

California State Teachers' Retirement System Investment Reports

December 31, 2018

Introduction

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

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

Background

CalSTRS

With over 100 years of experience and over \$219.4 billion of assets under management, as of November 30, 2018, 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 1,700 school districts, community college districts, county offices of education, regional occupational programs and charter schools. CalSTRS is administered by the 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.

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

Legislative History

Iran

AB 221 (Anderson, Chapter 671, Statutes of 2007) enacted the California Public Divest from Iran Act, prohibiting CalSTRS and CalPERS from investing in companies with business operations in Iran, and requiring each pension system to sell or transfer any investments in a company with business operations in Iran. The statute also requires that, when the United States

repeals its sanctions against Iran, the retirement system boards notify the Secretary of State and repeal the prohibitions and requirements in the act.

AB 1151 (Feuer, Chapter 441, Statutes of 2011) requires that any determination by CalSTRS, that an action, as specified in the California Public Divest from Iran Act, fails to satisfy the fiduciary duty of the board, be made in a properly noticed public hearing of the full board and that proposed findings be made public 72 hours before they are considered by the board.

Sudan

AB 2941 (Koretz, Chapter 442, Statutes of 2006) prohibits CalSTRS and CalPERS from investing in companies with business operations in Sudan that are complicit in the Darfur genocide or have specified relationships with the Sudanese government or military and requires the boards of both retirement systems to divest from such companies, consistent with their fiduciary obligations.

Northern Ireland

SB 105 (Burton, Chapter 341 Statutes of 1999) mandates that CalSTRS report investments in companies operating in Northern Ireland and provide information on the corporations' efforts to achieve specific goals related to equal opportunity for employees. SB 105 requires CalSTRS, whenever feasible, to support shareholder resolutions designed to encourage corporations in which it has invested to pursue a policy of affirmative action in Northern Ireland.

Policy Review

CalSTRS contracts with two external research firms, MSCI and IW Financial, to provide information relating to companies with operations in Iran and Sudan. Prior to 2017, CalSTRS contracted with MSCI for research on companies with operations in Northern Ireland. CalSTRS now performs this research internally.

In addition to the research firms, 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), the United States Government Accountability Office (GAO), the United States Department of the Treasury Office of Foreign Asset Control (OFAC), the United States Department of State, the 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 Committee on Responsible Investment (formerly the 21 Risk Factor Review Committee). The Committee on Responsible Investment consists of 13 senior staff members: the Chief Investment Officer, the Deputy Chief Investment Officer, the Director of Corporate Governance and 10 other senior Investment staff. In 2014, the committee adopted a charter, which is reviewed and revised annually, governing its operation and scope of duties ([Attachment B](#)). The committee reviews the companies identified to determine if they

meet the requirements of the law. Companies that are determined to meet the requirements of the law and 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 the companies on the Sudan- and Iran-related securities lists in which the system has holdings. When a company is identified as potentially meeting the requirements of an applicable law, CalSTRS sends a letter requesting information on the company's ties to the respective restricted area (Attachments C & D). In addition to the letter, CalSTRS makes every attempt to meet with senior executives of the company. All the companies are sent a letter annually requesting an update of the company's operations in those restricted areas specified in statute (Attachments E & F).

In addition to the companies in its portfolio, CalSTRS continually monitors companies it does not hold that have been designated as possibly problematic. If securities of these companies enter the portfolio, the Committee on Responsible Investment 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 operating or engaging within 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.

Response to Iran Risk

As directed by AB 221, 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 energy, nuclear or defense industries. These distinctions provide the assessment framework and support the qualitative aspect of CalSTRS' process. The initial CalSTRS list was divided into three sections of various levels of involvement and holding levels. The list was based on the information provided by independent research providers, NGOs and engagement work by Investment staff.

President Obama signed Executive Order 13590 and H.R. 1905 (The Iran Threat Reduction and Syrian Human Rights Act of 2012) on November 21, 2011, and August 10, 2012, respectively, which strengthened and expanded sanctions against Iran beyond those specified in California statute. In applying the CalSTRS Investment Policy for Mitigating ESG Risks, CalSTRS expanded its research to comply with federal sanctions, which increased the number of

companies being reviewed and, in some cases, triggered 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 an agreement known as the Joint Comprehensive Plan of Action (JCPOA), which was designed to ensure Iran's nuclear program would be exclusively peaceful. The JCPOA became effective on October 18, 2015, and participants began preparations for implementation. 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 offered sanction relief, it only removed the sanctions imposed after the adoption of AB 221. Accordingly, it did not affect the status of any of the companies CalSTRS had divested or restricted.

In accordance with implementation of the JCPOA, OFAC issued general waivers for business in Iran. The issuance of the waivers led to news reports and speculation that several of the largest European companies were considering doing business in or with Iran. Additionally, sanctions relief made it possible for independent foreign subsidiaries of United States companies to do business with Iran. CalSTRS was concerned that these companies, which are not currently divested or restricted, may take advantage of OFAC waivers without fully evaluating the risks.

On October 13, 2017, President Trump announced that he would not certify Iran's compliance with the terms of the JCPOA. While not ending the deal, the decertification sent the deal back to Congress for a 60-day review period to reapply sanctions. Then on May 8, 2018, President Trump formally withdrew from the JCPOA and began the process to reinstate sanctions on Iran with the sanctions being fully restored on November 6, 2018.

On May 18, 2018, the European Union Commission initiated a blocking statute to preserve the interests of European companies investing in Iran and to enable the European Investment Bank (EIB) to finance activities in Iran, demonstrating the European Union's commitment to the JCPOA. The blocking statute were further updated on June 6, 2018, and took effect on August 7, 2018.

On July 6, 2018, a meeting of the Joint Commission of the JCPOA convened in Vienna, and all remaining parties to the deal reiterated their commitment to the full and continued implementation of the nuclear deal. They supported recent efforts to maintain the normalization of trade and economic relations with Iran.

Investments Identified

An initial list comprised of 23 companies identified as having some level of business ties to Iran 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 held within CalSTRS' portfolio.

As of October 4, 2008, CalSTRS' had divested from PetroChina, Petronas, Sinopec (Kunlun Energy, formerly CNPC Hong Kong), and MISC Bhd, all of which were restricted under AB

2941, the Sudan divestment bill. At the same time, the CalSTRS portfolio had restricted and had no holdings in Oil and Natural Gas Company of India and Daelim Industrial Co. In October 2012, the Committee on Responsible Investment added CNOOC (Chinese National Offshore Oil Company) to the list of restricted securities, and CalSTRS divested its holdings accordingly. 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 committee added Indian Oil and Oil India to the list of restricted securities. In November 2015, the committee determined to divest and restrict holdings of Doosan Corp. as well as Doosan Infracore and Doosan Heavy Industries related companies. In November 2018, CalSTRS received a request from Daelim Industrial to review the company's "Divested and Restricted" designation. After receiving confirmation that Daelim Industrial has curtailed its ties to Iran and reviewing the company's internal controls for sanctions compliance, CalSTRS removed the company from the list of Iran-related securities.

At this time, CalSTRS has identified 65 companies with ties or possible ties to Iran, as shown in [Attachment G](#). Currently, 11 companies are subject to the most severe restrictions under the law and are listed on the "Divested and Restricted" tier. In addition to the 11 "Divested and Restricted" companies, there are 13 companies listed in the second tier as "Under Review" to determine if the criteria for divestment under the legislation has been met. After the review is complete, these companies will be classified as "Divested and Restricted," "Being Monitored" or "Removed" from the list.

CalSTRS is monitoring 14 companies in its portfolio that have ties to Iran or concerns regarding Iran under our Investment Policy for Mitigating ESG Risks but do not meet the requirements of the law. CalSTRS maintains these companies in the third tier as "Being Monitored" to confirm they keep their commitments and their status does not change.

Over the past year, CalSTRS has removed 27 companies that were "Divested and Restricted," "Under Review" or "Being Monitored" for ties to Iran, including companies that were both identified and removed within the year. While these companies have been removed, they continue to be monitored by CalSTRS third-party research firms and will be subject to the law if new information is discovered. Moreover, CalSTRS continues to monitor the portfolio for both investments with new ties or companies with existing ties entering the portfolio.

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. Additionally, CalSTRS staff has met with monitors from the Department of State and OFAC to receive updates and attends the annual symposium on sanctions compliance with the Department of State to better understand the status of sanctions and United States foreign policy on Iran.

Response to Sudan Risk

Prior to the enactment AB 2941, CalSTRS identified a list of 24 companies with some level of business operations in Sudan. The legislation defined “active business operations” as a company engaged in oil-related activities or in business operations that provide revenue to the government of Sudan. Those distinctions provide an assessment framework and support 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 subject to change with market fluctuations. At any time, a company may be under review or monitored. The initial list was based on the list contained in the University of California Regents’ April 2006 Investment Committee agenda item. That list has been updated based on data provided by CalSTRS’ independent research contractors, NGOs and engagement work by Investment staff.

On October 12, 2017, the United States formally removed most sanctions on Sudan. While most sanctions have been lifted, the country remains on the Department of State’s list of State Sponsors of Terrorism. The restrictions on military equipment and the sanctions related to the Darfur and South Sudan programs remain in place. However, these sanctions represent a small portion of the overall sanctioned entities.

As Sudan remains on the Department of State’s list of State Sponsors of Terrorism, CalSTRS does not believe the actions fulfill the requirements to sunset AB 2941. However, CalSTRS is closely monitoring the situation and evaluating how any changes relate to the implementation of AB 2941 in relation to the Federal Sudan Accountability and Divestment Act of 2007 (SADA) and the fund’s fiduciary duties.

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: “Companies targeted for liquidation,” “Companies to closely monitor & still under review,” “Companies still under evaluation” and “Companies to monitor.” 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, and CalSTRS has divested its holdings accordingly. These companies are listed on the “Divested and Restricted” tier in [Attachment H](#). 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 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 “Divested and Restricted” companies, CalSTRS has one company in the second tier listed as “Under Review” to determine if the criteria for divestment under the

legislation has been met. Lastly, CalSTRS has identified 14 companies in its portfolio that have ties to Sudan but do not meet the requirements for divestment. CalSTRS maintains these companies in the third tier as “Being Monitored” to confirm they keep their commitments and their status does not change.

Over the past year, CalSTRS has removed six companies that were in either the “Under Review” or “Being Monitored” categories for ties to Sudan, including companies that were both identified and removed within the year. These companies are listed in the “Removed” tier, and while these companies have been moved into this tier, they continue to be monitored by CalSTRS’ third-party research firms 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 tiers.

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

Actions Taken

CalSTRS continues to monitor and engage with the companies on the Sudan-related securities list. CalSTRS is monitoring and evaluating changes to federal policy and sanctions relating to Sudan and their impact on CalSTRS efforts.

The Cost of Divestment

In addition to researching and monitoring, the Committee on Responsible Investment tracks the estimated fiscal impact of divestment programs on the fund. As of November 30, 2018, CalSTRS had divestment mandates for tobacco, Sudan, Iran, firearms, thermal coal and private prisons. Since fully divesting tobacco in 2010, firearms in 2013, United State thermal coal in 2016, non-United States thermal coal in 2017 and private prisons in 2018, the CalSTRS Investment Portfolio, which is benchmarked against custom indexes (indexes that exclude tobacco, firearms, thermal coal, private prisons and geopolitical restrictions), has underperformed standard indexes (indexes that include securities restricted by CalSTRS) by 1 percent, which represents roughly \$2.09 billion.

Between June 2000 and January 2010, CalSTRS divested of tobacco in the system’s passive portfolios by removing the sector from benchmarks. Staff estimates the total compounded cost of all divestments and the prior restricting of tobacco under the prior benchmark modification policy cost the system approximately \$5.73 billion.

Northern Ireland-Related Securities

CalSTRS staff compiled information from Northern Ireland’s Equality Commission and Irish National Caucus to identify companies with operations in Northern Ireland. Furthermore, staff attempted to confirm that the identified companies have made efforts towards inclusiveness in Northern Ireland.

Investments Identified

The following lists are comprised of companies that have been identified as having ties to Northern Ireland. CalSTRS determined that it holds \$5,698,164,455 worth of equity with exposure to Northern Ireland, which represents 4.94 percent of CalSTRS' equity holdings. Additionally, CalSTRS holds \$935,051,433 worth of bonds with exposure to Northern Ireland, which represents 3.4 percent of its Fixed Income portfolio. In total, CalSTRS holds \$6,633,215,888 worth of securities with exposure to Northern Ireland, which represents 3 percent of the total fund.

CalSTRS identified four holdings representing nine 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 I](#)).

Company Name	Security Type	Shares / Face Value	Market Value 11/30/18
GENTING SINGAPORE	Stock	15,950,465	\$11,276,932
KUEHNE + NAGEL INTERNATIONAL AG	Stock	60,148	\$8,456,291
LEGAL & GENERAL GROUP PLC	Stock	11,803,419	\$36,881,919
PANDORA A/S	Stock	154,982	\$8,372,893
	Stock		\$64,988,036
	Total		\$64,988,036

CalSTRS identified 177 holdings representing 140 companies that have exposure to Northern Ireland but have taken substantial action towards inclusiveness by adopting the MacBride Principles or adopting a global human rights policy that substantially reflects the values of the MacBride Principles. The MacBride Principles consist of nine fair employment and affirmative action principles and are used as a corporate code of conduct for companies doing business in Northern Ireland.

Company Name	Security Type	Shares / Face Value	Market Value 11/30/18
3M	Bonds	6,000,000	\$5,656,663
3M	Stock	1,165,334	\$242,296,245
ADECCO GROUP AG	Stock	352,835	\$17,441,386
AGF MANAGEMENT LTD CLASS B	Stock	231,499	\$870,886
ALLERGAN PLC	Bonds	35,126,000	\$35,318,516
ALLERGAN PLC	Stock	626,494	\$98,108,960
ALLIANZ SE	ADR	5,300	\$111,989
ALLIANZ SE	Stock	1,083,033	\$228,698,302
AON PLC	Bonds	3,000,000	\$2,996,953
AON PLC	Stock	833,576	\$137,631,733

ARAMARK	Bonds	1,767,000	\$1,934,546
ARAMARK	Stock	407,589	\$15,512,837
ASSOCIATED BRITISH FOODS PLC	Stock	837,235	\$25,893,866
ASTRAZENECA PLC	Bonds	12,000,000	\$11,698,542
ASTRAZENECA PLC	Stock	2,107,644	\$150,215,911
ATOS SE	Stock	220,566	\$18,730,193
AVIVA PLC	Stock	7,348,106	\$38,158,099
AXA S.A.	Stock	4,366,373	\$106,366,434
AXA S.A.	Bonds	10,795,000	\$11,121,935
BABCOCK INTERNATIONAL GROUP PLC	Stock	406,975	\$2,949,395
BANCO SANTANDER, S.A.	Bonds	56,085,000	\$53,736,580
BANCO SANTANDER, S.A.	Stock	26,103,724	\$123,691,640
BARCLAYS PLC	ADR	135,349	\$1,119,336
BARCLAYS PLC	Bonds	149,770,000	\$148,409,855
BARCLAYS PLC	Stock	43,051,413	\$89,468,895
BEMIS COMPANY	Stock	149,396	\$7,284,549
BOMBARDIER INC.	Bonds	12,262,000	\$12,098,411
BOMBARDIER INC.	Stock	3,349,258	\$5,594,276
BOUYGUES S.A.	Stock	734,767	\$28,252,686
BRENNTAG AG	Stock	384,564	\$17,778,308
BRITVIC PLC	Stock	376,017	\$4,109,148
BRUNSWICK CORP	Stock	241,948	\$12,832,922
BT GROUP PLC	Bonds	6,250,000	\$8,736,660
BT GROUP PLC	Stock	14,897,434	\$49,800,037
BUNZL PLC	Stock	790,593	\$24,370,632
C & C GROUP PLC	Stock	364,641	\$1,259,238
CANON INC.	Stock	1,986,748	\$56,339,309
CAPITA PLC	Stock	1,990,107	\$2,622,972
CK HUTCHINSON HOLDINGS LIMITED	Stock	10,210,617	\$106,728,233
CLOSE BROTHERS GROUP PLC	Stock	298,503	\$5,728,138
COCA-COLA HBC AG	Stock	567,439	\$16,898,064
COMPAGNIE DE SAINT-GOBAIN S.A.	Stock	2,171,353	\$80,479,486
COMPAGNIE GENERALE DES ETABLISSEMENTS MICHELIN S.C.A.	Stock	419,267	\$43,873,175
COMPUTERSHARE LTD	Stock	1,816,837	\$24,080,427
CRH PLC	Bonds	3,000,000	\$3,157,048
CRH PLC	Stock	1,586,567	\$43,867,344
DANSKE BANK A/S	Bonds	100,000	\$111,726
DANSKE BANK A/S	Stock	1,632,595	\$32,545,891

DART GROUP PLC	Stock	129,620	\$1,380,942
DCC PLC	Stock	277,008	\$20,870,321
DEUTSCHE POST AG	Stock	2,077,276	\$66,138,134
DEUTSCHE TELEKOM AG	Bonds	23,351,000	\$23,221,409
DEUTSCHE TELEKOM AG	Stock	6,554,410	\$114,917,780
DFDS A/S	Stock	184,480	\$6,929,825
DIAGEO PLC	Bonds	10,360,000	\$10,408,170
DIAGEO PLC	Stock	4,260,613	\$153,488,833
DIXONS CARPHONE PLC	Stock	1,390,642	\$2,869,077
DSV A/S	Stock	864,608	\$66,163,224
ELECTROLUX AB SER B	Stock	359,201	\$8,161,955
ESSILORLUXOTTICA	Stock	463,568	\$58,864,728
FERGUSON PLC	Stock	2,460,663	\$157,606,005
FERROVIAL SA	Stock	594,998	\$12,240,886
FUJITSU LIMITED	Stock	1,147,277	\$70,594,667
G4S PLC	Stock	12,391,394	\$30,663,862
GENPACT LIMITED	Stock	246,825	\$7,498,544
GENTING SINGAPORE PLC	Stock	15,950,465	\$11,276,932
GLANBIA PLC	Stock	1,021,039	\$18,323,735
GLAXOSMITHKLINE PLC	ADR	786,787	\$32,942,772
GLAXOSMITHKLINE PLC	Bonds	34,660,000	\$34,421,747
GLAXOSMITHKLINE PLC	Stock	9,468,848	\$195,910,533
HENNES & MAURITZ AB	Stock	991,991	\$18,272,228
HALFORDS GROUP PLC	Stock	229,563	\$854,681
HARVEY NORMAN HOLDINGS LTD	Stock	665,855	\$1,536,520
HAYS PLC	Stock	4,668,389	\$9,339,637
HCL TECHNOLOGIES LIMITED	Stock	3,457,884	\$50,358,738
HEINEKEN HOLDING N.V.	Stock	230,146	\$20,312,434
HEINEKEN N.V.	Stock	482,505	\$44,153,291
HSBC HOLDINGS PLC	Bonds	215,633,000	\$214,728,061
HSBC HOLDINGS PLC	Stock	24,681,123	\$209,192,483
HUHTAMAKI OYJ	Stock	133,155	\$4,070,649
INDUSTRIA DE DISENO TEXTIL SA	Stock	1,671,271	\$51,262,325
INTERNATIONAL CONSOLIDATED AIRLINES GROUP SA	Bonds	2,385,943	\$2,462,213
INTERNATIONAL CONSOLIDATED AIRLINES GROUP SA	Stock	2,866,662	\$22,907,117
ISS A/S	Stock	1,584,720	\$51,378,260
J D WETHERSPOON PLC	Stock	170,461	\$2,485,926

J SAINSBURY PLC	Stock	6,879,911	\$26,773,156
JOHN MENZIES PLC	Stock	121,949	\$793,534
JUST GROUP PLC	Stock	1,054,467	\$1,173,185
KAO CORPORATION	Stock	996,534	\$73,351,221
KERRY GROUP PLC	Stock	220,599	\$22,791,811
KINGFISHER PLC	Stock	14,527,292	\$46,338,458
KINGSPAN GROUP PLC	Stock	470,382	\$20,257,679
KLOECKNER & CO SE	Stock	94,927	\$763,653
KONE Oyj	Stock	809,806	\$40,123,676
KONINKLIJKE PHILIPS N.V.	ADR	287,833	\$10,923,262
KONINKLIJKE PHILIPS N.V.	Stock	2,469,675	\$92,962,663
KYOCERA CORPORATION	Stock	352,242	\$19,000,284
LADBROKES PLC	Bonds	2,245,066	\$2,085,381
LAFARGEHOLCIM LTD	Stock	708,119	\$31,737,279
LAGARDERE SCA	Stock	167,870	\$4,747,970
LARSEN AND TOUBRO LIMITED	GDR	25,331	\$509,153
LARSEN AND TOUBRO LIMITED	Stock	462,588	\$9,507,961
LIBERTY GLOBAL PLC	Bonds	21,891,612	\$21,801,681
LIBERTY GLOBAL PLC	Stock	100,469	\$2,494,645
LINDE AG	Stock	1,290,142	\$205,203,177
LLOYDS BANKING GROUP PLC	Bonds	255,770,000	\$254,517,543
LLOYDS BANKING GROUP PLC	Stock	189,179,379	\$133,624,712
LOOKERS PLC	Stock	442,451	\$513,716
L'OREAL S.A.	Stock	431,040	\$101,464,584
MARKS AND SPENCER GROUP PLC	Stock	1,804,214	\$6,737,948
METSO OYJ	Stock	114,756	\$3,270,401
MICHAEL KORS HOLDINGS LIMITED	Stock	277,817	\$12,154,494
MITCHELLS & BUTLERS PLC	Stock	253,096	\$888,045
MITIE GROUP PLC	Stock	440,542	\$813,903
NEXT PLC	Stock	186,951	\$11,690,401
NORTHGATE PLC	Stock	160,101	\$791,354
ORANGE SA	Bonds	3,000,000	\$3,280,972
ORANGE SA	Stock	2,548,157	\$43,738,894
OXFORD INSTRUMENTS PLC	Stock	79,420	\$1,196,065
PANDOX AB	Stock	100,470	\$1,613,949
PEARSON PLC	ADR	63,900	\$784,053
PEARSON PLC	Stock	899,943	\$11,062,125
PENSKE AUTOMOTIVE GROUP, INC.	Bonds	243,000	\$235,833
PENSKE AUTOMOTIVE GROUP, INC.	Stock	99,283	\$4,328,739

PREMIER FOODS PLC	Stock	774,781	\$353,404
PROVIDENT FINANCIAL PLC	Stock	302,596	\$2,345,065
R P S GROUP PLC	Stock	306,801	\$606,744
RANDSTAD HOLDING NV	Stock	213,805	\$10,404,631
RENTOKIL INITIAL PLC	Stock	3,368,992	\$14,185,048
REXEL S.A.	Bonds	270,000	\$314,883
REXEL S.A.	Stock	2,789,357	\$33,461,660
ROLLS-ROYCE HOLDINGS PLC	Stock	113,364,350	\$25,401,594
RSA INSURANCE GROUP PLC	Stock	17,256	\$119,464
RYOBI LIMITED	Stock	88,178	\$2,403,443
SANDVIK AKTIEBOLAG	Stock	2,107,134	\$31,255,902
SEAGATE TECHNOLOGY PLC	Bonds	9,000,000	\$8,148,443
SEAGATE TECHNOLOGY PLC	Stock	53,641	\$2,311,391
SENSATA TECHNOLOGIES HOLDING N.V.	Bonds	3,416,502	\$3,442,000
SENSATA TECHNOLOGIES HOLDING N.V.	Stock	1,419,266	\$65,655,245
SERCO GROUP PLC	Stock	1,229,312	\$1,406,927
SGS SA	Stock	7,786	\$18,433,658
SHISEIDO COMPANY LTD	Stock	502,788	\$31,987,147
SIEMENS AG	Bonds	10,000,000	\$9,727,878
SIEMENS AG	Stock	1,722,875	\$199,754,302
SIGNET JEWELERS LIMITED	Stock	97,786	\$5,153,322
SMURFIT KAPPA GROUP PLC	Bonds	117,000	\$132,593
SMURFIT KAPPA GROUP PLC	Stock	233,204	\$6,295,343
SODEXO S.A.	Stock	108,681	\$11,252,066
SPORTS DIRECT INTERNATIONAL PLC	Stock	1,543,622	\$5,707,636
SSE PLC	Stock	4,142,662	\$57,904,030
STEINHOFF INTERNATIONAL HOLDINGS N.V.	Stock	1,265,304	\$162,426
TATA STEEL LIMITED	GDR	4,143	\$31,570
TATA STEEL LIMITED	Stock	1,299,003	\$9,736,401
TELEFONICA SA	Bonds	30,935,000	\$30,689,564
TELEFONICA SA	Stock	10,504,681	\$94,295,056
TELEPERFORMANCE SE	Stock	105,016	\$17,383,822
TERUMO CORPORATION	Stock	385,065	\$22,669,833
TESCO PLC	Bonds	100,000	\$141,251
TESCO PLC	Stock	40,012,091	\$100,852,156
THALES S.A.	Stock	228,498	\$28,019,042
THE RESTAURANT GROUP PLC	Stock	791,905	\$982,366
THE ROYAL BANK OF SCOTLAND GROUP PLC	Stock	11,551,601	\$32,159,836
THOMAS COOK GROUP PLC	Stock	1,665,545	\$639,646

THYSSENKRUPP AG	Stock	458,402	\$8,561,330
TRAVIS PERKINS PLC	Stock	2,963,873	\$41,748,951
TRIGANO S.A.	Stock	11,028	\$1,164,362
TUI AG	Stock	1,275,316	\$18,175,564
UDG HEALTHCARE PLC	Stock	308,944	\$2,639,048
VEOLIA ENVIRONNEMENT S.A.	Stock	633,554	\$13,468,090
VODAFONE GROUP PLC	ADR	1,298,662	\$27,908,246
VODAFONE GROUP PLC	Bonds	20,840,000	\$20,314,376
VODAFONE GROUP PLC	Stock	52,278,727	\$112,687,151
WH SMITH PLC	Stock	594,753	\$14,463,601
WILLIAM HILL PLC	Stock	2,008,266	\$4,151,004
WILLIS TOWERS WATSON PLC	Stock	293,653	\$46,822,971
WPP PLC	Stock	4,908,040	\$54,217,886
ZURICH INSURANCE GROUP AG	Stock	398,573	\$125,033,908
	ADR		\$73,789,659
	Bonds		\$935,051,433
	GDR		\$540,723
	Stock		\$5,558,846,038
	Total		\$6,568,227,852

Actions Taken

In 2018, 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

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. As a significant investor with a very long-term investment horizon, the success of CalSTRS is linked to global economic growth and prosperity. The system's investments impact other facets of the global economy, and actions and activities that detract from the likelihood and potential of global growth are not in the long-term interests of the fund.

Consistent with its fiduciary responsibilities to CalSTRS members, the board has an obligation to ensure that the corporations and entities in which CalSTRS invests strive for long-term sustainability in their operations. Managers of our investments who do not strive for sustainability jeopardize achieving the long-term expected rate of return we expect. Therefore, CalSTRS incorporates ESG considerations into its analysis of the riskiness of its investment

decisions and its ownership policies and practices, to the extent that ESG factors are material to the long-term success of an investment.

As noted in this report, CalSTRS will continue to invest its funds in a responsible and prudent manner and adhere to the statutes referenced in this report and to the board's Investment Policy for Mitigating ESG Risks. As CalSTRS continues to secure a strong retirement fund for California educators while remaining consistent with its ethical responsibilities and fiduciary obligations, the philosophy of identifying and addressing risks is interwoven in CalSTRS' business and investment goals:

- a) Achieve a rate of return on the total assets of the fund that 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 liabilities in the long run.
- 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 confidence of members and the public in CalSTRS.



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

Investment Branch May 2018

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

POLICY

The fiduciary responsibility of the Board, as described in detail within the overall Investment Policy and Management Plan, is to discharge its responsibility in a manner that is in the sole and exclusive interest of the participants and beneficiaries and 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. As a significant investor with a very long-term investment horizon, the success of CalSTRS is linked to global economic growth and prosperity. The System's investments impact other facets of the global economy and actions and activities that detract from the likelihood and potential of global growth are not in the long-term interests of the Fund.

Consistent with its fiduciary responsibilities to CalSTRS members, the Board has an obligation to ensure that the corporations and entities in which CalSTRS invests strive for long-term sustainability in their operations. Managers of our investments who do not strive for sustainability jeopardize achieving the long-term expected rate of return we expect. Therefore, CalSTRS incorporates ESG considerations into its analysis of the riskiness of its investment decisions and its ownership policies and practices, to the extent that ESG factors are material to the long-term success of an investment.

Since CalSTRS is a long-term investor and may hold an investment in a corporation or entity for many decades, 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.

Since CalSTRS must invest huge sums of moneys for long periods of time to pay for future benefits promised to California Teachers, our decision to invest in corporations and other entities 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. CalSTRS utilizes "index" investing due to its low cost and efficient structure. These "index" investments are broadly diversified and composed of thousands of individual companies.

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 to guide CalSTRS proxy voting; however this ESG Policy is CalSTRS's preeminent policy on ESG matters and will guide active investment decisions and passive index strategy engagements.

PROCEDURES

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 environmental, social or governance issue as identified by the ESG risk factors.

When faced with a decision or other activity that potentially violates CalSTRS ESG Policy; the Investment Staff, CIO and Investment Committee will undertake the following actions:

- A. The CIO will assess the potential ESG policy violation both as an ESG risk and as an impact to the System. The extent of the responsibility of the System to devote resources to address these issues will be determined by: 1) the size of the investment, and 2) the gravity of the violation of CalSTRS ESG Policies.
- B. At the CIO's direction, the Investment Staff will directly engage corporate management or other appropriate parties to seek information and understanding concerning the ESG policy violation and its ramifications on the System.
- C. The CIO and investment staff will provide a report to the Investment Committee of the findings associated with an ESG policy violation engagement 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 ESG risk factors that should be considered as part of the financial analysis of any active investment decision. For passive index strategies, CalSTRS uses the ESG risk factors to guide engagement activities. This ESG list is not exhaustive and does not attempt to identify all forms of risk that are appropriate to consider in a given investment transaction or engagement; however, they do provide a framework of other factors that might be overlooked. These risk factors should be reviewed for any CalSTRS investment or engagement in any asset class .

CalSTRS expects all investment managers, both internal and external to assess the risk of each of the following factors when making an active 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 ESG RISK FACTORS

Monetary Transparency

The investment's 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 investment's 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 investment's 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 investment's 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 investment's 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 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>The investment's long-term profitability from 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 violations of human rights.</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 Cultural and Ethnic Identities</p> <p>The investment's long-term profitability from operations, activities and business practices that do not adequately respect cultural values and ethnic identities.</p>
<p>Respect for Property Rights</p> <p>The investment's long-term profitability from operations, activities and business practices that dispossesses or degrades peoples' lands, territories or resources, or does not adequately respect established property rights.</p>

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.

Climate Change

The investment's long-term profitability from inadequate attention to the impacts of climate change, including attention to relevant climate policy considerations and emerging climate risk mitigating technologies.

Resource Efficiency

The investment's long-term profitability from inadequately managing resource usage in a resource-constrained environment amid growing resource demand.

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 protocols.

Human Health

The 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.

Charter of the CalSTRS Committee on Responsible Investment

Purpose

The Committee on Responsible Investment (“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 Committee on Responsible Investment 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 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 Committee on Responsible Investment are:

- Evaluate ESG issues to determine if they violate CalSTRS’ ESG Policy

Attachment B

- Carry out CalSTRS Board's directives relating to the CalSTRS ESG and Divestment policies
- 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



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

December 31, 2018

Rajeev Suri
President & CEO
Karaportti 3
02610 Espoo
Finland

Dear Rajeev Suri,

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 933,410 plan participants and their families. The CalSTRS portfolio is currently valued at approximately \$215 billion invested across both domestic and international markets. Currently, CalSTRS owns 8,881,594 shares of Nokia.

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 prospective the CalSTRS Board has adopted an ESG 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 Nokia 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 Nokia has undertaken to prevent US sanctions. Our goal 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 Espoo.

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,

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



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

December 10, 2018

Cheng Lei
Investor Relations Manager
Anton Oilfield Services Group
No.8 Pingcui West Road
Chaoyang District, Beijing
China

Dear Cheng Lei,

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 933,410 plan participants and their families. The CalSTRS portfolio is currently valued at approximately \$215 billion invested across both domestic and international markets. Currently, CalSTRS owns 7,066,000 shares of Anton Oilfield Services Group.

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 an ESG Risk policy, which is available in the board policy manual at our website www.calstrs.com.

Our independent research providers have identified Anton Oilfield Services Group 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

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 Anton Oilfield Services Group 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 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
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

December 10, 2018

Chang Jin Li
Chairman
China Railway Group Limited
No.69, Fuxing Road
Block A, China Railway Square
Beijing, Beijing 100039
China

Dear Chang Jin Li,

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 nearly 933,410 plan participants and their families. The CalSTRS portfolio is currently valued at approximately \$215 billion invested across both domestic and international markets. Currently, CalSTRS owns 2,969,451 shares of China Railway Group.

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 prospective the CalSTRS Board has adopted an ESG Risk policy, which is available in the board policy manual at our website www.calstrs.com.

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Currently, CalSTRS has China Railway Group 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 China Railway Group has undertaken to

prevent US 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
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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



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December 10, 2018

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Chairman
China Railway Group Limited
No.69, Fuxing Road
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Beijing, Beijing 100039
China

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Sudan is not only designated as a terrorist sponsoring country by the United States government, but is also been 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. While there has been improvement in the United States diplomatic relations and easing of sanctions, as shareowners, we remain 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.

Currently, CalSTRS has China Railway Group 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 Sudan including purchases from and sales to Sudan as well as any risk controls China Railway Group 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.

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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 G: CalSTRS Portfolio Companies Identified as Possibly Having Ties to Iran

Companies Divested and Restricted					
	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
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 designated it as "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	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 Limited was identified as being involved in the development of oilfields in Iran.	In 2014, CalSTRS designated China Oilfield Services Limited as "Under 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 Limited as "Divested and Restricted" and has maintained the "Divested and Restricted" designation in 2018.	0	\$0

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
3	CNOOC (China)	<p>According to CNOOC20-F Filings, 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 "Under 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. In 2012, CalSTRS divested holdings of CNOOC and designated the company as "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.</p>	0	\$0
4	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 designated Doosan Corp. as "Under Review" for potentially having ties to Iran. In 2015, CalSTRS designated Doosan Corp. and related entities as "Divested and Restricted" after the company failed to respond to requests for information and has maintained the "Divested and Restricted" designation in 2018.</p>	0	\$0

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2017	Market Value (\$) of Shares Held by CalSTRS 11/30/2017
5	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.	Since 2012, 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 designated the company as "Divested and Restricted" because of the troubling nature of its ties to Iran and believed it would be more efficient than continually initiating the review process. CalSTRS has maintained the "Divested and Restricted" designation in 2018.	0	\$0
6	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 "Divested and 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 "Divested and Restricted" in 2018.	0	\$0
7	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 "Divested and Restricted" and has maintained that designation in 2018.	0	\$0
8	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 CalSTRS' 2009 Iran list but had already been designated as "Divested and Restricted" for ties to Sudan. In early 2010, CalSTRS also designated the company as "Divested and Restricted" for ties to Iran and has maintained that designation in 2018.	0	\$0

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
9	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.	Since 2012, 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 designated the company as "Divested and Restricted" because it would be more efficient than continually initiating the review process. CalSTRS has maintained the "Divested and Restricted" designation in 2018.	0	\$0
10	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 "Divested and Restricted" and has maintained that designation in 2018.	0	\$0
11	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 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 "Divested and Restricted." While the company's apparent withdrawal from Iran is promising, Petronas remains "Divested and Restricted" under Sudan sanctions. CalSTRS has maintained the company's "Divested and Restricted" designation in 2018.	0	\$0

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

Companies Under Review					
	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2017	Market Value (\$) of Shares Held by CalSTRS 11/30/2017
1	Andritz Hydro AG (Austria)	Andritz Hydro AG was identified as potentially providing hydropower equipment in Iran.	In 2017, CalSTRS designated Andritz Hydro AG as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	82,225	\$3,958,581
2	Anton Oilfield Services (Finland)	Anton Oilfield Services was identified as potentially providing oil and gas oilfield equipment to Iran.	In 2018, CalSTRS identified Anton Oilfield Services as potentially having ties to Iran and began the review process.	7,066,000	\$884,858
3	ArcelorMittal (Luxembourg)	ArcelorMittal has reported selling steel to Iran.	In 2017, CalSTRS designated ArcelorMittal as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	<u>Stock</u> 1,214,257 <u>ADR</u> 194,751 <u>Bonds</u> \$470,000	<u>Stock</u> \$27,517,478 <u>ADR</u> \$4,473,430 <u>Bonds</u> \$506,154
4	DMG Mori AG (Germany)	DMG Mori AG has been identified as selling their automation and production machinery in Iran.	In 2017, CalSTRS designated DMG Mori AG as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	28,933	\$1,431,586
5	FLSmidth & Co. A/S (Denmark)	FLSmidth & Co. A/S has reportedly opened a new office in Iran to service mineral and cement customers.	In 2017, CalSTRS designated FLSmidth & Co. A/S as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	50,034	\$2,506,482

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2017	Market Value (\$) of Shares Held by CalSTRS 11/30/2017
6	JGC Corporation (Japan)	JGC Corporation reportedly provides engineering services for power plants and gas processing plants in Iran.	In 2017, CalSTRS designated JGC Corporation as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	242,845	\$3,545,901
7	Kanemetsu Corp. (Japan)	Kanemetsu Corp. has been identified as potentially providing motor vehicles and electronic parts to Iran through their distribution service.	In 2017, CalSTRS designated Kanemetsu Corp. as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	113,987	\$1,453,573
8	Nokia (Finland)	Nokia was identified as possibly providing telecommunications equipment and services to Iran.	In 2018, CalSTRS identified Nokia as potentially having ties to Iran and began the review process.	<u>Stock</u> 8,881,594 <u>ADR</u> 685,856 Bonds \$896,000	<u>Stock</u> \$48,832,843 <u>ADR</u> \$3,751,632 Bonds \$919,533
9	SKF AB (Sweden)	SKF AB reportedly provides bearing and lubrication products to Iran.	In 2017, CalSTRS designated SKF AB as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	<u>Stock</u> 976,686 <u>ADR</u> 20,440	<u>Stock</u> \$15,421,188 <u>ADR</u> \$325,711
10	Tata Steel (India)	Tata Steel has a subsidiary that reportedly provides steel to Iran.	In 2017, CalSTRS designated Tata Steel as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	<u>Stock</u> 1,299,003 <u>GDR</u> 4,143	<u>Stock</u> \$9,736,401 <u>GDR</u> \$31,570

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2017	Market Value (\$) of Shares Held by CalSTRS 11/30/2017
11	Telenor ASA (Norway)	Telenor ASA reportedly has roaming and service agreements with the Iranian state-owned Mobile Company of Iran.	In 2017, CalSTRS designated Telenor ASA as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	3,867,029	\$74,816,724
12	Toyo Engineering (Japan)	Toyo Engineering reportedly signed an agreement to develop the Salman oil and gas field in Iran.	In 2017, CalSTRS designated Toyo Engineering as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	35,796	\$275,524
13	Toyota Tsusho Corp. (Japan)	Toyota Tsusho Corp. reportedly has an operational trade business in Iran which helps coordinate various types of businesses between Japanese and Iranian companies.	In 2017, CalSTRS designated Toyota Tsusho Corp. as "Under Review" for potentially having ties to Iran. CalSTRS maintained the "Under Review" designation in 2018.	579,853	\$20,017,823

Companies Being Monitored					
	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2017	Market Value (\$) of Shares Held by CalSTRS 11/30/2017
1	Aker Solutions (Norway)	Aker Solutions reportedly has a subsidiary with business agreements in Iran which may include the transfer of petroleum research technology to Iran.	Aker Solutions had previously been removed from the CalSTRS Iran-related securities list. However, in 2016, CalSTRS reinitiated the review process due to potentially new involvement." In 2017, CalSTRS designated Aker Solutions as "Being Monitored" and maintained that designation in 2018.	173,488	\$872,154

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2017	Market Value (\$) of Shares Held by CalSTRS 11/30/2017
2	Bharat Petroleum Corporation Ltd. (India)	Bharat Petroleum Corporation Ltd. was identified as potentially purchasing Iranian crude.	In 2017, CalSTRS designated Bharat Petroleum Corporation Ltd. as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS changed the designation to "Being Monitored" because India is one of eight countries receiving a sanction waiver.	1,350,272	\$6,284,931
3	China Railway Group (China)	In 2016, news reports indicated China Railway Group signed a \$2 billion investment agreement, including the construction of a 350,000 ton smelter, a 500 megawatt power station and an anode project.	In 2016, CalSTRS designated China Railway Group as "Under Review" for potentially having ties to Iran. In 2017, CalSTRS designated China Railway Group as "Being Monitored" and maintained that designation in 2018.	2,969,451	\$2,728,218
4	Japan Drilling Co. Ltd. (Japan)	In 2015, Japan Drilling Co. Ltd. was identified as possibly operating offshore drilling services in Iran with clients including the Iranian government.	In 2015, CalSTRS designated Japan Drilling Co. Ltd. as "Under Review" for potentially having ties to Iran. In 2016, CalSTRS stopped and restarted the review process based on changes in CalSTRS' holdings in the company's securities. In 2017, CalSTRS designated Japan Drilling Co. Ltd. as "Being Monitored" and maintained that designation in 2018.	5,709	\$1,207
5	Kamigumi Co. Ltd. (Japan)	In 2014, Kamigumi Co. Ltd. was identified by CalSTRS service providers as being a supplier of logistic services in Iran including agreements with state-owned Islamic Republic of Iran Shipping Lines.	In 2014, CalSTRS designated Kamigumi Co. Ltd. as "Under Review" for potentially having ties to Iran. In 2015, CalSTRS designated Kamigumi Co. Ltd. as "Being Monitored" and maintained that designation in 2018.	292,112	\$6,557,406
6	Larsen & Tourbro Ltd. (India)	In 2014, Larsen & Tourbro Ltd. was identified by CalSTRS service providers as providing products to Iran. Additionally, Larsen & Tourbro Ltd. reportedly holds a stake in an Iran-based joint venture, IndIran Engineering Projects and Systems.	In 2014, CalSTRS designated Larsen & Tourbro Ltd. as "Under Review" for potentially having ties to Iran. In 2015, CalSTRS designated Larsen & Tourbro Ltd. as "Being Monitored" and maintained that designation in 2018.	<u>Stock</u> 462,588 <u>GDR</u> 25,331	<u>Stock</u> \$9,507,961 <u>GDR</u> \$509,153

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2017	Market Value (\$) of Shares Held by CalSTRS 11/30/2017
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 National Iranian Oil Company (NIOC) relating to the Shah Deniz Field. In 2015, CalSTRS designated Lukoil OAO as "Being Monitored" due to media speculation that Russian firms were seeking business in Iran. In 2018, Lukoil OAO put its Iranian-based projects on hold due to U.S. sanctions on Iran. CalSTRS maintained a "Being Monitored" designation due to sensitivity around Russian-based investments and to further review how the hold status affects the investment.	<u>ADR</u> 1,810,462 <u>Bonds</u> \$5,820,000	<u>ADR</u> \$132,777,594 <u>Bonds</u> \$5,782,388
8	OAO Gazprom (Russia)	In July 2008, OAO Gazprom signed an MOU with the NIOC, which expired in July 2010. Additionally, Gazprom Neft, a subsidiary of OAO Gazprom, signed an MOU with the NIOC providing for joint exploration of oilfields in Iran. In 2014, the company reported that Iran had suspended cost recovery payments related to South Pars 2 and 3. In December 2017 the company signed an MOU relating to the development of Iranian gas fields.	In 2009, CalSTRS designated OAO Gazprom as "Under Review." In 2010, CalSTRS designated OAO Gazprom as "Being Monitored" after confirming the company has no current investments in Iran. In 2011, CalSTRS maintained OAO Gazprom as "Being Monitored" as the GAO stated it had insufficient information on the company's activities and the Russian government's reported interest in developing a deal with Iran. In 2014, due to U.S. sanctions on Gazprom Bank, an OAO Gazprom subsidiary, CalSTRS determined to minimize its exposure to the company by restricting managers from making new purchases in OAO Gazprom securities. For risk control purposes, in 2016, CalSTRS revised the restriction on purchasing shares of OAO Gazprom to allow managers underweighted in OAO Gazprom (versus their benchmark) to purchase up to benchmark weight. CalSTRS maintained the restriction on purchasing OAO Gazprom in 2017. In 2018, CalSTRS maintained the "Being Monitored" designation and removed the benchmark weighting restriction on OAO Gazprom but required managers holding the security to make quarterly updates on their investment rationale.	<u>ADR</u> 8,358,602	<u>ADR</u> \$39,892,861

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary Status	Shares Held by CalSTRS 11/30/2017	Market Value (\$) of Shares Held by CalSTRS 11/30/2017
9	OMV (Austria)	OMV has signed MOU with Dana Energy and NIOC to develop the Band Karkheh oilfield.	In 2017, CalSTRS designated OMV as "Being Monitored" for potentially having new ties to Iran and subsequently maintained the "Being Monitored" designation after reviewing the company's business and internal controls and deciding to monitor their interest in the Band Karkheh oilfield. In 2018, the company announced it will pull out of Iran when seismic studies are completed. CalSTRS is maintaining a "Being Monitored" designation until the pull out is completed.	164,105	\$8,290,750
10	PJSC Taineft (Russia)	PJSC Taineft has reportedly signed an agreement to develop the Deloran oilfield in Iran and performed studies on the development of the Shadeghan oil field.	In 2017, CalSTRS designated PJSC Taineft as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS designated PJSC Taineft as "Being Monitored" due to potentially ongoing operations in Iran.	ADR 272,845	ADR \$17,234,612
11	Polskie Górnictwo Naftowe i Gazownictwo (PGNiG) (Poland)	PGNiG has an MOU with NIOC to work on the Lavan Island and Soumar oilfields.	CalSTRS has initiated the review process multiple times since 2012 but liquidated the security before completing the engagement. In 2015, CalSTRS designated PGNiG as "Being Monitored" and maintained that designation in 2018.	5,878,079	\$10,002,535
12	Reliance Industries Ltd. (India)	Reliance Industries Ltd. has reportedly started purchasing Iranian crude after a six-year hiatus.	Reliance Industries Ltd. had previously been removed from the Iran-related securities list. In 2017, CalSTRS designated Reliance Industries Ltd. as "Under Review" for potentially having new ties to Iran. In 2018, CalSTRS designated Reliance Industries as "Being Monitored". While the company has announced they plan to halt purchases of Iranian crude, India was one of eight countries receiving a sanction waiver.	3,958,585	\$66,315,316

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
13	Royal Dutch Shell (Netherlands)	Royal Dutch Shell has reportedly signed preliminary agreements to develop oilfields in Iran.	Royal Dutch Shell had previously been removed from the Iran-related securities list. In 2017, CalSTRS designated Royal Dutch Shell as "Under Review" for potentially having new ties to Iran. In 2018, CalSTRS designated Royal Dutch Shell as "Being Monitored." CalSTRS expects to meet with the company in 2019.	<u>Stock (A Shares)</u> 12,115,259 <u>Stock (B Shares)</u> 4,556,231 <u>ADR (A Shares)</u> 187,500 <u>ADR (B Shares)</u> 209,169 <u>Bonds</u> 70,780,000	<u>Stock (A Shares)</u> \$366,343,863 <u>Stock (B Shares)</u> \$139,257,571 <u>ADR (A Shares)</u> \$11,325,000 <u>ADR (B Shares)</u> \$12,974,753 <u>Bonds</u> \$69,879,655
14	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 designated Woori Finance Holdings Co. as "Under Review" for potentially having ties to Iran. In 2015, CalSTRS determined to classify Woori Bank as "Being Monitored" and maintained that designation in 2018.	54,161	\$756,162

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

Companies Removed					
	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
1	ABB Ltd. (Switzerland)	In 2017, ABB Ltd. disclosed that it had reopened its Iranian office and had started to seek business in the country.	ABB Ltd. had previously been removed from the Iran-related securities list. In 2017, CalSTRS designated ABB Ltd. as "Under Review" for potentially having new ties to Iran. In 2018, CalSTRS removed ABB Ltd. after reviewing the company's business in Iran and internal controls to prevent sanction violations.	<u>Stock</u> 4,273,413 <u>Bonds</u> \$360,000	<u>Stock</u> \$86,421,851 <u>Bonds</u> \$370,147
2	Chiyoda Corporation (Japan)	Chiyoda corporation was identified as potentially agreeing to renovate refineries in Iran.	In 2017, CalSTRS designated Chiyoda Corporation as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Chiyoda Corporation after reviewing the company's business in Iran and internal controls to prevent sanction violations.	292,339	\$829,002
3	Daelim Industrial Co. Ltd. (South Korea)	In June 2009, Daelim Industrial Co. Ltd. won a contract to build pipelines for a liquefied natural gas storage facility in Iran. Until 2018, CalSTRS research providers had shown Daelim Industrial Co. Ltd. continued to be involved in several natural gas-related projects in Iran.	In 2009, Daelim Industrial Co. Ltd. was designated as "Restricted From Additional Purchase." In 2010, CalSTRS divested holdings of the company and designated the company as "Divested and Restricted." CalSTRS maintained the "Divested and Restricted" designation through most of 2018. However, CalSTRS removed the "Divested and Restricted" designation after the company confirmed it curtailed operations and ties to Iran and after reviewing the company's internal controls.	0	\$0
4	Ecolab (USA)	Ecolab has reported that a subsidiary has sold products for upstream oil and gas production and petrochemical plants in Iran.	In 2017, CalSTRS designated Ecolab as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Ecolab after confirming the company was winding down activities in Iran and reviewing the company's business with Iran and internal controls to prevent sanction violations.	<u>Stock</u> 585,441 <u>Bonds</u> \$6,481,000	<u>Stock</u> \$93,957,426 <u>Bonds</u> \$6,481,000

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
5	Enel SpA (Italy)	Enel SpA reportedly has an agreement to purchase liquefied natural gas from Iran.	In 2017, CalSTRS identified Enel SpA as potentially having ties to Iran and began the review process. In 2018, CalSTRS removed Enel SpA after reviewing the company ties to Iran and internal controls to prevent sanction violations.	<u>Stock</u> 24,793,917 <u>Bonds</u> \$14,000,000	<u>Stock</u> \$161,266,296 <u>Bonds</u> \$12,359,670
6	Fiera Capital (Canada)	An acquisition of Fiera Capital reportedly has a fund that invests exclusively in Iranian securities.	In 2017, CalSTRS designated Fiera Capital as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Fiera Capital after reviewing the company's business with Iran and internal controls to prevent sanction violations.	118,673	\$828,570
6	Groupe Bruxelles Lambert (Belgium)	Groupe Bruxelles Lambert has a subsidiary that reportedly provides oil and gas testing services in Iran.	In 2017, CalSTRS designated Groupe Bruxelles Lambert as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS staff met with representatives of the company and confirmed it is a holding company only and does not have a subsidiary operating in Iran. Furthermore, CalSTRS reviewed the company's investment and compliance policies and confirmed it maintains appropriate controls and includes geopolitical risk in its investment process. CalSTRS subsequently removed Groupe Bruxelles Lambert from the list of "Under Review" companies.	92,789	\$8,352,299
7	Harbin Electric (China)	Harbin Electric was identified as potentially having power projects in Iran.	In 2018, CalSTRS identified Harbin Electric as potentially having ties to Iran. CalSTRS subsequently removed Harbin Electric as it no longer holds securities of the company.	0	\$0
8	Hexagon Composites (Norway)	Hexagon Composites reportedly provides lightweight composite cylinders for the storage of gases.	In 2017, CalSTRS designated Hexagon Composites as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed the company as it no longer holds any of the company's securities.	0	\$0

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	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
9	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 designated Holcim Ltd. as "Under Review" for potentially having ties to Iran. 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. In 2017, CalSTRS maintained LafargeHolcim Ltd. in the "Being Monitored" designation. In 2018, CalSTRS removed LafargeHolcim Ltd. after reviewing the company's business with Iran and internal controls to prevent sanction violations.	<u>Stock</u> 719,103	<u>Stock</u> \$39,398,891
10	Maire Tecnimont SpA (Italy)	Maire Tecnimont SpA reportedly has an agreement to build refineries in Iran.	Maire Tecnimont SpA was previously removed from the Iran-related securities list. In 2017, CalSTRS designated Maire Tecnimont SpA as "Under Review" for potentially having new ties to Iran. In 2018, CalSTRS removed Maire Tecnimont SpA after reviewing the company's business with Iran and internal controls to prevent sanction violations.	168,288	\$657,377
11	Mitsubishi Corp. (Japan)	Mitsubishi Corp. reportedly renewed contracts to purchase Iranian crude.	Mitsubishi Corp. had previously been removed from the Iran-related securities list. In 2017, CalSTRS designated Mitsubishi Corp. as "Under Review" for potentially having new ties to Iran. In 2018, CalSTRS removed Mitsubishi Corp. after reviewing the company's business with Iran and internal controls to prevent sanction violations.	2,478,751	\$66,842,233
12	Muenchener Rueck (Germany)	Muenchener Rueck has been identified as potentially providing insurance services related to Iran.	In 2017, CalSTRS designated Muenchener Rueck as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Muenchener Rueck after reviewing the company's business with Iran and internal controls to prevent sanction violations.	243,693	\$52,949,327

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	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
13	Orange SA (France)	Orange SA reportedly provides consulting services to Iranian government owned companies.	In 2017, CalSTRS designated Orange SA as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Orange after confirming the company had curtailed its ties to Iran and reviewing the company's internal controls.	<u>Stock</u> 2,548,157 <u>Bonds</u> \$3,000,000	<u>Stock</u> \$43,738,894 <u>Bonds</u> \$3,263,297
14	Orient Overseas International (Hong Kong)	In 2015, Orient Overseas International was identified as providing shipping services in Iran.	In 2015, CalSTRS designated Orient Overseas International as "Under Review" for potentially having ties to Iran. In 2016, CalSTRS designated Orient Overseas International as "Being Monitored" while CalSTRS conducted further review of the company's compliance and control policies and procedures. In 2017, CalSTRS maintained the "Being Monitored" designation. In 2018, CalSTRS removed the company as it no longer holds any of the company's securities.	0	\$0
15	Outotec OYJ (Finland)	Outotec OYJ reportedly provides products and expertise for copper smelting in Iran.	In 2017, CalSTRS designated Outotec OYJ as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Outotec OYJ after reviewing the company's business with Iran and internal controls to prevent sanction violations.	396,081	\$11,491,139
16	Raiffeisen Bank Intl. (Austria)	The Raiffeisen Bank Intl. reportedly signed agreements to increase cooperation with Iran and stated it plans to reopen offices in Tehran "as soon as possible."	In 2016, CalSTRS designated Raiffeisen Bank Intl. as "Under Review" for potentially having ties to Iran. In 2017, CalSTRS designated Raiffeisen Bank Intl. as "Being Monitored" while it conducted further review of the company's internal controls and compliance programs. In 2018, CalSTRS removed Raiffeisen Bank Intl. after reviewing the company's business with Iran and internal controls to prevent sanction violations.	209,121	\$6,165,681
17	Saipem SpA (Italy)	Saipem SpA reportedly signed a MOU to help develop the Toos Gas Field Development Project.	Saipem SpA had previously been removed from the Iran-related securities list. In 2017, CalSTRS designated Saipem SpA as "Under Review" for potentially having new ties to Iran and initiated a new review process. In 2018, CalSTRS removed Saipem SpA. after reviewing the company's business with Iran and internal controls to prevent sanction violations.	3,704,281	\$16,206,284

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
18	Siemens AG (Germany)	Siemens AG reportedly will finance multiple power and transportation projects in Iran as well as provide other products and service in Iran.	Siemens AG had previously been removed from the Iran-related securities list. In 2017, CalSTRS designated Siemens AG as "Under Review" for potentially having new ties to Iran. In 2018, CalSTRS removed Siemens AG after reviewing the company's business with Iran and internal controls to prevent sanction violations.	<u>Stock</u> 1,722,875 <u>Bonds</u> \$10,00,000	<u>Stock</u> \$199,754,302 <u>Bonds</u> \$9,746,011
19	Sika AG (Switzerland)	Sika AG reportedly provides building products and automotive services in Iran.	In 2017, CalSTRS designated Sika AG as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Sika AG after reviewing the company's internal controls and confirming it ceased business related to sanctioned industries.	279,113	\$34,548,735
20	Sojitz (Japan)	Sojitz reportedly signed multiple agreements to renovate steel and petrochemical plants in Iran.	In 2017, CalSTRS designated Sojitz as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Sojitz after reviewing the company's business with Iran and internal controls to prevent sanction violations.	3,321,147	\$11,757,826
22	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 designated State Bank of India as "Under Review" for potentially having ties to Iran. In 2014, CalSTRS sold all holdings of State Bank of India prior to completing the review process. In 2015, CalSTRS designated State Bank of India as "Being Monitored" because of the intermittent nature of the holdings in the company and maintained the "Being Monitored" designation through 2017. In 2018, CalSTRS removed State Bank of India after several years of not having exposure to the company.	<u>GDR</u> 0	<u>GDR</u> \$0
23	Sulzer AG (Switzerland)	In 2015, Sulzer AG was identified as selling industrial pumping products in Iran.	In 2015, CalSTRS designated Sulzer AG as "Under Review" for potentially having ties to Iran. In 2016, CalSTRS designated Sulzer AG as "Being Monitored" while conducting further review of the company's internal controls and compliance programs and maintained that designation in 2017. In 2018, CalSTRS removed Sulzer AG from the "Being Monitored" list after reviewing internal controls and receiving confirmation the company ceased doing business in Iran.	23,539	\$2,198,795

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

	Company Name (Domicile)	Summary of Ties to Iran	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
24	Swiss Re (Switzerland)	Swiss Re reportedly provides insurance services related to Iran.	In 2017, CalSTRS designated Swiss Re as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Swiss Re after reviewing the company's business with Iran and internal controls to prevent sanction violations.	403,939	\$36,887,450
25	Telecom Italia (Italy)	Telecom Italia reportedly has roaming and service agreements with Iran.	In 2017, CalSTRS designated Telecom Italia as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed the company after reviewing internal controls and confirming the company has ceased doing business with Iran other than permitted reciprocal roaming agreements.	<u>Stock</u> 30,137,905 <u>Bonds</u> \$5,625,093	<u>Stock</u> \$18,939,217 <u>Bonds</u> \$5,480,550
26	Total SA (France)	In November 2016, Total SA issued a press release stating 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-related securities list after ceasing operations in Iran. In 2016, CalSTRS designated Total SA as "Being Monitored" and maintained that designation in 2017. In 2018, CalSTRS removed Total SA after the company decided not to proceed with projects in Iran, citing U.S. sanction issues.	4,207,405	\$234,213,960
27	Unicredit SpA (Italy)	Unicredit SpA reportedly provides banking services to Iran.	In 2017, CalSTRS designated Unicredit SpA as "Under Review" for potentially having ties to Iran. In 2018, CalSTRS removed Unicredit SpA after reviewing the company's business with Iran and internal controls to prevent sanction violations.	<u>Stock</u> 3,810,895 <u>Bonds</u> \$350,000	<u>Stock</u> \$49,129,300 <u>Bonds</u> \$428,494

Attachment H: CalSTRS Portfolio Companies Identified as Possibly Having Ties to Sudan

Companies Divested and Restricted					
	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
1	AviChina Industry and Technology Limited (China)	AviChina was identified as possibly providing military equipment and maintenance services to Sudan.	In 2016, CalSTRS designated AviChina as "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	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 "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	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 "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	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 "Divested and 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 "Divested and Restricted" in 2018.	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 "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	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 "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	0	\$0

Company Name (Domicile)	Summary of Ties to Sudan	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
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 "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	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 "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	0	\$0
9 Petronas (Malaysia)	Petronas has interest in several oil fields in Sudan.	In 2009, CalSTRS designated Petronas as "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	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 "Divested and Restricted." CalSTRS has maintained the "Divested and Restricted" designation in 2018.	0	\$0

Companies Under Review

Company Name (Domicile)	Summary of Ties to Sudan	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
1 Anton Oilfield Services (Finland)	Anton Oilfield Services has been identified as providing products and services for oil and gas production in Sudan.	In 2018, CalSTRS identified Anton Oilfield Services as potentially having ties to Sudan and began the review process.	7,066,000	\$884,858

Companies Being Monitored					
	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
1	China Railway Group (China)	China Railway Group has two supply contracts and one works contract for railway maintenance in Sudan.	In 2013, CalSTRS designated China Railway Group as "Under Review" for potentially having ties to Sudan. In 2014, CalSTRS designated China Railway Group as "Being Monitored" and maintained that designation in 2018.	2,969,451	\$2,728,218
2	Commercial Bank POQC (Qatar)	Commercial Bank POQC was identified as potentially providing banking services in Sudan.	In 2016, CalSTRS designated Commercial Bank POQC as "Under Review" for potentially having ties to Sudan. In 2017 CalSTRS designated Commercial Bank POQC as "Being Monitored" and maintained that designation in 2018.	47,675	\$552,526
3	Emirates Telecommunication Group Company (United Arab Emirates)	Emirates Telecommunication Group Company was identified as possibly providing telecommunication services to Sudan.	In 2017, CalSTRS designated Emirates Telecommunication Group Company as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS designated Emirates Telecommunication Group Company as "Being Monitored" while it conducts further review of the company's internal controls and compliance programs.	608,729	\$2,754,332
4	First Abu Dhabi Bank (United Arab Emirates)	First Abu Dhabi Bank was identified as potentially providing banking services in Sudan.	In 2017, CalSTRS designated First Abu Dhabi Bank as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS designated First Abu Dhabi Bank as "Being Monitored" while it conducts further review of the company's internal controls and compliance programs.	Stock 12,678,658 Bonds \$2,220,000	Stock \$46,943,291 Bonds \$2,198,616

	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
5	Fuji Electric Co. Ltd. (Japan)	Fuji Electric Co. Ltd. was identified as providing heavy equipment in Sudan.	In 2015, CalSTRS designated Fuji Electric Co. Ltd. as "Under Review" for potentially having ties to Sudan. In 2016, CalSTRS designated Fuji Electric Co. Ltd. as "Being Monitored" and maintained that designation in 2018.	242,768	\$7,621,910
6	Hannover Rueck (Germany)	Hannover Rueck has been identified as possibly providing insurance services in Sudan.	In 2017, CalSTRS designated Hannover Rueck as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS designated Hannover Rueck as "Being Monitored" while it conducts further review of the company's internal controls and compliance programs.	63,231	\$8,784,500
7	ICICI Bank (India)	ICICI Bank was identified as potentially providing banking services in Sudan.	In 2016, CalSTRS designated ICICI Bank as "Under Review" for potentially having ties to Sudan. In 2017, CalSTRS designated ICICI Bank as "Being Monitored" and maintained that designation in 2018.	<u>Stock</u> 10,497,849 <u>ADR</u> 2,800,000 <u>Bonds</u> \$2,170,000	<u>Stock</u> \$53,494,671 <u>ADR</u> \$28,476,031 <u>Bonds</u> \$2,160,995
8	Larsen & Tourbro Ltd. (India)	Larsen & Tourbro was identified as providing consulting services to the government of Sudan.	In 2015, CalSTRS designated Larsen & Tourbro as "Under Review" for potentially having ties to Sudan. In 2016, CalSTRS designated Larsen & Tourbro as "Being Monitored" and maintained that designation in 2018.	<u>Stock</u> 462,588 <u>GDR</u> 25,331	<u>Stock</u> \$9,507,961 <u>GDR</u> \$509,153
9	M1 Ltd. (Singapore)	M1 Ltd. was identified as potentially providing telecommunications services in Sudan.	In 2016, CalSTRS designated M1 Ltd. as "Under Review" for potentially having ties to Sudan. In 2017, CalSTRS designated M1 Ltd. as "Being Monitored" and maintained that designation in 2018.	436,903	\$668,729

	Company Name (Domicile)	Summary of Ties to Sudan	Summary of Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
10	Makita Group (Japan)	Makita Group was identified as providing products and equipment to Sudan.	In 2015, CalSTRS designated Makita Group as "Under Review" for potentially having ties to Sudan. In 2016, CalSTRS designated Makita Group as "Being Monitored" and maintained that designation in 2018.	1,026,070	\$40,256,643
12	Malayan Banking Bhd. (Malaysia)	Malayan Banking Bhd. was identified as potentially providing banking services in Sudan.	In 2017, CalSTRS designated Malayan Banking Bhd. as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS designated Malayan Banking Bhd. as "Being Monitored" while it conducts further review of the company's internal controls and compliance programs.	17,989,863	\$40,369,175
13	Nokia Corp. (Finland)	Nokia Corp. was identified as potentially providing telecommunication services in Sudan.	In 2017, CalSTRS designated Nokia Corp. as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS designated Nokia Corp. as "Being Monitored" while it conducts further review of the company's internal controls and compliance programs.	<u>Stock</u> 8,881,594 <u>ADR</u> 685,856 Bonds \$896,000	<u>Stock</u> \$48,832,843 <u>ADR</u> \$3,751,632 Bonds \$919,533
14	Nordea Bank (Sweden)	Nordea Bank was identified as potentially providing banking services in Sudan.	In 2017, CalSTRS designated Nordea Bank as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS designated Nordea Bank as "Being Monitored" while it conducts further review of the company's internal controls and compliance programs.	<u>Stock</u> 6,781,847 <u>Bonds</u> \$655,780,000	<u>Stock</u> \$60,202,110 <u>Bonds</u> \$657,641,692
11	Qatar Islamic Bank (Qatar)	Qatar Islamic Bank was identified as potentially providing banking services in Sudan.	In 2016, CalSTRS designated Qatar Islamic Bank as "Under Review" for potentially having ties to Sudan. In 2017, CalSTRS designated Qatar Islamic Bank as "Being Monitored" and maintained that designation in 2018.	28,210	\$1,176,821

Companies Removed					
	Company Name (Domicile)	Summary of Ties to Sudan	Summary Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
1	Commercial International Bank (Egypt)	Commercial International Bank was identified as potentially providing banking services in Sudan.	In 2017, CalSTRS designated Commercial International Bank as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS removed Commercial International Bank after reviewing the company's business with Sudan and its internal controls to prevent sanction violations.	<u>ADR</u> 23,020 GDR 5,893,757	<u>ADR</u> \$97,835 GDR \$24,960,061
2	DNB ASA (Norway)	First DNB ASA was identified as potentially providing banking services in Sudan.	In 2017, CalSTRS designated DNB ASA as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS removed DNB ASA after reviewing the company's business with Sudan and its internal controls to prevent sanction violations.	<u>Stock</u> 2,398,163 <u>Bonds</u> 97,250,000	<u>Stock</u> \$41,115,746 <u>Bonds</u> \$97,190,975
3	Keysight Technologies (USA)	Keysight Technologies was identified as possibly providing services in Sudan.	In 2017, CalSTRS designated Keysight Technologies as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS removed Keysight Technologies after reviewing the company's business with Sudan and its internal controls to prevent sanction violations.	<u>Stock</u> 310,249	<u>Stock</u> \$19,179,593
4	LafargeHolcim Ltd. (Switzerland)	LafargeHolcim Ltd. was identified as potentially having assets and providing products in Sudan.	In 2017, CalSTRS designated LafargeHolcim Ltd. as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS removed LafargeHolcim Ltd. after reviewing the company's business with Sudan and its internal controls to prevent sanction violations.	<u>Stock</u> 708,119	<u>Stock</u> \$31,737,279

	Company Name (Domicile)	Summary of Ties to Sudan	Summary Status	Shares Held by CalSTRS 11/30/2018	Market Value (\$) of Shares Held by CalSTRS 11/30/2018
5	Sapura Energy Bhd. (Malaysia)	SapuraKencana Petroleum Bhd. had a contract to create drilling access to an oilfield in South Sudan that has restricted entities as a partner. In 2017, SapuraKencana Petroleum Bhd. changed its name to Sapura Energy Bhd.	In 2014, CalSTRS designated SapuraKencana Petroleum Bhd. as "Under Review" for potentially having ties to Sudan. In 2015, CalSTRS designated SapuraKencana Petroleum Bhd. as "Being Monitored" and maintained that designation in 2017. In 2018, CalSTRS removed Sapura Energy Bhd. as it no longer holds any of the company's securities.	0	\$0
6	UltraTech Cement (India)	UltraTech Cement was identified as having a majority owned subsidiary with operation in Sudan.	In 2017, CalSTRS designated UltraTech Cement as "Under Review" for potentially having ties to Sudan. In 2018, CalSTRS removed UltraTech Cement after reviewing the company's business with Sudan and its internal controls to prevent sanction violations.	0	\$0



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

December 14, 2018

Peder Tuborgh
Chairman
Pandora A/S
Havneholmen 17-19
DK-1561 Copenhagen V
Denmark

Dear Mr. Tuborgh,

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 914,000 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 November 30, 2018, the CalSTRS portfolio was valued at approximately **\$221 billion** with approximately **\$115 billion** of the fund's assets invested in the public equity markets, on both a domestic and an international basis. CalSTRS currently holds \$8,372,893 worth of Pandora A/S 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 an ESG Policy that can be accessed in our Board Policy Manual found on our website www.calstrs.com. CalSTRS staff has compiled information from Northern Ireland's Equality Commission and Irish National Caucus to identify companies with operations in Northern Ireland with 26 or more employees. Furthermore, staff has attempted to confirm that the identified companies have made efforts towards inclusiveness in Northern Ireland. Pandora A/S has been identified as having operations in Northern Ireland, however we have not been able to confirm that Pandora A/S has taken substantial action towards inclusiveness. As long-term investors, we encourage Pandora A/S to take substantial action such as adopting the MacBride principles to address this issue.

Attachment I

Peder Tuborgh

12/14/2018

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

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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