

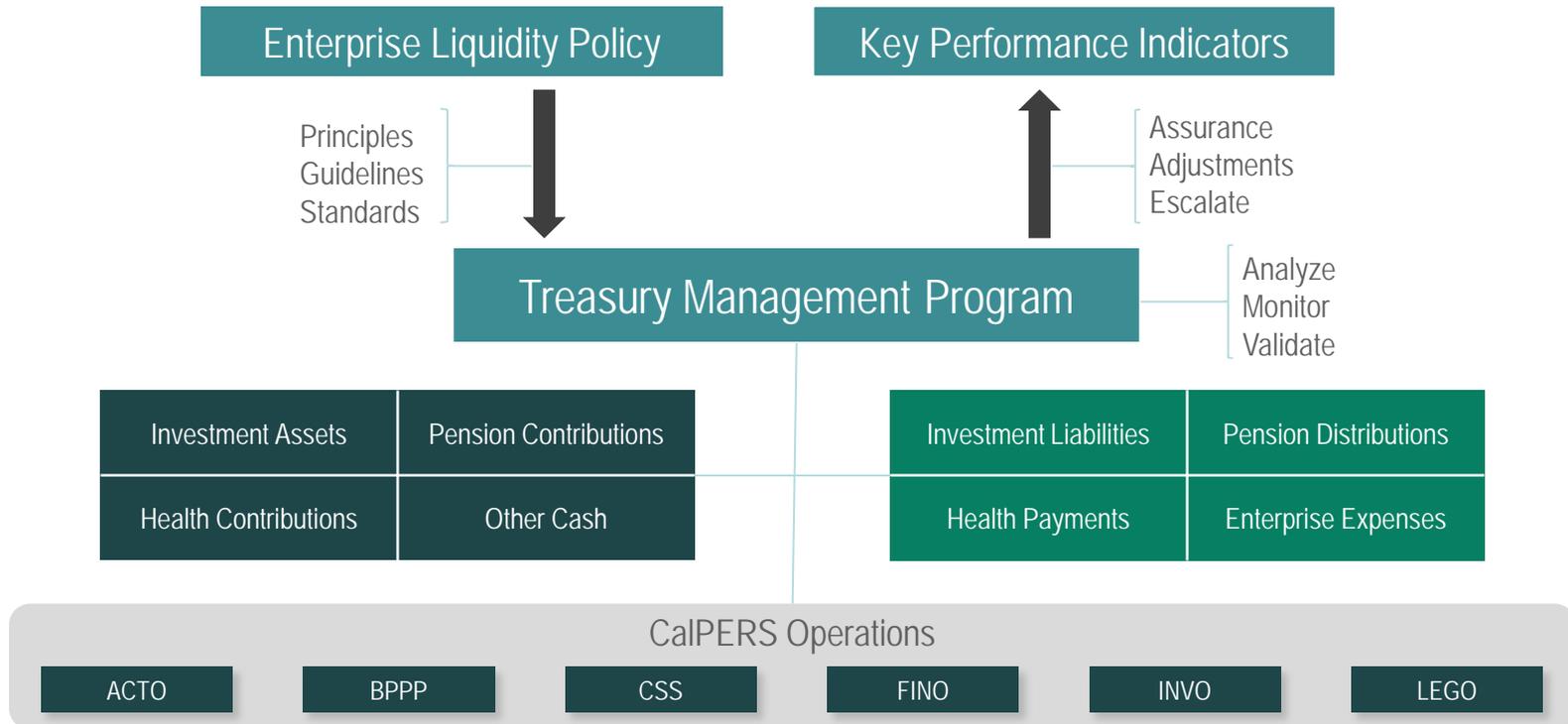
Treasury Management (Liquidity) Program

Finance & Administration Committee Update

October 14, 2014

Strategic Operating Model

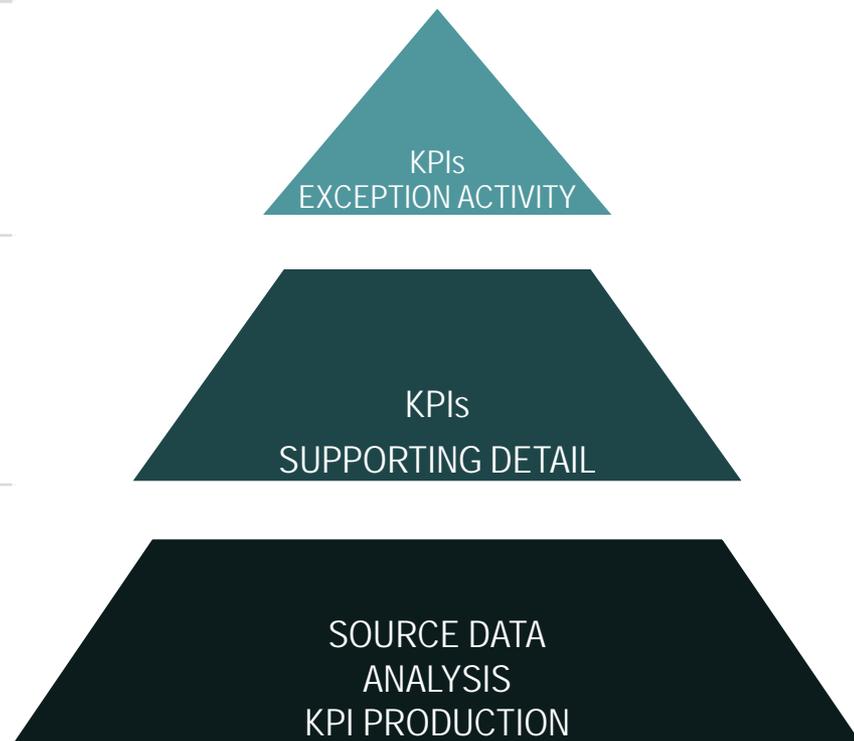
Goal of Treasury Management: Ensure the payment of member benefits and organizational expenses without interruption regardless of market conditions and without the forced sale of assets



Treasury Management Reporting

A primary goal of the Treasury Management Program is the accurate and timely reporting of short term assets and liabilities in the form of Key Performance Indicators which align with enterprise liquidity policies and allow the Board to assess the organization’s success in managing liquidity.

Report Elements	Frequency
Board Reporting <ul style="list-style-type: none"> Summary of KPI results by program Escalation events Actions to remedy Policy adjustment recommendations 	Monthly Quarterly
Executive Reporting <ul style="list-style-type: none"> Daily KPIs by program Variance report / escalation events Cash flow forecasts Forecast accuracy Enterprise cash position 	Daily Weekly Monthly
Production Reporting <ul style="list-style-type: none"> Source data reports KPI calculations Cash flow forecast details and back testing 	Daily



Key Performance Indicators

The calculating, monitoring and reporting of the following key performance indicators (KPI) will provide Executive management and the Board transparency into CalPERS ability to meet its obligations.

KPI	Description	Purpose
30 Day Coverage Ratios	The ability to meet outgoing cash obligations over the next 30 days utilizing “available cash” and forecasted incoming cash and liquidity program assets.	<ul style="list-style-type: none"> Identifies near term liquidity Detects developing risks Ability to weather short-term cash flow shocks
90 Day Coverage Ratios	The ability to meet outgoing cash obligations over the next 90 days utilizing “available cash”, forecasted incoming cash and liquidity program assets.	<ul style="list-style-type: none"> Identifies short-term liquidity Spots potential draw down of liquidity pool assets
12 Month Coverage Ratios	The ability to meet all known and forecasted outgoing cash obligations for the next twelve months utilizing “available cash”, cash equivalents, liquidity program assets and forecasted incoming cash flows.	<ul style="list-style-type: none"> Identifies medium-term liquidity Spots potential draw down of liquidity pool assets

Key Performance Indicators - continued

KPI	Description*	Purpose
<p>Days of Coverage -Normal-</p>	<p>The number of days CalPERS can meet its known and forecasted outgoing cash obligations utilizing “available cash”, cash equivalents, liquidity program assets and forecasted incoming cash flows.</p>	<ul style="list-style-type: none"> • Detects developing risks • Identifies liquidity under normal circumstances
<p>Days of Coverage -Stressed-</p>	<p>The number of days CalPERS can meet its known and forecasted outgoing cash obligations utilizing “available cash”, cash equivalents, and liquidity program assets with a X% discount to market value and forecasted incoming cash flows with a Y% reduction.</p>	<ul style="list-style-type: none"> • Identifies ability to weather moderate cash flow and market liquidity shocks
<p>Days of Coverage -Extreme-</p>	<p>The ability to meet all known and forecasted outgoing cash obligations for the next twelve months utilizing “available cash”, cash equivalents, liquidity program assets with Z% discount to market value without any incoming cash flows.</p>	<ul style="list-style-type: none"> • Identifies ability to manage extreme cash flow and market liquidity shocks
<p>Capital Call Coverage Ratios</p>	<p>The ability to meet the maximum exposure to capital commitments for illiquid investments (private equity, infrastructure, real estate) investments utilizing “available cash”, cash equivalents, liquidity program assets and forecasted incoming cash flows.</p>	<ul style="list-style-type: none"> • Identifies medium-term liquidity • Spots potential draw down of liquidity pool assets

*All forecasting for next twelve months

During the February 2014 meeting, the Finance and Administration Committee has tasked the CFO with providing the Board with perspective of how other public pensions firms manage liquidity and approach treasury management. In Q3, CalPERS conducted a survey among the attendees of the 2014 Global CFO Conference from which the insights below were derived .

Topic	CalPERS	Public Pensions	All Firms
Are the cash management and liquidity practices of the entire organization centralized within a formal Treasury Management function?	In development	57%	63%
In addition to working capital supporting daily investment operations, does your firm maintain a dedicated allocation to liquid assets for use in the event of an extreme market event or contribution interruption	Yes	70%	55%
Does your organization have a program in place to raise short-term cash if needed (i.e., a line of credit with a financial institution or a commercial paper program)?	No	50%	50%
Does your organization maintain specific policies or guidelines for managing enterprise liquidity during exceptional market events?	In development	28%	35%

Note: Survey respondents included AIMCO, ATRF, Australian Government Future Fund, BCIMC, Canada Public Pension, China Investment Corporation, Investment Board, Caisse de depot, New Brunswick Investment Management Corporation, New Zealand Superannuation Fund, OMERS, Ontario Teachers Pension Plan, OpTrust, Public Sector Pension Investment Board , QIC, The World Bank

Treasury Management Program: Project Status



Activity	Accomplishments and Next Steps
Strategic Operating Model Framework	<ul style="list-style-type: none"> • Provided high level design of TMP including: <ul style="list-style-type: none"> • Liquidity Definition • KPI's defined • Level's of related liquidity • Roles and responsibilities
Industry Benchmark and Survey	<ul style="list-style-type: none"> • Developed and administered survey to determine best practices • Analyzed results to CalPERS TMP
Model INVO liquidity report	<ul style="list-style-type: none"> • Completed liquidity report modeling to identify challenge areas for future cash forecasting development