

California State Teachers' Retirement System Investment Reports

December 31, 2016

Introduction

The California State Teachers' Retirement System (CalSTRS) is required to report to the Legislature on specific areas regarding the Teachers' Retirement Fund's investments and CalSTRS actions as they relate to specific investments and holdings. This report is submitted in compliance with the direction of the following statutes:

- Chapter 442, Statutes of 2006 (AB 2941-Koretz) - Sudan.
- Chapter 671, Statutes of 2007 (AB 221-Anderson) - Iran.
- Chapter 441, Statutes of 2011 (AB 1151-Feurer) - Iran.
- Chapter 605, Statutes of 2015 (SB 185-de León) - Thermal Coal.
- Chapter 341, Statutes of 1999 (SB 105-Burton) - Northern Ireland.

Background on CalSTRS

With over 100 years of experience and over \$191.5 billion of assets under management, CalSTRS is the oldest and largest educator only pension system in the world. CalSTRS members include California public school employees, pre-kindergarten through community college, who teach, are involved in the selection and preparation of instructional materials, or are supervising persons engaged in those activities. CalSTRS members are employed by approximately 1,400 school districts, community college districts, county offices of education and regional occupational programs. CalSTRS is administered by a 12-member Teachers' Retirement Board (board). The board sets the policies and is responsible for ensuring benefits are paid by the system in accordance with the law. The board is comprised of:

- Three member-elected positions representing current educators;
- A retired CalSTRS member appointed by the Governor and confirmed by the Senate;
- Three public representatives appointed by the Governor and confirmed by the Senate;
- A school board representative appointed by the Governor and confirmed by the Senate;
- and
- Four board members who serve in an ex-officio capacity by virtue of their office.

One of the board's key core values is to ensure the strength of the retirement system by proactively addressing the risks of investing. The value permeates the investment portfolio, where the board has adopted the Investment Policy for Mitigating Environmental, Social, and Governance Risks (ESG). The policy requires managers to consider 21 separate risk factors when investing for CalSTRS. A copy of the policy is included as [Attachment A](#).

Teachers' Retirement Fund

The Teachers' Retirement Fund (fund), from which CalSTRS benefit payments are made, is valued at over \$191.5 billion as of November 30, 2016. Historically, investment returns have contributed roughly two-thirds of the costs of the educators' defined benefit retirement plan. The board's investment actions reflect a policy of investing on a long-term basis. This is done in a comprehensive, measured manner. In November 2015, the board reviewed and revised the long-term asset allocation targets based on the final results of the fiscal year 2015-16 Asset/Liability study. The funds resulted in an investment asset allocation of:

Global Equity	47 percent
Real Estate	13 percent
Private Equity	13 percent
Fixed Income	12 percent
Risk Mitigating Strategies	9 percent
Inflation Sensitive	4 percent
Cash	2 percent

In July 2016, the board reviewed and updated its 10-year financial plan. Although future events may arise that would require adjustment to the plan, having a plan ensures easier management of unexpected shifts. The development of a long-term plan is relatively new ground for public pension plans; most of CalSTRS' peers only plan year-to-year through the traditional budget process. The specific components of the plan will be incorporated as needed into the discussion within this paper, and the plan in its entirety is included as [Attachment B](#).

Strategic Response: Policy Review

CalSTRS contracts with MSCI to provide data on companies with operations in Northern Ireland and thermal coal. CalSTRS contracts with two external service providers, MSCI and IW Financial, to be our providers of information relating to Iran and Sudan.

In addition to the service providers, CalSTRS also receives information from governmental and non-governmental organizations (NGOs), such as the Conflict Risk Network, Amnesty International, Human Rights Watch, the American Israel Public Affairs Committee (AIPAC), United Against Nuclear Iran (UANI), 350.org, the Government Accountability Office (GAO), United States Department of the Treasury Office of Foreign Asset Control (OFAC), California Department of General Services (DGS), and other public pension plans. The information from these sources is compiled, vetted and compared to the CalSTRS portfolio. After reviewing the information, staff determines which companies potentially meet the criteria of the statutes.

The companies identified are presented to the 21 Risk Factor Review Committee. The 21 Risk Factor Review Committee consists of 13 senior staff members: the Chief Investment Officer, the Deputy Chief Investment Officer, the Chief Operating Investment Officer, two senior staff members from Global Equities, two senior staff members from Fixed Income, two senior staff members from Corporate Governance, one senior staff member from Private Equity, one senior

staff member from Real Estate, one senior staff member from Operations, and one senior staff member from the Innovation and Risk Group. In 2014, the committee adopted a charter governing its operation and scope of duties ([Attachment C](#)).

The committee reviews the companies identified to determine if they meet the requirements of the laws. Companies that are determined to meet the requirements of the law that require divestment are placed on restricted or related securities lists as noted in this report. After placing the companies on the respective lists, the list of restricted securities is sent out to all of CalSTRS' managers and Index providers.

Furthermore, CalSTRS engages with all of the companies on the Sudan and Iran related securities lists in which it has holdings. When a company is identified as potentially meeting the requirements of an applicable law, they receive a letter requesting information on their ties to the respective restricted area ([Attachments D & E](#)). In addition to the letter requesting information, CalSTRS makes every attempt to have senior investment staff meet with senior executives of the company. All the companies are sent a letter requesting an update of the company's operations in those restricted areas specified in statute ([Attachments F & G](#)).

In addition to the companies in its portfolio, CalSTRS continually monitors its portfolio for the companies it does not hold that have been designated as possibly problematic. If securities of these companies enter the portfolio, the 21 Risk Factor Review Committee is notified, and the engagement process is started. Furthermore, the Private Equity and Real Estate groups are updated with the lists of restricted securities and review their portfolios to monitor for possible related securities.

Lastly, CalSTRS continues to work with groups such as the Conflict Risk Network, Principles for Responsible Investment (PRI), and Global Compact to improve transparency and encourage corporations to act responsibly when dealing with conflict prone areas.

Planned Actions

CalSTRS intends to maintain its relationships with independent research providers and to continue to review publicly available information regarding investments with ties to the restricted areas. CalSTRS also plans to continue the research and engagement process indefinitely. If there are investments in the portfolio that fall within the terms of the statutes and the board finds that it is consistent with its fiduciary duty, those investments will be eliminated.

CalSTRS Response to Sudan Risk

Process

CalSTRS identified a list of 24 companies with some level of business operations in Sudan prior to the enactment of Chapter 442, Statutes of 2006 (AB 2941-Koretz), the Sudan Divestment law. The legislation defined "active business operations" to mean a company engaged in business operations that provide revenue to the government of Sudan or a company engaged in oil-related

operations. Those distinctions provided an assessment framework and supported the qualitative aspect of CalSTRS' process. The initial list was divided into four sections of various levels of involvement and holding levels. The list is fluid, and at any time, there will be companies that are in the "Being Reviewed" or second tier, and companies in the "Being Monitored" or third tier. The initial list was based on the list contained in the April 2006 Investment Committee agenda item published by the University of California Regents. The initial list has been updated based on data provided by CalSTRS' independent research contractors, NGOs and engagement work.

Tactical Response: Investments Identified

At the June 2006 Teachers' Retirement Board meeting, staff presented a list of 24 investments that could have ties to Sudan. Companies were placed on the Sudan related securities list in one of four sections: Restricted Companies, Companies Being Monitored, Companies Being Reviewed, or Non-Holdings That Possibly Meet the Divestment Criteria. The list critically focused on 10 companies that fell within the definition of the statute. Since that time, three companies have been removed from the list and two companies have been added. Currently, 10 companies are subject to the most severe restrictions under the law. As of October 4, 2008, the CalSTRS portfolio has been free of PetroChina, Petronas, Sinopec (Kunlun Energy, formerly CNPC Hong Kong), and MISC Bhd, all of which were restricted under the Sudan Divestment law. Additionally, the CalSTRS portfolio has restricted and has no holdings in Bharat Heavy Electricals, Dongfeng Motor Group, Oil and Natural Gas Company of India, PECD Berhad, and Sudan Telecom. In 2016, CalSTRS added AviChina to the list of restricted companies and divested all related securities. The portfolio has been free of AviChina since March 9, 2016.

In addition to the 10 restricted companies, CalSTRS has 10 companies in the second tier or "Under Review" category (determining if criteria for divestment is met). Lastly, CalSTRS has identified 12 companies in its portfolio that have ties to Sudan but do not meet the requirements for divestment. CalSTRS maintains these companies on its list in the "Being Monitored" category (third tier) and continues to engage them to confirm they keep with their commitments and their status does not change.

Over the past year, CalSTRS has removed nine companies that were in either the "Under Review" or "Being Monitored" categories for ties to Sudan, this includes companies that were both identified and removed within the year. While these companies have been removed, they continue to be monitored by our third party vendors and will be subject to the law if new information comes forward. Moreover, CalSTRS continues to monitor the portfolio for both investments with new ties or companies with existing ties entering the portfolio. [Attachment H](#) lists the companies in all four categories.

All asset classes were reviewed for any investments that could have ties to Sudan. Only the Global Equities asset class was found to have investments potentially affected by the law.

Actions Taken

CalSTRS continues to engage with the companies on the Sudan related securities list. In addition to engaging with individual companies, CalSTRS is a founding member and has served on the advisory board of the Conflict Risk Network. The Conflict Risk Network is the successor to the Sudan Divestment Task Force. The network is intended to increase responsible foreign investment and leverage the influence of members in areas afflicted by genocide and other atrocities.

CalSTRS Response to Iran Risk

Process

As directed by law, CalSTRS identified and created a list of companies noted as having some level of or possible business ties to Iran, such as operations in the oil, nuclear or defense industries. These distinctions provided the assessment framework and supported the qualitative aspect of CalSTRS' process. The initial CalSTRS list was divided into three sections of various levels of involvement and holding levels. This list provided the basis for the CalSTRS Iran Divestment list. The list was based on the information provided by independent research providers, NGOs and engagement work.

The list is continuously updated, and currently, companies that are determined to meet the requirements of the law are placed on the Iran Restricted list. It should be noted that on November 21, 2011, President Obama signed Executive Order 13590 and on August 10, 2012, signed H.R. 1905, the Iran Threat Reduction and Syrian Human Rights Act of 2012, which strengthened and expanded sanctions against Iran beyond those specified in the California statute. In applying the CalSTRS Investment Policy for Mitigating Environmental, Social and Governance Risks, CalSTRS expanded our research to comply with federal sanctions, which has increased the number of companies being reviewed and, in some cases, the reevaluation of previously reviewed companies.

On July 14, 2015, P5+1 (the five permanent members of the United Nations Security Council plus Germany), the European Union and Iran reached a Joint Comprehensive Plan of Action (JCPOA) designed to ensure Iran's nuclear program would be exclusively peaceful. The JCPOA became effective on October 18, 2015 ("Adoption Day"), and participants began preparations for implementations. On January 16, 2016, the JCPOA was implemented after the International Atomic Energy Agency (IAEA) verified that Iran had implemented key nuclear-related measures described in the JCPOA. While the JCPOA does offer sanction relief, it will only remove the sanctions imposed after the adoption of AB 221. Accordingly, at this point, it appears that implementation does not affect the status of any of the companies CalSTRS has currently divested or restricted.

In accordance with implementation of the JCPOA, OFAC has issued general waivers for business in Iran. The issuance of the waivers has led to news reports and speculation that several of the largest European companies are considering doing business in or with Iran. Additionally,

sanctions relief makes it possible for independent foreign subsidiaries of U.S. companies to do business with Iran. CalSTRS is concerned that these companies, which are not currently divested or restricted, may take advantage of OFAC waivers without fully evaluating the risks. Therefore, CalSTRS staff met with many of the largest European multinationals with potential interest in doing business with Iran and discussed companies' need to fully consider the risks, in particular the risks around the "snapback provisions" being invoked. Under the JCPOA, sanctions can be "snapped back" into place if the JCPOA is violated. OFAC has stated that contracts undertaken under OFAC Waivers will not be grandfathered if snapback provisions are triggered.

While none of the companies we engaged had immediate plans to do business with Iran, all gave the caveat that they are consistently monitoring the market and evaluating opportunities but would not take on a project that could violate any sanction. Furthermore, at the time of our visits, the companies cited multiple challenges to doing oil and gas projects with Iran despite the reduced sanctions. Specifically, companies cited low energy prices, financing difficulty as payments could not be in U.S. dollars or touch any U.S. financial institution, and the political risk of reinstated sanctions. Additionally, companies were concerned regarding the potential for differing sanction regimes if snapback provisions were implemented. European Union-based companies are concerned that the U.S. could reinstate sanctions for "political reasons," not obvious violations. If the U.S. were to apply snapback for "political reasons" the European Union may not follow suit and continue to allow European companies to do business with the country.

Currently, the Iran related securities list is maintained in three sections: Restricted Companies (Iran Restricted list), Companies Being Monitored, or Companies Being Reviewed.

Tactical Response: Investments Identified

The initial list comprised the names of 23 companies identified as having some level of business ties to Iran. The list was presented to the board in June 2008 and included three companies that were already restricted under the Sudan Divestment law, 18 companies that were under review, and two companies that were being monitored but were not CalSTRS holdings.

At this time, CalSTRS has identified 42 companies with ties or possible ties to Iran. Currently, 12 companies are subject to the most severe restrictions under the law. As of October 4, 2008, CalSTRS' portfolio was free of PetroChina, Petronas, Sinopec (Kunlun Energy, formerly CNPC Hong Kong), and MISC Bhd, all of which were restricted under Chapter 442, Statutes of 2006 (AB 2941-Koretz), the Sudan Divestment law. Additionally, the CalSTRS portfolio has restricted and has no holding in Oil and Natural Gas Company of India and Daelim Industrial Co. In October 2012, the 21 Risk Factor Review Committee added CNOOC (Chinese National Offshore Oil Company) to the list of restricted securities. In June 2013, CalSTRS added China Blue Chemical Ltd. to the restricted list and divested holdings of the company. In December 2014, CalSTRS added China Oilfield Services to the restricted list and divested holdings in the company. In January 2015, the 21 Risk Factor Review Committee added Indian Oil and Oil India to the list of restricted securities. In November 2015, the 21 Risk Factor Review Committee determined to divest and restrict holdings of Doosan Corp as well as Doosan Infracore and Doosan Heavy Industries related companies.

In addition to the 12 “Restricted” companies, there are 11 companies in the “Under Review” category or second tier (determining if criteria for divestment are met). Staff continues to engage with these companies to determine if they fall within the terms of the statute to divest, if the board determines it would be consistent with its fiduciary responsibility. After the review is complete, these companies will either be classified as “Restricted” or “Being Monitored” or removed from the list.

Lastly, CalSTRS is monitoring 15 companies in its portfolio that have ties to Iran or concerns regarding Iran under our Investment Policy for Mitigating Environmental, Social, and Governance Risks but do not meet the requirements of the law. CalSTRS maintains these companies as “Being Monitored” (third tier) and continues to engage them to confirm they keep with their commitments and their status does not change.

Over the past year, CalSTRS has removed 15 companies that were in either the “Under Review” or “Being Monitored” categories for ties to Iran. While these companies have been removed, they continue to be monitored by our third party vendors and will be subject to the law if new information comes forward. Moreover, CalSTRS continues to monitor the portfolio for both investments with new ties or companies with existing ties entering the portfolio. Attachment I lists the companies in all four categories.

All asset classes were reviewed for any investments that could have ties to Iran. Only the Global Equities and Fixed Income asset classes were found to have investments potentially affected by the law.

Actions Taken

CalSTRS continues to monitor the situation with regards to Iran and engage companies identified as having ties to the country.

CalSTRS Report on Thermal Coal Related Securities

Process

At the April 3, 2015, Investment Committee meeting, the board directed staff to evaluate the risk of investments in certain thermal coal companies under the CalSTRS 21 Risk Factors and CalSTRS Divestment Policy. Subsequently, on October 8, 2015, Governor Edmund G. Brown, Jr. signed SB 185, which, subject to their fiduciary duties, requires CalPERS and CalSTRS to divest of certain thermal coal companies.

SB 185 requires CalSTRS to evaluate and engage with thermal coal companies and, if consistent with the Investment Committee’s fiduciary duty, liquidate investments in thermal coal companies that are not transitioning their business models to adapt to clean energy generation, such as through a decrease in reliance on thermal coal as a revenue source, by July 1, 2017, and file a report with the Legislature by January 1, 2018. Similarly, the CalSTRS Divestment Policy requires direct engagement before divestment can take place. This allows CalSTRS to hear all sides of the issue

and to utilize our clout and asset size to bring about change. Specifically, the CalSTRS Divestment Policy states:

Consistent with its fiduciary responsibility and the concepts of diversification and passive index management, the Investment Committee does not and will not systemically exclude or include any investments in companies, industries, countries or geographic areas, except in cases where: one of the CalSTRS 21 Risk Factors is violated over a sustained time frame to the extent that it becomes an economic risk to the Fund, a potential for material loss of revenue exists, and where it weakens the trust of a significant portion of members to the System.

Tactical Response: Investments Identified

The legislation defines thermal coal companies as companies that receive 50 percent or more of their revenue from the mining of thermal coal and is consistent with the divestment evaluation requested by the Investment Committee in April 2015.

Due to the cost of engagement as well as differences in energy demand, public opinion, and governmental and regulatory policies between the United States and other countries, CalSTRS divided the issue between U.S. (“domestic”) and non-U.S. (“foreign”) markets. MSCI, CalSTRS research provider, identified six U.S. and 20 non-U.S. companies that meet the definition of thermal coal companies.

Of the six U.S. companies identified by MSCI, CalSTRS held securities in four. Over the course of several months, CalSTRS engaged the identified thermal coal companies. CalSTRS staff held a conference call with executives of Westmoreland Coal and met in person with senior executives of Hallador Energy, Peabody Energy and Cloud Peak Energy. In addition to the meeting with Cloud Peak Energy, CalSTRS staff also took a tour of the Cordero Rojo Mine, an open pit mine in the Powder River Basin in Wyoming. All the companies approached were forthcoming and open to discuss their business and the coal industry.

Of the 20 non-U.S. thermal coal companies identified, CalSTRS held securities in seven over the previous year. However, through normal portfolio activity, currently, CalSTRS holds positions in four. Since thermal coal is more of a multifaceted social issue relating to the energy need and economic development of these countries, CalSTRS’ analysis is focused on emerging market countries rather than specific companies. In particular, staff focused on India and China as the two largest consumers of thermal coal. CalSTRS’ research included a due diligence trip to India; meetings with government officials, Coal India, environmental groups and industry experts; and a tour of a mine in Durgapur. As a group, all were forthcoming and open to discuss their business, societal needs and the coal industry.

Actions Taken

At its February 3, 2016, meeting the board voted to divest of U.S. thermal coal companies as they had become de minimis to the portfolio. Accordingly, CalSTRS divested, removed from the index and restricted Alpha Natural Resources, Arch Coal, Cloud Peak Energy, Hallador Energy and

Peabody Energy. Additionally, CalSTRS restricted from purchase any other U.S. companies that are identified as coal companies that derive more than 50 percent of their revenue from thermal coal. The CalSTRS portfolio has been free of U.S. thermal coal holdings since May 9, 2016, and the CalSTRS Custom benchmarks have reflected the ex-U.S. thermal coal status since April 1, 2016.

The Investment Committee plans to take up a final decision on non-U.S. thermal coal companies at the April 2017 board meeting. If the committee determines to divest from non-U.S. thermal coal companies, staff would divest, remove from the index and restrict Coal India Limited, Exxaro Resources Limited, PT Adaro Energy and Whitehaven Coal Limited. Additionally, staff would restrict from purchase Banpu Public Company Limited, Bukit Asam (Persero) Tbk PT, China Coal Energy Company Limited, DaTong Coal Industry Co. Ltd., Golden Eagle Energy Tbk PT, Guizhou Panjiang Refined Coal Co. Ltd., Gujarat Mineral Development Corporation, Hargreaves Services PLC, Indo Tambangraya Megah Tbk PT, Inner Mongolia Yitai Coal Co. Ltd., Lubelski Wegiel Bogdanka SA, PT Bumi Resources Tbk, PT Harum Energy, Tbk, SDIC Xinji Energy Co. Ltd., Shanxi Lu'an Environmental Energy Develop Co. Ltd., Yang Quan Coal Industry (Group) Co. Ltd., and any other non-U.S. companies that are identified as coal companies that derive more than 50 percent of their revenue from thermal coal.

CalSTRS continues to maintain a contract with MSCI for thermal coal-related research and monitor the portfolio for thermal coal companies securities and will divest and restrict identified companies consistent with instruction from the board and SB 185.

CalSTRS Report on Northern Ireland Related Securities

Process

CalSTRS contracts with MSCI to provide a list of companies with business operations in Northern Ireland and those companies' efforts toward substantial action relating to affirmative action in Northern Ireland. In addition, CalSTRS has consistently voted in favor of shareholder proposals relating to companies' operations in Northern Ireland.

Companies with Exposure to Northern Ireland

The following list is comprised of companies that have been identified as having ties to Northern Ireland. CalSTRS determined that it holds \$4,862,139,794 worth of equity with exposure to Northern Ireland, which represents 4.45 percent of CalSTRS' equity holdings. Additionally, CalSTRS holds \$641,606,406 worth of bonds with exposure to Northern Ireland, which represents 2.21 percent of its fixed income portfolio. In total, CalSTRS holds \$5,503,746,200 worth of securities with exposure to Northern Ireland, which represents 2.87 percent of the total fund.

CalSTRS identified 47 holdings representing 39 companies it believes have not made substantial action toward the goals of inclusiveness in Northern Ireland. CalSTRS sent a letter to each of the companies requesting they take actions toward inclusiveness in Northern Ireland ([Attachment J](#)).

Company Name	Security Type	Shares / Face Value	Market Value 11/30/16
ALLERGAN PLC	BONDS	85,550,000	\$87,495,968
ALLERGAN PLC	STOCK	1,005,120	\$195,294,816
ASTRAZENECA PLC	BONDS	11,000,000	\$10,971,769
ASTRAZENECA PLC	STOCK	1,721,380	\$89,242,992
ASTRAZENECA PLC	ADR	1,721,380	\$89,242,992
BOOKER GROUP PLC	STOCK	4,841,979	\$10,429,459
BRENNTAG AG	STOCK	171,696	\$9,045,738
CANON INC.	ADR	169,457	\$4,899,002
CANON INC.	STOCK	2,208,288	\$63,199,150
CARILLION PLC	STOCK	470,229	\$1,449,960
CK HUTCHISON HOLDINGS LIMITED	STOCK	3,806,377	\$46,373,451
CLOSE BROTHERS GROUP PLC	STOCK	272,393	\$4,638,669
DART GROUP PLC	STOCK	119,521	\$712,302
DEBENHAMS PLC	STOCK	6,593,775	\$4,563,998
DFDS A/S	STOCK	43,676	\$1,799,698
GENPACT LIMITED	STOCK	596,777	\$14,280,874
GENTING SINGAPORE PLC	STOCK	11,457,665	\$7,758,961
GLAXOSMITHKLINE PLC	STOCK	9,538,554	\$178,225,795
GLAXOSMITHKLINE PLC	ADR	95,953	\$3,626,064
GLAXOSMITHKLINE PLC	BONDS	29,280,000	\$29,613,398
HCL TECHNOLOGIES LIMITED	STOCK	4,058,019	\$47,653,553
J D WETHERSPOON PLC	STOCK	110,346	\$1,130,504
KLOECKNER & CO SE	STOCK	185,466	\$1,960,340
KUEHNE + NAGEK INTERNATIONAL AG	STOCK	63,298	\$8,252,073
LAFARGEHOLCIM LTD.	BONDS	2,000,000	\$1,942,737
LAFARGEHOLCIM LTD.	STOCK	826,682	\$43,701,787
LEGAL & GENERAL GROUP PLC	STOCK	10,404,290	\$30,651,932
LOOKERS PLC	STOCK	385,121	\$506,432
METSO OYJ	STOCK	155,450	\$4,402,865
MICHAEL KORS HOLDINGS LIMITED	STOCK	518,625	\$24,110,876
MICRO FOCUS INTERNATIONAL PLC	BONDS	3,585,058	\$3,609,724
MICRO FOCUS INTERNATIONAL PLC	STOCK	342,110	\$9,023,097
NORTHGATE PLC	STOCK	129,887	\$680,362
PANDORA A/S	STOCK	175,007	\$20,847,831

PEARSON PLC	STOCK	3,225,146	\$32,054,659
REXEL S.A.	BONDS	370,000	\$407,845
REXEL S.A.	STOCK	364,133	\$5,635,711
SENSATA TECHNOLOGIES HOLDING N.V.	BONDS	8,149,000	\$8,465,152
SENSATA TECHNOLOGIES HOLDING N.V.	STOCK	445,047	\$16,631,406
SKY PLC	STOCK	1,685,955	\$16,451,239
SODEXO S.A.	STOCK	184,518	\$20,200,022
SPORTS DIRECT INTERNATIONAL PLC	STOCK	1,304,176	\$5,149,024
SUPERGROUP PLC	STOCK	64,165	\$1,231,377
TERUMO CORPORATION	STOCK	479,065	\$16,922,521
UDG HEALTHCARE PLC	STOCK	271,511	\$2,230,410
VEOLIA ENVIRONNEMENT S.A.	STOCK	636,334	\$11,006,249
WILLIS TOWERS WATSON PLC	STOCK	327,554	\$40,737,891
	BONDS		\$142,506,593
	DEPOSITORY RECIEPTS		\$97,768,058
	STOCK		\$988,188,027
	TOTAL		\$1,228,462,678

CalSTRS identified 141 holdings representing 119 companies that have exposure to Northern Ireland but have taken substantial action by adopting the MacBride principles or have global human rights policy that substantially contains the principle of MacBride.

Company Name	Security Type	Shares / Face Value	Market Value 11/30/16
ADECCO GROUP AG REG	STOCK	283,748	\$17,451,345
AGF MANAGEMENT LTD CLASS B	STOCK	83,943	\$334,623
ALLIANZ SE REG	STOCK	880,835	\$139,971,553
ALLIED IRISH BANKS PLC	BONDS	310,000	\$322,563
AON PLC	STOCK	1,047,820	\$119,556,262
AON PLC	BONDS	3,000,000	\$3,111,324
ASSOCIATED BRITISH FOODS PLC	STOCK	568,950	\$18,126,580
ATKINS (WS) PLC	STOCK	102,922	\$1,804,129
ATOS SE	STOCK	457,457	\$47,328,409
AVIVA PLC	STOCK	7,219,228	\$40,318,084
AXA S.A.	BONDS	4,795,000	\$5,785,823
AXA SA	STOCK	3,675,387	\$86,671,426
BABCOCK INTL GROUP PLC	STOCK	313,225	\$3,737,330
BANCO SANTANDER SA	STOCK	18,938,184	\$86,646,534

BANCO SANTANDER SA	BONDS	33,000,000	\$33,012,568
BANK OF IRELAND	STOCK	49,750,419	\$10,611,178
BANK OF IRELAND	BONDS	380,000	\$410,095
BARCLAYS PLC	STOCK	38,935,981	\$105,052,389
BARCLAYS PLC	ADR	281,089	\$3,021,707
BARCLAYS PLC	BONDS	42,025,060	\$42,740,925
BERENDSEN PLC	STOCK	169,506	\$1,875,319
BOMBARDIER INC B	STOCK	2,877,981	\$4,023,951
BOMBARDIER INC.	BONDS	9,182,000	\$8,962,714
BOUYGUES SA	STOCK	1,384,552	\$46,999,437
BRITVIC PLC	STOCK	253,584	\$1,810,672
BT GROUP PLC	STOCK	15,830,232	\$70,628,297
BT GROUP PLC	BONDS	11,250,000	\$14,794,894
BUNZL PLC	STOCK	476,252	\$12,257,605
C+C GROUP PLC	STOCK	304,753	\$1,124,698
CAPITA PLC	STOCK	749,503	\$4,911,572
COCA COLA HBC AG DI	STOCK	733,622	\$15,581,988
COMPAGNIE DE SAINT GOBAIN	STOCK	1,242,279	\$53,931,343
COMPASS GROUP PLC	STOCK	2,535,654	\$43,433,922
CRH PLC	STOCK	1,612,871	\$53,865,219
CRH PLC	BONDS	3,000,000	\$3,399,877
DANSKE BANK A/S	STOCK	1,220,545	\$35,692,623
DCC PLC	STOCK	111,324	\$8,526,109
DEUTSCHE POST AG REG	STOCK	1,692,115	\$52,934,407
DEUTSCHE TELEKOM AG	BONDS	43,788,246	\$46,278,320
DEUTSCHE TELEKOM AG REG	STOCK	6,291,034	\$99,201,982
DIAGEO PLC	STOCK	5,503,157	\$137,856,701
DIAGEO PLC	BONDS	10,360,000	\$10,875,329
DIXONS CARPHONE PLC	STOCK	1,370,769	\$5,682,537
DSV A/S	STOCK	1,265,991	\$57,021,580
ELECTROLUX AB SER B	STOCK	615,203	\$14,373,840
ESSILOR INTERNATIONAL	STOCK	269,969	\$28,666,943
FERROVIAL SA	STOCK	662,287	\$11,750,214
FUJITSU LTD	STOCK	8,849,773	\$52,409,731
G4S PLC	STOCK	6,829,126	\$20,827,374
GETINGE AB B SHS	STOCK	205,365	\$3,136,532
GLANBIA PLC	STOCK	336,533	\$5,706,551
GRAFTON GROUP PLC	STOCK	204,006	\$1,350,891
HALFORDS GROUP PLC	STOCK	179,138	\$766,343
HARVEY NORMAN HOLDINGS LTD	STOCK	1,520,308	\$5,335,577
HAYS PLC	STOCK	1,404,647	\$2,437,648
HEINEKEN NV	STOCK	486,371	\$36,487,434

HENNES + MAURITZ AB B SHS	STOCK	1,024,628	\$29,733,302
HSBC HOLDINGS PLC	STOCK	29,585,042	\$234,792,533
HSBC HOLDINGS PLC	BONDS	31,129,000	\$134,798,506
HUHTAMAKI OYJ	STOCK	97,190	\$3,660,019
INDUSTRIA DE DISEÑO TEXTIL	STOCK	1,508,049	\$51,631,543
INTERSERVE PLC	STOCK	506,784	\$1,894,779
INTL CONSOLIDATED AIRLINE DI	STOCK	1,123,403	\$6,100,341
INTL CONSOLIDATED AIRLINE DI	BONDS	2,704,036	\$2,910,331
ISS A/S	STOCK	519,215	\$17,767,138
JD SPORTS FASHION PLC	STOCK	467,445	\$1,944,806
JRP GROUP PLC	STOCK	596,284	\$992,337
KAO CORP	STOCK	1,005,099	\$46,459,752
KERRY GROUP PLC A	STOCK	171,371	\$12,149,047
KINGFISHER PLC	STOCK	10,133,620	\$44,705,806
KINGSPAN GROUP PLC	STOCK	299,385	\$7,987,326
KONE OYJ B	STOCK	518,807	\$22,872,560
KONINKLIJKE PHILIPS NV	STOCK	1,789,577	\$51,522,109
KYOCERA CORP	STOCK	543,142	\$25,911,799
L OREAL	STOCK	435,433	\$74,390,156
LADBROKES CORAL GROUP PLC	STOCK	1,709,234	\$2,650,177
LAGARDERE SCA	STOCK	153,666	\$3,792,401
LARSEN + TOUBRO LTD	STOCK	661,603	\$13,365,166
LARSEN + TOUBRO LTD	GDR	661,603	\$13,365,166
LIBERTY GLOBAL PLC	BONDS	69,478,206	\$71,304,542
LIBERTY GLOBAL PLC LILAC A	STOCK	73,800	\$1,592,604
LINDE AG	STOCK	227,613	\$37,956,225
LLOYDS BANKING GROUP PLC	STOCK	30,616,489	\$94,439,372
LLOYDS BANKING GROUP PLC	ADR	130,616,489	\$94,439,372
LLOYDS BANKING GROUP PLC	BONDS	52,815,000	\$53,529,604
MARKS + SPENCER GROUP PLC	STOCK	2,611,343	\$10,724,208
MENZIES (JOHN) PLC	STOCK	109,640	\$719,167
MICHELIN (CGDE)	STOCK	788,727	\$84,504,821
MITCHELLS + BUTLERS PLC	STOCK	188,133	\$534,041
MITIE GROUP PLC	STOCK	369,178	\$948,332
NATIONWIDE BUILDING SOCIETY	BONDS	310,000	\$391,097
NEXT PLC	STOCK	155,220	\$9,510,421
ORANGE	STOCK	3,178,446	\$46,377,660
ORANGE	BONDS	8,000,000	\$8,563,131
OXFORD INSTRUMENTS PLC	STOCK	108,498	\$844,523
PREMIER FOODS PLC	STOCK	585,320	\$321,772
PROVIDENT FINANCIAL PLC	STOCK	662,601	\$24,131,941
RANDSTAD HOLDING NV	STOCK	210,448	\$10,695,581

RENTOKIL INITIAL PLC	STOCK	2,866,944	\$7,679,724
RESTAURANT GROUP PLC	STOCK	234,237	\$949,961
ROLLS ROYCE HOLDINGS PLC	STOCK	3,411,102	\$28,831,292
ROYAL BANK OF SCOTLAND GROUP	STOCK	9,182,884	\$22,292,229
ROYAL BANK OF SCOTLAND GROUP	BONDS	14,860,000	\$14,796,483
RPS GROUP PLC	STOCK	256,835	\$601,668
RSA INSURANCE GROUP PLC	STOCK	2,550,225	\$17,221,691
RYOBI LTD	STOCK	160,890	\$645,283
SAINSBURY (J) PLC	STOCK	3,011,785	\$8,692,357
SANDVIK AB	STOCK	1,247,768	\$14,759,128
SEAGATE TECHNOLOGY	STOCK	117,670	\$4,718,567
SEAGATE TECHNOLOGY PLC	BONDS	16,000,000	\$14,834,991
SERCO GROUP PLC	STOCK	1,142,036	\$1,897,724
SGS SA REG	STOCK	6,595	\$13,226,903
SHISEIDO CO LTD	STOCK	491,052	\$12,536,489
SIEMENS AG REG	STOCK	1,524,350	\$172,375,406
SIGNET JEWELERS LTD	STOCK	461,859	\$42,163,108
SMURFIT KAPPA GROUP PLC	STOCK	255,993	\$5,838,482
SMURFIT KAPPA GROUP PLC	BONDS	145,000	\$147,779
SSE PLC	STOCK	1,289,235	\$23,758,866
STEINHOFF INTERNATIONAL H NV	STOCK	534,112	\$2,478,211
TATA STEEL LTD	STOCK	844,854	\$5,122,893
TELEFONICA SA	STOCK	8,024,215	\$66,836,893
TELEFONICA SA	BONDS	20,895,000	\$22,477,315
TELEPERFORMANCE	STOCK	60,563	\$5,919,554
TESCO PLC	STOCK	27,507,112	\$71,724,751
TESCO PLC	BONDS	200,000	\$278,996
THALES SA	STOCK	361,772	\$35,356,513
THOMAS COOK GROUP PLC	STOCK	1,669,428	\$1,766,659
THYSSENKRUPP AG	STOCK	580,259	\$13,184,837
TRAVIS PERKINS PLC	STOCK	1,223,284	\$20,510,744
TRIGANO SA	STOCK	9,119	\$682,074
TUI AG DI	STOCK	592,272	\$7,799,440
VODAFONE GROUP PLC	STOCK	46,618,091	\$112,936,389
VODAFONE GROUP PLC	ADR	46,618,091	\$112,936,389
VODAFONE GROUP PLC	BONDS	5,000,000	\$5,352,573
WH SMITH PLC	STOCK	124,747	\$2,350,353
WILLIAM HILL PLC	STOCK	2,381,287	\$8,964,219
WOLSELEY PLC	STOCK	2,196,652	\$127,481,915
WPP PLC	STOCK	3,318,250	\$70,852,107
WPP PLC	ADR	11,998	\$1,274,668
WPP PLC	BONDS	20,000	\$20,033

ZURICH INSURANCE GROUP AG	STOCK	279,593	\$73,147,337
		BONDS	\$499,099,813
		DEPOSITORY RECIEPTS	\$225,037,300
		STOCK	\$3,551,146,409
		TOTAL	\$4,275,283,522

Shareholder Proposals Relating to Northern Ireland

In 2016, there were no shareholder proposals requesting implementation of the MacBride principles. In accordance with the law and CalSTRS fiduciary duty, CalSTRS generally votes for such proposals when placed on the ballot. CalSTRS will continue to support shareholder proposals related to operations in Northern Ireland when they are in line with CalSTRS fiduciary duties.

Conclusion

As noted in this report, CalSTRS will continue to invest its funds in a responsible and prudent manner. CalSTRS will continue to adhere to the California statutes referenced in this report and to the board's Investment Policy for Mitigating Environmental, Social, and Governance Risks.

CalSTRS continues to secure a strong retirement fund for the teachers of California while remaining consistent with its ethical responsibilities and fiduciary obligations. Thus, the philosophy of identifying and addressing risks is interwoven in the business goals of CalSTRS. CalSTRS' investment goals are to:

- a) Achieve a rate of return on the total assets of the fund that in the long run exceeds the actuarial discount rate used to value the liabilities of the State Teachers' Retirement Plan for funding purposes, so as to ensure that sufficient assets are available to meet the liabilities on an on-going basis.
- b) Maximize the long-term investment return on assets at a level of risk that is acceptable to the board.
- c) Maintain a certain level of stability in pension contributions, so as not to adversely impact the long-term viability of CalSTRS and its ability to continue to meet pension obligations.
- d) Manage the investments of the fund in a prudent manner, so as to maintain the confidence of members as well as the general public in CalSTRS.

Attachment A: Investment Policy for Mitigating Environmental, Social, and Governance Risks (ESG)

PRINCIPLES

The fiduciary responsibility of the Board, as described in detail within the overall Investment Policy and Management Plan, is to discharge its responsibility in the sole and exclusive interest of the participants and beneficiaries in a manner that will assure the prompt delivery of benefits and related services.

CalSTRS invests a multi-billion dollar fund in a unique and complex social-economic milieu and recognizes it can neither operate nor invest in a vacuum. The System's investment activities impact other facets of the economy and the globe. As a significant investor with a very long-term investment horizon and expected life, the success of CalSTRS is linked to global economic growth and prosperity. Actions and activities that detract from the likelihood and potential of global growth are not in the long-term interests of the Fund. Therefore, consideration of environmental, social, and governance issues (ESG), as outlined by the CalSTRS 21 Risk Factors, are consistent with the Board fiduciary duties.

Consistent with its fiduciary responsibilities to our members, the Board has a social and ethical obligation to require that the corporations and entities in which securities are held meet a high standard of conduct and strive for sustainability in their operations. As an active owner, CalSTRS incorporates ESG into its ownership policies and practices.

Since CalSTRS is a long-term investor and may hold an investment in a corporation or entity for decade after decade, short-term gains at the expense of long-term gains are not in the best interest of the Fund. Sustainable returns over long periods are in the economic interest of the Fund. Conversely, unsustainable practices that hurt long-term profits are risks to the System's investment.

Since CalSTRS must invest huge sums of moneys for long periods of time to pay for future benefits promised to California Teachers, our actions to invest in securities of a corporation predominately reflects a judgment that the ownership will produce a sustainable rate of return which will make it an attractive investment and help CalSTRS meet its long-term obligations. It is important to note that CalSTRS ownership of a security in a company does not signify that CalSTRS approves of all of the company's practices or its products or that CalSTRS believes a particular company is an attractive investment since the security may be owned due to its membership in a particular index or for risk mitigation purposes.

Attachment A

Since 1978, CalSTRS has used a written policy, the Statement of Investment Responsibility, SIR, to navigate the complex landscape of ESG issues. The long history of this document is testimony to the national leadership of CalSTRS among pension funds in addressing ESG matters through a written policy. The SIR will continue its longevity as guidance on proxy voting; however this Policy now replaces the SIR as CalSTRS's preeminent policy on ESG matters.

POLICY

Governance Risks and Social Risks: To help manage the risk of investing a global portfolio in a complex governance environment, CalSTRS has developed a series of procedures to follow when faced with any major governance and social issue as identified by the 21 risk factors. It is important to note that fiduciary standards do not allow CalSTRS to select or reject investments based solely on social criteria.

When faced with a corporate decision that potentially violates CalSTRS Policies; the Investment Staff, CIO and Investment Committee will undertake the following actions:

- A. The CIO will assess the gravity of the situation both as an ESG risk and as to the System. The extent of the responsibility of the System to devote resources to address these issues will be determined by: 1) the number of shares held in the corporation, and 2) the gravity of the violation of CalSTRS Policies.
- B. At the CIO's direction, the Investment Staff will directly engage corporate management to seek information and understanding of the corporate decision and its ramifications on ESG issues.
- C. The CIO and investment staff will provide a report to the Investment Committee of the findings and recommend any further action of engagement or need to commit further System resources. The Investment Committee can marshal further resources given the gravity of the situation.

To assist CalSTRS Staff and external investment managers in their investment analysis and decision-making, CalSTRS has developed a list of 21 risk factors that should be included within the financial analysis of any investment decision. This list is not exhaustive and does not attempt to identify all forms of risk that are appropriate to consider in a given investment transaction; however they do provide a framework of other factors that might be overlooked. These risk factors should be reviewed for an investment in any asset class whether within the U.S. or across the globe.

CalSTRS expects all investment managers, both internal and external to assess the risk of each of the following factors when making an investment. The manager needs to balance the rate of return with all the risks including consideration of the specific investments exposure to each factor in each country in which that investment or company operates.

CALSTRS 21 RISK FACTORS

Monetary Transparency

The long-term profitability by whether or not a country or company has free and open monetary and financial data, and its observance of applicable laws.

Data Dissemination

The long-term profitability by whether or not a country is a member of the IMF (or similar organization) and satisfies the conditions for access, integrity, and quality for most data categories.

Accounting

The long-term profitability by whether or not the accounting standards are formulated in accordance with International Accounting Standards or the U.S. Generally Accepted Accounting Principles.

Payment System: Central Bank

The long-term profitability by whether the activities of a country's central bank encompass implementing and ensuring compliance with principles and standards which are established to promote safe, sound, and efficient payment and settlement systems.

Securities Regulation

The long-term profitability by exposure to operations in countries that have not complied with IOSCO objectives, which provide investor protection against manipulation and fraudulent practices.

Auditing

The investment's long-term profitability by whether or not the country uses International Standards on Auditing in setting national standards.

Fiscal Transparency

The investment's long-term profitability by its exposure or business operations in countries that do not have not some level of fiscal transparency such as publication of financial statistics, sound standards for budgeting, accounting, and reporting.

Corporate Governance

The investment's long-term profitability by whether or not the government recognizes and supports good corporate governance practices and whether it generally adheres to OECD principles.

Banking Supervision

The investment's long-term profitability from its exposure to countries that have not endorsed/complied with the Basel Core Principles. An endorsement includes an agreement to review supervisory arrangements against the principles and bring legislation in line with the principles where necessary.

<p>Payment System: Principles</p> <p>The investment’s long-term profitability by whether a country complies with the 10 Core Principles for Systemically Important Payment Systems, which includes operational reliability, efficiency, real time settlement, final settlement in central bank money; and whether rules and procedures are clear and permit participants to understand the financial risks resulting from participation in the system.</p>
<p>Insolvency Framework</p> <p>The investment’s long-term profitability from its business operations and activities in specific countries with regard to bankruptcy reform or insolvency legislation.</p>
<p>Money Laundering</p> <p>The investment’s long-term profitability from exposure and whether or not a country has implemented an anti-money laundering regime in line with international standards; consideration should be given to compliance with the 40 recommendations in the Financial Action Task Force, FATF, on Money Laundering; and whether it is a member of FATF.</p>
<p>Insurance Supervision</p> <p>Whether or not a country has a regulatory framework in line with International Association of Insurance Supervisors, IAIS, Principles.</p>
<p>Respect for Human Rights</p> <p>The investment’s long-term profitability from its business operations and activities in countries that lack or have a weak judicial System. Assess the risk to an investment’s long-term profitability from its business operations and activities in a country that engages in or facilitates the following: arbitrary or unlawful deprivation of life, disappearance, torture and other cruel, inhuman, or degrading treatment or punishment, arbitrary arrest, detention, or exile, arbitrary interference with privacy, family, home, or correspondence, use of excessive force and violations of humanitarian law in internal conflicts. Consideration should be given to governmental attitude regarding international and non-governmental investigation of alleged</p>
<p>Respect for Civil Liberties</p> <p>The investment’s long-term profitability from operations, activities, and business practices in countries or regions that do not allow freedom of speech and press, freedom of peaceful assembly and association, freedom of religion, freedom of movement within the country, allowance for foreign travel, emigration, and repatriation.</p>
<p>Respect for Political Rights</p> <p>The investment’s long-term profitability from business practices and activities in countries that do not allow their citizens the right to advocate for change to their government.</p>
<p>Discrimination Based on Race, Sex, Disability, Language, or Social Status</p> <p>The investment’s long-term profitability from business practices and activities on discrimination, such as discrimination against women, children, and persons with disabilities, national/racial/ethnic minorities, or indigenous people.</p>

Worker Rights

The investment's long-term profitability from management and practices globally in the area of worker's rights; specifically the right of association, the right to organize and bargain collectively, prohibition of forced or bonded labor, status of child labor practices and minimum age for employment, acceptable work conditions, or human trafficking.

Environmental

The investment's long-term profitability from activities and exposure to environmental matters such as; depleting or reducing air quality, water quality, land protection and usage, without regard for remediation. Consideration should be given to how a company is dealing with the impact of climate change, including whether the government is taking steps to reduce its impact, exacerbating the problem, or oblivious to the risk.

War/Conflicts/Acts of Terrorism

The investment's long-term profitability from business exposure to a country or region that has an internal or external conflict, war, acts of terrorism or involvement in acts of terrorism, and whether the country is a party to international conventions and

Human Health

The risk to an investment's long-term profitability from business exposure to an industry or company that makes a product which is highly detrimental to human health so that it draws significant product liability lawsuits, government regulation, United Nations sanctions and focus, and avoidance by other institutional investors.



INVESTMENTS BRANCH BUSINESS PLANS

FISCAL YEAR 2016-17

CALIFORNIA STATE TEACHERS' RETIREMENT SYSTEM



INVESTMENTS CORE VALUES

The CalSTRS Investments Branch core values are a set of attitudes, beliefs and behaviors that define CalSTRS and its employees.

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.

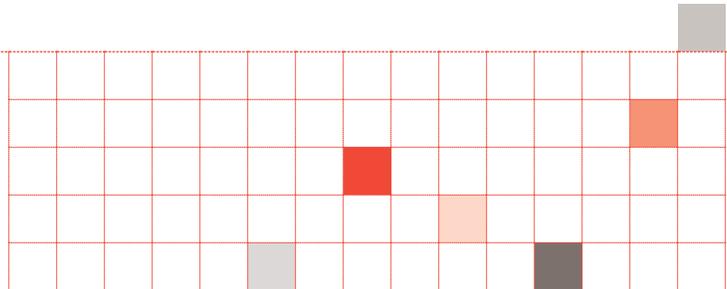
Purpose

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.

TABLE OF CONTENTS



Introduction	03
10-Yr Financial Plan	05
Global Equity.....	08
Fixed Income.....	10
Real Estate.....	13
Private Equity	16
Corporate Governance.....	19
Inflation Sensitive.....	22
Innovation & Risk	25
Risk Mitigating Strategies.....	28
Operations	31

INTRODUCTION

This year's theme is "Takin' Care of Business".

Just like the Bachman Turner Overdrive (BTO) song of the 1973, we are 'takin care of business in every way" and "everyday". As the song imparts, our schedule is full, not quite people pushin', people shovin', but close. Our Investment Committee agendas are full and the meetings have run long since there is so much to cover and so much to discuss. As we finish FY 15-16, and commence FY 16-17, we still have two major projects to complete. As a result, the Investment Committee wisely chose not to add anything more to the Committee work-plan beyond a review of the ESG 21-risk factor policy, which naturally flows after completion of the new Investment beliefs project. This will give staff, the consultants, and the Committee a chance to complete the major project at hand and to, as the theme suggest, take care of business.

The number one goal of our business does not change year in or year out, it's to earn 7.5 percent and beat our benchmarks at the lowest cost possible. It's both an absolute and relative return threshold. This coming year, as with most years, both goals look to be a big challenge. The market conditions continue to fluctuate and global risk abound. The challenge of a lower return environment with negative interest rates across the globe will once again test our ability to keep our 7.5 percent pace up.

In the following business plans, I have asked each Investment Director to outline their internal strengths and weaknesses, along with the external opportunities and threats to achieving their respective return hurdle. We have noted where each respective market is within its expected value range. A big key to our future is selecting the correct external managers and increasing our internal asset management capabilities. Of the \$185 billion, our staff is frankly the most valuable asset. To quote the last line of the song, "chances are you'll go far....if you get in with the right bunch of fellows." I'd substitute right team, but that doesn't rhythm.

Each year I caution one of the biggest threats and a general weakness for CalSTRS is to get sidetracked with short term events and issues and not maintain focus on the long-term. Since it's NOT about earning 7.5 percent in a single year, but earning 7.5 percent on average over 30 years, it's the long-term that matters and ONLY matters. We need to think in decades, not months, quarters or even years. We also can't get sidetracked with short term issues or events. It is that 7.5 percent pace that matters

most. As our members told us, consistent benefit payments is their definition of CalSTRS sustainability. Saving the climate is great, but job number one is securing the financial future of our member.

As we look into FY 16-17, we will seek to complete our Investment Beliefs project and deliver the comprehensive investment cost report. After the Investment Beliefs, we will revise and update our Environmental, Social, and Governance (ESG) 21-Risk Factor policy statement. Along the way, at each meeting, staff and the consultants will keep the Committee apprised of our progress to implement the 2015 asset allocation plan. In total, that will be a lot of business to take care of. Let's get to work!

A handwritten signature in black ink, appearing to read 'C. Ailman', with a long horizontal flourish extending to the right.

Christopher J. Ailman
Chief Investment Officer

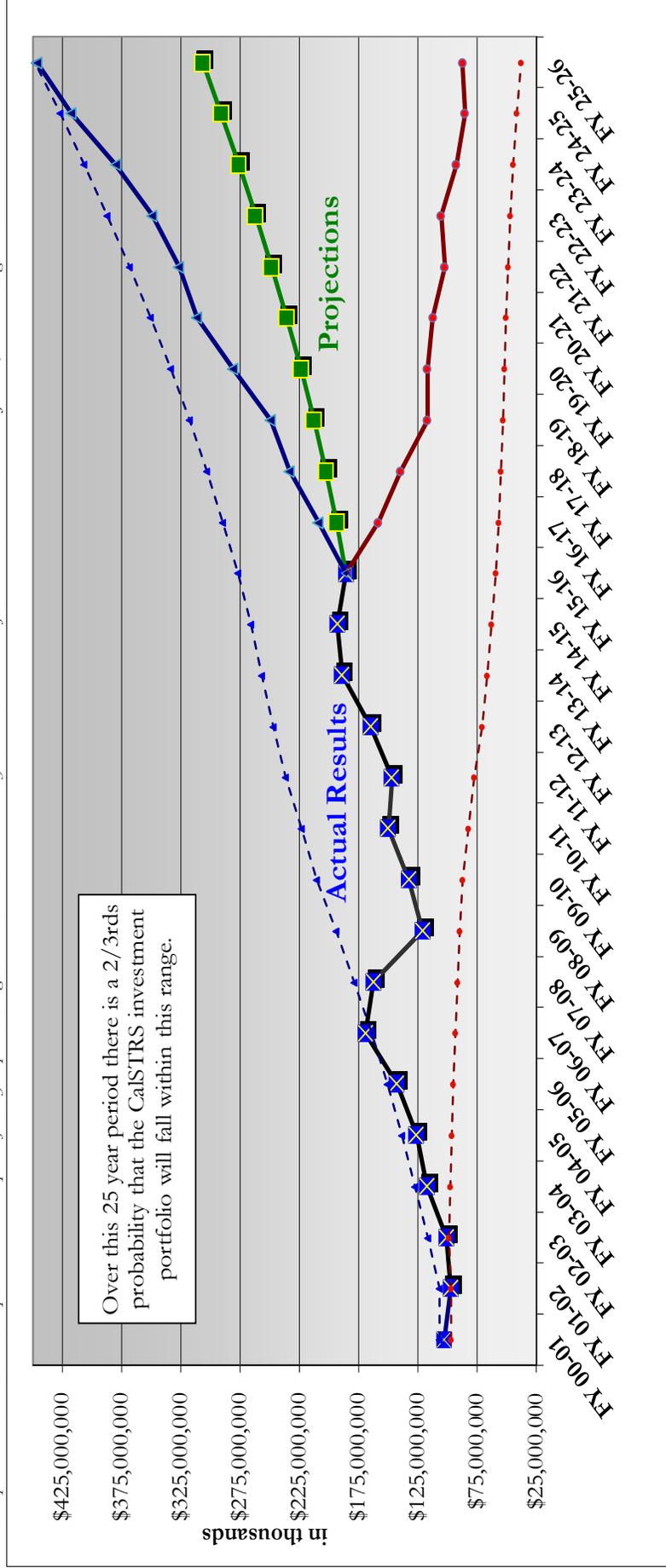
CALSTRS INVESTMENTS BRANCH 10-YR COMPREHENSIVE FINANCIAL PLAN

(in thousands)	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Defined Benefit Plan	\$ 180,238,113	\$ 188,786,971	\$ 198,226,994	\$ 208,663,019	\$ 220,257,745	\$ 232,757,076	\$ 245,927,857	\$ 259,801,446	\$ 274,387,555	\$ 289,670,741	\$ 305,592,160
D.B.S. & Cash Bal.	\$ 5,330,674	\$ 4,877,367	\$ 4,428,594	\$ 3,984,308	\$ 3,544,465	\$ 3,109,020	\$ 2,677,930	\$ 2,251,150	\$ 1,828,639	\$ 1,410,353	\$ 996,249
Pension2@*	\$ 634,575	\$ 712,033	\$ 797,236	\$ 890,959	\$ 994,055	\$ 1,107,461	\$ 1,232,207	\$ 1,369,428	\$ 1,520,370	\$ 1,686,407	\$ 1,869,048
Total (less Pension 2)	\$ 185,568,787	\$ 193,664,339	\$ 202,655,588	\$ 212,647,327	\$ 223,802,210	\$ 235,866,096	\$ 248,605,787	\$ 262,052,597	\$ 276,216,194	\$ 291,081,094	\$ 306,588,409

*PENSION 2 assets: 403(b), 457, Roth IRA & IRA assets managed outside the Investment Branch and not included in growth estimate.

Low Return Environment* \$ 185,568,787 \$ 158,484,600 \$ 139,461,070 \$ 117,000,521 \$ 112,542,715 \$ 102,339,369 \$ 105,320,204 \$ 92,774,894 \$ 85,243,516 \$ 87,429,704
High Return Environment* \$ 185,568,787 \$ 208,999,542 \$ 233,439,616 \$ 249,407,040 \$ 281,136,804 \$ 311,475,310 \$ 326,782,313 \$ 349,283,722 \$ 380,239,323 \$ 417,730,040 \$ 446,597,784

**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.

PORTFOLIO GROWTH FORECAST

CalSTRS Investment Branch 10 Year Comprehensive Financial Plan

Investment Branch

Fiscal Year	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 23-24	FY 24-25	FY 25-26
Total Assets (in billions)	\$ 185.6	\$ 193.7	\$ 202.7	\$ 212.6	\$ 223.8	\$ 235.9	\$ 248.6	\$ 262.1	\$ 276.2	\$ 291.1

Investment Branch Support Budget

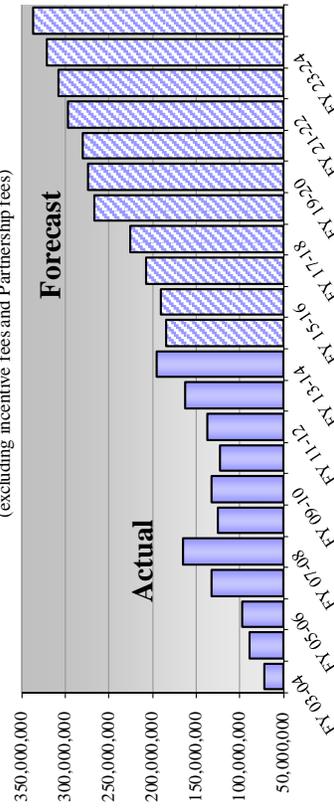
	144	155	168	178	188	199	210	233	246	260
1 Total Staff - PY's (Personnel years)	\$ 20,879,124	\$ 22,529,233	\$ 24,284,453	\$ 26,152,575	\$ 28,024,916	\$ 30,021,987	\$ 32,153,598	\$ 34,556,610	\$ 37,122,842	\$ 39,865,270
2 Salaries & Est. Incentives (w/o Benefits)	115,551	117,862	120,219	122,623	125,076	127,577	130,129	132,731	135,386	138,094
3 General Expense & (excludes IT exp.)	925,100	966,729	1,010,232	1,055,693	1,103,199	1,152,843	1,204,721	1,258,933	1,315,585	1,374,786
4 Travel (In State, U.S. & Non-U.S.)	127,957	131,456	135,052	138,747	142,543	146,445	150,454	154,573	158,807	163,157
5 CP&S & Misc. (Print, Comm., Training)	\$ 22,047,731	\$ 23,745,280	\$ 25,549,956	\$ 27,469,638	\$ 29,395,734	\$ 31,448,851	\$ 33,638,901	\$ 36,102,848	\$ 38,732,620	\$ 41,541,308
6 TOTAL SUPPORT BUDGET	\$ 22,047,731	\$ 23,745,280	\$ 25,549,956	\$ 27,469,638	\$ 29,395,734	\$ 31,448,851	\$ 33,638,901	\$ 36,102,848	\$ 38,732,620	\$ 41,541,308

Continuous Appropriation

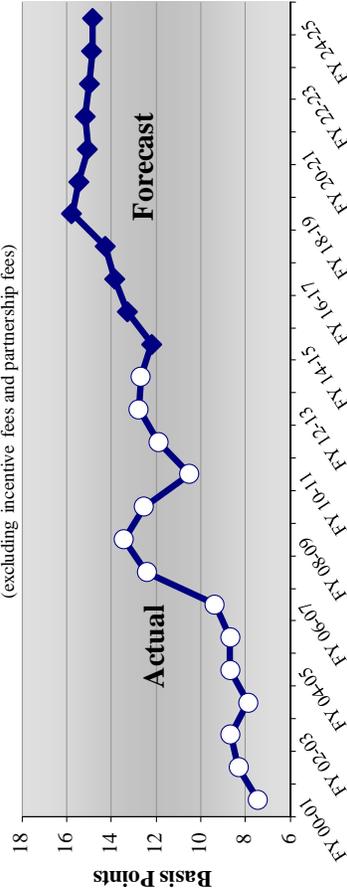
7 Investment Managers	150,587,565	168,338,096	193,707,477	235,654,083	246,075,909	257,011,083	269,720,210	280,342,939	292,659,871	309,036,351
8 Consultants Fees	11,545,198	12,122,458	12,728,581	13,365,010	14,033,261	14,734,924	15,471,670	16,245,253	17,057,516	17,910,392
9 Custodian & Legal Fees	11,539,160	12,116,118	12,721,924	13,358,020	14,025,921	14,727,217	15,463,578	16,236,756	17,048,594	17,901,024
10 Risk systems (Bloomberg, Blackrock)	6,167,500	6,414,200	6,670,768	6,937,599	7,215,103	7,503,707	7,803,855	8,116,009	8,440,650	8,778,276
11 Corp. Gov. (Expenses & Inv Mgrs)	39,088,362	39,183,664	31,034,684	31,141,765	28,005,271	22,125,587	27,253,122	27,388,309	27,531,608	27,683,504
12 Research & Market Data	3,491,585	3,679,248	3,874,418	4,077,395	4,288,490	4,508,030	4,736,351	4,973,805	5,220,757	5,477,588
13 Trading Systems	1,785,120	1,984,353	2,406,525	2,502,786	2,602,897	2,707,013	2,815,294	2,927,905	3,045,022	3,166,822
14 Misc.	70,097	72,901	75,817	78,850	82,004	85,284	88,696	92,243	95,933	99,770
15 TOTAL CONTINUOUS	\$ 224,274,588	\$ 243,911,037	\$ 263,220,193	\$ 307,115,507	\$ 316,328,856	\$ 323,402,844	\$ 343,352,776	\$ 356,323,222	\$ 371,099,952	\$ 390,053,728

16 TOTAL EXPENSES	\$ 246,322,319	\$ 267,656,318	\$ 288,770,149	\$ 334,585,145	\$ 345,724,590	\$ 354,851,696	\$ 376,991,677	\$ 392,426,069	\$ 409,832,572	\$ 431,595,036
17 % of ASSETS (BPs)	13.27	13.82	14.25	15.73	15.45	15.04	15.16	14.98	14.84	14.83

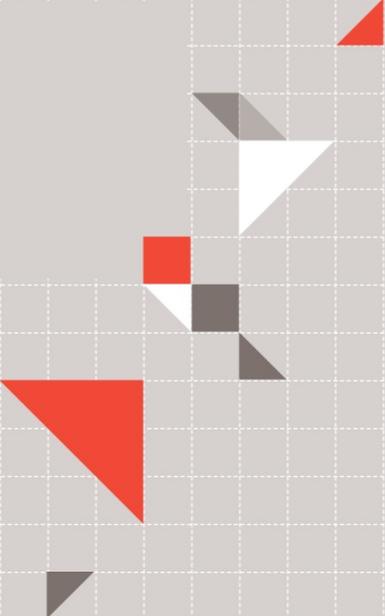
External Investment Manager Costs
(excluding incentive fees and Partnership fees)



Investment Management Costs
(excluding incentive fees and partnership fees)



GLOBAL EQUITY



GLOBAL EQUITY

FAST FACTS

Assets: \$99.2 billion as of 3/31/2016

Asset Class Objective: Maximize the risk-adjusted returns to meet CalSTRS obligation to pay benefits

FY 16-17 GOAL

Absolute Objective: 9.2% - difficult

Active Relative Objective: 60 bps – achievable

Passive Relative Objective: 8 bps – achievable

Benchmark: Migrating from 67% Russell 3000 Custom Index and 33% MSCI All Country World Custom Index to the same indexes at MSCI ACWI IMI market capitalization weights for U.S. and non-U.S.

Internal Management: \$46.4 billion (47%)

Number of External Managers: 38

External Management: \$52.8 billion (53%)

Board Consultants: Pension Consulting Alliance, Meketa Investment Group

Investment Team (16)

Director: June Kim

Portfolio Managers: David Murphy, Candace Ronan, Raymond Venner

Associate Portfolio Managers: Jason Crawford, Wilson Yee

Investment Officers: Shivi Bansal, Tim Baumert, Sharon Jou, Tiffany Lau, Helena Posner, Orintheo Swanigan, Curtis Takechi, Wayne Yim

Support Staff: Marie China, Adriana Gutierrez

Transparency and Reporting

[Global Equity Quarterly Report, 3/31/2016](#)

[Portfolio Holdings by Asset Category, 6/30/2015](#)

[Comprehensive Annual Financial Report, 6/30/2015](#)



Link to the *CalSTRS Investments Branch*

PROGRAM DESCRIPTION



The Global Equity portfolio is managed both internally by CalSTRS staff and externally by investment managers. The portfolio is invested in passive and active strategies across the U.S., developed non-U.S., and emerging markets. Additionally, Global Equity is responsible for numerous other programs including oversight and management of the Developing Manager Program, Cash Equitization Program, Stock Distribution Program, and evaluation of investment options for inclusion in Pension2® which consists of 403(b), 457, and Roth 403(b) plans for CalSTRS members.

BUSINESS PLAN FOR FISCAL YEAR 2016-17

- Continue to transition to global index weights for U.S. and non-U.S. within the global equity portfolio to implement the November 2015 Asset Allocation decision.

Expand Internal Management

- Increase the amount of assets managed internally by adding the small cap segment of the MSCI EAFE + Canada Custom IMI.
- Evaluate and potentially implement new investment strategies for internal management, such as low carbon, “Other Beta” (rules-based strategies managed to non cap-weighted benchmarks), and others.

External Manager Portfolio

- Restructure the Developing Manager Program from a U.S. equity only program to a global one in order to align it with the overall global equity portfolio transition to global index weights.

Attachment B

- Conduct manager searches as needed to refresh previously created manager pools.
- Research and potentially adopt strategies designed to outperform during equity market downturns.

STRENGTHS OF THE PROGRAM

- Long investment horizon: Volatility in equity markets creates opportunities for investors able to allocate capital to areas offering attractive valuations. As a long term investor, we can take advantage of market dislocations to help achieve our absolute return objective.
- Size: As a global investor with billions of dollars to invest, the CalSTRS Global Equity Portfolio has access to innovative ideas and investors globally. CalSTRS is often the largest investor in a strategy and negotiates terms that reflect that position. The ability to combine the best minds on Wall Street with low cost is a significant advantage.
- The team: A talented and cohesive group that integrates both sophisticated internal management and trading capabilities with a global portfolio of external active managers.

CHALLENGES FOR FISCAL YEAR 2016-17

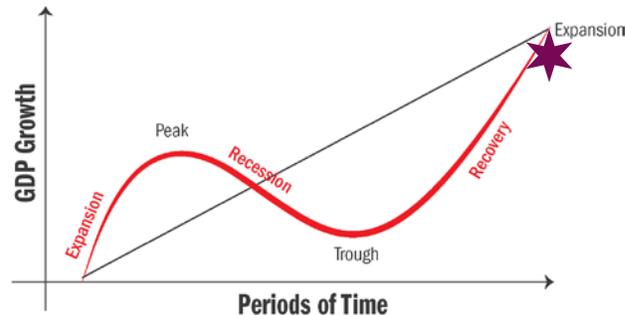
- Attracting and retaining qualified and high-performing investment professionals: It is critical that the group is sufficiently staffed in order to effectively implement the components of this proposed business plan. During fiscal year 2015-2016, positions were filled for a portfolio manager and investment officer for the external manager team, an administrative assistant, and a staff services analyst. For fiscal year 2016-2017, the goal is to fill two vacant positions for the internal management team.
- Operating an investment management firm within the confines of a government structure: In response to the extended procurement process, staff will use and periodically refresh existing

investment manager pools. Also, staff will continue working with the procurement team to find ways to streamline the investment manager hiring process.

MITIGATE RISKS & FEES

- Low or negative equity market returns could arise from central bank missteps, unfavorable tax or regulatory policies, a short-term equity market correction, or other adverse events. Researching and potentially investing in strategies designed to outperform during equity market downturns would help mitigate this risk.
- The equity portfolios collectively could underperform the Global Equity benchmark, a risk that is mitigated by retaining a diversified mix of investment managers and strategies.
- Increasing the amount of assets managed internally will help lower overall costs for the global equity portfolio.

GLOBAL MARKET CYCLE STAGE



FIXED INCOME



FIXED INCOME

FAST FACTS

Assets: \$31.1 billion as of 3/31/2016

Asset Class Objective: Maximize risk-adjusted total return within a multi-asset class portfolio

FY 16-17 GOAL

Absolute objective: 3.3% (Investment Grade Debt) and 6.2% (High Yield) – Difficult

Active Relative Objective: 35 bps – achievable

Passive Relative Objective: 10 bps - achievable

Benchmark: 95% Barclays U.S. Aggregate + 5% Barclays High Yield Cash Pay Custom

Internal Management: \$25.7 billion (83%)

Number of External Portfolios: 7

External Management: \$5.4 billion (17%)

Other Portfolios

Assets: \$48.7 billion as of 3/31/2016

Objective: Provide protection against inflation, rising interest rates and strengthening U.S. dollar.

Internal Management: \$32.9 billion (68%)

Number of External Managers: 4

External Management: \$15.8 billion (32%)

Investment Team – staff of 20 with an average of 15 years of experience in the Fixed Income market

Director: Glenn Hosokawa

Portfolio Managers: Deborah Contini, David Gold, Rosie Lucchesini-Jack, Ian McCarty, John Perez

Associate Portfolio Mangers: Geetha Arani, Roy Clothier

Investment Officers: Dan Depner, Sunny Dhillon, Cathy DiSalvo, Anthony Kennedy, Debra Ng, Kimmie Nicolas, Stacey Reichenberg, Matt Schott, Kate Wallen, Darin Yi

Support Staff: Marcella Gonzales, Laurie Masters

Transparency and Reporting

[Fixed Income Quarterly Report, 3/31/2016](#)

[Securities Lending 2015 Annual Report](#)

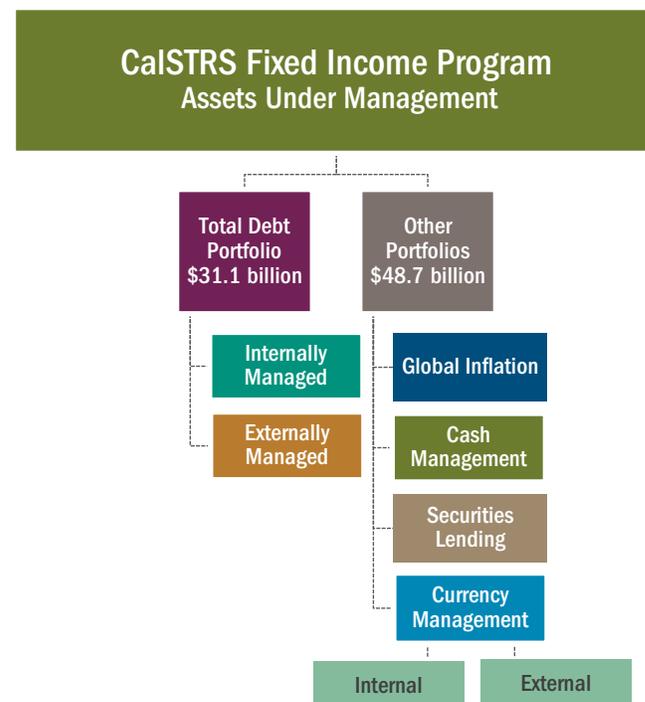
[Portfolio Holdings by Asset Category, 6/30/2015](#)

[Comprehensive Annual Financial Report, 6/30/2015](#)



Link to the *CalSTRS Investments Branch*

PROGRAM DESCRIPTION



The Fixed Income portfolio is managed both internally and externally using enhanced and active strategies. Fixed Income seeks to provide value through innovative/active asset allocation and bond selection taking advantage of internally and externally managed strategies. In addition, Fixed Income is responsible for several other portfolios and programs including Global Inflation, Cash Management, Securities Lending and Currency Management.

BUSINESS PLAN FOR FISCAL YEAR 2016-17

- Asset allocation to RMS strategies
- Establish RMS long US Treasury portfolio
- Implement contracts for Securities Lending
- Research Fixed Income non-index like strategies
- Currency Management Program – submit RFP to refresh manager pool
- Evaluate and research additional internal investment opportunities

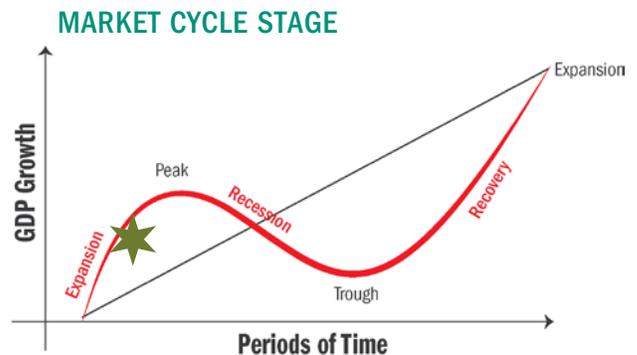
STRENGTHS OF THE PROGRAM

- Partnerships with external managers allows for knowledge sharing amongst staff
- Robust compliance and risk management system that continues to evolve and get stronger
- Cost effective structure in both internal and external management
- Cohesive and experienced Fixed Income team

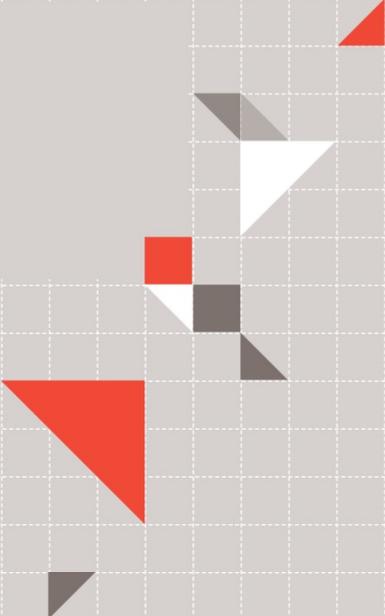
CHALLENGES FOR FISCAL YEAR 2016-17

- Interest rates are close to record lows and in some sovereign markets, negative. Mitigation: Asset allocation to ensure a broadly diversified portfolio.
- Potential for a Central Bank (FOMC, ECB, BOJ) policy error. Mitigation: Staying nimble with laser like focus on identifying opportunities and market dislocations.
- Rise of populism, its impact on the 2016 US presidential election and in turn, fiscal policy. Mitigation: Knowledge sharing with other asset classes, departments and external partners.
- Asset allocation out of Fixed Income into the RMS strategy during this period of reduced liquidity and market depth. Mitigation: Continuous monitoring of market conditions.

- Succession planning and the recruitment and retention of well-qualified staff Mitigation: Formal mentoring program designed to provide career and personal development.



REAL ESTATE



REAL ESTATE

FAST FACTS

Assets: \$26.5billion as of 3/31/2016

Asset Class Objective:

- To provide improved diversification to the overall CalSTRS Investment Portfolio,
- To generate an enhanced yield to the actuarial earnings rate assumption and provide stable cash flows, and
- To provide a hedge against inflation.

FY 16-17 GOAL

Absolute objective: The absolute objective for Core Real Estate is 7.7% and 9% for Non-Core Real Estate. – Achievable

Relative objective: The benchmark for Real Estate is the ODCE open end fund index plus 70 basis points. – Difficult

Benchmark: Open-end Diversified Core (ODCE)

Internal Management: \$7.1B, (27%) (Co-invests and Separate Accounts)

Number of External Managers: 80

External Assets: \$19.3B, (73%)

Board Consultant: The Townsend Group

Investment Team (20)

Director: Mike DiRé

Portfolio Managers: Mike Thompson, Hank Thomas, Greg Nyland, Don Palmieri

Associate Portfolio Managers: Daniel Clark, Bruce Deutsch

Investment Officers: Bruce Deutsch, Michael Yager, Daniel Clark, Tiffany Vispetto, Josh Kawaii-Bogue, Kari Salazar-Maynard, Collin Clark, Kevin Bassi, Greg Arendt, Vandy Tep, Mauricio Smith

Analysts: Jean Kagimoto, Gina Tavarez

Support Staff: Susan Daniel, Eliza Hubbard

Transparency and Reporting

[Real Estate Quarterly Report, 3/31/2016](#)

[Real Estate Semi-Annual Performance Report, 9/30/2015](#)

[Comprehensive Annual Financial Report, 6/30/2015](#)



Link to the *CalSTRS Investments Branch*

PROGRAM DESCRIPTION



Last year staff has created a Vintage Fund category to track pre-2008 vintage non-controlled closed end fund investments that are in liquidation mode. In addition we moved the risk targets to 60% core, 20% value add and 20% opportunistic. The percentages of risk classes in the portfolio do not include the vintage portfolio. The portfolio is 94% U.S. The 6% outside the U.S. is predominantly in Western Europe and Asia. In the U.S. we focus on high cash flowing investments through best in class managers. Many specialize in the four major assets types of Office, Industrial, Retail and Multifamily. CalSTRS prefers separate account and joint venture structures over closed end funds to maximize control of capital flows, sales and financing decisions in addition to minimizing fee loads.

BUSINESS PLAN FOR FISCAL YEAR 2016-17

Liquidate non-strategic assets and target investments to lower risk strategies. Review relationships to ensure alignment of interests and focused strategies.

Attachment B

- The portfolio is roughly in balance with our risk goals. We will evaluate the pricing in each risk category and adjust the portfolio to best risk/return options.
- Within the U.S. core portfolio, we continue our overweight in apartments and will look to sell down in select markets while increasing office, industrial and retail.

Position the portfolio for growth of international investments.

- Staff has made and will continue to pursue international partner relationships to access low to moderate-risk strategies that focus on cash flow.
- Staff will work with Townsend and existing partners to evaluate the best risk/return markets outside the U.S.

Continue successful strategies in “Creating Core”

- Staff will continue to seek out “Build or Lease to Core” opportunities where available across asset types.
- Staff will have additional focus on Value Add lease-up or reposition strategies in all asset types with emphasis on office and retail assets.

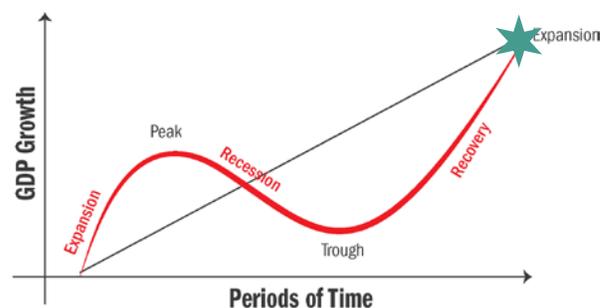
STRENGTHS OF THE PROGRAM

- Experienced and Focused Investment Team – The team is led by portfolio managers with 20-30 years of public and private investment experience.
- Advantageous Structures – CalSTRS size and experience investing through separate accounts and joint venture structures allows the program to negotiate favorable investment terms.
- Investment Reach – A more focused set of investment managers with added management teams with global investment experience. CalSTRS is now better positioned to participate in investment opportunities.

Challenges for FISCAL YEAR 2016-17

- Constrained Resources – The size of the Real Estate staff is small relative to the size and complexity of both the current portfolio, and importantly, the increasingly complex market opportunities. More staff expertise and time are required to reshape a portfolio that features higher control structures.
- Overweight in Vintage Funds – Approximately \$4 billion or 15% of the portfolio remains in pre-fiscal crisis closed end funds. These older funds have impaired our performance; staff will aggressively push for liquidation over the next three years.
- Preparation for Market Cycle Change – We continue to believe the current aggressive pricing in the U.S. and selected global markets may be signaling a pricing adjustment. We are reviewing our portfolio holdings to minimize risk of write-downs.

MARKET CYCLE STAGE



SUSTAINABILITY / ESG ACTIVITY

- Continue to be a market leader managing a real estate portfolio where the vast majority of the assets are either LEED certified or Energy Star rated.
- Continue our improvements to the Responsible Contracting Policy outreach effort.
- Work with Townsend to review best in class ESG programs to seek out program improvements
- Institute new Responsible Contractor bidding program

PRIVATE EQUITY



PRIVATE EQUITY

FAST FACTS

Assets: \$17.6 billion as of 3/31/2016

Asset Class Objective: Enhanced equity return.

FY 16-17 GOAL

Absolute Objective: The absolute objective for Private Equity is a long term return of 12.3% - achievable but difficult in the current very low return environment.

Relative Objective: The relative objective for Private Equity is a return of 70 basis points over the State Street Private Equity Index (SSPEI) – difficult.

Benchmark: In the long term, the program benchmark is the Russell 3000 public markets index plus three percent per annum. For the shorter term (three years or less) the program benchmark is the State Street Private Equity Index (SSPEI).

Internal Management: \$1.2 billion (7.1%) (Co-invests)

Number of External Managers: 127

External Management: \$16.4 billion (92.9%)

Board Consultant: Meketa Investment Group

Investment Team (20)

Director: Margot Wirth

Portfolio Managers: Deanna Winter, Geetika Misra, Rob Ross, Seth Hall, Solange Brooks, Tom Baker

Investment Officers: Chris Moore, Chris Singh, Delfina Palomo, Henry Ha, Jean Kushida Uda, Kathleen Williams, Kristian Altier, Lisa Tagao, Nick Chladek, Tyler Rico, Vanessa Phillips

Support Staff: Cindy Connitt, Debora Green

Transparency and Reporting

Private Equity Quarterly Report, 3/31/2016

Private Equity Semi-Annual Performance Report, 9/30/2015

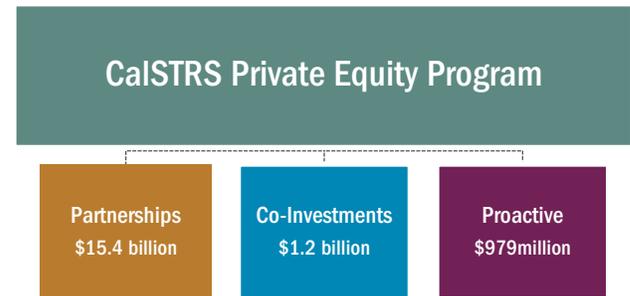
Portfolio Holdings by Asset Category, 6/30/20145

Comprehensive Annual Financial Report, 6/30/2015



Link to the CalSTRS Investments Branch

PROGRAM DESCRIPTION



Established in 1988, the Private Equity Program invests globally in partnerships, separate accounts, general partner interests, secondary interests and co-investments. Partnerships account for 93 percent of the program's exposure. Investments are further broken down into the following categories: buyouts, equity expansion, debt-related and venture capital. Approximately 70 percent of the program's exposure is based in North America and 18 percent in Europe. Remaining exposure is concentrated in Asia but also includes various (other) emerging markets. External advisors support the program by providing investment selection advice, research and gate-keeping services. Cambridge Associates covers the Americas and Asia; Altius Associates covers Europe, Middle East and Africa.

BUSINESS PLAN FOR FISCAL YEAR 2016-17

- Maintain long term investment pacing goals while remaining mindful of high valuations and high levels of dry powder within the industry. Past experience has proven many times over that attempting to time private equity markets to any large degree is difficult and probably unwise. Past experience also dictates that it is also unwise to be fully swept away by the

momentum of rising valuations, shortened fund raising cycles and rapidly increasing fund sizes.

- Continue efforts to promote fairness, transparency and compliance in the relationship between private equity general partners and limited partners. Through the advent of the Dodd Frank Act, increased SEC scrutiny and increasing cooperation amongst limited partners through organizations such as ILPA, significant strides have been made in recent years. However, market dynamics have shifted some power back in favor of general partners and in some instances this has caused some progress to be reversed or become endangered. CalSTRS continues to work hard and take leading roles within organizations such as ILPA in our efforts to maintain and increase the power and sway of limited partners.

STRENGTHS OF PROGRAM

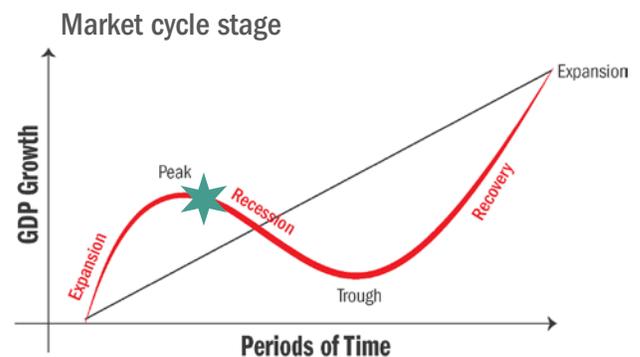
- Experience, reputation and relationships – CalSTRS was an early public pension plan investor in this asset class. CalSTRS maintains an excellent reputation in the industry for integrity, professionalism and performance.
- Cohesive world-class investment team – A mix of tenured professionals plus outside hires with extensive global capital markets and private equity experience.
- Strong teamwork-oriented culture – Emphasizes process driven due diligence and rigorous peer review.

CHALLENGES FOR FISCAL YEAR 2016-17

As reported last year, the private equity portfolio is decreasing in value on both an absolute and relative basis compared to the overall CalSTRS fund. This phenomenon is the result of several

factors, including: (1) a long term trend of general partners returning much more capital than they call; (2) a deliberately cautious investment pace by CalSTRS; and (3) a multi-year period of very high public market returns which has increased the value of the overall CalSTRS fund

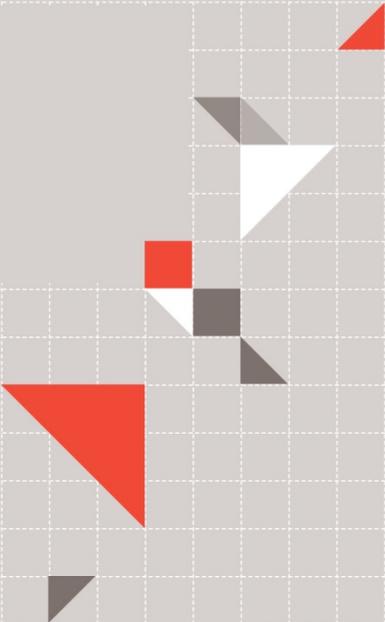
Although equity prices remain high, the pace of distributions (i.e., exit activity) has moderated in recent quarters as market volatility has disrupted capital markets. Concurrently, general partners continue to encounter significant difficulties in sourcing new deals. Besides robust competition and high prices, equity ratios (relative to debt) remain significantly higher than historical averages for most market sectors.



SUSTAINABILITY / ESG ACTIVITY

The private equity portfolio contains a large exposure (\$438.6 million total value) of legacy investments which were specifically targeted at clean technology and energy business sectors. Overall performance has been impaired by both falling fossil fuel prices and lackluster global economic demand. Staff is committed to this sector in the long term. These legacy investments are being carefully monitored and new investment opportunities actively screened and evaluated.

CORPORATE
GOVERNANCE



CORPORATE GOVERNANCE

FAST FACTS

Assets: \$4.2 billion as of 3/31/2016

Asset Class Objective: Create alpha and reduce risk in the CalSTRS portfolio by pursuing good corporate governance and sustainability.

FY 16-17 GOAL

Absolute Objective: 9% - difficult

Active Relative Objective: 60 bps – achievable

Benchmark: For Activist Managers: Russell 3000 CalSTRS Custom Index (U.S. Equity) and MSCI ACWI CalSTRS Custom Index (non-U.S. equity). For Sustainability Managers: MSCI World CalSTRS Custom Index.

The chance of meeting return objective may be difficult given current public equity market conditions

Internal Management: \$35 million (1%) (Co-invest)

Number of External Managers: 11

External Assets: \$4.0 billion (99%)

Board Consultant: Pension Consulting Alliance and Meketa Investment Group

Investment Team (10)

Director: Anne Sheehan

Portfolio Managers: Brian Rice, Aeisha Mastagni

Associate Portfolio Manager: Philip Larrieu

Investment Officers: Ly Van, Eric Kwong, Travis Antoniono, Mary Morris, Doug Chen, Daniel Bain

Support Staff: Laurie Winston, Kathleen Hawkins

Transparency and Reporting

[CalSTRS Principles for Executive Compensation](#)

[Summary of Fiscal Year 2014-2015 Proxy Votes](#)

[CalSTRS efforts on board diversity](#)

[Green Initiative Task Force 2015 Annual Report](#)

[Corporate Governance 2015 Annual Report](#)



Link to the *CalSTRS Investments Branch*

PROGRAM DESCRIPTION



The Corporate Governance Program includes proxy voting, portfolio company engagements, securities litigation support, and portfolio management. The Corporate Governance Activist Manager Portfolio consists of ten external managers and multiple side-by-side co-investments. The Sustainability Manager Portfolio consists of two external managers.

BUSINESS PLAN FOR FISCAL YEAR 2016-17

- The Corporate Governance Activist Manager Portfolio outperforms its U.S. and non-U.S. benchmarks.
- The Sustainability Manager Portfolio outperforms its non-U.S. benchmark.
- Staff reinforces CalSTRS reputation as a global leader on Corporate Governance, focusing on executive compensation, majority vote, proxy access and diversity.
- CalSTRS continues to be a leader in sustainability awareness through engagement of financial market participants on environmental issues including climate change, water and other topics.
- Evaluate Potential new Sustainability themed Strategies

Attachment B

STRENGTHS OF THE PROGRAM

- CalSTRS continues to be a leader in the field of Corporate Governance, with staff being frequently sought out as speakers, analysts and press references on Corporate Governance topics.
- The integration of the Sustainability Manager Portfolio has deepened the staff expertise and credibility on engagements and other activities in the ESG space.
- Staff has maintained the number of managers in the activist portfolio at nine managing approximately \$3.4 billion.
- Staff's ability to do in-depth research and analysis on public equity securities have increased with the growth of our co-investment portfolio.

CHALLENGES FOR FISCAL YEAR 2016-17

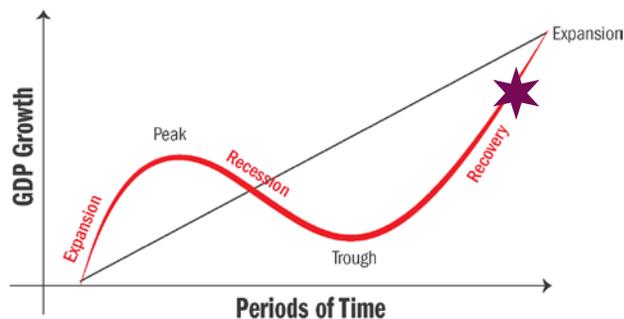
- Limited resources: Resources will become more constrained with the transfer of the Sustainability Manager Program.
- The recent press attention to the role of activism has required staff to respond to inquiries concerning the role that CalSTRS activist program plays in these markets.
- Finding suitable staff to augment the Corporate Governance team.
- Activist managers' returns are largely driven by capital allocation and mergers and acquisitions (M&A) activity which could be less attractive in an overvalued market.

MARKET CYCLE STAGE

- The Corporate Governance unit pursues engagements throughout the market cycle. While markets have traditionally been more

receptive to governance changes during down markets, this appears to be slowly changing.

- Activist managers seek fundamentally sound companies where they can act as a catalyst to affect change and add value.



- The market cycle for activist investing remains near a peak. The recent superior performance of activism has attracted many new managers to the space and has gained the attention of public company directors, management, media and regulators.
- The crowded investment arena, rich company valuations and companies trying to prevent activist engagement have resulted in fewer investment opportunities.
- Staff continues to work to optimize our portfolio for this environment by partnering with managers that have a wealth of activism experience, enjoy good reputations and have demonstrated innovative thinking.

MITIGATE RISK AND FEES, FISCAL YEAR 2016-17

- Evaluate potential new good governance themed indexes as a way to both reduce costs and volatility.
- Continue to evaluate and pursue co-investment opportunities with current managers to reduce cost.

INFLATION SENSITIVE



INFLATION SENSITIVE

FAST FACTS

Assets: \$1.77 billion as of 3/31/2016

Asset Class Objective: Improve diversification of the overall CalSTRS Investment Portfolio by lowering the macroeconomic risks that pervade other major asset classes. Generate enhanced yield and stable cash flows.

FY 16-17 Goal:

Absolute Objective – 5.0% - achievable

Relative Objective – Weighted Barclays Inflation Linked Global – Series L Index, Alerian Index and CPI +4% - achievable

Benchmark: Weighted Barclays Inflation Linked Global – Series L Index, Alerian Index and CPI + 4%

Internal Management: \$559.1 million (32%)

Number of External Managers: 10

External Management: \$1.2 billion (68%)

Board Consultants: Pension Consulting Alliance, Meketa

Investment team (6)

Director: Paul Shantic

Portfolio Manager: Vacant

Assoc. Portfolio Manager: Charles Fitzpatrick

Investment Officers: Christopher Ellis, John-Charles Gish, and Michael Warmerdam. (One vacancy)

Support Staff Analyst: Richard Novoa

Transparency and Reporting

[Infrastructure Quarterly Report, 3/31/2016](#)

[Portfolio Holdings by Asset Category, 6/30/2015](#)

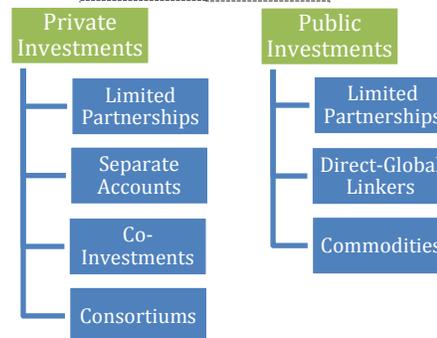
[Comprehensive Annual Financial Report, 6/30/2015](#)



Link to the *CalSTRS Investments Branch*

PROGRAM DESCRIPTION

CalSTRS Inflation Sensitive Program

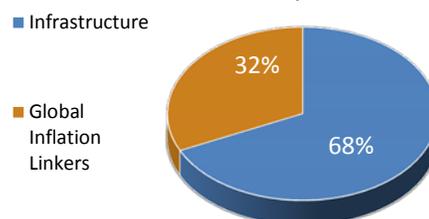


The Inflation Sensitive Portfolio currently consists of: (1) The Global Inflation Linkers Portfolio, and; (2) The Infrastructure Portfolio.

- Inflation linked securities are issued by developed market countries in North America, Europe, and Asia. These securities are linked to national inflation rates.
- Infrastructure’s policy objective is to invest in assets that have a long-term life, are monopolistic in nature, provide essential services, and have a form of inflation linkage in the revenue stream.

PORTFOLIO ALLOCATION

Inflation Sensitive Allocation as of March 31, 2016



BUSINESS PLAN FOR FISCAL YEAR 2016-17

- Present to the Board for review and approval, an updated Inflation Sensitive and/or Infrastructure Policy, if necessary.
- Expand the portfolio beyond Global Linkers and Infrastructure to include Commodities by the end of 2016.
- Complete consultant review of Agriculture and Timber portfolio strategy and potential structures. Begin implementation in Fiscal Year 2016-17.

STRENGTHS OF THE PROGRAM

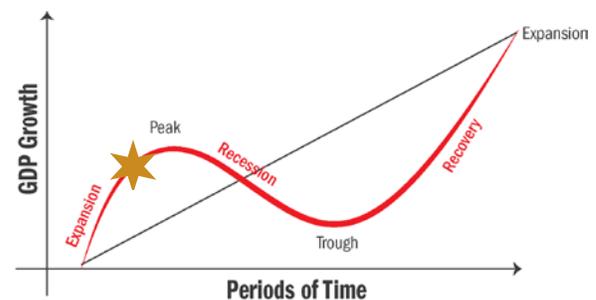
- The Inflation Sensitive unit has grown since it was implemented in early 2010 with the allocation of 5 more dedicated staff in 2014. The intention is to grow the team in an orderly fashion so as to build a unique hybrid multi- asset portfolio.
- The Inflation Sensitive policy was approved by the Board in September 2015 permitting further diversification. The Infrastructure policy has been reviewed and revised over the last five years to strengthen the program objectives and direction.
- The CalSTRS infrastructure program continues to be recognized as a leader in the industry.

CHALLENGES FOR FISCAL YEAR 2016-17

- Portfolio monitoring and reporting will continue to be an important focus as the portfolio acquires new assets and grows.
- Implementing three different program strategies: commodities, agriculture and timber in a deliberate and thoughtful manner.

- Movements in global currency can affect portfolio holdings and valuations. Currency hedging will be implemented, when necessary, based on market data and long-term forecasts.
- Maintain and develop the investment skill set of the Inflation Sensitive staff so as to be capable of reviewing and working with a broad range of investment opportunities across the asset class.
- Staying atop changing macro conditions such as: regulatory changes, political uncertainties and climate trends.

MARKET CYCLE STAGE



MITIGATE RISKS & FEES FISCAL YEAR 2016-2017

- Review more infrastructure co-investment and separately managed account structures so as to lower fees and costs.
- Actively negotiate lower fees in commodity fund structures.
- Work with our agriculture and timber consultant to determine the best managers and the most advantageous fee structures for the strategies undertaken.
- Continue to ensure, via Advisory Board meetings, that Fund managers do not deviate from their intended investment goals and objectives.

INNOVATION & RISK



INNOVATION & RISK

FAST FACTS

Assets: \$1.3 billion as of 3/31/2016

Asset Class Objective: Maximize the risk-adjusted total fund returns to meet CalSTRS obligation to pay benefits

FY 16-17 GOAL

Absolute Objective: Incubate strategies new to CalSTRS that could improve the overall risk and return characteristics of the total fund - achievable

Relative Objective: Outperform the Innovation benchmark by 40 bps over a rolling three-year period - difficult

Benchmark: Custom benchmark based on the weighted-average performance of underlying strategy benchmarks

Internal Management: N/A

Number of External managers: 8

External Assets: \$1.3 billion

Board Consultants: Pension Consulting Alliance, Meketa

Investment team (7)

Director: Steven Tong

Portfolio Manager: Glen Blacet

Associate Portfolio Manager: Josh Diedesch

Investment Officers: Matt Lisonbee, Matt Toepel, Angela Tran

Support Staff: Nancy Flora

Transparency and Reporting

[Innovation & Risk Quarterly Report, 3/31/2016](#)

[Portfolio Holdings by Asset Category, 6/30/2015](#)

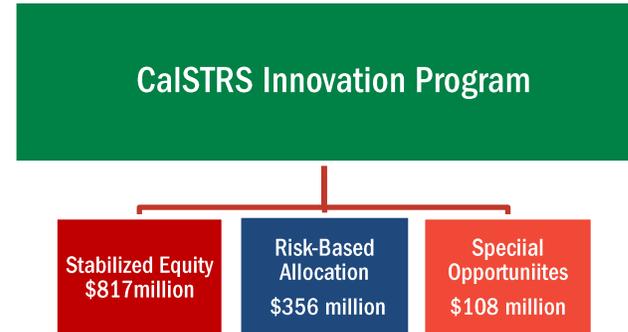
[Comprehensive Annual Financial Report, 6/30/2015](#)

[CIO Risk Report, June 2016](#)



Link to the CalSTRS Investments Branch

PROGRAM DESCRIPTION



Established in 2009 and organized around two distinct areas: investment strategies new to CalSTRS (Innovation) and risk management.

Innovation:

Our primary goal is to identify, research, and incubate strategies that diversify the CalSTRS Total Plan. The global macro and trend following strategies were “graduated” into the RMS asset class leaving three strategies within the Innovation portfolio: risk-based allocation, stabilized equities, and special opportunities.

Risk Management:

We strive to measure and understand risks that span the entire Investments portfolio to inform short- and long-term asset allocation decisions.

BUSINESS PLAN FOR FISCAL YEAR 2016-2017

- Review and analyze additional strategies that diversify returns and lower the fund volatility across economic regimes
- Continue joint research with Global Equities on “other beta” solutions
- Complete an in-depth analysis of risk-based allocation strategy and make recommendation to Innovation Advisory Committee
- Complete risk management system RFP
- Load Risk Mitigating Strategies portfolios on the Aladdin total fund risk system

Attachment B

- Develop private asset cash flow models to better measure and manage liquidity risk

STRENGTHS

- Relatively small capital allocations enable a thorough evaluation of new strategies prior to full integration into the total plan's asset allocation
- Multi-asset class managers provide insights for tactical asset allocation decisions
- Risk team focus on actionable, high-value information
- The Risk unit's insight into all asset classes enables a more comprehensive approach to risk management

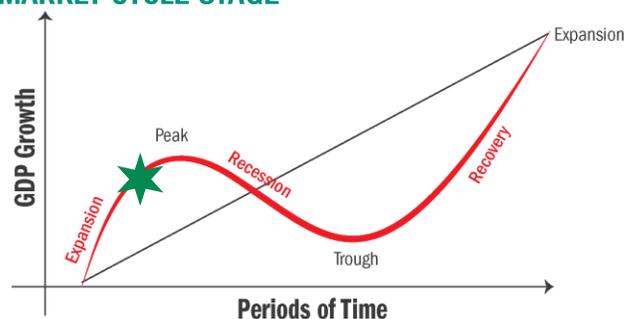
CHALLENGES

- Strategy due diligence is more resource intensive because of the limited history and complexity of many of these strategies
- Performance evaluation for some of these strategies can be more difficult due to the absence of appropriate benchmarks
- Need for and integration of additional staff – the team is hiring an IO III for fiscal year 2016-17 to assist with new strategy research and implementation. The IO III position will provide additional capacity to incubate a greater number of potentially value-adding strategies
- Determining where successful incubation strategies will be graduated to
- Robust analysis of risk requires use of relatively new and untested private market risk models
- Refining the role of risk management in the investment process

Potential threats to achieving our return objectives:

- Continued global interest rate easing may lower volatility and the number of investment opportunities
- Unanticipated market events cause multiple asset classes to become highly correlated and reduce the effectiveness of diversification
- Markets that are range bound or experience frequent, sharp reversals can limit the opportunity set

MARKET CYCLE STAGE



MITIGATE RISKS & FEES, FISCAL YEAR 2016-17

- Separate accounts provide full transparency and improves 21 Risk Factor Policy compliance
- Larger capital allocations provides fee negotiation leverage
- Take advantage of low or no-cost technology solutions wherever possible
- Ensure that the risk management system relies on accurate, high quality data
- Expand risk reports in order to improve risk monitoring and management

RISK MITIGATING STRATEGIES



RISK MITIGATING STRATEGIES

FAST FACTS

Assets: \$1.8 billion as of 3/31/2016

Asset Class Objective: Preserve total plan capital by diversifying the global equity exposure of the total plan

FY 2016-2017 GOAL

Absolute Objective: Invest in strategies that primarily provide protection against equity market downturns - achievable

Relative Objective: Outperform the RMS benchmark by 20 bps over a rolling three-year period. - difficult

Benchmark: Custom benchmark based on the respective target weight of each RMS component: 40% long duration U.S. Treasuries (UST), 45% trend following, 10% global macro, 5% systematic risk premia (SRP). Benchmark is dynamically weighted during RMS ramp-up phase

Internal Management: \$4.4 billion by June 30, 2017

Number of External managers: 15 by June 30, 2017

External Assets: \$6.7 billion by June 30, 2017

Board Consultants: Pension Consulting Alliance, Meketa

Hedge Fund Adviser: Lyxor Asset Management

Investment team (5)

Director: Steven Tong

Portfolio Manager: Carrie Lo

Investment Officers: Jeffrey Jaro, Michel Paniagua

Support Staff: Nancy Flora

Transparency and Reporting

[Innovation & Risk Quarterly Report, 3/31/2016](#)

[Portfolio Holdings by Asset Category, 6/30/2015](#)

[Comprehensive Annual Financial Report, 6/30/2015](#)



Link to the *CalSTRS Investments Branch*

PROGRAM DESCRIPTION



The Risk Mitigating Strategies asset class was established in 2015 and is currently comprised of four strategies: UST, trend following, global macro, and SRP. Our primary goal is to construct a portfolio that will invest in strategies that provide protection during equity market downturns. Currently, we have begun to implement three of the four approved strategies: UST, trend following and global macro. The trend following and global macro programs were initiated in the Innovation portfolio.

BUSINESS PLAN FOR FISCAL YEAR 2016-2017

- Invest approximately 3 percent of the total plan in Risk Mitigating Strategies by December 31, 2016, and approximately 6 percent by June 30, 2017
- Continue to conduct due diligence on new managers and negotiate contracts and managed accounts
- Reevaluate existing managers and renegotiate contract terms and fees
- Identify and fund four additional trend following managers, one additional global macro manager and three systematic risk premia managers
- Establish guidelines and procedures for and allocate to UST program

STRENGTHS OF PROGRAM

- Established class that encompasses several approaches to reducing total plan shortfall risk
- Managed account platform provides for improved 21 Risk Factor Policy compliance, transparency, risk management, fees and terms
- Internal capabilities for large portion of RMS class (40 percent UST)
- Multi-asset class managers provide insights for tactical asset allocation decisions

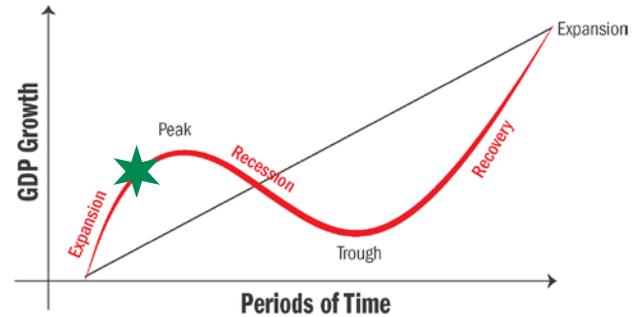
CHALLENGES FOR FISCAL YEAR 2016-2017

- Potential fee transparency and other State legislative requirements may limit willingness of managers to do business with CalSTRS
- Development of RMS staff: recruiting, integrating. Need for and integration of additional staff – The team is hiring an IO II for fiscal year 2016-17 to assist with some of the supporting tasks. Additionally, an IO III will be hired to provide capacity to research a greater number of potentially value-adding strategies.

Potential threats to achieving our return objectives:

- Drivers of next crisis are unknown and we don't know if RMS strategies will behave as they have in the past. Unanticipated market events cause multiple asset classes to become highly correlated and reduce the effectiveness of diversification
- Limited history, not tested in crisis – true for SRP
- Markets that are range bound or experience frequent, sharp reversals can limit the opportunity set

MARKET CYCLE STAGE



MITIGATE RISKS & FEES

- Large allocations to trend following managers should provide fee negotiation leverage
- Transparency of managed accounts improves adherence to ESG policy
- Incorporating positions on a single risk platform should provide deeper insights to market exposure

OPERATIONS



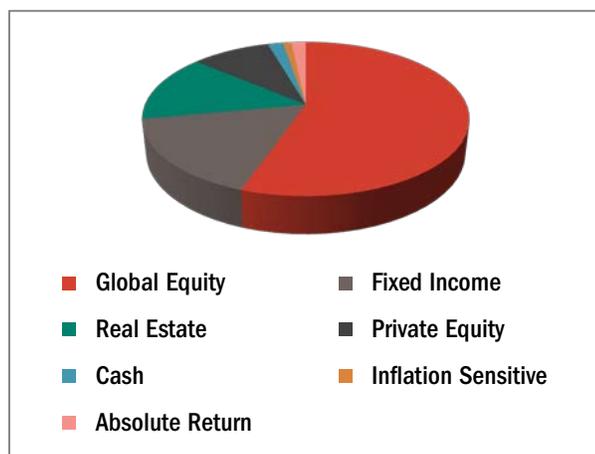
OPERATIONS

FAST FACTS

Assets: \$186.8 billion as of 3/31/2016

Investment Summary:

Asset Mix	In Millions	%
Global Equity	\$103,494	55.4
Fixed Income	31,067	16.6
Real Estate	26,558	14.2
Private Equity	17,298	9.3
Cash	3,366	1.8
Inflation Sensitive	1,774	1.0
Absolute Return	3,230	1.7
Total	\$186,787	100.0%



Total Fund:

Internal Management: \$77.5 billion (41%)

External Management: \$109.3 billion (59%)

INVESTMENT TEAM (19)

Director: April Wilcox

Associate Portfolio Manager: Kelly Criss

Investment Officers: Matthew Schroeder, Haytham Sharif, Mami Wong, Diego Sanchez, Daniel Thai, Pedro Ferrer De Morais, Ralph Smith, Mary Ann Avansino, Huy Ngo, Michael Lawrence, Denny Young, Carlos Maciel, Mylene Dalpig, Rona Johnson, (2) Vacancies

Support Staff: Vacant

TRANSPARENCY AND REPORTING

[Current Investment Portfolio](#)

[Portfolio Holdings by Asset Category, 6/30/2015](#)

[Semi-Annual Performance Report as of December 2015](#)

[Comprehensive Annual Financial Report as of June 30, 2015](#)



Link to the *CalSTRS Investments Branch*

PROGRAM DESCRIPTION

Investment Operations

Trade
Management

Account
Control

Reconciliation

Investment Operations' primary objective is to provide middle-office support for internal and external portfolio activities across the Investment Branch. This is accomplished by performing pre-settlement and post trade controls, trade management, portfolio reconciliations, cash flow analysis and forecasts, and total fund reporting. We partner with the asset classes in conjunction with our global master custodian to align operational services for successful implementation of the Investment Policy and Management Plan.

BUSINESS PLAN FOR FISCAL YEAR 2016-2017

- Implementation of the November 2015 asset allocation decision by providing operational support of the Risk Mitigating Strategies and the move away from a U.S. home country bias within Global Equity.
- Internal management support of new investment strategies across all asset classes (e.g. Global Equity EAFE, Inflation Sensitive).
- Investment Cost Effectiveness reporting for direct investment costs, indirect investment costs, and a peer group comparison.
- Manage the relationship and deliverables of internal and external service providers including

Attachment B

the master custodian, our risk management system, data providers and internal stakeholders.

STRENGTHS

- A diverse operational team encompassing a breadth of different backgrounds, education, gender and ethnicity which foster teamwork and engage critical thinking in order to integrate new investment strategies into the current workload.
- Strong internal control environment and operational oversight for portfolio activities across all asset classes.
- Providing cash forecasts and cash flow analysis to investment management and during the Tactical Asset Allocation meetings to ensure sufficient cash balances are available to pay benefits to our members.

CHALLENGES

- Recruiting and retaining well qualified staff in Investment Operations to maintain sufficient operational knowledge and resources in order to support our complex global investment portfolio.
- Increased complexity of the global investment portfolio requires continuous education, knowledge transfer, specialized expertise, and enhanced internal controls.
- An evolving financial and regulatory environment will require technological changes that are critical to mitigate risk and manage the complexity of our global investment portfolio.

MITIGATING RISK AND FEES

- Research and establish best practices of operational processes in the investment industry and across peers to reduce manual intervention, decrease complexities and strengthen efficiencies, while maintaining a cost effective middle-office support team.

- Segregate and monitor the operational internal control environment and provide support to the investment enterprise risk management system.
- Perform ongoing internal control reviews and oversight of our master custodian in order to periodically assess and mitigate risks.
- Strengthen our culture and ethical environment within the organization by combining standards of professional conduct in the investment industry with core values of the organization.

Charter of the CalSTRS 21 Risk Factor Review Committee

Purpose

The 21 Risk Factor Review Committee (“the Committee”) is established by the Chief Investment Officer of California State Teachers’ Retirement System (“CalSTRS” or “the fund” CalSTRS to discuss geopolitical and Environmental Social and Governance (“ESG”) risks to the fund and to take actions to address ESG risks faced by the fund.

Membership and Structure

Membership

The 21 Risk Factor Review Committee shall consist of at least the Chief Investment Officer, Deputy Chief Investment Officer and Director of Corporate Governance as well as one representative of each asset class determined by each asset class’ director. From time to time, the committee may seek input from other CalSTRS Departments and groups such as the Green Team, Legal, or Legislative Affairs.

Meetings

Committee meetings will be open to all members of the Investment Office.

Meetings are led by the Chair, which shall be determined by Chief Investment Officer.

The Committee will meet at least quarterly and on ad hoc basis as circumstances dictate. Occasionally the committee may act through written consent to act on pressing issues and with a more in depth review of the issue at the next scheduled meeting.

Reporting

The Chair of the Committee or Chief Investment Officer shall report on the Committee’s activities of the CalSTRS board as circumstances demand.

The Chair of the committee shall draft an annual report to the CalSTRS board and legislatively required reports to the Legislature for approval of the Chief Investment Officer and CalSTRS Board.

Responsibilities

The responsibilities of the 21 Risk Factor Review Committee are:

- Evaluate ESG issues to determine if they violate 21 Risk Factors Policy
- Carry out CalSTRS Board’s directives relating to the 21 Risk Factors and Divestment policies

Attachment C

- Assist the investment office in addressing ESG Issues
- Assist asset classes on engagement of ESG issues
- Insure all asset classes are aware of ESG issues affecting the fund
- Determine if such issues should be elevated to the full board. Refer issues to the Teachers' Retirement Board for review.
- Prepare annual reports to the board and legislature on ESG issues related to investments

Appendix A – CalSTRS 21 Risk Factor Policy

Attachment A:

Investment Policy for Mitigating Environmental, Social, and Governance Risks (ESG)

PRINCIPLES

The fiduciary responsibility of the Board, as described in detail within the overall Investment Policy and Management Plan, is to discharge its responsibility in the sole and exclusive interest of the participants and beneficiaries in a manner that will assure the prompt delivery of benefits and related services.

CalSTRS invests a multi-billion dollar fund in a unique and complex social-economic milieu and recognizes it can neither operate nor invest in a vacuum. The System's investment activities impact other facets of the economy and the globe. As a significant investor with a very long-term investment horizon and expected life, the success of CalSTRS is linked to global economic growth and prosperity. Actions and activities that detract from the likelihood and potential of global growth are not in the long-term interests of the Fund. Therefore, consideration of environmental, social, and governance issues (ESG), as outlined by the CalSTRS 21 Risk Factors, are consistent with the Board fiduciary duties.

Consistent with its fiduciary responsibilities to our members, the Board has a social and ethical obligation to require that the corporations and entities in which securities are held meet a high standard of conduct and strive for sustainability in their operations. As an active owner, CalSTRS incorporates ESG into its ownership policies and practices.

Since CalSTRS is a long-term investor and may hold an investment in a corporation or entity for decade after decade, short-term gains at the expense of long-term gains are not in the best interest of the Fund. Sustainable returns over long periods are in the economic interest of the Fund. Conversely, unsustainable practices that hurt long-term profits are risks to the System's investment

Since CalSTRS must invest huge sums of moneys for long periods of time to pay for future benefits promised to California Teachers, our actions to invest in securities of a corporation predominately reflects a judgment that the ownership will produce a sustainable rate of return which will make it an attractive investment and help CalSTRS meet its long-term obligations. It is important to note that CalSTRS ownership of a security in a company does

Attachment C

not signify that CalSTRS approves of all of the company's practices or its products or that CalSTRS believes a particular company is an attractive investment since the security may be owned due to its membership in a particular index or for risk mitigation purposes. Since 1978, CalSTRS has used a written policy, the Statement of Investment Responsibility, SIR, to navigate the complex landscape of ESG issues. The long history of this document is testimony to the national leadership of CalSTRS among pension funds in addressing ESG matters through a written policy. The SIR will continue its longevity as guidance on proxy voting; however this Policy now replaces the SIR as CalSTRS's preeminent policy on ESG matters.

POLICY

Governance Risks and Social Risks: To help manage the risk of investing a global portfolio in a complex governance environment, CalSTRS has developed a series of procedures to follow when faced with any major governance and social issue as identified by the 21 risk factors. It is important to note that fiduciary standards do not allow CalSTRS to select or reject investments based solely on social criteria.

When faced with a corporate decision that potentially violates CalSTRS Policies; the Investment Staff, CIO and Investment Committee will undertake the following actions:

A. The CIO will assess the gravity of the situation both as an ESG risk and as to the System. The extent of the responsibility of the System to devote resources to address these issues will be determined by: 1) the number of shares held in the corporation, and 2) the gravity of the violation of CalSTRS Policies.

B. At the CIO's direction, the Investment Staff will directly engage corporate management to seek information and understanding of the corporate decision and its ramifications on ESG issues.

C. The CIO and investment staff will provide a report to the Investment Committee of the findings and recommend any further action of engagement or need to commit further System resources. The Investment Committee can marshal further resources given the gravity of the situation.

To assist CalSTRS Staff and external investment managers in their investment analysis and decision-making, CalSTRS has developed a list of 21 risk factors that should be included within the financial analysis of any investment decision. This list is not exhaustive and does not attempt to identify all forms of risk that are appropriate to consider in a given investment transaction; however they do provide a framework of other factors that might be overlooked. These risk factors should be reviewed for an investment in any asset class whether within the U.S. or across the globe.

CalSTRS expects all investment managers, both internal and external to assess the risk of each of the following factors when making an investment. The manager needs to balance the rate of return with all the risks including consideration of the specific investments exposure to each factor in each country in which that investment or company operates.

CALSTRS 21 RISK FACTORS

Monetary Transparency

The long-term profitability by whether or not a country or company has free and open monetary and financial data, and its observance of applicable laws.

Data Dissemination

The long-term profitability by whether or not a country is a member of the IMF (or similar organization) and satisfies the conditions for access, integrity, and quality for most data categories.

Accounting

The long-term profitability by whether or not the accounting standards are formulated in accordance with International Accounting Standards or the U.S. Generally Accepted Accounting Principles.

Payment System: Central Bank

The long-term profitability by whether the activities of a country's central bank encompass implementing and ensuring compliance with principles and standards which are established to promote safe, sound, and efficient payment and settlement systems.

Securities Regulation

The long-term profitability by exposure to operations in countries that have not complied with IOSCO objectives, which provide investor protection against manipulation and fraudulent practices.

Auditing

The investment's long-term profitability by whether or not the country uses International Standards on Auditing in setting national standards.

Fiscal Transparency

The investment's long-term profitability by its exposure or business operations in countries that do not have not some level of fiscal transparency such as publication of financial statistics, sound standards for budgeting, accounting, and reporting.

Corporate Governance

The investment's long-term profitability by whether or not the government recognizes and supports good corporate governance practices and whether it generally adheres to OECD principles.

Banking Supervision

The investment's long-term profitability from its exposure to countries that have not endorsed/complied with the Basel Core Principles. An endorsement includes an agreement to review supervisory arrangements against the principles and bring legislation in line with the principles where necessary.

Attachment C

Payment System: Principles

The investment's long-term profitability by whether a country complies with the 10 Core Principles for Systemically Important Payment Systems, which includes operational reliability, efficiency, real time settlement, final settlement in central bank money; and whether rules and procedures are clear and permit participants to understand the financial risks resulting from participation in the system.

Insolvency Framework

The investment's long-term profitability from its business operations and activities in specific countries with regard to bankruptcy reform or insolvency legislation.

Money Laundering

The investment's long-term profitability from exposure and whether or not a country has implemented an anti-money laundering regime in line with international standards; consideration should be given to compliance with the 40 recommendations in the Financial Action Task Force, FATF, on Money Laundering; and whether it is a member of FATF.

Insurance Supervision

Whether or not a country has a regulatory framework in line with International Association of Insurance Supervisors, IAIS, Principles.

Respect for Human Rights

The investment's long-term profitability from its business operations and activities in countries that lack or have a weak judicial System. Assess the risk to an investment's long-term profitability from its business operations and activities in a country that engages in or facilitates the following: arbitrary or unlawful deprivation of life, disappearance, torture and other cruel, inhuman, or degrading treatment or punishment, arbitrary arrest, detention, or exile, arbitrary interference with privacy, family, home, or correspondence, use of excessive force and violations of humanitarian law in internal conflicts. Consideration should be given to governmental attitude regarding international and non-governmental investigation of alleged

Respect for Civil Liberties

The investment's long-term profitability from operations, activities, and business practices in countries or regions that do not allow freedom of speech and press, freedom of peaceful assembly and association, freedom of religion, freedom of movement within the country, allowance for foreign travel, emigration, and repatriation.

Respect for Political Rights

The investment's long-term profitability from business practices and activities in countries that do not allow their citizens the right to advocate for change to their government.

Discrimination Based on Race, Sex, Disability, Language, or Social Status

The investment's long-term profitability from business practices and activities on discrimination, such as discrimination against women, children, and persons with disabilities, national/racial/ethnic minorities, or indigenous people.

Worker Rights

The investment's long-term profitability from management and practices globally in the area of worker's rights; specifically the right of association, the right to organize and bargain collectively, prohibition of forced or bonded labor, status of child labor practices and minimum age for employment, acceptable work conditions, or human trafficking.

Environmental

The investment's long-term profitability from activities and exposure to environmental matters such as; depleting or reducing air quality, water quality, land protection and usage, without regard for remediation. Consideration should be given to how a company is dealing with the impact of climate change, including whether the government is taking steps to reduce its impact, exacerbating the problem, or oblivious to the risk.

War/Conflicts/Acts of Terrorism

The investment's long-term profitability from business exposure to a country or region that has an internal or external conflict, war, acts of terrorism or involvement in acts of terrorism, and whether the country is a party to international conventions and

Human Health

The risk to an investment's long-term profitability from business exposure to an industry or company that makes a product which is highly detrimental to human health so that it draws significant product liability lawsuits, government regulation, United Nations sanctions and focus, and avoidance by other institutional investors.

Appendix B – CalSTRS Divestment Policy

DIVESTMENT POLICY

As set forth in the California Constitution, Article 16, Section 17, and the California Education Code, Section 22250, the CalSTRS Retirement Board, its Investment Committee, and staff have fiduciary duties with respect to the system and the plan. These duties include duties of loyalty and prudence to invest “with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.” (Ed. Code, sec. 22250(b).)

This policy sets forth CalSTRS’ policy for responding to external or internal initiatives to divest of individual or groups of securities for purposes of achieving certain goals that do not appear to be primarily investment related. The Investment Committee opposes any divestment effort that would either implicitly or explicitly attempt to direct or influence the Investment Committee to engage in investment activities that violate and breach the Trustees’ fiduciary responsibility. Consistent with its fiduciary responsibility and the concepts of diversification and passive index management, the Investment Committee does not and will not systemically exclude or include any investments in companies, industries, countries or geographic areas, except in cases where: one of the CalSTRS 21 Risk Factors is violated over a sustained time frame to the extent that it becomes an economic risk to the Fund, a potential for material loss of revenue exists, and where it weakens the trust of a significant portion of members to the System.

When pressured to divest, CalSTRS firmly believes that active and direct engagement is the best way to resolve issues. Face to face meetings with shareowners and senior management, or the Board of Directors, are essential to bringing about change in a corporation. No further action will be taken until all efforts at engagement have been fully exhausted; efforts at engagement include, but are not limited to: shareholder resolutions, media campaigns, and other efforts at engagement.

CalSTRS’ commitment to engagement with companies rather than divestment is based on several considerations: (i) divestment would eliminate our standing and rights as a shareowner and foreclose further engagement; (ii) divestment would be likely to have negligible impact on portfolio companies or the market; (iii) divestment could result in increased costs and short-term losses; and (iv) divestment could compromise CalSTRS’ investment strategies and negatively affect investment performance.

If engagement fails to resolve the risk factor sufficiently, the CIO will bring the issue before the Investment Committee for consideration of divestment from the applicable securities. The Investment Committee will receive input from the following, but not limited to: investment managers, investment consultants, investment staff, fiduciary counsel, academics, and experts in the particular field or issue. If the Investment Committee determines that the making of an

investment or continuing to hold a security is imprudent and inconsistent with the fiduciary duty, the Investment Committee will instruct investment staff to remove the security from the portfolio.

Divestment does not apply to segments of the portfolio that track market indices, as CalSTRS policies require those segments to invest in all companies included in an index. Additionally, the policy does not apply to investments in a Limited Partnership due to CalSTRS position of limited liability as a Limited rather than General Partner.

CalSTRS will exclude or eliminate investments that fall within the terms of a State or Federal law regarding divestment, if the Investment Committee finds that divestment is consistent with its fiduciary duties and divestment is determined not to be imprudent.

REPORTING

On at least a quarterly basis, the Chief Investment Officer will prepare a comprehensive report that shows the performance difference between any divestment taken under this Policy and the un modified CalSTRS benchmark of the respective asset class.

Any divestment decision should be reviewed at least annually by the CIO to ensure the key factors and risks continue to warrant divestment. The Investment Committee, at any time, can request a divestment decision be revisited.

Approved: March 5, 2009

Appendix C – CalSTRS Responsible Contractor Policy

I. Responsible Contractor Policy

The California State Teachers' Retirement System has a deep interest in the condition of workers employed by the CalSTRS and its advisors. CalSTRS, through the CalSTRS Responsible Contractor Policy supports and encourages fair wages and fair benefits for workers employed by its contractors and subcontractors, subject to fiduciary principles concerning duties of loyalty and prudence, both of which further require competitive returns on the CalSTRS real estate investments. The CalSTRS endorses small business development, market competition, and control of operating costs. The CalSTRS believes that an adequately compensated and trained worker delivers a higher-quality product and service. CalSTRS requires its real estate managers to abide by the Responsible Contractor policy on all applicable investments.



California State Teachers'
Retirement System
Investments
100 Waterfront Place, MS-04
West Sacramento, CA 95605
(916) 414-7400 FAX (916) 414-7533

August 24, 2016

Dominique Lefebvre
Chairman of the Board
Credit Agricole SA
12 place des Etats-Unis
92127 Montrouge Cedex
France

Dear Mr. Lefebvre,

This letter is sent to you on behalf of the California State Teachers' Retirement System (CalSTRS). As you may be aware, CalSTRS is a public pension fund established for the benefit of California's public school teachers over 100 years ago. CalSTRS serves the investment and retirement interests of over 868,000 plan participants and their families. The CalSTRS portfolio is currently valued at approximately \$193 billion invested across both domestic and international markets. Currently, CalSTRS owns 3,124,509 shares of Credit Agricole SA.

The long-term nature of CalSTRS' liabilities, and its responsibilities as a fiduciary to its members, makes the fund keenly interested in governance and geopolitical issues. As a long-term investor, we are concerned with risks posed by companies in our portfolio that are operating in sensitive areas such as Sudan. To address these risks from an investor perspective the CalSTRS Board has adopted a 21-point Geopolitical Risk policy, which is available in the board policy manual at our website www.calstrs.com.

Our independent research providers have identified Credit Agricole SA as having business in, or with Sudan. Sudan is not only designated as a terrorist sponsoring country by the United States government, but is also embroiled in domestic conflicts in which the Sudanese government has been charged with arming militia that have engaged in genocide which has been documented by the United Nations Commission of Inquiry on Darfur. As shareowners, we are concerned that companies that do business in Sudan may be perceived as furthering or condoning the egregious human rights violations currently occurring there. We believe that any association with the atrocities taking place in Sudan by your company poses a serious risk to your ability to create sustainable and responsible long-term value creation.

In several states, legislation has been enacted or is being publicly discussed to address investments in companies doing business in or with Sudan. In California, Chapter 442 of the 2006 Statutes require the California Public Employees' Retirement System and the California

Attachment D

Dominique Lefebvre

8/24/2016

Page 2

State Teachers' Retirement System to encourage companies in which they invest in to act responsibly and not take actions that promote or otherwise enable human rights violations in the Sudan. Additionally, the legislation requires that we periodically follow up with identified companies to ensure they are acting responsibly with regards to Sudan.

CalSTRS would like to engage in an open dialogue with you regarding your company's ties to Sudan. We are requesting full disclosure of your direct or indirect business activities with Sudan including purchases from and sales to Sudan as well as any risk controls Credit Agricole SA has undertaken to prevent US sanctions. Our goal is to have a complete and accurate understanding of your involvement with Sudan so that we, as fiduciaries, can accurately assess the risk associated with your activities there and make informed investment decisions.

Furthermore, to better understand your exposure to Sudan and your company's actions around the issue we would like to meet with you or representatives of your company in person. We believe a meeting in person will help us better understand and be more comfortable with your involvement with Sudan. If you are planning to have the appropriate people in the United States in the near future, we would appreciate the opportunity to meet with them. We can easily arrange to meet in anywhere in the United States, however, Sacramento, San Francisco, Los Angeles, New York, Chicago, or Washington D.C. are the most convenient for us.

If there are no plans for the appropriate people to be in the United States we often have staff travel abroad to London, Zurich, or Tokyo are the most convenient for us. Lastly, if necessary, we can arrange to have staff meet at your headquarters in Montrouge.

If you have any questions, please feel free to contact Philip Larrieu of the Corporate Governance staff at:

Philip Larrieu
Investments – Corporate Governance
100 Waterfront Place, MS-4
West Sacramento, CA 95605-2807
(916)414-7417
plarrieu@calstrs.com

Sincerely,



Christopher Ailman, Chief Investment Officer
California State Teachers' Retirement System



California State Teachers'
Retirement System
Investments
100 Waterfront Place, MS-04
West Sacramento, CA 95605
(916) 414-7400 FAX (916) 414-7533

August 30, 2016

LI Changjin
Chairman and Executive Director
China Railway Group Limited
Block A, China Railway Square, No.69 Fuxing Road,
Haidian District, Beijing 1000369
China

Dear Mr. Changjin,

This letter is sent to you on behalf of the California State Teachers' Retirement System (CalSTRS). As you may be aware, CalSTRS is a public pension fund established for the benefit of California's public school teachers over 100 years ago. CalSTRS serves the investment and retirement interests of over 868,000 plan participants and their families. The CalSTRS portfolio is currently valued at approximately \$193 billion invested across both domestic and international markets. Currently, CalSTRS owns 1,650,451 shares of China Railway Group Limited.

The long-term nature of CalSTRS' liabilities, and its responsibilities as a fiduciary to its members, makes the fund keenly interested in governance and geopolitical issues. As a long-term investor, we are concerned with risks posed by companies in our portfolio that are operating in sensitive areas such as Iran. To address these risks from an investor perspective the CalSTRS Board has adopted a 21-point Geopolitical Risk policy, which is available in the board policy manual at our website www.calstrs.com.

In several states, legislation has been enacted or is being publicly discussed to address investments in companies doing business in or with Iran. In California, Chapter 441 of the 2011 Statutes require the California Public Employees' Retirement System and the California State Teachers' Retirement System to encourage companies in which they invest in to act responsibly and to not take actions that promote terrorism or that otherwise enable the Iranian pursuit of nuclear weapons. Additionally, the legislation requires that we periodically follow up with identified companies to ensure they are acting responsibly with regards to Iran.

Our independent research providers have identified China Railway Group Limited as having business in, or with Iran. CalSTRS would like to engage in an open dialogue with you regarding your company's ties to Iran. We are requesting full disclosure of your direct or indirect business activities with Iran including purchases from and sales to Iran as well as any risk controls China Railway Group Limited has undertaken to prevent US sanctions. Our goal

Attachment E

LI Changjin

8/30/2016

Page 2

is to have a complete and accurate understanding of your involvement with Iran so that we, as fiduciaries, can accurately assess the risk associated with your activities there and make informed investment decisions.

Furthermore, to better understand your exposure to Iran and your company's actions around the issue we would like to meet with you or representatives of your company in person. We believe a meeting in person will help us better understand and be more comfortable with your involvement with Iran. If you are planning to have the appropriate people in the United States in the near future, we would appreciate the opportunity to meet with them. We can easily arrange to meet in anywhere in the United States, however, Sacramento, San Francisco, Los Angeles, New York, Chicago, or Washington D.C. are the most convenient for us.

If there are no plans for the appropriate people to be in the United States we often have staff travel abroad and London, Zurich, or Tokyo are the most convenient for us. Lastly, if necessary, we can arrange to have staff meet at your headquarters in Beijing.

If you have any questions, please feel free to contact Philip Larrieu of the Corporate Governance staff at:

Philip Larrieu
Investments – Corporate Governance
100 Waterfront Place, MS-4
West Sacramento, CA 95605-2807
(916)414-7417

Sincerely,



Christopher Ailman, Chief Investment Officer
California State Teachers' Retirement System



California State Teachers'
Retirement System
Investments
100 Waterfront Place, MS-04
West Sacramento, CA 95605
(916) 414-7400 FAX (916) 414-7533

November 28, 2016

Jing Jing Yu
Investor Relations Contact
China Communications Construction Company Limited
No. 85 Deshengmen Outer Street
Xicheng District
Beijing, BE 100088
China

Dear Jing Jing Yu,

This letter is sent to you on behalf of the California State Teachers' Retirement System (CalSTRS). As you may be aware, CalSTRS is a public pension fund established for the benefit of California's public school teachers over 100 years ago. CalSTRS serves the investment and retirement interests of over 896,000 plan participants and their families. The CalSTRS portfolio is currently valued at approximately \$192 billion invested across both domestic and international markets. Currently, CalSTRS owns 4,042,938 shares of China Communications Construction Company Limited.

The long-term nature of CalSTRS' liabilities, and its responsibilities as a fiduciary to its members, makes the fund keenly interested in governance and geopolitical issues. As a long-term investor, we are concerned with risks posed by companies in our portfolio that are operating in sensitive areas such as Sudan. To address these risks from an investor perspective the CalSTRS Board has adopted a 21-point Geopolitical Risk policy, which is available in the board policy manual at our website www.calstrs.com.

Sudan is not only designated as a terrorist sponsoring country by the United States government, but is also embroiled in domestic conflicts in which the Sudanese government has been charged with arming militia that have engaged in genocide which has been documented by the United Nations Commission of Inquiry on Darfur. As shareowners, we are concerned that companies that do business in Sudan may be perceived as furthering or condoning the egregious human rights violations currently occurring there. We believe that any association with the atrocities taking place in Sudan by your company poses a serious risk to your ability to create sustainable and responsible long-term value creation.

In several states, legislation has been enacted or is being publicly discussed to address investments in companies doing business in or with Sudan. In California, Chapter 442 of the

Attachment F

Jing Jing Yu

11/28/2016

Page 2

2006 Statutes require the California Public Employees' Retirement System and the California State Teachers' Retirement System to encourage companies in which they invest in to act responsibly and to not take actions that promote or otherwise enable human rights violations in Sudan. Additionally, the legislation requires that we periodically follow up with identified companies to ensure they are acting responsibly with regards to Sudan.

Currently, CalSTRS has China Communications Construction Company Limited in a Monitor status based on information from our independent service providers and our past communications. We are requesting an updated disclosure of your direct or indirect business activities with Iran including purchases from and sales to Sudan as well as any risk controls China Communications Construction Company Limited has undertaken to prevent US sanctions. Our goal is to maintain a complete and accurate understanding of your involvement with Sudan so that we, as fiduciaries, can accurately assess the risk associated with your activities there and make informed investment decisions.

If you have any questions, please feel free to contact Philip Larrieu of the Corporate Governance staff at:

Philip Larrieu
Investments – Corporate Governance
100 Waterfront Place, MS-4
West Sacramento, CA 95605-2807
(916)414-7417
plarrieu@calstrs.com

Sincerely,



Christopher Ailman, Chief Investment Officer
California State Teachers' Retirement System



California State Teachers'
Retirement System
Investments
100 Waterfront Place, MS-04
West Sacramento, CA 95605
(916) 414-7400 FAX (916) 414-7533

November 28, 2016

Winston Yeo
Investor Relations Officer
Gemalto N.V.
6 rue de la Verrerie
Meudon, IF 92190
France

Dear Winston Yeo,

This letter is sent to you on behalf of the California State Teachers' Retirement System (CalSTRS). As you may be aware, CalSTRS is a public pension fund established for the benefit of California's public school teachers over 100 years ago. CalSTRS serves the investment and retirement interests of over 896,000 plan participants and their families. The CalSTRS portfolio is currently valued at approximately \$192 billion invested across both domestic and international markets. Currently, CalSTRS owns 89,010 shares of Gemalto N.V..

The long-term nature of CalSTRS' liabilities, and its responsibilities as a fiduciary to its members, makes the fund keenly interested in governance and geopolitical issues. As a long-term investor, we are concerned with risks posed by companies in our portfolio that are operating in sensitive areas such as Sudan. To address these risks from an investor prospective the CalSTRS Board has adopted a 21-point Geopolitical Risk policy, which is available in the board policy manual at our website www.calstrs.com.

In several states, legislation has been enacted or is being publicly discussed to address investments in companies doing business in or with Iran. In California, Chapter 441 of the 2011 Statutes require the California Public Employees' Retirement System and the California State Teachers' Retirement System to encourage companies in which they invest in to act responsibly and to not take actions that promote terrorism or otherwise enable the Iranian pursuit of nuclear weapons. Additionally, the legislation requires that we periodically follow up with identified companies to ensure they are acting responsibly with regards to Iran.

Currently, CalSTRS has Gemalto N.V. in a Monitor status based on information from our independent service providers and our past communications. We are requesting an updated disclosure of your direct or indirect business activities with Iran including purchases from and sales to Iran as well as any risk controls Gemalto N.V. has undertaken to prevent US

Attachment G

Winston Yeo

11/28/2016

Page 2

sanctions. Our goal is to maintain a complete and accurate understanding of your involvement with Iran so that we, as fiduciaries, can accurately assess the risk associated with your activities there and make informed investment decisions.

If you have any questions, please feel free to contact Philip Larrieu of the Corporate Governance staff at:

Philip Larrieu
Investments – Corporate Governance
100 Waterfront Place, MS-4
West Sacramento, CA 95605-2807
(916)414-7417
plarrieu@calstrs.com

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Ailman', written in a cursive style.

Christopher Ailman, Chief Investment Officer
California State Teachers' Retirement System

Attachment H: CalSTRS Portfolio Companies Subject to the California Public Divest from Sudan Act

10 Companies Divested and Restricted					
	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
1	AviChina Industry and Technology Limited (China)	AviChina was identified as possibly providing military equipment and maintenance services to Sudan.	In 2015, CalSTRS identified AviChina as potentially having ties to Sudan and began the review process. CalSTRS divested its holding and designated AviChina as restricted in 2016.	0	\$0
2	Bharat Heavy Electricals (India)	Bharat Heavy Electricals has contracts to build power plants in Sudan.	In 2009, Bharat Heavy Electricals was designated as "Restricted." CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0
3	Dongfeng Motor Group and Dongfeng Automobile Company Ltd., a linked company (China)	Dongfeng Motor Group and Dongfeng Automobile Co. Ltd. have reportedly supplied military vehicles to the Sudanese government. The companies did not reply to CalSTRS requests for information.	In 2009, Dongfeng Motor Group and Dongfeng Automobile Company Ltd. were designated as "Restricted." CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0
4	Kunlun Energy Co. and Sinopec, a linked company (China)	While Kunlun Energy Co. has no activity in Sudan, its parent, CNPC, is the largest partner of several oil consortiums that have active oil exploration and production operations in Sudan.	In 2009, Sinopec and its related companies, including CNPC Hong Kong, were designated as "Restricted." In February 2010, CNPC Hong Kong changed its name to Kunlun Energy Co. Sinopec and all of its subsidiaries, including Kunlun Energy Co., have remained "Restricted" in 2016.	0	\$0
5	MISC Bhd. (Malaysia)	MISC Bhd. is a Malaysian shipping company that is linked to Sudan through its parent company, Petronas, also a "Restricted" company.	In 2009, MISC Bhd. was designated as "Restricted." CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0
6	Oil and Natural Gas Company of India (India)	Oil and Natural Gas Company of India (ONGC) has interests in multiple Sudanese oil blocks.	In 2009, ONGC was designated as "Restricted." CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0

Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
7 PECD Berhad (Malaysia)	PECD Berhad has an ongoing contract to build an oil export terminal in Port Sudan.	In 2009, PECD Berhad was designated as "Restricted." CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0
8 PetroChina and CNPC - as connected corporations to the Chinese National Oil Company (China)	PetroChina has no operations in Sudan but is linked to the country through its parent, CNPC, which has multiple interests in the country.	In 2009, CalSTRS designated PetroChina as "Restricted." CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0
9 Petronas (Malaysia)	Petronas has interest in several oil fields in Sudan.	In 2009, CalSTRS designated Petronas as "Restricted." CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0
10 Sudan Telecom Company (Sudatel) (Sudan)	Sudan Telecom (Sudatel) provides telecommunication services in Sudan and reportedly cut services to villages in Darfur when attacks were imminent.	In 2009, CalSTRS designated Sudan Telecom as "Restricted." CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0

10 Companies Under Review				
Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
1 Andritz AG (Austria)	Andritz AG was identified as possibly providing industrial machinery in Sudan.	In 2016, CalSTRS identified Andritz AG as potentially having ties to Sudan and began the review process.	91,153	\$4,707,116
2 Ascorm AG (Switzerland)	Ascorm Mining has an office in Khartoum and reportedly has the state-owned Nile Cement Company as a client.	In 2016, CalSTRS identified Ascorm AG as potentially having ties to Sudan and began the review process.	47,934	\$825,840

	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
3	Commercial Bank QSC (Qatar)	Commercial Bank QSC was identified as potentially providing banking services in Sudan.	In 2016, CalSTRS identified Commercial Bank QSC as potentially having ties to Sudan and began the review process.	44,515	\$403,437
4	CRRC Corp (China)	CRRC Corp was identified as potentially providing locomotives to entities owned by the government of Sudan.	In 2016, CalSTRS identified CRRC Corp as potentially having ties to Sudan and began the review process.	540,207	\$533,476
5	Dubai Islamic Bank (Dubai)	Dubai Islamic Bank was identified as potentially providing banking services in Sudan.	In 2016, CalSTRS identified Dubai Islamic Bank as potentially having ties to Sudan and began the review process.	1,440,849	\$2,055,638
6	ICICI Bank (India)	ICICI Bank was identified as potentially providing banking services in Sudan.	In 2016, CalSTRS identified ICICI Bank as potentially having ties to Sudan and began the review process.	<u>Stock</u> 13,083,268 <u>ADR</u> 960,357 <u>Bonds</u> \$2,170,000	<u>Stock</u> \$50,756,978 <u>ADR</u> \$7,529,199 <u>Bonds</u> \$2,186,708
7	ENGIE SA (France)	ENGIE SA was identified as potentially providing services in Sudan.	In 2016, CalSTRS identified ENGIE SA as potentially having ties to Sudan and began the review process.	2,251,411	\$27,823,651
8	M1 Ltd (Singapore)	M1 Ltd. was identified as potentially providing telecommunications services in Sudan.	In 2016, CalSTRS identified M1 Ltd. as potentially having ties to Sudan and began the review process.	421,203	\$576,346
9	Old Mutual (United Kingdom)	Old Mutual was identified as potentially providing investment services in Sudan.	In 2016, CalSTRS identified Old Mutual as potentially having ties to Sudan and began the review process.	5,950,763	\$14,118,847
10	Qatar Islamic Bank (Qatar)	Qatar Islamic Bank was identified as potentially providing banking services in Sudan.	In 2016, CalSTRS identified Qatar Islamic Bank as potentially having ties to Sudan and began the review process.	14,720	\$401,837

12 Companies Being Monitored					
	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
1	AON PLC (United Kingdom)	AON PLC has reported that it has direct transactions with parties domiciled in Sudan.	In 2015, CalSTRS identified AON PLC as potentially having ties to Sudan and began the review process. In 2016, CalSTRS determined to classify AON PLC as "Monitor" while staff reviewed the company's internal controls and compliance procedures.	<u>Stock</u> 1,047,820 <u>Bonds</u> \$3,000,000	<u>Stock</u> \$119,556,262 <u>Bonds</u> \$3,032,100
2	China Communications Construction Company Limited (China)	China Communications Construction Company Limited was involved in several infrastructure projects in Sudan.	In 2015, CalSTRS identified China Communications Construction Company Limited as potentially having ties to Sudan and began the review process. In 2016, CalSTRS determined to classify China Communications Construction as "Monitor," while staff conducts further review of the company's compliance and control policies and procedures.	1,923,938	\$2,306,746
3	China Railway Group (China)	China Railway Group has two supply contracts and one works contract for railway maintenance in Sudan.	In 2013, China Railway Group was identified as "Review" for potentially having ties to Sudan. In 2014, CalSTRS moved China Railway Group to "Monitor" status and maintained that status in 2016.	1,923,451	\$1,735,821
4	Fuji Electric Co. Ltd. (Japan)	Fuji Electric was identified as providing heavy equipment in Sudan.	In 2015, CalSTRS identified Fuji Electric as potentially having ties to Sudan and began the review process. In 2016, CalSTRS designated Fuji Electric Co. Ltd. as "Monitor" while staff reviewed the company's internal controls and compliance programs.	784,843	\$3,871,006

	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
5	HC2 Holdings, Inc. (USA)	HC2 Holdings Inc. was identified as providing telecommunication services in Sudan.	In 2015, CalSTRS identified HC2 Holdings Inc. as potentially having ties to Sudan and began the review process. In 2016, CalSTRS designated HC2 Holdings, Inc. as "Monitor" while staff reviewed the company's internal controls and compliance programs.	70,211	\$334,204
6	Kawasaki Kisen Kaisha Ltd. (Japan)	Kawasaki Kisen Kaisha lists Port Sudan in its service network.	In 2013, Kawasaki Kisen Kaisha was identified as "Review" for potentially having ties to Sudan. In 2014, CalSTRS moved Kawasaki Kisen Kaisha to "Monitor" status and maintained that status in 2016.	1,550,825	\$3,416,184
7	Larsen & Tourbro Ltd. (India)	Larsen & Tourbro was identified as providing consulting services to the government of Sudan.	In 2015, CalSTRS identified Larsen & Tourbro as potentially having ties to Sudan and began the review process. In 2016, CalSTRS determined to classify Larsen & Tourbro as "Monitor" while staff conducts further review of the company's compliance and control policies and procedures.	<u>Stock</u> 661,603 <u>GDR</u> 24,648	<u>Stock</u> \$13,365,166 <u>GDR</u> \$491,728
8	Makita Group (Japan)	Makita Group was identified as providing products and equipment to Sudan.	In 2015, CalSTRS identified Makita Group as potentially having ties to Sudan and began the review process. In 2016, CalSTRS designated Makita Group as "Monitor" while staff reviewed the company's internal controls and compliance programs.	575,585	\$39,148,569
9	MTN Group Limited (South Africa)	MTN Group Limited was identified providing telecommunications services in Sudan.	In 2015, CalSTRS identified MTN Group Limited as potentially having ties to Sudan and began the review process. In 2016, CalSTRS determined to classify MTN Group Limited as "Monitor" while staff conducts further review of the company's compliance and control policies and procedures.	<u>Stock</u> 2,120,389 <u>Bonds</u> \$1,000,000	<u>Stock</u> \$18,355,629 <u>Bonds</u> \$981,181

	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
10	Sapurakencana Petroleum Bhd. (Malaysia)	Sapurakencana Petroleum Bhd. has a contract to create drilling access to an oilfield in South Sudan that has restricted entities as a partner.	In 2014, CalSTRS identified Sapurakencana Petroleum Bhd. as potentially having ties to Sudan and began the review process. In 2015, CalSTRS moved Sapurakencana Petroleum Bhd. to a "Monitor" status and maintained that status in 2016.	3,340,014	\$1,076,941
11	Shanghai Electric Group (China)	Shanghai Electric Group reportedly has several contracts relating to power transmission in Sudan.	In 2014, CalSTRS identified Shanghai Electric Group as potentially having ties to Sudan and began the review process. In 2015, CalSTRS moved Shanghai Electric Group to a "Monitor" status and maintained that status in 2016.	596,466	\$287,596
12	Volvo AB (Sweden)	Volvo AB has been identified as selling trucks and construction equipment to Sudan. The company confirmed its major customer is the state-owned sugar company, which is not a restricted entity.	In 2012, Volvo AB was identified as "Review" for potentially having ties to Sudan. In 2013, CalSTRS moved Volvo AB to "Monitor" status and maintained that status in 2016.	<u>Stock</u> 2,044,845 <u>Bonds</u> \$1,981,000	<u>Stock</u> \$21,839,441 <u>Bonds</u> \$1,980,251

9 Companies Removed					
	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
1	Bollore SA (France)	Bollore SA maintains an active interest in a Khartoum-based logistics company.	In 2014, CalSTRS identified Bollore SA as having ties to Sudan and began the review process. In 2015, CalSTRS moved Bollore SA to a "Monitor" status. In 2016, CalSTRS removed Bollore SA from the "Monitor" list after meeting with management and confirming the company is maintaining appropriate internal controls and compliance procedures.	996,404	\$3,272,426

Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
2 Clariant AG (Switzerland)	A third party distributor is listed as a provider of Clariant AG oil services in Sudan.	In 2014, CalSTRS identified Clariant AG as potentially having ties to Sudan and began the review process. In 2015, CalSTRS moved Clariant AG to a "Monitor" status. In 2016, CalSTRS removed Clariant AG from the "Monitor" list after meeting with management and confirming the company is maintaining appropriate internal controls and compliance procedures.	325,133	\$5,244,132
3 Credit Agricole (France)	Credit Agricole agreed to pay a \$787 million fine to settle allegations of violations of U.S. sanctions against Iran and Sudan for action that occurred prior to 2008.	In 2016, CalSTRS identified Credit Agricole as potentially having ties to Sudan and began the review process. Credit Agricole was subsequently removed from the "Review" list after confirming the company is maintaining appropriate internal controls and compliance procedures.	<u>Stock</u> 3,498,277 <u>Bonds</u> \$1,960,000	<u>Stock</u> \$39,521,845 <u>Bonds</u> \$2,191,270
4 Glencore Plc (Switzerland)	Glencore Plc confirmed in a meeting with CalSTRS that it is interested in purchasing oil from South Sudan if it can be done in compliance with U.S. and international sanctions.	In 2012, Glencore Plc was designated as "Review" and was subsequently moved to "Monitor" after meeting with the company. In 2016, CalSTRS removed Glencore Plc from the "Monitor" list after meeting with management and confirming the company is maintaining appropriate internal controls and compliance procedures.	<u>Stock</u> 20,824,610 <u>Bonds</u> \$56,207,999	<u>Stock</u> \$72,669,039 <u>Bonds</u> \$56,538,263
5 KEPCO Plant Services (South Korea)	KEPCO Plant Services was identified as potentially providing products and services in Sudan.	In 2016, CalSTRS identified KEPCO Plant Services as potentially having ties to Sudan. CalSTRS subsequently removed KEPCO Plant Services from the "Review" list as CalSTRS no longer holds the company's securities.	0	\$0

Attachment H

	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
6	National Bank of (Greece)	National Bank of Greece was identified as potentially providing banking services in Sudan.	In 2016, CalSTRS identified National Bank of Greece as potentially having ties to Sudan and began the review process. CalSTRS subsequently removed National Bank of Greece from the "Review" list as CalSTRS no longer holds the company's securities.	0	\$0
7	Qatar National Bank (Qatar)	Qatar National Bank was identified as providing banking services in Sudan.	In 2015, CalSTRS identified Qatar National Bank as potentially having ties to Sudan and began the review process. In 2016, CalSTRS removed Qatar National Bank from the "Review" list after confirming the company is maintaining appropriate internal controls and compliance procedures.	423,308	\$17,310,382
8	Wan Hai Lines Ltd. (Taiwan)	Wan Hai Lines was identified as possibly providing shipping services to Sudan.	In 2015, CalSTRS identified Wan Hai Lines as potentially having ties to Sudan and began the review process. In 2016, CalSTRS removed Wan Hai Lines from the "Review" list as CalSTRS no longer holds the company's securities.	0	\$0
9	Wilhelmsen ASA (Norway)	Wilhelmsen ASA was identified as possibly providing shipping services to Sudan.	In 2015, CalSTRS identified Wilhelmsen ASA as potentially having ties to Sudan and began the review process. In 2016, CalSTRS removed Wilhelmsen ASA from the "Review" list after confirming the company is maintaining appropriate internal controls and compliance procedures.	82,245	\$273,404

Attachment I: CalSTRS Portfolio Companies Identified as Possibly Having Ties to Iran

12 Companies Divested and Restricted					
Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016	
1 China Blue Chemical Ltd. (China)	China Blue Chemical Ltd. is a majority owned subsidiary of CNOOC, a restricted company.	In 2013, one of CalSTRS' external managers purchased shares of China Blue Chemical Ltd. CalSTRS initiated a review of the company and determined to add it to the "Restricted" list. CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0	
2 China Oilfield Services Limited (China)	China Oilfield Services Limited is a majority owned subsidiary of CNOOC, a restricted company. In 2014, China Oilfield Services was identified as being involved in the development of oilfields in Iran.	In 2014, China Oilfield Services Limited was identified as "Review" for potentially having ties to Iran. The company's activities in Iran were confirmed in CNOOC's 20-F Filing, which stated, "China Oilfield Services Limited (COSL), one of our non-controlled affiliates, continued to provide certain drilling and other related services in Iran in relation to subcontracting agreements entered into in 2009, as it did in 2012." In 2014, CalSTRS designated China Oilfield Services as "Restricted" and maintained the "Restricted" designation in 2016.	0	\$0	

Attachment I

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
3	CNOOC (China)	<p>According to CNOOC's most recent 20-F Filing, the company cites in its risk section the potential for U.S. sanctions related to its affiliates' operations in Iran and Sudan. In particular, one of the company's non-controlled affiliates continued to provide certain drilling and other related services in Iran.</p> <p>In 2011, CalSTRS staff met with executives of the company in its offices in Beijing. The company confirmed its parent may have ties to Iran, but it does not, and will not, seek business in Iran as the company has and is looking to purchase more assets in the United States.</p>	<p>In 2009, CalSTRS designated CNOOC as "Further Review." CNOOC was being considered for divestment because of the lack of clarity between it and its parent when it was announced CNOOC was buying 33 percent of Chesapeake Energy's stake in the Eagle Ford Shale project in south Texas. CalSTRS viewed this purchase as significant because it gives CNOOC U.S.-based assets that could be subject to sanctions. In 2011, CalSTRS designated the company as "Being Monitored."</p> <p>While CNOOC does not appear to have direct ties to Iran, CalSTRS is uncomfortable with its parent company's relations to the country and determined to maintain the "Restricted" designation in 2016.</p>	0	\$0
4	Daelim Industrial Co. Ltd. (South Korea)	<p>In June 2009, Daelim Industrial Co. Ltd. won a contract to build pipelines for an LNG storage facility in Iran. CalSTRS research providers show Daelim Industrial Co. Ltd. continues to be involved in several natural gas related projects in Iran.</p>	<p>In 2009, Daelim Industrial Co. Ltd. was designated as "Restricted From Additional Purchase." In early 2010, CalSTRS divested the holdings of the company and designated the company as "Restricted." CalSTRS has maintained the "Restricted" designation in 2016.</p>	0	\$0
5	Doosan Corp. (South Korea)	<p>In 2014, Doosan Corp. was identified by CalSTRS service providers as being a supplier of automotive products to companies in Iran.</p>	<p>In 2014, CalSTRS identified Doosan Corp. as potentially having ties to Iran and began the review process. In 2015, CalSTRS designated Doosan Corp. and related entities as "Restricted" after the company failed to respond to requests for information and maintained the "Restricted" designation in 2016.</p>	0	\$0

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
6	Indian Oil Corp. (India)	Indian Oil Corp. has been identified as having a majority stake in a company in Iran. One of the minority partners in the company has ties to the Iranian Revolutionary Guard Corps, an entity restricted by U.S. sanctions. The U.S. Government Accountability Office (GAO) has identified Indian Oil Corp. as having commercial activity in Iran's energy sector.	In the past several years, CalSTRS has initiated the review process of Indian Oil Corp. as the company was purchased by CalSTRS external managers. However, the security was always sold before the review process could be completed. In 2015, CalSTRS determined to restrict the company because of the troubling nature of the ties and believed it would be more efficient than continually initiating the review process. CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0
7	Kunlun Energy Co. and Sinopec, a linked company (China)	Kunlun Energy Co.'s parent, Sinopec, is linked to Iran through oil exploration contracts and interests, refining and commercialization of gas processing products.	In 2009, Sinopec and its related companies, including CNPC Hong Kong, were designated as "Restricted." In February 2010, CNPC Hong Kong changed its name to Kunlun Energy Co. Sinopec, and all of its subsidiaries, including Kunlun Energy Co., remain "Restricted" in 2016.	0	\$0
8	MISC Bhd. (Malaysia)	MISC Bhd. is a Malaysian shipping company that is linked to Iran through its parent company, Petronas, a "Restricted" company.	In 2009, CalSTRS designated MISC Bhd. as "Restricted" and maintained that status in 2016.	0	\$0
9	Oil and Natural Gas Company of India (India)	Oil and Natural Gas Company of India (ONGC) holds stakes in at least one Iranian gas field and is reportedly considering others. In 2013, it was reported that the company was no longer involved in the development of oilfields in Iran. However, through a subsidiary, it remains a large purchaser of Iranian crude.	ONGC was not on the 2009 Iran list but had already been restricted for ties to Iran. In early 2010, CalSTRS also designated the company as "Restricted" for ties to Iran and maintained that status in 2016.	0	\$0

Attachment I

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
10	Oil India (India)	Oil India has been identified as having a participating interest in an offshore block in Iran. The GAO has identified Oil India as having commercial activity in Iran's energy sector.	In the past several years, CalSTRS has initiated the review process of Oil India as the company was purchased by CalSTRS external managers. However, the security was always sold before the review process could be completed. In 2015, CalSTRS determined to restrict the company as it would be more efficient than continually initiating the review process. CalSTRS has maintained the "Restricted" designation in 2016.	0	\$0
11	PetroChina and CNPC - as connected corporations to the Chinese National Oil Company (China)	PetroChina is linked to Iran through its parent, China National Petroleum Corp. (CNPC), which has interests in several Iranian oil and gas projects. Additionally, PetroChina is reportedly continuing work to develop the Azadegan Field in Iran.	In 2009, CalSTRS designated PetroChina as "Restricted" and maintained that status in 2016.	0	\$0
12	Petronas (Malaysia)	Petronas has interest in multiple gas fields in Iran that are in the production phase. Additionally, in 2010, the company reportedly ceased supplying refined products to Iran. However, the company stated it is due to Iran's lack of demand and has not pledged to cease activities in the country. In February 2013, Petronas withdrew from South Pars Phase 11 and is in the cost recovery phase of Phases 2 and 3.	In 2009, CalSTRS designated Petronas as "Restricted." While the company's apparent withdrawal from Iran is promising, Petronas remains "Restricted" under Sudan sanctions. CalSTRS has maintained the company's "Restricted" designation in 2016.	0	\$0

11 Companies Under Review					
Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016	
1 Aker Solutions (Norway)	According to news reports Aker Solutions signed an MOU to transfer state-of-the-art technology to Iran.	Aker Solutions had previously been removed from the CalSTRS Iran related securities list. However, in 2016, CalSTRS reinstated the review process due to potentially new involvement.	857,994	\$3,859,040	
2 Bilfinger SE (Germany)	Bilfinger SE has reportedly signed contracts with Nargan, an Iran-based engineering, procurement and construction company, for the supply of process control technology and safety systems for the upgrade of a refinery operated by an Iran state-owned company.	In 2016, CalSTRS identified Bilfinger SE as potentially having ties to Iran and began the review process.	45,339	\$1,714,368	
3 BT Group (United Kingdom)	BT Group reportedly signed a contract with an Iranian state-owned telecommunications company to make and receive voice calls from the country to the UK.	In 2016, CalSTRS identified BT Group as potentially having ties to Iran and began the review process.	Stock 15,830,233 Bonds \$11,250,000	Stock \$70,628,297 Bonds \$14,794,894	
4 China Railway Group (China)	News reports indicate China Railway Group has signed a \$2 billion investment agreement, including the construction of a 350,000 ton smelter, a 500 mega watt power station and an anode project.	In 2016, CalSTRS identified China Railway Group as potentially having ties to Iran and began the review process.	1,923,451	\$1,735,821	
5 Hindustan Petroleum (India)	Hindustan Petroleum has reportedly entered into contracts to purchase Iranian crude oil.	In 2016, CalSTRS identified Hindustan Petroleum as potentially having ties to Iran and began the review process.	333,634	\$2,296,724	
6 Honeywell International (USA)	Honeywell International reportedly has wholly owned subsidiaries that have entered into contracts to sell gas meters and absorbents for end use in the Iranian petrochemical industry.	In 2016, CalSTRS placed Honeywell International on the "Review" list to confirm the company's compliance and controls.	2,002,421	\$228,155,849	

Attachment I

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
7	Japan Drilling Co. Ltd. (Japan)	In 2015, Japan Drilling Co. Ltd. was identified as possibly operating in Iran with clients including the Iranian government.	In 2015, CalSTRS identified Japan Drilling Co. Ltd. as potentially having ties to Iran and began the review process. In early 2016, CalSTRS stopped the review process as CalSTRS no longer had holdings in the company's securities. However, in late 2016, CalSTRS reinitiated the review process when one of CalSTRS' managers took a new position in the company.	4,509	\$93,983
8	Linde AG (Germany)	Linde AG is reportedly making investments in multiple petrochemical projects in Iran.	In 2016, CalSTRS identified Linde AG as potentially having ties to Iran and began the review process.	227,613	\$37,956,225
9	MMC Corp. (Malaysia)	MMC Corp. was identified as possibly providing consulting services on energy projects in Iran.	In 2015, CalSTRS identified MMC Corp. as potentially having ties to Iran and began the review process. In early 2016, CalSTRS stopped the review process as CalSTRS no longer had holdings in the company's securities. However, in late 2016, CalSTRS reinitiated the review process when one of CalSTRS' managers took a new position in the company.	362,700	194,913
10	Raiffeisen Bank Intl. (Austria)	The Raiffeisen Bank Intl. has reportedly signed agreements to increase cooperation with Iran and has stated they plan to reopen offices in Tehran "as soon as possible."	In 2016, CalSTRS identified Raiffeisen Bank Intl. as potentially having ties to Iran and began the review process.	139,175	\$2,537,138
11	S and P Global (USA)	S and P Global reported to the SEC that one of its divisions sold energy-related information and informational materials to 14 Iran-linked subscribers that are on U.S. government sanctions lists and are owned or controlled by the government of Iran.	In 2016, CalSTRS placed S and P Global on the "Review" list to confirm the company's compliance and controls.	<u>Stock</u> 710,840 <u>Bonds</u> \$12,000,000	<u>Stock</u> \$84,582,852 <u>Bonds</u> \$12,698,660

15 Companies Being Monitored					
	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
1	China Communications Construction Company Limited (China)	In 2015, China Communications Construction Company Limited was identified as potentially being involved in the development of a harbor in Iran.	In 2015, CalSTRS identified China Communications Construction Company Limited as potentially having ties to Iran and began the review process. In 2016, CalSTRS determined to classify China Communications Construction Company Limited as "Monitor."	1,923,938	\$2,306,746

Attachment I

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
2	Gazprom (Russia)	<p>In July 2008, Gazprom signed an MOU with the National Iranian Oil Company (NIOC), which expired in July 2010. Additionally, Gazprom Neft, a subsidiary of Gazprom, signed an MOU with the NIOC providing for joint exploration of oil fields in Iran. In 2014, the company reported that Iran had suspended cost recovery payments related to South Pars 2 and 3.</p>	<p>In 2009, CalSTRS designated Gazprom as "Review." In 2010, CalSTRS designated Gazprom as "Monitor" after confirming the company has no current investments in the country. In 2011, CalSTRS maintained Gazprom as "Monitor" as the GAO stated it had insufficient information on the company's activities. CalSTRS maintained Gazprom as "Monitor" due to the Russian government's reported interest in developing a deal with Iran. In 2014, due to U.S. sanctions on Gazprom Bank, a Gazprom subsidiary, CalSTRS determined to minimize its exposure to the company by restricting managers from making new purchases in Gazprom securities. For risk control purposes, in 2016 CalSTRS revised the restriction on purchasing shares of Gazprom to allow managers underweighted in Gazprom (versus their benchmark) to purchase up to benchmark weight.</p>	<p><u>ADR</u> 9,252,234</p>	<p><u>ADR</u> \$42,712,304</p>
3	Gemalto NV (Netherlands)	<p>In 2014, Gemalto NV was identified as providing digital security products to Iran.</p>	<p>In 2014, CalSTRS identified Gemalto NV as potentially having ties to Iran. In 2015, CalSTRS designated Gemalto as "Monitor" and maintained that designation in 2016.</p>	<p>131,477</p>	<p>\$6,711,333</p>

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
4	Kamigumi Co. Ltd. (Japan)	In 2014, Kamigumi Co. Ltd. was identified by CalSTRS service providers as being a supplier of logistic services in Iran.	In 2014, CalSTRS identified Kamigumi Co. Ltd. as having ties to Iran. In 2015, CalSTRS determined to classify Kamigumi Co. Ltd. as "Monitor" and maintained that designation in 2016.	373,424	\$3,441,092
5	LafargeHolcim Ltd. (Switzerland)	In 2014, Holcim Ltd. was identified as having equity interest in an Iranian cement company. In 2015, Holcim merged with Lafarge SA.	In 2014, CalSTRS identified Holcim Ltd. as potentially having ties to Iran and began the review process. In 2015, Holcim Ltd. merged with Lafarge SA to create LafargeHolcim Ltd. CalSTRS reinitiated the review process on the merged company to evaluate its internal controls and compliance procedures.	Stock 826,682 Bonds \$2,000,000	Stock \$43,701,787 Bonds \$1,942,737
6	Larsen & Tourbro Ltd. (India)	In 2014, Larsen & Tourbro Ltd. was identified by CalSTRS service providers as providing products to Iran.	In 2014, CalSTRS identified Larsen & Tourbro Ltd. as potentially having ties to Iran. In 2015, CalSTRS determined to classify Larsen & Tourbro Ltd. as "Monitor" and maintained that designation in 2016.	Stock 661,603 GDR 24,648	Stock \$13,365,166 GDR \$491,728
7	Lukoil OAO (Russia)	In 2009, Lukoil OAO confirmed to CalSTRS that it did not have any business in Iran. However, the company does have a 10 percent stake in the Shah Deniz Field operated by BP, which has Iran as a partner. The Shah Deniz Field operates under exemptions to the Iran sanctions. In 2016, Lukoil OAO reportedly signed an agreement for hydrocarbon exploration in Iran.	In 2014, CalSTRS determined to re-evaluate Lukoil OAO and its sanction controls and relations with the NIOC relating to the Shah Deniz Field. In 2015, CalSTRS determined to place Lukoil OAO as "Monitor" due to media speculation that Russian firms were seeking business in Iran and maintained that designation in 2016.	Stock 2,421,463 Bonds \$4,780,000	Stock \$118,860,840 Bonds \$4,830,558

Attachment I

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
8	MTN Group (South Africa)	In 2015, MTN Group was identified as potentially operating a mobile phone network in Iran with a partner owned by the Iranian government.	In 2015, CalSTRS identified MTN Group as potentially having ties to Iran and began the review process. In 2016, CalSTRS determined to classify MTN Group as "Monitor" while staff conducts further review of the company's compliance and control policies and procedures.	<u>Stock</u> 2,120,389 <u>Bonds</u> \$1,000,000	<u>Stock</u> \$18,355,629 <u>Bonds</u> \$981,181
9	Orient Overseas International (Hong Kong)	In 2015, Orient Overseas International was identified as providing shipping services in Iran.	In 2015, CalSTRS identified Orient Overseas International as potentially having ties to Iran and began the review process. In 2016, CalSTRS determined to classify Orient Overseas International as "Monitor" while staff conducts further review of the company's compliance and control policies and procedures.	253,637	\$1,012,043
10	Polskie Górnictwo Naftowe i Gazownictwo (PGNiG) (Poland)	PGNiG has an MOU with NIOC to work on the Lavan Island Oil Field.	CalSTRS has initiated the review process multiple times in the past but liquidated the security before completing the engagement. In 2015, CalSTRS determined to classify PGNiG as "Monitor" and maintained that designation in 2016.	6,083,063	\$7,182,920
11	Siam Cement (Thailand)	Siam Cement holds a 38 percent stake in a HDPE petrochemical plant in Iran. HDPE is a raw material used in the production of consumer products such as shopping bags.	In 2012, CalSTRS identified Siam Cement as potentially having ties to Iran. In 2013, CalSTRS designated Siam as "Monitor." CalSTRS has maintained the "Monitor" status in 2016.	<u>Stock</u> 1,681,450 <u>NVDRs</u> 278,300	<u>Stock</u> \$22,432,215 <u>NVDRs</u> \$3,712,799

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
12	State Bank of India (India)	State Bank of India was identified by CalSTRS service providers as possibly providing financial services to Iran, including financing oil purchases.	In 2013, CalSTRS identified State Bank of India as potentially having ties to Iran and began the review process. In 2014, CalSTRS sold all holdings of State Bank of India prior to completing the review process. In 2015, CalSTRS determined to classify State Bank of India as "Monitor" because of the intermittent nature of the holdings in the company and maintained the "Monitor" status in 2016.	<u>GDR</u> 69,617	<u>GDR</u> \$2,617,559
13	Sulzer AG (Switzerland)	In 2015, Sulzer AG was identified as possibly selling products in Iran.	In 2015, CalSTRS identified Sulzer AG as potentially having ties to Iran and began the review process. In 2016, CalSTRS determined to classify Sulzer AG as "Monitor" while staff conducts further review of the company's compliance and control policies and procedures.	14,303	\$1,460,278
14	Total SA (France)	In November 2016, Total SA issued a press release that the company had signed a Heads of Agreement (HoA) with the NIOC for the development of phase 11 of South Pars.	Total SA had previously been removed from the Iran review list after ceasing operations in Iran. Given the signing of the HoA, CalSTRS has reinstated Total SA in a "Monitor" status.	3,552,410	\$169,408,224
15	Woori Bank (South Korea)	In 2014, Woori Finance Holdings Co. was identified as providing import-export financing services to facilitate trade with Iran. In late 2014, Woori Finance Holdings Co. merged with its subsidiary Woori Bank and changed its name to Woori Bank.	In 2014, CalSTRS identified Woori Finance Holdings Co. as having ties to Iran. In 2015, CalSTRS determined to classify Woori Bank as "Monitor" and has maintained the "Monitor" status in 2016.	706,945	\$7,256,610

15 Companies Removed					
Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016	
1 Aeroports de Paris (France)	In 2016, Aeroports de Paris (ADP) reportedly joined in a joint venture to develop a \$2.8 billion expansion to Tehran's Imam Khomeini International Airport.	In 2016, CalSTRS identified ADP as potentially having ties to Iran and began the review process. ADP was subsequently removed from the list after CalSTRS met with the company and determined the company had not yet joined the venture. The project was for the expansion of a civilian terminal, not military, and the company maintained adequate internal controls and compliance procedures.	32,644	\$3,213,894	
2 Banco Bilbao Vizcaya Argentaria - BBVA (Spain)	In 2015, Banco Bilbao Vizcaya Argentaria was identified as potentially having banking ties to Iran.	In 2015, CalSTRS identified Banco Bilbao Vizcaya Argentaria as potentially having ties to Iran and began the review process. In 2016, CalSTRS removed Banco Bilbao Vizcaya Argentaria from the "Review" list after confirming the company is maintaining appropriate internal controls and compliance procedures.	Stock 8,148,777 Bonds \$1,695,000	Stock \$50,361,229 Bonds \$1,683,177	

Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
3 Clariant AG (Switzerland)	In 2014, Clariant AG was identified in news reports as being part of a joint venture that sold products to Iran without government approval.	In 2014, CalSTRS identified Clariant AG as potentially having violated U.S. sanctions. While the company has reported it has stopped the transactions, due to the nature of the violations, CalSTRS has determined to designate Clariant AG as "Monitor" in 2015. In 2016, CalSTRS removed Clariant AG from the "Monitor" list after meeting with the management and determining the company had adequately improved internal controls and compliance procedures.	325,133	\$5,244,132
4 Credit Agricole (France)	Credit Agricole agreed to pay a \$787 million fine to settle allegations of violations of U.S. sanctions against Iran and Sudan for action that occurred prior to 2008.	In 2016, CalSTRS identified Credit Agricole as potentially having ties to Iran and began the review process. Credit Agricole was subsequently removed from the "Review" list after confirming the company is maintaining appropriate internal controls and compliance procedures.	Stock 3,498,277 Bonds \$1,960,000	Stock \$39,521,845 Bonds \$2,191,270

Attachment I

Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
5 Ericsson (Sweden)	In 2015, Ericsson was identified for possibly not following through on its commitment to withdraw from Iran.	In 2015, CalSTRS reinitiated the review process of Ericsson to determine if the company was keeping with its commitment to curtail involvement in Iran. In 2016, CalSTRS removed Ericsson from the "Review" list after meeting with the company and confirming the changes the company is possibly making regarding Iran are due to the potential of eased sanctions resulting from the JCPOA and confirming the company is maintaining appropriate internal controls and compliance procedures.	<u>Stock</u> 6,571,031 <u>ADR</u> \$304,543	<u>Stock</u> \$33,801,805 <u>ADR</u> \$1,559,260
6 General Electric (USA)	In 2016, General Electric was identified by United Against a Nuclear Iran (UANI) as having independent subsidiaries seeking to do business in Iran.	In 2016, CalSTRS initiated a review of General Electric and subsequently removed the company from the "Review" list after meeting with management and confirming the potential business in Iran is allowed under eased sanctions resulting from the JCPOA and confirming the company is maintaining appropriate internal controls and compliance procedures.	<u>Stock</u> 28,166,984 <u>Bonds</u> \$294,120,000	<u>Stock</u> \$866,416,428 <u>Bonds</u> \$302,208,846

Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
7 Glencore Plc (Switzerland)	In the past, Glencore Plc has reported that non-U.S. affiliates have made sales to Iranian state entities.	In 2014, CalSTRS identified Glencore Plc as potentially having ties to Iran. In 2015, CalSTRS determined to classify Glencore Plc as "Monitor." In 2016, CalSTRS removed Glencore Plc from the "Monitor" list after meeting with management and confirming the company is maintaining appropriate internal controls and compliance procedures.	<u>Stock</u> 20,824,610 <u>Bonds</u> \$56,207,999	<u>Stock</u> \$72,669,039 <u>Bonds</u> \$56,538,263
8 Korea Electric Power Corporation (South Korea)	In 2015, Korea Electric Power Corporation was identified as being involved in the building of power plants in Iran.	In 2015, CalSTRS identified Korea Electric Power Corporation as potentially having ties to Iran and began the review process. In 2016, CalSTRS removed the company as it was no longer identified as potentially having ties to Iran by our research providers.	<u>Stock</u> 173,516 <u>ADR</u> 99,251 <u>Bonds</u> \$2,000,000	<u>Stock</u> 6,901,752 <u>ADR</u> 1,964,177 <u>Bonds</u> \$1,993,293
9 Legrand SA (France)	In 2014, Legrand SA was identified by CalSTRS service providers as having a majority-owned subsidiary operating in Iran.	In 2014, CalSTRS identified Legrand SA as potentially having ties to Iran. In 2015, CalSTRS determined to classify Legrand SA as "Monitor." In 2016, CalSTRS removed Legrand SA from the "Monitor" list after confirming the company is maintaining appropriate internal controls and compliance procedures.	535,053	\$29,940,060

Attachment I

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
10	Mitsubishi Chemical Holding Corp. (Japan)	In 2013, Mitsubishi Chemical Holding Corp. was identified by CalSTRS' service providers as providing analytical instruments in Iran.	In 2013, CalSTRS identified Mitsubishi Chemical Holding Corp. as potentially having ties to Iran and began the review process. In 2014, CalSTRS designated Mitsubishi Chemical Holding Corp. as "Monitor" and maintained that designation in 2015. In 2016, CalSTRS removed Mitsubishi Chemical Holding Corp. from the "Monitor" list after confirming the company is maintaining appropriate internal controls and compliance procedures.	3,737,944	\$23,603,060
11	Qatar National Bank (Qatar)	In 2015, Qatar National Bank was identified as possibly having banking ties to Iran.	In 2015, CalSTRS identified Qatar National Bank as potentially having ties to Iran and began the review process. In 2016, CalSTRS removed Qatar National Bank from the "Review" list after confirming the company is maintaining appropriate internal controls and compliance procedures.	423,308	\$17,310,382

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
12	SGS SA (Switzerland)	In 2011, SGS SA was identified as being engaged in verification and testing of oil and gas in Iran.	In 2011, CalSTRS identified SGS SA as potentially having ties to Iran and began the review process. Staff met with executives of the company and confirmed it has oil-testing relations in Iran within the limits of U.S. sanctions. In 2012, CalSTRS moved the company to "Monitor" status to ensure the company does not exceed U.S. sanction limits. In 2016, CalSTRS removed SGS SA from the "Monitor" list after meeting with management and confirming the company is maintaining appropriate internal controls and compliance procedures.	6,595	\$13,226,903
13	SK Telekom (South Korea)	In 2016, SK Telekom reportedly has signed an MOU with the National Iran Gas Co. for the construction of contour measuring devices with "intelligent functions and cleaver automation."	In 2016, CalSTRS identified SK Telekom as potentially having ties to Iran and began the review process. CalSTRS removed SK Telekom from the "Monitor" list after confirming the company is maintaining appropriate internal controls and compliance procedures.	Stock 261,285 ADR 311,210	Stock \$50,511,449 ADR \$6,597,652

Attachment I

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Changes From 2015	Shares Held by CalSTRS 11/30/2016	Market Value (\$) of Shares Held by CalSTRS 11/30/2016
14	Vittoria Assicurazioni SPA (Italy)	In 2015, Vittoria Assicurazioni SPA was identified as possibly providing insurance services in Iran.	In 2015, CalSTRS identified Vittoria Assicurazioni SPA as potentially having ties to Iran and began the review process. In 2016, CalSTRS removed Vittoria Assicurazioni SPA from the "Review" list as CalSTRS no longer holds the company's securities.	0	\$0
15	ZTE Corp. (China)	In 2014, ZTE Corp. was identified by CalSTRS as possibly having business ties with the Iranian government.	In 2014, CalSTRS identified ZTE Corp. as potentially having ties to Iran. The company subsequently responded that it did not believe it had any ties to Iran but was going to do a more thorough investigation. In 2015, CalSTRS determined to classify ZTE Corp. as "Monitor." In 2016, CalSTRS removed ZTE Corp. from the "Monitor" list as CalSTRS no longer holds the company's securities.	0	\$0



California State Teachers'
Retirement System
Christopher J. Ailman
Chief Investment Officer
100 Waterfront Place, MS-4
West Sacramento, CA 95605-2807

October 25, 2016

Lisa M. DeFrancesco, Head-Investor Relations
Allergan plc
Clonshaugh Business and Technology Park, Coolock
Dublin, D17 E400
Ireland

Dear Ms. Lisa M. DeFrancesco

This letter is sent to you on behalf of the California State Teachers' Retirement System (CalSTRS). CalSTRS was established for the benefit of California's public school teachers over 100 years ago and is the largest educator-only pension fund in the world. CalSTRS serves the investment and retirement interests of over 879,000 plan participants. The long-term nature of CalSTRS' liabilities, and its responsibilities as a fiduciary to its members, makes the fund keenly interested in governance issues. As of September 30, 2016, the CalSTRS portfolio was valued at approximately **\$193 billion** with approximately **\$108 billion** of the fund's assets invested in the public equity markets, on both a domestic and an international basis. CalSTRS currently holds \$238,256,846.55 worth of Allergan plc securities in our portfolio.

Under a 1999 California Law, CalSTRS is required to monitor our portfolio for companies that have operations in Northern Ireland. In addition to the law, CalSTRS investments are governed by a 21-point Geopolitical Risk Policy that can be accessed in our Board Policy Manual found on our website www.calstrs.com. CalSTRS has contracted with MSCI Inc., to provide us with information on companies that have operations in Northern Ireland. Furthermore, MSCI reports on the companies' identified efforts towards inclusiveness in Northern Ireland. Allergan plc has been identified as having operations in Northern Ireland and as having not taken substantial action towards inclusiveness. As long-term investors, we encourage Allergan plc to take substantial action such as adopting the MacBride principles to address this issue.

Attachment J

Lisa M. DeFrancesco

10/25/2016

Page 2

If you have any questions, please feel free to contact Philip Larrieu of the CalSTRS corporate governance staff at:

Philip Larrieu
CalSTRS - Corporate Governance Unit Investments
100 Waterfront Place, MS-4
West Sacramento, CA 95605
plarrieu@calstrs.com

Sincerely,

A handwritten signature in black ink, appearing to read "C. Ailman", written in a cursive style.

Christopher Ailman
Chief Investment Officer