

IN PERSON & VIRTUAL BOARD MEETING



TO VIEW VIA WEB



TO PROVIDE PUBLIC COMMENT

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

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



Building on Experience
Investing for Tomorrow

BOARD OF INVESTMENTS OFFSITE

September 10-11 2024

AGENDA

A SPECIAL MEETING OF THE BOARD OF INVESTMENTS

AND BOARD OF RETIREMENT

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

HILTON HOTEL | 100 W GLENOAKS BLVD, GLENDALE, CA 91202

8:30 A.M., TUESDAY, SEPTEMBER 10, 2024

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(b), (f).

Teleconference Locations for Trustees and the Public under California Government Code Section 54953(b).

Northeastern University - Ryder Hall 11 Leon St, Rm 285, Boston, MA 02115

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

8:30 a.m. (Continued)

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

Public Comment

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

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

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

8:35 a.m.

Welcome & Opening Remarks

Jonathan Grabel, Chief Investment Officer

8:45 a.m. Macro and Geopolitical Environment
Magdalia Armstrong, Senior Investment Analyst
Jonathan Grabel, Chief Investment Officer
General John Abizaid, Senior Advisor, Lazard

This session will give an overview of the macro environment in the framework of current events and the geopolitical landscape and cover key insights from the unique perspective of General John Abizaid.

10:30 a.m. Break

10:45 a.m. Emerging Cyber Security Developments
Mel Tsao, Senior Investment Analyst
Bryan Palma, Chief Executive Officer, Trellix

This session will provide an overview of current cybersecurity trends, summarize the technology landscape and consider a hypothetical LACERA scenario.

12:00 p.m. Lunch

1:00 p.m. Investment Opportunities in the Energy Transition
Scott Zdrazil, Principal Investment Officer
Dale Johnson, Senior Investment Officer
Terra Elijah, Senior Investment Analyst
Ashli Aslin, Senior Analyst – Real Assets and Infrastructure, Albourne
Jonathan Elkind, Senior Advisor, WestExec Advisors, and Senior Research Scholar, Columbia University Center on Global Energy Policy
William Demas, Senior Managing Director and Head of Americas, Macquarie Investment Group
Troy Thacker, Co-Founder, Ara Partners

The session will provide background on LACERA's policies, investment guidelines, portfolio exposures, and strategies to date related to the energy transition. In addition, the speakers will address the evolving global policy and market environment.

September 10, 2024

Page 4

1:00 p.m. (Continued)

Lastly, LACERA's investment managers will provide an overview of current investments and strategies.

2:30 p.m. Break

2:45 p.m. Portfolio Liquidity

Pushpam Jain, Investment Officer

Adrian Gonzalez, Senior Investment Analyst

Vache Mahseredjian, Principal Investment Officer

Tim Filla, Managing Consultant, Meketa

Nick Collier, Principal, Milliman

Lisa Rossi, Senior Vice President, State Street

This session will provide an overview of liquidity sources and their impact on LACERA. The panel will highlight how various asset classes exhibit different liquidity levels. Lastly, there will be a panel discussion on LACERA's liquidity and its resilience in case of market decline.

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 Board of Retirement and Board of Investments 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 Members at LACERA's offices at 300 N. Lake Avenue, Suite 820, Pasadena, CA 91101, during normal business hours of 9:00 a.m. to 5:00 p.m. Monday through Friday.

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

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BOARD OF INVESTMENTS OFFSITE

L.A. CERA
Los Angeles County Employees Retirement Association

Macro and Geopolitical Environment

2024 Board of Investments Offsite
September 10, 2024

September 10-11 2024

Macro and Geopolitical Environment

Tuesday, September 10, 2024, 8:45am – 10:30am

Session Outline

1. Introduction
 - **Magdalia Armstrong**, Senior Investment Analyst
2. Interview with **General John Abizaid**
 - **Jonathan Grabel**, Chief Investment Officer (Moderator)
3. Audience Questions and Responses

Objectives

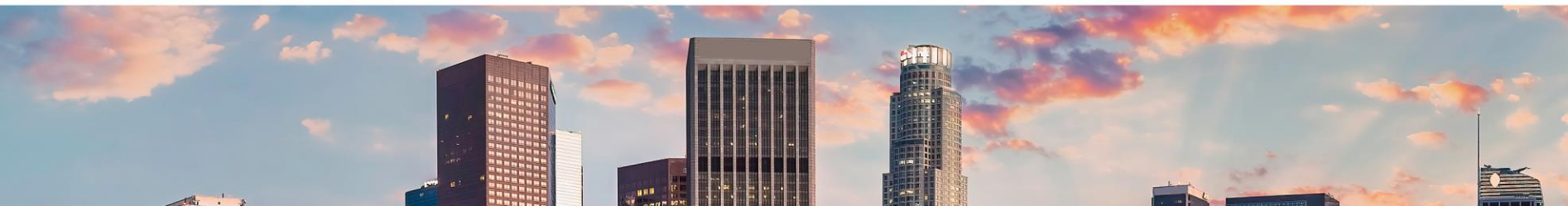
- A. Discuss the macro environment in the framework of current events and the geopolitical landscape
- B. Cover key insights from the unique perspective of General John Abizaid

TODAY'S DISCUSSION



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Speaker Biography

General John P. Abizaid

Senior Advisor
Lazard



John P. Abizaid is the Principal Partner of JPA Partners and a Senior Advisor within Lazard's Geopolitical Advisory group.

Abizaid is a retired U.S. Army four-star General, who most recently served as the United States Ambassador to the Kingdom of Saudi Arabia.

Gen. Abizaid retired from the United States Army in May 2007 as Commander of U.S. Central Command, after 34 years of active service. A graduate of the United States Military Academy at West Point, he commanded units at every level, serving in Grenada, Lebanon, Kurdistan, Bosnia, Kosovo, Afghanistan and Iraq. Units under his command included the 1st Infantry Division, a brigade in the 82nd Airborne Division, a Parachute Battalion Combat Team and two Ranger companies.

Gen. Abizaid studied at the University of Jordan in Amman, holds a Master's degree in Middle Eastern studies from Harvard University, and has deep expertise in regional as well as international strategy.



Part 1: Introduction



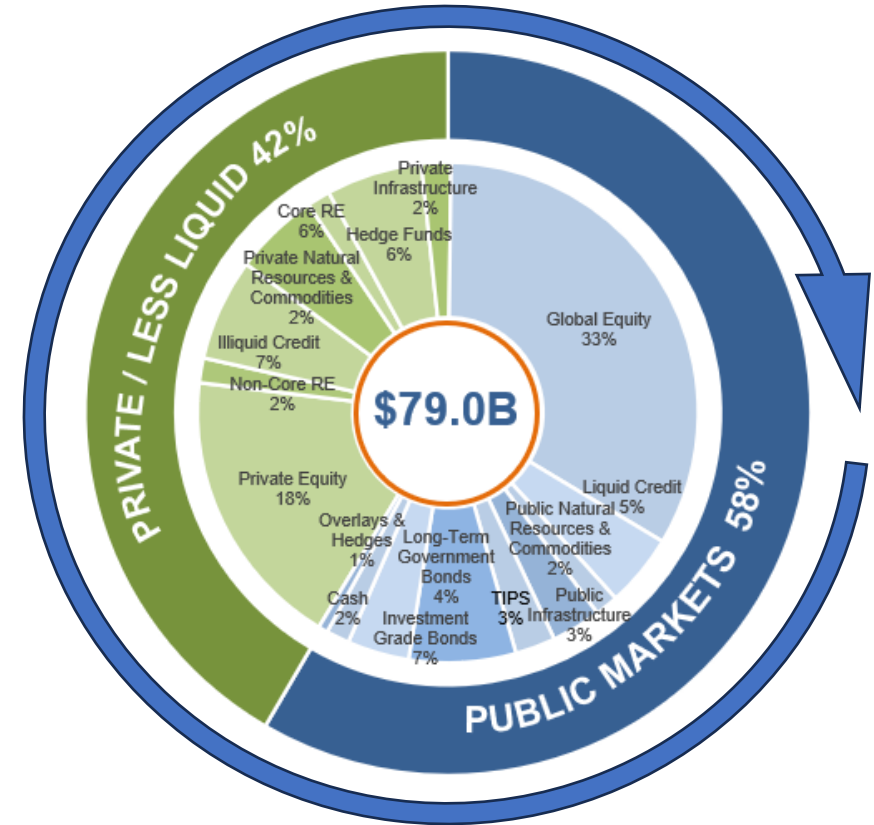
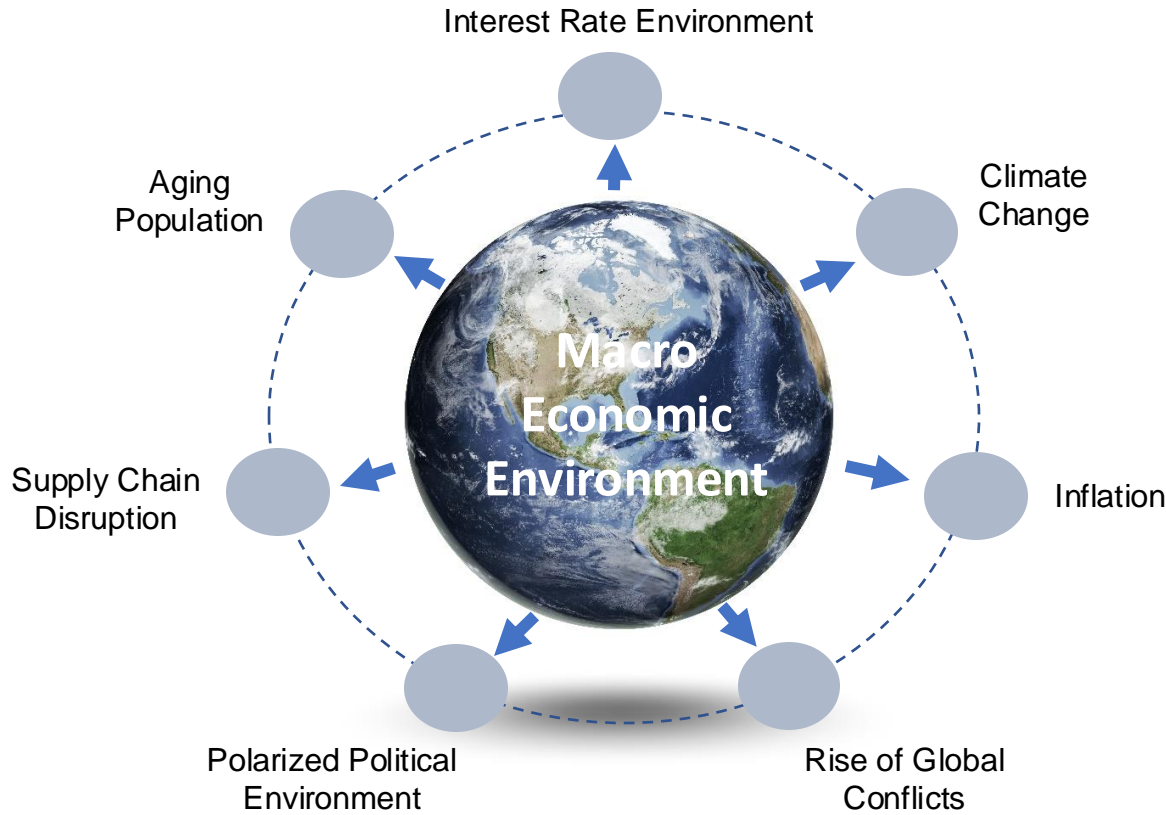


Macro and Geopolitical Environment

Building on experience, investing for tomorrow

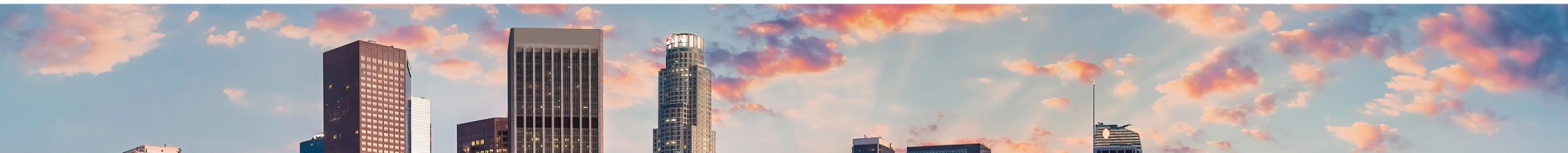
The macro environment continues to be impacted by geopolitics as we move from a globalized unipolar arrangement to a more fragmented multipolar world order.

Always Evolving and Adapting



- Cyber Security
- Energy Transition
- Portfolio Liquidity
- Operational Due Diligence
- LACERA's Portfolio

Part 2: Interview with General John Abizaid



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Los Angeles County Employees Retirement Association

Emerging Cyber Security Developments

2024 Board of Investments Offsite
September 10, 2024

September 10-11 2024

Emerging Cyber Security Developments

Tuesday, September 10, 2024, 10:45am – 12:00pm

Session Outline

1. Introduction
 - **Mel Tsao**, Senior Investment Analyst
2. **Presentation on the State of Cyber, Market Landscape, and Attack Surface**
 - **Bryan Palma**, Chief Executive Officer, Trellix

Objectives

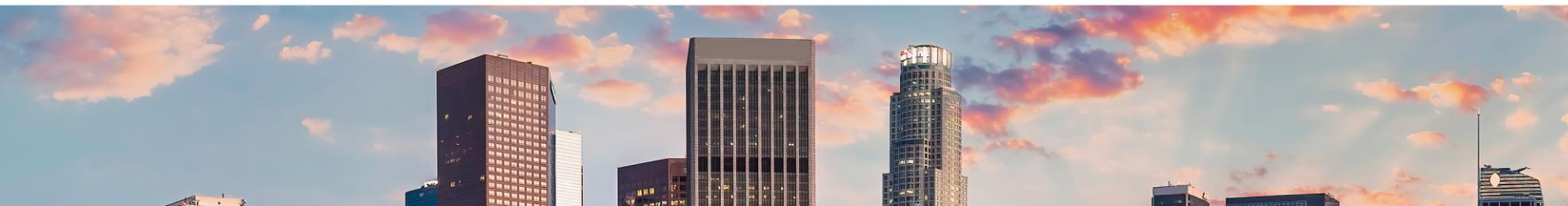
- A. Provide an overview of current cybersecurity trends
- B. Summarize the technology landscape
- C. Consider a hypothetical LACERA scenario

TODAY'S DISCUSSION



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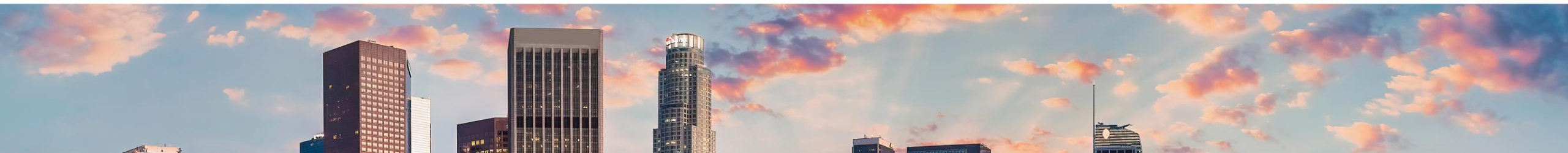
Speaker Biographies



Bryan Palma

Chief Executive Officer
Trellix

Bryan Palma is the CEO of Trellix and serves on its board of directors. Before being named CEO in October 2021, he led FireEye's sale to Symphony Technology Group, and subsequently drove the integration of McAfee Enterprise and FireEye. Bryan has quickly transformed Trellix into a global cybersecurity leader by accelerating product innovation, improving customer experience, and delivering operational agility. Prior to joining Trellix, Bryan guided some of the world's leading organizations through pivotal technology and business transformations including Cisco, Boeing, EDS, PepsiCo, and the US Secret Service. Bryan earned a masters of business administration from Duke University's Fuqua School of Business, Masters of Education from the University of Maryland, and Bachelor of Arts from the University of Richmond. He currently serves on President Biden's National Security Telecommunications Advisory Committee and the CloudBees board of directors.



Part 1: Introduction



Part 2: Presentation on the State of Cyber, Market Landscape, and Attack Surface



State of Cyber

Election Security

Global elections provide opportunities for threat actors to drive disinformation and scam voters



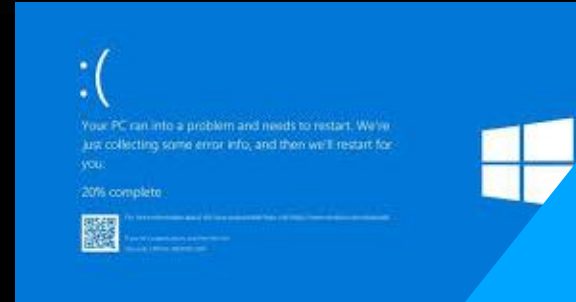
Ransomware

Despite ongoing law enforcement actions tactic remains lucrative opportunity for cyber criminals



CrowdStrike Outage

July 19 outage disrupted travel, medical services, financial systems and more when a bad update crashed Microsoft OS



Artificial Intelligence

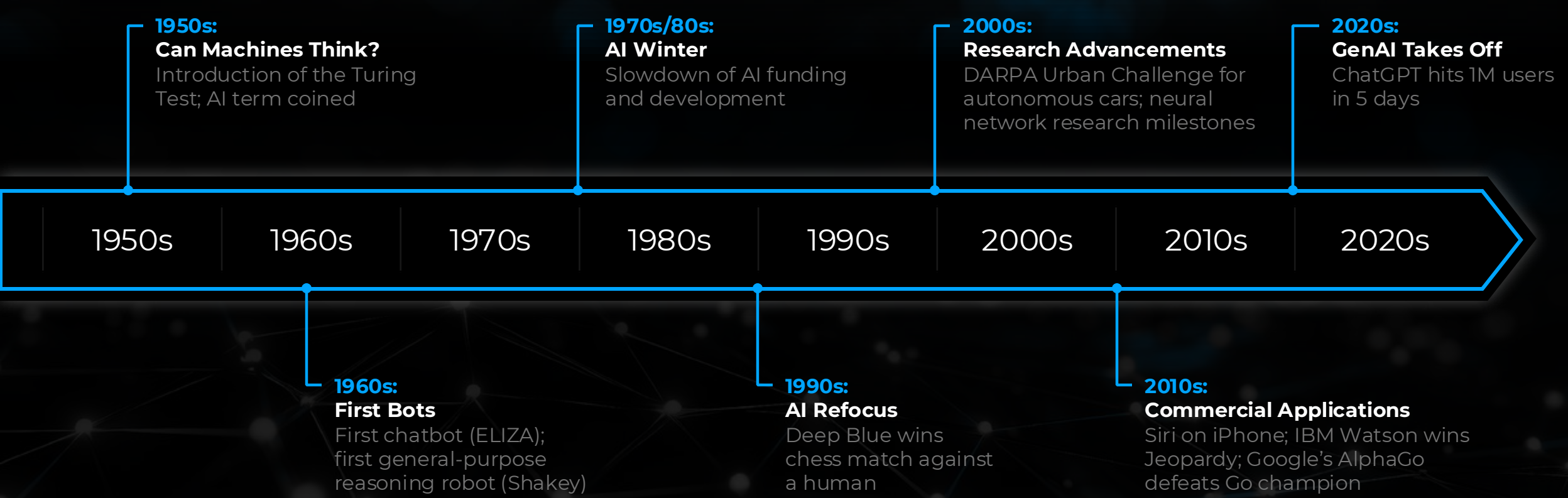
Evolution enables threat actors to rapidly produce sophisticated attacks and accelerates threat detection



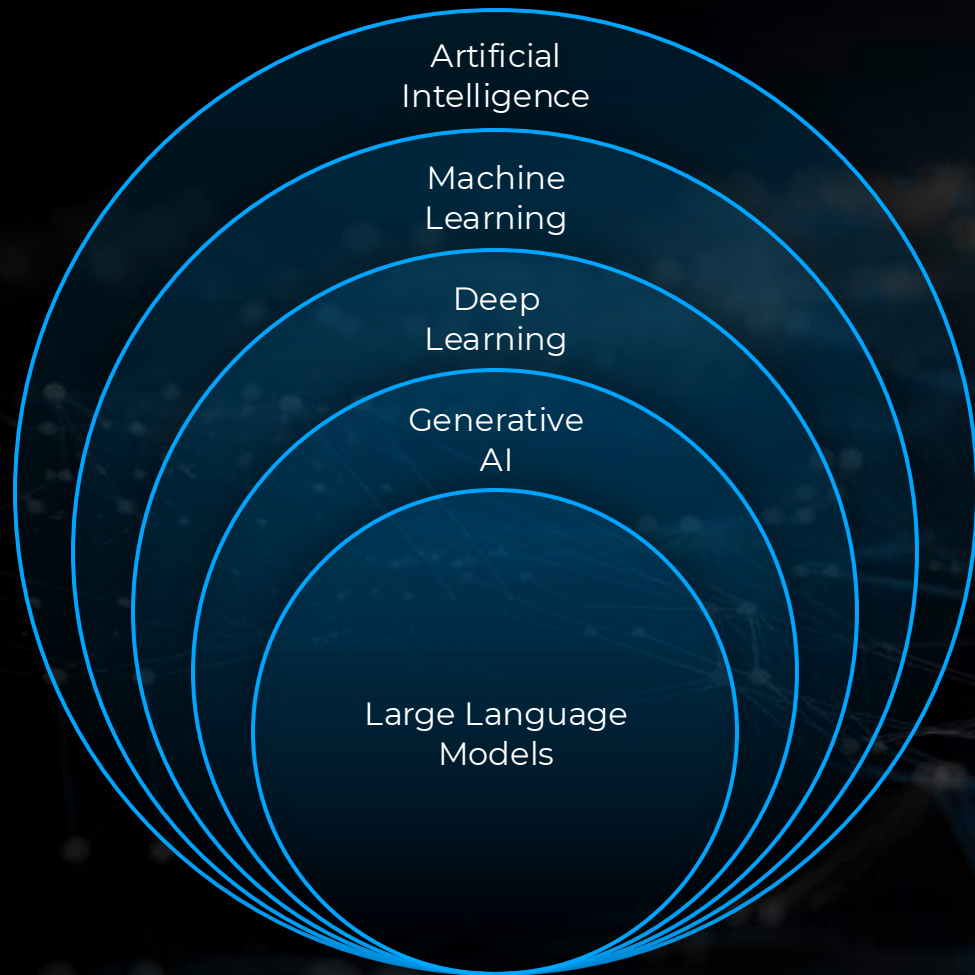
Increase in activity from Chinese and Russian backed threat groups



AI Milestones



What is GenAI?



What is Generative AI?

- ✦ In technical terms, generative artificial intelligence, utilizes machine learning algorithms to create entirely new data.

This data can encompass various formats, including text, images, audio, and even video.

A more detailed look:

- Pattern Recognition and Synthesis
- Originality Beyond Replication
- Guided Innovation

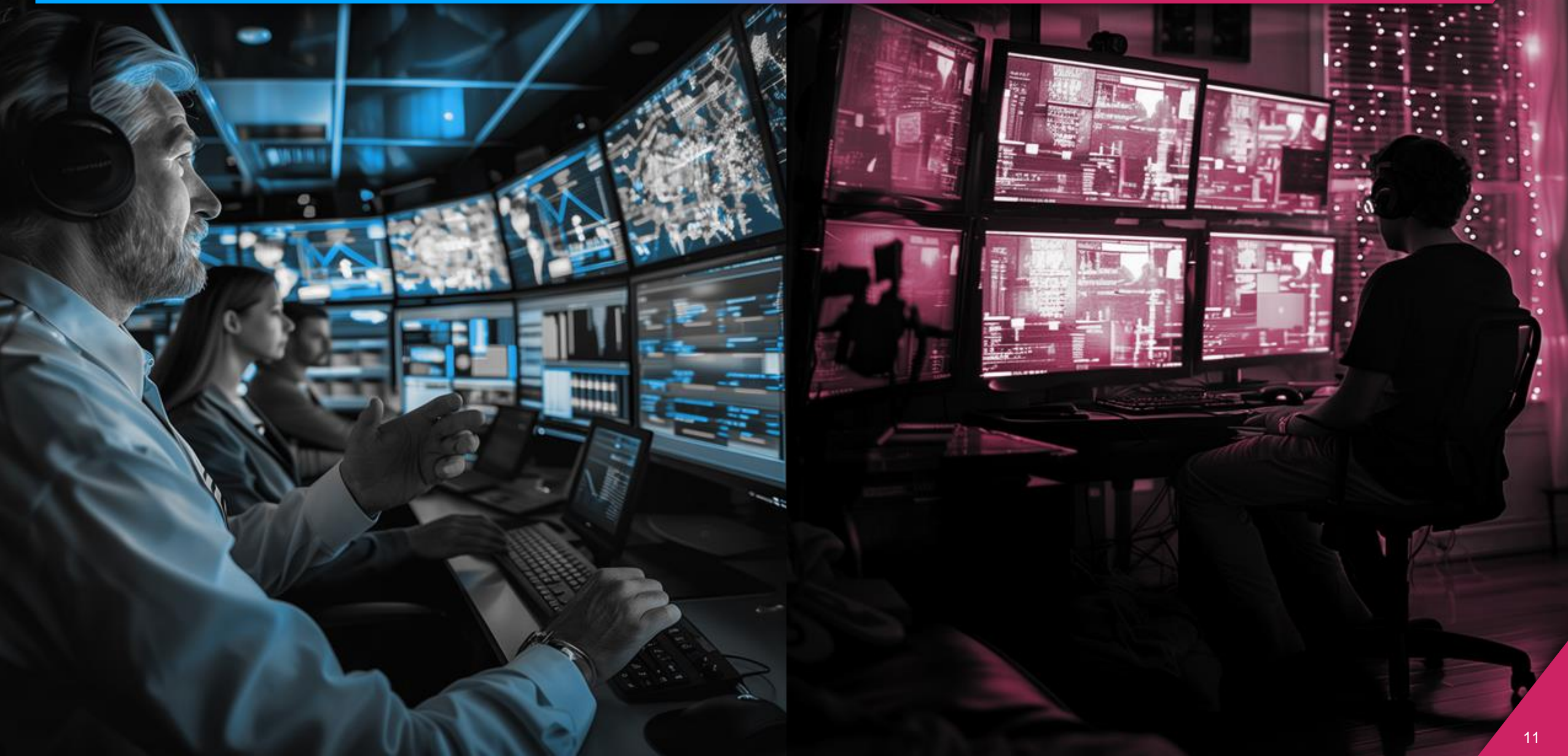
100%

**... concerned over
cybercriminals using
GenAI to perform
cyberattacks**

84%

**... believe GenAI could
give their organization
an advantage over
cybercriminals**

Good vs Evil... who will win?



Sensitive Data Leakage

Tools may inadvertently reveal confidential data in its responses, leading to unauthorized data access, privacy violations, and security breaches

Example:

An employee posts sensitive company data to ChatGPT as a question, but it is used in training, exposing sensitive data in responses to other user prompts

Phishing

GenAI tools enhance the credibility, volume, and velocity of phishing communications, helping to deceive even the most aware users

80% of all phishing attacks are using GenAI tools to craft better emails

Phishing activity increased **1000%** since the introduction of ChatGPT



Deep Fakes

Deep-faked images, audio, and video content are becoming more and more indistinguishable from real life

FINANCIAL TIMES

AI Deepfakes Can Sway
Voters and Disrupt Elections

Future Cyber Changes



Quantum



Space



Machine vs.
Machine



Offensive



Technology
Convergence

Market Landscape

Network

- FW
- IDS/IPS
- Sandboxing
- NG-FW
- NDR

Email

- Spam
- Malware
- Phishing
- ETDR

Endpoint

- Endpoint FW
- AV
- NG-AV
- EPP
- EDR
- Encryption
- DLP

SIEM

- Log Mgmt
- Compliance
- Analytics
- SOAR

Cloud

- Cloud Compute
- Containers
- CSPM
- CWPP
- CNAPP
- CDR
- SD-WAN
- SWG
- CASB
- SSE / SASE

Vulnerability

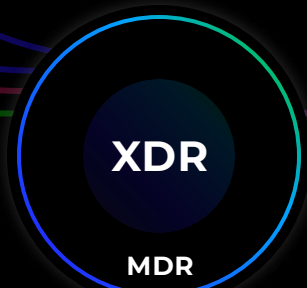
- Vuln Management
- Attack Sim
- EASM

Identity

- SSO
- IDAM
- ITDR

Threat Intel

- TIP
- TlaaS



Adjacent

- OT / IoT
- Web / API Security
- Code / Supply Chain
- Browser Isolation



One page not attached as exempt from disclosure under the California Public Records Act and other legal authority.

**For further information, contact:
LACERA
Attention: Public Records Act Requests
300 N. Lake Ave., Suite 620
Pasadena, CA 91101**

Key Takeaways

1

Build a resilient technology architecture

2

Ensure adequate cyber investment

3

Prepare for the unexpected

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BOARD OF INVESTMENTS OFFSITE

L.A. CERA
Los Angeles County Employees Retirement Association

Investment Opportunities in the Energy Transition

2024 Board of Investments Offsite
September 10, 2024

September 10-11 2024

Investment Opportunities in the Energy Transition

Tuesday, September 10, 2024, 1:00pm – 2:30pm

Session Outline

- 1. Background on LACERA Policies and Portfolio Insights Related to the Energy Transition**
 - **Scott Zdrzil**, Principal Investment Officer
 - **Dale Johnson**, Senior Investment Officer
 - **Terra Elijah**, Senior Financial Analyst
- 2. Panel Discussion on Market and Policy Environment and Insights from LACERA Asset Managers**
 - **Ashli Aslin**, Senior Analyst – Real Assets and Infrastructure, Albourne (Moderator)
 - **Jonathan Elkind**, Senior Advisor, WestExec Advisors, and Senior Research Scholar, Columbia University Center on Global Energy Policy
 - **William Demas**, Senior Managing Director and Head of Americas, Macquarie Investment Group
 - **Troy Thacker**, Co-Founder, Ara Partners

Objectives

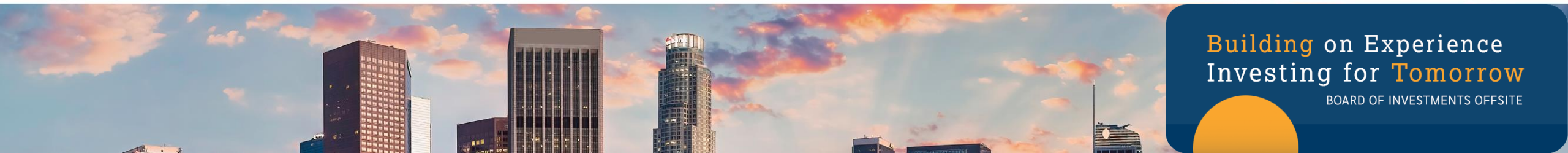
- A. Provide background on LACERA's policies, investment guidelines, portfolio exposures, and strategies to date related to the energy transition
- B. Gain insight on the evolving global policy and market environment
- C. Hear perspectives from current LACERA asset managers on current investments and strategies

TODAY'S DISCUSSION



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Speaker Biographies

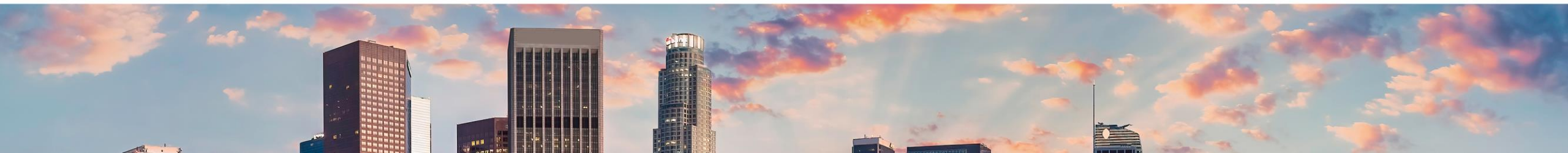


Ashli Aslin

Senior Analyst – Real Assets and Infrastructure
Albourne

Ashli Aslin joined Albourne in 2021 as a Senior Analyst on the Real Assets team. She has 19 years of experience working in institutional investments, both as an allocator and an investment consultant. Ashli is responsible for investment diligence on across real assets, focusing on infrastructure.

Prior to Albourne, Ashli was an Investment Officer with the South Carolina Retirement System working across different portfolio initiatives in credit, private equity, emerging markets, and traditional fixed income. Most recently was responsible for the build-out of the pension's infrastructure program, where she led the sourcing, portfolio construction, and underwriting process for real assets mandates totaling over \$2.0bn, including fund and co-investment opportunities. Ashli also worked as a Senior Analyst at NEPC, LLC, where she helped pension, endowment, and corporate clients with asset allocation and implementation decisions. Ashli holds a BA in economics from Vanderbilt University and a Master's in Business Administration from the University of South Carolina.



Speaker Biographies



Jonathan Elkind

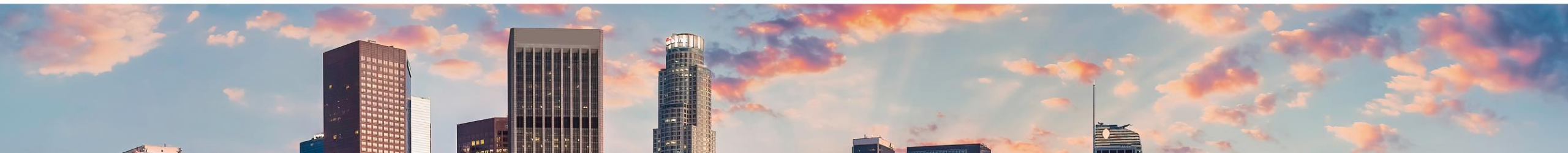
Senior Advisor, WestExec Advisors

Senior Research Scholar, Columbia University Center on Global Energy Policy

Jonathan Elkind is a senior advisor for WestExec Advisors, a Washington, DC-based strategic advisory firm offering geopolitical and policy expertise that can help business leaders make the best decisions in a complex global landscape. He focuses on the policies, technologies, and markets that are driving the global clean energy transition.

Elkind is also a senior research scholar at Columbia University's Center on Global Energy Policy and an adjunct professor at Columbia's School of International and Public Affairs. From 2009 to 2017, he worked in a variety of senior roles in domestic and international energy policy at the U.S. Department of Energy, his last position being Assistant Secretary for International Affairs. Earlier in his career, he created Eastlink Consulting, advising major corporate players on large infrastructure projects. He also worked at the Brookings Institution, the Joint Global Change Research Institute, the U.S. National Security Council, the Office of the Vice President of the United States, and the Council on Environmental Quality.

Elkind serves as a board director for Infineon Technologies LLC. He holds an MBA from the University of Maryland, an MA from Columbia University, and an AB from the University of Michigan.



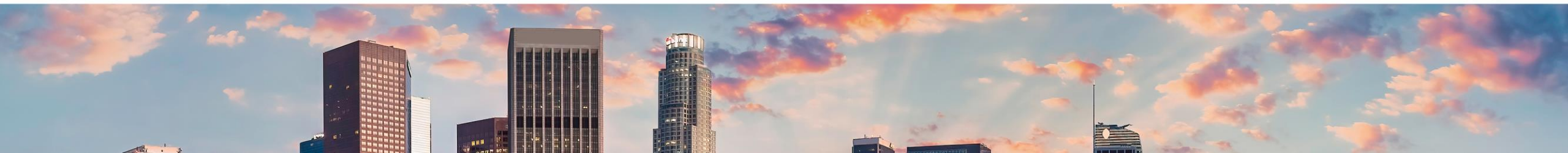
Speaker Biographies



William Demas

Senior Managing Director & Head of Americas
Macquarie Investment Group's Green Investment Group

William Demas is Senior Managing Director & Head of Americas at Macquarie Investment Group's Green Investment Group. Will re-joined Macquarie from Stonepeak Partners, where he was instrumental in leading the firm's America's renewable energy and energy transition investment activities. Prior to Stonepeak, he spearheaded and led Copenhagen Infrastructure Partners in the Americas. Prior to CIP, Will was a senior member of Macquarie Capital's renewable energy principal and investment and advisory team and spent the early part of his career at Good Energies, one of the first dedicated clean technology venture funds. He began his career at Lazard, as a founding member of its' Clean Technology and Renewable Energy advisory business.



Speaker Biographies



Troy Thacker

Co-Founder
Ara Partners

Troy Thacker co-founded Ara in 2017, co-heads the firm alongside Charles Cherington and is a member of the firm's Investment Committee. Troy has been investing in or serving as Chief Executive Officer of sustainable, impact-oriented businesses for over 25 years. He has led over 30 private equity transactions spanning the 1990's to today in the environmental, industrial, software, renewable and conventional energy and insurance industries. In addition, Troy spent eight years leading, growing and building businesses in the recycling, environmental services and safety industries, generating exceptional returns for investors. Prior to co-founding Ara, Troy served as the Chief Executive Officer of Total Safety, Inc., an international worker safety solutions company. From 2010 until 2013, Troy served as President and Chief Executive Officer of R360 Environmental Solutions, Inc., a leading recycling and environmental services business.

Troy holds a Bachelor of Science in Chemical Engineering from Rice University and attended Harvard Business School to play rugby and get an MBA. Troy sits on the Council of Overseers of Jones Business School at Rice University and serves as a director of the Hermann Park Conservancy. He is married, has three children and in his free time can be found on a paddleboard in the Gulf of Mexico watching sea turtles and fishing plastic out of the ocean.



Part 1: Background on LACERA Policies and Portfolio Insights Related to the Energy Transition



Global Investment Trends in Energy Transition



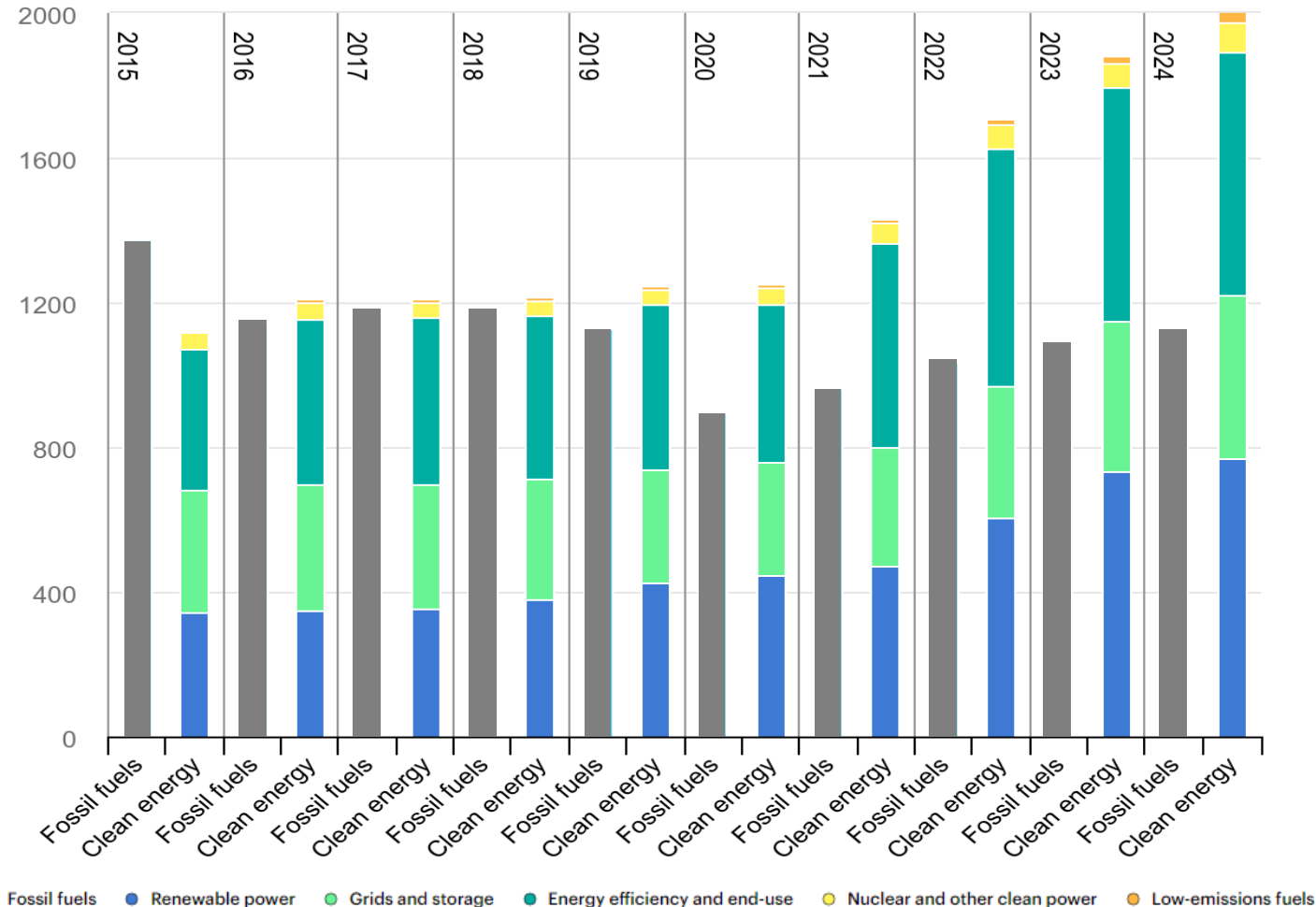
Global investment in clean energy and fossil fuels, 2015-2024¹

Energy transition investments have grown in past decade to projected US\$2 trillion in 2024

Includes:

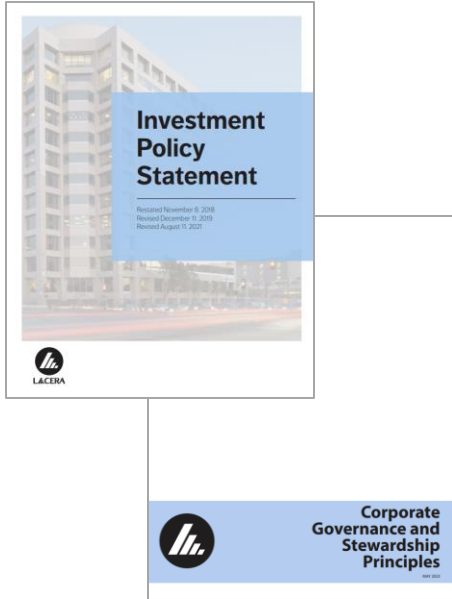
- Renewable power
- Grids and storage
- Energy efficiency and end-use
- Nuclear and other clean power
- Low-emission fuels

Outpacing investments in fossil fuels



¹ International Energy Agency (IEA) www.iea.org/reports/world-energy-investment-2024/overview-and-key-findings (downloaded July 22, 2024).

LACERA Guiding Policy on Energy Transition



Guided by Mission

LACERA's approach to the energy transition is 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 invests¹

Credible, Pragmatic, Informed, Integrated Approach for Climate-Aware Investing

LACERA's approach to date aims to:

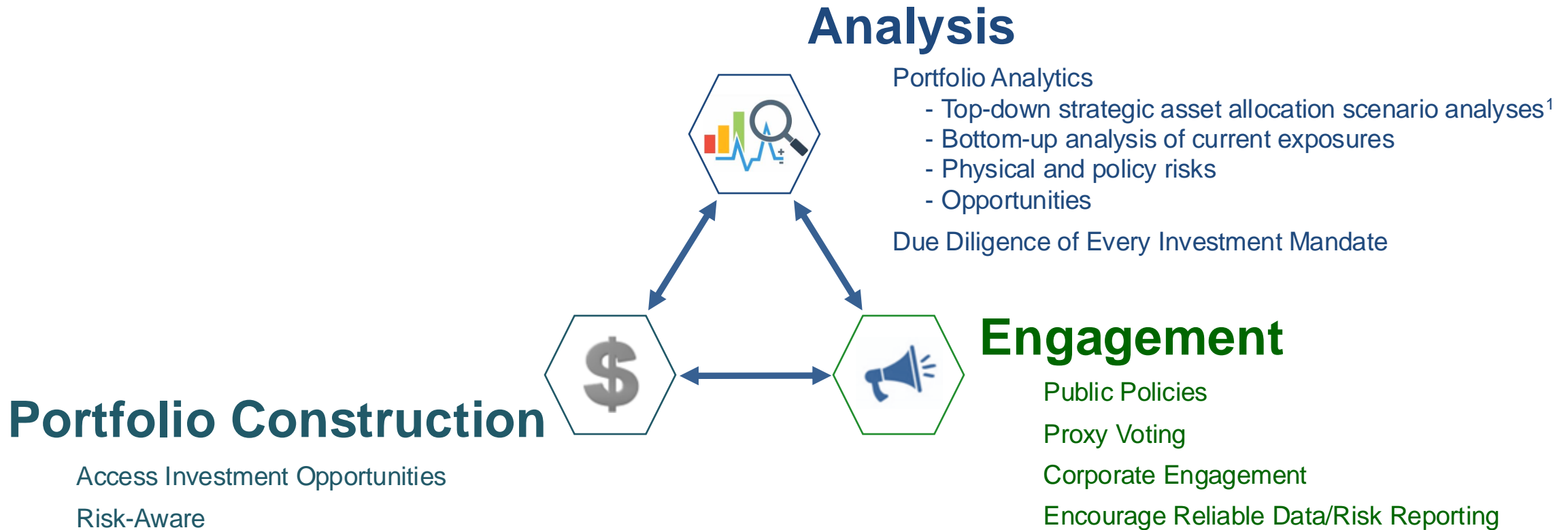
- Identify, evaluate, and monitor both financial risks and opportunities
- Inform portfolio construction, investment decisions, and stewardship strategies
- Integrated, holistic approach to managing the total portfolio

¹ See LACERA Investment Policy Statement and Corporate Governance and Stewardship Principles (page 24) at www.lacera.com.

Comprehensive Coordinated Strategies To Date



Interconnected, iterative approaches to consider energy transition-related risks and opportunities in furtherance of LACERA's mission to produce, protect, and provide the promised benefits



¹ Board of Investments November 2023 and November 2020 meetings.

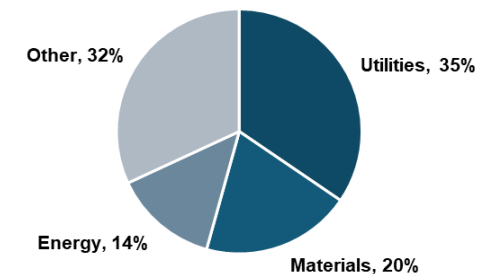
Risks: Snapshot of Energy Transition Exposures



LACERA has expanded research and analytical tools to assess financial risks and opportunities related to the energy transition

- ✓ **Scenario analysis indicates climate risks present headwinds to achieving LACERA's 7% target rate of return**
 - LACERA stress tested its Strategic Asset Allocation options in 2020 and again in 2023 across variety of energy transition/climate scenarios¹
 - Portfolio impact from weather-related “physical” risks (sea rise, extreme cold and heat, flooding) and public policy changes
- ✓ **Concentrated exposures**
 - Three industries account for about two-thirds of LACERA's measured carbon intensity
 - High-yield credit, global equity, and real assets public markets completion portfolios
 - Real assets completion accounts drawn down as LACERA commits to private funds
 - 50 companies represent about 50% of carbon footprint (Scope 1 and 2)
- ✓ **Limited data coverage impedes total portfolio view**
 - Data coverage is expanding but currently limited to about 52% of the portfolio

Contribution to Weighted Average Carbon Intensity (Scope 1 and 2) By Sector²



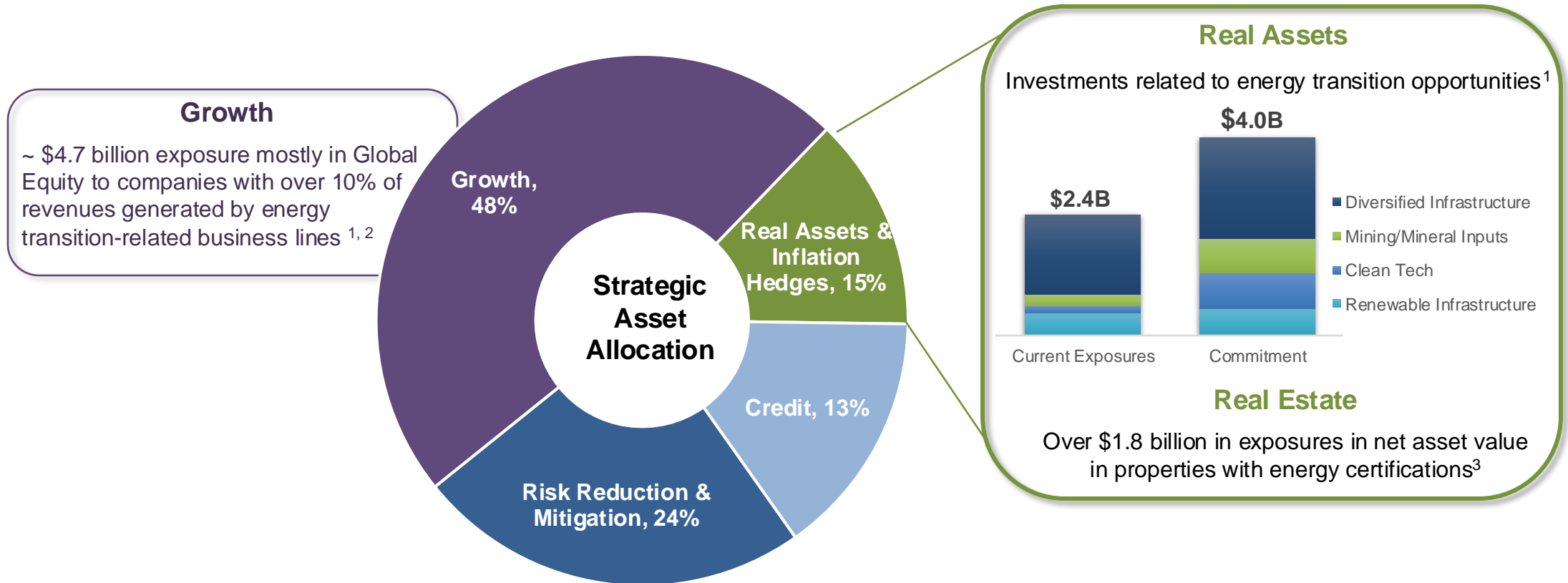
¹ Board of Investments November 2023 and November 2020 meetings.

² Weighted average carbon intensity (WACI) is the portfolio's exposure to carbon-intensive companies measured by weighted average of companies' emissions to sales (tons CO2/USD millions sales).

Opportunities: Energy Transition Exposures



- About \$9 billion in current exposures to energy transition-related opportunities throughout portfolio (over 10% of total Fund)
- Includes companies with transitioning business strategies (i.e., publicly-listed utilities)
- Most deliberate exposures in Real Assets where Structure Review guidelines include “climate aware” considerations and avoiding stranded asset risk



¹ Sources: Albourne, MSCI Analytics, LACERA portfolio analysis.

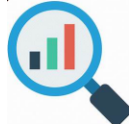
² Alternative energy, energy efficiency, green buildings, pollution prevention, sustainable water, and sustainable agriculture.

³ Certifications include BREEAM (Building Research Establishment Environment Assessment Method), LEED (Leadership in Energy and Environmental Design), Energy Star, Institute of Real Estate Management – Certified Sustainable Property.

Quick Notes on Ongoing Fund Initiatives



Today's discussion is part of LACERA's ongoing effort to fulfill LACERA's mission by assessing investment opportunities and risks in line with fiduciary duties of loyalty to members and duty of care



Expanding Data Coverage

Accessing more data, as it becomes available in private markets, to inform investment decisions



Continued Commitment to “Climate Aware” Strategic Asset Allocation

Periodic stress testing the return assumptions underlying LACERA's Strategic Asset Allocation with an energy transition lens



Active Stewardship Strategies

Proxy voting, corporate engagement, and policy advocacy on transition risks and opportunities



Iterative Process with Continued Education

Ongoing education and discussion as market, policies, and insights evolve

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





Energy Transition: The Changeable Policy Landscape

LACERA Board of Investments, Glendale, CA

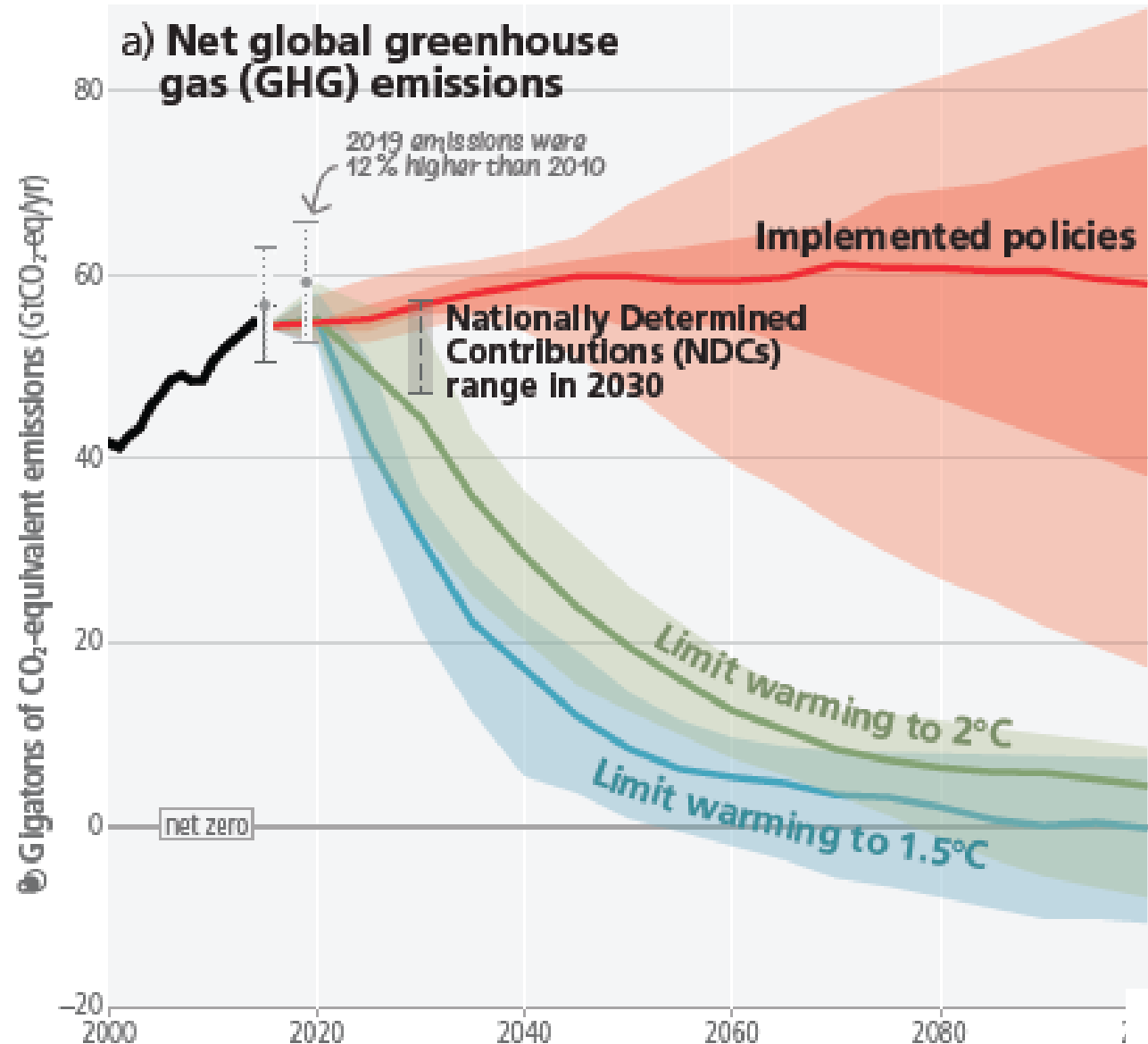
September 10, 2024

Jonathan Elkind, Senior Advisor



International Context: Science Meets Policy

- The Science: UN Intergovernmental Panel on Climate Change (IPCC):
 - Assessments from leading scientists, economists, policy-makers;
 - Identification of scientific frontiers – areas of clarity and uncertainty;
 - Negotiated findings (not free from policy findings).
- The Policy: Paris Agreement and the UN Framework Convention on Climate Change (UNFCCC):
 - Countries **pledge** action (nationally-determined contributions of NDCs);
 - Periodic **reviews** of progress – most recently the Global Stocktake in Dubai at COP28;
 - Annual conferences of the parties (COPs): a lagging indicator of progress.



Source: Climate Change 2023, Synthesis Rep., Summary for Policy-makers

EU – Fighting to Sustain Progress

- Historical policy leadership:
 - Wealthy countries; large single market;
 - Significant R&D and innovation capacity;
 - Broad support for sustainability;
 - European Green Deal – Van der Leyen’s “man on the moon” moment.
- Science collides with politics... and with economics:
 - Energy impacts of Russian invasion of Ukraine;
 - Populist backlash against Euro Green Deal.
- Business environment drives some firms away:
 - Expensive energy prices and stingy corporate valuations;
 - Red tape – declared goal of simplified rules and regs;
 - Carbon border adjustment mechanism (CBAM) will be a test case: Can Europe protect climate and grow?



Emerging Economies Balance Clean Growth & Other Priorities

China: economic leadership, global power

- *Consistent policy drives energy sector:*
 - Energy security: biggest in all energy;
 - Coal: still a domestic behemoth;
 - Super fast: renewables, power grid, nuclear.
- *Industrial policy drives market leadership*
 - Made in China 2025 – super-charging EVs, batteries, materials, IT, other high-tech
 - Capital, workforce, manufacturing capacity create market dominance but tensions with US, Europe, others



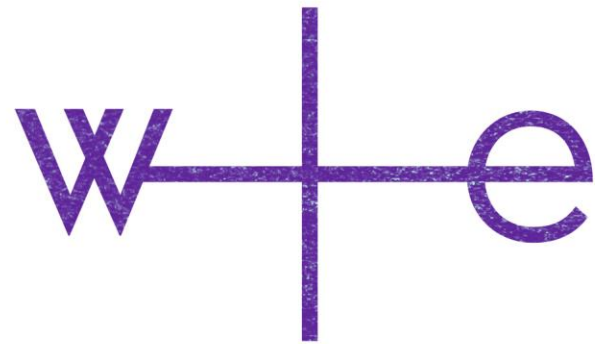
India: poverty reduction and growth

- *India's energy sector confronts headwinds:*
 - Shaky power sector economics;
 - Coal reliance – air pollution;
 - Imported fuels (esp. natgas) often too costly.
- *Modi government has sought tailwinds:*
 - Sustained economic growth;
 - Ambitious on renewables, though coal persists;
 - Fostering innovation culture.
- *India seeks to tap clean energy markets:*
 - Cleantech manufacturing, hydrogen, minerals.



US Policy – Coming to a Fork in the Road?

- One fork: Extend current path:
 - High priority on sustainability; use government funds to de-risk clean energy deployment;
 - Implement current laws, regulations, and policies;
 - Intensified focus?
 - Coal phaseout, grid modernization, methane abatement, local impacts of energy infrastructure, environmental justice.
- Other fork: Stress conventional energy
 - Skepticism of climate change & multilateralism drives:
 - Talk of “energy dominance” and departure from Paris Agmt;
 - Budget priority for early-stage R&D, not loan progs, commercialization, deployment.
- But continuity may surprise onlookers:
 - Broad support for next-gen nukes, carbon management, minerals, hydrogen economy, industrial capacity;
 - Permitting reform is a shared (but tricky) priority;
 - Oil and gas keep energy affordable for many.
- Critical factors: Next Congress and state-level policies.



WESTEXEC ADVISORS

Building on Experience
Investing for Tomorrow
BOARD OF INVESTMENTS OFFSITE

L.A. CERA
Los Angeles County Employees Retirement Association



Portfolio Liquidity

2024 Board of Investments Offsite
September 10, 2024



September 10-11 2024

Portfolio Liquidity

Tuesday, September 10, 2024, 2:45pm – 4:15pm

Session Outline

1. Introduction
 - **Pushpam Jain**, Investment Officer
 - **Adrian Gonzalez**, Senior Investment Analyst
2. Panel Discussion on Liquidity
 - **Vache Mahseredjian**, Principal Investment Officer (Moderator)
 - **Tim Filla**, Managing Consultant, Meketa
 - **Nick Collier**, Principal, Milliman
 - **Lisa Rossi**, Senior Vice President, State Street

Objectives

- A. Discuss the Fund's liquidity sources and their impact on the Fund
- B. Provide an overview of liquidity and highlight how various asset classes exhibit different liquidity levels
- C. Engage in a panel discussion on LACERA's liquidity and its resilience in case of market decline

TODAY'S DISCUSSION



Building on Experience
Investing for Tomorrow

BOARD OF INVESTMENTS OFFSITE



Speaker Biographies



Tim Filla

Managing Principal
Meketa

Tim Filla is a managing principal and consultant with Meketa. Tim has over twenty years of investment experience and serves as a consultant on various defined benefit and health & welfare funds, public funds, and non-profits. Tim's work includes the development of asset allocation and investment policies, as well as providing oversight and performance assessment of client portfolios. He is responsible for portfolio management of several of the firm's discretionary client portfolios.



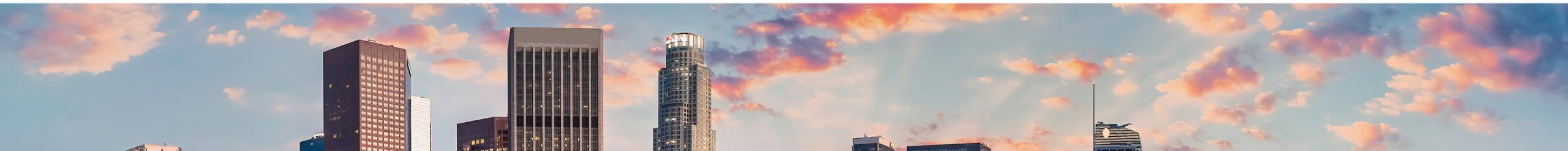
Speaker Biographies



Nick Collier

Principal
Milliman

Nick Collier is a principal and consulting actuary with Milliman. He has over 30 years of experience working with public sector retirement systems, including LACERA, SamCERA, CalSTRS, Texas County & District Retirement System, and the Government of Guam Retirement Fund. Nick assists his clients on a wide range of actuarial matters related to the funding of their pension plans. He has been a presenter at SACRS and CALAPRS and has served on the California Actuarial Advisory Panel.



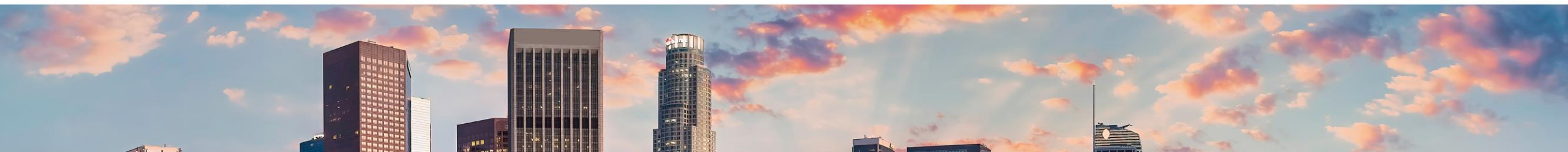
Speaker Biographies



Lisa Rossi

Senior Vice President
State Street

Lisa Rossi, Senior Vice President, is responsible for Enterprise Cash, Deposit and Financing Solutions at State Street. She coordinates the global cash strategy and optimizing the value of deposits across the organization. Lisa is responsible for overseeing over \$200 billion in deposits from cash and investment products, overdraft management and payment solutions. Lisa focuses on developing new cash and investment solutions for clients, manages client pricing, monitors transfer pricing for portfolio profitability and supports the relationship management teams in extending State Street's leadership knowledge throughout the industry.



Part 1: Introduction





- **Liquidity is a portfolio characteristic that LACERA manages along with risk and return**
- **Liquidity enables LACERA to convert investments into cash so we can pay benefits, expenses, and rebalance the portfolio**
- **The Board-approved 2024 Strategic Asset Allocation resulted in changes to the makeup of the portfolio, and the portfolio continues to maintain ample liquidity and provide benefits through:**
 1. LACERA's proactive cash flow monitoring with its custodian
 2. LACERA typically holds cash and cash equivalents equal to 3 months of benefit payments
 3. LACERA maintains sufficient liquid assets that can be converted into cash without a significant discount to carrying value

Liquidity is integral to LACERA's Mission and IPS



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



Produce - Investment Management

- Investment gains drive growth of the LACERA Fund



Protect – Risk Management

- Risk management is focused on managing risk within the portfolio



Provide – Liquidity Management

- Focused on liquidity to provide the benefits to LACERA's members

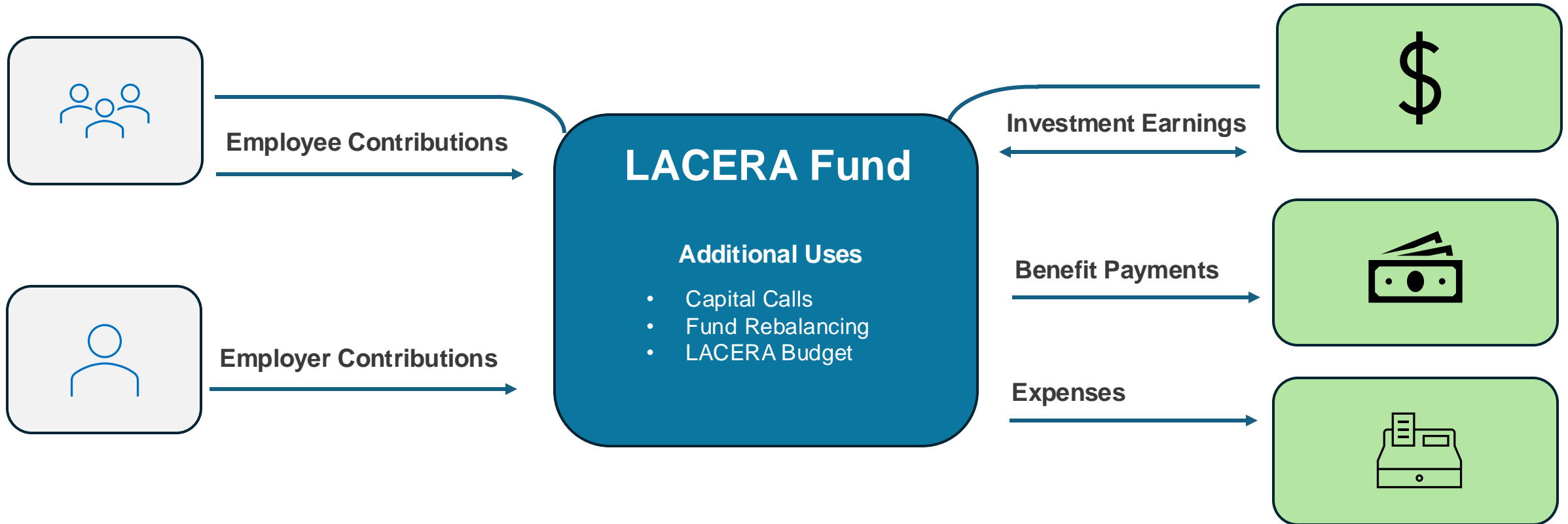
Investment Policy Statement (“IPS”) - Liquidity and Cash Management

- “LACERA strives to maintain appropriate levels of liquidity—i.e., the ability to convert investments into cash—in order to meet immediate or short-term obligations and liabilities, such as funding member benefits, meeting capital calls, and rebalancing the portfolio per the strategic asset allocation. LACERA manages liquidity by monitoring the Fund’s aggregate liquidity and liquidity risk exposures”

LACERA Cash Flow Flowchart



$$\text{Contributions} + \text{Investment Earnings} = \text{Benefit Payments} + \text{Expenses}$$

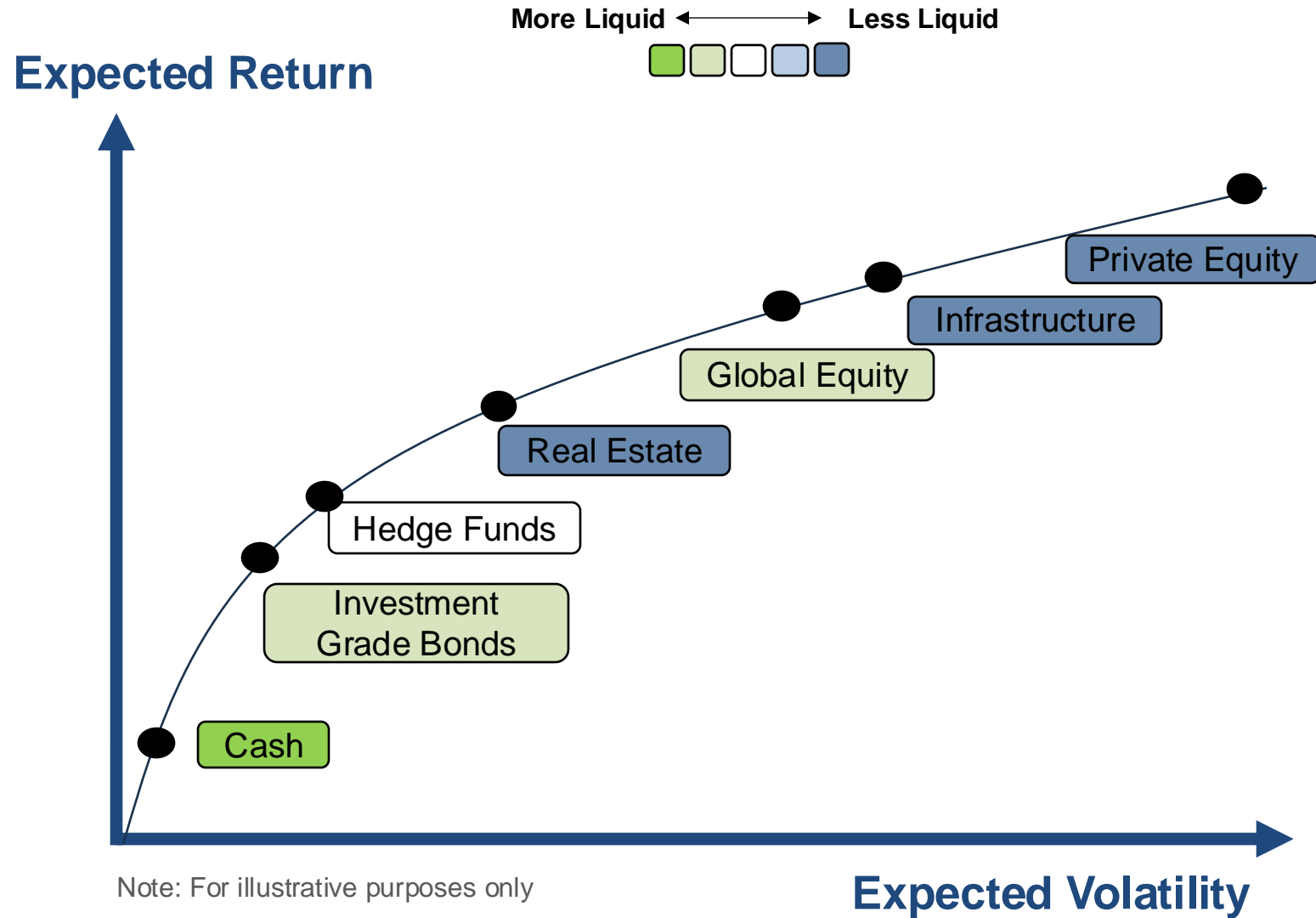


- LACERA maintains ~\$1 billion in cash and cash equivalents, which amounts to about 3 months of benefit payments

What is Liquidity?



- **Liquidity is the ease of buying or selling a security**
 - Factors that affect liquidity – volume, trading hours, market volatility, security type, asset type, legal structure
- **LACERA balances the return, risk, and liquidity of different asset classes to build a resilient portfolio**



LACERA Crisis Response Plan



- **LACERA has a Crisis Response Plan to continue to oversee and manage the pension during an unexpected crisis** (*natural disaster, energy disruption, cyberattacks, internet infrastructure, etc.*)
- **The Crisis Response Group is comprised of the Chief Investment Officer (CIO), Deputy Chief Investment Officer (DCIO), Principal Investment Officers (PIOs), Chief Executive Officer (CEO), BOI's assigned investment consultant(s), and the Chair of the Board of Investments**
 - During an event, the CIO and General Investment Consultant will consult with the other members of the Crisis Response Group and prepare a recommended course of action
- **If the Crisis Response Group determines the event requires intervention outside the scope of normal business, the following actions may be taken:**
 - Suspend securities lending program and recall all securities on loan
 - Suspend all overlay programs (including cash and currency programs)
 - Raise a maximum of \$1 billion in cash from passive investments
 - Transfer raised cash to LACERA's operating cash account


Part 2: Panel Discussion on Liquidity



Meketa: What are the key risks to the pension plan?




01 **Investments**




- Long-term asset appreciation in value
- Asset return volatility

04 **Workforce**




- Constant or growing headcount
- Level of hours worked or wages earned

02 **Inflation**




- Depreciating value of the assets
- Strength of the participant benefits

05 **Cash Inflow**




- Volatility of contribution requirements
- Employer ability to make contributions

03 **Liquidity**



- Ability of assets to pay benefit payments
- Maintain investment policy targets

06 **Longevity**



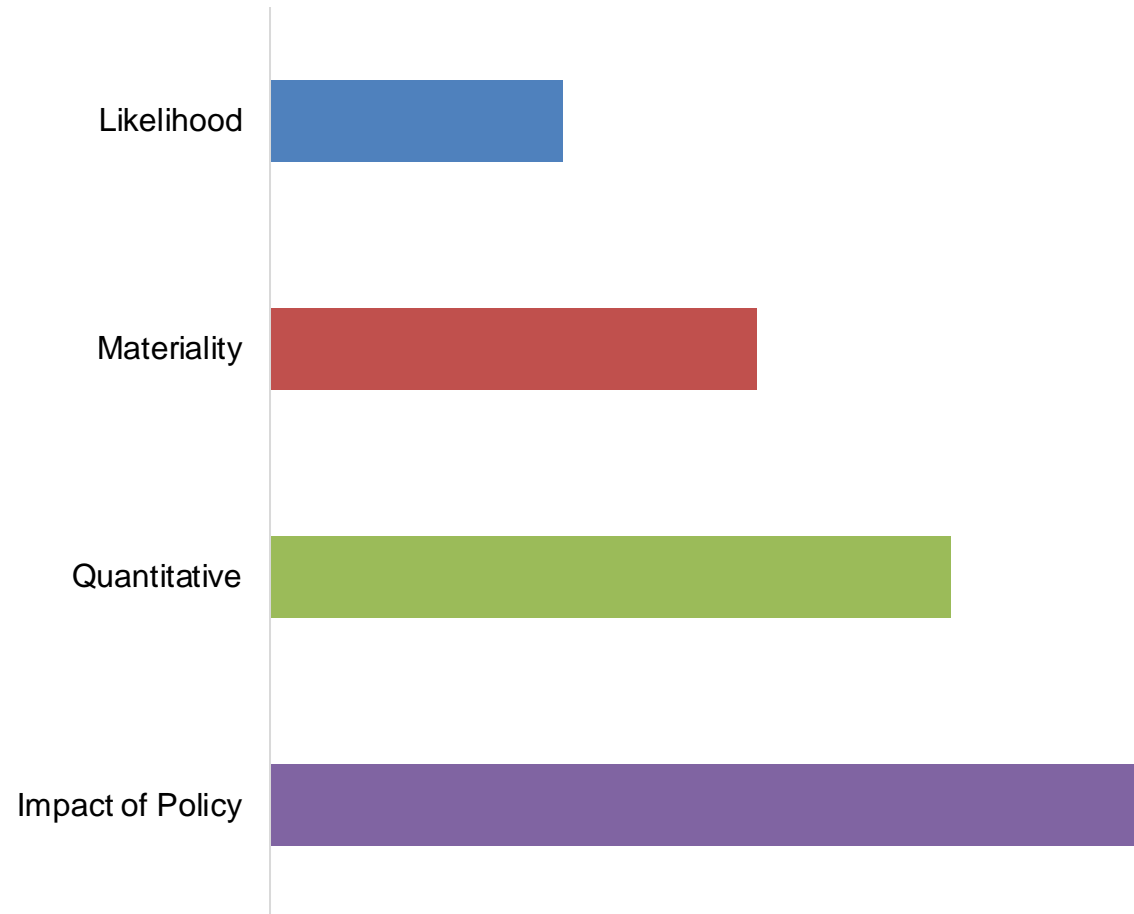
- Participants receiving benefits beyond expectations

Meketa: Risk Isolation – Liquidity



Liquidity

- Ability of assets to pay benefit payments
- Maintain investment policy targets



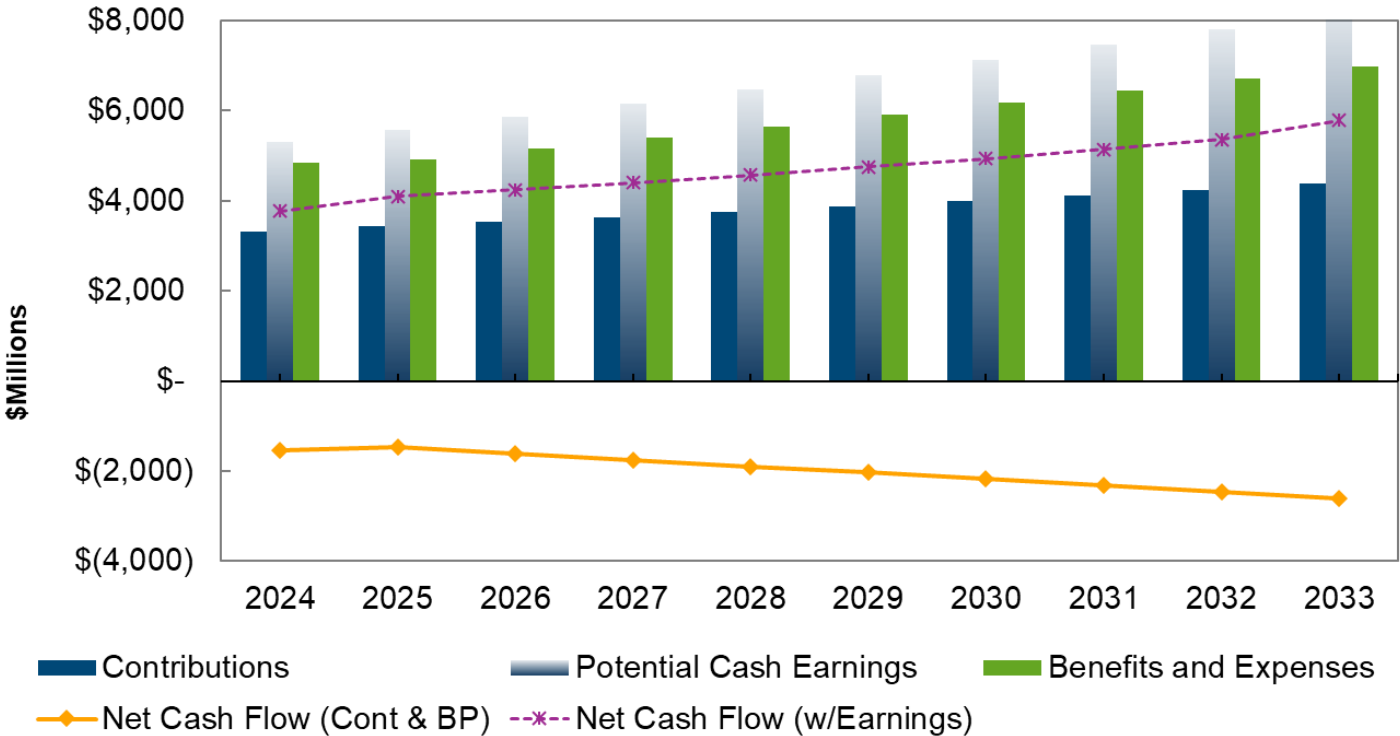
- ✓ More than half of LACERA's portfolio is in highly liquid asset classes creating a solid liquidity base.
- ✓ Several areas should be watched closely to ensure solid liquidity levels.
- ✓ In the event of liquidity issues, the Plan can initiate alternative courses of less-than-ideal actions, such as selling liquid assets at a loss.
- ✓ Liquidity can be tricky to measure given most illiquid assets are not valued frequently or consistently.
- ✓ Certain reasonable assumptions can be made to produce a good, quantitative liquidity analysis.
- ✓ Asset allocation is a primary driver of Plan liquidity.
- ✓ Liquidity in stressed markets can be very unpredictable.

Milliman: Projected Cash Flow



Assumes all valuation assumptions are met

- Expected contributions are less than benefit payments creating negative cash flow (orange line)
- Realized investment earnings (e.g., coupons, dividends, capital gains) create potential for additional inflow and positive cash flow, but these type of earnings tend to be immediately reinvested. Year-to-year volatility.

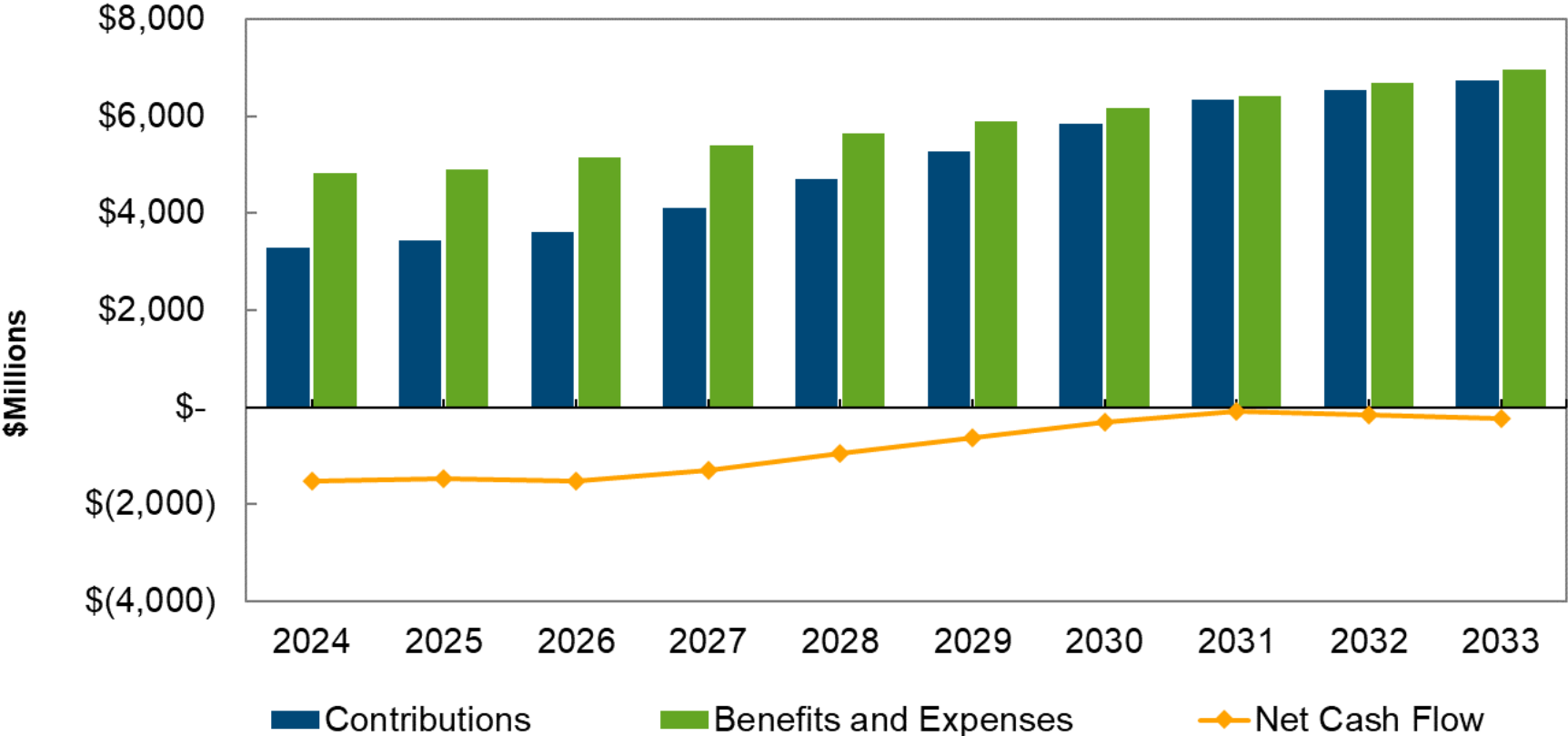


Milliman: Projected Cash Flow – Negative Return Scenario



Assumes repeat of Great Financial Crisis (actual FYE2008 & FYE2009 LACERA returns)

- Employer contributions increase in response to negative return scenario but very slowly



GFC Scenario: FYE2024 return = -1.5% / FYE2025 return = -18.3%

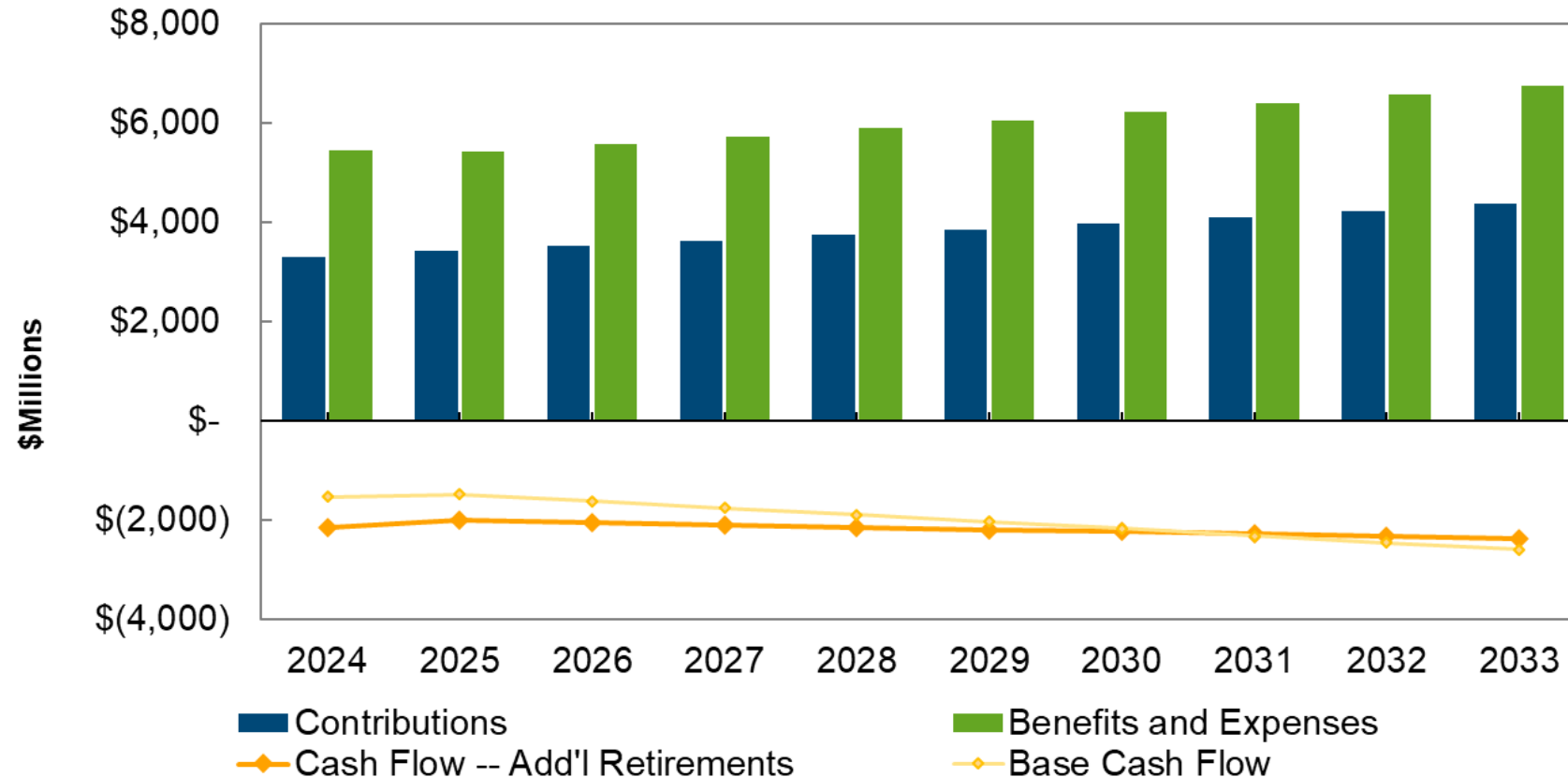


Milliman: Projected Cash Flow – Spike in Benefit Payments



Assumes half of retirement-eligible members retire during year

- Surge in retirements would increase cash requirements but annual amount expected to be less than 1% of assets
- Impact of other factors that would increase benefit payments (e.g., COLAs, low mortality) are even more limited



State Street: Custody and Liquidity Services



- As part of a leading franchise in global trust and custody, and a strong position in asset management, State Street provides securities processing and cash management solutions to meet the operational and liquidity needs for LACERA

Custody Deposit	Considerations
Advantages of a Custodian Deposit	<ul style="list-style-type: none"> Operational efficiency and convenience as cash in multiple currencies can be managed from LACERA's operating account LACERA's cash/DDA needs supported every business day of the year, including late day cash needs Flight to quality deposit options provided to LACERA Global operational support and resiliency
Credit Rating	<ul style="list-style-type: none"> State Street Bank and Trust Company is a global systemically important bank (G-SIB), with high deposit ratings
Strong Capital Ratios²	<ul style="list-style-type: none"> Strong capital position with CET1 ratio at 11.2%, as of June 30, 2024

State Street Bank & Trust ¹	S&P	Moody's	Fitch
Short Term Deposits	A-1+	P-1	F1+
Long Term Deposits	AA-	Aa1	AA+
Senior Debt / Long Term Issuer	AA-	Aa3	AA
Subordinated Debt	A	Aa3	NR

Capital Ratios ²	Q2 2024 (% as of period end)	Regulatory Minimum	Headroom
CET 1 (STANDARDIZED)	11.2%	8%	3.2%
Tier 1 Leverage	5.3%	4%	1.3%

¹ Ratings as of August 2024. Current ratings available on [State Street Credit Rating](#)
² State Street Financial Highlights Q2 2024 financials, [page 11](#)



State Street: Custody & Liquidity Platform Strategy



Improve our value proposition by addressing competitive gaps, improving the client experience, and realizing the potential of our custody platform for LACERA

- 1 State Street Partner with LACERA**
 - Meet LACERA's cash and liquidity requirements
 - Globally consistent product offering for all currencies
- 2 Client Satisfaction**
 - Global, functional support and subject matter expertise for client events
 - Work with LACERA to enhance their workflow and improve business outcomes
- 3 Markets and Treasury**
 - Provide intraday and end-of-day liquidity, and improve visibility on intraday liquidity and balance sheet usage
 - Provide near real-time actual cash positions to improve credit risk management, liquidity forecasting and funding
 - Automated investment sweeps with LACERA's allocation methodology
- 4 Operating Model**
 - Global 24*6.5, scaled, resilient, event driven operating model supported by technology-driven insights and risk mitigation