

Investment Program

INVESTMENT PROGRAM DEVELOPMENT

A long-term strategic transition

Introduction

Following the financial crisis, the investment program began a transition from traditional public pension system to modern investment organization. The transition touched elements of the assets, liabilities, and administration, but this presentation focuses on the changes to the Investment Program.

This presentation is intended to be a living document that puts the present Investment Program status into the context of this larger transition, ties current Investment Program projects and topics into a goals-based framework, and provides clarity on specific deliverables and actions in the near future.

<u>June 2017</u>

Staff has added slide #6, showing the organizational structure that existed past few years, to juxtapose against the near-term current organizational structure (slide #7). The new slide #8 shows the change in functional allocation of time by staff as a result of shifting roles and responsibilities. Slide 15 has also been updated with the most recent forward calendar.

Long-Term Strategic Transition

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	Cortex I	Ad hoc committ	tees							
			Cortex	II						
					Measure G					
				Committee	Charters: Audit (2012	, 2016), Governance	(2013, 2016), Invest	ment (2012, 2015), Jo	oint Personnel (2016	5)
Governance					narters: Board of Adm 2, 2015), Chief Investr			012, 2013, 2016), Vice	Chair (2013, 2016),	Chief Executive
				2014), Boar Review Pol	tendance (Fed-2016), l d Performance Assessi icy (2013, 2016), Electi Retirement Contribution (12, 2015)	ment (2012), Code of on of Board Officers	f Conduct (2012, 20 (2013, 2016), Strate	13, 2016), Monitoring gic Planning (2012),	g & Reporting (2012 Overpayment/Unde	, 2015), Personne erpayment of
									Cortex p	rocedure docs.
Team					see slid	le #4				
	P&F General Const	ultant: NEPC							Meketa	
	SIS Fed Ge	neral Consultant: Me	eketa							
	,			Absolute Return C	Consultant: Albourne					
							Compli	ance System: State S	reet	
Infrastructure					Performance System: State Street					
							Risk Sys	stem: State Street	M	ISCI
									Risk Cons	ultant: Verus
									Dynamo RMS	
								Albourne Proc	ess Review	
Investment	Diversification								6-27-2017 JOI	NT IC ITEM #4
Structure & Process						Investment Pr	ocess Formalization	າ	0-21-2011 301	IN IO II LIVI ##

	2009	201	10	2011	2012		2013	2	014	201	5	2016	20	17	2018
	Matt Loesch														
	Ed Overton														
	Ash Kalra		N	lichael Armst	rong *										
Federated Board	Jeffrey Perkins			Martin Dirks	*										
		Arn Andre	ews					L. T.		Udaya Rajbhai	ndari				
	David Busse		L	ara Druyan *									Anurag (Chandra *	
	Pete Constant		S	tuart Odell*						Elizabe	th Rounds	; *	P. P. *		
	Sam Liccardo		Vinc	ent Sunzeri *											
	Scott Johnson			Richard Santo	os										
	Rose Herrera			Andrew La	nza *										
	David Bacigalupi		·			Nic	ck Muyo								
Police & Fire Board	Bill Brill		Dam	on Krytzer*					Stephen l	Brennan *					
			Sear	Bill *						Jeremy Evni	ne *				
			M.	F.* Eli	zabeth Rounds	s *				Ghia Griarte	*				
	Keith Keeslir	ng :	Sean Kaldor								A	ndrew Gardani	er		
	Conrad Taylo	or			Jam	es Mason	ı					Franco Vado)		
	Russell Crosby						Roberto Peña								
	Carmen Racy-Cho	y						A	Arn Andre	ews					
	Ali Amiry			Dary	yn Miller										
		Ryan Ju	ısko		M.K.H.				Brian	Starr					
Investment		Mic	chael Moehle						J	ay Kwon					
Program			Heidi Poor	ı											
	Ron Kumar														
	Ceara O'Fallon					Ayı	nur Yeniay				Dhinesh Ganapathiappan				
				Tram D	oan			Viktoria Tubaltsev							
									Sue G	Griffiths			6-27-	2017 JOIN	Γ IC ITEM #4

^{*} denotes independent Board trustees

Governance

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Cortex	
CULICA	

 August 2008 	City Auditor findings of abuse of travel policy by Board members and Staff.
 September 2008 	City Council approves an RFP that results in Cortex being retained to review Board governance and structure.
• June 2009	Publication of initial recommendations, subsequently revised September 2009.
 February 2010 	City Council approves a sub-set of one part of Cortex's set of recommendations (independent board members).

Cortex II

 July/August 2011 	Boards retain Cortex as Governance Consultant, for deliverables on the roles and responsibilities of the Board and
	Staff, staffing structure and salary range, policies and procedures, strategic planning, education and training
	planning, and communications protocol.
 May 2013 	Governance Committee accepts Cortex report. It recommends the Boards direct Staff to conduct a feasibility

Governance Committee accepts Cortex report. It recommends the Boards direct Staff to conduct a feasibility assessment of the recommendations, and that the Boards form a Joint Ad Hoc committee to work with stakeholders to achieve implementation of Cortex recommendation #1 (the Retirement Boards be granted full authority to administer their Systems).

Measure G

• November 2014 Ballot measure approved by voters, allowing the Boards to hire an at-will CEO and CIO, exclude future Staff from classified civil service and the City's defined benefit plans, and set stipends for independent Board members.

Cortex procedures documentation

• June 2017 Staff intends to engage Cortex to help develop a comprehensive outline of processes, evaluate/formalize processes for further development, and document the processes in the existing or future form.

6-27-2017 JOINT IC ITEM #4

Team Structure: 2014-2017

CHIEF EXECUTIVE OFFICER

Roberto Peña

CHIEF INVESTMENT OFFICER

Arn Andrews

INVESTMENT MANAGEMENT

INVESTMENT OPERATIONS

Sr. Investment Officer Absolute Return GTAA/Opportunistic

Daryn Miller, CFA

Investment Officer Global Equity

Jay Kwon, CFA

Investment Officer Global Fixed Income Private Debt

Brian Starr, CFA

Investment Officer Real Assets Private Equity

Ron Kumar

Investment Officer

(vacant)

Investment AnalystDhinesh Ganapathiappan

Investment Analyst (vacant)

Operations Analyst Aynur Yeniay / Viktoria Tubaltsev[‡]

Staff Technician Sue Griffiths

Team Structure: Current

CHIEF EXECUTIVE OFFICER

Roberto Peña

CHIEF INVESTMENT OFFICER

(Interim: Daryn Miller, CFA)

Investment Officer

(vacant)

INVESTMENT MANAGEMENT

Sr. Investment Officer **Absolute Return GTAA/Opportunistic**

Daryn Miller, CFA

Investment Officer Public Equity Public Real Assets

Jay Kwon, CFA

Investment Analyst Dhinesh Ganapathiappan

Investment Officer Global Fixed Income Private Markets

Brian Starr, CFA

Investment Analyst (vacant)

INVESTMENT OPERATIONS

Investment Operations Supervisor Ron Kumar †

Operations Analyst Viktoria Tubaltsev[‡]

Staff Technician Sue Griffiths

⁺ Position in final stages of completion.

[‡] Temporary employee.

Team Functions

		Andrews	Miller	Kwon	Starr	Kumar	Ganapathiappan	
	ADMINISTRATION	$70\% \rightarrow 0\%$	$0\% \rightarrow 40\%$	-	-	10%	-	80% → 50%
	Macro / Asset Allocation	$25\% \rightarrow 0\%$	10% → 30%	20% → 30%	$20\% \rightarrow 30\%$	-	0% → 10%	75% → 100%
ENT	Risk Management	$5\% \rightarrow 0\%$	10% → 20%	-	-	_	0% → 10%	15% → 30%
SEM	GTAA/Opportunistic	-	30% → 20%	-	-	-	$10\% \to 30\%$	$40\% \rightarrow 50\%$
NAC	Absolute Return	-	50%→ 40%	-	-	-	0% → 10%	60% → 70%
r MA	Global Equity	-	-	80%	-	-	0% → 10%	80% → 90%
INVESTMENT MANAGEMENT	Global Fixed Income	-	-	-	$40\% \rightarrow 30\%$	-	0% → 10%	40%
ESTIN	Private Debt	-	-	-	$40\% \rightarrow 20\%$	-	-	40% → 20%
INI	Private Equity	-	-	-	$0\% \rightarrow 20\%$	20% → 0%	-	20%
	Real Assets	-	-	$0\% \rightarrow 10\%$	$0\% \rightarrow 20\%$	40% → 0%	0% → 20%	$40\% \rightarrow 50\%$
TIONS	Middle Office functions	-	-	-	-	20% → 60%	60% → 10%	80% → 70%
OPERATIONS	Back Office functions	-	-	-	-	10% → 30%	30% → 10%	40%
		100% → 0%	$100\% \to 150\%$	$100\% \to 120\%$	$100\% \to 120\%$	$100\% \to 100\%$	100% -6> 2 120 %oin	IT IC ITEM #4

Investment Management Team

Daryn Miller, CFA

Interim CIO / Senior Investment Officer

Daryn joined the Investment Program in 2011 and currently oversees the Absolute Return and GTAA/Opportunistic allocations as well as being responsible for the risk management initiative, rebalancing, and tactical decision-making. Before building out the Absolute Return and GTAA programs, Daryn managed the Global Equity asset class. Prior to joining the City of San José, Daryn spent five years with Goldman Sachs, where he was a Vice President in equity research, focusing on the healthcare services sector. In addition, Daryn has held accounting and finance positions in the technology sector.

MBA, University of Southern California BA, Vanguard University

Brian Starr, CFA

Investment Officer

Brian joined the Investment Program in 2014 and currently oversees the Global Fixed Income and Private Markets allocations. Prior to joining the City of San José, he spent three years at City and County of San Francisco, where he was an investment analyst and trader for the City's \$6 billion operational and surplus cash portfolio. Before entering the public sector, Brian worked in several investment disciplines including: investment advisory services, real estate private equity and investment banking.

MBA, EDHEC Business School

BA, University of California, Santa Barbara

Jay Kwon, CFA, CAIA

Investment Officer

Jay joined the Investment Program in 2014 and currently oversees the Public Equity and Public Real Assets allocations. Prior to joining the City of San José, he spent eleven years at Bank of New York Mellon, where he was a senior portfolio manager for derivatives-based risk hedging solutions. Before Bank of New York Mellon, Jay worked as a financial analyst from the Federal Home Loan Bank and as a research analyst for an energy and environmental economics firm.

MBA, University of Oxford MA, California State University, East Bay BA, Stanford University

Dhinesh Ganapathiappan, CIPM

Investment Analyst

Dhinesh joined the Investment Program in 2016 as an investment analyst. Prior to joining the City of San José, Dhinesh spent seven years with State Street, where he was an assistant vice president, providing performance, attribution, and risk consulting to institutional clients.

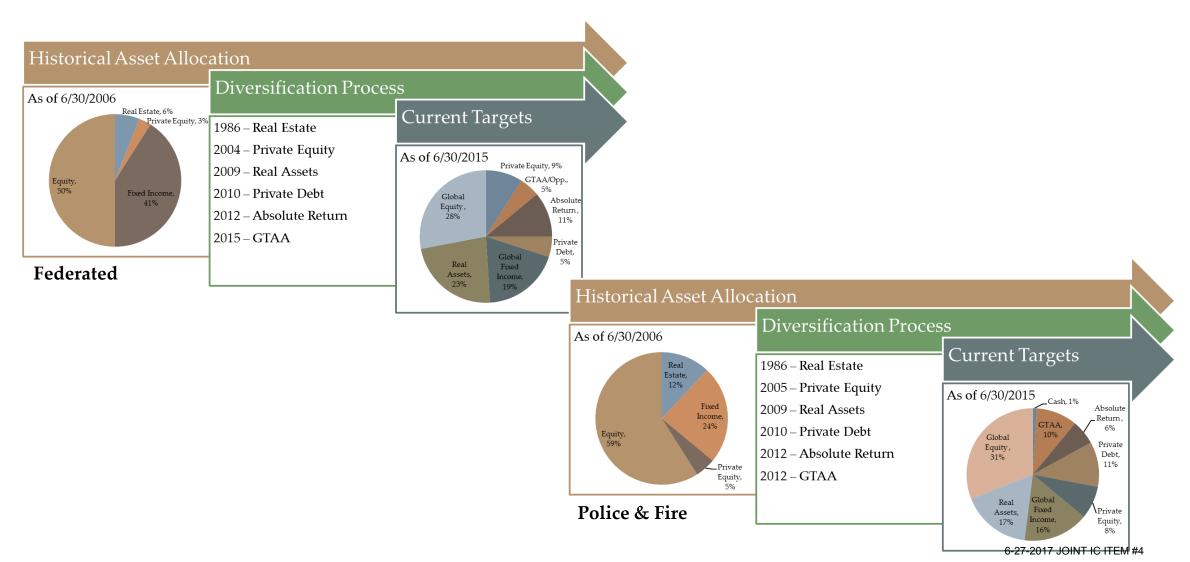
BA, University of California, Davis

Infrastructure

Consultants

Combartants								
• General	Support the Board and Staff in asset allocation, asset class structuring, manager selection/monitoring, reporting							
 Absolute Return 	Assist Staff with Absolute Return structuring, manager selection/monitoring, reporting							
• Risk	Guide the Board with in developing enterprise risk tolerance, risk philosophy and policies; manages the risk system and risk reporting; assists Staff with identification and management of risk							
Systems								
Compliance	Streamline monitoring manager compliance with established investment guidelines							
 Performance 	Serve as official book of record and investment performance data engine behind attribution and analytics							
• Risk	Tool to understand expected risk levels, current factor exposures, stress tests, and the impact of reallocating assets							
Documentation								
• RMS	Centralized repository to store and access detailed information on past, current, and prospective investments							
 Process Review 	Independent review and formalization of due diligence processes for manager selection and monitoring							

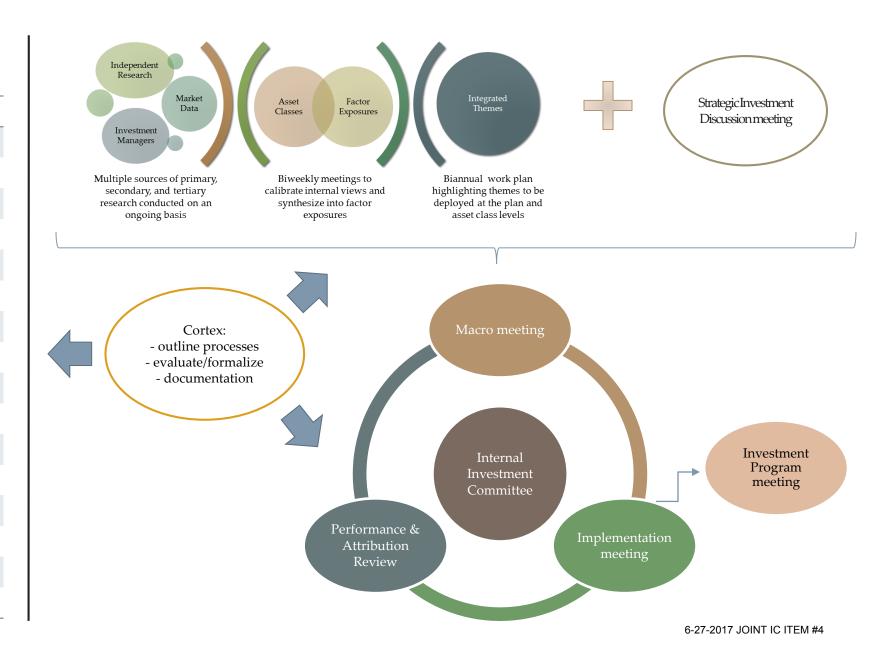
Investment Structure & Process



Investment Process Formalization and Development

Function/Process

- a. Investment function
 - i. Risk management
 - ii. Strategic asset allocation
 - iii. Tactical asset allocation
 - iv. Asset class structuring
 - v. Manager selection
 - vi. Performance analysis
- b. Operations function
 - i. Custody/Cash handling
 - ii. Accounting/Reporting
 - iii. Compliance and legal
 - iv. Process/Document management
- c. Organizational function
 - i. Team structure and staffing
 - ii. Governance and policy
 - iii. Audit and reporting



Investment function > Performance analysis > Performance Attribution & Review project

Meeting details

Purpose: Discuss monthly performance and attribution at multiple levels, including

1) plan, 2) asset class, 3) sub-asset class, and 4) manager. Discuss attribution analysis including 1) allocation effect – asset class and sub-asset class level, and 2) selection effect. Allocation, tactical and manager level performance is

discussed and questioned by the team.

Frequency: Monthly, third or fourth Thursday

Attendance: CIO, Investment Officers, Investment Analysts

Meeting Chair: Dhinesh Ganapathiappan

Materials: Established meeting format (i.e. no agenda); monthly internal flash

performance and/or quarterly consultant performance reports; attribution

analysis.

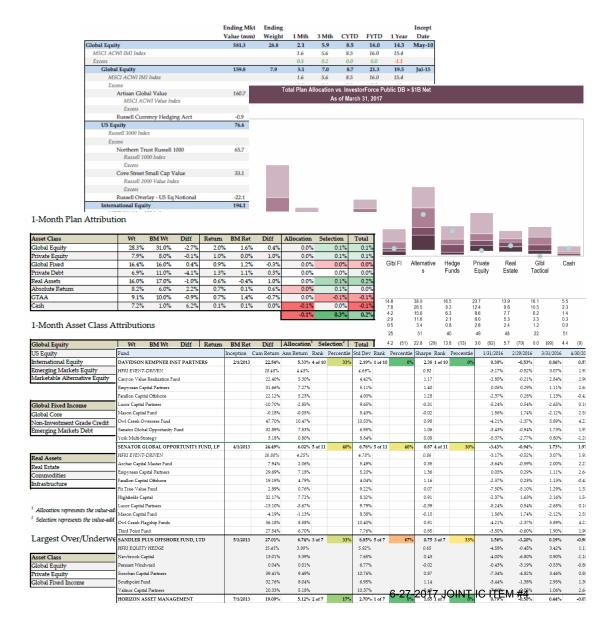
Goals

Team scrutiny and oversight of plan performance.

Foster culture of questioning, reflection, and accountability.

Output

- Watch list positioning and/or investment managers that will receive a heightened level of due diligence.
- Team request for additional research or due diligence on positioning and/or investment managers that are to be brought to a Macro meeting, Internal Investment Committee meeting, or Implementation meeting.



Investment Committee Deliverables	Produced by	Frequency				M	onths l	Presei	nted				
Allocating													
Asset-Liability Study	General consultant	At least every three years							Feb	Mar	Apr		
Economic & Financial Market Outlook	Staff	Every six months					Dec					May	Jun
Capital Market Assumptions	General consultant / Staff	At least annually								Mar	Apr	May	
Asset Allocation	General consultant / Staff	Annually									Apr	May	Jun
Prefunding Plan	Staff	Annually											Jun
Implementation & Positioning													
Project & Deliverables Calendar	Staff	At least every six months	Aug						Feb				Jun
Asset Class Reviews	Staff	Annually for each asset class	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
Equity Tactical Asset Allocation Update	Staff	Every six months	Aug					Jan					
Private Equity Pacing Plan	General consultant / Staff	Annually	Aug	Sep									Jun
Private Debt Pacing Plan	General consultant / Staff	Annually	Aug	Sep									
Private Real Assets Pacing Plan	General consultant / Staff	Annually	Aug	Sep									
Reporting													
Flash Performance	Staff	Monthly / ~3 weeks lag	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Quarterly Performance	General consultant	Quarterly / ~2 months lag	Aug			Nov			Feb			May	
Absolute Return Performance	Absolute return consultant	Quarterly / ~2 months lag	Aug			Nov			Feb			May	
Private Markets Performance	General consultant	Quarterly / ~5 months lag		Sep			Dec			Mar			Jun
Fee Report (directly to Board)	Staff	Annually / ~8 months lag	Aug										
Investment Risk Report	Risk consultant / Staff	TBD											
Dashboards (P&F directly to Board)	Staff	Quarterly / ~3 months lag		Sep			Dec			Mar			Jun

Thursday, August 3 Police & Fire Board	Thursday, August 17 Federated Board
 Economic & financial market outlook Pension asset allocation (decision) Prefunding plan (decision) 2016 Fee report Investment Program development presentation Closed session recommendation (1) 	 Economic & financial market outlook Pension asset allocation (decision) Prefunding plan (decision) 2016 Fee report 4Q16 Private markets performance Investment Program development presentation Closed session recommendation (1)
Thursday, September 7 Police & Fire Board	Thursday, September 21 Federated Board
 Projects & deliverables calendar Health Care Trust asset allocation Update to IPS: Cash asset class, Opportunistic 2Q17 Quarterly performance 2Q17 Absolute return performance 4Q16 Private markets performance Able Noser contract approval 	 Projects & deliverables calendar Health Care Trust asset allocation Update to IPS: Cash asset class 2Q17 Quarterly performance 2Q17 Absolute return performance Able Noser contract approval
Thursday, October 5 Police & Fire Board	Thursday, October 19 Federated Board
 Asset allocation process review Private Debt pacing plan Private Real Assets pacing plan 1Q17 Private markets performance 	 Asset allocation process review Private Debt pacing plan Private Real Assets pacing plan 1Q17 Private markets performance
	Police & Fire Board • Economic & financial market outlook • Pension asset allocation (decision) • Prefunding plan (decision) • 2016 Fee report • Investment Program development presentation • Closed session recommendation (1) Thursday, September 7 Police & Fire Board • Projects & deliverables calendar • Health Care Trust asset allocation • Update to IPS: Cash asset class, Opportunistic • 2Q17 Quarterly performance • 2Q17 Absolute return performance • 4Q16 Private markets performance • 4Q16 Private markets performance • Able Noser contract approval Thursday, October 5 Police & Fire Board • Asset allocation process review • Private Debt pacing plan • Private Real Assets pacing plan

Summary of past updates

May 2017

The initial version of this document emphasizes the stabilization and development status of the Investment Program relative to the early years of the transition. It highlights Staff's plans to, rapidly:

- (a) respond to several requests/inquiries made by the Investment Committee over the past year;
- (b) continue formalizing and developing the processes that have evolved during the transition period;
- (c) solicit outside expertise in the formalization, development, and documentation of processes, utilizing the same process used by City Council and the Boards in the past.