

6c. Liquidity Management

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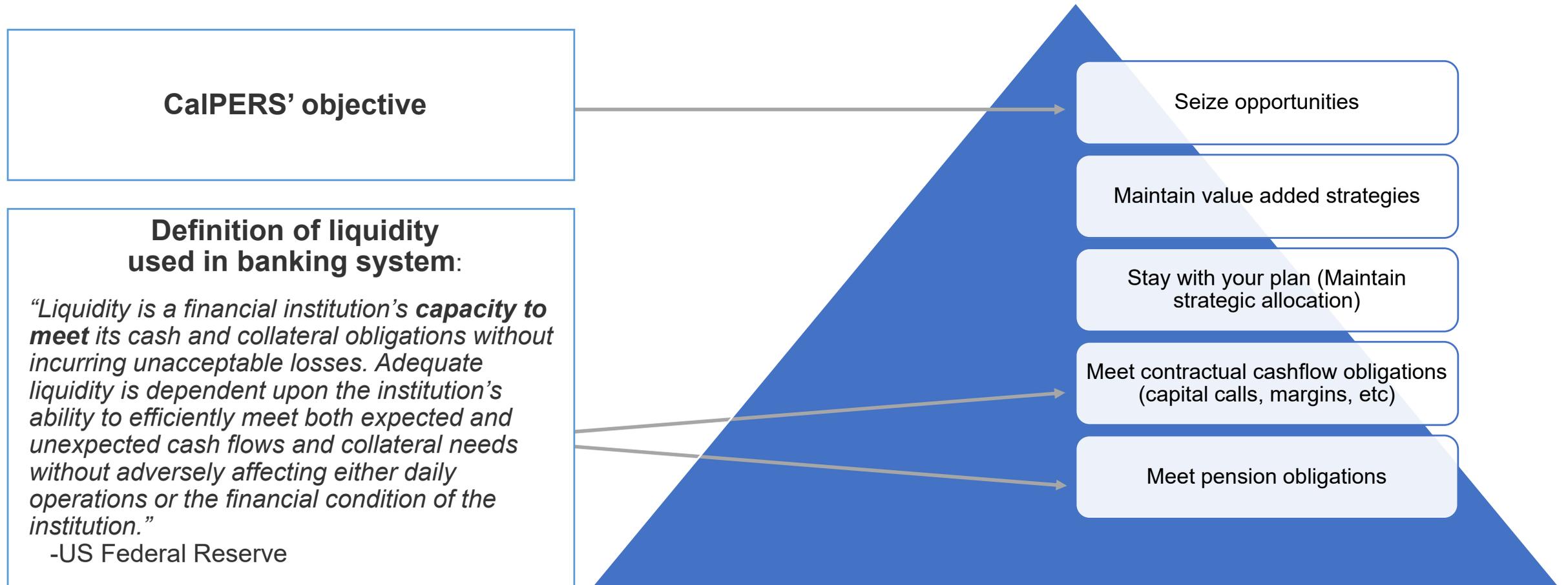
Objectives today

1. Describe the goal of liquidity management at CalPERS and the trade-offs
2. Review the liquidity available within our existing portfolio
3. Provide an overview of our liquidity management process

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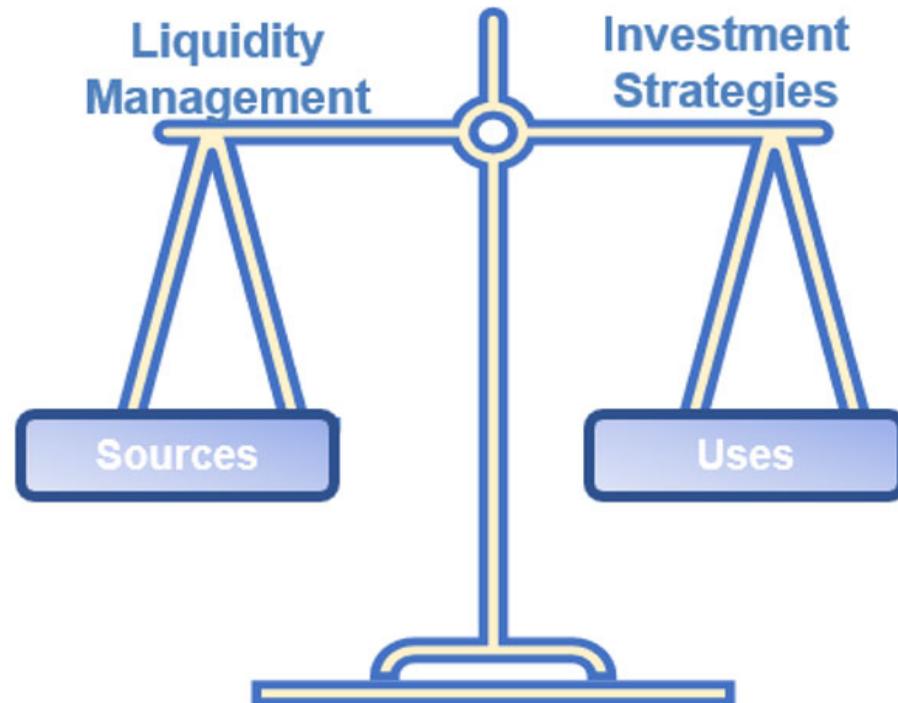
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CalPERS liquidity goal is larger than meeting cashflow obligations



Managing liquidity includes managing tradeoffs

Deliberate balance between liquidity controls and investment strategies



Liquidity management seeks to strike a balance between having:

- Excess liquidity: Costly as it poses a return drag
- Insufficient liquidity: Dangerous as it could impact ability to stay with strategies or require forced sale of assets

Private assets require more careful liquidity management

- Private and less liquid assets that provide diversification and return enhancements are often associated with lower liquidity
- Conversely, certain public assets enhance liquidity by acting as a ready source of financing

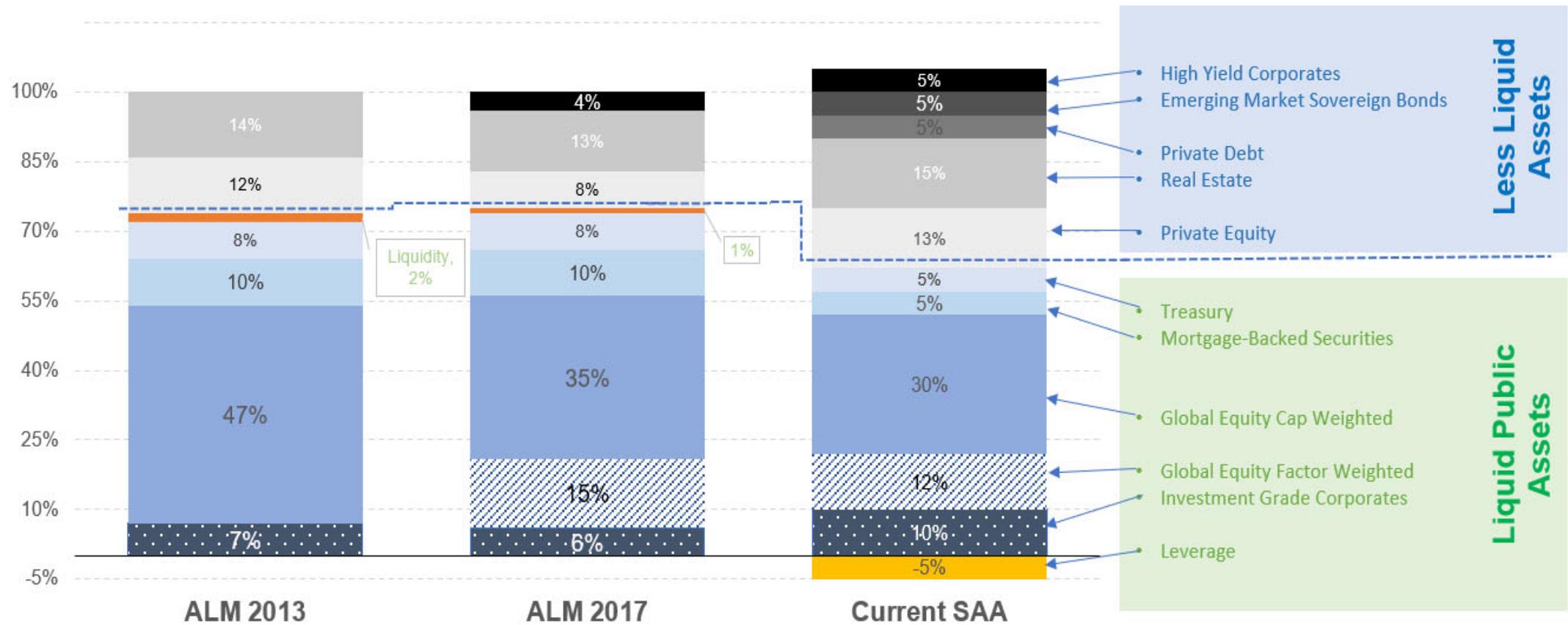


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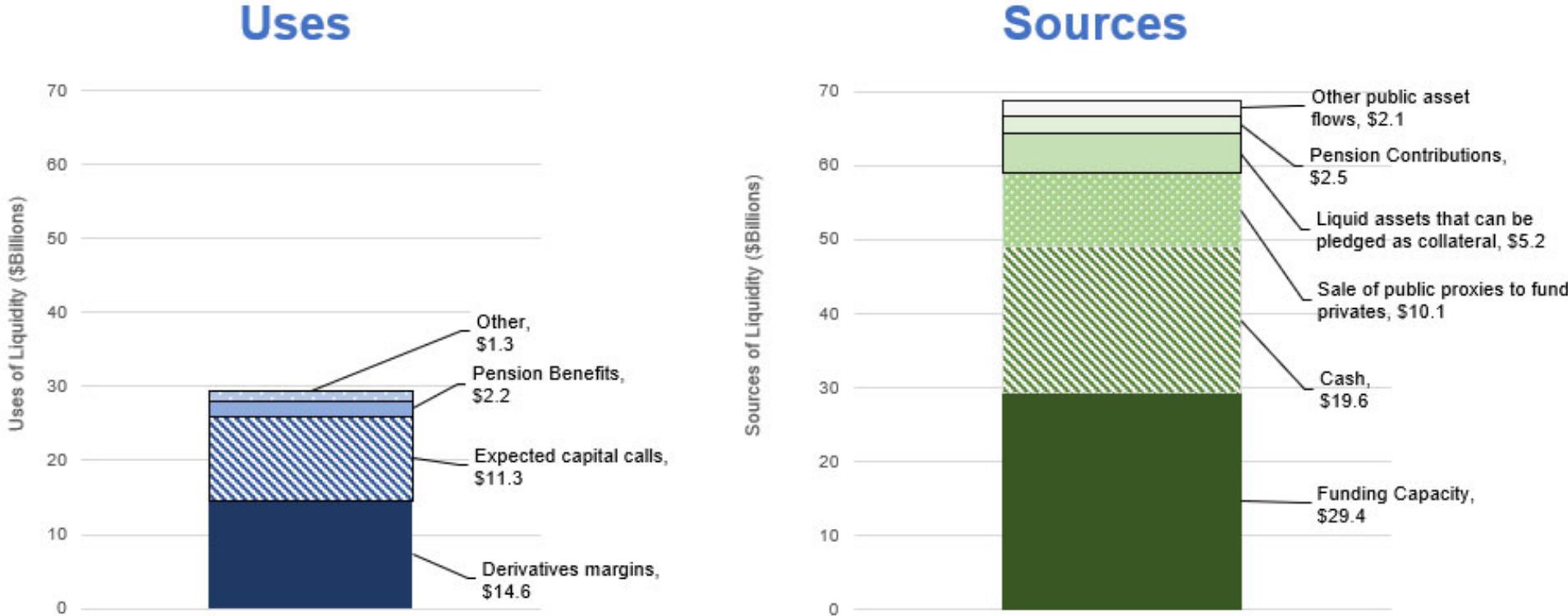
CalPERS portfolio has evolved in complexity

Recently adopted SAA takes greater advantage of CalPERS' available liquidity, but requires more careful management



Liquidity uses and sources are stress tested

- The chart shows current expected 30-day Tier 1 PERF liquidity in a stress scenario
- Liquidity varies day to day, but this snapshot is representative of current management practices

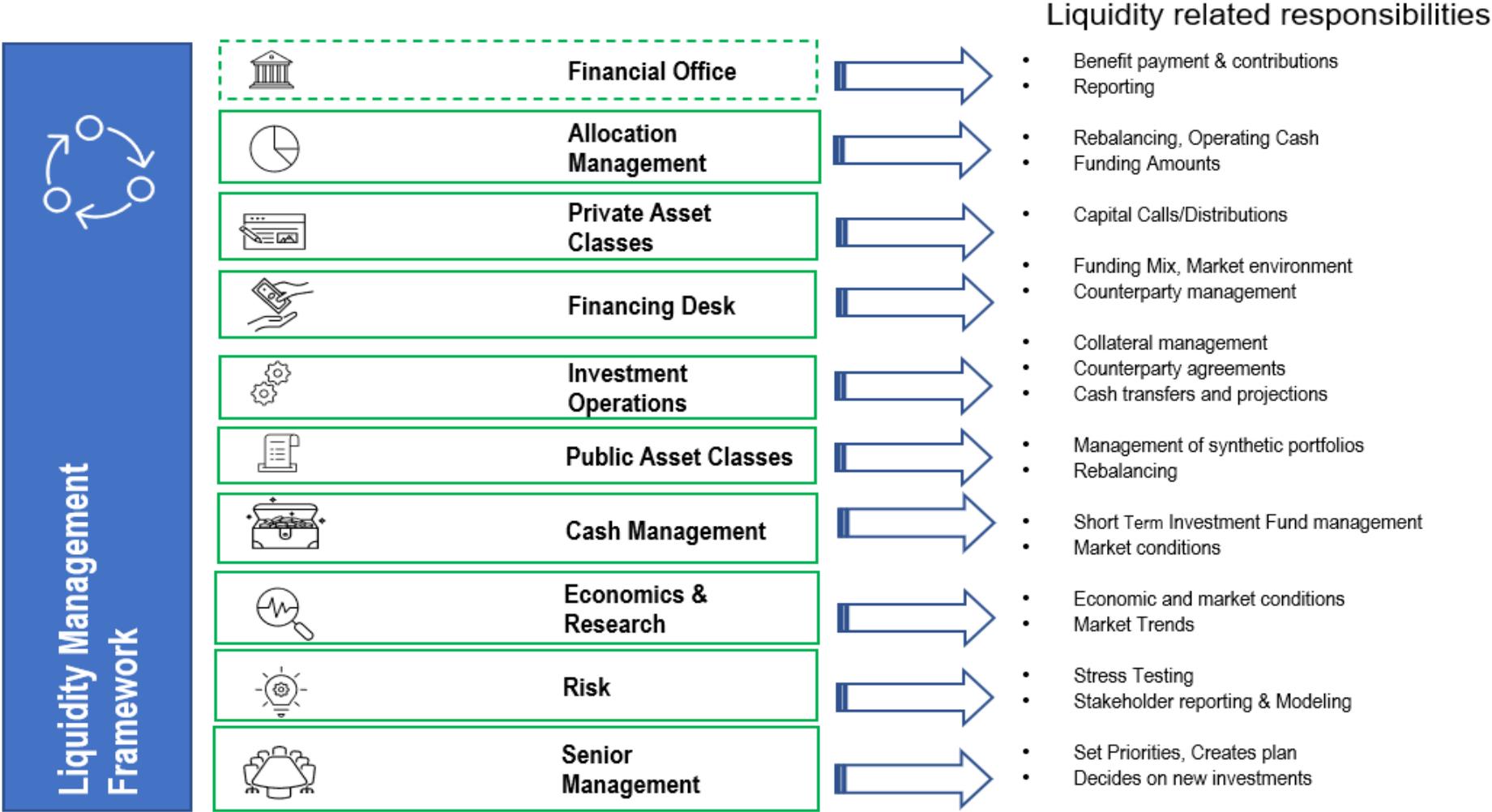


Note: The graph represents 30 day Tier 1 coverage

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Liquidity management involves the whole organization



CalPERS' liquidity framework has evolved in the past decade

~10 Years Ago

Today

Access

- Distributed cash management
- Limited access to internal pools of liquidity
- Siloed access to external funding markets
- Inconsistent funding for private assets

- Internally managed Short Term Investment Fund enhances cash efficiency (2016)
- Policy and processes to share liquidity across PERF sources (2013)
- Permanent, highly scalable financing via synthetic Equity and Treasury portfolios (2020)
- Standing access to 19+ dealer repo lines
- Centralized team manages all financing and dealer relationships (2017)
- Formalized mapping of saleable public asset classes for each private program provides consistent access to funding (2020)

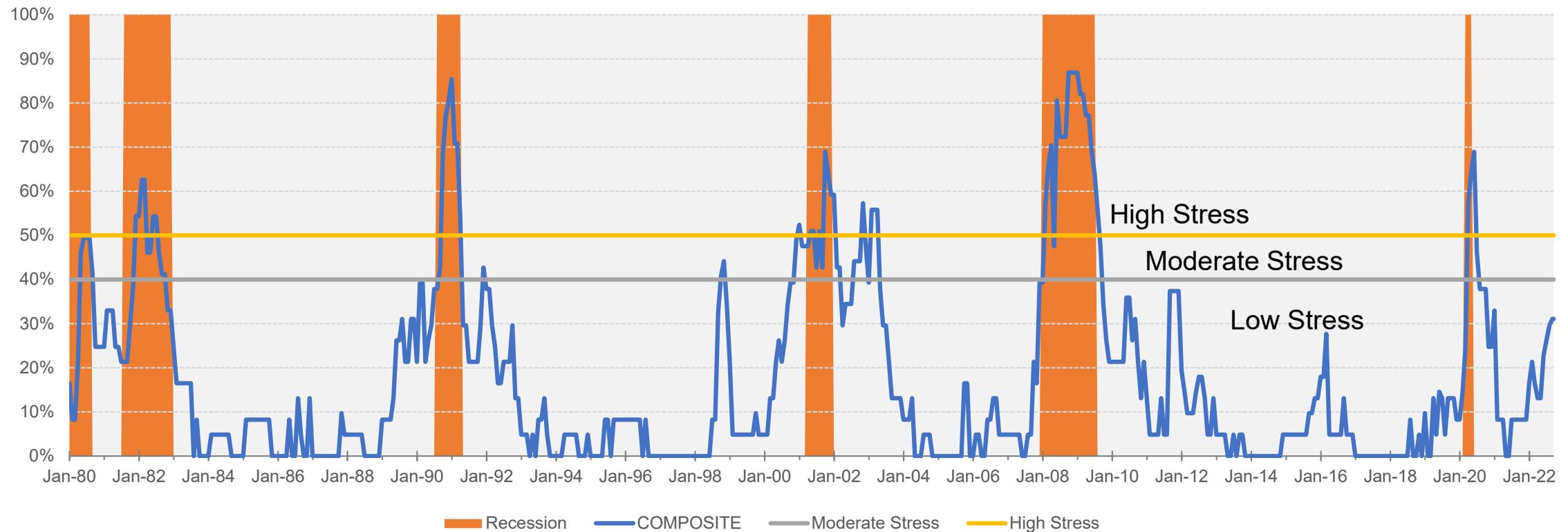
Risk Management

- Information gaps
- Informal counterparty management
- Securities lending used as funding source
- Distributed governance of leverage

- Consolidated cashflow monitoring platform shared with FINO (2017)
- Centralized liquidity dashboard integrates asset class and top-down perspectives (2019)
- Derivatives and Counterparty Committee and formalized monitoring process (2013)
- Securities lending managed separately from financing activities (2010)
- Coherent single total fund policy for leverage with related reporting and management processes (2019)

CalPERS monitors financial conditions with a variety of tools

- In addition to day-to-day monitoring by staff, economic and market conditions are systematically tracked through a combination of proprietary and public indicators
- The chart below is an example of an indicator used in management of the cash portfolio



Closing comments

- The goal of liquidity management at CalPERS is not just to meet cashflow obligations, but to ensure we can maintain our investment strategies and take advantage of opportunities
- Liquidity management is an important tool for a diversified portfolio strategy, including managing leverage and higher allocations to less-liquid assets
- CalPERS' framework has evolved since the global financial crisis to take advantage of our scale and to support a more complex portfolio