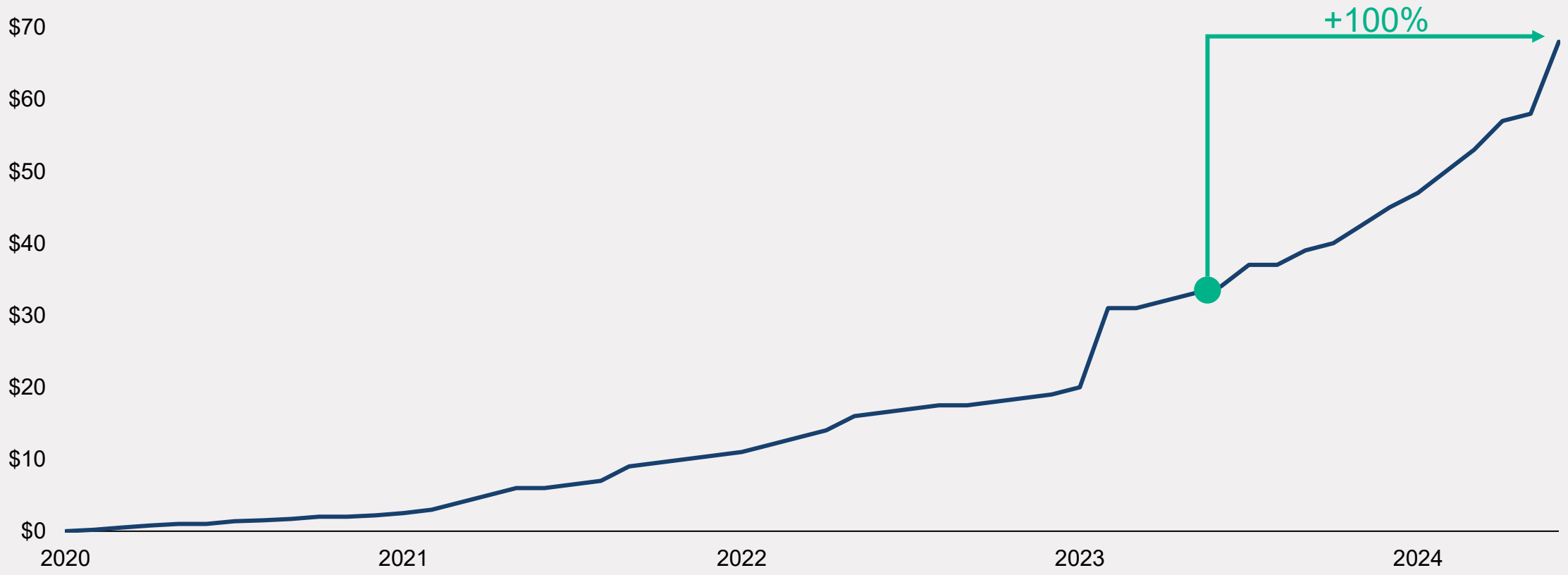
ChatGPT is one of the fastest applications to ever reach **100M users** and did it over **15x faster** than applications like Instagram, Facebook, Spotify and Twitter



Source: Twitter and Redpoint Ventures. For illustrative purposes only.

AI funding is following suit and accelerating significantly

Cumulative funding in private AI companies since 2020
In USD ($B)

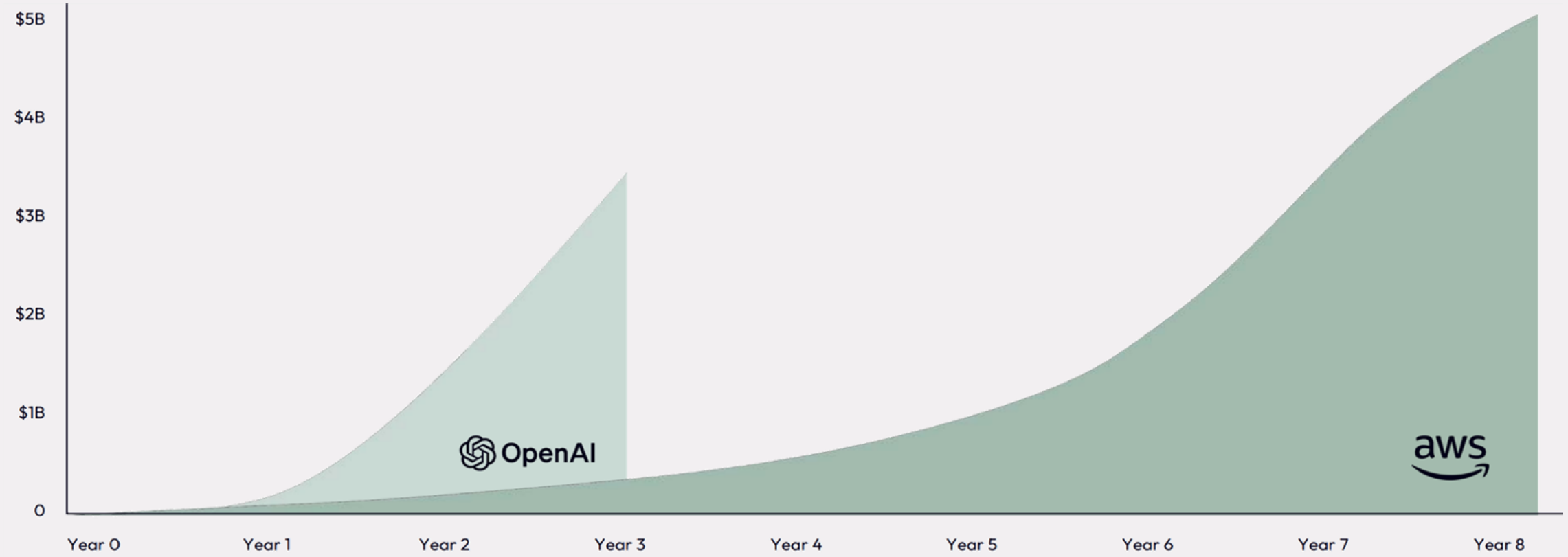


Source: Coatue.

Nvidia isn’t the only one breaking records… could AI > Cloud?

Revenue growth since inception

Run rate (estimated) in USD ($B)



Cloud - the delivery of computing services over the internet (“the cloud”) instead of on local computers

Source: Scale Venture Partners.

…but let's remember: we are still in the "Flashlight Era" of AI

AI apps case study (illustrative)

Today: 1.5 years post ChatGPT

- Temu
- Tik Tok
- Google
- Threads
- WhatsApp
- ChatGPT (AI)
- Google Maps
- CapCut
- Max
- Instagram

Mobile internet case study (illustrative)

1.5 years post app store launch → Maturity

- Facebook (Desktop)
- Angry Birds (Fad)
- Fruit Ninja (Fad)
- Flashlight (Fad)
- Pandora (Desktop)
- Weather (Desktop)
- Draw Something (Fad)
- Shazam (Fad)
- Paper Toss (Fad)
- Skype (Desktop)

Maturity:

- TikTok (Mobile) 11 years[1]
- Instagram (Mobile) 4 years[1]
- Facebook <1 years[1]
- WhatsApp (Mobile) 4 years[1]
- SnapChat (Mobile) 5 years[1]
- Spotify (Mobile) 6 years[1]
- Cash App (Mobile) 10 years[1]
- Uber (Mobile) 6 years[1]
- Google Maps (Mobile) 5 years[1]
- Candy Crush 5 years[1]

1. Number of years to become a top app, post App Store launch.
Source: Apple App Store charts, TechCrunch, Business Insider, as of June 2024.

Large tech incumbents validating importance of AI race

In 2024, Big tech companies participated in **71%** of the dollars raised in the top 5 VC-deals

Top US VC Deals by Size in 2024
As of June 30, 2024

Company	Series	Round Size	AI	Big Tech Participation
databricks	Series J	$10.0B	✓	--
OpenAI	Series B	$6.6B	✓	NVIDIA, Microsoft
xAI	Series C	$6.0B	✓	NVIDIA
WAYMO	Series B	$5.6B	✓	Meta
ANTHROPIC	Series C	$4.0B	✓	Google

Source: Crunchbase & CNBC, as of January 2025.

NVIDIA amazon Google

Microsoft Meta

Amazon, Microsoft, Google and Meta

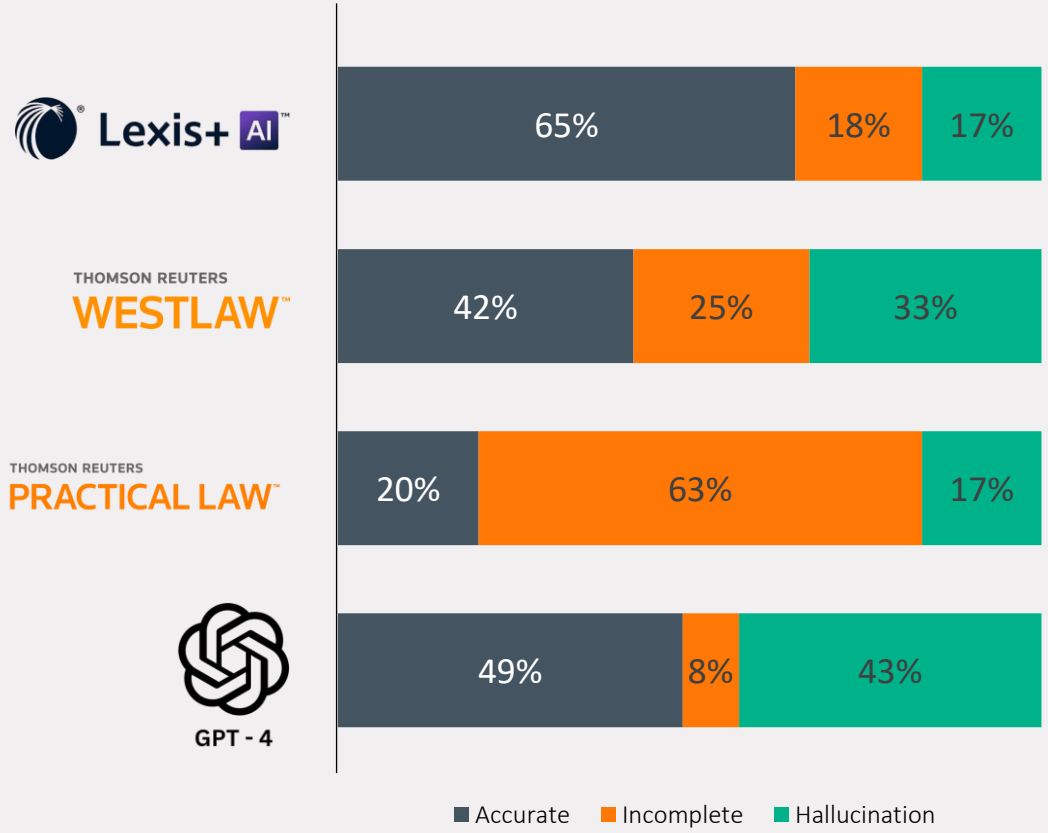
are each investing an eye-watering

$30-$60 Billion in AI **per year.**

– CNBC, Accel

Models still need to get better for mass adoption

AI systems still immature

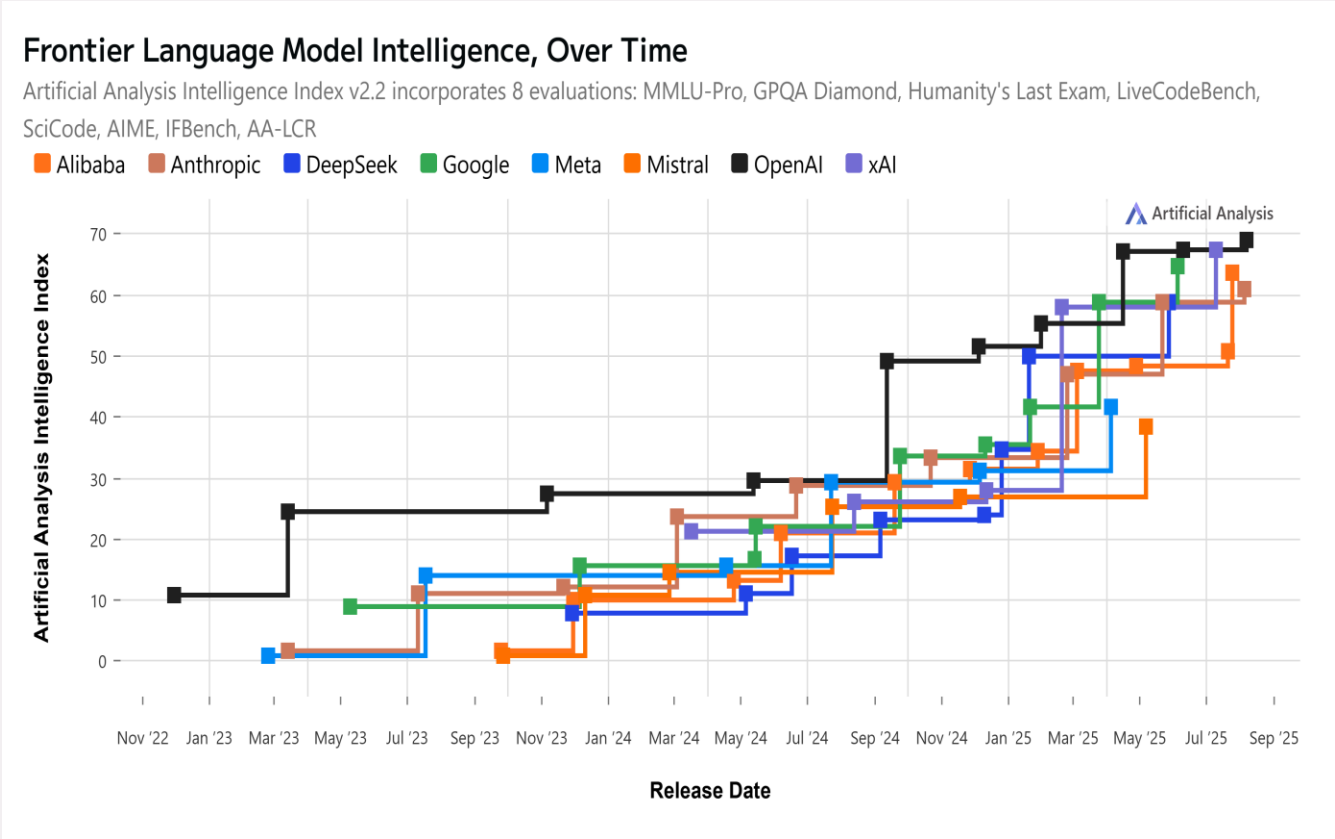


- Accuracy varies across industry specific models (e.g. legal) and general purpose models (e.g. ChatGPT)
- Large general purpose models are more responsive than industry specific models, which struggle with incompleteness due to limited data
- Industry specific models hallucinate less than general purpose models, but they still hallucinate

Source: Stanford, Papers With Code, as of June 2024. For illustrative purposes only.

All eyes were on OpenAI's release of ChatGPT-5

OpenAI continues to outperform other model providers, but the gap between competitors is closing…



Market Sentiment:

- ✓ Combines fast-response with deep-reasoning
- ✓ Fewer hallucinations than GPT-4o
- ✓ Free for all users; enhanced features for paid subscribers
- – Overhyped as breakthrough; mostly incremental update
- – Robotic responses lacking creativity
- – Removal of older models disrupting workflows

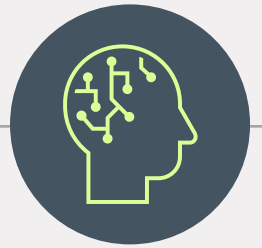
Source: Artificial Analysis. Combination metric covering multiple dimensions of intelligence - the simplest way to compare how smart models are. Version 2.2 was released in August '25 and includes: MMLU-Pro, GPQA Diamond, Humanity's Last Exam, LiveCodeBench, SciCode, AIME, IFBench, AA-LCR. See Intelligence Index methodology for further details, including a breakdown of each evaluation and how we run them.

Next gen models led to more capabilities

Larger AI models can take on more advanced tasks — like writing and fixing code, understanding both text and images together, and helping manage complex, multi-step processes

Current

- Logical inference chains
- Common-sense reasoning
- Pattern recognition
- Translation
- Dialogue
- Joke explanations
- Physics QA
- Language understanding
- Question answering
- Semantic phrasing
- Proverbs
- Arithmetic
- Code completion
- General knowledge
- Reading comprehension
- Summarization



Future

- Deep personalization of results and responses
- Proactive suggestions based on long-term behavior
- Seamless analysis across all forms of data types
- Increased enterprise cross-platform integration
- Complex problem solving across industries
- Autonomous agents
- Cognitive prosthetics and assistive tech for disabilities
- Privacy-first platforms

10 trillion parameters

Source: Google Research.

Advanced capabilities including reasoning models

User Prompt

What's the implication of the new Canadian prime minister on foreign exchange rates?

Reasoning

Thought for 5 minutes

Output

Below is a holistic overview of the impact the new Canadian prime minister may have on FX rates, broken down by….

Internal Monologue

To answer this question, I first need to consider:

1. ***The economic drivers of exchange rates***
2. ***Canada's current exchange rates***
3. ***The differences in policy between Canada's new and former prime minister***

To start….

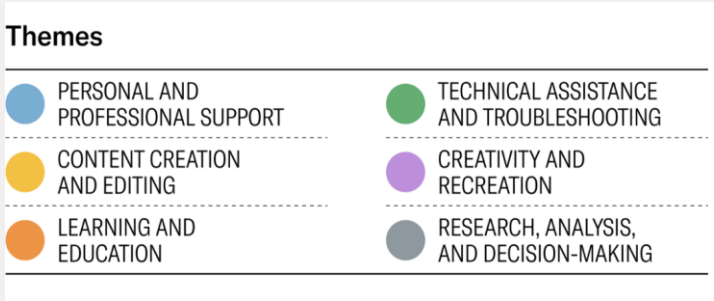
Source: Innovation Endeavors.

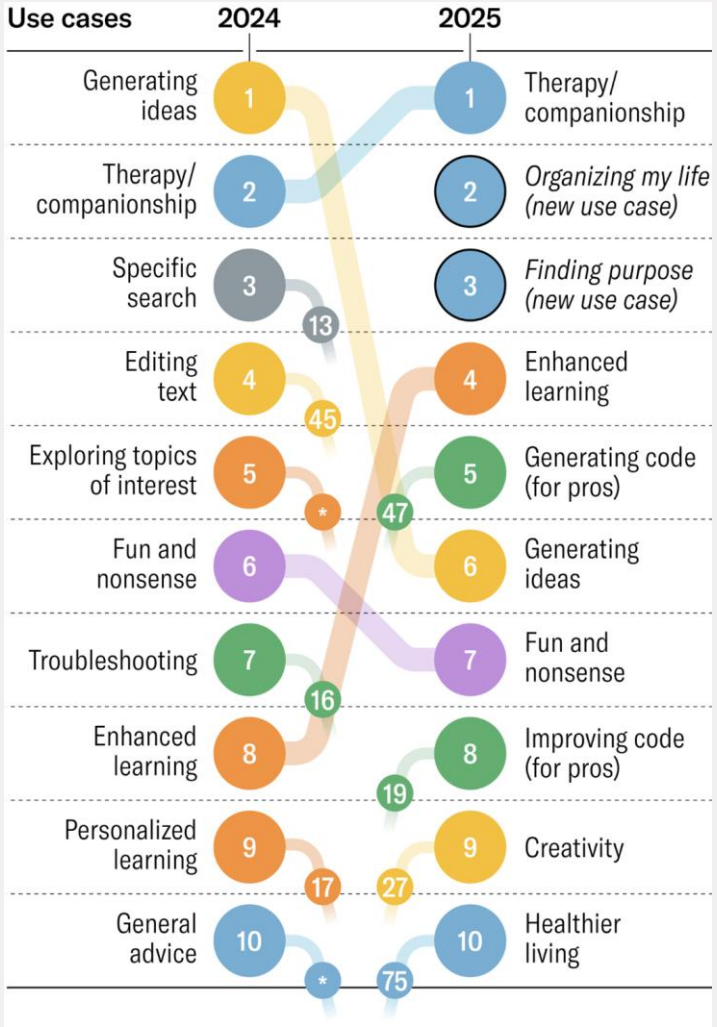
How people are using AI

Embedded in Daily Workflows
People are no longer just experimenting with AI—they're integrating it into routine tasks (summarizing meetings, drafting emails, and analyzing data)

Specialized Tools Are Gaining Traction
The rise of AI models tailored for specific roles or industries has made generative AI more relevant and effective

Voice and Reasoning Capabilities Are Expanding Use Cases
Chain-of-thought reasoning and voice interfaces are enabling more nuanced use cases, such as using AI while driving





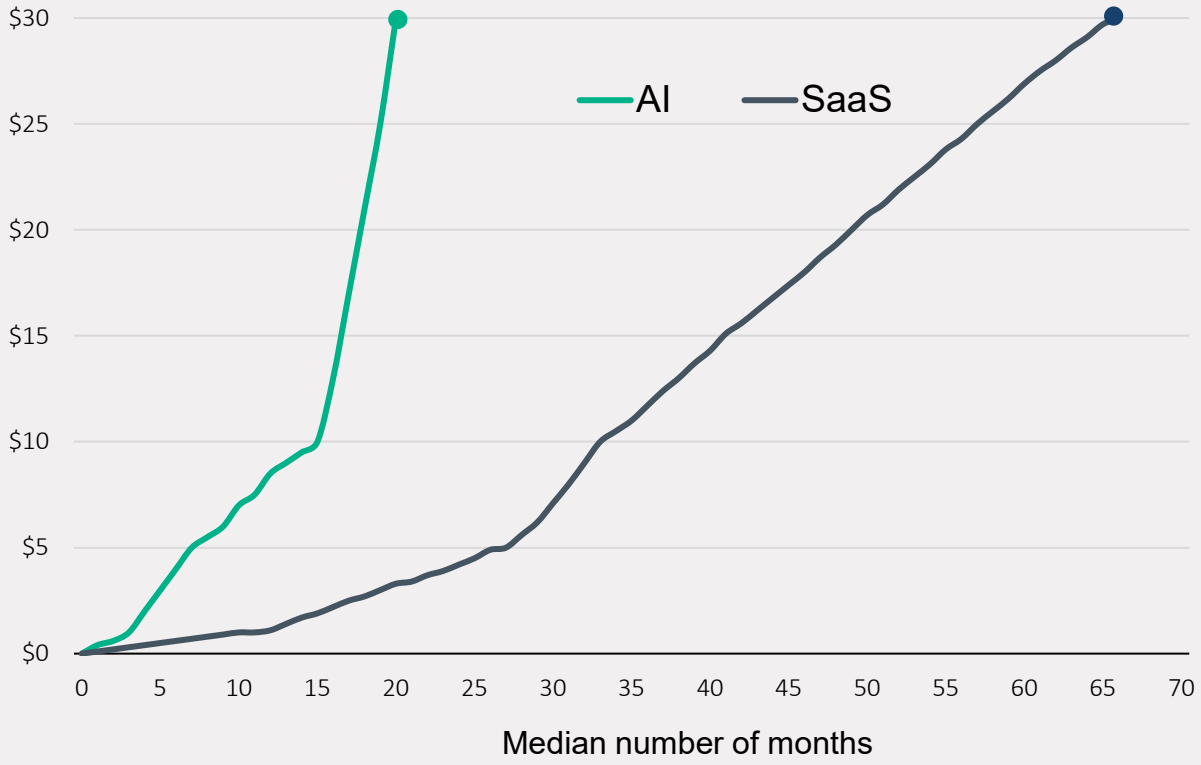
HBR - Top Gen AI Use Cases

AI propelling rapid revenue acceleration

AI startups scaled from $1M to $30M in revenue 5x faster than SaaS companies

Annualized revenue AI vs SaaS[1]

USD in millions, as of September 2024



However, VCs are beginning to distinguish between AI "sugar" vs. "protein"

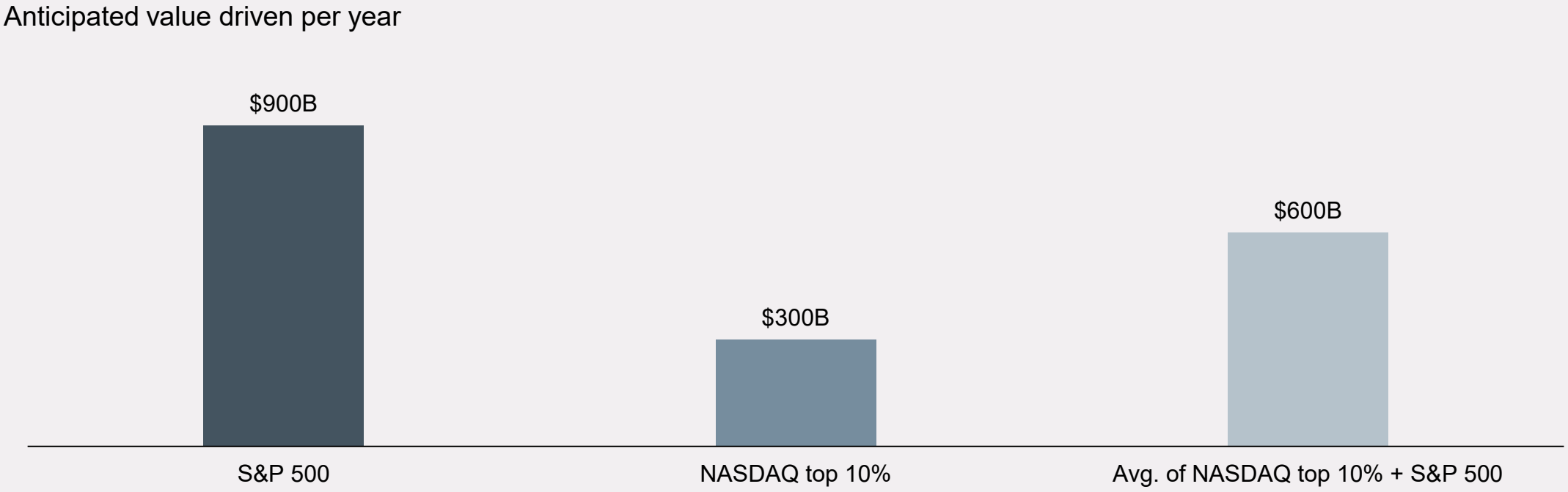
Protein companies: sustainable growth and provide long-term value through innovative AI solutions

Sugar companies: often hype-driven but churn out customers due to lack of substantial value or differentiation

Source: Financial Times, "AI start-ups generate money faster than past hyped tech companies", November 2024.

$600B in value could result from 5% net margin increase

An AI-driven improvement to labor productivity (e.g. a 5% net margin increase) could drive $600B+ in value to companies in the S&P 500 and top 10% of NASDAQ



Source: Felicis. Based on analysis of Factset estimates, using GAAP 2025 net income estimate.

What does this mean for the economy and market?

Market Opportunity

$4.1T
in economic value

$200B+
in software spend

50%
of households projected to use generative AI products

44%
of labor will be impacted by generative AI

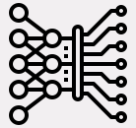
33%
of the workload will be automated

1.5%
improvement to US GDP or $232B

Skills in Demand


AI Ethicist


Prompt Engineer


AI Trainer & Data Annotator


AI Integration Consultant


Conversational UX Designers


Machine Learning Engineer


Model Risk Engineer


AI Regulation and Compliance

Technical	Human-Centric	Communication
AI Model Evaluation Prompt Writing	Human-Centric Design Ethics and Bias Detection	Data Storytelling Digital Coordination

Source: Morgan Stanley Research AI Index, October 2023.

Part 2: Implications of Artificial Intelligence

Panel Discussion – Artificial Intelligence

Moderator

Greg Wallem

StepStone

Panelist

Seth Boro

Thoma Bravo

Panelist

Jim Prusko

Magnetar

Panelist

Naunidh Singh Balla

Tetrix

Glossary of Terms

Artificial Intelligence (AI): Technology that enables computers to perform tasks that typically require human intelligence, such as recognizing images, understanding language, and making decisions.

AI Applications: Practical uses of AI in products and services, including chatbots, autonomous vehicles, and recommendation systems for music, movies, or shopping.

AI Infrastructure: The foundational systems—such as servers, data storage, and software tools—that support the development, deployment, and operation of AI technologies.

Cloud: A method of storing and accessing data and software over the internet, rather than relying on local devices or servers.

Context Window: The amount of information an AI model can consider at one time when generating a response or continuing a conversation.

Foundation Models: Large-scale AI models trained on extensive datasets that serve as a base for building more specialized AI tools and applications.

"Flashlight Era": A metaphor describing the early phase of AI development, when its capabilities were limited to narrow tasks, before evolving into more powerful and versatile systems.

Generative AI: A category of AI that can produce new content—such as text, images, or music—based on patterns it has learned from existing data.

General Purpose Models: AI models designed to handle a wide range of tasks, rather than being tailored to a single, specific function.

GPT (Generative Pre-trained Transformer): A type of AI model that excels at understanding and generating human-like text, commonly used for writing, summarizing, and conversational tasks.

Hallucinations: Instances where an AI system generates information that is incorrect or fabricated, yet presented in a way that appears plausible.

Inference: The process by which an AI system applies its training to analyze data, make predictions, or generate responses.

LLM (Large Language Model): An advanced AI model trained on vast amounts of text data to understand and produce natural language with high accuracy.

Machine Learning (ML): A subset of AI that allows systems to learn from data and improve performance over time without being explicitly programmed for each task.

Model Training: The process of teaching an AI system by exposing it to large datasets so it can learn patterns and perform specific tasks effectively.

Multi-modal: AI systems capable of processing and integrating multiple types of input—such as text, images, and audio—within a single model.

Prompt Engineering: The practice of crafting effective inputs or instructions (prompts) to guide AI systems toward producing accurate and useful outputs.

Reasoning Models: AI systems designed to simulate logical thinking, enabling them to solve problems, make decisions, and draw conclusions in a structured manner.

SaaS (Software as a Service): Software that is accessed online via a subscription or web interface, eliminating the need for local installation—examples include Google Docs and Netflix.

Speaker Biographies

Speaker Biographies

Seth Boro

Managing Partner
Thoma Bravo

Seth Boro is a Managing Partner at Thoma Bravo, where he has helped shape the firm's strategy and expansion in the software and technology sectors since 2005. Based in San Francisco, he leads the firm's infrastructure software and cybersecurity investments. Over his tenure, Seth has held more than 30 board seats, led over 15 exits, and played a central role in building one of the largest cybersecurity portfolios in private equity, representing approximately $60 billion in enterprise value. His work has earned industry recognition, including Private Equity Deal of the Year awards for the sales of Imperva and DigiCert. Seth holds a Bachelor of Commerce from Queen's University and an MBA from Stanford. Prior to joining Thoma Bravo, he held roles at Summit Partners, Credit Suisse, and First Marathon Securities.

Speaker Biographies

Jim Prusko

Senior Portfolio Manager and Partner
Magnetar Capital

Jim Prusko is a senior Portfolio Manager at Magnetar and brings nearly three decades of experience across various portfolio management strategies to his role. At Magnetar, Jim has been instrumental in implementing and managing a wide variety of structured fixed income strategies including intellectual property, transportation, music royalties, solar energy and recycling-related investments as well as liquid corporate credit markets. Jim has also played a central role in helping develop and manage Magnetar's technology and Artificial Intelligence investing initiative.

Speaker Biographies

Naunidh Singh Balla

Co-Founder and Chief Technology Officer

Tetrix

Naunidh is the Co-Founder and Chief Technology Officer of Tetrix, an AI-powered fintech platform transforming private market investing. He leads Tetrix's technology strategy and product roadmap, and is the architect behind Tetrix' state-of-the-art ingestion, processing and analytics engine for alternative investments. Under his leadership, Tetrix secured $5 million in seed funding in 2024 to accelerate its mission of empowering investors with operational excellence and data driven insights.

Before co-founding Tetrix, Naunidh was a top-ranked software engineer at JP Morgan Chase, where he led several high impact technology initiatives, designed scalable fintech solutions, and authored 3 software patents. His work there solidified his expertise in financial technology and building scalable, best-in-class software solutions.

Naunidh holds a B. Eng in Computer Science from the Singapore University of Technology and Design (SUTD), where he double majored in Artificial Intelligence and Business Analytics. He subsequently pursued his MBA at Stanford University and MPA at Harvard University.

Speaker Biographies

Greg Wallem

Managing Director
StepStone Group

Mr. Wallem is a member of the private equity team, focusing on US-based middle-market, venture capital, and growth equity managers.

Prior to joining the research team, Mr. Wallem was an associate on the monitoring and reporting team at StepStone.

Mr. Wallem received his BA from Westmont College and is a CFA charterholder.