

# **California State Teachers' Retirement System Annual Report Regarding Expenditures for External Investment Advisors Investments**

**December 31, 2011**

## **Introduction**

Item 1920-002-0835 of the annual Budget Acts enacted beginning 1995 requires the California State Teachers' Retirement System (CalSTRS) to report to the Legislature: 1) The final expenditures for external investment advisors, made during the prior fiscal year and 2) A revision of the budget act's estimate of expenditures for external investment advisors, including an accounting and explanation of the changes, and the proposed external investment advisor expenditures for next fiscal year. Also to be included in the reports:

- A summary and comparison of externally managed portfolios, internally managed portfolios, and the total fund;
- A description of actions to be taken to ensure that any future expenditures for outside advisors will result in a greater return on investments, including costs for these advisors, than if in-house advisors were used; and
- A listing of advisor contracts in effect and approved for the future.

This legislative report is submitted in compliance with that direction and covers external investment management fees paid in FY 10-11 and revisions to the estimated external investment management fees paid in FY 11-12 and forecasts the likely fees for FY 12-13. Questions on this Legislative Report should be directed to Mary Anne Ashley, Acting Director of Governmental Affairs and Program Analysis, (916) 414-1981.

## **Final 2010-11 Expenditures for External Investment Advisors**

As of June 30, 2011, the CalSTRS portfolio held \$155.5 billion in investments. CalSTRS internally manages 33 percent of those assets and hires external managers for the remaining 67 percent. CalSTRS also hires firms to manage discrete portions of the portfolio. These investment managers are under personal service contracts and are broken out in the summary by those asset classes.

Over the past eight years, the CalSTRS Investment Committee has approved hiring more firms to help develop a Developing Manager Program, which reaches small emerging investment managers. In addition, CalSTRS has expanded the use of active investment management at a higher fee structure with the goal of generating a higher, overall return. Lastly, over the past seven years, CalSTRS has also expanded the number of investment areas to include equity investments in emerging markets, debt investments in global fixed income, and currency managers.

### **1) SUMMARY OF EXTERNALLY MANAGED PORTFOLIOS**

A summary of investment managers by asset class is listed in Attachment 1. The external investment manager cost of the Total Portfolio for fiscal year 2010-11 is \$119,236,738, which also includes partnership costs. According to an international cost comparison universe, CalSTRS operates a lower cost investment fund compared to large pension peers and operates well below the cost of other large California pension plans.

Attachment 2 provides a listing of investment managers versus their respective benchmark. Just like Mutual Funds, professional institutional investment services are very expensive, yet the net results are highly variable. There are no guarantees on Wall Street and investing is a very complex and challenging endeavor. Not surprising, some of CalSTRS investment managers have outperformed, while others underperformed.

The Budget Act requires a comparison between internal and external investment management. For example, it costs roughly one-tenth the cost to manage money with CalSTRS investment staff as compared to external firms. On the other hand, CalSTRS and its employees are subject to State personnel and procurement rules. As a result, CalSTRS attempts to manage as much as is prudent and in as many styles as is prudent with internal staff.

CalSTRS spends \$13.7 million to manage approximately one-third of the assets in-house. As noted previously, it costs over \$120 million to manage the 67 percent of the assets that are managed by external firms. Therefore, the total investment manager fees for the system are over \$133.7 million. It is difficult to compare the returns since external firms fulfill different investment mandates and in different asset classes compared to the internal strategies.

**2) DESCRIPTION OF ACTIONS TO BE TAKEN TO ACHIEVE GREATER RETURNS**

In July of each year, CalSTRS Investment Committee adopts business plans for each segment of the Investment Portfolio. The goal of CalSTRS is to achieve greater investment results; therefore, the business plans outline those exact plans. Attachment 3 includes the Investment Branch Business Plans for fiscal year 2010-11.

**3) LISTING OF ADVISOR CONTRACTS IN EFFECT AND APPROVED FOR THE FUTURE**

Attachment 4 outlines the various investment advisors/consultants in effect and under annual retainer for the fiscal year 2011-12. CalSTRS Investment Committee retains a general investment consultant and three specialty consultants. CalSTRS staff retains several firms to assist with management and guidance of the investment portfolio; some are paid an annual retainer while most are paid on an hourly basis for specific projects.

## **Estimate of 2011-12 Expenditures for External Investment Advisors**

In the fall of 2008, stocks around the world suffered a meltdown on par with the historic declines of 1987 and even 1929. Since the majority of external investment managers fees are based upon assets under management, those fees will decline along with the drop in assets. Given the extreme volatility of the global financial markets both here in the U.S. and across the globe, it is more difficult than ever to forecast where the asset value may move in fiscal year 2011-12 and fiscal year 2012-13. CalSTRS internally manages 33 percent of the portfolio assets and hires external managers for the remaining 67 percent. CalSTRS also hires firms to manage discrete portions of the portfolio. These investment managers are under personal service contracts and are broken out in the summary by those asset classes. In fiscal year 2011-12, the CalSTRS Investment Committee approved moving more assets internal to save costs.

### **A. REVISION OF THE BUDGET ACT'S ESTIMATE OF EXPENDITURES**

In the Fiscal Year 2011-12 Budget, CalSTRS estimated investment manager costs to be \$135,284,835. This has been revised down based on the decline of assets from the 2008 financial crisis and as a result of aggressive fee re-negotiation by the CalSTRS investment staff.

### **B. PROPOSED EXTERNAL INVESTMENT ADVISOR EXPENDITURES FOR FISCAL YEAR 2011-12**

Based upon the value of the investment portfolio at December 2011, we can estimate the expected size of the portfolio over the next 20 months if we experience a normalized investment climate. Unfortunately, financial markets are far from "normalized" here in 2012 and year-to-year they seldom match the long-term average return. CalSTRS uses a wide standard deviation to estimate the Fund value, which has been a reasonable tool over time.

#### **1) SUMMARY OF EXTERNALLY MANAGED PORTFOLIOS**

CalSTRS estimates the external investment manager costs for fiscal year 2011-12 will be \$135,284,835, internal management costs will be \$13,955,134, and the total cost to invest the Fund will be \$181,084,818. It should be noted that the estimated Fund costs additionally include the cost of legal services, custodian services, and investment research, not just internal and external investment managers.

The most effective way to compare investment costs is to calculate the basis point cost per dollar invested. This term is also used extensively by the Mutual Fund industry to help investors compare cost factors. Our external investment managers cost, on average, 17 basis points. This compares with the cost of internal management at less than 1 basis point. In other words, internal management is at least 17 times more cost effective than hiring external investment managers.

The CalSTRS Investment Committee would like to manage more assets internally than hire external firms. However, the regulations on a State Agency make it very difficult

to attract and retain the qualified talent and compete with Wall Street investment management firms.

**2) DESCRIPTION OF ACTIONS TO BE TAKEN TO ACHIEVE GREATER RETURNS**

Annually, in July of each year, CalSTRS adopts business plans for each segment of the Investment Portfolio. The entire goal of CalSTRS is to achieve greater investment results; therefore, the business plans outline those exact plans. Attachment 5 is the Investment Branch Business Plans for Fiscal Year 2011-12.

**3) LISTING OF ADVISOR CONTRACTS IN EFFECT AND APPROVED FOR THE FUTURE**

Attachment 6 outlines the various investment advisors/consultants in effect and under annual retainer for the fiscal year 2012-13. CalSTRS Investment Committee retains a general investment consultant and three specialty consultants. The Investment staff retains several firms to assist with management and guidance of the investment portfolio; some are paid an annual retainer while most are paid on an hourly basis for specific projects.

CalSTRS estimates the external investment manager costs for fiscal year 2012-13 will be \$155,708,920, internal management costs will be \$19,284,715, and the total cost to invest the Fund will be \$207,255,818. It should be noted that the estimated Fund costs additionally include the cost of legal services, custodian services, and investment research, not just internal and external investment managers.



## State Teachers' Retirement Fund

Teachers' Retirement Fund Schedule of Investment Expenses by asset class for the year ended June 30, 2011.

**FY 2010-2011****External Portfolio Manager Costs**

<i>External Equity Manager Domestic</i>	<i>Dollars In Thousands</i>
<i>Battery March Financial Management Inc</i>	\$ 981
<i>Bivium Capital Partners, LLC</i>	1,428
<i>BlackRock Financial Management Inc.</i>	9
<i>BlackRock Institutional Trust Co., NA</i>	988
<i>Capital Prospects, LLC</i>	884
<i>Chicago Equity Partners</i>	681
<i>Delaware Investment Advisors</i>	986
<i>Delphi Management, Inc.</i>	396
<i>Denver Investment Advisors</i>	1,262
<i>First Quadrant</i>	508
<i>FIS Funds Management, Inc.</i>	1,839
<i>Leading Edge Investment Advisors, LLC</i>	1,440
<i>Light Green Advisors</i>	191
<i>Mellon Capital Management Corp.</i>	251
<i>NCM Capital Management Group, Inc.</i>	364
<i>New Amsterdam Partners, LLC</i>	288
<i>12294</i>	1,505
<i>Progress Investment Management</i>	1,972
<i>Sasco Capital, Inc.</i>	4,057
<i>State Street Global Advisors</i>	802
<i>Sterling Capital Management, LLC</i>	1,382
<i>T. Rowe Price International, Inc.</i>	1,880
<i>TCW Asset Management Co.</i>	2,736
<i>UBS Global Asset Management (Americas), Inc.</i>	331
<b>TOTAL</b>	<b>\$ 27,161</b>

**External Fixed Income Managers**

Dollars In Thousands

Artio Global Investors	\$	2,262
BlackRock Financial Management, Inc.		1,844
E H Williams Capital Management, LLC		370
Goldman Sachs Asset Management		2,190
LM Capital Group, LLC		848
Post Advisory Group, LLC		1,720
Western Asset Management Company		3,060
<b>TOTAL</b>	<b>\$</b>	<b>12,294</b>

**External Fixed Income Managers FX Overlay**

Dollars In Thousands

FDO Partners	\$	1,850
Lee Overlay Partners		1,000
Mesirow Financial		202
Millenium		360
<b>TOTAL</b>	<b>\$</b>	<b>3,412</b>

**External Equity Manager International**

Dollars In Thousands

Acuity Investment Management	\$	510
Allianz global Investors (Nicholas-Applegate)		1,437
Baillie Gifford Overseas Ltd		6,077
Batterymarch Financial Management, Inc.		722
BlackRock, Institutional Trust Co, NA		505
BlackRock International Ltd.		487
Capital Guardian Trust		1,425
Generation Investment Management US, LLP		4,291
Lazard Asset Management, LLC		8,055
Mondrian Investment Partners Ltd.		8,772
Morgan Stanley Investment Management		1,901
Oechsle International Advisors, LLC		1,685
Pyramis Global Advisors Trust Co		704
State Street Global Advisors		1,060
T. Rowe Price International, Inc.		3,909
Templeton Asset Management, Ltd.		7,640
UBS Global Asset Management (Americas), Inc.		1,000
<b>TOTAL</b>	<b>\$</b>	<b>50,180</b>

<i><b>Real Estate Manager/Advisor</b></i>	<i>Dollars In Thousands</i>
<i>BlackRock Realty Advisors</i>	\$ 1,523
<i>CB Richard Ellis Investors, LLC</i>	9,540
<i>Heitman Capital Management, LLC</i>	2,221
<i>ING Clarion Partners</i>	760
<i>Principal Global Investors</i>	4,893
<i>Thomas Properties Group, LLC</i>	624
<b><i>TOTAL</i></b>	<b>\$ 19,561</b>
<b>Total External Investment Manager Fees</b>	<b>112,608</b>
<b>Total Internal Investment Management Costs</b>	<b>\$13,700</b>



FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
Advisors and Consultants	KPMG, LLP	0.00	Financial Advisor for Co-investment
	Pacific Corporate Group, LLC	0.00	Co-Investment Advisor, Independent Fiduciary - Amend To Reflect Evergreen Term
	Pacific Corporate Group, LLC	0.00	Financial Advisor for Co-investment
	Pacific Corporate Group, LLC	0.00	Name Change and update authorized personnel
	Pacific Corporate Group, LLC	0.00	Real Estate Independent Fiduciary
	Credit Suisse AG, New York Branch	0.00	Amended to change name. No change in funding.
	Credit Suisse, New York Branch	0.00	Securities Lending Agent Services, amend to change contract to Evergreen.
	Credit Suisse, New York Branch	0.00	Securities Lending manager
	Pension Consulting Alliance, Inc.	0.00	Funding Change
	Pension Consulting Alliance, Inc.	0.00	Real Estate Independent Fiduciary
	Pension Consulting Alliance, Inc.	0.00	Real Estate Independent Fiduciary - Amend To Reflect Evergreen Term
	Valuation Research Corporation	0.00	Amend to reflect change in term
	Valuation Research Corporation	0.00	Amendment to modify language
	Valuation Research Corporation	0.00	Co-investment advisor
	Valuation Research Corporation	0.00	Funding Change only to correct expiration date
	Pension Consulting Alliance, Inc.	0.00	Alternative Investment Advisor
	Pension Consulting Alliance, Inc.	0.00	Amend to reflect change in term
	Ennis Knupp & Associates	0.00	Amended to revise agreement liaisons and to extend term
	Hewitt, Ennis Knapp, Inc.	\$ 870,000.00	Amended to change name and to extend the term
	Houlihan Lokey Howard & Zukin		
	Financial Advisors, Inc.	0.00	Alternative Investment Manager
	Houlihan Lokey Howard & Zukin		
	Financial Advisors, Inc.	0.00	Amended to reflect Evergreen term and adjust contract language
Houlihan Lokey Howard & Zukin			
Financial Advisors, Inc.	0.00	Funding strip 1	
Pension Consulting Alliance	\$ 2,900,000.00	Amended to extend term, increase funds, and change index code.	
Westwood Consulting	0.00	Real estate independent fiduciary RFP 2P2006608	
Bard Consulting, LLC	0.00	Evergreen contract for Real Estate Independent Fiduciary	

## FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	David L. Bonuccelli & Associates, Inc.	0.00	Evergreen: Real Estate independent fiduciary
	Courtland Partners, Ltd	0.00	Contractor shall provide evaluation and due diligence service for domestic and international commingled funds, joint ventures, and other real estate related projects.
	Valuation Research Corporation	0.00	evaluation and due diligence services for domestic and international commingled funds, joint ventures, and other real estate related projects/ Evergreen
	Real Estate Research Corporation	0.00	Real estate independent fiduciary
	Real Estate Fiduciary Services	0.00	Contractor shall provide evaluation and due diligence services for domestic and international commingled funds, joint ventures, and other real estate related projects.
	ORG Portfolio Management LLC	0.00	Real estate independent fiduciary
	Ennis Knupp & Associates	0.00	Real estate independent fiduciary
	Capital Hotel Management	0.00	Real Estate Independent Fiduciary
	Credit Suisse, New York Branch	0.00	Transition managers will manage, acquire, dispose of assets and coordinate the entire transition process in the most efficient and cost effective manner relative to each Investment asset class for CalSTRS.
	The Townsend Group	0.00	Real Estate Investment Consultant
	The Townsend Group	\$ 1,349,567.00	Amended to extend term and add funds and revise various other sections and exhibits to reflect current language
	Altius Associates Limited		Advisory services to support staff in the management of the Alternative Investments Portfolio
	Altius Associates Limited	\$ 1,875,000.00	Amended to extend term and add funding
	Cambridge Associates	\$ 4,800,000.00	Private Equity Program Advisor
	Cambridge Associates, LLC	0.00	The Board desires to retain a qualified firm in the Alternative Investment domain to provide advisory services relating to partnership investments for the Americas and Asia region for the Alternative Investment program. Alternative Investment Program Advisor-Americas and Asia.
	Cambridge Associates	\$ 14,400,000.00	Amended to extend term and add funds

## FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
<b>Attorneys, Master Custodian</b>	DLJ MB Advisors On Behalf of Credit Suisse Fund Investment Group	\$ 60,000.00	Independent fiduciaries for the proactive portfolio
	Altura Capitol Group	\$ 65,000.00	Subscription to reference guide/database for emerging financial services providers.
	Altura Capitol Group		Subscription to reference guide/database for emerging financial services providers.
	Pension Consulting Alliance	\$ 2,358,000.00	General Pension Consulting Services for the CalSTRS Investment Portfolio
	State Street	0.00	Amended to incorporate addendum changing contract language.
	State Street Bank & Trust Company	0.00	Securities Lending services
	State Street Bank and Trust Company	0.00	Amend to accommodate the Evergreen term and change the Item Number, Index and Object code.
	State Street Bank and Trust Company	0.00	Amend to incorporate Contractor's amendment 1 & 2
	State Street Bank & Trust	0.00	Amend to reflect change in term
	State Street Bank & Trust Co.	0.00	Funding Change
<b>Corporate Governance</b>	State Street Bank & Trust Co.	0.00	Master Custody Services
	State Street Bank & Trust co.	0.00	Transition management service
	State Street Bank and Trust Company	0.00	Amend to replace authorized/key personnel to be designated by the Contractor.
	State Street Bank and Trust Company	0.00	Contractor shall provide all services to CalSTRS as the Credit Enhancement Service Agent.
	Sheppard, Mullin, Richter & Hampton, LLP	\$ 480,000.00	Provide legal representation of CalSTRS concerning investments by CalSTRS
	Glass Lewis & Co.	0.00	Proxy voting research
	Global Proxy Watch	0.00	Global Proxy Watch will provide a weekly international Corporate Governance newsletter.
	EVA Dimensions	0.00	20 years of historical data for EVA, NOPAT, Return on Capital, Cost of Capital and FGV and 15 years of data for MV and MVA, as well as industry classification and ticker for each company in the Russell 3000.
	Corporate Library	0.00	Amended to add service and add funds

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Corporate Library	0.00	The Corporate Library, through its Board Analyst publication will provide corporate governance research and ratings for the companies within the CalSTRS domestic equity portfolio.
	California Public Employees Retirement System	0.00	To reimburse CalPERS for the cost of conference co-hosting.
	Stanford Law School	\$ 10,000.00	Stanford Law School Departmental membership.
	KLD	\$ 8,000.00	Subscription
	The Conference Board	\$ 15,000.00	Annual Membership in Governance Center. Contractor provides economic and corporate governance analysis through online publications and allows participation in workgroups through its membership.
	Council of Institutional Investors	\$ 30,000.00	Membership - Premier advocacy group, improving corporate accountability and strengthening shareholder's rights.
	EVA Dimensions	\$ 45,000.00	Subscription: 20 Years of historical data for EVA, NOPAT, Capital, Return on Capital, Cost of Capital and FGV and 15 years of data for MV and MVA, as well as industry classification and ticker for each company in the Russell 3000.
	Institutional Shareholders Services, Inc (ISS)	0.00	Subscription: ISS to provide a monthly Sudan Data feed list as well as access to research and data, via electronic web-based platform.
	Institutional Shareholders Services, Inc (ISS)	0.00	Subscription: Securities Class Action Services (SCAS) Online Database to SCAS research and information monthly newsletter and e-mail alerts.
	Institutional Shareholders Services, Inc (ISS)	0.00	Subscription: Information and research provided via electronic delivery platform
	Egan-Jones Proxy Service	\$ 27,612.50	Amended to add funds to increase amount of reports.
	The Conference Board	0.00	Membership to join The Conference Board
	Glass, Lewis & Co., LLC	0.00	Contractor shall provide Proxy Voting Platform services to CalSTRS.
	Mercer	\$ 20,000.00	Participation for Climate Risk and Asset Allocation study
	Institutional Shareholders Services, Inc (ISS)	\$ 25,000.00	Subscription for US & Global Proxy Advisory Service

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
GovernanceMetrics International		\$ 26,000.00	Annual Subscription Renewal to GMI's North America Corporate Governance Research and Rating Service Additional Seat Licenses
FirstRain		\$ 40,000.00	Subscription to FirstRain's software application for online research of Corporate Governance companies in the Corporate Governance portfolio.
IRSS		\$ 35,000.00	Subscription: Contractor maintains a website that monitors class action lawsuits relevant to the CalSTRS portfolio. The subscription allows staff to monitor relevant class action lawsuits, recover damages, and assess lead plaintiff status.
Genocide Intervention Network		\$ 1,875.00	Corporate Membership to Genocide Intervention Network allows access to information and research regarding companies linked to countries afflicted by mass atrocities and/or genocide.
Carbon Disclosure Project		\$ 8,000.00	Corporate Membership to Carbon Disclosure Project Website.
CERES		\$ 7,500.00	2010 Membership in the Ceres Coalition and Investor Network on climate risk.
Morgan Lewis & Bockius LLP		\$ 290,000.00	Amended to add funds
Morgan Lewis & Bockius LLP		\$ 200,000.00	To provide CalSTRS with legal services related to corporate governance activities.
GovernanceMetrics International		\$ 15,000.00	Annual Membership to the Conference Board
Council of Institutional Investors		\$ 30,000.00	Annual Membership renewal
Investor Communications Network, LLC		\$ 18,000.00	Subscription for 13D Monitoring Services
EVA Dimensions		\$ 66,000.00	Subscription for FRS Software and Implementation
Institutional Shareholders Services, Inc (ISS)		\$ 311,675.00	Annual Subscription to ISS for information and research
IW Financial		\$ 13,400.00	Subscription to provide staff with an internet based software for research of CalSTRS' social and environmental shareholder resolutions
FirstRain		\$ 40,000.00	Subscription for software application for online research if Corporate Governance companies in the Corporate Governance portfolio.

## FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
External Equity Manager - Domestic	GovernanceMetrics International Sustainable Investments Institute, Inc.	\$ 84,500.00	Internet based software, GMI Research for research of Corporate Governance managers' holdings
		\$ 25,000.00	Subscription - internet based software for research of CalSTRS' holdings in Iran and Sudan
	Trucost	\$ 50,000.00	Internet based software for effective research of Corporate Governance Environment, Social, and Governance in the companies within the Corporate Governance Portfolio.
	Mellon Capital Management Corp.	0.00	Amended to revise fees and revise various sections and exhibits
	Mellon Capital Management Corp.	0.00	Domestic Equity Enhanced Index
	Mellon Capital Management Group	0.00	Add Y2K Language
	Mellon Capital Management Group	0.00	Amended to reflect as an Evergreen contract- no expiration date
	State Street Global Advisors	0.00	Amended to reflect Evergreen contract- no expiration
	State Street Global Advisors	0.00	Domestic Equity Enhanced Index
	State Street Global Advisors	0.00	Update CalSTRS authorized Personnel
	Barclays Global Investors	0.00	Domestic Equity Enhanced Index
	BlackRock Institutional Trust Company, N.A.	0.00	Amended to reflect name change, to incorporate revised related exhibits, and to replace the Item, FY, Chapter and Statute, on 215, to reflect the appropriate current continuous appropriation codes.
	Chicago Equity Partners Corporation (CAP)	0.00	Amended to revise fees and revise various sections and exhibits
	Chicago Equity Partners, LLC	0.00	Amended to reflect as an Evergreen contract-no expiration date
	Chicago Equity Partners, LLC	0.00	Name change only
	Chicago Equity Partners, LLC	0.00	To reflect name change only
Chicago Equity Partners. LLC	0.00	Domestic Equity Enhanced Index	
Brown Capital Management	0.00	Amended to reflect as a Evergreen contract-no expiration date	
Brown Capital Management	0.00	Domestic Equity Manager (Large Cap)	
Delaware Investment Advisors	0.00	Amended to reflect an Evergreen contract - no end date	
Delaware Investment Advisors	0.00	Domestic Equity Large Cap Index	

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Delaware Investment Advisors, a series of Delaware Management Business Trust	0.00	Amended to revise the fees and various sections and exhibits
	First Quadrant, LP	0.00	Amended to revise fees and revise various sections and exhibits
	First Quadrant, LP	0.00	Amended to reflect as an Evergreen contract - no expiration date
	First Quadrant, LP	0.00	Domestic Equity Large Cap Index
	NCM Capital Management Group, Inc.	0.00	Amended to reflect as an "Evergreen " contract - no expiration date
	NCM Capital Management Group, Inc.	0.00	Amended to revise various sections/exhibits to reflect a change in fees and current GTC's
	NCM Capital Management Group, Inc.	0.00	Domestic Equity Large Cap Index
	Sasco Capital, Inc.	0.00	Amended because fees were renegotiated
	Sasco Capital, Inc.	0.00	Amended to reflect Evergreen contract - no end date
	Sasco Capital, Inc.	0.00	Domestic Equity Manager (Small Cap)
	Ariel Capital Management, Inc.	0.00	Amended to reflect as an Evergreen contract-no expiration date
	Ariel Capital Management, Inc.	0.00	Domestic Equity Manager (Small Cap)
	Delphi Management, Inc.	0.00	Amended to reflect the Evergreen expiration date, adjust the fees, amend and add certain exhibits and sections of the contract to reflect current language.
	Delphi Management, Inc.	0.00	Domestic Equity Manager (Small Cap)
	Denver Investment Advisors, LLC	0.00	Amend to reflect as an Evergreen contract - no expiration date.
	Denver Investment Advisors, LLC	0.00	Domestic Equity Manager (Small Cap)
	TCW Asset Management Co.	0.00	Domestic Equity Manager (Small Cap)
	TCW Asset Management Co.	0.00	Domestic Equity Manager (Small Cap)
	UBS Global Asset Management (Americas)	0.00	Name Change and update authorized personnel
	UBS Global Asset Management (Americas) Inc.	0.00	Amended to remove the Proxy voting language from Section I. Services to be provided, subsection C, and revised various other sections and exhibits to reflect current language

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	UBS Global Asset Managers (Americas)	0.00	International Manager EAFE
	USB Global Asset Management (Americas) Inc.	0.00	Amended to reflect reduction in fees and update item code on 215 to reflect current code for Continuous Appropriation
	Barclays Global Investors	0.00	Amend to reflect change in term
	Barclays Global Investors	0.00	Benchmark changes and guidelines
	BlackRock Institutional Trust Company, N.A.	0.00	Amended to reflect name change and to incorporate revised related exhibits, and to replace the Item, FY, Chapter and Statute to reflect the appropriate current continuous appropriation codes.
	State Street Global Advisors	0.00	Amend Benchmark and update guidelines
	State Street Global Advisors	0.00	Amend to reflect change in term
	State Street Global Advisors	0.00	Portfolio Manager for extended market index
	Barclays Global Investors	0.00	Amend to reflect change in term
	Barclays Global Investors	0.00	Change guidelines and CalSTRS authorized personnel.
	Barclays Global Investors	0.00	Extended Market Manager
	Barclays Global Investors, N.A.	0.00	Amended to reflect name change and to incorporate revised related exhibits, and to replace the Item, FY, Chapter and Statute, and to reflect the appropriate current continuous appropriation codes.
	BlackRock Institutional Trust Company, N.A.	0.00	Amended to reflect name change, to incorporate revised related exhibits, and to replace the Item, FY, Chapter and Statute, on 215, to reflect the appropriate current continuous appropriation codes.
	The Northern Trust Company of Connecticut	0.00	Amended to change the contractor's name from Northern Trust Global Advisors, Inc. to the Northern Trust Company of Connecticut and incorporate the revised related exhibits.
	Northern Trust Global Advisors, Inc.	0.00	Manage External Equities Developing Manager Program
	FIS Funds Management, Inc.	0.00	DEVELOPING EQUITY MANAGER
	Frank Russell Trust Company	0.00	Fund of Funds Manager
	Sterling Capital Management, LLC	0.00	CalSTRS has renegotiated fees with Sterling to better align the fees to the benefit of CalSTRS. CalSTRS has renegotiated a lower normal fee for the Sterling US Equity portfolio TC1E.

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Sterling Capital Management, LLC	0.00	Investment manager Relational Corporate Governance
	Sterling Capital Management, LLC *Evergreen	0.00	Amendment to adjust fees
	T. Rowe Price Associates	0.00	Emerging Markets Manager
	BlackRock Financial Management	0.00	Fixed Income Portfolio and Risk Management System
	BlackRock Financial Management	0.00	Enhanced Index Manager
	Batterymarch Financial Management	0.00	Amended to reflect reduction in fees and update item code on 215 to reflect current code for Continuous Appropriation
	Batterymarch Financial Management	0.00	Enhanced Index Manager
	State Street Global Advisors	0.00	Enhanced Index Manager
	New Amsterdam Partners, LLC	0.00	Sustainable Investment manager
	Light Green Advisors/Rhumblin Advisors	0.00	Sustainable Investment manager
	Citigroup Global Markets, Inc	0.00	Transition Management Pool
	BlackRock Investment Management, LLC	0.00	Transition managers will manage, acquire, dispose of assets, and coordinate the entire transition process in the most efficient and cost effective manner relative to each Investment asset class for CalSTRS.
	Russell Implementation	0.00	Transition managers will manage, acquire, dispose of assets, and coordinate the entire transition process in the most efficient and cost effective manner relative to each Investment asset class for CalSTRS.
	BlackRock Institutional Trust Company, N.A.	0.00	Amended to reflect name change from Barclays Global Investors, N.A. to BlackRock Institutional Trust Company, N.A.
	Progress Investment Management Co. LLC	0.00	Amended to revise fees and revise various sections and exhibits
	Progress Investment Management Co. LLC	0.00	Management of a portion of the Global Equity, Developing Managers Portfolio.
	Capital Prospects LLC	0.00	Management of a portion of the Global Equity, Developing Manager Portfolio.

## FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
External Equity Manager - International	Capital Prospects, LLC	0.00	Amended to revise fees and revise various sections and exhibits
	Capital Prospects, LLC	0.00	Amended to revise the fee schedule and revise certain contract language and exhibits to reflect current policy
	Leading Edge Investment	0.00	Amended to revise fees and revise various sections and exhibits
	Leading Edge Investment	0.00	Global Equities Developing Manager. (Evergreen)
	Bivium Capital Partners, LLC	0.00	Amended to revise the fee schedule and revise certain contract language and exhibits to reflect current policy
	Bivium Capital Partners, LLC	0.00	Developing Manager Program
	Neuberger Berman, LLC	0.00	Provide Management Services for U.S. Large Cap Growth Equity Investments.
	UBS Global Asset Management (Americas)	0.00	Contract amended to reflect Evergreen.
	UBS Global Asset Management (Americas)	0.00	Name Change and update authorized personnel
	UBS Global Asset Management (Americas) Inc.	0.00	Amendment to reflect reduction in fees and to update item code on 215 to reflect current code for Continuous Appropriation
	UBS Global Asset Managers (Americas)	0.00	Domestic Equity Large Cap Index
	Batterymarch Financial Management	0.00	Amended to reflect a reduction in fee calculations and incorporate current Disclosure of Campaign Contributions and Gift Disclosure language and accompanying exhibits. The item number, index, and object number on the 215 is also amended to reflect appropriate codes for Continuous Appropriation.
	Batterymarch Financial Management	0.00	Amended to remove Proxy voting language
	Batterymarch Financial Management	0.00	International Manager EAFE
	Bank of Ireland Asset Management LT	0.00	International Manager EAFE
	Franklin Templeton Institutional, LLC	0.00	International Manager EAFE

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Franklin Templeton Institutional, LLC	0.00	Investment Manager Name change
	Morgan Stanley Dean Witter	0.00	International Manager EAFE
	Morgan Stanley Investment Management, Inc.	0.00	Amended to remove Proxy voting language
	Mondrian Investment Partners Limited	0.00	Amended to remove Proxy voting language
	Mondrian Investment Partners, Inc.	0.00	Contractor shall provide services related to international equity (EAFE)
	Mondrian Investment Partners, Inc.	0.00	International Manager EAFE
	Mondrian Investment Partners, Ltd	0.00	Amended to reflect a change in fees. .
	Capital Guardian Trust Company	0.00	Amended to reflect the Evergreen expiration date, adjust the fees, amend and add certain exhibits and sections of the contract to reflect current language.
	Capital Guardian Trust Company	0.00	Amended to remove Proxy voting language
	Capital Guardian Trust Company	0.00	International Manager EAFE
	Allianz Global Investors Capital	0.00	Amended to reflect name change and to revise related exhibits, and update std. 215 with current continuous appropriation codes and new federal ID number.
	Allianz Global Investors Capital	0.00	Amended to revise sections
	Nicholas-Applegate Capital Management	0.00	International Manager EAFE
	Marvin & Palmer Associates, Inc.	0.00	International Manager EAFE
	BlackRock International, LTD	0.00	International Manager Pacific Basin
	Schroder Capital Mgmt. Intrn'l LT	0.00	International Manager Pacific Basin
	Paribas Asset Management, INC	0.00	International Equity European
	Oechsle International Advisors, LLC	0.00	Amended to revise sections
	Oechsle International Advisors, LLC	0.00	Amended to revise fees and revise various sections and exhibits
	Oechsle International Advisors, LLC	0.00	International Manager European

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Pyramis Global Advisors Trust Company	0.00	Amended to change name and adjust fees and exhibits
	Pyramis Global Advisors Trust Company	0.00	Amended to remove Proxy voting language
	Goldman Sachs Asset Management	0.00	EAFE Investment Manager - Amend To Reflect Evergreen Term
	Goldman Sachs Asset Management	0.00	International Equity Manager
	State Street Global Advisors	0.00	Amend to reflect change in term
	State Street Global Advisors	0.00	Clarify proxy voting responsibilities
	State Street Global Advisors	0.00	EAFE Manager
	State Street Global Advisors	0.00	Update CalSTRS authorized personnel page
	Barclays Global Investors	0.00	Amend to reflect the Evergreen term for Passive EAFE manager
	Barclays Global Investors	0.00	Clarify proxy voting responsibilities
	Barclays Global Investors	0.00	EAFE Manager
	Capital Guardian Trust Company	0.00	High Yield Fixed Income Investment Management services
	Lazard Asset Management	0.00	Emerging Markets Manager
	Templeton Asset Management, LTD.	0.00	Amended as pursuant to the attached Addendum to replace section E, Fees in its entirety and to replace the item, FY, Chapter, and statute on this Std 215 to appropriately reflect current continuous appropriation codes.
	Templeton Asset Management, LTD.	0.00	Emerging Market Manager
	Mondrian Investment Partners Limited	0.00	Amended to remove Proxy voting language
	Mondrian Investment Partners, Inc.	0.00	Emerging Markets Manager
	Baillie Gifford Overseas Limited	0.00	Amended to revise Section B. General Responsibilities, Subsection 4., regarding the contractor's responsibilities on corporate actions and amends various other sections of the agreement to reflect current contract language
	Baillie Gifford Overseas Limited	0.00	Amended to update renegotiated rated with Contractor to better align the fees to the benefit of CalSTRS

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
External Fixed Income Managers	Baillie Gifford Overseas Limited	0.00	Emerging Markets Manager
	Acuity Investment Management	0.00	Amended to revise various sections
	Acuity Investment Management	0.00	Sustainable Investment manager
	Pyramis Global Advisors Trust Company	0.00	Core Plus Bond Manager
	Generation Investment Management	0.00	Sustainable Investment manager
	Generation Investment Management	0.00	
	Generation Investment Management US LLP	0.00	Amended to remove Proxy voting language
	T. Rowe Price Associates	0.00	External Manager
	T. Rowe Price Associates, Inc	0.00	Global Equity U.S. Enhanced Manager Services
	Boston Global Advisors	0.00	Amend to Fee Structure
	Boston Global Advisors	0.00	Amend to reflect change in term
	Boston Global Advisors	0.00	Securities Lending
	Goldman Sachs Agency Lending	0.00	Change name of company from Boston Global Advisors to Goldman Sachs Agency Lending.
	Seix Investment Advisors	0.00	Amend to reflect change in term
	Seix Investment Advisors	0.00	Benchmark change and update CalSTRS authorized personnel
	Seix Investment Advisors	0.00	High Yield Bond Manager
	Hartford Investment Management Co.	0.00	Amend Guidelines and Update CalSTRS authorized personnel
	Hartford Investment Management Co.	0.00	Amend to reflect change in term
	Hartford Investment Management Co.	0.00	High Yield Bond Manager
	MW Post Advisory Group, LLC	0.00	Amend to reflect change in term
	MW Post Advisory Group, LLC	0.00	High Yield Manager
	MW Post Advisory Group, LLC	0.00	Update CalSTRS authorized personnel and guidelines
	Shenkman Capital Management, Inc.	0.00	Amend to reflect change in term

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Shenkman Capital Management, Inc.	0.00	High Yield Bond Manager
	Western Asset Management Company	0.00	Amended to delete Section E, entitled "Fees" in its entirety and to incorporate Exhibit H, entitled "Schedule of Fee".
	Western Asset Management Company	0.00	Core Plus Bond Manager
	Goldman Sachs Asset Management	0.00	High Yield Bond Manager
	Aberdeen Asset Management, Inc.	0.00	Amended to reflect change in fees, all other terms remain the same
	Aberdeen Asset Management, Inc.	0.00	Core Plus Bond Manager
	Artio Global Management LLC	0.00	Effective June 25, 2010, this agreement is hereby amended to reflect Contractor's change in address for correspondence and incorporate current Disclosure of Campaign Contributions and Gift Disclosure language and accompanying exhibits.
	Artio Global Management LLC Julius Baer	0.00 0.00	This agreement is being amended to reflect the following: 1) Name change from Julius Baer Investment Management, LLC to Artio Global Management, LLC. 2) Change the Agreement of Liaison to include Terri Smith. 3) Incorporate the Disclosure of Campaign Contributions, Disclosure and Limits on Charitable Contributions, and Gifts.
	BlackRock Financial Management	0.00	High Yield Bond Manager
	BlackRock Institutional Trust Company, N.A.	0.00	Amended to revise annual flat fee for the management of CalSTRS' Fixed Income Portfolio and make various changes to sections and exhibits
	LM Capital Group, LLC	0.00	Core Plus Bond Manager
	E.H. Williams	0.00	High Yield Bond Manager
	Leading Edge Investment	0.00	Management of a portion of the Fixed Income, Developing Manager Portfolio.
	Community Capital Management, Inc.	0.00	Management of a portion of the Fixed Income, Developing Manager Portfolio.

## FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
<b>FX Overlay</b>	Millennium Global Investments Limited	0.00	Management of a portion of the External Currency Manager Portfolio.
	Mesirow Financial Investment Management, Inc.	0.00	Provide external currency management services for CalSTRS.
	Lee Overlay Partners	0.00	Amended Fees
	Lee Overlay Partners	0.00	Investment manager services for external currency program.
<b>Operating Expenses</b>	FDO Partners, LLC	0.00	Management of a portion of the External Currency Manager Portfolio.
	Barclays Global Investors	0.00	S&P 500 manager
	Bank of America, N.A.	0.00	Amended to change name from Countrywide to Bank of America
	Countrywide Home Loans, Inc.	0.00	Admin. Support for CalSTRS Home Loan Program
	Countrywide Home Loans, Inc.	0.00	Funding Change
	Countrywide Home Loans, Inc.	0.00	Home Loan Program
	Korn/Ferry International	\$ 750,000.00	Amended to add funds, extend the term in accordance with the original RFP terms, revise contract language and exhibits to reflect current policy, and to revise the Index code from 3550 to 3600.
	EFL Associates		Amended to add funds, extend term, revise contract language and exhibits to reflect contract language and exhibits to reflect current policy, and to revise the Index Code from 3550 to 3600
	State Controller's Office (SCO)	\$ 20,000.00	Amended to extend term and increase contract amount
	Dow Jones & Co		Subscription for WSJ
Barclays Capitol	\$ 450,000.00	Online subscription	
California Public Employees Retirement System		Amended to incorporate memorandum of understanding (MOU)	
California Public Employees Retirement System	\$ 750,000.00	For CalSTRS to reimburse CalPERS for the cost of conference co-hosting for Corporate Governance purposes.	
IPC Systems, Inc	\$ 20,000.00	Services maintenance support for Trading Floor Turret Phones	
MERS	\$ 10,000.00	Subscription service for mortgage loan transfer notice services.	

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	International Swaps and Derivatives Association, Inc.	\$ 9,360.00	Membership to International Swaps and Derivatives Association, Inc.
	Pacific Pension Institute	\$ 10,000.00	Pension Fund Membership
	Institutional Limited Partners Association (ILPA)	0.00	Membership to join Institutional Limited Partners Association
	Emerging Markets Private Equity Association	0.00	Membership to Join Emerging Markets Private Equity Association
	SymSoft Solutions, LLC	0.00	Web Design and Maintenance
	National Multi Housing Council	\$ 2,500.00	National Multi Housing Council Membership
	New Direction Services	\$ 392.27	Tabs for CalSTRS Corporate Governance Committee
	Global Financial Markets Institute, Inc.	\$ 14,750.00	Conference - Custom Financial Learning Program for High Yield Financial Analysis
	IPC Systems, Inc	\$ 93,430.11	Service maintenance support for Trading Floor Turret Phones
	Lazard Asset Management	0.00	Amended to remove proxy voting language
	Lazard Asset Management	0.00	Amended to revise fees and revise various sections and exhibits
	Lazard Freres Asset Management	0.00	International Manager EAFE
	C. B. Richard Ellis Investors, LLC	0.00	Real Estate investment manager
	C.B. Richard Ellis Investors, LLC	0.00	Funding Change
	C.B. Richard Ellis Investors, LLC	0.00	Real Estate Investment Manager - Amend To Reflect Evergreen Term
	C.B. Richard Ellis Investors, LLC	0.00	Responsibilities contractor as title holding entity
	Lowe Enterprises	0.00	How CalSTRS real property title held & respon of Advis.
	Lowe Enterprises	0.00	Investment Management
	Lowe Enterprises	0.00	Real Estate investment manager
	Lowe Enterprises	0.00	Real Estate Manager - Amend To Reflect Evergreen Term
	Thomas Properties Group, LLC	0.00	Amend to reflect change in term
	Thomas Properties Group, LLC	0.00	Evergreen term amended - real estate investment
	Thomas Properties Group, LLC	0.00	Modify fees to align with market
	Thomas Properties Group, LLC	0.00	Real Estate investment manager
	Thomas Properties Group, LLC	0.00	Responsibilities contractor as title holding entity

Real Estate Manager /  
Advisor

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Heitman Capital Management, LLC	0.00	Funding Change
	Heitman Capital Management, LLC	0.00	Incorporate Attachment A
	Heitman Capital Management, LLC	0.00	Real Estate Investment Manager - Amend To Reflect Evergreen Contract Term
	Heitman Capital Management, LLC	0.00	Real Estate investment manager
	ING Clarion Partners, LLC	0.00	Name change only
	ING Clarion Partners, LLC	0.00	Real Estate Investment Manager - Amend to Reflect Evergreen Term
	ING Clarion Partners, LLC	0.00	Real Estate investment manager
	ING Clarion Partners, LLC	0.00	Responsibilities contractor as title holding entity
	BlackRock Realty Advisors, Inc.	0.00	Amend to reflect name change from SSR Realty Advisors, Inc and reflect term change.
	BlackRock Realty Advisors, Inc.	0.00	Funding Change
	BlackRock Realty Advisors, Inc.	0.00	Language change only
	BlackRock Realty Advisors, Inc.	0.00	Real Estate investment manager
	Sentinel Realty Advisors Corp.	0.00	Real Estate Investment Manager - Amend To Reflect Evergreen Term
	Sentinel Realty Advisors Corp.	0.00	Real Estate investment manager
	Sentinel Realty Advisors Corp.	0.00	Responsibilities contractor as title holding entity
	John McMahan Group	0.00	Real Estate - CO Investment Ind. Fiduciary
	John McMahan Group	0.00	Real Estate - CO Investment Ind. Fiduciary Amend To Reflect Evergreen Term
	Principal Capital Real Estate Investors	0.00	Amend to update Contractor's authorized personnel exhibit
	Principal Capital Real Estate Investors	0.00	Funding Change
	Principal Capital Real Estate Investors, LLC	0.00	Real Estate Investment Manager
	Principle Real Estate Investors, LLC	0.00	Amendment to change term to Evergreen
	Principle Real Estate Investors, LLC	0.00	Responsibilities contractor as title holding entity

## FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
Research and Rating Services	Principle Real Estate Investors, LLC	0.00	Update Contractors authorized personnel page Contractor shall provide evaluation and due diligence services for domestic and international commingled funds, joint ventures, and other real estate related projects.
	Callan Associates	0.00	Evergreen contract
	Investors Diversified Realty, LLC	0.00	Real Estate Insurance Consulting Services
	Nelson and Bernstein, LLC	\$ 541,650.00	Amend to change term of subscription-reduce term by one year.
	Property & Portfolio Research, Inc.	0.00	Property and Portfolio Research: Independent, non-bias research aid.
	Property & Portfolio Research, Inc.	0.00	Access to Standard & Poor's Index Information
	Standard & Poor	0.00	Access to the Audit Integrity website-which provides financial statement analysis on CalSTRS' entire domestic equity portfolio.
	Audit Integrity	0.00	Amended due to fee increases
	Moody's Analytics	\$ 91,932.00	Subscription: In-depth reports concerning individual corporations, as well as industry trends in general.
	Moody's Analytics (Fixed Income)	0.00	Subscription: Investment research service for the total portfolio management used by specified investment staff.
	Dow Jones & Company	0.00	Bond portfolio analysis tool.
	Capital IQ, Inc	0.00	RatingsXpress
	Standard and Poor's	\$ 132,000.00	Subscription to FactSet
	Fact Set	\$ 136,983.00	
	Informa Investments and Solutions	\$ 6,500.00	PSN Enterprise subscription- Platinum version user.
	CEM	\$ 125,000.00	Benefit administration benchmarking analysis
	Moody's Analytics	\$ 17,000.00	Subscription to Moody's Analytics
	Source Media	\$ 20,000.00	Subscription to The Bond Buyer, online newspaper.
	ISI - International Strategy & Investment Group, inc. The Yield Book	\$ 100,000.00 \$ 180,000.00	Subscription: ISI Economic Research Report Site Access and Software License to the Yield Book
	Gimme Credit, LLC	\$ 39,000.00	These services are utilized by the portfolio managers as tools in assessing the credit quality of an issuer. Services include online Grade Daily Report, Intraday Commentary, credit scores, online archive, and analyst direct.

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	ValueLine	\$ 4,500.00	Online Annual Subscription: ValueLine provides independent, objective, and unbiased investment research information.
	Standard & Poors Financial Services, LLC	\$ 119,700.00	Subscription Standard & Poor's RatingsDirect.
	Realpoint, LLC	\$ 46,616.00	Subscription for CMBS, REIT, and Property Market reporting, research, market alerts, watch list, data base queries and portfolio and deal analysis.
	Credit Sights	\$ 24,000.00	Subscription for daily credit market commentary and proprietary market model.
	Fitch Solutions	\$ 109,000.00	Contractor shall provide on-line access to credit research reports used for investment benchmarking and credit risk management.
	The Institute for Quantitative Research in Finance	\$ 6,000.00	2010 Membership - One Seat
	Zepher Associates, Inc.	\$ 18,000.00	Contractor shall provide user access to Style Advisor/Allocation Advisor and Morningstar Basic Plus Mutual Fund Data.
	Standard & Poors Financial Services, LLC	\$ 63,275.00	Standard and Poor's Cusip Subscription
	Standard & Poor's Financial Services, LLC	\$ 126,550.00	Amended to extend term
	Market News International, Inc.	\$ 8,640.00	Subscription: 4 users of Fixed Income Bullet Points via Bloomberg
	NCREIF	\$ 2,500.00	Membership to join National Council of Read Estate Investments Fiduciaries
	Fitch Information, Inc.	\$ 33,500.00	Subscription: Third party ratings information for the structured product portfolios managed by the CalSTRS Fixed Income Unit.
	Moody's Investors Services	\$ 269,000.00	Credit Rating Annual Relationship Fee
	Barra, Inc.	\$ 107,812.50	Subscription: RiskAnalytics via FactSet
	Fitch Ratings	\$ 20,000.00	Performs an annual credit rating of CalSTRS necessary for the Credit Enhancement Program to underwrite credit enhancement in the municipal bond market.
	Standard & Poor's	\$ 40,000.00	Amended to increase funds

## FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Standard & Poor's	0.00	Performs an annual credit rating of CalSTRS necessary for the Credit Enhancement Program to underwrite credit enhancement in the municipal bond market.
	Standard and Poor's, LLC	0.00	Online Subscription. S&P License Fee for Custom Index Domestic
	MSCI Inc.	0.00	Online Subscription: World Index Ex-Tobacco (Online Data Delivery to FactSet)
	Moody's Analytics	0.00	Subscription allows web-based access to credit research of the banking capital markets and municipal sectors.
	Zepher Associates, Inc.	0.00	Subscription: Style Advisor/Allocation Advisor Secondary License - Single User
	eVestment Alliance, LLC	\$ 18,250.00	Subscription to eVestment Alliance, LLC software application for online comparisons, research, etc.
	TSX, Inc.	\$ 1,453.06	Subscription for online access for investment professional staff to TSE live market data.
	Russell Investments	\$ 40,000.00	Subscription - Russell Custom Ex-Tobacco Indexes Premier Services
	Informa Investment Solutions	\$ 6,500.00	Subscription: PSN Enterprise Platinum Version
	Property & Portfolio Research, Inc.	\$ 135,000.00	Subscription for a wide array of global products and services to meet the research needs of commercial real estate investors and lenders
	Zephyr Associates, Inc.	\$ 21,000.00	Subscription: Style Advisor/Allocation Advisor and Morningstar Basic Plus Mutual Fund Data
	Credit Sights	\$ 24,000.00	Subscription to online research service. Access for two users to access Online Research during normal business hours.
	MSCI, Inc.	\$ 49,000.00	Subscription to provide standard indices with the Daily and Monthly Delivery Method
	MSCI, Inc.	\$ 51,372.57	Amended to add three year subscription services for online MSCI Europe SMID ex Tobacco Index and add funds
	International Strategy & Investment Group Inc. (ISIS)	\$ 85,000.00	Subscription to ISIS
	Moody's Analytics	\$ 64,691.00	Subscription to Moody's Analytics
	Market News International, Inc.	\$ 8,640.00	Subscription to Market News International to provide market based information and analysis

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Fitch Ratings	\$ 20,000.00	Performs long-term and short term credit ratings of the
	Standard & Poor's	\$ 140,400.00	CalSTRS Credit Enhancement Program
	Standard & Poor's Financial Services, LLC	\$ 15,000.00	Subscription to Standard & Poor's Ratings Direct Online subscription for S&P License fee for Custom Index Domestic
	Telemet America, Inc.	\$ 17,855.00	One year Subscription to Telemet services which provides updated stock quotes, charting, historical and current research tools
	Fitch Solutions, Inc.	\$ 14,000.00	Subscription to Fitch Solutions
	Oxford Analytica	\$ 20,000.00	Subscription to Oxford Analytica Comprehensive Client Membership service for three users
	Russell Investments	\$ 40,000.00	Subscription - Russell Indexes - Premier Service & Fund License
	MSCI Barra	0.00	MSCI Real Time Indices
	Barra, Inc.	0.00	Funding Change
<b>Risk Management Systems</b>			
	MSCI Barra	0.00	Contractor shall provide Risk Management Software System. Software Licensing for MSCI Barra Integrated Model Risk Package (Base Risk Analysis and Stress Testing for Global Equities, Fixed Income, Currencies & Commodities) including Brinson Perf Attrib & Monte Carlo VaR.
	Barra, Inc.	\$ 321,000.00	Amended to add funds and extend term
	Barra, Inc	0.00	Amended to extend term end date and add funds.
	MSCI, Inc	\$ 23,500.00	MSCI Monthly Index Services
	Trepp, LLC	\$ 106,200.00	Contractor shall provide a risk system used by the Fixed Income unit to analyze and stress test individual Commercial Mortgage Backed Security bonds as well as entire issued structures.
	MSCI, Inc.	\$ 8,000.00	2010 GICS MSCI Supplied with Cusip
	MSCI Inc.	\$ 40,556.25	Subscription: MSCI Custom Indices (daily). Custom Ease Ex Tobacco Index/Em Index. CalSTRS Custom Em Index. Custom EM ex Malaysia.
	MSCI, Inc.	\$ 24,500.00	MSCI Monthly DM & EM Core Vendor

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
Trading Systems	MSCI, Inc.	\$ 5,775.00	Subscription for online MSCI Europe SMIIT ex Tobacco Index
	MSCI, Inc.	\$ 47,608.00	Provide subscriptions to custom indices with the daily and monthly delivery method
	MSCI, Inc.	\$ 8,000.00	Subscription to MSCI for GICS Data via MSCI and FactSet
	MSCI, Inc.	\$ 107,812.50	Risk Analytics via FactSet for 7 users - subscription
	Metropolitan West Securities	0.00	Securities Lending
	Wachovia Global Securities	0.00	Amend to reflect change in term
			Contractor will provide lending services for the lendable assets within the CalSTRS investment portfolio. Amended to reflect the Evergreen term. Amended to change name from Metropolitan West Securities, LLC to Wachovia Global Securities Lending. Third amendment to adjust the Fee Schedule for Securities Lending Agent.
	Wachovia Global Securities	0.00	Name change only
	Wachovia Global Securities	0.00	Amendment to adjust fee schedule
	New York Stock Exchange	\$ 5,543.00	Amended to add funds
	New York Stock Exchange	0.00	New York Stock Exchange subscription
	Real Capital Analytics	0.00	Subscription: Capital trends monthly reports. Market trend monthly reports, access to the web site and database usage for five users maximum.
	Rise Vision USA, Inc.	0.00	Market Data Reader Boards
	Thomson Financial LLC	\$ 144,000.00	Subscription: Technical support, upgrades and training for the PORTIA system which is used for U.S. and Non-U.S. portfolios.
Omgeo	\$ 5,440.00	Subscription: Web base trade applications	
MarketAxess	\$ 75,600.00	MarketAxess is an online price discovery service utilized by trader/analysts in the corporate bond area of the Fixed Income unit.	
Thomson Reuters	\$ 26,148.00	Subscription to Reuters Global Fundamentals	
Bloomberg Finance L.P.	\$ 1,800,000.00	Online Subscription: Fixed income and equity market information system providing price data, market information and data feeds. Access to terminals and market information.	

FY 2010/11 Summary of Externally Managed Portfolio Contracts

Program	Contractor	Current FY Encumbrance Amount	Service Provided
	Intex Solutions	\$ 444,000.00	Subscription Services
	Omgeo	\$ 191,500.00	Subscription
	Tradeweb	\$ 38,400.00	Online Subscription
	Thomson Reuters	\$ 88,219.56	Subscription: Market moving data, information, pricing, and news feeds for management of Fixed Income and Equity portfolios.
	Thomson Financial LLC	\$ 88,020.00	Thomson Financial provides market based information, via internet portal, in the areas of credit, foreign exchange, mortgage data, and global bond data. CalSTRS' Investment staff relies heavily on this independent third party analysis of fixed income market new and events
	Bloomberg L.P.	\$ 245,609.20	Portfolio Order Management System Data Exchange Feeds
	FactSet	\$ 388,983.00	Bloomberg Professional Anywhere Amended to shorten contract term
	FactSet	\$ 380,163.00	Subscription to FactSet web based performance attribution statistics for Global Equities
	FactSet	\$ 388,983.00	Subscription for web based performance attribution statistics for Global Equities and Corporate Governance
	Thomson Reuters	\$ 26,148.00	Subscription to Thomson Reuters database
	Thomson Reuters	\$ 10,200.00	Database to allow staff to access company analyst reports on portfolio companies.
	Thomson Reuters (Markets) LLC	\$ 36,000.00	Amended to change name from Tradeweb LLC to Thomson Reuters
	TradeWeb, LLC	\$ 36,000.00	Online subscription to TradeWeb
	Realpoint, LLC	\$ 42,000.00	Subscription for Reappoint for COMBS Services
	Thomson Reuters	\$ 91,821.48	Subscription: Market moving data, information, pricing, and news feeds for management of Fixed Income and Equity portfolios.



# CALSTRS

**CalSTRS Investments Business Plans  
For 2010-11 FY**



# CalSTRS Investments Value Statements

## Respect

We strive to not only treat others as we would like to be treated but to go the extra mile and treat others as they would like to be treated

## Personal Development

We support an individual's career and persona goals.

## Balance

We encourage employees to balance a strong work ethic with interests outside of the office.

## Worth

We strive to recognize everyone's efforts and contributions to the organization.

## Challenge

We are honored to accept the challenges place upon us and strive to create an innovative work environment.

## Purpose

We work toward a common goal, thereby making a difference for others and ourselves.

## Honesty

We are truthful to ourselves ,to peers, to supervisors, the Board and to the organization; our word in our bond .

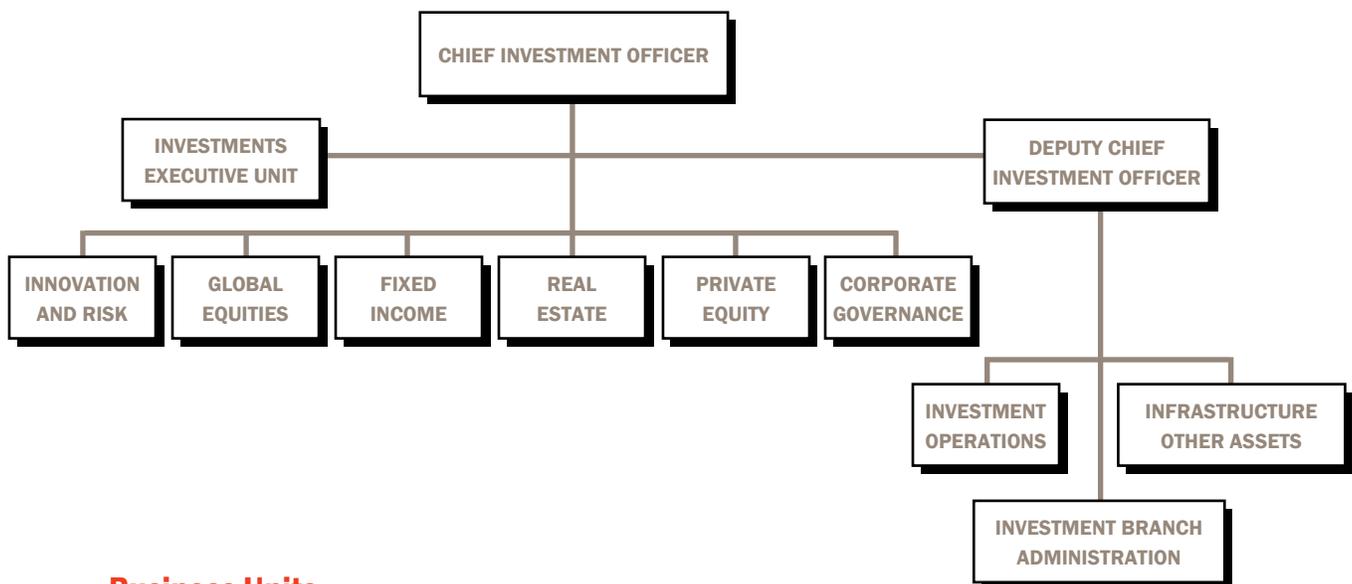
## Investments Branch

### Business Plan for 2010-11FY

#### Investment Branch Mission & Organization Chart

The Investment Branch is tasked with two missions, earn an **absolute return equal to the assumption adopted by the Board, currently eight percent**, as required to meet the Actuaries assumptions; and a **relative return** to exceed our respective benchmarks to add an **additional 60 basis** of excess return above the benchmark each year. In real dollar terms, we need to earn over \$10 billion in profits from the financial markets, and add an extra \$1 billion of return above the market.

Within the business plans, each unit will display their share of our objectives and describe what they need to deliver the added value. In this Branch wide business plan and financial plan, **the theme for FY 10-11 is “Continuous Improvement.”**



#### Business Units

The Chief Investment Officer unit contains three groups:

- CIO – 2 PYs for Overall Administration of the Investment Branch and Portfolio
- Investment Executive Unit – 4 PYs for The Diversity in Investment Management and the Member Home Loan Programs
- Deputy CIO – 18 PYs for Investment Operations, Absolute Return Asset Class – Infrastructure, and Investment Branch Management



## Investments Branch

### Performance Objective / Risk Management

The desired outcome of the Investment Branch is very straight forward and clear.

1. Earn at least an absolute return equal to the Board assumed rate, currently 8%, per year, over 20 to 30 years.
2. Outperform the Policy Benchmark portfolio by 60 basis points annually without excess risk.
3. Prudently diversify the portfolio and strive for lower costs.

Those three goals take precedence over all others. While in the 1980's and 90's, it looked easy to accomplish most of those three; however, in the past decade of "Naught", the 2000's, it proved actually very difficult and challenging. Seeking to accomplish too many other objectives has shown to defuse the focus on the core mission. Therefore, the lesson learned is that these three goals have to be paramount above all else, and to the exclusion of all else. Otherwise, the entire pension plan and defined benefit system is threatened.

Risk measurement and management will be a key area of continuous improvement in FY 10-11. Working with our industry leading risk measurement system, Barra One, we are working to integrate all of the private asset classes into this model. In the coming year, we will work with the UC Regents and China Investment Company staff to improve the system and enhance the reporting. In addition, we plan to implement scenario risk assessments using the "inevitable surprises" as the various crises.

The other desired outcomes set forth by the Investment Committee focus on two key areas, climate change and diversity. Both areas are multi-year efforts and the desired outcome is not as much a set objective as it is additional core values. Therefore, we do not have a discreet outcome for each year, but rather milestones for continuous improvements.

Under the Climate Change effort this year, we will continue to expand our investment program in real estate, private equity and global equity, as well as our risk mitigate in real estate and fixed income. Under diversity, the major effort of the year is to develop and implement a five- year business plan to expand the diversity of our investment managers. It is very important to note that at CalSTRS, these efforts are not a siloed effort into a single office or unit, but rather integrated into the operations of every asset class. This is an important distancing characteristic compared to other larger institutional investors.



## **FY 10/11 Continuous Improvement**

Our business plan for the year is built on our theme: **“Continuous Improvement.”** While we are always striving to improve, this theme links with last year’s effort to get back to the basics of Alpha, Beta and Costs. Using that as our platform, we want to expand our efforts on the portfolio and improve our effectiveness and efficiency. Working with the Investment Committee we want to explore the potential of **Risk Oriented Strategic Allocation Management and wider asset class ranges.** Pension Consulting Alliance will lead us through a discussion of how we might attempt to be more nimble in the financial markets and more actively manage risk at the extreme inflection points of the markets.

Later in FY 10-11 we would like to **explore different levels of internal versus external asset management.** With our new headquarters and equipment, we believe there are areas within the portfolio where internal asset management may be more effective and efficient.

These include not just U.S passive equities and fixed income, but other facets of the portfolio as well.

Building on the success of the Real Estate workshop last May, we will hold another **interactive workshop this year on Private Equity.** In addition, we will present a deep dive into the private equity portfolio and our key general partner relationships. Combined, this should provide the Investment Committee with a much more comprehensive understanding of the long-term private equity market place.

A major area of improvement will be the implementation of the **Deputy Chief Investment Officer** role. As demonstrated in the organization chart. This new position, will oversee the new Absolute Return Asset Class, Investment operations and a majority of the day to day Investment Branch management. As requested by the Board at the fall off-site, this addition should allow the CIO to focus more time and attention of the investment portfolio and asset allocation.

With the **Climate Change** taskforce we are looking to seize any opportunities created by the realization that environmental factors could change the competitive landscape for many investments held in our overall portfolio. How an organization manages the risks and opportunities from climate change plays a key role in the determination of management quality, business quality and valuations. Consistent with this belief, a task force was formed in 2007 comprised of representatives from each asset class – Innovation & Risk, Global Equities, Corporate Governance, Fixed Income, Private Equity and Real Estate.



## Investments Branch

The team continues to demonstrate a collaborative effort to consider global sustainability issues and to identify, analyze and propose potential investment and risk control strategies intended to enhance the risk-adjusted returns of the overall CalSTRS portfolio. The sustainability issues being considered encompass not only global warming but might also include issues such as water supply, pollution abatement, hazardous wastes disposal, and recycling. For FY10/11 the major asset classes will continue their commitment to providing leadership and improving the “double bottom-line.” Finally, the Innovation & Risk unit will be incorporating environmental factors into a quantitative screen used to identify potential new strategies for incubation as well as continuing their effort to evaluate the impact of climate change risk to the overall CalSTRS portfolio.

### Key Success Factors & Challenges

- **Market Risk** - We are dealing with the most challenging investment climate in the past three decades. The key is the uncertainty of economic growth in the U.S. and across the globe.
- **Government Business Model** - Each year, in the overall Branch business plan, we raise this key success factor risk of operating a money management firm inside a governmental business structure. With the budget problems of the State of California as a backdrop, this has never been more prominent. Ennis Knupp has demonstrated that the government model costs 40 basis points per year<sup>1</sup> versus other more traditional money management business models. This performance drag may be even greater in the current environment.
- **Investment Branch Culture and Personnel** - One of our key factors that has led to success in past years has been our Investment Branch culture and staff. This diverse team has shown it can make extra return in normal economic conditions and can compete with the best investment management firms around the globe. Our new Headquarters, equipment, and trading platforms allow us to manage more assets internally at a lower cost.

### Financial Plan

A key component of the business plan is the financial plan. To manage our costs and to gauge our resource needs, the CIO has used the enclosed 10-Year Financial Plan. Industry

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<sup>1</sup> Ennis Knupp Research, *Can Public Funds Compete?*, June 2004



research makes it very clear that investment firm costs are driven by a combination two factors: assets under management (AUM) and the complexity of the portfolio.

The plan shows the anticipated and hoped for growth of AUM. For now, we assume the current level of complexity of the Portfolio is constant; however, that may not be the case when we study our peers larger than CalSTRS. If more asset classes are added and the current asset classes grow more diverse, the cost structure will rise. To frame the plan and ensure it is reasonable, we use larger plans as a future road map; CalPERS, the Dutch Fund APG, the Korean Pension Service (KPS), the Norwegian Government Pension Fund, and the two halves of TIAA-CREF. These plans serve as examples ranging from \$175 billion to \$350 billion in AUM. Our plan forecasts a smaller staff and cost compared to all the others, with the sole exception of the Norwegian fund, which is run by the government constrained Federal Reserve Bank.

As testament to the validity to the plan, during the tumultuous decade of the 2000 the actual outcomes, both high and low, have fallen within the expected range. Even so one must use caution in the assumptions about the future of the portfolio. The range displayed on the graphs only shows one standard deviation or two thirds of the possible outcomes. The actual future result will vary and possibly exceed the upper or lower band of the range.

Our investment costs have increased over the past three years as we have expanded the use of external investment managers and invested in more complex areas. According to the CEM, back in 2004, when CalPERS was our size today, their investment operation ran at a cost of 24.7 basis points<sup>2</sup>. This compares to our current CEM cost factor of 22 basis points. In the 10-Year Financial Plan, we estimate the budget cost to be around 17 basis points, the difference compared to the CEM figure has to do with the expensing rather than amortization of private equity and real estate partnership fees.

The lion's share of the cost to manage the total investment portfolio is driven by the external investment managers, Line 7 in the Financial Plan. In total, they comprise 82 percent of the annual cost. The decision back in 2005 to expand the use of active management resulted as expected in a bump in our cost structure. In the past year, we have actively pushed to lower our costs. As a result, we expect to achieve a 15 percent reduction in existing investment manager agreements.

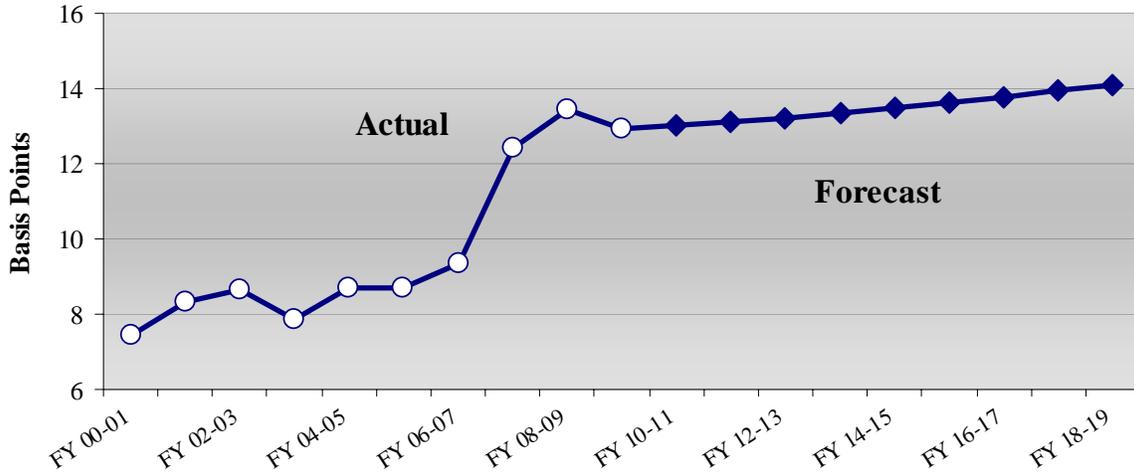
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<sup>2</sup> CalPERS Web Site, 2005 Press release of their Dec. 31. 2004 CEM report



# Investments Branch

## Investment Management Costs (excluding partnership fees)



## Portfolio Growth Forecast

	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
Retirement Funds (Net)	\$ 126,275,012	\$ 131,904,638	\$ 137,956,487	\$ 144,462,225	\$ 151,455,895	\$ 158,974,091	\$ 167,056,153	\$ 175,744,371	\$ 185,084,205	\$ 195,124,529	\$ 209,758,868
Supplemental Def. B.	\$ 6,616,454	\$ 6,624,125	\$ 6,631,642	\$ 6,639,010	\$ 6,506,229	\$ 6,376,105	\$ 5,848,583	\$ 5,331,611	\$ 4,824,979	\$ 4,328,479	\$ 3,841,910
PENSION 2**	\$ 238,921	\$ 276,813	\$ 318,494	\$ 364,344	\$ 414,778	\$ 470,256	\$ 531,282	\$ 598,410	\$ 672,251	\$ 753,476	\$ 842,823

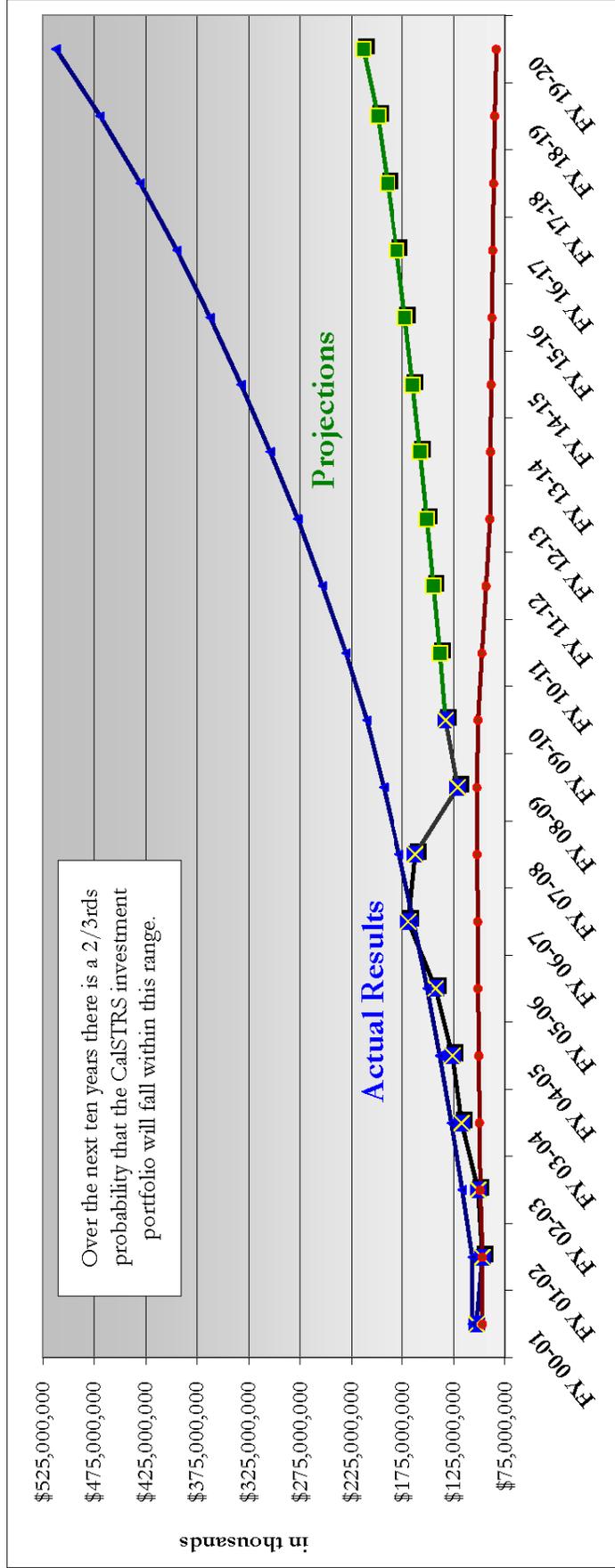
**Total (less 403(b))**    \$ 132,891,466    \$ 138,528,763    \$ 144,588,129    \$ 151,101,235    \$ 157,962,125    \$ 165,350,196    \$ 172,904,736    \$ 181,075,982    \$ 189,909,184    \$ 199,453,008    \$ 213,600,778

\*PENSION 2 assets: 403(b), 457. Each IRA & IRA assets managed outside the Investment Branch and not included in growth estimate. The growth forecast is not reliable.

**Low Return Environment\*\***    \$ 101,290,866    \$ 97,449,866    \$ 93,549,866    \$ 89,021,411    \$ 88,471,288    \$ 87,698,611    \$ 86,794,254    \$ 86,220,761    \$ 85,118,020    \$ 83,459,039

**High Return Environment\*\***    \$ 210,177,235    \$ 230,716,794    \$ 253,638,943    \$ 277,524,671    \$ 304,442,286    \$ 332,536,515    \$ 362,590,166    \$ 394,849,183    \$ 430,334,101    \$ 469,367,511    \$ 512,304,262

\*\*Return assumptions based on CalSTRS capital market. Assumption for 10 year growth. High and low estimate based on 10 year standard deviation for CalSTRS current asset mix.

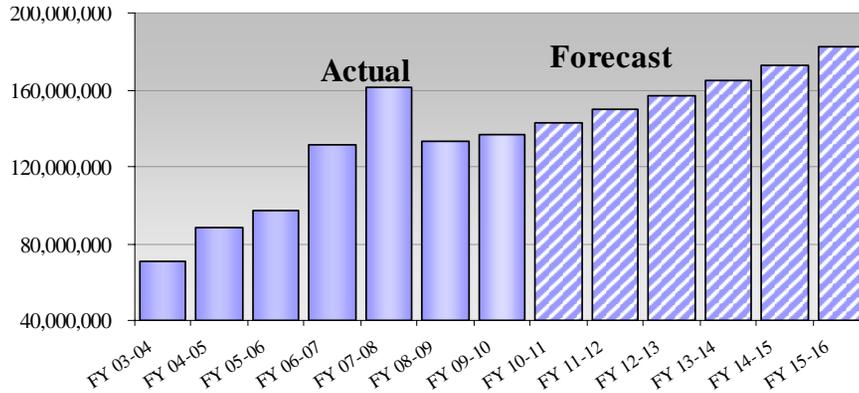


This forecast is based upon the current CalSTRS capital market assumptions over the next ten years. Actual result will vary widely. Since this chart is based upon a ten year average, individual years return can and will vary significantly. The purpose of the chart is to help explain the potential growth in the investment portfolio. Asset allocation shifts and changes in the assumption will move the chart. As described above this only includes one standard deviation, or two thirds of the potential outcomes. This information is for estimation of the CalSTRS business plan and should not be used for any other forecast without the consultation of the CalSTRS Investment Branch.

“Any requests for augmentations to the support budget will be presented formally to the board through the formal CalSTRS budget development process and in conjunction with and in consideration of all other CalSTRS budget requests.” CalSTRS Budget Office



### External Investment Manager Costs (excluding partnership fees)



The increase in investment manager fees from FY 06-07 to FY 07-08, Line 7 in the budget plan, reflects the decision in '06 to hire more active managers to help generate a higher rate of return net of fees. A majority of the increase (\$40 million) is from the retention of active emerging market managers. Another part (\$9 million) is due to the increase of external managers in fixed income. The total plan costs rose from an average of around 9 basis points to 13 basis points. From the current level of \$140 million, fees and costs are estimated to grow slowly unless additional external managers are retained.

## CalSTRS Investment Branch 10-Year Comprehensive Financial Plan

### Investment Branch

Fiscal Year	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 18-20
Total Assets (in billions)	\$ 137.9	\$ 143.9	\$ 150.4	\$ 157.3	\$ 164.6	\$ 172.5	\$ 180.6	\$ 189.4	\$ 198.8	\$ 209.0	\$ 223.9
<b>Investment Branch Support Budget</b>											
1 Total Staff - PY's (Personnel years)	112 (106)	112	118	124	130	137	144	152	160	169	180
Staff additions (Total+CG)	9 (+3)	0 (+6)	6	6	6	7	7	8	8	9	11
Billion per PY	\$ 1.30	\$ 1.28	\$ 1.27	\$ 1.27	\$ 1.27	\$ 1.26	\$ 1.25	\$ 1.25	\$ 1.24	\$ 1.24	\$ 1.24
2 Salaries (w/ Benefits & Inct)	\$ 15,458,345	\$ 16,642,361	\$ 17,547,018	\$ 19,757,064	\$ 22,131,800	\$ 24,802,295	\$ 26,714,132	\$ 29,922,846	\$ 33,249,093	\$ 37,022,570	\$ 40,939,172
3 General Expense & IT exp./equipment	452,470	500,294	553,286	612,017	677,125	749,317	829,385	918,208	1,016,771	1,126,167	1,247,619
4 Travel (starting 2006)	781,480	862,155	951,176	1,049,408	1,157,805	1,277,423	1,409,424	1,555,094	1,715,850	1,893,260	2,089,051
5 Publications, HR, Intern prog, Misc ('06)	389,440	413,709	439,991	468,493	499,443	533,097	569,738	609,682	653,283	700,933	753,072
6 TOTAL SUPPORT BUDGET	\$ 17,081,735	\$ 18,418,519	\$ 19,491,471	\$ 21,886,982	\$ 24,466,174	\$ 27,362,131	\$ 29,522,678	\$ 33,005,830	\$ 36,634,996	\$ 40,742,929	\$ 45,028,914
<b>Continuous Appropriation</b>											
7 Investment Managers	136,733,340	142,987,634	149,711,002	156,938,623	164,708,316	173,060,738	182,039,592	191,691,862	202,068,052	213,222,458	229,214,143
8 Custodian & Legal Fees	7,542,175	7,919,284	8,315,248	8,731,010	9,167,561	9,625,939	10,107,236	10,612,598	11,143,228	11,700,389	12,285,408
9 Consultants Fees	9,662,925	10,146,071	10,653,375	11,186,044	11,745,346	12,332,613	12,949,244	13,596,706	14,276,541	14,990,368	15,739,887
10 Corporate Governance Staff & OE&E	2,641,934	2,968,252	3,461,456	3,751,431	3,893,593	4,321,063	4,629,419	4,967,513	5,498,683	5,761,806	6,145,904
11 Research & Market Data (from Dir B)	2,604,790	2,761,077	2,926,742	3,102,347	3,288,487	3,485,797	3,694,944	3,916,641	4,151,640	4,400,738	4,664,782
12 Risk systems (Barra, BBg, Brk, Pt)	1,589,110	1,684,457	1,785,524	1,892,655	2,006,215	2,126,588	2,254,183	2,389,434	2,532,800	2,684,768	2,845,854
14 Misc.	575,870	598,905	622,861	647,775	673,686	700,634	728,659	757,806	788,118	819,643	852,428
15 TOTAL CONTINUOUS	\$ 161,350,144	\$ 169,065,680	\$ 177,476,208	\$ 186,249,885	\$ 195,483,205	\$ 205,653,371	\$ 216,403,277	\$ 227,932,559	\$ 240,459,061	\$ 253,580,169	\$ 271,748,406
19 TOTAL EXPENSES	\$ 178,431,878	\$ 187,484,198	\$ 196,967,679	\$ 208,136,867	\$ 219,949,378	\$ 233,015,502	\$ 245,925,955	\$ 260,938,389	\$ 277,094,058	\$ 294,323,099	\$ 316,777,320
20 % of ASSETS (BPs)	12.94	13.03	13.10	13.23	13.36	13.51	13.62	13.78	13.94	14.08	14.15

## **Conclusion**

We face of the most challenging time for the California Teachers Retirement Plan and for the global financial market. We must continually improve our methods and success rate. Beating our benchmarks, as hard as it is, is simply not enough; we must also ensure we achieve an absolute return in excess of the actuaries assumed rate in order to reduce our unfunded liability. The business plan and asset business plans are designed to be tightly focused on helping us continually improve and achieve our objectives. Working hand-in-hand with the Investment Committee, consultants, and external investment advisors, we are confident we can achieve the required results and meet the high expectations the teachers of California and our constituent groups have for our investment operation.



## Attachment 3



## A. Global Equities

### Business Plan for 2010–11FY

#### Global Equities—Unit Description

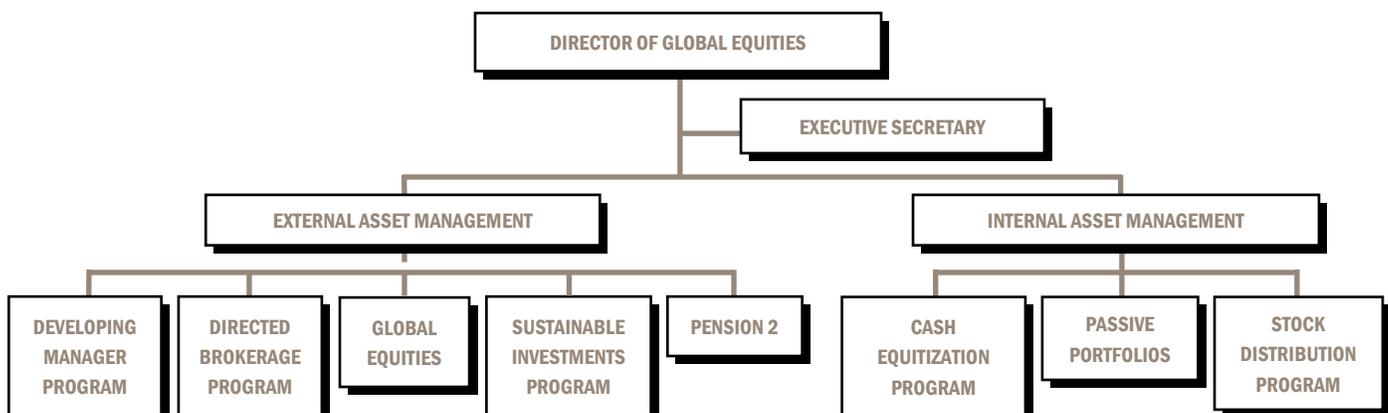
The Global Equities Unit consists of two core programs—External and Internal Asset Management. Ancillary programs include oversight and management of the Developing Manager Program, the Sustainable Investments Program, the Cash Equitization Program, the Stock Distribution Program, the Directed Brokerage Program, and evaluation of investment options for inclusion in Pension2 which consists of 403(b), 457, and Roth 403 (b) plans for CalSTRS’ members. The primary objective of this asset class is to generate alpha to meet CalSTRS’ obligation to pay benefits to its membership.

The Global Equity Portfolio is 28 percent internally managed and 72 percent externally managed. The Unit is currently staffed with 10 investment professionals and 1 support staff.

#### Business Sub-units Personnel

➤ External Management	6.5
➤ Internal Management	3.5
➤ Support Staff	1.0
➤ Total Staff	11.0

An organization chart depicting the structure of the Global Equities Portfolio follows:

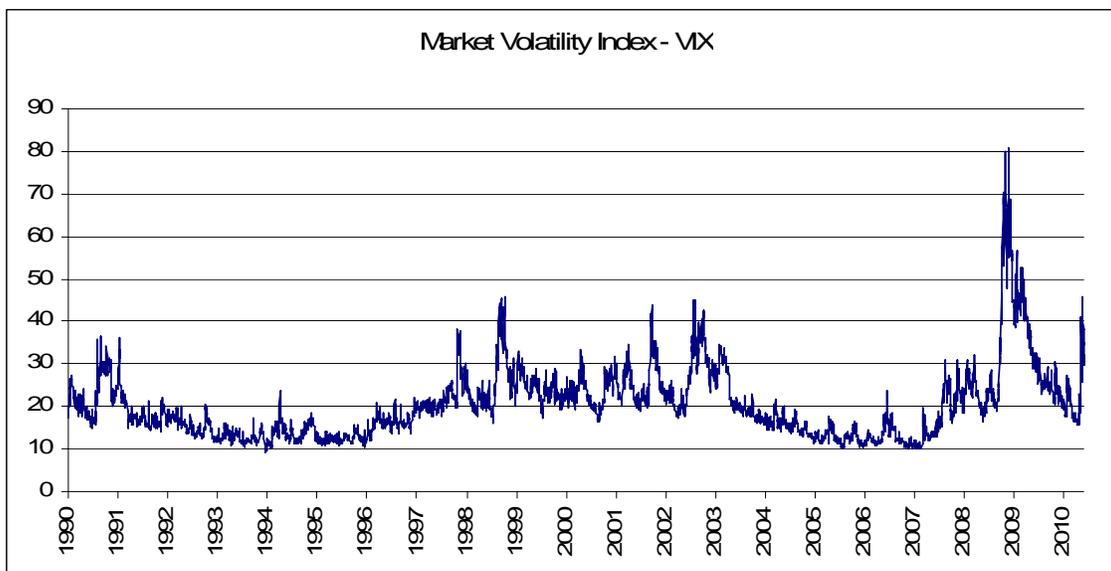


## Global Equities

### Performance Objective / Risk Management

The Global Equities asset class performance objective is to beat the Russell 3000 ex-tobacco benchmark by 32 basis points for the U.S. Portfolio, and to beat the MSCI All Country World ex-U.S. ex-tobacco Index by 53 basis points for the Non-U.S. Portfolio. Based on our share of the assets, that represents 21 bps (35%) of the total Fund's objective to generate 60 bps over the total plan benchmark.

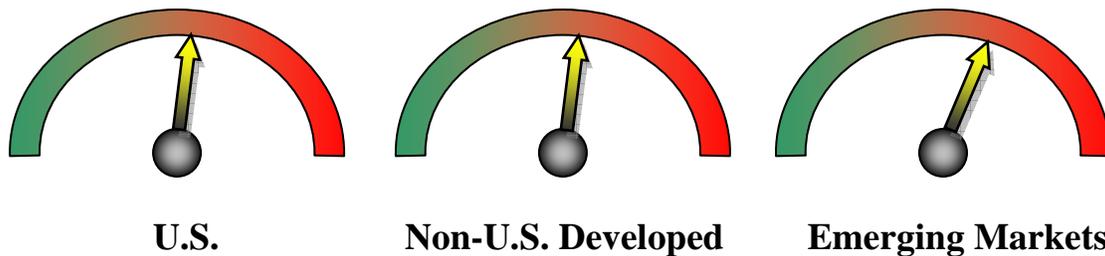
Attaining our performance objective requires understanding the significant risks inherent in the current global equity markets. One of the most widely used measures of stock market volatility is the Market Volatility Index (VIX). Also known as the fear index, the VIX provides a real-time measure of investor confidence.



Historically, any reading above 30 indicates concern or fear in investor sentiment, while a reading below 20 signifies that investors are less concerned with future volatility. At a value close to 40, the current level of the VIX is similar to levels experienced during the Russian financial crisis (1998), the dot-com bubble and immediately after the 9/11 terrorist attack. Over the past 20 years, the only period that experienced a higher VIX reading was the 2008 global financial crisis, which peaked at an extreme level of 80.



### Current Market Valuations



Historical valuation metrics are less effective in volatile environments because one can not simply extrapolate trends. A lot of uncertainty remains in global markets which is evident in both the increased volatility and unprecedented policy responses. Even with the dramatic increase in global equity markets from the lows of March 2009, U.S. and non-U.S. developed markets are still close to fair-value based on current earnings assumptions. While emerging markets equities are attractive from a long-term perspective, the short-term valuation is slightly expensive given the massive run-up since the beginning of 2009.

### FY 10/11 Continuous Improvement

Consistent with the objective of continuous improvement, staff will continue to evaluate current and potential opportunities to enhance the global equity portfolio. One component of this effort is to carefully evaluate our current and potential investment managers. The goal of this effort is to ensure that we are partnering with the highest conviction investment managers. In the past, adding new managers to the portfolio was challenging due to the time-intensive RFP process. To mitigate this issue, staff is implementing a streamlined alternative solicitation process which should provide flexibility in hiring new investment managers.

Staff will also explore new sources for generating alpha. Staff will evaluate a variety of structured products such as asset trusts, structured notes, warrants, portable alpha, swaps, etc., that generate an index return plus a guaranteed amount of alpha above the benchmark. These types of investments are very risk-controlled, easy to move into and out of as needs change, and provide a source of guaranteed alpha.

Staff will continue to evaluate new mandates for active or passive management. In recent years, index changes have created sub-asset opportunities such as international small cap,



## Global Equities

fundamental indexing, and frontier markets which staff continue to monitor for possible inclusion in the portfolio. Adding or continuing existing programs requires systems and services capable of supporting these mandates. Staff is evaluating and reviewing current and potential services to determine whether they are supportive of our business needs and truly add value to our investment processes.

Staff will evaluate and consider increasing the level of internal management. Staff has been successfully managing a portion of the Russell 1000 portfolio for over 10 years, with the remainder of the passive assets being managed by external managers. On April 1, 2010, staff began managing a \$500 million Russell 2000 passive portfolio. After establishing a track record of successfully managing these assets, staff will consider bringing in the remainder of the passive assets for internal management in the second half of FY 2010-11.

Alignment of interests with all of our partners remains a high priority. One component of better alignment is negotiating performance based fee schedules that penalize underperformance while providing reasonable incentives for outperformance. Staff has negotiated more attractive fee structures with several external managers and will continue this process over the coming fiscal year.

### Key Success Factors & Challenges

- Recruitment and retention of experienced and talented staff
- Continued discipline concerning asset allocation and rebalancing
- Tactically take advantage of current opportunities
- Ability to partner with the highest conviction external managers
- Changing legal and regulatory environment for financial services

### Conclusion

With market volatility remaining elevated, the coming fiscal year will be difficult to navigate and will pose numerous challenges to investors. Staff will continue to diligently manage the current roster of managers, and may make changes or enhancements to the external manager portfolios as necessary. Additionally, staff will continually explore new sources for generating alpha, and will evaluate a variety of new products and mandates to enhance portfolio performance.



## B. Fixed Income

### Business Plan for 2010–11FY

#### Fixed Income—Unit Description—\$28.0 billion

The primary, or core, function of the Fixed Income Unit is to manage the System's allocation to fixed income assets in such a way as to provide diversification to the Total Investment Portfolio, while maximizing the risk-adjusted return. In addition to the investment management function, other "non-core" investment programs (i.e., Currency Management and Securities Lending) that have been designed to add incremental income to the Fund are also managed within the Fixed Income Unit.

The investment programs managed within the Fixed Income Unit are structured in such a way as to take advantage of the benefits/efficiencies of both internal and external management as follows.

Business Units	Internally Managed	Externally Managed
➤ Fixed Income Asset Management	78.5%	21.5%
➤ Currency Management Program <sup>1</sup>	92%	8%
➤ Securities Lending Program <sup>2</sup>	44%	56%

<sup>1</sup> External Currency Managers implementation began FY 2009/10; anticipate 80%/20% mix

<sup>2</sup> Reflects Cash Collateral Asset Management breakdown

Currently, twenty staff members are responsible for the management of the portfolios and programs within the Fixed Income Unit as follows:

Business Units	Internal Staff	External Managers
➤ Fixed Income Asset Management <sup>3</sup>	14	9



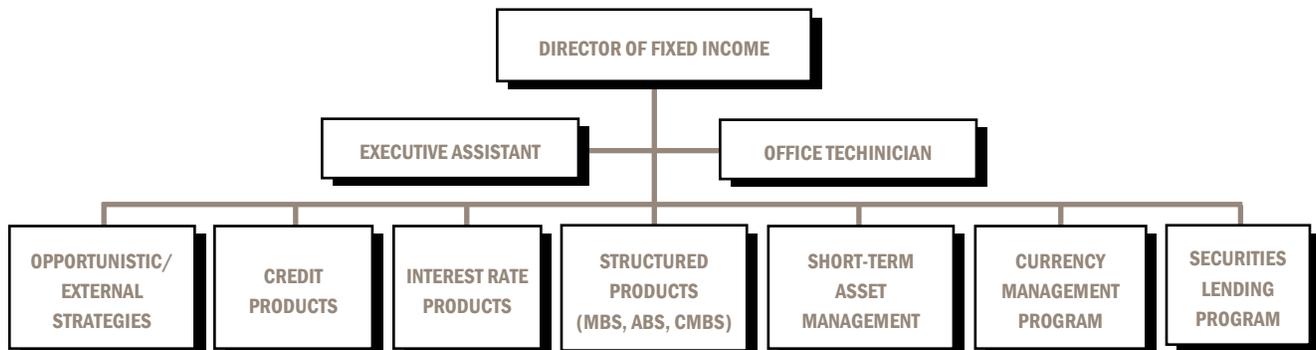
## Fixed Income

Business Units con't.	Internal Staff	External Managers
➤ Currency Management Program <sup>4</sup>	2	2
➤ Securities Lending Program	2	2
➤ Support Staff	2	n/a
➤ Total	20	13

<sup>3</sup> Internal staffing includes long and short-term asset management

<sup>4</sup> Anticipate up to four external currency managers implemented FY2010/11

An organization chart depicting the structure of the Global Equities Portfolio follows:



### Performance Objective(s) / Risk Management

**Fixed Income** - The strategic performance objective for CalSTRS' Fixed Income Portfolio (Portfolio) is outperformance vs. the Policy Benchmark [(95%) Barclays Capital U.S. Aggregate + (5%) Barclays Capital U.S. High Yield Cash Pay 2% Issuer Constrained Index (ex-tobacco)] over a full market cycle, which is usually considered to be three-to-five years. The internally managed (Core) fixed income assets are expected to outperform the Barclays Capital U.S. Aggregate benchmark by 10 basis points annually, and the externally managed (Opportunistic) fixed income assets are expected to outperform the Portfolio Policy Benchmark by 35 basis points annually. Based upon our share of the assets, fixed income alpha is expected to represent 5 percent of the total plan objective of 60 basis points.



**Currency Management** - The primary role of the Currency Management Program (CMP) is to preserve the value of the Fund's non-U.S. public and private equity assets against a strengthening U.S. dollar. A secondary objective is to design strategies to take advantage of potential alpha opportunities in the currency markets. The internally managed portion of the CMP is expected to generate 10 basis points, annually, in alpha. While the performance objectives are currently being finalized with the remaining external currency managers, once they are in place, it is expected that they will be able to generate between 100-125 basis points annually in alpha. Based upon the size of the CMP, that represents the potential to contribute 10 percent of the total plan objective of 60 basis points.

**Securities Lending** - The Securities Lending Program (SLP) generates incremental income to the Fund through collateralized, low-risk, short-term loans using a portion of the lendable assets within the Investment Portfolio. Although there are no explicit goals with respect to alpha generation, the SLP has added over four basis points, on average, annually to the return of the Fund over the past twenty years, representing approximately 7 percent of the total plan objective of 60 basis points.

Taken together, the fixed income asset management, currency management and securities lending programs are anticipated to contribute roughly 20 percent of the Total Fund's alpha target.

**Risk Management** - At CalSTRS, the risk management framework has been developed within the context of a risk budget, in order to align the management of the assets with the System's risk-adjusted investment objectives. Risk budgeting involves first the measurement, then the monitoring, and finally the management of exposures to economic and fundamental drivers of risk and return across the portfolio(s)/program(s). These exposures are managed within the risk tolerance established by the System's Policy documents (i.e., Investment Policy and Management Plan, Fixed Income, Currency Management, and Securities Lending Policy) set by the Board.

Within the fixed income portfolio(s)/program(s), tracking error, defined as the amount of quantifiable risk an investor is willing to take versus the performance benchmark, and volatility, defined as standard deviation or how much price movement an investor is willing to assume, are used as standard tools to measure risk. The BlackRock Solutions platform is integral to measuring and then monitoring the tracking error/volatility ranges established by the Director and Portfolio Managers, depending on the strategy (i.e., Core versus Opportunistic Fixed Income, Currency, Short-term, Cash Collateral) under consideration. Staff then budgets/aggregates this risk across the various portfolio(s)/program(s), based upon our outlook for the investment markets, and monitors the changes on a daily basis. The



## Fixed Income

information from the measurement and monitoring processes are used to manage and then report the exposures within the context of the Investment and Performance Objectives. Risk management has always been an integral part of the fixed income portfolio management process.

Diversification is also critical to control risk and maximize returns. CalSTRS is expected to diversify each of the portfolio(s)/program(s) in a manner consistent with prudent person guidelines. Consequently, in addition to parameters within the Investment Guidelines, thresholds with respect to credit exposure, issuer concentration, and maturity constraints are used to further mitigate the risk across the Portfolio.

### FY 2010/11 – Continuous Improvement

Last year at this time, we were still in the midst of a severe recession, reeling from the toll that the financial crisis took across the CalSTRS Investment Portfolio, yet seeing evidence that policy actions and massive injections of capital into the banking system by governments around the world were taking hold and restoring liquidity and a sense of confidence in the global financial system. Global economic fundamentals, along with unusually distressed valuations, fueled investors' risk appetites over the past year. In response, staff took steps toward structuring the portfolios and programs to benefit from an economic turnaround in assets that would perform better in an environment of moderate inflation, more volatility, and potentially higher interest rates. Our strategies and decisions have been developed over time within the context of "lessons learned," not only from the previous 18 months, but also from previous financial crises, which will continue to frame our actions over the next year. We continue to broaden the lines of communication, look for ways to implement strategies efficiently, and better control manager and subscription costs.

**Fixed Income** – One of the major trends we've observed over the past several years is the "blurriness" of the lines between investment opportunities across the asset classes. In response, a cross-functional team throughout the Branch and within the Fixed Income Unit has been brought together to leverage our respective talents and experiences to take advantage of opportunities in securities that may be experiencing either distressed or near-distressed pricing levels or could add value to the Fund through additional diversification. These teams meet on a regular and ad-hoc basis and provide a forum to hear a variety of strategies and voice alternative views and concerns. In conjunction with this forum, staff has developed a streamlined and competitive alternative for hiring external managers, in order to decrease the end-to-end processing time and costs associated with delays inherent in the traditional



Request for Proposal (RFP) process. A similar team is also in place to research best practices regarding hedging and derivatives processes, in order to enable us to prudently hedge risk in the future (as well as to efficiently gain exposures that may otherwise be difficult to put on due to our size). Lastly, controlling costs is also a high priority, given the continued difficult economic and budgetary environment. The Investment Branch has established a goal of a 15 percent reduction in the overall costs (i.e., asset manager, research and subscription fees), and will continue going forward until each relationship has been reviewed.

**Currency Management** - Staff will continue to work toward completing the implementation of the CMP restructuring approved by the Investment Committee in 2006. We currently have two currency managers established and actively managing portfolios for us. We are in the process of establishing guidelines and getting a contract finalized with a third new currency manager, in order to complement and diversify our internal core strategy, and are on target to have them in place within the next couple of months. Up to four managers will be selected to provide not only a potential alpha source (i.e., Opportunistic Strategy) for 10 to 30 percent of the Program, but also a powerful resource and relevant benchmark comparison for the internal program (i.e., Core Strategy) that represents 70 to 90 percent of the Program.

**Securities Lending** – Staff continues to work in a risk controlled manner toward recovering the securities lending income lost as a result of the unprecedented financial challenges in the marketplace. We will also continue to work closely with the Corporate Governance unit, in order to demonstrate best practices for the SLP and continued leadership within the securities lending industry. Finally, as described in the SLP Annual Report, we will be conducting a Securities Lending Agent search sometime during the upcoming fiscal year. The intent of the search is to refresh our agent pool and ensure that we continue to have high quality lending agents and cash collateral external managers to complement our internal cash collateral management program and that the structure continues to maximize our asset utilization and earning potential in a cost effective manner.

### **Key Success Factors and Challenges**

- Recruitment and retention of well-qualified staff
- Ability to focus on core, return-producing priorities
- Ability to tap research/analytics with top firms in the industry
- Continued access to technology to operate more efficiently



- Continued access to educational opportunities
- Opportunities to update/streamline administrative processes
- Implementation of external currency managers
- Ability to tactically implement new strategies
- Recovery of securities lending collateral losses

### Conclusion

The economic landscape has certainly changed for the positive, and risk asset valuations are reflecting the ensuing confidence. Although we expect returns to taper back to the mean over the next year or two, we are heartened by several developments this year: businesses' continued cost-cutting and de-leveraging, which produced record profits for many; many large banks continued to clean up their balance sheets by raising capital and repaying government TARP funds; and credit markets made a comeback after being stabilized through the federal government's aggressive policy actions. However, unemployment remains a key issue. Consumers will not really benefit from higher inventory and production until they have jobs and the requisite income necessary to fuel industry growth. It also remains to be seen how the European banking crisis will ultimately impact the global economic recovery. We, therefore, continue to expect low GDP growth in 2010.

Looking forward, we expect continued improvement in U.S. economic growth, which should generally bode well for non-treasury securities and the U.S. dollar. We are not, however, expecting rapid growth and are therefore positioning ourselves across the portfolio(s)/program(s) within sectors that emphasize yield and coupon clipping (as opposed to significant price appreciation), with an emphasis on higher quality and risk management. As a result, we may continue to be taking gains in selected areas, including our external managers, where we determine that overvaluation is likely.



## C. Real Estate

### Business Plan for 2010–11FY

#### Real Estate—Unit Description

The primary objective of the real estate asset class, within the overall CalSTRS Portfolio, is to provide diversification. The secondary objective is to enhance yields and provide stable cash flows. Real Estate needs to generate 17 of the 60 basis points of the total fund. As it is only 11 percent of the total fund, we need to beat the real estate benchmark by 150 basis points.

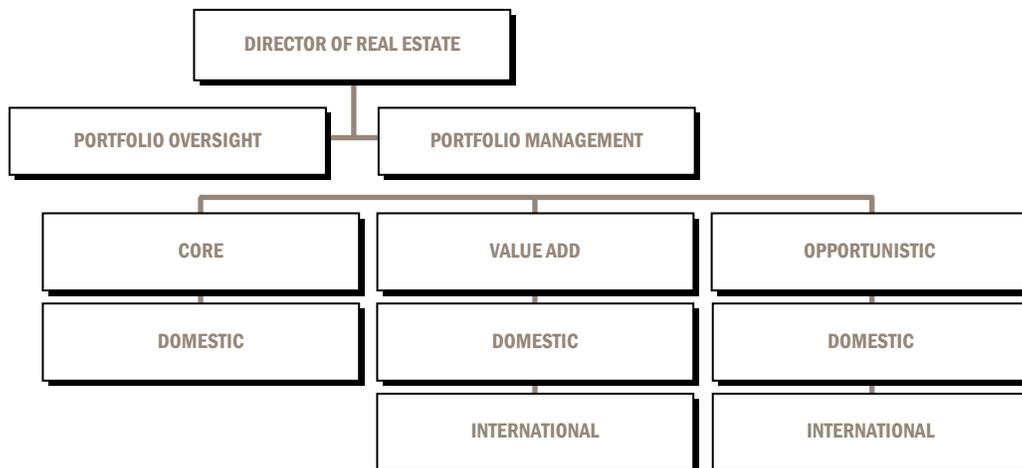
At present, investments are comprised of 82 percent domestic and 18 percent international, with a long term goal of 20–30 percent of the portfolio to be in international markets.

Currently, the Real Estate staff is made up of 15 full-time and one-part time staff members. There have been no additions to staff in the last fiscal year. While the furlough imposed on all CalSTRS employees has clearly not had a favorable effect on efficiency and morale, the Real Estate staff remains focused and committed to achieving performance goals.

#### Business Units

#### Personnel

➤ Real Estate Portfolio Management	10.5
➤ Real Estate Portfolio Oversight	4.0
➤ Support Staff	2.0
➤ Total	16.5



## Real Estate

### Performance Objective

The Investment Committee approved changes to the Real Estate Policy at the June, 2010 meeting. The updated policy calls for re-categorizing each real estate investment from "Core" and "Tactical" to "Core", "Value Add" and "Opportunistic". The board also approved a move from the previous benchmark of the National Council of Real Estate Investment Fiduciaries (NCREIF) Index to three new Indices that match the Core, Value Add and Opportunistic categories and better mirror the risk/return characteristics of each.

These benchmarks are Open End Diversified Core Equity Fund ("ODCE") for Core; the NCREIF Townsend Value Fund Index for Value Add and the NCREIF Townsend Opportunistic Global Index for Opportunistic. Over the next year, staff will be working with Townsend, the board's consultant, to appropriately designate investments into these new categories. During this transitional fiscal year of 2010/2011, Townsend will analyze the portfolio using both the existing and new benchmarks before moving to the new benchmarks permanently.

In addition, the Investment Committee has expressed a goal to lower the risk in the portfolio by accentuating Core investments on a relative basis over both Value Add and Opportunistic investments. Staff has agreed to present an implementation plan to the board in an upcoming meeting. This business plan incorporates the basic goal of this plan.

### Risk Management

Improved risk management is an integral part our business plan, with increased emphasis on monitoring and effectively managing risk on both the asset and liability side of the balance sheet. On the asset side, the primary focus will be on continued leasing progress, using our strong capital position to increase occupancy and drive net income and appreciation growth. On the liability side, in addition to reducing overall leverage, a key area of focus will be on appropriate asset-liability matching as well as implementation of more consistent debt mark-to-market procedures to reduce volatility in portfolio performance. We have also improved our valuation procedures, and are currently undergoing a complete review of our financial reporting and cash management procedures, all of which are important areas of risk control and management. In addition, we have undergone a procedural audit which reportedly has minimal findings of concern but does list areas where we can improve.



## **Fiscal Year 2010/2011 Continuous Improvement**

Specific to our portfolio, a great deal of progress has been made in advancing the themes and initiatives outlined last year. The “Back to Basics” theme has been implemented, with a major focus on achieving our leasing and operational goals. The “Take the Pain Now” approach to valuing our portfolio has served us well, as more realistic valuations have been critical in making appropriate capital allocation decisions on existing assets. Significant progress has also been made in better monitoring and reducing our portfolio leverage risk.

This year’s theme of “Continuous Improvement” matches the Real Estate group’s goals quite well. It is evident in our success in materially reducing investment management expenses, achieving high levels of staff engagement with no turnover, effective deployment of our independent fiduciaries, and, in conjunction with Townsend, critical evaluation of the performance of our investment managers and partners. With respect to portfolio management, our new policy requires staff to evaluate all our investment positions and, working with our consultant, to place each investment into our newly adopted categories of Core, Value Add and Opportunistic. Because individual assets can move from one category to another due to changes in occupancy and leverage levels, we also will be negotiating changes in our manager agreements to allow transfer when appropriate.

This recategorization is an important aspect of our intermediate term strategy, given that a key source of increased exposure to core assets will come from stabilization of assets that currently reside within our value-add and opportunistic buckets. That strategy will be supplemented with an increased weighting toward Core properties on new investment opportunities, as we are currently underweight to Core given the adoption of our new policy. This fiscal year, we will conduct a search through a Request for Proposal for Core managers, and will likely expand our current pool to add well qualified Core partners (unlike Value Add and Opportunistic strategies, where we believe we are already well positioned with our current investment partners). Further, we expect to expand some current relationships while contracting others, and add expertise in markets segments where we do not currently have “best in class” coverage.

## **Key Success Factors and Challenges**

- While economic growth has rebounded, with the U.S. currently in its fourth consecutive quarter of expansion, the European crisis has dramatically increased market volatility. In addition, job growth continues to be uneven and lags the broader recovery. As a result, tenant demand (albeit varying across



## Real Estate

property types) is still generally in a slight downward to flat trajectory which has kept rents under pressure despite dramatically reduced supply of real estate.

- Capital availability for real estate investment has rebounded dramatically for both debt and equity. The majority of capital is focused on high quality core assets in primary markets which has significantly increased competitive bid activity and pricing, resulting in a scarcity premium amidst the limited number of core transactions that have come to market. However, there is still little available capital for assets with development or leasing challenges, creating potential opportunities in these areas.
- Valuations have sharply declined over the last two years, but appear to have bottomed and in some cases are seeing a modest rebound as a result of strong bid activity on high quality core properties.
- Lenders continue to extend troubled mortgages, and as a result the deleveraging of the real estate market is proceeding slowly, with the market still facing a significant wall of debt maturities over the next several years.
- The Euro crisis has changed the market outlook for interest rates, with a likelihood of a more extended period of accommodative monetary policy and low Treasuries rates that is generally favorable for the cost of real estate debt capital and cap rates.
- Staffing is not expected to increase in the coming year. The resolution of the State of California's budget crisis and how it affects the addition of new employees, as well as the retention of existing employees, remains equally uncertain.

A significant portion of the investments that are in "workout" in our portfolio are either completed or well underway. However, these have proven to be heavy consumers of staff's resources. A challenge in the coming fiscal year will be to continue to balance our efforts to maximize returns in the existing portfolio and capitalize on new opportunities as they occur.

### Conclusion

While there has been a discernible improvement in market sentiment, liquidity, and the cost and availability of capital in the commercial real estate markets over the past several months, significant challenges to a sustained recovery remain. A weak job market, a return



of volatility to the broader capital markets, and a real estate market facing a long road to deleveraging reinforce the critical need for ongoing and effective risk management at both the property and portfolio level.

The dramatic decline in property values brought about by the global credit crisis and recession has caused us to reflect not only on lessons learned, but also how best to apply those lessons going forward as part of the “Continuous Improvement” theme. These initiatives will lead to more effective management and growth of the Real Estate portfolio to optimize its risk-adjusted returns, consistent with the new policies. The re-categorization of the portfolio into the three new buckets, as well as the consistent overlay of improved leverage valuation processes, and other risk oversight, cash management, manager selection and evaluation, financial reporting, property k control and management techniques across all three buckets, will be integral to our success going forward.

Importantly, the ongoing challenges facing the real estate market on its road to recovery will also provide the basis for attractive new investment opportunities, not only within the U.S. but also globally. Our goal is to not only stay alert to such opportunities, and position our program to take advantage of them in a manner that effectively deploys the policy and procedure enhancements highlighted above.

As we noted last year, despite the still unsettled nature of the real estate space and capital markets, we are confident that CalSTRS is well positioned to participate in the eventual recovery of commercial real estate markets both domestically and globally. The new policies approved by the Investment Committee will be an integral part of achieving our long term goal of top-tier real estate investment performance.



## Attachment 3



## D. Private Equity

### Business Plan for 2010-11FY

#### Private Equity—Unit Description

Private Equity (PE) oversees a portfolio of private equity limited partnerships managed by external general partners. In addition, PE makes side-by-side co-investments alongside its private equity general partners. PE also manages the Credit Enhancement Program (CEP) which underwrites municipal transactions on an opportunistic basis.

There are four main industry sub-segments in which PE invests: (1) Buyouts; (2) Equity Expansion; (3) Venture Capital; and (4) Debt Related. The Proactive Group is a sub-group within PE that focuses on new and next generation external managers as well as external managers dedicated to underserved urban and rural markets.

PE has a benchmark consisting of the Russell 3000 plus 300 basis points. The CEP has a goal of earning fee income with zero losses.

PE is 90 percent externally managed through limited partnership funds and 10 percent internally managed through its co-investment portfolio. The CEP is 100 percent internally managed.

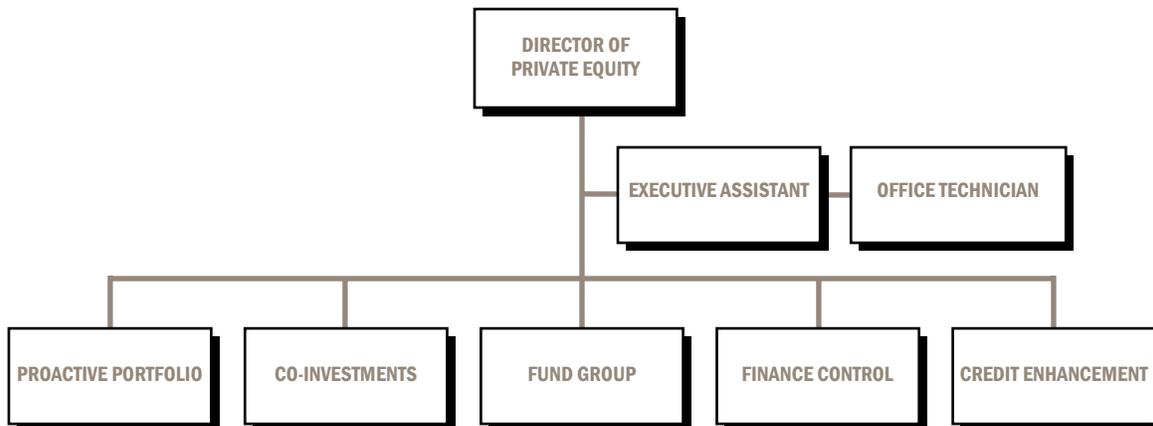
PE is currently budgeted for 20 personnel years as follows:

<b>Business Units</b>	<b>Personnel</b>
➤ Private Equity Group	13
➤ Proactive Group	2
➤ Credit Enhancement	3
➤ Support Staff	2
➤ Total Staff	20

An organization chart depicting the structure of the PE Program follows on the next page.



## Private Equity



### Performance Objective/Risk Management

The asset class goal for PE is to outperform its benchmark (Russell 3000 plus 300 basis points) by 150 basis points (i.e., Russell 3000 plus 450 basis points). Since PE assets constitute approximately 12 percent of total plan assets, the 150 basis points of outperformance equates to 18 basis points of the targeted 60 basis points of outperformance for the total plan, or 30 percent of the overall plan's target alpha.

### FY 2010-11 Continuous Improvement

PE is dedicated to the concept of continuous improvement; it continually identifies areas of potential improvement and implements those deemed most deserving. Results are evaluated and further iterative improvements are pursued as appropriate. Our goal is overall excellence in the program.

The most significant improvement activities currently underway are as follows:

- Staff specialization:** Staff is in the process of increasing and formalizing sub-sector expertise among its members. Each investment professional has been assigned one or more areas of expertise. The goal is for all team members to retain their overall high level of general industry knowledge while also gaining deeper domain knowledge within their individual areas of expertise.
- Private Equity Review Committee (PERC):** The role of the PERC is to review all important investment decisions pertaining to PE. Staff is in the process of formalizing the PERC voting process and adding additional protocols to ensure



that all senior investment professionals in the group actively participate on the committee and are held accountable for their votes.

- **Increased operational resources:** As the private equity industry has matured and become more institutionalized over the past several years, reporting, accounting and compliance requirements have become more complex and time consuming (examples include more stringent fair market value standards, greater scrutiny of unfunded commitment amounts and an increase in the amount of portfolio company information available to analyze). PE's resources dedicated to reporting, compliance and accounting have not kept pace (especially when the overall growth of the portfolio is factored in). PE is in the process of reorganizing its internal operations group and adding a new position to oversee all such activities.
- **Administrative reduction:** Business initiatives often involve new administrative burdens on staff (in the form of additional meetings, memos, forms, procedures, etc.). Therefore, concurrent with the implementation of all improvements, efforts are being made to eliminate all unnecessary administrative practices within the PE organization. The goal is to avoid a net increase in administrative requirements (or even bring about a reduction if such is possible).

### Key Success Factors and Challenges

The aftermath of the financial crisis (spotlighted by the collapse of Lehman Brothers in September 2008) has yet to be resolved. Some dust has settled, but the ramifications for the private equity industry remain to be seen. Key questions that staff are continuing to review include:

- To what extent is there over-capacity in the industry and which funds in particular are over-capitalized?
- How will the industry realign? Which will be the general partners that recover, take advantage of current financial and economic displacements and prosper, and which will decline and possibly go away? Do the current industry conditions bode well for new start-up firms?
- Which of the sectors, subsectors, and geographies within the private equity universe are most likely to deliver high rates of return at reasonable levels of risk?
- To what extent should the CalSTRS PE portfolio expand or contract in terms of active general partner relationships in the near to medium term?

Some of staff's specific views on these issues are proprietary and will not be discussed in this public document. However, the following general points can be addressed:



## Private Equity

- PE staff believes that caution is still warranted with respect to investment pace; in most subsectors of the industry, a large overhang exists and staff does not foresee significant access issues in the near future (i.e., if industry activity picks up, staff believes that it will still have the ability to access quality partnerships).
- In the post-Lehman environment, more effort is being spent in monitoring the current investment portfolio rather than searching for and evaluating new general partner relationships. (Exceptions to this tendency exist, especially in the area of debt-related private equity investments). Staff believes that this is fully warranted as several of its partnerships have had weaknesses exposed (either in their organizations or their portfolios) and in some instances, circumstances have arisen that require intensive attention (e.g., key man triggers, extension requests, waiver requests, etc.). That said, there are likely to be many attractive investment opportunities to be found from non-traditional sources in the current investment environment.
- Given the combination of circumstances described above, staff believes that it is more important than ever to be in the field observing and analyzing the major developments occurring within the industry and within the PE portfolio. While being mindful of travel budgets, Staff is redoubling its efforts to stay in close contact with its general partners, fellow limited partners, and other industry insiders.
- Legal and economic terms continue to evolve to the benefit of limited partners in the private equity industry. CalSTRS is a signatory of the ILPA Private Equity Principles, and staff is working diligently in conjunction with other major limited partners to bring about fundamental changes in the legal structure and economics of private equity partnerships. Fairness issues, transparency, alignment of interests and investor protections are being substantially improved for new generation partnerships. The improvement process is ongoing.
- PE remains committed to finding, funding, and developing new and next generation managers as well as managers focusing on underserved urban and rural markets. PE also remains committed to its portfolio of investments focusing on sustainable technologies. These endeavors require a disproportionate level of resources for the commitment amounts achieved but these also represent markets that could be substantially larger in the future.
- PE remains active with the United Nations Principles of Responsible Investing (UNPRI). These principles require that a documented method be employed to ensure that environmental, social, and governance issues are considered in our investment decision-making process. Staff is in the process of establishing an infrastructure to comply with the UNPRI requirements.
- CalSTRS will selectively make co-investments with the goal of benefitting from the superior economics of these investment opportunities. Co-investments also provide staff with a deeper knowledge of the skills and abilities of our general partners.



- The CEP team is closely monitoring the public finance markets. The CEP is looking to maintain its current level of commitments. However, there has been some run-off in the portfolio due to changing market conditions. Staff is selectively making high quality new commitments to replace those that have left the portfolio.

## **Conclusion**

After an extended period of years in which the PE portfolio expanded in terms of market value, complexity and number of general partner relationships, staff believes it has entered a period in which there will be a net reduction in the number of its active general partner relationships. Staff is redoubling its efforts to monitor its existing partnerships and detect those heading in errant directions while at the same time remaining alert to new (and potentially less traditional) investment opportunities.

A fundamental challenge for the team at this point in time is to identify what has changed and what will remain the same in the industry. Staff will continue to invest in partnerships with highly experienced and stable management teams, proven track records, sound investment theses and sustainable competitive advantages. Alignment of interests and utmost integrity remain requisite.





## E. Corporate Governance

### Business Plan for 2010–11FY

#### Corporate Governance—Unit Description

- Global equity assets
- \$3,081 million portfolio
- 87% domestic equity
- 13% international equity
- 97% externally managed core
- 3% internally managed co-investment
- 6 external managers
- 8 funds
- 8 internal staff

The Corporate Governance unit is responsible for the Corporate Governance Activist Manager Portfolio and for promoting best governance practices within the CalSTRS Investment Portfolio. Improved corporate governance reduces the risk associated with the Investment Portfolio and allows for more sustainable, long-term investment returns. The major issues that the Corporate Governance Program will focus on in fiscal year 2010-2011 are sustainability risk management, diversity on corporate boards, and financial market reform.

#### Business Units

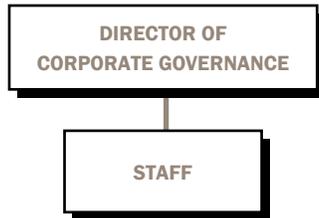
#### Personnel

➤ Portfolio Manager	1
➤ Investment Officers	5
➤ Administration & Management	1
➤ Support Staff	1
➤ Total Staff	8.0



## Corporate Governance

An organization chart depicting the structure of the Corporate Governance unit follows:



### Performance Objective / Risk Management

The Corporate Governance Activist Manager Program's objective is to augment the Global Equity performance objective of earning, over time, 21 basis points above the stated plan benchmarks, currently the Russell 3000 ex-Tobacco Index and the MSCI All Country World ex-U.S. ex-Tobacco Index.

The Corporate Governance Activist Manager Portfolio's goal is to exceed the Russell 3000 ex-Tobacco Index by 150 basis points for the U.S. component of the portfolio, and to exceed the MSCI All Country World ex-U.S. ex-Tobacco Index by 150 basis points for the non-U.S. component of the portfolio. Since we are 2.3 percent of the Total Fund, that equates to 1.38 basis points of the 60 basis points combined goal for the Total Fund.

### Risk Management of the Corporate Governance Portfolio

- Continuous monitoring of markets and market conditions
- Increased diligence on existing managers – more meetings, calls, etc.
- Increased diligence on performance attribution and contribution, investment process of external managers
- Increased diligence on the staffing and resource levels at external managers
- Review of co-investment portfolio goals and operation
- Review of emerging markets for strategy application

As mentioned previously, the Corporate Governance Program will focus on improving the CalSTRS Investment Portfolio's governance profile through advocating greater awareness of, and attention to, sustainability risk management within the investment community,



promoting greater diversity on boards of directors, and engaging the investment community on the need for financial market reform. Increasing the number of companies with whom we engage, continuing to speak publicly on issues of importance, growing our network of collaborative partners, and increasing our meetings with government and regulatory representatives will represent success in promoting best practices corporate governance.

## **FY 10/11 Continuous Improvement**

### **Managers**

- Seek out new managers in markets not currently covered (Asia)
- More favorable terms (fees, carry, holdbacks, clawbacks) from existing managers
- Better terms from new managers
- Evaluate existing manager performance for possible commitment reduction or partnership termination
- International Fund Services (IFS), a subsidiary of State Street Bank was brought on as a fund administrator to function as an independent third-party to recalculate financials, performance, and fees.

### **Sustainability**

- Better utilization of existing tools (use PRI network and clearing house more often to gather support for sustainability issues)
- Consider new areas of engagement (water, extractives, agriculture)
- Improve shareholder proposal work plan (earlier recognition of targets and engagement efforts)
- Consider new data service providers (that could provide more relevant information)

### **Diversity**

- Enlarge network of investors promoting board diversity (establish new partnerships)
- Improve information dissemination systems (websites, blogs)
- Increase transparency of the nomination process in corporate elections
- Increase the pool of qualified directors

### **Financial Market Reform**

- Continue efforts to improve the systemic market apparatus for investors



## Corporate Governance

- Evaluate the use of Proxy Access for Portfolio Application
- Increase efforts on Majority Voting, Say-on-Pay, Executive Compensation Disclosure and Metrics
- Evaluate the use of Securities Litigation for Portfolio Application

### **General Corporate Governance Enhancements**

- Launch a California Corporate Governance website to establish A network of California pension funds to develop a coalition aimed at promoting best practices in corporate governance
- Use Proxy Voting Platform in the new fiscal year to free-up staff time for more targeted work

### **Key Success Factors & Challenges**

- Activist managers navigating turbulent markets
- Identifying most-skilled activist managers to partner with
- Integrating new proxy voting platform
- Building consensus among investors on governance issues of importance
- Overcoming expected increase in corporate lobbying
- Convincing Congress that climate change legislation is needed
- Maintaining current staffing levels
- Keeping department morale high

### **Conclusion**

Staff expects that the current difficult economic circumstances, including increased market volatility will continue into the next fiscal year and that the market place will be difficult for institutional investors. Staff will work to increase the alignment of shareholder interests with that of management and boards and with our investment partners in an effort to mitigate the risk to the overall portfolio.



## F. Absolute Return

### Business Plan for 2010–11FY

#### Absolute Return / Infrastructure—Unit Description

In early 2008, the Board approved a 5 percent allocation to the Absolute Return asset class. The two assets approved within the asset class were Treasury Inflation Protected Securities (TIPS) and Infrastructure, which have equally weighted allocations of approximately of 2.5 percent or \$3.0 - \$3.5 billion each.

In July 2008, the Infrastructure Investment Policy was approved by the Board. The key objectives of the program are to provide diversification to the overall Fund, generate long-term cash flows to hedge against long-term liabilities and protect the portfolio against inflation. The performance objective was set at an inflation linked benchmark of CPI + 5 percent net return.

The Infrastructure policy guides the investment process. Based on the policy guidelines, investments will be made in the next three to five years, which will provide both time and sub-sector diversification.

In February 2010, a portfolio manager was selected to lead the Infrastructure investment efforts. The portfolio manager currently reports directly to the chief investment officer. In the interim, the director of Innovation and Risk is assisting the portfolio manager in implementing the program. Currently, there is no other staff dedicated to this program. However, as the program develops over the next three years, it is anticipated that more personnel will be needed to support investment efforts and the growth of the Infrastructure portfolio.

#### Business Units

#### Personnel

➤ Portfolio Manager

1

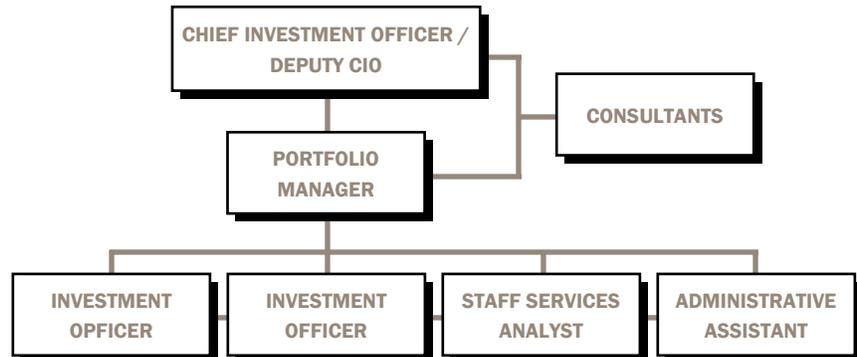


# Absolute Return

## Current Structure



## Planned 1–3 Year Structure



There are currently no assets under management in the Infrastructure portfolio. Since the appointment of the portfolio manager in Spring 2010, staff is developing the internal processes and working towards hiring a general Infrastructure consultant and a pool of independent fiduciaries with niche infrastructure expertise (e.g., project finance, engineering, etc), as well as hiring legal counsel. Also, staff is formulating the portfolio construction plan for the program, internal cash management processes, procedural manuals, etc.

## Performance Objective/Risk Management

The goal of the Infrastructure program is to provide stable long-term returns and diversification to the overall Fund. Staff will look for infrastructure opportunities that will provide a stable source of income and some capital appreciation with underlying assets generating cash flows commensurate with inflation. Infrastructure assets that have long-term cash yield with low capital expenditures will be preferred.

The overall strategy is to create a portfolio of investments within the infrastructure space that is well diversified and has underlying assets with a solid risk/return profile. To accomplish this goal, staff will need to select the appropriate investment structures and investment managers.



Risk management processes and controls will be utilized to build a robust risk analysis and reporting process (i.e., risk modeling, stress testing, exposure analysis, risk budgeting) to reduce “surprises”, identify unwanted risk, ensure key risks are managed, and promote better communication between front, middle and back-office functions.

### **2010/11 Continuous Improvement**

Detailed due diligence will guide the investment process. Staff will perform extensive due diligence on investments that will be recommended to the Board. Currently, the Board has the full discretion in deciding Infrastructure investments. An Internal Investment Review Committee (IIRC) will be formed to review the recommended investment opportunities. This committee will include the CIO, one or more director(s), one or more portfolio manager(s), and one or more investment staff from different asset classes, to constitute a minimum of three members. One of the members will be acting as the contrarian. To capture the best internal expertise, the membership of this committee may be different based on the type of the investment under review. As the Infrastructure program grows and investment staff is added to the Infrastructure program, the IIRC member composition may change for internal control purposes.

Detailed procedure manuals will be created and rigorous risk measurements will be taken as the program grows and assets are added to the portfolio. Given that Infrastructure is a developing asset class, especially in the United States; staff will also continue to learn the developments within the asset class via conferences, research material, meeting with peers, etc.

Staff will be closely involved in the creation of the Association that the Institutional Real Estate Inc. (IREI) is initiating to focus on implementing industry accepted standards for infrastructure investments.

### **Key Success Factors and Challenges**

CalSTRS is a highly desired Limited Partner (LP) by the General Partner (GP) community. This position, in addition to having an experienced and sophisticated investment team, is important to be a long-term, successful investor.



## Absolute Return

The infrastructure asset class within the United States is relatively new and developing rapidly. Infrastructure is becoming much more complex with alternative products and ownership structures. The support of the CalSTRS Investment Committee is critical to the future success of managing the Infrastructure portfolio when modifying policies to address market changes.

A strong oversight process will be a key component in building a successful program. The following initiatives are some ways that the program plans to implement an oversight process:

- **Gain insights into the risks.** Risks include but are not limited to fiduciary, market, strategic, operational, financing, country, headline, and reputation risks. Staff will continuously monitor these risks to protect CalSTRS from unexpected impacts as well as to manage the risk profile for the Infrastructure portfolio.
- **Research and attribution analysis.** Staff will research the sector on an ongoing basis while analyzing performance as the program grows.
- **Investment accounting, compliance, internal audit, and corporate governance.** Staff will focus on these areas as investments are made and focus on communicating with key members of each unit within the organization.
- **Regular oversight and monitoring of investments.** Given the long holding periods for infrastructure investments, staff will closely monitor activities related to such investments.

Following are some of the initial challenges anticipated for the program.

- Top-tier manager selection is challenging due lack of performance history. Some infrastructure fund managers are new to the industry and currently raising capital.
- Recent market dislocation is requiring more in-depth due diligence on managers' true experience and track records.
- Lack of a standardized benchmark has given investors the discretion to use a benchmark based on their strategy and portfolio objectives.
- Costs are expected to increase as the program grows to support internal infrastructure, including staffing, advisors/fund managers, independent fiduciaries, legal support, and performance and risk measurement tools (no estimates available at this time).



## Conclusion

The CalSTRS Infrastructure Program will be focused on stable, long-term, cash yielding investments with the top investors in the world, but will evolve in several ways, including:

- Focus investments initially in both the U.S. and Organization for Economic Co-Operation and Development Countries (OECD), with some emerging market exposure;
- Source co-investments, funds, direct investments, consortiums, and joint ventures for the purpose of getting access to high quality assets;
- Prioritize investments in the clean and alternative energy markets, including energy efficiency strategies, as well as in the California markets; and
- Work towards gaining status as a world class infrastructure investor that is driven by the best practices and governance in the industry.



## Attachment 3



## G. Innovation and Risk

### Business Plan for 2010-11FY

#### Innovation and Risk—Unit Description

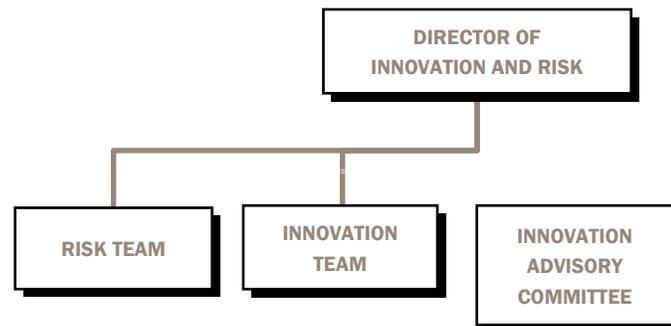
In early 2009, the Innovation and Risk (IR) unit was established to identify, research and incubate investment opportunities that currently are not utilized by the fund. In addition, the IR unit is charged with monitoring the fund-wide risks of the total portfolio.

The primary role of the Director of IR is to provide leadership, strategic planning and program oversight. The Innovation team within the Unit has two full-time experienced investment professionals dedicated to the research and incubation of new investment opportunities. The combined global investment management experience of the team members, including the Director, is more than 45 years. The scalability and efficiency of a three-person team will pay dividends as the Innovation team deploys capital later this year.

The Risk team has two full-time experienced investment professionals dedicated to managing the fund-wide risks of the Total Portfolio. The team is dedicated to developing a risk management process that focuses on both quantitative and qualitative risks.

#### Business Units Personnel

➤ Innovation	2.5
➤ Risk	2.5
➤ Support Staff	1.0
➤ Total Staff	6.0



#### Innovation Portfolio

The Innovation Portfolio's allocation is not to exceed the lesser of 1.5 percent of the total fund assets or \$2 billion. New strategies in the Innovation Portfolio must demonstrate success within three years of the initial investment before CalSTRS will commit large dollar amounts to the strategy. Each new strategy pursued is expected to improve the risk/return efficiency of the Total Fund by increasing the fund's expected return while maintaining or decreasing the level of risk or by decreasing its risk while maintaining or increasing expected return. To date, staff has not deployed capital as the Unit was focused on



## Innovation and Risk

establishing an analytical framework and tools. Global Macro, the first strategy approved by the Investment Committee, is expected to be implemented during the 2010/11 fiscal year.

Subsequent to a thorough analysis, internal review and approval by the Director of IR, the Innovation team presents the investment merits of a strategy to the Chief Investment Officer (CIO) and consultant (e.g., general or specialized independent consultant, if required) for final approval to incubate the strategy in compliance with the Innovation Portfolio Policy. In addition, staff has formed an Innovation Advisory Committee (IAC) consisting of the CIO and a subset of Directors from CalSTRS' other asset classes. The purpose of the IAC is to provide oversight to the Innovation team as well as determine if strategies should be "graduated" from the Innovation portfolio. Within the three-year incubation period, the Innovation team shall conduct a full assessment of the investment strategy and determine if the strategy should receive a larger allocation or be terminated.

### **Risk Management**

The Risk Management team is responsible for establishing a comprehensive framework to measure and manage the risk of the Total Portfolio. By collecting, maintaining and evaluating historical and forward-looking data concerning fund-wide risks, the team can assess the total fund risks. To mitigate unacceptable levels of risk, the team will proactively alert the CIO and Investment Directors to address these risks. The risk management process will strive to minimize any threat to CalSTRS' financial objectives of: 1) generating out-performance relative to the benchmark and 2) providing a return at least equal to the 8% hurdle rate.

Additionally, the Risk Management team is responsible for enterprise-wide risks for the Investment Branch. This includes managing compliance, business continuity and audit liaison roles. The team collects and monitors the Campaign Contribution and Gift Disclosure ("pay to play") Conflict of Interest reporting of all investment partners, including third party and placement agents. The team is also responsible for the Investment Branch Ethics Pledge and is creating a Personal Trading Policy for staff to regularly report their personal investment transactions. Additionally, the team updates, trains and tests Investment staff for the Investments Business Continuity Plan (IBCP).

### **Performance Objective**

To assess the benefits of the Innovation Portfolio's first strategy, Global Macro, staff analyzed the strategy's low correlation to the Total Portfolio, positive asymmetric return



distribution, and historical outperformance during periods of financial distress. Based on this analysis, Global Macro was deemed to have the potential to both enhance the return and reduce the risk of the total fund.

Global Macro is currently in the second phase of this framework to determine the optimal characteristics including concentration of sub-strategies, investment horizon, investing style and trading methodology. Once the optimal portfolio has been determined, staff will focus on the third phase, which is to select the best Global Macro managers that fit the parameters of the portfolio. Innovation will also hire a hedge fund consultant during the first quarter of the fiscal year to assist in portfolio construction, manager selection, and both portfolio-level and manager-level monitoring.

The Innovation team has also researched and presented the role of commodities as an inflation-hedge, the various benchmarks and investment vehicles available, and the role of active and passive investing. On June 3, 2010, the Investment Committee approved an allocation to commodities. This fall, the Committee will review and approve policies as well as an implementation plan.

During the 2010/11 fiscal year, staff will focus on implementing commodities as well as the global macro hedge fund program. Staff will also present an education paper on Liability Driven Investing and focus on identifying at least two more opportunities to add to the Innovation Portfolio.

## 2010/11 Continuous Improvement

### Innovation Portfolio

The Innovation team's mandate is in-line with this year's theme of "Continuous Improvement" by identifying strategies that will improve the total fund's risk-adjusted returns. Over the past twelve months, the Innovation team has been developing a framework to evaluate, implement and incubate innovative strategies. This framework entails three steps:

1. **Assess risk and performance of strategy.** The first step is to determine whether a new strategy improves the total fund's risk/return efficiency by increasing its return, reducing its risk or a combination of both.
2. **Implement strategy.** If the strategy passes the first step, the second step entails developing the procedures for implementing, managing and monitoring the new strategy.



## Innovation and Risk

3. **Incubate and monitor strategy.** The final step involves selecting the best managers within this strategy and negotiating appropriate terms to access the strategy.

The team will implement and continue to refine the framework during the 2010/11 fiscal year.

### Risk Management

Over the next fiscal year, the Risk Management team plans to improve the fund-wide risk management process. These improvements include increased reporting frequency, greater granularity and refined risk measurement of the Real Estate and Private Equity portfolios. The risk reports will aid senior investment management staff in the investment decision making process. This requires an understanding of how the portfolio may behave in certain market environments and deciding how to manage or mitigate the risks embedded in the portfolio. The risk team intends to continually improve the risk monitoring, analysis and reporting process. This will be accomplished by the following:

- **Enhance data for modeling.** The goal is to increase the data quality of public fixed income assets by transferring terms and conditions from BlackRock, the Fixed Income system, to BarraOne, the risk management system. The risk team will also evaluate the effectiveness of MSCI Barra's upcoming real estate model.
- **Increase reporting frequency.** The risk team will increase reporting frequency from monthly to daily.
- **Design proprietary risk report framework.** The risk team will utilize information from quantitative reports and combine them with qualitative data to enhance our ability to manage portfolio risk. For example, the team is considering the measurement and monitoring of leverage and liquidity at the total portfolio level.
- **Identify and capture total portfolio drivers of return.** The risk team will work with each asset class to determine the primary return drivers.
- **Stress test data.** The risk team will stress the portfolio under various macroeconomic conditions and market events. This will help staff to better understand how the portfolio may perform when unexpected changes in inflation, interest rates or economic growth rates occur.



## Key Success Factors and Challenges

### Innovation Portfolio

To continuously improve the evaluation, implementation and monitoring processes, the Innovation team is focused on the following:

- **Develop a scaleable, automated ranking system for the innovation strategy pipeline.** A plethora of ideas are suggested to the Innovation team by internal staff, external partners, the Committee and others. With the quantity of ideas to be considered and limited staff, this system will be critical to assist staff in identifying the most compelling opportunities to investigate. However, finding sufficient data to analyze may be a challenge.
- **Transfer knowledge from consultants.** The complexity of hedge funds requires extensive due diligence and monitoring that focuses on both the investment and operational processes of a manager. Having a hedge fund consultant work alongside staff to assess and monitor these aspects will guide staff in their analysis. Valuable insight can also be gained from other consultants as the Innovation team considers new strategies. To date, staff relies on Pension Consulting Alliance and State Street Investment Analytics to provide perspectives on how CalSTRS' peers view innovative strategies and analyze these strategies.
- **Measure and monitor risk effectively.** Innovative strategies often present new types of risks that must be captured, measured and anticipated. Staff will work towards developing a system to identify red flags that anticipate challenges and establish action steps to address these risks.
- **Establish transparent relationships with managers.** Global Macro is one of the most discretionary strategies with flexibility to trade in many markets using many types of instruments. Having an open dialogue with managers will be critical to assess changes in the risks of the managers' portfolios. IR will apply market knowledge gained from Global Macro managers to CalSTRS' monthly tactical asset allocation decisions and performance attribution analysis. Staff will also focus on effective communication with the Committee regarding portfolio performance and risks.
- **Cost Reduction.** For each strategy considered, staff assesses the returns to ensure that most of the return can be attributed to alpha, as opposed to beta. Beta is the return that can be earned from overall market returns, generally by passively holding an index. The cost to earn beta returns should be negligible. On the other hand, alpha requires skill and is more difficult to generate. Consequently, alpha strategies will command higher fees. However, staff will



## Innovation and Risk

thoroughly analyze the appropriateness of the level and structure of the fees paid for alpha strategies with a focus on aligning managers' interests with CalSTRS.

- **Human Resource Management.** Since the IR unit is tasked with reviewing many potential investment opportunities, staff will require additional resources to build the portfolio, incorporate more complex securities, and manage the risks associated with them. Staff will be conscientious in weighing the “buy versus build” option along with keeping its cost structure flexible.

### Risk Management

There are several challenges in measuring risk at the total fund level, including:

- **Improve the risk measurement of private assets (e.g., real estate and private equity).** Approximately 25 percent of the CalSTRS Portfolio is comprised of private assets (Private Equity and Real Estate, and soon, Infrastructure investments). Given the limited data available on private investments, it is difficult for the risk model to estimate the inherent risk in these investments. Currently, these securities are proxied in the BarraOne risk system. In the near future, MSCI Barra will introduce a new Real Estate model. It is anticipated that this new tool will vastly improve the quality of risk metrics for the real estate asset class.
- **Communicate fund-wide risk.** Fund-wide risk management must be integrated into the investment decision making process to be effective. It will be important for the Risk team to communicate in a timely manner both market and non-market risks such as counterparty, operational, leverage and liquidity risks.

### Conclusion

The Innovation and Risk unit will continue to identify strategies that are less correlated, diversify CalSTRS' beta exposures and have lower volatility. Staff will also continue to reassess traditional methods of asset allocation, hedging and investing. Our focus is to stay on the leading edge of financial tools, concepts and risk management. Furthermore, staff will aggregate asset class information to best position the total Fund throughout the ups and downs of the market.



The unit will also seek to improve the fund-wide risk management process for the Investment Branch. The objective of the risk team is to complete building and maintaining a risk management process for the total portfolio that meets two primary objectives:

1. Identify and monitor the relative performance risk: total portfolio return vs. policy portfolio return; and,
2. Identify and monitor the absolute performance risk: total portfolio return vs. absolute return hurdle (e.g., 8%).



## Attachment 3



## H. Operations

### Business Plan for 2010-11FY

#### Operations—Unit Description

Investment Operations provides middle-office support and services for internal and external portfolio management activities. We manage a segment of the cash allocation which is used to fund benefit payments, ensure end-of-day cash is invested and that funds are made available to cover purchases in other asset classes or investment programs. In addition, Investment Operations manages the processing of daily cash movements, transactions and settlements, cash forecasting, performance reporting and portfolio controls over cash, accruals and positions.

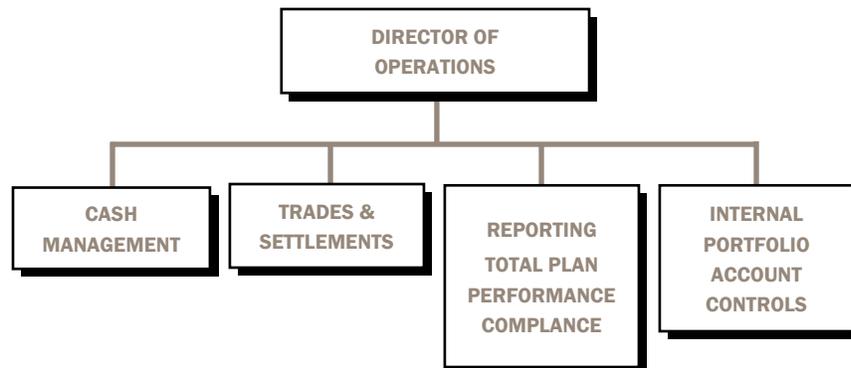
It is important that someone other than the Portfolio Manager has responsibility for the day-to-day business management for the Investment office to enable the Portfolio Manager to concentrate solely on generating alpha. Our focus is on all aspects of asset management operations from new program launches to coordination of the external audit for the Investment office, operational risk reviews, technology reviews, supporting investment managers' requirements - all from an expert institutional investor perspective. We provide special services based on a skilled program knowledge and implementation track record for all asset classes.

Investments must leverage and invest in technology to manage a multifaceted \$130 billion Fund with a staff of about 100 professionals. We are at the center to coordinate and facilitate the delivery of technology from our internal information technology staff and strategic business partners to the Investment office.

<b>Business Units</b>	<b>Personnel</b>
➤ Cash Balances , Trades and Settlements	7.0
➤ Portfolio Controls, Reporting & Performance	9.0
➤ Administration & Management	1.0
➤ Support Staff	1.0
➤ Total	18.0



# Operations



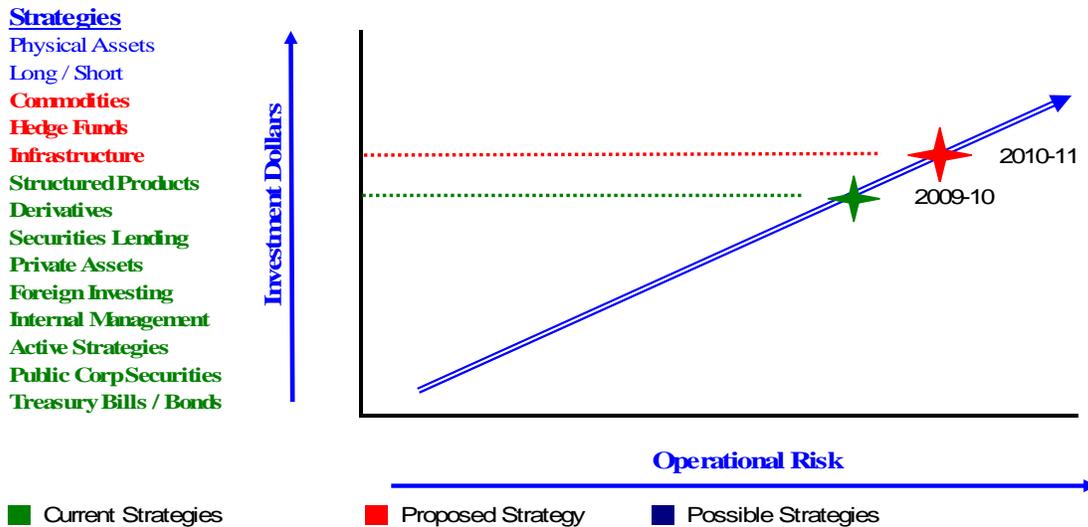
## Performance Objective / Risk Management

Investment Operations' overall goal is to align our services and functions to investment activities and programs that cut across all asset classes for the success and implementation of the Investment Management Plan. We seek to minimize operational risks and establish effective controls by using portfolio management tools to perform independent quality verifications of the custodian and front office systems. We strive to provide management with the highest quality investment reporting and value-added services used to make sound investment decisions.

Strategic or tactical asset allocation shifts have a wide range of potential impact on Operational resources and risks. There are many facets to consider for instance transaction volume, complexity and implementation speed. Our cash asset allocation target is one percent and with our non-investment negative cash flows, constant vigilance is required to ensure sufficient cash balances are available to pay benefits and to make contributions to asset classes separate from cash.

The operational risk complexity has increased from prior year as a result of additional internal equity management (Canadian index, Russell 2000 index, Transition portfolios), internal fixed income management (Global TIPs, Opportunistic Currency Overlay, TALF), and the external Currency Program.





With dedicated CalSTRS staff and the assistance of major service provider's (i.e. State Street Bank), we have been successful in establishing internal controls, policies, and procedures which are used on a daily basis to mitigate operational risks. Operational risk refers to potential causes of loss arising from deficiencies in internal controls, human errors, physical systems failures, and other business execution risks, as well as external events. Operations' staff works closely with internal and external managers/advisors to refine our processes and functions servicing assets on a post trade basis.

### **FY 10/11 Continuous Improvement**

Investment Operations' specific objectives for this year are:

- Support all Investment office business plans and implement new investment strategies and initiatives originating from each asset class;
- Creating efficiencies and reducing operational risks:
  - ◇ Implementing an end-to-end internal equity trade order management system (OMS) similar to Fixed Income's OMS,
  - ◇ Automating the trade confirmation process for debt securities, and
  - ◇ Implementing an electronic trade flow system for the Real Estate and Corporate Governance divisions;



## Operations

- Continuing to work with other Business Units on the following:
  - ◇ Researching the asset allocation change to the Defined Benefit Supplemental and Cash Balance Programs to include private assets (Real Estate and Private Equity),
  - ◇ Working on the Investment Accounting Project, which focuses on the general ledger and financial reporting controls of investment activities such as recording derivatives and other complex securities for financial reporting, and
  - ◇ Developing and implementing a full funding plan for the Medicare Premium Payment Program (MPPP).
- Replace or upgrade existing Real Estate Cash Management process taking into account audit recommendations.

### Key Success Factors and Challenges

Investment Operations is the middle office, and with dedicated staff, we manage the day-to-day operations and the integrated technology solutions across the Investment office. Our staff has the specialized knowledge, skill and expertise needed to support the Investment Policy and Management Plan, basic investment programs, and initiatives. We leverage technology to a large degree, which allows us to keep overall personnel costs down. Additionally, we leverage and manage strategic partnerships with various vendors and service providers such as State Street Bank, Blackrock, Thompson, and Omgeo.

### Keys to our success:

- Due to the complex nature of Investment programs and investments, it is extremely important to have a qualified and experienced professional staff. Therefore, attracting, developing and retaining quality investment professionals are vital to the success of our operation.
- Maintaining effective communication across CalSTRS' enterprise (largely with Human Resources, Legal, Accounting, Contracts, and Enterprise Information Technology) along with external business relationships is critical. As our business evolves, we must also adapt to change and be able to create solutions that best meet the needs of all affected parties while maintaining an effective internal control structure.
- Working with other Investment divisions to assess the risks and develop the processes associated with International Swap & Derivative Association (ISDA) Agreements, infrastructure, and hedge funds has been fundamental to our service.



**Potential deterrents to our success:**

- The government structure we operate under does not allow for the flexibility or efficiency in hiring applicants directly from private industry. Frequently, staff hired in Investment Operations are soon attracted to front office positions which have higher classifications and salary structures. Investment Operations annual turnover rate is twenty percent; two-thirds of that turnover rate represents internal transfers within the Investments office.
- The uncertainty of the State of California's financial condition places a burden on our ability take on new initiatives and meet daily critical functions with reduced staff.

**Conclusion**

As CalSTRS' Investment programs evolve, the corresponding operational risks must be managed and mitigated. New complex strategies, initiatives and internal management increases workloads and introduces risks that must be controlled. To contend with these portfolio intricacies and higher transaction volumes requires policies, processes, management tools and knowledgeable professionals that have the financial competencies to perform the work.

Providing support and services to each asset class is our main goal. We strive to incorporate new investment strategies and initiatives into our workflow while managing the day-to-day operational processes. This requires robust prioritization by Investment Management since new investment strategies and initiatives compete for existing resources. Projects require proper controls, documented processes, risk assessments, and effective implementation.

As our use of investment products like infrastructure, commodities, structured products, and derivatives increase, we will look to develop staff competencies that are essential to support our investment programs and the challenges we all face in an increasingly knowledge-based economy. These investments and the blurring of investments between asset classes will make performance reporting more challenging. It will be necessary to develop staff that focus on compliance, performance analysis, measurement and reporting across the portfolio.





State Teachers' Retirement Fund

Teachers' Retirement Fund Schedule of Advisor & Consultants in effect for the year ended June 30, 2011, and remaining in effect for the fiscal year 2011-12.

**Advisors and Consultants:**

Altius Associates Limited  
Altura Capital Group  
Bard Consulting  
Cambridge Associates  
Credit Suisse AG, New York Branch  
David L. Bonuccelli & Associates, inc.  
DLJ MB Advisors On Behalf of Credit Suisse Fund \*  
Houlihan Lokey Howard & Zukin Financial Advisors, Inc.  
Pacific Corporate Group, LLC  
Pension Consulting Alliance (General Consultant)  
Pension Consulting Alliance (Private Equity Consultant) \*  
The Townsend Group  
Valuation Research Corporation

\* These contracts expire during fiscal year 2011-12.



# CALSTRS SUSTAINABILITY<sup>2</sup>

CalSTRS Investments Branch Business Plans for Fiscal Year 2011-12

## CalSTRS Investments Branch Value Statements

### Respect

**We strive to not only treat others as we would like to be treated, but to go the extra mile and treat others as *they* would like to be treated.**

### Personal Development

**We support an individual's career and personal goals.**

### Balance

**We encourage employees to balance a strong work ethic with interests outside of the office.**

### Worth

**We strive to recognize everyone's efforts and contributions to the organization.**

### Challenge

**We are honored to accept the challenges placed upon us and strive to create an innovative work environment.**

### Purpose

**We work toward a common goal, thereby making a difference for others and ourselves.**

### Honesty

**We are truthful to ourselves, to peers, to supervisors, the Board and to the organization; our word is our bond.**

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## CalSTRS Investments Branch Business Plan and 10-Year Financial Plan

### Investment Risk Climate - Fiscal Year 2011-12

Fiscal year 2010-11 is closing out to be one of the best years in the CalSTRS Investments Branch history. Our fiscal year investment return is around 20 percent, the second or third highest of all time. We were named the Large Public Pension Investment Manager of the Year by Institutional Investor magazine. It was the type of year you'd be national or world champs and, while most sports teams set a goal to repeat, we know very well in the investment business that the top is more of a mountain peak than a plateau. Stock market history shows, once at the top, there's typically a downside the next year. Look at the S&P 500 index in years following a positive 30 percent or greater year.

<b>1936</b>	<b>33.92</b>	<b>1937</b>	<b>-35.02</b>
<b>1938</b>	<b>31.14</b>	<b>1939</b>	<b>-0.42</b>
<b>1945</b>	<b>36.41</b>	<b>1946</b>	<b>-8.07</b>
<b>1950</b>	<b>31.74</b>	<b>1951</b>	<b>24.02</b>
<b>1954</b>	<b>52.62</b>	<b>1955</b>	<b>31.55</b>
<b>1955</b>	<b>31.55</b>	<b>1956</b>	<b>6.56</b>
<b>1958</b>	<b>43.37</b>	<b>1959</b>	<b>11.98</b>
<b>1975</b>	<b>37.21</b>	<b>1976</b>	<b>23.85</b>
<b>1980</b>	<b>32.42</b>	<b>1981</b>	<b>-4.91</b>
<b>1985</b>	<b>32.16</b>	<b>1986</b>	<b>18.47</b>
<b>1989</b>	<b>31.68</b>	<b>1990</b>	<b>-3.12</b>
<b>1991</b>	<b>30.48</b>	<b>1992</b>	<b>7.64</b>
<b>1995</b>	<b>37.57</b>	<b>1996</b>	<b>22.95</b>
<b>1997</b>	<b>33.36</b>	<b>1998</b>	<b>28.57</b>

Of the 14 years since the Great Depression that had a positive 30 percent return or more, five of the following years were negative and half were below the historic average for the U.S. stock market. In fact, if you toss out the go-go internet craze years in the late 1990's, the 12-year arithmetic average return is a paltry six percent. While at least positive, it is far from our expected return for U.S. stocks. With the European debt crisis, weak U.S. housing market and anemic global economy, it's not hard to be very worried about financial markets in fiscal year 2011-12.

With history and the current climate all pointing to a rough and tumble year, the theme for this year's Investments Branch business plan is straightforward and on the core mission: **"Make Money and Protect the Assets"**.

Like most things in life, easier said than done. But the theme is core to our mission in the Investments office of achieving a 7.75 percent annual return and diversifying the assets to reduce risk. The annual goal starting fresh each July 1<sup>st</sup> is to make \$10 billion dollars of profits. With our negative cash flow, that puts us right about on target to earn the actuarial assumed rate. It is also a neat slogan the staff can repeat and recall all year.

### **Make Money**

So how do we go about making \$10 billion in profits in what might be a very tough year. Obviously we can't squeeze that type of profit from a negative or flat global equity market, but we can deploy some strategies to make added profit over what the markets give us. First and foremost is to increase the amount of internally managed assets as has been discussed in the previous three Investment Committee meetings. Right off the bat, it will save us on fees which will improve the bottom line return. Both the Global Equity and Fixed Income business plans outline portfolios and ideas that can be managed internally at one tenth (1/10<sup>th</sup>) the cost of external money managers.

The second idea to help generate the \$10 billion profit is to expand the Innovation portfolio. In fiscal year 2011-12, we will roll out the Global Macro hedge fund portfolio and initial allocation to commodities, as well as several other ideas. Individually, they are not large enough to move the needle for the Total Fund but, added together, they can help the bottom line. Steven Tong's Innovation and Risk business plan outlines just some of the ideas brewing in our laboratory.

The other new addition to the portfolio that may be very timely is the effort to increase our Inflation Sensitive assets within the Absolute Return portfolio. Led by Deputy CIO John Petzold, we will continue in fiscal year 2011-12 to expand the portfolio exposure to real assets and inflation linked investments. Several economists have predicted that, with the sheer size of the global monetary stimulus, inflation may increase in the near future. Similar to the Innovation portfolio, the sheer size of the exposure is not large enough compared to our huge asset base, but it may well serve as yet another push in the fiscal year to help generate the goal of \$10 billion in profit.

Margot Wirth's Private Equity business plan and Trish Taniguchi's Global Equity business plan also outline areas that will help us generate our profit goal for the fiscal year. Michelle Cunningham outlines ideas to both protect the assets if interest rates do in fact rise during the year, but also ways to make money through different fixed income instruments.

### **Efforts in Fiscal Year 2011-12 to Protect the Assets**

If our concerns for the next fiscal year prove out, we will be playing defense for most of the year. The key tool we have used historically is diversification across multiple assets; yet, as we have discussed several times, diversification is not as effective in this globally linked and daily connected world. To help, we have developed new tools; the new Risk Factors to not only measure market risks but, in the fall of 2011, outline strategies to help navigate the portfolio during turbulent times. These new risk strategies will be the core Investment Committee objective for the first half of fiscal year 2011-12. These could include expanding or enhancing policies to allow the use of more derivative instruments or wider ranges to allow a dynamic asset allocation overlay. At the center of all of these will be the effort to make the huge portfolio a bit more nimble in a highly dynamic investment climate.

The second protection effort and likely most critical next year, will be active asset allocation shifts to the Total Portfolio. To be very clear, we are not proposing market timing or short-term trading of the massive portfolio. The objective will be strategic tilts or over- and under-weights versus the target allocation to factor in long-term market conditions. An excellent example of this is the current minimum weighting in Fixed Income. With two red flags signaling risk factors, the slope of the yield curve and the historic low interest rates, it warrants an asset allocation tilt. Over the past six years, the TAAC (Tactical Asset Allocation Committee) comprised of the CIO, directors and portfolio managers, has been able to achieve added value with their tilts each and every year. But past performance does not foretell future results and this year maybe the most challenging of all. If the markets are as dynamic and soft as we fear, this team will be pressed more than ever to make timely and solid decisions that add considerable value to the portfolio. Within each director's business plan, they also attempt to assess the current risk within each asset class.

The third effort will be in the one asset class that has yet to recover from the global financial meltdown in 2008, real estate. With the simple and straightforward goal of "buying low and selling high" the Real Estate unit is going to continue to expand our core real estate portfolio in line with the Investment Committee's instructions. Since the asset class hasn't rebounded, it might be a bit more immune to fluctuations in the global equity markets. However, since real estate is pushed by the job market, a continued anemic economy may delay any price rebound. Mike DiRe's business plan outlines their plans to transition to the new real estate structure.

Year in and year out a key area we strive to protect the assets in is Corporate Governance. Anne Sheehan's business plan outlines core areas to help promote global best practices for corporations and across the financial industry. Another core area we use to protect the assets is by solid accounting and custody of the assets. Debra Smith's business plan details our best-in-class front and middle

office systems for the Investments branch. Her largest endeavor is helping Robin Madsen modernize the back office accounting system. The Investment Accounting Project (IAP) must be completed by calendar year-end in order for the larger enterprise wide Corporate Accounting and Reporting Project (CARM) to begin implementing their solutions. The investment Branch has already spent considerable resources to help implement IAP and will do whatever it takes to get the project done by year end.

### **10 Year Financial Plan**

Since 2002, the Investments branch has been developing and managing to a 10-year financial plan. Despite coming through one of the most volatile and difficult decades in financial history, the experiences fell within the plan and it served as an invaluable tool. As still one of the handful of pension plans to use a financial planning tool, CalSTRS remains a leader in planning our work and working our plan.

On the following pages, this plan is first and foremost conservative. The best piece of evidence to prove that point is that it assumes that, with the same size assets as two of our present day peers, CalSTRS will manage the same amount of money with 2/3rds the staff and at 3/4ths of the total cost. While internal staff pushes for a more aggressive plan, the budget officials push for a more conservative plan; therefore, this is a nice balance and is acknowledged to be lean compared to U.S. and global peers. The model assumes a lower growth of personnel (PY's – personnel years) than prior plans. This is to maintain the approximate economies of scale as assets grow. It also assumes that external investment fees grow. While one would hope fees decline over time, we have found that not to be the case over the past 20 years. In fact, new strategies and innovative ideas have proven to be very expensive, at an average of 200 basis points of cost.

## Portfolio Growth Forecast

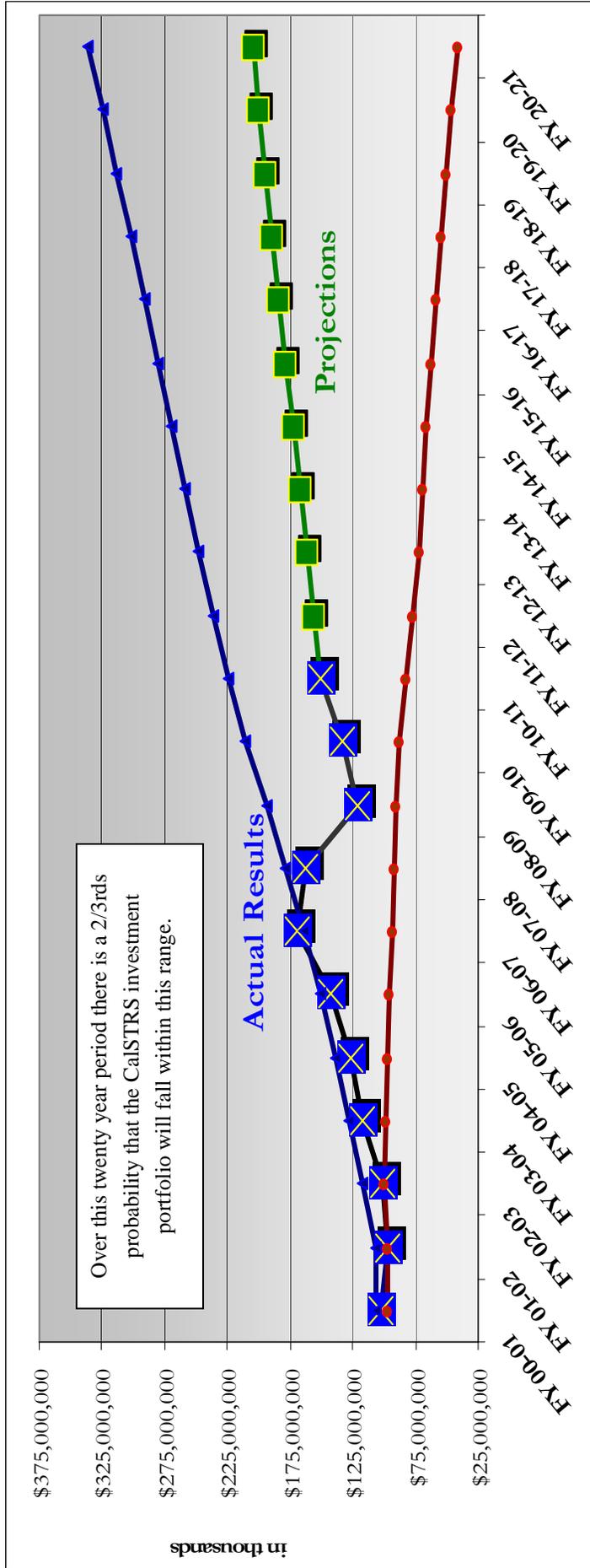
	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Defined Benefit Plan	\$ 142,040,000	\$ 147,649,000	\$ 153,372,675	\$ 159,108,626	\$ 164,939,773	\$ 170,865,255	\$ 176,805,150	\$ 182,727,536	\$ 188,615,101	\$ 194,418,234	\$ 200,113,601
Def. Benefit Supplemental	\$ 8,048,000	\$ 8,027,040	\$ 7,966,499	\$ 7,807,169	\$ 7,651,026	\$ 7,098,005	\$ 6,556,045	\$ 6,024,924	\$ 5,504,426	\$ 4,994,337	\$ 4,494,451
Pension2 <sup>®</sup> *	\$ 301,103	\$ 345,213	\$ 393,735	\$ 447,108	\$ 505,819	\$ 570,401	\$ 641,441	\$ 719,585	\$ 805,543	\$ 900,098	\$ 1,004,108
<b>Total (less Pension2)</b>	<b>\$ 150,088,000</b>	<b>\$ 155,676,040</b>	<b>\$ 161,339,174</b>	<b>\$ 166,915,795</b>	<b>\$ 172,590,798</b>	<b>\$ 177,963,261</b>	<b>\$ 183,361,195</b>	<b>\$ 188,752,460</b>	<b>\$ 194,119,527</b>	<b>\$ 199,412,571</b>	<b>\$ 204,608,052</b>

\*PENSION2 assets: 403(b), 457, Roth IRA & IRA assets managed outside the Investment Branch and not included in growth estimate.

**Low Return Environment\*\*** \$ 82,577,908 \$ 77,533,908 \$ 72,183,908 \$ 69,376,449 \$ 66,118,883 \$ 62,384,757 \$ 58,067,532 \$ 54,153,976 \$ 50,040,829 \$ 45,717,912 \$ 41,174,525

**High Return Environment\*** \$ 223,546,591 \$ 236,609,864 \$ 247,822,555 \$ 259,403,134 \$ 269,643,531 \$ 280,186,074 \$ 290,962,796 \$ 301,955,453 \$ 313,161,646 \$ 324,547,830 \$ 336,108,343

\*\*Return assumptions based on CalSTRS' capital market assumptions for 10 year period. High and low estimate based on 10 year standard deviation for CalSTRS' current asset mix. June 30, 2000 starting date.



This forecast is based upon the current CalSTRS capital market assumptions over the next ten years. Actual results will vary widely. Since this chart is based upon a ten year average, individual years return can and will vary significantly. The purpose of the chart is to help explain the potential growth in the investment portfolio. Asset allocation shifts and changes in the assumptions will move the chart. As described above this only includes one standard deviation, or two thirds of the potential outcomes. This information is for estimation of the CalSTRS business plan and should not be used for any other forecast without the consultation of the CalSTRS Investment Branch.

# CalSTRS Investment Branch 10 Year Comprehensive Financial Plan Investment Branch

Fiscal Year	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Total Assets (in billions)	\$ 150.1	\$ 155.7	\$ 161.3	\$ 166.9	\$ 172.6	\$ 178.0	\$ 183.4	\$ 188.8	\$ 194.1	\$ 199.4	\$ 204.6

### Investment Branch Support Budget

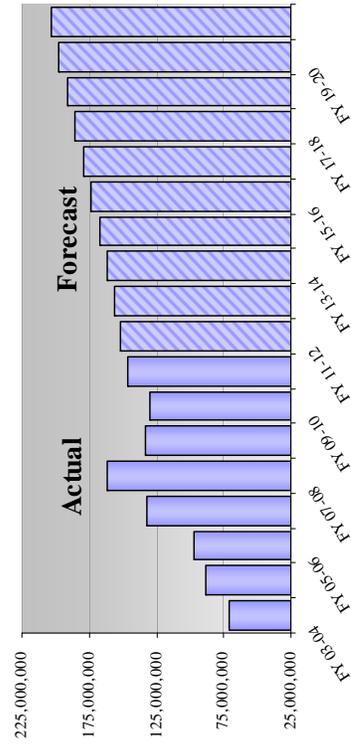
1 Total Staff - PY's (Personnel years)	110	115	119	124	128	132	136	140	144	148	152
2 Salaries (w/ Benefits & Est. Incentives)	\$ 17,723,742	\$ 18,472,148	\$ 19,284,715	\$ 20,169,668	\$ 21,041,085	\$ 22,003,379	\$ 22,820,445	\$ 23,574,948	\$ 24,704,573	\$ 27,819,617	\$ 28,921,516
3 General Expense & IT exp.	\$ 145,448	\$ 149,198	\$ 156,658	\$ 164,491	\$ 172,715	\$ 181,351	\$ 190,419	\$ 199,940	\$ 209,937	\$ 220,433	\$ 231,455
4 Travel (In State, U.S. & Non-U.S.)	\$ 781,372	\$ 863,372	\$ 922,802	\$ 986,365	\$ 1,054,384	\$ 1,127,177	\$ 1,205,084	\$ 1,288,469	\$ 1,377,723	\$ 1,473,266	\$ 1,575,546
5 CP&S & Misc. (Print, Comm., Training)	\$ 490,550	\$ 500,050	\$ 521,354	\$ 543,686	\$ 567,101	\$ 591,659	\$ 617,424	\$ 644,462	\$ 672,845	\$ 702,648	\$ 733,953
<b>6 TOTAL SUPPORT BUDGET</b>	<b>\$ 19,141,112</b>	<b>\$ 19,984,768</b>	<b>\$ 20,885,529</b>	<b>\$ 21,864,210</b>	<b>\$ 22,835,285</b>	<b>\$ 23,903,566</b>	<b>\$ 24,833,371</b>	<b>\$ 25,707,818</b>	<b>\$ 26,965,077</b>	<b>\$ 30,215,964</b>	<b>\$ 31,462,470</b>

### Continuous Appropriation

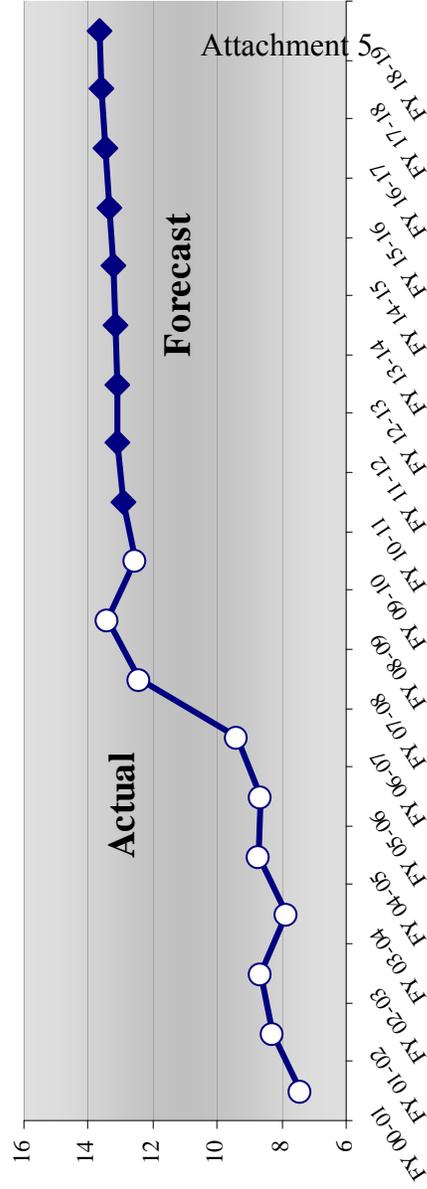
7 Investment Managers	146,311,441	152,089,116	155,708,920	161,532,243	167,452,213	173,467,955	179,498,329	185,510,927	191,488,175	197,379,703	203,161,825
8 Custodian & Legal Fees	9,375,253	9,844,016	10,336,216	10,853,027	11,395,679	11,965,463	12,563,736	13,191,922	13,851,519	14,544,095	15,271,299
9 Consultants Fees	7,525,050	7,901,303	8,296,368	8,711,186	9,146,745	9,604,083	10,084,287	10,588,501	11,117,926	11,673,822	12,257,514
10 Corp. Gov. (Staff & expenses & Inv Mngrs)	3,256,200	3,304,049	3,594,024	3,736,186	4,163,655	4,314,604	4,652,698	5,171,276	5,289,584	5,554,063	5,831,766
11 Research & Market Data	2,352,505	2,493,655	2,643,275	2,801,871	2,969,983	3,148,182	3,337,073	3,537,298	3,749,536	3,974,508	4,212,978
12 Risk systems (Barra, Bloomberg, Blackrock)	3,601,680	5,817,781	7,166,848	7,596,859	8,052,670	8,535,830	9,047,980	9,590,859	10,166,310	10,776,289	11,422,866
13 Trading Systems	1,140,250	1,208,665	1,281,185	1,358,056	1,439,539	1,525,912	1,617,466	1,714,514	1,817,385	1,926,428	2,042,014
15 Misc.	866,752	901,422	937,479	974,978	1,013,977	1,054,536	1,096,718	1,140,587	1,186,210	1,233,658	1,283,005
<b>16 TOTAL CONTINUOUS</b>	<b>\$ 174,429,131</b>	<b>\$ 183,560,006</b>	<b>\$ 189,964,314</b>	<b>\$ 197,564,406</b>	<b>\$ 205,634,462</b>	<b>\$ 213,616,565</b>	<b>\$ 221,898,287</b>	<b>\$ 230,445,884</b>	<b>\$ 238,666,645</b>	<b>\$ 247,062,567</b>	<b>\$ 255,483,268</b>

<b>17 TOTAL EXPENSES</b>	<b>\$ 193,570,243</b>	<b>\$ 203,544,774</b>	<b>\$ 210,849,842</b>	<b>\$ 219,428,616</b>	<b>\$ 228,469,747</b>	<b>\$ 237,520,131</b>	<b>\$ 246,731,658</b>	<b>\$ 256,153,703</b>	<b>\$ 265,631,722</b>	<b>\$ 277,278,531</b>	<b>\$ 286,945,738</b>
<b>18 % of ASSETS (BPs)</b>	<b>12.90</b>	<b>13.07</b>	<b>13.07</b>	<b>13.15</b>	<b>13.24</b>	<b>13.35</b>	<b>13.46</b>	<b>13.57</b>	<b>13.68</b>	<b>13.90</b>	<b>14.02</b>

### External Investment Manager Costs (excluding Partnership Fees)



### Investment Management Costs (excluding Partnership fees)



A critical driver of our costs and an impediment to producing strong returns is our long-standing and antiquated state government business model for a financial services organization. Similar to most public pension plans in the U.S., we operate in a structure designed in the late 1970's to early 80's. As a global investment manager, our government business model hampers our efforts and results now more than ever. Several other State pension plans are having discussions around the same issue. Oregon, Missouri and a couple others are looking to implement a better business model. Some state plans such as Colorado have considerable independence from their sponsoring government while others labor under even greater restrictions than CalSTRS. The vast majority of the Canadian pension plans have moved to a different model. In each of the past five Investment Branch business plans, we have cited the Ennis Knupp study that concluded the government business model costs a fund on average 40 basis points per year. Since our current business model is over 30 years old, has not improved and has in fact gotten less effective as we have grown, it is worthy of noting it yet again in the annual business plan. If the other States continue the discussion, it is worth our time to join in and evaluate other business models and structures. The board did examine several alternative legal structures during the early part of the decade such as: establishing a joint powers authority, or a not-for-profit entity, or fully contracting out, as we were facing some immediate difficulties restructuring the compensation plan. Ultimately those compensation issues were resolved and the alternative structures were not pursued at that time, but it may be time to revisit these ideas.

With the accelerating pace and complexity of global business transactions and accompanying expectations of responsiveness by our external partners, the government business model has had an increasing impact on our ability to effectively carry out the investment mission. Over the past five years, the consequence of existing legal constraints and control practices has escalated; as other business sectors have become more efficient, in the public sector we are still tied to business processes designed to meet 20<sup>th</sup> century operational requirements. Public contracting legal requirements envisioned to provide for fair and competitive procurement thirty years ago are not allowing us to be nimble in the 21<sup>st</sup> century. As a result, engaging business partners takes too long for the current investment environment. It can take up to six to nine months to complete a formal procurement solicitation process and there is a backlog of 12 RFPs to develop and present to the business community.

To be clear, it is not a matter of diverting more staff to relieve the backlog. To date, our internal service providers have tried to be very responsive where they can, but the government model significantly slows the work process. In addition, the cost of internal services charged directly to the Investments has risen significantly over the past four years. The general expenses paid by the Investment Branch have increased from \$1.2 million to \$4.2 million per year. The direct charged expenses now exceed one quarter of our internal investment management costs.

State of California legal constraints and control practices are also designed to create operational consistency under a single business process. While the established process may be helpful to other State agencies, or in complying with requirements associated with the receipt and management of federal funds, they hamper the effectiveness of CalSTRS, where we are required to compete in a highly dynamic global investment market. In fact, they put us at a competitive disadvantage compared to other public investors and Sovereign Wealth Funds. Some level of relief and/or a new business process model must be considered. To help manage the workload and expectations John Petzold, Deputy Chief Investment Officer, will be working to establish service level agreements with all our internal service providers.

There are several interesting business ideas worth discussing and debating that are better suited for a more casual environment than the formal annual business plan. Innovative ideas on business models, the efficiency of operations, and branding will be discussed at future workshops and planning meetings.

### **Key Initiatives in Fiscal Year 2011-12**

#### **Investment Committee Work Plan**

There are four major projects to complete with the Investment Committee during the fiscal year. First is to develop new strategies and policy changes that allow us to be more nimble in periods of high risk. Second is to help integrate the new Board members in early 2012. Third is to host a Request for Proposal (RFP) and final interview for the Investment Committee's expert Private Equity Consultant. Lastly, if approved at the July Board meeting, is to engage in a review of the Global Equity portfolio near the end of the fiscal year.

#### **Staff Projects**

The second group of core initiatives is a combination of projects by staff listed on the Investment Committee Work Plan. Highlights include the increase in internal management, the efforts in climate change and the implementation of the 5-year diversity business plan.

#### **Make \$10 billion in Fiscal Year 2011-12**

The final initiative is actually the most important and both straightforward and daunting, make \$10 billion between July 1<sup>st</sup> 2011 and June 30, 2012. We have well designed policies and detailed procedures to guide us. We have hired some of the brightest investment managers across the globe, we have access to the brightest economists and researchers in the industry, and, most

importantly, the most valuable asset we have are the 110 dedicated hard-working internal investment staff. At the same time, we have challenges both on the external financial landscape and within our own interior structure. We know it will not be easy, but the staff and these business plans are up for the challenge. While there are impediments, we can and will rise to the occasion.

We accomplished the major initiatives and, again most importantly, the goal of earning \$10 billion last year. Now we just need to do it again. As we start the new fiscal year, “bring it on”.



## Global Equity Unit Description

<b>Assets</b>	<b>\$74,500,000,000</b>
<b>Expected Annual Net Profit for the Unit</b>	
• Market based net-profit goal	\$7,077,500,000
• Extra value added net- profit	\$303,960,000
<b>Total Net Profit for the Unit</b>	<b>\$7,381,460,000</b>
<b>Expected Cost to Produce Net Profit</b>	\$77,970,243

## Risk Management

### Current Level of Risk

In order to understand what risks are present in equities, it is important to summarize what happened last fiscal year. Global equity markets continued to recover during the fiscal year 2010-11 year returning nearly 25 percent in the first six months. The second half of the fiscal year proved more challenging for equities as the markets were plagued by an onslaught of negative news. Investor concerns grew regarding the possible ending of quantitative easing, the sustainability of global economic growth as political upheaval in the Middle East pushed oil prices higher, and authorities in European and Asian nations continued to rein in their liquidity measures.

A slightly longer-term perspective on risk takes us back to March of 2009, when the markets recorded decade lows. Since that time, the markets, as illustrated by the S&P 500, are up 98 percent. With such a dramatic recovery off the lows, a simple lack of continued good news could lead to a market correction. Looking forward, Global Equity faces both challenges in continuing to generate positive absolute returns while also achieving positive alpha.

One of the most significant “game changing” issues going forward is the level of inflation both in the United States and globally. Inflation is of particular concern because of the impact it has on market performance. As inflation rises beyond the target rate, the Fed will likely be forced to raise interest rates, which directly impacts economic growth and therefore equity valuations.

From 1920 to 2010, the S&P 500 has averaged a 7.4 percent annual return while the average rate of inflation (CPI-U) has been 2.9 percent. From a long-term perspective, since equities outperform inflation, equities appear to be a hedge. When looking at shorter periods of time however, a different story is told. During high inflationary environments, equities have historically suffered. In highly competitive industries, rising input costs cannot be passed along the chain to end customers in the short-term, which squeezes profit margins.

Unfortunately, inflation is not the only risk anticipated to impact equity returns over the next fiscal year. So called global interconnectedness means everything from sovereign debts (e.g., Greece) to political instability makes the worldwide drivers of equity risks and returns very similar. One of the major positives over the last year was the continued record recovery in earnings. Going forward, it is not clear that high earnings growth can continue. Many other speed bumps remain to continued global growth such as the state of the housing market, high levels of joblessness and whether any additional quantitative easing is necessary or even possible.

### **Efforts in Fiscal Year 2011-12 to Protect Assets**

The next fiscal year will require that Global Equity considers protecting the significant gains both from the lows of 2009 and last fiscal year. Wisely protecting gains in equities is neither simple nor costless. Recognizing that some reasonable cost is acceptable to protect the strong recent gains in equities will lead to using accepted portfolio construction methodologies such as holding tactical cash balances (generally less than 5%). Another attractive strategy is rebalancing to areas that offer defensive characteristics (e.g., utilities).

In an inflationary environment, certain segments of the equity market are positioned to outperform (e.g., companies with pricing power). Protecting equities in inflationary environments may require different sources of passive exposure than simple broad benchmarks. Active managers with proven track records in inflationary environments or sectors that perform well in inflationary environments (e.g., energy) are historically attractive.

As always, risk control remains the first and highest priority when assessing choices in the equity portfolio. With double digit returns in recent history, flexibility to keep those gains is more important than ever.

### **Efforts in Fiscal Year 2011-12 to Achieve Return**

While protecting assets is extremely important, staff cannot lose sight of participating with the markets and achieving the portfolio's performance goals. The balance between preserving capital and generating alpha is complicated and will require staff to actively manage the portfolio in a disciplined, risk controlled manner.

When uncertainty pervades the equity markets, it elevates risk but it can also provide opportunities. As trends develop in the market, staff will tactically allocate assets to the market segments that

exhibit the most rewarding risk/return profile. By having this flexibility, staff can quickly respond to changing market conditions and take advantage of market inefficiencies when they occur.

Another way that staff plans on meeting the portfolio's return objectives is to carefully evaluate our current and potential investment managers. The goal of this effort is to ensure that we are partnering with the highest conviction investment managers who will generate positive alpha. When evaluating external managers, staff does not just focus on investment returns since performance is a lagging indicator. Instead, staff thoroughly evaluates the people, process and philosophy of each investment manager to understand why a manager is able to produce excess returns and why they are sustainable. In addition, during this due diligence, staff discovers how each manager performs in different market regimes (e.g., high growth, slow growth, recession). Through this process, staff will replace low conviction managers with investment managers from a pool of higher conviction managers and will also rebalance assets between investment managers to maximize the risk-adjusted return of the Global Equity portfolio. Evaluating and adjusting the mix of the portfolio's active investment managers is an important step in achieving excess returns.

Controlling costs will again be a high priority, given the difficult economic and budgetary environment. Over the past two years, most of CalSTRS' external managers agreed to lower fee schedules resulting in roughly a 15 percent cost savings. Staff will continue this effort to reduce asset management costs with the remaining external managers.

### **Key Initiatives in Fiscal Year 2011-12**

In addition to tactically managing the portfolio in a risk controlled manner, the Global Equity team will focus on implementing the initiatives approved at the conclusion of the Internal/External Management Study (Study) at the June 2011 Investment Committee Meeting.

**Implement an Enterprise Investment Management System (EIMS)** – In Part 3 of the Study, staff identified several passive non-U.S. strategies that are likely candidates for internal management. While staff has extensive experience managing passive portfolios, the current EIMS is antiquated and limited in regards to providing trade order management, portfolio administration, sophisticated risk analytics, and operations management for non-U.S. securities. Staff has reviewed and evaluated several potential EIMS platforms and has determined that the platform that CalSTRS Fixed Income unit has been using for the past five years would meet all of the requirements to manage non-U.S. equity portfolios internally. Since the infrastructure has already been established within Investments, expanding the platform to Global Equity should not require significant resources.

- **Internally Managed Strategies** – Staff will be implementing internally managed strategies that the Investment Committee approved at the conclusion of the Internal/External Study. The first priority will be those strategies that can be implemented with no additional staff and only minimal data requirements, e.g., the R3000 passive portfolio and the U.S. tactical strategy.
- **Global Equity Portfolio Review** – Depending on the outcome of the Investment Committee’s Work Plan directives, staff will prepare a comprehensive review of the Global Equity portfolio for presentation at the April and June 2012 Investment Committee meetings.
- **Policy Updates** – Staff will update the Global Equity policy as needed to clarify and define the various management strategies that are appropriate for the portfolio.

## Fixed Income Unit Description

<b>Assets</b>	<b>\$27,000,000,000</b>
<b>Expected Annual Net Profit for the Unit</b>	
• Market based net-profit goal	\$810,000,000
• Extra value added net- profit	\$40,500,000
<b>Total Net Profit for the Unit</b>	<b>\$850,500,000</b>
<b>Expected Cost to Produce Net Profit</b>	\$22,795,297

## Risk Management

### Current Level of Risk

Last year at this time, we were seeing some cyclical improvements in economic activity as a direct result of stimulative policy actions and massive injections of capital into the banking system after the financial crisis. At the same time however, we were also seeing troubling initial signs of longer-term, structural issues, such as ballooning government debt and European budgetary problems.

Twelve months later, we're experiencing a sense of déjà vu. A key difference now however, as compared to last year, is that the economy is anticipating the start of the removal of the unprecedented stimulus and accommodative policies that restored confidence in the global financial system after the crisis. The key question at this juncture is, will economic growth become self-sustaining without the fiscal and, perhaps, monetary policy support? As a result, the risk for fixed income assets is at a potentially significant turning point: (1) either the economy will be able to withstand the removal of the stimulus and grow at a moderate pace or, (2) the economy stumbles and the Fed has to continue on with its quantitative easing (QE) program(s). In the first case above, interest rates will likely go up along with the U.S. dollar. If the Fed feels the need to implement QE3, 4, or 5, rates will likely re-test their crisis lows and the U.S. dollar will continue to be under pressure. Turning points are always difficult to call, but we expect to get more conclusive evidence within the next quarter or two.

One of the consequences of the stimulative policies over the past several years has been the effect on the market's propensity to be self-correcting. That is, given the extremely accommodative nature of the policies over the past several years, certain risk/valuation metrics have ratcheted to extreme levels. Importantly, three of the four investment risk metrics identified by Pension Consulting Alliance (PCA) within their Investment Market Risk Metrics reporting package relate to the fixed income markets and are at extreme levels, warranting close monitoring. The slope of the yield curve, the level of breakeven inflation, and interest rate risk are all at the top decile of their historical ranges.

These risk/valuation metrics serve as a red flag and/or corroborate that a turning point for fixed income assets may be forthcoming. Although we've learned that extreme levels can continue for a surprisingly long period and, therefore, be painful for early positioners, the major risk to fixed income assets is higher interest rates.

### **Efforts in Fiscal Year 2011-12 to Protect Assets**

As higher interest rates represent the most significant risk to the fixed income assets, staff has developed a number of strategies to manage and mitigate the impact of higher rates across the portfolio(s) (long and short-term fixed income) and program(s) (Currency Management and Securities Lending) under our purview.

#### **Fixed Income**

One of the most conventional strategies for managing interest rate risk is to reduce the exposure within the portfolio to those assets which will be subjected to the greatest loss of principal. At the highest level to mitigate this risk, staff has underweighted the fixed income asset class within the Total Investment portfolio to the bottom of the policy range. Within the fixed income portfolio(s), staff has taken a measured approach to implementing a variety of strategies that include buying securities with coupons that adjust to changes in interest rates, buying securities that have a shorter maturity than the policy benchmark, using derivatives to provide protection against higher rates in the future (i.e., a combination of swaps and swaptions), and tactically selling bond futures targeting specific maturities that we believe are most at risk.

#### **Currency Management**

CalSTRS has a strategic allocation to non-U.S. assets dating back over almost two decades. A key component to the returns of non-U.S. assets is from currency. In an environment of rising interest rates, the risk of a strengthening U.S. dollar increases. A rising U.S. dollar would impair the return of non-U.S. dollar assets. As a result, staff will look for opportunities to sell those non-U.S. currencies approved within policy that we believe will underperform the U.S. dollar.

#### **Securities Lending Collateral**

CalSTRS manages nearly half of the securities lending cash collateral assets internally. Although these assets are very high quality and short-term in nature, in an environment in which short-term interest

rates rise quickly, these assets would be significantly impacted. As a result, staff will increase the weighting of adjustable rate securities and reduce the overall weighted average maturity of the portfolio.

### **Efforts in Fiscal Year 2011-12 to Achieve Return**

The CalSTRS Investments Branch has been developing business plans annually since 1998. Despite the changing and often volatile market environment and the challenges and opportunities described over the years, two key factors consistently appear in the discussion of meeting our performance objectives: (1) the recruitment and retention of well-qualified staff and, (2) the enabling of the investment staff to focus on the core, return-producing priorities within the constantly evolving, increasingly volatile markets.

Other themes that resonate throughout the return discussion over the years, and continue to be relevant include: (1) the ability to be tactical in developing and implementing strategies and, (2) the need to review, evaluate, and revise the structure of the investment portfolios/programs to be as cost efficient and competitive as possible. As discussed earlier, with interest rates near multi-decade lows and key risk metrics at extreme levels, staff will continue to concentrate on positioning the portfolios/programs to reflect the environment, while recognizing the timing of such a move will be difficult to gauge, given the tenuous economic and geopolitical situation. While the need to be tactical has become more important over the years, due to increasing market volatility and complexity, the value over the long-run of a well structured, cost efficient investment program cannot be understated. Over the past several months, staff has worked with the Investment Committee and Pension Consulting Alliance to develop a criteria matrix designed to standardize the internal vs. external management implementation decision for existing and new strategies. This framework will facilitate and help prioritize staff's efforts to meet our return objectives across our portfolios/ programs.

### **Key Initiatives in Fiscal Year 2011-12**

Based upon the investment environment described above and, in large part, the findings of the Internal/External Asset Management Study (i.e., Study) completed in June 2011, the Fixed Income team will be focusing on the following major projects this upcoming fiscal year:

#### **➤ Internally Managed High-yield Strategy**

This initiative is based upon the findings and recommendations from the Study referenced earlier. A portion of the high-yield mandate that has been entirely managed externally since

2002 will be brought in-house. Staff envisions starting with an initial allocation of \$250-\$500 million, building up to \$1+ billion, or roughly half of the strategic allocation to the strategy, if deemed appropriate, and will be managing to a lower tracking error and active risk. Given our existing internal credit expertise and trading infrastructure, very modest additional informational and data feeds are anticipated to be needed at this time. As the portfolio size increases toward potentially half the allocation to the high-yield strategy, additional staffing resources may be necessary. Staff believes it will be able to manage these assets at one-quarter of the cost of external management, saving approximately \$1 million in asset management fees annually on \$500 million.

➤ **Internally Managed non-U.S. Dollar Contributions and Distributions (Currency Management)**

This initiative is also based upon the findings and recommendations from the Study referenced earlier. The currency translation for non-U.S. dollar contributions and distributions for Private Equity, Real Estate and Corporate Governance assets have historically been executed externally by the Master Custodian. Currency management and operations staff estimate that these transactions amount to roughly \$1.5 billion per year and will work together to streamline and automate the processes to execute these transactions internally. While staff feels confident that these transactions can be executed internally for no additional cost at this time, it is anticipated that some reallocation of staffing resources within the currency management team will be necessary. The cost savings to the Fund for this initiative is estimated to be approximately \$2 million annually.

➤ **Securities Lending Request for Proposal (RFP)**

It's been nearly ten years since the last major restructuring of the Securities Lending Program (Program) as a result of an RFP. At that time, the Program was reorganized in such a way to take advantage of multiple lending agents and multiple asset managers, in order to benefit from both diversification and competition. Although that structure is still considered to reflect best practices within the industry, staff will be conducting a Securities Lending Agent search early in the upcoming fiscal year. The intent of the search is to refresh our agent pool and ensure that we continue to have high quality lending agents and cash collateral external managers to complement our internal cash collateral management program and that the structure continues to maximize our asset utilization and earning potential in a cost effective manner.

➤ **Innovative Strategies / New Opportunities**

This initiative will continue as part of the overall fixed income theme of searching out innovative opportunities that have the potential to add alpha and are complements to our current strategies.

We continue to be open to new and innovative ways in which to assume and reduce risk within the confines of our overall portfolio, short- and long-term strategies, and purpose within CalSTRS' portfolio structure. Staff is in the final stages of implementing a bank loan strategy which will add floating rate protection to the fixed income portfolio. Staff, with the assistance of PCA, has also put forward a floating rate taxable securities initiative for the municipal securities market. Staff is always open to these new opportunities and will continue to search among our peers and among other money managers for the best ideas for adding alpha while protecting assets.



## Real Estate Unit Description

<b>Assets</b>	<b>\$18,750,000,000</b>
<b>Expected Annual Net Profit for the Unit</b>	
• Market based net-profit goal	\$1,359,375,000
• Extra value added net- profit	\$281,250,000
<b>Total Net Profit for the Unit</b>	<b>\$1,640,625,000</b>
<b>Expected Cost to Produce Net Profit*</b>	\$23,126,452

\* estimate does not include management fees or carried interest on opportunistic funds.

## Risk Management

### Current Level of Risk

The risk level in the Real Estate portfolio can be broadly grouped into three categories: market risk, operating risk, and financial risk. All three risk categories were in historical danger zones from the crash of Lehman in the fall of 2008 through the spring of 2010. The second half of 2010 through the present has been generally positive for the real estate asset class.

Market risk for real estate can be centered on the economic drivers of real estate returns. Job growth drives demand for office space, retail sales, and apartment occupancy, and growth has been positive but weak. Consumer confidence, which is a key driver of retail sales, is up from recent lows but not high enough to drive new store demand. Interest rates remain low and are driving demand for investment in the real estate asset class, but not significant leasing or development. Overall, the market risk for real estate had decreased, but sluggish economic growth is hampering the rebound.

Operating risk is predominantly the development and leasing status of the real estate asset. The continuum of risk (from high to low) is raw land to empty building to fully leased building with high credit tenancy. Our portfolio is over-weighted in opportunistic investments. Many of these assets are in transition (under development or lease-up) and, with hard work by our investment partners, will be stabilized and marketed for sale soon. Our core portfolio has above market vacancy in the office and industrial assets, which is being monitored closely by our staff. Other operating risk is the stability and solvency of our manager partners. Staff has worked with our partners transferring assets to other partners in better positions to manage our portfolio. We will continue to closely monitor both the assets and managers.

Financial risk is best defined by the level of structure of debt or leverage on the portfolio. The significant drop in real estate values correspondingly raised the leverage in the CalSTRS Portfolio.

Staff has also monitored the leverage in each risk class of our portfolio, and paid off debt as the opportunities arose.

### **Efforts in Fiscal Year 2011-12 to Protect Assets**

Managing risk has been a common theme in real estate for three years. Generally, we are working to increase our holdings in core assets and decrease our holdings in opportunistic and value-add investments. In addition, we are actively lowering the leverage in the portfolio.

#### **Market Risk**

Managing the portfolio against the market risk is the most difficult to execute as the market has been very volatile over the last five years. Staff consistently monitors our holdings, looking for over- and under-weighting by product type and market. We have been over-weighted in office holdings and under-weighted in industrial and retail. We have, therefore, been actively pursuing core industrial and retail and been very selective in considering new office product. The most significant market shift in our industry has been a high demand for investment in core assets. This has been driving up asking prices for core product to a level where we are concerned some markets have a mini bubble in pricing. We continue to bid on these assets but are striving to stay disciplined and avoid overpaying in the near term to achieve our long-term objectives.

#### **Operating Risk**

Staff is actively managing operating risk through careful oversight of our portfolio and constant communication with our managing partners. Our investment partners strive to lease up vacant space and renew existing tenants. CalSTRS has some advantages as an owner in that we are not capital constrained and can improve the space to driving rental demand. We are in the process of an RFP to seek out core managers to better serve the system. We continue to monitor our partners; fortunately, most of the operating risk has diminished.

#### **Financial Risk**

Staff has proactively strived to lower the leverage in the portfolio over the last two years. Opportunities to pay down existing leverage at a discount as we had in previous years are essentially gone due to improved market conditions. However, as debt comes due, staff looks for opportunities to pay down debt on select assets that can be transferred into the core portfolio, thereby achieving two goals; lowering leverage and raising our investment in core assets.

### **Efforts in Fiscal Year 2011-12 to Achieve Return**

The real estate asset class returns are based on a combination of quarterly cash flows, quarterly appraisals and sales executed in each quarter. Market values for real estate turned positive in the last fiscal year and are projected to be positive again this fiscal year as real estate markets recover. The demand for real estate continues to be bifurcated. There is significant demand and increased pricing for core assets and lower pricing with inconsistent demand for transitional assets. This creates a challenge for investors like CalSTRS whose long-term goal is to increase holdings of core assets.

Staff will strive to take advantage of individual over-heated markets and sell challenged or aggressively priced assets. These sales will typically be above existing carrying values and thereby increase returns to CalSTRS. In addition, sales will generate cash for potential purchases. Along with searching for quality core assets, our partners are seeking out opportunities to purchase high quality assets that are in need of capital infusions to cure short-term leasing challenges. Once leased to stabilization, these "value add" investments will be transferred into the core portfolio or sold, depending on the market conditions.

### **Key Initiatives in Fiscal Year 2011-12**

Staff is in the midst of completing a Request for Proposal (RFP) for core managers. This RFP was issued in the spring of this year, and manager selection is likely to be completed this summer. Our goal is to hire a handful of top tier core managers to both purchase core assets through separate account relationships and oversee joint venture partner relationships for both core and value-add strategies. It is critical to achieving our goal of increasing our core holdings to select managers that have the depth to seek out core investment opportunities throughout the United States.

Once completed, we will also issue an RFP to replenish the pool of independent fiduciaries. CalSTRS policy requires two fiduciaries to opine on new investment opportunities and relationships. Our policy also restricts our consultant to working with the board on policy and strategy and not be conflicted by opining these investment opportunities. Therefore, we periodically seek out, through the RFP process, capable consultants and market experts to assist staff in our review of investments.

Managing the leverage in the portfolio has been a common theme over the last few years. Many of our venture partners utilize lines of credit (LOC) to manage capital flows in their investment strategies. This fiscal year, we will explore creating a master line of credit for use by CalSTRS joint venture partners. This master line of credit will be used to replace individual lines of credit formed with each joint

venture. The benefits of the master line should increase CalSTRS control over the use of LOC, potentially lowering leverage for the portfolio and lowering the cost through better negotiated terms.

We will continue our ongoing efforts to create a sizable pipeline of assets to potentially transfer into the core portfolio. This strategy of “Build or Lease to Core” will allow CalSTRS to tactically shift away from purchasing core assets at peak pricing. Alternatively, we can seek out below market pricing of assets that are in need of capital for leasing.

This fiscal year, we will explore setting up a public securities portfolio. CalSTRS recently transferred a privately held hotel portfolio for \$200M shares of REIT. These shares can not be traded until the fall, which will give staff an opportunity to strategize how to build a public security portfolio. The goal of the portfolio is to lower risk of the overall portfolio, increase liquidity and increase diversification.

## Private Equity Unit Description

<b>Assets</b>	<b>\$22,500,000,000</b>
<b>Expected Annual Net Profit for the Unit</b>	
• Market based net-profit goal	\$2,812,500,000
• Extra value added net- profit	\$630,000,000
<b>Total Net Profit for the Unit</b>	<b>\$3,442,500,000</b>
<b>Expected Cost to Produce Net Profit*</b>	\$25,657,814

\* estimate does not include management fees or carried interest on partnership investments.

## Risk Management

### Current Level of Risk

Private equity risk can be divided into two categories: (1) risk associated with private companies already purchased and thereby already constituting an underlying component of the private equity portfolio (i.e., “existing portfolio company risk”) and (2) risk associated with private companies currently being purchased and /or to be purchased in the near to medium term (i.e., “future portfolio company risk”).

With respect to the first category, risk associated with the program’s existing portfolio companies has significantly decreased over the past two years. Many of the portfolio companies within this category were purchased in the private equity bubble years (2006 -2008) at high prices and with high levels of debt. When the financial crisis struck with full force in the fall of 2008, these companies were left quite vulnerable: profits fell, valuations plummeted, and the availability of debt financing contracted dramatically. As a result of these conditions, an uncomfortably high proportion of these companies were at risk for medium-term bankruptcy. Many other companies, while not in any foreseeable danger of bankruptcy were nonetheless significantly impaired in their investment performance outlook. However, during the last two years or so, investments made in the private equity bubble years have been de-risked by several factors, specifically: (1) overall economic activity has recovered to some degree; (2) general partners have restructured costs at their portfolio companies, thus helping to restore profits to pre-crash levels (or better) in many instances;

<sup>1</sup> According to S&P LCD statistics, the average price to EBITDA multiples paid in leveraged buyouts peaked in late 2007 at approximately 9.7x. Range over the last decade has been between 6.0x and 9.7x.

<sup>2</sup> According to S&P LCD statistics, average price to EBITDA multiples paid in leveraged buyouts in 2011 have ranged from 8.1 x to 8.3x.

(3) expansionist monetary policy has kept debt markets liquid and enabled portfolio companies to refinance and elongate their loans at reasonable interest rates; and (4) public equity markets have rallied, thus bolstering market valuations (for both public and private companies) and enabling many companies to raise additional equity capital to strengthen their balance sheets. Barring a significant “double-dip” recession, staff believes that the portfolio companies purchased in the bubble years will, on average, return capital plus deliver a modest investment return.

Regarding deals currently being done and/or likely to be done in the near- to medium-term, staff would describe the current risk level as being moderate. Private equity investing is inherently risky in that it involves general partners striving to generate very high returns by making concentrated illiquid investments in companies generally undergoing some sort of transformation. In addition to this inherent riskiness, further cyclical risk factors are presented in the form of fluctuating levels of competition (in terms of competing firms and competing pools of dry powder), availability of attractive target companies in which to invest, market price levels for new investments and levels of debt associated with new investments. In the current environment, competition remains high; there are large pools of capital commitments which are un-deployed and which will be expiring over the next one to three years (i.e., the remaining capital commitments raised during the bubble years). In parallel with the rise in public equity prices over the past two years, private equity entry prices are moderately high. Mitigating these elevated risk factors are the following: (1) private equity managers remain extra cautious in the wake of the still vividly memorable financial crisis of 2008; (2) bank lending standards remain relatively conservative in terms of permissible leverage levels and other underwriting criteria; and (3) despite moderately high entry prices overall, private equity firms are still finding special situation deals which are being priced significantly below apparent market price levels (e.g., deals involving distressed sellers, under-appreciated sub-sectors, etc.).

### **Efforts in Fiscal Year 2011-12 to Protect Assets**

The investment philosophy of the CalSTRS Private Equity Program can be summarized as follows: (1) have a long-term perspective; (2) choose only high quality partners who have a proven track record in the endeavor being proposed; and (3) invest only in situations in which there is a strong alignment of interests. This investment philosophy is primarily “bottom-up” in that it stresses the quality of our investment partners above all else. This approach has served the program well throughout its history and staff believes it should remain at the core of our investment program beliefs going forward.

Last fiscal year's business plan focused heavily on improving Private Equity's bottom-up procedures and practices. This fiscal year, more effort will be devoted to Private Equity's top-down procedures and practices (see below). However, given the over-arching importance of choosing only high quality managers for the private equity program, this fiscal year's business plan once again envisions significant resources being devoted to improving bottom-up capabilities.

Another major focus will be on human resources. The Private Equity staff level is currently lean relative to both assets under management and partnerships under management. The ratio of partnerships under management to the number of investment staff professionals must be maintained at reasonable levels or the likelihood of poor decisions will increase. The hiring of additional experienced staff is being impeded by budgetary constraints. Staff is hopeful that budgetary constraints can be overcome so that Private Equity can hire two additional private equity professionals in the coming year (with one of those positions hopefully coming early in the fiscal year).

Related to human resources is the task of improving Private Equity's internal operations capabilities. As the private equity industry has matured and become more institutionalized over the past several years, reporting, accounting and compliance requirements have become increasingly complex and time consuming. Private Equity's resources devoted to operations activities have not kept pace. In order to partially cope with this problem, human resources have been shifted away from front line investment activities towards operations activities. Plans are in place to bring additional resources into the Private Equity unit to meet its increased operational needs on a more permanent basis and thereby also allow a much needed shift of certain investment professional's time back into front line investment activities.

Within the Private Equity asset class resides the CalSTRS Credit Enhancement Program. The Credit Enhancement program team will continue to closely monitor the public finance markets. The team hopes to maintain its current level of commitments. However, the team will only make new commitments if the proposed new commitments are of very high quality.

### **Efforts in Fiscal Year 2011-12 to Achieve Return**

Private Equity's efforts to achieve high returns in fiscal year 2011-12 will focus on the development and deployment of more advanced "top-down" portfolio management tools. Specifically, staff is in the process of developing a two to four year investment plan which will map out tentative investment amounts in the portfolio's various strategies and geographies. Also included in the investment plan will be tentative targets for number of investments to be made in each investment category over the coming

years. This planning process will instill additional discipline into our investment process by forcing the team to choose between various competing investment opportunities. Such discipline should result in better investment decisions and higher risk-adjusted returns. Also, more advanced top-down tools will enable staff to better analyze and implement the strategic over-weighting and under-weighting of specific strategies, sectors and industries (as permitted within policy limits).

Efforts in the coming fiscal year will also focus on improving the program's co-investment capabilities. In order to add depth to the team's co-investment capabilities, additional staff member(s) previously assigned solely to partnership investing will be cross-trained to also evaluate co-investment opportunities. Staff believes that co-investments enhance the program's overall ability to generate satisfactory private equity returns by: (1) providing no-fee/no-carry exposure to quality deals; (2) occasionally providing increased exposure to some appealing higher risk/higher potential reward deals; (3) providing an opportunity to achieve various strategic goals (i.e., exposure to clean-tech) through means other than longer-term partnership commitments; (4) providing an excellent opportunity to observe up close how certain private equity general partners conduct their business.

On a final note, staff, in conjunction with the Private Equity consultant, will in the coming fiscal year evaluate the potential for investing in certain private equity investment structures that could potentially facilitate improved governance and/or lower fees (e.g., separate accounts). Such investment structures are not currently permitted by policy - a policy change recommendation will be proposed if warranted.

### **Key Initiatives in Fiscal Year 2011-12**

➤ **Complete an RFP process for Private Equity Consultant**

PCA's contract expires on June 30, 2012.

➤ **Add Two Professional Staff to Team**

As discussed above, staff believes that at least one additional position is warranted on the front line investment team and another position is needed in the internal operations group.

➤ **Pursue Opportunities to Improve Governance and Reduce Fees by Exploring Alternative Investment Structures**

Specifically, explore and evaluate the possibility of investing in separate managed accounts with private equity mandates. This might result in a policy change proposal.

➤ **Improve Investment Decision Making Process by Developing and Implementing “top-down” Portfolio Planning Tools**

The Private Equity program will remain at its core a bottom-up driven organization. However, a more formal and rigorous top down analytical framework will be overlaid on top of the program’s bottom-up foundation.

➤ **Continue Increasing the Co-investment Program’s Capabilities and Continue to Refine the Co-investment Program Strategy**

This will entail cross training additional team member(s) so that they will be capable of analyzing partnership and co-investment opportunities.

➤ **Remain Highly Selective and Cautious in Underwriting New Credit Enhancement Program (CEP) Commitments**

The CEP team will only make commitments to replace portfolio run-off if the proposed new commitments are of very high quality.



### Corporate Governance Unit Description

<b>Assets</b>	<b>\$3,500,000,000</b>
<b>Expected Annual Net Profit for the Unit</b>	
• Market based net-profit goal	\$332,500,000
• Extra value added net- profit	\$28,560,000
<b>Total Net Profit for the Unit</b>	<b>\$361,060,000</b>
<b>Expected Cost to Produce Net Profit</b>	\$45,009,488

### Risk Management

#### Current Level of Risk

The activist manager portfolios are concentrated in nature and tend to be more exposed to volatile equity markets. With uncertainty in areas such as employment, inflation, housing, and commodity prices expected to continue into fiscal year 2011-12; the level of risk within the activist manager portfolio is medium – high.

#### Efforts in Fiscal Year 2011-12 to Protect Assets

- Pay close attention to the markets in which we invest.
- Monitor the performance attribution and contribution of our managers.
- Monitor staffing and resource levels at our external managers.
- Diversify pool of activist managers.

#### Efforts in Fiscal Year 2011-12 to Achieve Return

- Consider new managers in markets not currently covered such as Emerging Markets and Asia.
- Consider new managers in markets currently covered.
- Review existing manager performance for possible commitment reductions or partnership terminations.
- Seek more favorable fee and liquidity terms from both new and existing managers.
- Seek Co-investment opportunities as a low cost way to improve returns.

## Key Initiatives in Fiscal Year 2011-12

The CalSTRS Corporate Governance Program will continue to focus on improving the CalSTRS Investment Portfolio's governance profile through continued advocacy on issues such as financial market reform, sustainability risk management and diversity on boards of directors. We will look to increase the number of companies and investors we engage with on these issues, as well as increase our meetings with government officials and regulatory representatives. We will also continue to file and support shareholder resolutions that align with these objectives.

In 2011-12, the Corporate Governance staff aims to work more closely/and coordinate better with our Global Equity managers on their governance activities on CalSTRS' behalf. Our external managers oversee \$25 billion in assets on our behalf and by better understanding and hopefully coordinating our joint governance activities, we can enhance returns for the fund.

### **To help promote financial market reform, we will continue to engage on a variety of issues such as:**

- Establishing majority voting standards for director elections.
- Aligning executive compensation with shareholder interests.
- Improving transparency and accountability within the credit ratings process.
- Seek company specific Governance reforms.

### **To improve diversity on corporate boards we will focus on:**

- Promoting the Diverse Director Data/Source (3D Project).
- Encouraging nominating committees to consider diversity in their process.

### **To improve our sustainability risk management program we will:**

- Consider new areas of engagement such as sustainable land use and supply chain risk.
- Expand engagement efforts to include small and mid-cap companies.
- Better utilize engagement platforms such as the PRI Clearinghouse.

Additionally, as part of our sustainability risk management efforts, we will assume responsibility for the CalSTRS Investment Branch's Green Initiative Task Force. We will work to improve communications to the Board and the public, as well as between asset classes, on what CalSTRS is doing to manage environmental risk and take advantage of environmental-related investment opportunities within the portfolio.

## Absolute Return Unit Description

<b>Assets</b>	<b>\$2,600,000,000</b>
<ul style="list-style-type: none"> <li>Global Inflation-linked: \$2,200,000,000</li> <li>Infrastructure Committed: \$150,000,000</li> <li>Home Loan Program: \$400,000,000</li> </ul>	
<b>Expected Annual Net Profit for the Unit</b>	
<ul style="list-style-type: none"> <li>Market based net-profit goal*           <ul style="list-style-type: none"> <li>* based on 6.5% expected rate</li> </ul> </li> <li>Extra value added net-profit **           <ul style="list-style-type: none"> <li>** based on 3 basis points of Alpha</li> </ul> </li> </ul>	<p>\$170,000,000</p> <p>45,000,000</p>
<b>Total Net Profit for the Unit</b>	<b>\$215,000,000</b>
<b>Expected Cost to Produce Net Profit</b>	\$472,000

## Risk Management

### Current Level of Risk

The Global Inflation-Linked securities are limited to those countries who maintain an investment grade sovereign rating (Baa3/BBB-/BBB- or above) using the middle rating of Moody's, S&P and Fitch, respectively.

The Infrastructure program is in the early stage and we will focus on the core, sub-asset classes of more mature infrastructure. These types of investments are expected to yield a lower risk within the portfolio.

### Efforts in Fiscal Year to Protect Assets

Protecting the assets will be a key goal of the asset class. In order to achieve this, clear and effective risk management processes and controls will be utilized. Building a robust risk analysis and reporting process (eg. risk modeling, stress testing, exposure analysis, risk budgeting) to reduce "surprises", identify unwanted risk, ensure key risks are managed, and promote better communication between front, middle and back-office functions are being built over time with the addition of investments to the program.

The Global Inflation-linked portfolio's duration and country weighting is managed closely to its benchmark. Consequently, the low tracking error versus the benchmark reflects a low risk of under-performance.

The Infrastructure program will also focus on a well diversified portfolio (geographical, sector, vintage year, etc.) since the spreading of risk into a diversified portfolio not only generates positive returns in both favorable and unfavorable market conditions, but also provides an understanding of the correlations within the diversified portfolio.

To invest and then protect those investments, it is important to have intense due diligence processes, continued education and rigorous manager monitoring processes, and these will be built into the program. Staff will perform extensive due diligence on investments and the due diligence processes will be clearly identified at the time each investment is recommended to the board.

### **Efforts in Fiscal Year to Achieve Return**

Absolute Return asset class objectives are to increase Total Plan diversification, produce inflation-protected income/returns over extended periods and secure more steady real returns over time.

The goal of the global inflation-linked bond and infrastructure programs are to provide stable long-term returns and to protect assets from unfavorable market conditions (inflation, volatility, currency fluctuations, etc). Staff committed to the global inflation linked program will continue to increase the assets to the target weight of 2.5 percent of the Total Plan. The portfolio will be optimized to track the Barclays Inflation Linked index.

The staff committed to the Infrastructure program will look for opportunities that will provide a stable source of income with some capital appreciation opportunities so that the fund can generate a strong return while generating steady cash flows to the system.

Infrastructure assets that are mature, have low capital expenditures and have an early cash flow (short J curve), will be preferred as these assets tend to have lower risks while providing the stable returns and cash flows to the program and to the overall Fund.

As the programs focus on inflation protection, the underlying assets will have an inflation link to the income stream, thereby continuing to generate a stable income flow to the program during unfavorable market conditions.

### **Key Initiatives**

#### **Asset Class Level**

Create a strategy for the migration of innovation portfolio assets, such as commodities, into the asset class. Consider other inflation-link products that meet the objectives for this asset class such as

infrastructure debt, agriculture or timber. Rename Absolute Return Asset Class to Inflation Sensitive Asset Class to provide clear focus of inflation-linked strategies as the objective for this asset class. Evaluate the Home Loan Program fit into a new asset class containing Alpha and Stable return strategies.

### **Internal Processes**

Finalize procedure manuals, develop standard periodic reporting, portfolio and manager monitoring and investment performance and risk measurement tools.

### **Global Inflation Bonds**

- Continue with the dollar cost average funding strategy until the target weight of 2.5 percent is achieved.

### **Infrastructure**

- Target an additional \$300 - \$600 Million of new investments for the fiscal year, thereby building a portfolio that is diversified by vintage.
- Consultants – a search will be conducted to hire independent fiduciary consultants from an established pool with niche infrastructure expertise.
- Staffing – at least one additional investment officer will be required for the Infrastructure team to be successful in reviewing deals and managing the portfolio.
- Infrastructure is a developing asset class; staff will also continue to learn the developments within the asset class via conferences, research material, meetings with peers, etc.



## Innovation Portfolio and Fund-Wide Risk Management

<b>Assets</b>	<b>\$750,000,000</b>
<b>Expected Annual Net Profit for the Unit</b>	
• Market based net-profit goal	\$52,500,000
• Extra value added net- profit	\$5,625,000
<b>Total Net Profit for the Unit</b>	<b>\$58,125,000</b>
<b>Expected Cost to Produce Net Profit</b>	\$1,414,479

## Risk Management

### Current Level of Risk

Researching and identifying new strategies that improve the risk and return characteristics of the Total Fund are critical for CalSTRS. Multiple Investment Committee presentations and the Request for Proposal (RFP) process extended the time to implement these strategies. This extended time commitment may severely limit CalSTRS' ability to take advantage of these opportunities.

### Efforts in Fiscal Year to Protect Assets

Staff places emphasis on identifying strategies that perform well relative to global equities during turbulent market regimes. Commodities hedge against inflation and negative shocks. Global Macro Hedge Funds take advantage of volatility and flexibility to invest in various markets and regions of the world. Risk-Factor strategies provide diversification and downside protection during extreme events. Staff is also developing and utilizing risk systems to forecast a range of market conditions and the Total Fund's performance under these conditions. These will be used to guide staff in their asset allocation decisions and protect CalSTRS' assets.

### Efforts in Fiscal Year to Achieve Return

#### Implement Allocation to Global Macro Hedge Funds

Global Macro Hedge Funds use a variety of financial instruments to gain from fluctuations in asset prices caused by economic changes in many regions of the world. These assets typically include derivatives on currencies, commodities, futures, fixed income and equity indices. Global Macro should perform during periods of high volatility and financial distress when macroeconomic data tends to drive asset prices. This offers diversification and downside protection to CalSTRS' portfolio.

Over the past year and a half, CalSTRS has been working through the RFP process and negotiating a contract with Lyxor Asset Management to act as CalSTRS' hedge fund consultant. The contract with Lyxor is expected to be signed in June 2011. CalSTRS plans to open dedicated managed accounts on Lyxor's managed account platform (MAP). These accounts would custody CalSTRS' assets with a firm that is independent of the hedge fund manager. This provides greater asset protection and transparency, which reduces the risk of fraud, provides CalSTRS with the flexibility to move its assets during periods of financial distress, and offers greater insight into potential risks at the hedge fund and in the industry. With input from Lyxor, CalSTRS will select managers with low correlation to other managers and CalSTRS' Total Portfolio to construct a diversified portfolio.

### **Implement Allocation to Commodities**

Commodities historically exhibit low correlation to equities and bonds and can play a valuable role as a hedge against inflation or negative events such as geopolitical unrest. In effect, commodities may act as an insurance policy, realizing low single-digit returns over the long run but generating large payoffs in the event of a negative shock. However, commodity investment performance can be more volatile than equities. Staff has begun the Alternative Solicitation Process (ASP) to identify long-biased active commodity managers. Commodity investment can take various forms and staff will also examine investments in physical commodities and agriculture for the second phase of the commodity allocation.

### **Implement Allocation to Risk-Factor Based Strategy**

Over the past fiscal year, staff has explored investments that are correlated to positive trending equity markets, yet emphasize risk management and tail risk hedging to limit drawdowns during extreme events. During the recent market crisis, many asset classes shared several risk exposures and demonstrated high positive correlations, failing to provide protection against a severe draw-down. Managers that allocate to risk factors rather than to traditional asset classes follow the premise that correlations between risk factors are typically low and a portfolio diversified across these risk factors would have added downside protection not exhibited in traditional portfolios. Three key challenges for these strategies are: (1) determining which risk factors are rewarded, (2) identifying a global, investable set of asset classes that provide the cleanest exposure to the factor, and (3) forecasting when to enter and exit exposures.

### **Increase Staffing**

The first two years of the Innovation unit were spent establishing the framework to evaluate new strategies and presenting in-depth studies on hedge funds, commodities, risk factor-based investing,

microfinance, liability driven investing, real estate benchmarks and insurance-linked products. This research was completed with the current staffing of a director, a portfolio manager and an investment officer. As the three new strategies discussed previously are implemented in the Innovation portfolio, regular monitoring of managers and the portfolio is critical. It will be challenging with current staffing levels to both manage portfolios and continue to research as many strategies as are available or that the Investment Committee requests. Therefore, another portfolio manager position approved for the fiscal year 2010-2011 will be filled. Furthermore, as the number of Innovation strategies increases, this may warrant the creation of a stand-alone “alternatives” allocation to CalSTRS’ strategic allocation.

### **Continue Development of the Fund-Wide Risk Management Program**

Early this year, with the assistance of industry experts, PCA and staff identified six risk factors that explain the majority of CalSTRS’ portfolio investment performance. The six risk factors identified are: Global Economic Growth, Interest Rates, Inflation, Liquidity, Leverage/Financing and Investment Governance Risk. The model is expected to help CalSTRS staff better identify and monitor risk and changes in risk to provide input on the direction of the investment portfolio.

### **Issue Request for Proposal (RFP) for a Risk System**

In June 2008, after careful review and evaluation, CalSTRS selected the BarraOne risk management system to aide staff in managing risk across the entire CalSTRS portfolio. While the six factors discussed previously help CalSTRS monitor the macroeconomic risks across the Total Portfolio, BarraOne provides additional insight into other macroeconomic factors within asset classes. This enhances CalSTRS’ ability to appropriately monitor and analyze the risk characteristics in the Total Portfolio and is a critical component to understand which factors drive the return of the various asset classes. The BarraOne contract expires at the end of the fiscal year 2011-2012. Staff will issue a RFP to identify a comprehensive risk tool to forecast factors influencing expected returns of various asset classes across the Total Fund.

### **Regular Convening of Risk Oversight Committee**

In 2011, staff established an internal Risk Oversight Committee (ROC). The committee will meet on a monthly basis and is chaired by the lead investment officer of Risk. The primary duties and responsibilities include evaluating fund-wide risk exposures and tolerances, and assessing the steps management has taken to monitor, control and report such risk exposures.

**Fulfill Compliance, Business Continuity and Other Responsibilities**

Assuming staffing resources under the Deputy CIO are added during the fiscal year 2011-12, these responsibilities will be transitioned to his unit for oversight and execution. This transfer of responsibilities will free up staffing resources to focus on the measurement and analysis of investment risk.

## Operations Unit Description

### Operations Assets

**\$150,000,000,000**

### Expected Cost to Produce Net Profit

Incorporated within all other asset classes.

Our CalSTRS mission is securing the financial future and sustaining the trust of California's educators. We accomplish this by our investment philosophy of buying long-term stable cash flows at a reasonable price. Our mission is to beat our benchmark and add alpha to the Total Fund. Investment Operations plays a major role in achieving our mission by working in conjunction with the global master custodian to protect investment assets, which enables Investment Management to concentrate on generating alpha.

Investment Operations provides middle-office support and services for internal and external portfolio management activities. Our focus is on all aspects of asset management operations, from new program launches to coordination of the Investment section of the CAFR. We manage a segment of the cash allocation which is used to fund benefit payments, ensure end-of-day cash is invested and that funds are made available to cover purchases in other asset classes or investment programs. In addition, Investment Operations manages the processing of daily cash movements, transactions and settlements, cash forecasting, performance reporting and portfolio controls over cash, accruals and positions.

Further to the ongoing mission and core business processes, Investment Operation's is cognizant of the ever changing financial, regulatory and pension environment. Because of its plan design, CalSTRS is considered a 'hybrid' plan consisting of the Defined Benefit Program, the Defined Benefit Supplement Program, and Pension2. Opportunities may exist with Pension2 for CalSTRS to manage a pool of those assets in-house and as such, a unitized fund structure would be necessary. A unitized fund structure allows pooled assets while retaining individual net asset values which are calculated daily. Unitization will likely result in an increase in staff, service provider costs and supporting technologies.

In order for the Investments branch to manage the complexity of a \$150 billion fund, we must invest in technology that rapidly connects us to the marketplace, providing us with valuable investment information to manage market and operational risk. To do so, we leverage and manage strategic partnerships with various vendors and service providers such as State Street Bank, State Controller's Office, State Treasurer's Office, and Blackrock.

## Efforts in Fiscal Year to Protect the Assets – Operational Risk Management

We seek to minimize operational risks and establish effective controls by using portfolio management tools to perform independent quality verifications of the custodian and front office systems. Operational risk refers to potential causes of loss arising from deficiencies in internal controls, human errors, physical systems failures and other business execution risks, as well as external events.

Risks associated with enterprise wide and accounting projects must also be identified and managed. Investment Operations works with Accounting on projects such as the Investment Accounting Project (IAP) and the Corporate Accounting Resource Management (CARM) project. The purpose of the IAP is to enhance the current accounting procedures and processes as they relate to accounting for CalSTRS' investment portfolio and CARM is to improve fiscal management efficiency and effectiveness while mitigating operational risks. Essentially, with the purchase of SAP software, CalSTRS will build a platform to support business management tools to provide enhanced information to management for decision-making purposes. The Investments branch will be both a user and customer of the SAP system. As such, implementation of this system will take us from 'business as usual' to a 'business changing environment', which introduces other levels of risk such as overlap of resources, interfaces, and organizational risk that must be controlled. As we strive to implement newly created administrative policies and procedures here at CalSTRS, this directly impacts our ability to effectively support investment initiatives while we do our best to meet the deadlines of our daily critical functions. This requires robust prioritization by investment management since new investment strategies and other business projects compete for existing Investment Operation's resources.

Reputation and financial risks are minimized with the operational support and expertise of staff. For instance, we mitigate the risk that we will not have sufficient cash balances available to pay benefits by communicating our cash needs to the Investments branch. A cash management discussion and plan to fund the cash account is reviewed at our monthly Tactical Asset Allocation meetings. Since our cash asset allocation target is one percent and with our non-investment negative cash flows, constant vigilance is required to ensure sufficient cash balances are available to pay benefits.

**Other efforts that Investment Operations is focusing on to protect the assets and reduce operational risk are:**

- Continued development of effective controls by enhancing portfolio management tools to perform independent quality verifications between the custodian and front office systems.
- Automating trade processing.
- Continued development of written procedures to mitigate operational risks associated with new investment strategies. Procedures require frequent review to ensure they are updated and reflect the current operating environment.

With dedicated CalSTRS staff and the assistance of major service providers (i.e. State Street Bank), we have been successful in establishing internal controls and procedures which are used on a daily

basis to mitigate operational risks. As CalSTRS' investment programs and enterprise-wide projects evolve, the corresponding operational risks must be managed and mitigated. New complex strategies, projects and internal management increases workloads and introduces risks that must be controlled.

### **Efforts in Fiscal Year to Support Cost Reduction**

Investment Operations is a support unit which is responsible for the day-to-day business management for the Investments branch. We leverage technology to a large degree, which allows us to keep overall personnel costs down. Investment Operations is always looking for cost savings, efficiencies and opportunities to reduce fees. In fact, we achieved cost savings by negotiating a custody fee reduction for our Home Loan Program and most recently, we negotiated a significant fee reduction with our real estate cash management vendor.

Additionally, as we look for and implement new technologies to support internally managed strategies, this will provide cost savings and increase efficiency, which will enable Investment Operations to retire a reconciliation tool used solely for internal controls over equity transaction activity. As presented at the June 2011 Investment Committee meeting, the cost savings for the internally managed non-U.S. dollar contributions and distributions for Private Equity, Real Estate and Corporate Governance assets are estimated to be approximately \$2 million annually.

### **Key Initiatives in Fiscal Year 2011-12**

The Investment Operations team in conjunction with the asset classes will focus on implementing the initiatives approved at the conclusion of the Internal/External Management Study presented at the June 2011 Investment Committee meeting.

#### **Initiatives include:**

- Implement an enterprise investment management system - work with the Global Equities unit to implement end-to-end internal equity trade order management system (OMS) focusing on investment strategies that we can manage internally:
  - Russell 3000 passive strategy.
  - U.S. tactical passive strategies.
- Implement an internally managed fixed income high yield strategy;

- Implement an internally managed non-U.S. dollar contributions and distributions (currency management);
- The Investment Operations team will implement a procedural change to the Defined Benefit Supplemental asset allocation to include private assets (real estate and private equity) as presented at the June 2011 Investment Committee meeting.
- The Investment Operations team will continue to work with Accounting on the following:
  - Ongoing support of the Investment Accounting Project Phase II, which is scheduled to end December 2011; continuous support and participation in the CalSTRS Complex Securities Group (CCSG).
  - Participate on Accounting's Corporate Tax Project team to ensure compliance with federal and state tax requirements for investment manager fees.
  - Ongoing support of the implementation of the Corporate Accounting Resource Management (CARM) as a user and customer of the SAP system.
  - Real Estate and Accounting to continue efforts on evaluating the existing Real Estate Cash Management process with the goal of developing an effective implementation plan.



State Teachers' Retirement Fund

Teachers' Retirement Fund Schedule of Advisor & Consultants in effect for the year ended June 30, 2011, and under retainer for the future, fiscal year 2012-13.

**Advisors and Consultants:**

Altius Associates Limited  
Altura Capital Group  
Bard Consulting  
Cambridge Associates  
Credit Suisse AG, New York Branch  
David L. Bonuccelli & Associates, inc.  
Houlihan Lokey Howard & Zukin Financial Advisors, Inc.  
Pacific Corporate Group, LLC  
Pension Consulting Alliance (General Consultant)  
The Townsend Group  
Valuation Research Corporation