Sustainable Investments Update

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Executive Summary | Update

TOTAL FUND GOVERNANCE AND SUSTAINABILIY STRATEGIC PLAN PROGRESS

- All six Strategic Initiatives and Core Initiatives on target. Challenges:
  - Private Equity carbon footprint
  - Integrating relevant research findings into investment decision-making
- Research Strategic Initiative
  - Draft Carbon Pricing Framework
  - Economic Inequality research update & proposed next steps

MAJOR INITIATIVES ADDED IN 2018 WHICH ARE A FOCUS IN 2019

- Investor Leadership Network (ILN), a G7 Initiative
- Analysis and reporting in line with SB 964 and Task Force on Climate-related Financial Disclosures (TCFD)
- Engagement on financial market structure reform to benefit pensions

Climate Change | Coherent Approach

FOCUSED ON MITIGATING RISK AND INFORMING DECISION-MAKING

❖ Research and Integration

- Pilot and integrate insights from climate scenario analysis tools
- Research and educate INVO on expected investment impacts (e.g. physical and transition)
- Carbon footprinting
- Develop internal policies to routinely identify economically attractive opportunities (e.g. Energy Optimization Initiative) that can enhance returns and reduce emissions

❖ Advocacy[1]

- Support carbon pricing frameworks that meet investor needs. Analyze and comment on relevant regulation

❖ Engagement[1]

- Climate Action 100+ engagements (now led by Corporate Governance/supported by SI)
- Supply Chain Activities driving climate change (e.g. land use change/deforestation, food waste, transport)
- Reporting in line with SB 964 and TCFD

[1] Collaborating with peer funds, investor coalitions, and industry partnerships

Principles Proposed Enhancement | Carbon Pricing Framework

PROPOSED GOVERNANCE AND SUSTAINABILITY PRINCIPLES' LANGUAGE REGARDING SUSTAINABLE POLICY FRAMEWORK *(Changes underlined)*

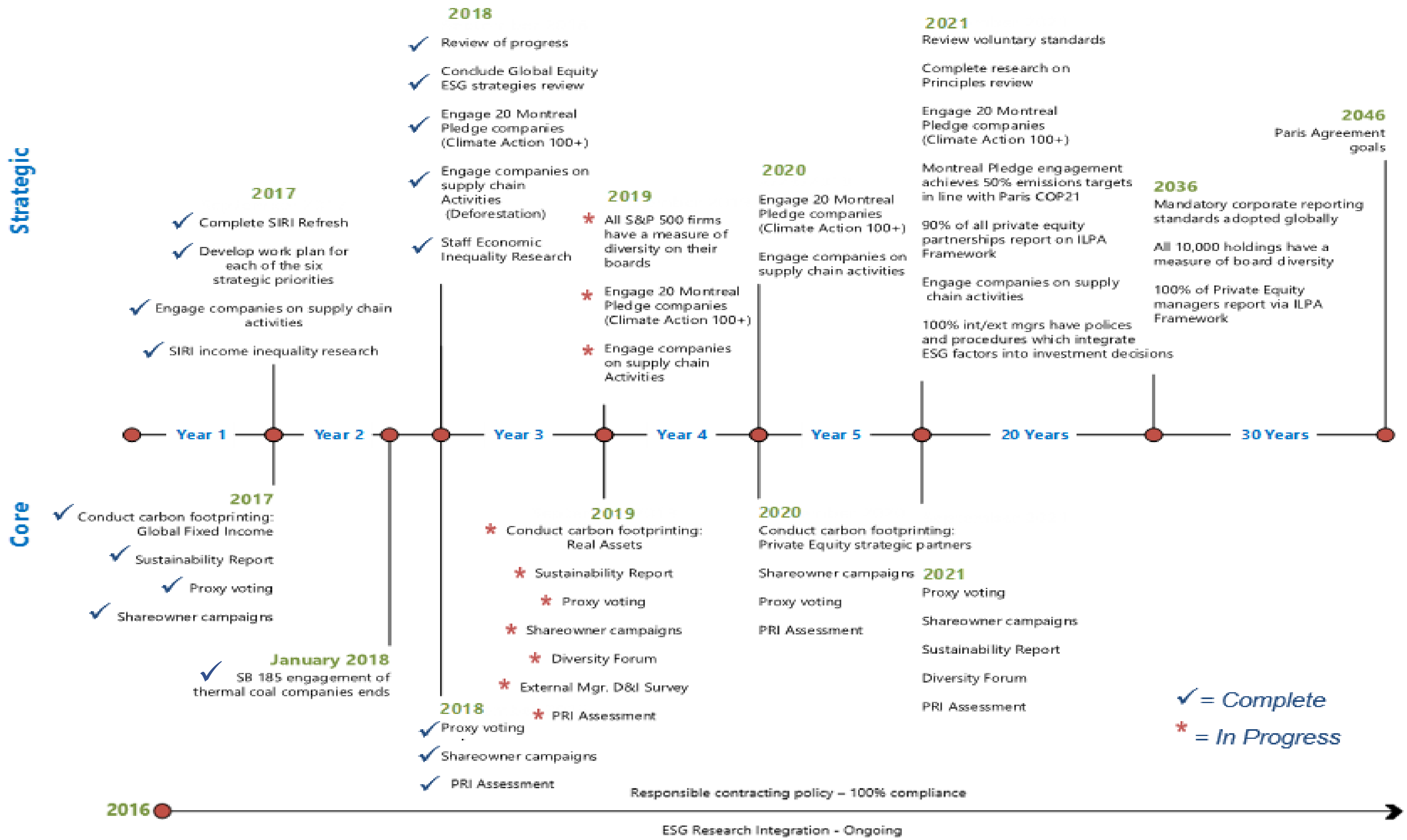
Section	Principle	Proposed Language	Page
E. Regulatory Effectiveness	6. Sustainable Policy Framework	<u>**6. Sustainable Policy Framework:** Sound regulation should be based on science and transparent analysis of social and environmental issues, be long-term focused and stable, providing the certainty for innovation, smart investment and global competitiveness.</u> **a. Productive Labor Practices:** No harmful labor practices or use of child labor. In compliance or moving towards compliance, with the International Labor Organization (ILO) Declaration on the Fundamental Principles and Rights at Work. Productive Labor Practices encompass: a. **ILO ratification:** Whether the convention is ratified, not ratified, pending ratification or denounced. b. **Quality of enabling legislation**: The extent to which the rights described in the ILO convention are protected. c. **Institutional capacity**: The extent to which governmental administrative bodies with labor law enforcement responsibility exist at the national, regional, and local levels. d. **Effective Implementation:** Evidence that enforcement procedures exist and are working effectively and evidence of a clear grievance process that is utilized and provides penalties that have deterrence value. b. <u>**Carbon Pricing Framework:** We believe in the importance of establishing a stable and clear carbon pricing framework that appropriately prices the externalized cost to the economy and society from greenhouse gas emissions. Specifically, carbon pricing should be set at a level, and with the regulatory certainty, that incentivizes business practices, consumer behavior and related investment decisions to drive the transition to a thriving low-carbon global economy. An effective carbon pricing framework should decrease emissions and therefore the physical risk to investors' portfolios from climate change. Additionally, the framework's design should seek to avoid exacerbating economic inequality and its related geopolitical risks.</u>	Governance and Sustainability Principles Page 34

Economic Inequality | Proposed Next Steps

- Support Total Fund in achieving 7% returns. Delivering strong returns helps:
  - Provide economic security to CalPERS' 1.9 million beneficiaries
  - Prevent increases in contributions from California communities, enabling them to devote more of their budgets to social services that support the quality of life in their communities
- Consider revisions to compensation section of the Governance & Sustainability Principles regarding executive compensation & companies' workforce
- As part of advocacy work, review and potentially comment on policy that could exacerbate or decrease risk from economic inequality, particularly those policies deemed most impactful to the investment performance of CalPERS
- Collaborate with industry peers & partners to further develop, and increase adoption of frameworks and standards for reporting on Human Capital topics including workforce compensation
- Continue Responsible Contractor Program
- Initiate research on coming Workforce Transitions that could heighten economic inequality and related geopolitical risk

Appendix

ESG Strategic Plan | Timeline



Strategic Initiatives | Data and Corporate Reporting Standards

OBJECTIVES

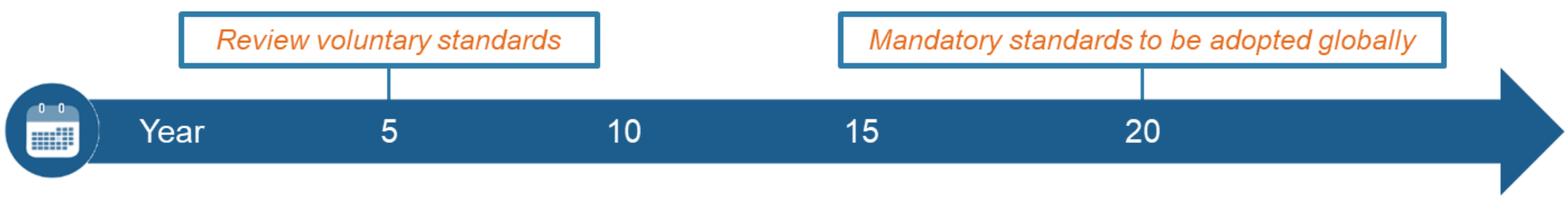
- **Initial voluntary corporate reporting including enhanced disclosure of ESG considerations in periodic filings globally**
- **Adoption of enhanced mandatory reporting of ESG in periodic filings globally**

KEY PERFORMANCE INDICATORS

- Benchmark and track the progress of integrated reporting globally
- Mandatory standards adopted globally

2018 ACCOMPLISHMENTS

- SI staff member appointed to both Financial Accounting Standards Advisory Council (FASAC) and IFRS Advisory Council, respectively the key domestic and international standards advisory councils
- SI and Global Equity MIDs representing CalPERS on Sustainable Accounting Standard Board (SASB) Investor Advisory Group
- Participation in the Embankment Project for Inclusive Capitalism (EPIC) identifying value drivers & potential metrics
- Participation in Investor Leadership Network (ILN) initiative on climate related disclosure under TCFD framework
- Domestically: promoted enhanced disclosures through visits with Securities and Exchange Commission (SEC) Commissioners and the petition to the SEC to require ESG Disclosures; comments on the Public Company Accounting Oversight Board (PCAOB) Draft Strategic Plan, proposed revisions to IFRS Framework, and the "JOBS and Investor Confidence Act of 2018"
- Internationally: engaged the International Accounting Standards Board (IASB) to conduct research on ESG disclosures



Strategic Initiatives | Climate Action 100+ [1]

Climate Action 100+
Global Investors Driving Business Transition

OBJECTIVE

Manage climate risk and opportunity by engaging 80 Montreal Pledge companies

KEY PERFORMANCE INDICATORS

- All 80 companies establish a carbon reduction target consistent with Paris COP 21
- Measure and report reduction in carbon footprint
- Track financial performance of companies with established reduction targets

2018 ACCOMPLISHMENTS

- Through successful partnership with several strategic partners (including Ceres and UNPRI) more than 310 investors with $32 Trillion in assets collectively under management are targeting 161 companies through collaborative engagement (well beyond the original 80 in the KPI and original plan for CalPERS to engage 20 companies/year)
- Appointed Chair of Global Steering Committee (through March 2019); Six staff members devoted significant time to this initiative
- Appointed Chair of Asia Advisory Group, which aims to assist the Global Steering Committee and investor signatories with insight in to the local Asian markets and developments that may be of importance or relevance to the initiative
- CalPERS is leading engagements on 21 portfolio companies globally; working to coordinate in-person meetings with senior management and director(s) from each company
- Notable progress across many companies. Details available at http://www.climateaction100.org/

[1] When approved in 2016, initiative was titled: “Engage UN PRI Montreal Pledge Companies” with timeline: Engage 20 companies: each of years 2, 3, 4, 5 of the 5-year plan

Strategic Initiatives | Manager Expectations

OBJECTIVE

Manager Expectations that allow CalPERS to better understand and manage ESG investment risk and opportunity across the portfolio

KEY PERFORMANCE INDICATORS

- All managers have policies and procedures for including ESG information in decision making
- Asset classes establish and implement documented procedures for due diligence, contracting, and monitoring activities

2018 ACCOMPLISHMENTS

- Surveyed and determined 96% of external strategic managers have ESG policies
- Updated and published Sustainable Investment Practice Guidelines (SIPG) on the internet for all asset classes
- Identified and reviewed industry / peer ESG integration standards in advance of creating a qualitative assessment framework for the SIPGs

Strategic Initiatives | Diversity and Inclusion

OBJECTIVE

Enhance Total Fund performance by increasing corporate board diversity

KEY PERFORMANCE INDICATORS

- All public companies in which CalPERS invests have a dimension of board diversity[1]
- Track financial performance of companies with diverse boards

2018 ACCOMPLISHMENTS

- 39% of the 504 companies engaged have since added a diverse director
- Diverse Director Database (3D)
  - Over 300 companies are signed up to search Equilar's BoardEdge, under which 3D is housed
  - There are 675 candidates in 3D, 526 of whom meet Equilar's criteria to be searchable in BoardEdge
  - 17 candidates within 3D were appointed to boards in calendar year 2018, up from 11 in 2017

[1] Diversity: Board diversity should be thought of in terms of skill sets, gender, age, nationality, race, sexual orientation, gender identity, and historically under-represented groups. Consideration should go beyond the traditional notion of diversity to include a more broad range of experience, thoughts, perspectives, and competencies to help enable effective board leadership. – Source: Global Governance Principles, Section B.9.

[2] Reference: 2015 Spencer Stuart Board Index - https://www.spencerstuart.com/research-and-insight/spencer-stuart-us-board-index-2015

Strategic Initiatives | Research

OBJECTIVE

Strengthen understanding of ESG factors relevant to risk and return specific to CalPERS' investment objectives

KEY PERFORMANCE INDICATORS

- Complete evidence review:
  1. SIRI refresh (inclusive of diversity and income inequality)
  2. Global Equity strategies
  3. Research companies most exposed to water risk to inform engagement
  4. Topics from Governance and Sustainability Principles review, including supply chain issues
- Integrate relevant research findings into investment decision-making

2018 ACCOMPLISHMENTS

- Conducted and completed research on Water Risk and Income Inequality. Launched and made progress on research on Disruptive Technologies and Climate Risk Data Mapping
- Completed analysis on ~20 equity strategies which integrate ESG themes/ research; selected and funded two strategies, additional $2B, for total of $3B, allocated to ESG strategies in Global Equity
- Added staff to Sustainable Investments team to support integrating relevant research findings across the Total Fund

Economic Inequality | Summary

Source	Breadth	Observations to Date
Sustainable Investment Research Initiative (SIRI)	~ 1800 [1] ESG academic studies, of which 50 reference Economic Inequality • 2017 UC Davis Symposium	• Economic inequality's affect on growth is unclear • Economic gains may have shifted from labor to owners • Public policy can affect income inequality and growth • Current literature not actionable for investor • Academic literature is still developing
Industry Experts and Stakeholders	Formal meetings and/or informal dialogues • Initiated internal discussion	• Investment case is not proven • A few investors are addressing through focus on HCM and executive pay • No established human capital frameworks for employee pay, benefits, education and training • In-country inequality is increasing in parts of the world • Can increase geopolitical risk
Industry Reports and Articles	Over 50 reports and articles reviewed and analyzed	• Income inequality can slow and shorten economic expansions and increase risks during corrective phases • Public policy can affect income inequality and growth • Relevant Education and Training increases equality • Expected workforce transitions (including automation and low-carbon economy) could exacerbate inequality

[1] Some articles address more than one topic.

Strategic Initiatives | Private Equity & Fee Profit Sharing Transparency

OBJECTIVE

Industry adoption of the Institutional Limited Partners Association (ILPA) framework for transparency of fees and profit sharing

KEY PERFORMANCE INDICATORS

- Ensure 100% of CalPERS' strategic private equity partnerships complete the ILPA fee reporting template and provide profit sharing information
- Target 100% of CalPERS private equity strategic partnerships complete the ILPA fee reporting template and provide profit sharing information
- Track and report industry ILPA adoption
  - Partnerships completing the ILPA fee reporting template and providing profit sharing information
  - Limited partners requiring such information from their general partners

2018 ACCOMPLISHMENTS

- For Q3 2018, 86% of strategic partnerships reported utilizing the quarterly ILPA fee template

90 % of all partnerships

100 % of all partnerships

Year 5 20

Investor Leadership Network | Overview

CALPERS' PARTICIPATION

BACKGROUND

- A global collaboration platform for long-term investors
- Project origin: CDPQ and OTPP leadership in context of Canadian G7 presidency
- A leadership forum for investors looking to take action against systemic issues, tackling global concerns that pose risk to long-term performance

Enhancing expertise in infrastructure development and financing in emerging and frontier economies

To help fill the gap in markets where infrastructure needs are most critical, partner institutions will:

- Launch an infrastructure fellowship program for senior public-sector infrastructure managers in targeted markets including:
  - 3-month business school certificate, including training on the Sustainable Infrastructure Foundation's SOURCE platform
  - Internship with participating institutional investors

KEY FACTS

- ✓ Initial cohort of 12-15 fellows, increasing to 30-35
- ✓ Investor partners and SIF will identify targeted markets (~6-8)
- ✓ Expected launch: Summer 2019
- ✓ Advisory committee made up of partner institution representatives, SIF and Schulich School of Business of York University

Speeding up the implementation of uniform and comparable climate-related disclosures under the FSB-TCFD framework

To make meaningful progress in the global fight against climate change, partner institutions will:

- Set up an advisory committee to assess current efforts by other groups to provide FSB-TCFD guidance, and publish guidelines applicable to institutional investors to accelerate FSB-TCFD reporting
- Engage with portfolio companies to encourage adoption of the FSB-TCFD recommendations
- Integrate the guidance developed by the advisory committee into their FSB-TCFD disclosure in the next few years

KEY FACTS

- ✓ Launch of advisory committee work: Summer 2018
- ✓ FSB-TCFD guidelines will be published over the course of the next few years
- ✓ Advisory committee made up of partner institution representatives and expert consultants
- ✓ Partner institutions may also use advisory committee to discuss SDGs and World Benchmarking Alliance

Senate Bill 964 | Overview

As of September 23, 2018 Section 7510.5 was added to the Government Code for California, excerpted below[1]:

- (a) (1) “Board” means the Board of Administration of the Public Employees’ Retirement System
- (2) “Climate-related financial risk” means risk that may include material financial risk posed to the fund by the effects of the changing climate, such as intense storms, rising sea levels, higher global temperatures, economic damages from carbon emissions, and other financial and transition risks due to public policies to address climate change, shifting consumer attitudes, changing economics of traditional carbon-intense industries.
- (3) “Fund” means the Public Employees’ Retirement Fund described in Section 20062
- (b) To the extent the board identifies climate-related financial risk as a material risk to the fund, that risk shall be analyzed.
- (c) By January 1, 2020, and every three years thereafter, the board shall publicly report on its analysis of the climate-related financial risk of its public market portfolio, including the alignment of the fund with the Paris climate agreement and California climate policy goals and the exposure of the fund to long-term risks.
- (d) The board shall include in the reports pursuant to subdivision (c) the methods and results of the board’s engagement related to climate-related financial risk with publicly traded companies that are the most carbon intense, such as utilities, oil, and gas producers, within the fund. This component of the reports shall include both of the following:
- (1) A summary of climate-related financial risk-related engagement activities undertaken.
- (2) A description of additional action taken, or planned to be taken, by the board to address climate-related financial risk, including a list of proxy votes and shareholder proposals initiated by the board.
- (e) Nothing in this section shall require the board to take action as described in this section unless the board determines in good faith that the action described in this section is consistent with the fiduciary responsibilities of the board as described in Section 17 of Article XVI of the California Constitution.
- (f) This section shall remain in effect only until January 31, 2035, and as of that date is repealed.

[1] SB 964 Full Text

Financial Markets | Promoting Sustainable Financial Markets

ISSUE	CalPERS' Approach
Ineffective Regulations	• Engaging with global regulatory and oversight bodies to identify and address specific components of financial markets in need of reform, specifically focusing on the interests of long-term asset owners
Insufficient Investor Protections	• Engaging with standard-setters to promote appropriate levels of transparency, reporting, and accountability
Marketplace Conflicts of Interest	• Advocating for market reforms supportive of a robust *Best-Execution* framework to enable the effective review of execution quality, ensure alignment with our trading partners, and help identify and eliminate costly structural conflicts

Deforestation | Update

July 2018: CalPERS' Board adopted revisions to CalPERS' Governance & Sustainability Principles, which specifically strengthened CalPERS' approach to Environmental Management Practices and specifically references deforestation.

August 2018: CalPERS, along with a large group of investors and Ceres, made specific requests for improvements to the Roundtable on Sustainable Palm Oil (RSPO) standards, pushing for stronger sustainability standards for the palm oil sector from the key sustainability certification body, RSPO.

October 2018: CalPERS joined Ceres and PRI investor working groups on deforestation addressing soy, cattle and palm oil sectors.

December 2018: CalPERS sent letters to more than 60 companies regarding risks to their business model from climate change as well their policies and practices regarding unsustainable deforestation, land use degradation, greenhouse gas emissions, and universal human rights.

February 2019: CalPERS responded to a letter from 8 US senators inquiring about CalPERS' approach to deforestation.