

POINT OF NO RETURNS

**Taxpayers on the
Hook for \$1 Trillion
as Public Pensions
Choose Politics
over Performance**

Tim Doyle

Vice President of Policy & General Counsel



ACCF

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CalPERS

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Volume 1:  CalPERS

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POINT OF NO RETURNS

Volume 1:  CalPERS

EXECUTIVE SUMMARY

The combined value of the companies comprising the S&P 500 has increased by more than 275 percent over the past eight years, driven by a broader bull-market for equities that's raged on now for more than 100 consecutive months.¹

At the same time, several large public pension systems find themselves today in dire financial straits, with actual returns falling far short of expected ones and the base of contributors not growing fast enough to offset retiree outflows. Making matters even worse: the growing tendency on the part of those who lead many large public pension funds to use beneficiaries' money as a vehicle to champion certain political causes and issues at the expense of doing what's necessary to improve fund performance.

Among the most obvious examples of this phenomenon in action also happens to be the nation's largest public pension fund -- and its most severely underfunded. The California Public Employees' Retirement System (CalPERS), with \$298 billion in assets as of June 30, 2016, has a future liability that exceeds those assets by more than \$138 billion. These figures reflect the pension fund's 2016-17 annual report, which was published on CalPERS's website the day before Thanksgiving, and on which the fund has yet to make a public statement.²

How did things get so bad? A number of factors have contributed to CalPERS's relatively recent and precipitous decline. Among those examined in this paper:

- How CalPERS has prioritized relatively poor-performing Environmental, Social and Governance (ESG) investments at the expense of other investments more likely to optimize returns (four of CalPERS's nine worst performing funds as of March 31, 2017 were ESG-focused).
- How the overwhelming majority of those who sit on CalPERS's board of directors, and who are otherwise in charge of directing outflows of billions of dollars per year, have little to no financial or portfolio management experience. Via public disclosures, we also look at how the fund's Chief Investment Officer and two other senior executives invest their own personal money (hint: no ESG investment to be found).
- How unrealistic actuarial assumptions (e.g. the "discount rate" applied to estimate the present value of future distributions) have drastically underestimated the pensions stated unfunded liabilities, decreasing the urgency for the Board to focus on the return of the fund while sheltering those individuals from the scrutiny of taxpayers that a much larger unfunded number would cause.
- How the Board uses its size and its beneficiaries' money to wage war on companies not aligned with its political views, and influences other large institutions and influential proxy advisory firms to fall in line alongside it -- or run the risk of losing out on billions of dollars in annual fees and business transactions.

1. CALPERS: PAST AND PRESENT

Public pension plans rose to prominence at the turn of the 20th century after Massachusetts established the first retirement pension plan for general state employees in 1911.³ Just nine years later, Congress introduced the Federal Employees Retirement Act (FERA), which created a comprehensive pension system for U.S. civil service workers. Following congressional approval of FERA, pension coverage in the public sector began to spread rapidly. Today, over 90 percent of public sector workers are covered by a government provided pension plan.⁴ But while the growth in participation of these funds has been regarded as a success, the increasingly politicized way in which they have been managed, especially in recent years, has created the specter of future insolvency – and the prospect of U.S. taxpayers being on the hook for more than \$1 trillion in potential long-term liabilities under a scenario in which performance and management does not significantly improve, with significant speed.⁵

The looming pension crisis is well documented. It has been researched, analyzed and written about for the last decade.⁶ It's easy to see why after taking just a cursory look inside the current state of the state public pension system. In the late 1990s, state pension funds were fully funded on an aggregate basis. Just two decades later, unfunded state actuarial liabilities have surpassed \$1 trillion. Over ten percent, or \$138 billion, of this \$1 trillion figure can be attributed to the California Public

Employees' Retirement System ("CalPERS"); the largest state pension plan in the U.S.

CalPERS was established approximately 85 years ago to provide certain California state workers with pension monies so they could maintain a basic standard of living through their retirement. Its mandate, along with all other state pension plans, started off clear and direct, to ensure the financial stability of the pension in order to pay its obligations through the proceeds of the fund without contributions from state and or U.S. taxpayers. In general, this meant fund managers would invest pensioners' money in a manner that was capable of producing good, stable returns (seven to eight percent) at a relatively low level of risk per dollar invested, such that assurances could be made that taxpayers wouldn't be forced to foot the bill.

A review of CalPERS's performance and missteps in investing decisions must include a look back through its history, which has included numerous changes aimed at increasing benefits and payouts for pensioners without much concern for where that money might come from – that, and a steady increase in emphasis on Environment, Social and Governance ("ESG") investing and activism.

CalPERS was established in 1932, with the post-Depression goal of increasing workforce productivity by offering an incentive for workers to retire, paving the way for younger employees. At that time, an employee's

The CalPERS Board		
Six Elected Members	Three Appointed Members	Four Ex Officio Members
<ul style="list-style-type: none"> Two elected by and from all CalPERS members One elected by and from all active state members One elected by and from all active CalPERS school members One elected by and from all active CalPERS public agency members (employed by contracting public agencies) One elected by and from retired members of CalPERS 	<ul style="list-style-type: none"> Two appointed by the Governor – an elected official of a local government and an official of a life insurer One public representative appointed jointly by the Speaker of the Assembly and the Senate Rules Committee 	<ul style="list-style-type: none"> The State Treasurer The State Controller The Director of the California Department of Human Resources A representative of the State Personnel Board

pension equaled 1.43 percent of their average salary over the final five years of employment, multiplied by the total number of years worked. According to a 2010 study by California's Little Hoover Commission, the formula was designed so that pensioners every year would collect half or more of their highest annual salary.⁷

In addition to contributions to the fund from employees and taxpayers, California initially restricted investment income to Treasury and state municipal bonds. Because employee contributions were fixed, state and local government deposits would need to increase if returns weren't sufficient.

INCREASED BENEFITS

The legislature added an annual cost-of-living adjustment in the 1960s, at a time public-sector unions began to grow. In 1970, pension distributions were calculated from 2 percent, up from the 1.43 percent in the initial mandate, while lowering the retirement age from 65 to 60. Pension distributions now had the

potential to rise from 50 percent of a pensioner's annual salary, to 90 percent.⁸ In the early 1980s, public-safety workers received 2.5 percent of average final salary for every year worked, which could be taken starting at 55.

As benefits increased, the pension system began to take on additional risk. In 1966, legislation was passed that allowed CalPERS to invest up to 25 percent of its portfolio in stocks. In 1984, after voters rejected a proposal that would allow the pension system to invest up to 60 percent of funds in stocks, lawmakers passed legislation that let CalPERS expand its investment in equities (without specifying a percentage limit), but held the CalPERS board members personally responsible if they didn't act prudently.

As the size of pensions grew and the market stagnated in the early 1990s, the legislature closed the existing pension system to new workers and offered a less expensive plan. It did not require employee contributions, and lowered the value of the pension to 1.25 percent, which could be collected only at 65.

Table 1: CalPERS Corporate Governance Program



Certain sectors criticized this change. In 1999, Gray Davis became governor, with Phil Angelides serving as state treasurer. That same year, the board (composed of members elected by workers and appointed by the governor, in addition to the treasurer and controller) put together a proposal that would place all the post-1991 state employees in the older system. The plan, eventually approved by lawmakers, stated “No increase over current employer contributions is needed for these benefit improvements.”⁹

From the late 1990s to the early 2000s, pension benefits continued to expand. Following the market crash in 2008, state and local governments saw their pension bills increase substantially. From 2001 to 2010, the state contribution swelled from \$322 million to \$7 billion.^{10 11}

TODAY

CalPERS now serves more than 1.93 million members in the retirement system, and administers health benefits for 1.4 million members and their families. Members include:

State Members (state police officers, state firefighters, state government officials) – 365,746 members or 19.0 percent of total membership Public Agency Members (school teachers, local safety officials, misc. district staff) – 891,638 or 46.3 percent Retired and Beneficiaries – 668,059 or 34.7 percent.

In 2017, CalPERS paid out \$21.4 billion in benefits to retirees and beneficiaries, a 5.5 percent increase from 2016 and double that of 2007 (\$10.3 billion). According to the 2017 CalPERS annual report, the funding ratio of the pension’s main fund (“PERF” which has a market value of roughly \$300 billion) stood at 68.3 percent as of June 30, 2016, a decline of 4.8 percentage points from the year prior and nearly 33 percentage points below its June 30, 2007 level (101.2 percent).¹²

2. PRIORITIZING ESG AT THE EXPENSE OF RETURNS

CalPERS has a long history of incorporating ESG criteria into its investment calculi and ultimate decision-making process. It announced plans to take part in 17 climate-related shareholder proposals in 2017 – up from 12 the year before.¹³ Its most recent ESG report begins: “Sustainability continues to be at the heart of what we do.”^{14 15}

The focus on ESG underlies several of CalPERS’s 10 stated “Investment Beliefs.” For example, Belief No. 3 states: “CalPERS investment decisions may reflect wider stakeholder views, provided they are consistent with its fiduciary duty to members and beneficiaries.”

Belief No. 4 goes deeper, stating: “CalPERS may engage investee companies and external managers on their governance and sustainability issues,” including:

- Risk management practices
- Human capital practices, including but not limited to fair labor practices, health and safety, responsible contracting and diversity
- Environmental practices, including but not limited to climate change and natural resource availability¹⁶

CalPERS initiated its corporate governance program in 1984. Its latest ESG report shows the development.¹⁷

PERFORMANCE

While it’s difficult to calculate exactly how the pension’s total environmental investments have performed over

time, a review of the current state of its private equity holdings as of March 31, 2017 (most recent data provided by CalPERS), shows the system had 238 private equity investments. Of the nine worst performing funds at this time, four were identified as focused primarily on renewable/clean energy (none of the top 25 funds were ESG).¹⁸ Those funds are as follows:

#237	Carlyle Renewable Energy Infrastructure Fund I
#236	Craton Equity Investors I, LP
#232	Richardson Capital Private Equity Limited Partnership
#230	CalPERS Clean Energy & Technology Fund, LLC

It’s worth noting that in 2010, the timeline says CalPERS “formed the Global Peer ESG Exchange to benchmark sustainable investment efforts of about 11 leading asset owners.” However, there is no mention of this benchmark anywhere in the CalPERS annual reports, making it difficult for taxpayers or pensioners to understand how these funds are performing on an annual basis relative to their “benchmark.” Though apparently the fund managers knew enough to not invest in these funds themselves.¹⁹

SOLAR ENERGY

A review of CalPERS’s most significant solar investment positions (either in terms of market value invested or companies’ status within the industry) shows further poor results for the fund.

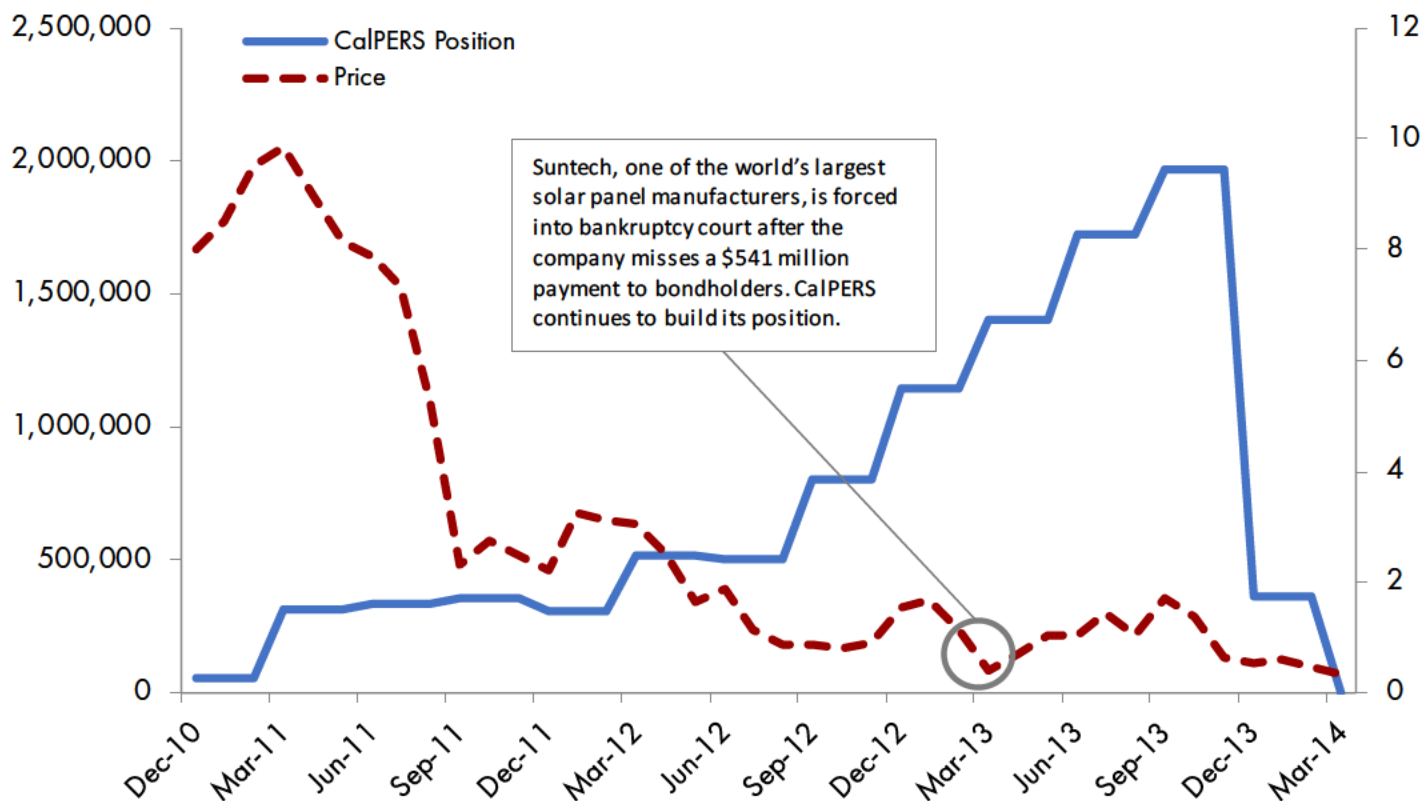
SUNTECH POWER

Suntech Power, headquartered in Wuxi, China, was one of the world's largest solar panel manufacturers. Between 2011 and 2013, however, the company suffered from a glut in the solar market and poor investment decisions. In March 2013, the company announced it defaulted on a \$541 million bond payment, becoming the first from mainland China to default on its U.S. bonds.²⁰ Subsequently, Chinese

banks filed to place Suntech Power Holdings Co., Ltd. into insolvency.²¹

While Suntech was proceeding through Chapter 15 bankruptcy in the United States, **CalPERS increased its position by 40.4 percent**, at a time when the stock was hovering between \$1.03 and \$1.70. According to data provided by Factset, CalPERS sold the majority of its position when the stock was around \$0.52 per share.²²

Chart 1: SunTech Power



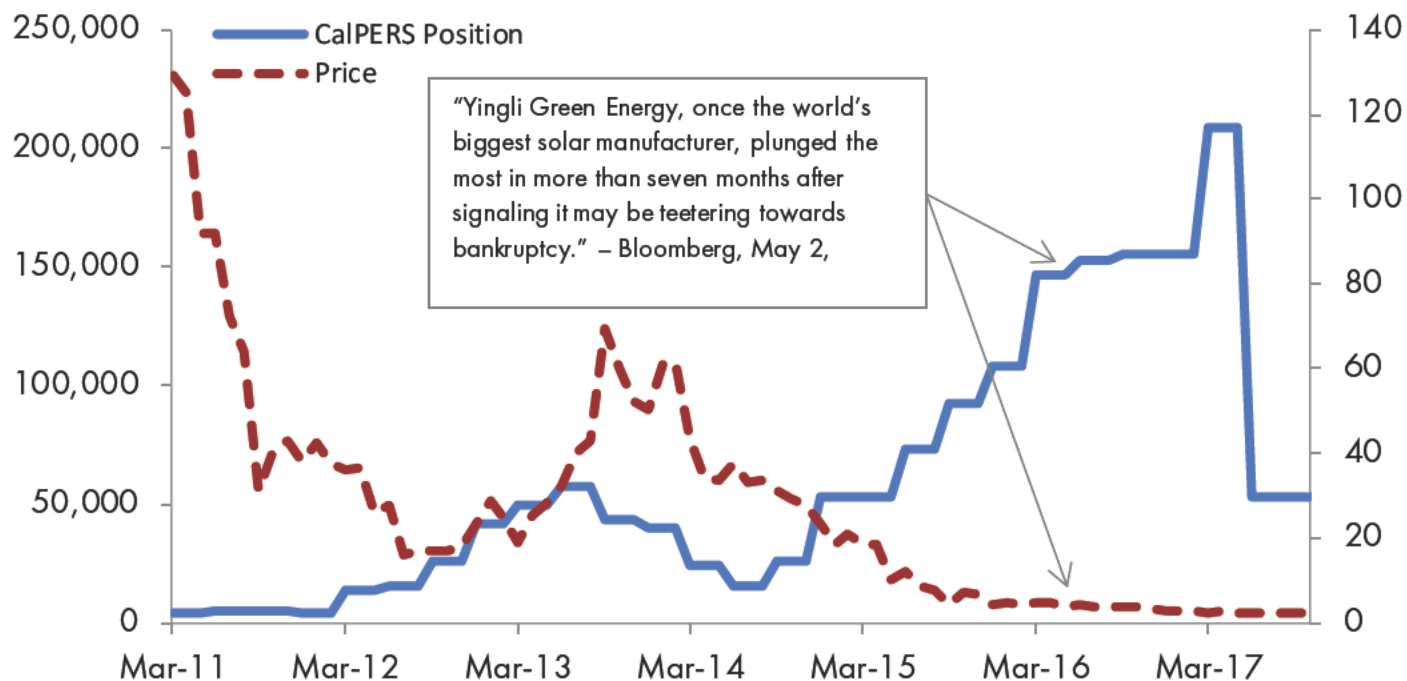
Source: FactSet

YINGLI GREEN ENERGY

Similar to Suntech, Yingli Green Energy (Baoding, China) was one of the world's largest solar panel manufacturers. After peaking in the early 2010s and failing to separate itself in a crowded solar market, Yingli struggled with debt. Since 2015, the company has been in default, selling assets and renegotiating with creditors. The company is surviving solely on the roughly \$500 million USD in loans from the state-backed China Development Bank.^{23 24 25}

Apparently, CalPERS officials saw this as an opportunity to build its position in the distressed company. In 2015, CalPERS doubled its position in Yingli, from 54,000 shares to 108,000 shares. During the time CalPERS was increasing its holding, the stock price ranged between \$20.90 and \$4.08. In 2017, CalPERS sold 74 percent of its stake at a price near or around \$2.27, significantly lower than the presumptive purchase price.

Chart 2: Yingli Green Energy



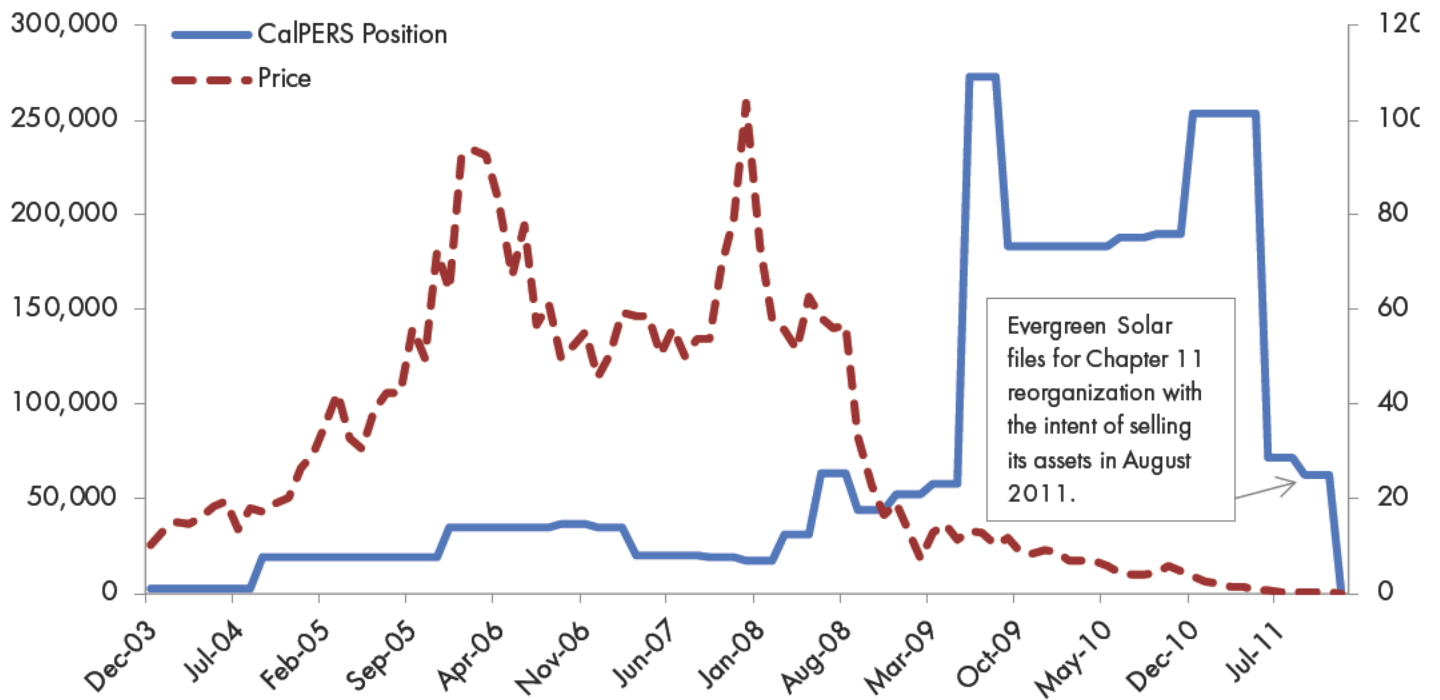
Source: Factset

EVERGREEN SOLAR

Evergreen Solar was a “fully integrated manufacturer of solar panels producing wafers, cells and panels,” emerging as the third-largest manufacturer of solar panels in the United States. This effort was aided by at least \$43 million in assistance from the government of Massachusetts. By the end of 2007, the company traded north of \$100 per share.²⁶

In just 14 months, the solar manufacturer fell 93 percent as a result of the Great Recession, rise of global competition and plunging solar prices. Once again, CalPERS bet big on solar despite the market glut, and increased its position by 421 percent. The pension fund held the majority of its investment until August 2011, when Evergreen Solar filed Chapter 11 reorganization with the intent to ultimately move production to China.²⁷

Chart 3: Evergreen Solar



Source: Factset

JINKO SOLAR

Jinko Solar was founded in 2006 in China as a developer/manufacturer of “clean” solar products such as wafers, cells and modules. In September 2011, the company faced controversy, with China Daily news reporting:

“More than 500 people from Hongxiao Village started to gather in front of the factory of Zhejiang Jinko Solar Co, Ltd located in the city of Haining on Thursday night, demanding explanation on the death of a large swath of fish in a nearby river last month, local officials said.

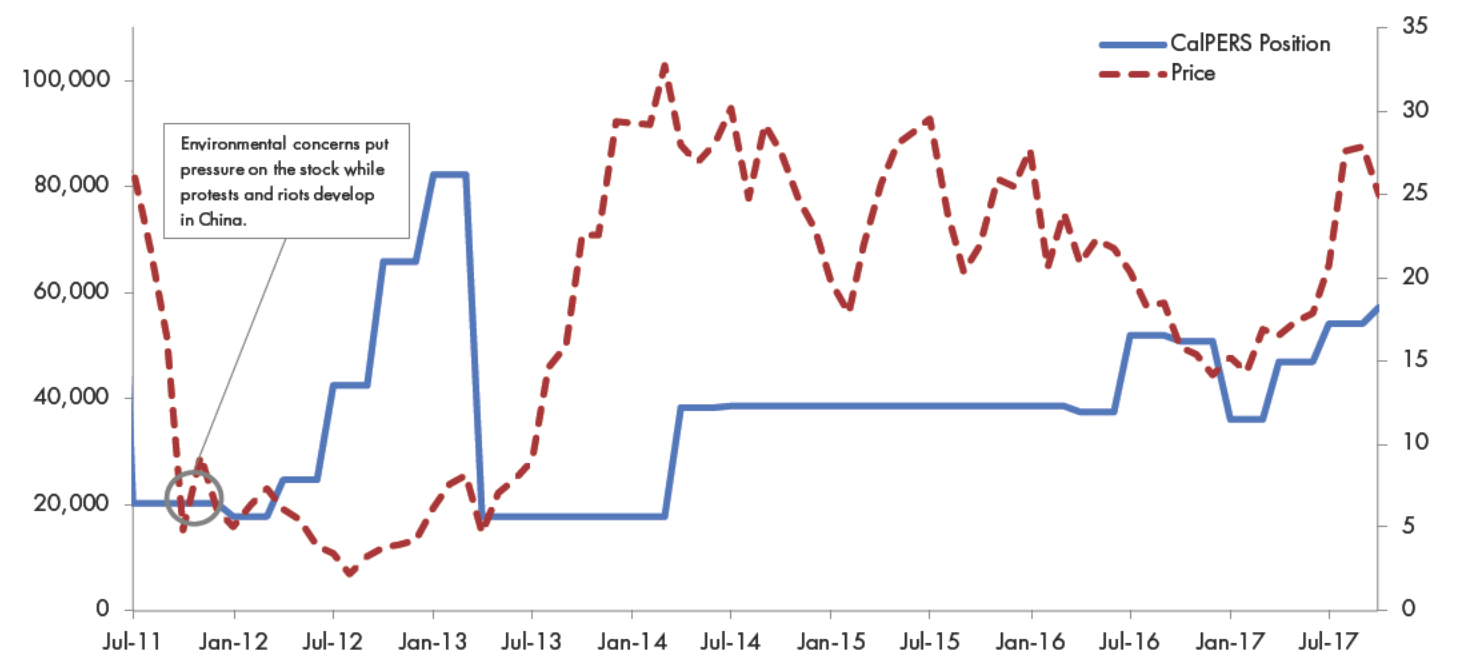
Angry protesters on Thursday stormed the factory compound, overturned eight company vehicles, and destroyed the offices before police came to disperse the crowd.

Chen Hongming, a deputy head of Haining’s environmental protection bureau, said the factory’s waste disposal had failed the pollution tests since April.”²⁸

Also in 2011, the CalPERS board approved the integration of ESG issues as a “strategic priority across CalPERS portfolio.”²⁹ The adoption of such principles did not impact the board’s approval of investing in a company in the thick of environmental controversy, however, as CalPERS quadrupled its investment in Jinko in the months following the protests.

CalPERS then sold the majority of its stake right before the stock popped, then built its position back at elevated levels.

Chart 4: Jinko Solar



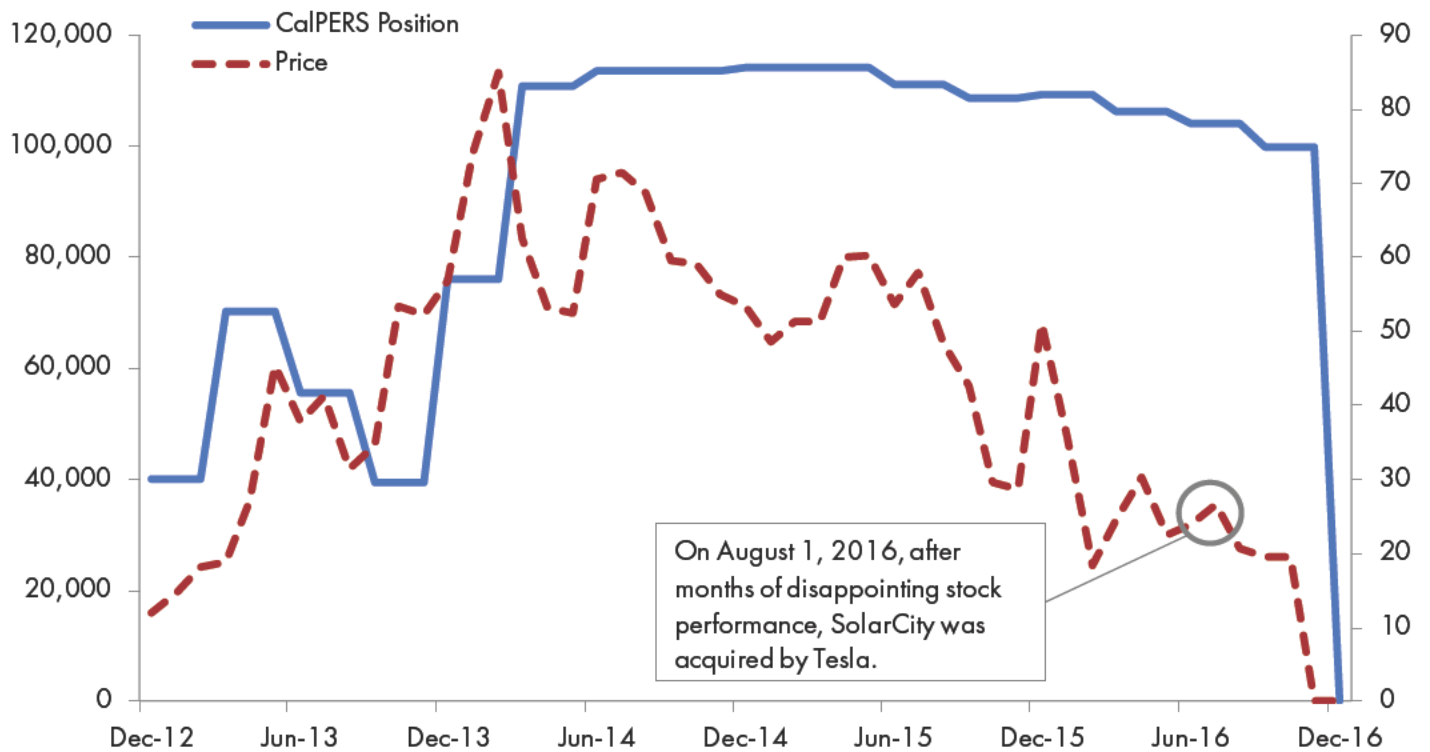
Source: Factset

SOLARCITY

SolarCity is perhaps the best example of a renewable or “clean” energy company that traded off speculation and anticipation rather than economics. In the first quarter of 2016, SolarCity had long-term debt of roughly \$5 billion (a debt to equity ratio of 278), negative EBITDA of \$507 million and a net loss of 15 cents on every dollar of revenue.³⁰

That did not stop CalPERS from buying into the prospect of owning a popular stock. As SolarCity’s stock rose, CalPERS continued to increase its position. The board ignored the financial results of the struggling company and rode the stock as it plummeted to nearly 25 percent from what it was at its peak before the Tesla acquisition.

Chart 5: SolarCity



Source: Factset

3. 2017 PROXY SEASON REVIEW

Shareholder activism may not have increased during the recently finished proxy season – in fact the number of environmental-related proposals submitted to the 250 largest publicly traded companies fell to 54 from 2015's highpoint of 60.³¹ But the impact of those proposals was much more significant than in years' past, as institutional investors such as BlackRock and Vanguard for the first time sided with long-time activism-over-performance funds such as CalPERS.³²

J.P. Morgan described the number of activist campaigns launched during the season as "relatively flat," while warning "this should not be viewed as a sign of the demise of shareholder activism."³³ Indeed both the investment banker's proxy recap and the Manhattan Institute's Proxy Monitor noted two key takeaway trends from the season: increased activism among institutional investors and greater focus on ESG issues.

Both trends had an impact and there are indications of more in coming years. Financial services provider Ipreo reported that "average support for environmental-focused shareholder proposals at S&P 500 companies jumped from 20.1 percent in 2016 to 29.7 percent in 2017."³⁴ Such bids were the most common form of activism this season, making up 20 percent of all shareholder proposals.³⁵ And for the first time since the Manhattan Institute's Proxy Monitor began tracking the trend, environmental-related proposals received a majority of shareholder votes. Three times, in fact.

TWO-DEGREE SCENARIO ("2DS")

The substance of the proposals themselves had not changed since the year before, when 2DS-related resolutions received less than the majority required. The proposals asked the companies to assess "the long-term portfolio impacts of technological advances and global climate change policies" that seek to limit the increase in average global temperatures to two-degrees Celsius.

Also unchanged were the activist investors that put forth the proposals: CalPERS and the New York State Common Retirement Fund were again at the head of the pack. The change came in the ranks of large institutional investors that sided with the activists. BlackRock, who was paid millions of dollars by CalPERS in 2017 for technology and investment related fees, supported a CalPERS-sponsored proposal at a company where the New York investment giant is the largest shareholder.³⁶ This marked the first time that BlackRock backed a

climate-related shareholder proposal.

BlackRock appeared to be reacting to pressure from smaller longer-term investors who, led by Walden Asset Management and the Center for Community Change, asked the world's largest money manager to declare a strong position on climate risk and other ESG issues.³⁷ BlackRock did just that.

Twice in 2017 the firm sided with CalPERS on 2DS votes, saying investors could not ignore the "swelling

"We are filing proposals and winning high votes following major proxy solicitation efforts across major markets."

– CalPERS Chief Investment Officer Ted Eliopoulos

tide of climate-related regulations and technological disruption."³⁸ BlackRock explained its votes as a matter of "engagement" with companies. "We don't decide how to vote based solely on our views on the issue under consideration. Our vote reflects our assessment of the company's response to our engagement in light of the long-term financial impact," the company told the Financial Times.³⁹

The votes followed the release of a report by the BlackRock Investment Institute that concluded: "We believe all investors should incorporate climate change awareness into their investment processes."⁴⁰

PARADIGM SHIFT

This shift to activism among big investment funds – Vanguard and State Street followed BlackRock's lead – was notable in its impact this past proxy season and could portend a common theme in future seasons. The Manhattan Institute's Proxy Monitor noted "significant evidence" of institutional investors bowing to activist pressure that "may augur a paradigm shift in the shareholder-engagement process."⁴¹

Meanwhile, activists such as CalPERS show no sign of changing strategies. The largest U.S. public pension system's actions on the three climate proposals were among 17 similar proxy solicitations it ran this past season, up from 12 the year before. "Climate change engagement is bearing fruit," CalPERS Chief Investment Officer Ted Eliopoulos said in March. "We are filing

proposals and winning high votes following major proxy solicitation efforts across major markets.”⁴²

If such engagement was indeed bearing fruit at CalPERS – which for decades has embraced an ESG-infused agenda in its investments – the results were not translating into wins for its pensioners or the taxpayers who bear the burden for covering shortfalls caused by poor management of the pension fund’s \$298 billion in assets. Instead, the use of these funds to advance an environmental agenda has plunged the system and California into a building financial crisis.

4. RESULTS CONSISTENTLY BELOW TARGETS, PEERS

During this time of increased ESG investing and activism, the fund's performance has suffered, converting a \$3 billion pension surplus to nearly \$140 billion deficit over the past ten years.⁴³ CalPERS's primary fund, the California Public Employees' Retirement fund (PERF), was just 68.3 percent funded as of June 30, 2016, down 4.8 percentage points from the previous year. The decrease can be attributed to the Board's recent need to utilize a more realistic return rate than in previous years, but still well above their recent historical returns.⁴⁴

Over the past decade, CalPERS returned 4.4 percent

During the same time period, the overall funding ratio fluctuated between 60.8 percent (2009) and 101.2 percent (2007), with the average at 74.7 percent. In 2007, PERF had a funding surplus of nearly \$3 billion.

The unfunded liability takes the Actuarial Accrued Liability (AAL), which is the projected value of member benefits, and subtracts it from the current market value of all holdings. The table below shows how funding liability has trended since 2007 (note: the "actuarial date" is on a one-year year lag, so 06/30/2016 figure is displayed in the 2017 annual report).⁴⁷

Table 2: Actuarial Accrued Liability (AAL)

Actuarial Valuation Date	Actuarial Accrued Liability	Market Value of Assets	Unfunded Liability
06/30/2016	\$436.7 billion	\$298.1 billion	\$138.6 billion
06/30/2015	\$413.7 billion	\$302.4 billion	\$111.3 billion
06/30/2014	\$394.7 billion	\$301.3 billion	\$93.5 billion
06/30/2013	\$375.0 billion	\$261.6 billion	\$113.4 billion
06/30/2012	\$340.4 billion	\$236.8 billion	\$103.6 billion
06/30/2011	\$328.6 billion	\$241.7 billion	\$86.8 billion
06/30/2010	\$308.3 billion	\$201.6 billion	\$106.7 billion
06/30/2009	\$294.0 billion	\$178.9 billion	\$115.2 billion
06/30/2008	\$268.3 billion	\$238.0 billion	\$30.3 billion
06/30/2007	\$248.2 billion	\$251.2 billion	(\$2.9) billion

Source: 2016-17 Comprehensive Financial Annual Report, Page 128

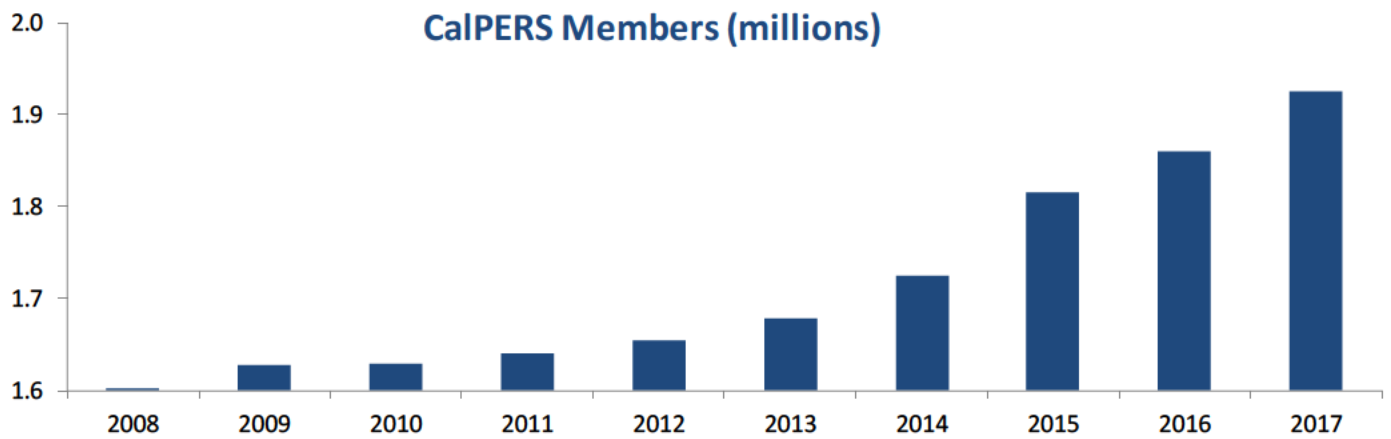
significantly below its expected rate of 7.0 percent (which was recently reduced from 7.5 percent). During this time, the pension has returned below 2.5 percent annually on 5 separate occasions: 0.6 percent in 2016, 2.4 percent in 2015, 0.1 percent in 2012, -24.0 percent in 2009 and -5.1 percent in 2008. Compare that to the Russell 3000 and S&P 500, which have only hit a mark that low **twice** during the same period.⁴⁵

UNDERFUNDED LIABILITIES

According to the 2017 annual report, unfunded liabilities in the PERF fund grew \$27.3 billion year-over-year to \$138.6 billion.⁴⁶ Between 2009 and 2016, the average unfunded liability stood at \$108.6 billion.

There are two points worth noting in the above exhibit. First, the Recession had a clear and significant impact on the market value of the assets managed by CalPERS. From 2007 to 2009, the unfunded liability grew by \$118.1 billion. Second, the unfunded liability gap continues to grow at a steady pace as the number of pensioners becoming eligible to draw from the fund increases. The chart on the next page shows the steep upward trajectory of fund membership – a trend that will continue to exacerbate the fund's underlying problems.⁴⁸

From 2008 to 2017, total membership climbed 20.2 percent, from 1.60 billion to 1.92 billion members. At the same time, benefit payments jumped 94.5 percent

Chart 6: CalPERS Members

Source: 2016-17 Comprehensive Financial Annual Report, Page 128

from \$10.9 billion to \$21.2 billion.⁴⁹ With benefit payments growing at a significantly higher rate than member growth, higher member contributions or investment income must make up the difference. If both of these fail, the CalPERS board must turn to taxpayers and the state to close the gap.

Total member contributions increased by just 20 percent during the same period, from \$3.5 billion to \$4.2 billion, while investment income averaged just \$11.6 billion per year.⁵⁰ Both of these figures combined fall well short of the \$21.2 billion (and increasing) benefit payout that the pension fund must account for as fiduciaries.

SOLVENCY TEST

In the 2017 annual report, CalPERS states a solvency test for their own pension fund and metrics it should achieve. The pension fund notes that in a short-term solvency test, the plan's present assets (investments and cash) are compared with 1) member contributions on deposit, 2) the liabilities for future benefits to persons who have retired or terminated, and 3) the liabilities for projected benefits for service already rendered by active members.

CalPERS purports that the fund has effectively utilized "level contribution rate financing," which should allow present assets (except in rare circumstances) to fully cover the liabilities for members' contributions on deposit (liability 1) and the liabilities for future benefits

Table 3: Solvency Test Table

Valuation Date	Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Valuation Assets		
		(1)	(2)	(3)
06/30/2016	\$298.1 billion	100.0%	95.3%	0.0%
06/30/2015	\$302.4 billion	100.0%	100.0%	7.4%
06/30/2014	\$301.3 billion	100.0%	100.0%	20.3%
06/30/2013	\$281.9 billion	100.0%	100.0%	25.5%
06/30/2012	\$283.0 billion	100.0%	100.0%	45.0%
06/30/2011	\$271.4 billion	100.0%	100.0%	46.7%
06/30/2010	\$257.1 billion	100.0%	100.0%	52.3%
06/30/2009	\$245.0 billion	100.0%	100.0%	54.6%
06/30/2008	\$233.3 billion	100.0%	100.0%	64.2%
06/30/2007	\$216.5 billion	100.0%	100.0%	65.2%

2016-17 Comprehensive Financial Annual Report, Page 129-30

to present retirees (liability 2). Fiscal year 2017 marks one of those rare circumstances as CalPERS, for the first time in over a decade, is not only underfunded by over \$138 billion, but also does not have enough money (in terms of member contributions on deposit and assets) to pay its current level of persons who have either retired or been terminated. Additionally, the fund now has 0 percent available for current employees who may retire in the future. A detailed breakout can be found above in Table 3.

BENCHMARKING

Benchmarking the historical performance of a pension fund has its complications. The CalPERS board and investment committee must hedge against the risk and volatility associated with the stock market by allocating investments to short and long-term bonds. By doing so, the fund's managers are attempting to balance risk and reward to provide adequate funding for its current and future beneficiaries. Given this, the most appropriate benchmarks that can be used to evaluate the performance of current and past CalPERS board members are:

Asset Allocation Policy Index. The primary PERF fund had a market value of \$298 billion as of June 30, 2016, or nearly all assets under CalPERS management. Internally, the board and investment committee use the Asset Allocation Policy Index to benchmark returns within this fund.⁵¹ The index equals the return for each asset class benchmark, weighted at the current asset allocation. Put simply, this is the return the fund should have, given optimal allocation.

Wilshire Consulting. Wilshire Consulting, paid by CalPERS to be the fund's general investment consultant, told the CalPERS investment committee that it estimates the system's annualized investment return over the next decade will be 6.2 percent.⁵²

Stated pension targets. For years, CalPERS has aimed at returns of greater than 7.5 percent. After internal discussions and consulting with Wilshire, the board in December 2016 reduced its target return to 7 percent, still higher than the 6.2 percent that the consultant estimated was realistic.⁵³

Other Public Pension Funds. How do returns compare with other public pension funds? After comparing CalPERS returns with 117 public pensions with the same fiscal year end, CalPERS was the clear laggard (using 2007-2016 time period since not all public pensions have reported FY2017).⁵⁴

From 2007-2016, CalPERS' average annual return was just 5.1%, 50 basis points ("bps") below the average of all 117 public pensions. Analysis shows that after applying an additional 50 bps to annual returns over the same time period, the market value of the PERF fund would be \$13.5 billion higher than its reported June 30, 2015 level.⁵⁵

THE DISCOUNT RATE

Actuaries use the term "discount rate" to describe the figure applied to future fund liabilities to discount back to present value. This is the rate at which you can conservatively expect your total to grow moving forward in order to properly identify the value of future liabilities. Because of the volatility that persists

"The gap grows over time. If we return less than 7.5% along this path, it gets wider sooner."

— CalPERS Chief Investment Officer Ted Eliopoulos

in the market, corporate pension funds typically peg their discount rate to risk-free investments such as US Treasuries. The argument can be made that CalPERS, along with many other public pensions in the U.S., mislead their communities by using a discount rate significantly higher than the rate at which they can conservatively expect to grow moving forward.⁵⁶

According to a study by Milliman, the average discount rate across the 100 largest corporate pension plans fell 30 basis points to 3.99 percent for the FY2016.⁵⁷ Compare this to CalPERS, which until December 2016 maintained a discount rate of 7.5 percent, well above the Wilshire estimate.

Maintaining a higher discount rate is viewed as a way for elected politicians to avoid raising taxes or taking other steps to meet pensioners' obligations.⁵⁸ A lower discount rate requires cities to pay more each year into the pension fund to keep it solvent. Once the discount rate is reduced, it requires cities, towns and other municipal entities in the CalPERS system to pay more money to cover their employees. Further, an additional argument can be made that maintaining an elevated discount rate (and therefore underestimating your future liabilities) reduces the urgency for decisionmakers to focus on returns, while sheltering those individuals from the scrutiny of taxpayers that a much larger unfunded number would cause.

Illinois Gov. Bruce Rauner's administration in 2016 summed up such a move when describing his state's Teachers' Retirement System: "If the board were to approve a lower assumed rate of return taxpayers will be automatically and immediately on the hook for potentially hundreds of millions of dollars in higher taxes or reduced services."⁵⁹ This is precisely the scenario that is playing out in California.

DRIVING THE TARGET LOWER

In 2012, CalPERS cut the long-term investment target from 7.75 percent to 7.5 percent, as returns continued to lag beneficiary obligations – causing the funding gap to steadily expand. Four years later, despite operating in a broader market that had risen 54 percent, CalPERS Chief Investment Officer Ted Eliopoulos warned of further widening, stating: "The gap grows over time. If we return less than 7.5% along this path, it gets wider sooner."⁶⁰ Just three months following these remarks, the CalPERS board voted to lower the discount rate from 7.5 percent to 7.0 percent by 2020.

"Lowering the discount rate, also known as the assumed rate of return, means employers that contract with CalPERS to administer their pension plans will see increases in their normal costs and unfunded actuarial liabilities," CalPERS said in announcing the cut, "Active members hired after January 1, 2013, under the Public Employees' Pension Reform Act will also see their contribution rates rise."

Table 4: Target Allocations

	Target Allocation						
	2007	2008	2009	2010	2011	2012	2017
Cash Equivalents	0.0%	0.0%	0.0%	2.0%	2.0%	4.0%	1.0%
Global Debt Securities	26.0%	19.0%	19.0%	22.5%	21.0%	17.0%	20.0%
Equity	66.0%	66.0%	66.0%	62.0%	63.0%	64.0%	61.0%
Domestic	40.0%	28.0%	28.0%	-	-	-	-
International	20.0%	28.0%	28.0%	-	-	-	-
Global	-	-	-	49.0%	49.0%	50.0%	51.0%
Alternative/PE	6.0%	10.0%	10.0%	13.0%	14.0%	14.0%	10.0%
Real Estate	8.0%	10.0%	10.0%	10.0%	10.0%	11.0%	12.0%
Inflation Links	0.0%	5.0%	5.0%	3.5%	4.0%	4.0%	6.0%
Fixed Income	26.0%	24.0%	24.0%	28.0%	27.0%	25.0%	27.0%
Equity	66.0%	66.0%	66.0%	62.0%	63.0%	64.0%	61.0%
Real Estate	8.0%	10.0%	10.0%	10.0%	10.0%	11.0%	12.0%

Source: 2016-17 Comprehensive Financial Annual Report, Page 108, 2011-12 Comprehensive Financial Annual Report, Page 104, 2009-10 Comprehensive Financial Annual Report, Page 92, 2007-08 Comprehensive Financial Annual Report, Page 88

Such a move reflects a large change in expected liabilities. The 2016 CalPERS annual report noted a funding ratio of 73.1 percent using a 7.5 percent discount rate, with \$302 billion in assets under management, implies actuarial liabilities of \$414 billion. However, according to the CalPERS press release announcing preliminary results for 2017, "the funded status of the overall CalPERS fund is an estimated 68 percent, an **increase** of 3 percentage points from the previous fiscal year. This estimate is based on a 7 percent discount rate." When it was released, the 2017 annual report disclosed a 68.3 percent status number.⁶¹

Given the June 30, 2015 market value of \$302 billion, this would imply that instead of \$414 billion in liabilities, the fund truly had \$465 billion (using 65 percent and a 7 percent discount rate as noted in the preliminary results press release), a \$51 billion difference.

SHIFTING ALLOCATIONS

As CalPERS's funding liability continued to expand over time, annual reports show that the portfolio's target allocations shifted in response. Above is a look at the stated target allocation leading up to and including the financial crisis (2007-2009), the years following (2010-2012) and again in 2017.

In September 2013, the CalPERS board adopted a set of ten "Investment Beliefs" intended to provide a basis for strategic management of the investment portfolio,

and to inform organizational priorities. Belief No. 1 states: *"Liabilities must influence the asset structure,"* followed by the sub-point, *"Ensuring the ability to pay promised benefits by maintaining an adequate funding status is the primary measure of success for CalPERS."*

As indicated in Table 4, when liabilities grew between 2007 and 2010, CalPERS decided to sell 11 percent of its equity holdings (likely near historic lows), in favor of high-fee private equity funds and inflation-linked securities. Unfortunately CalPERS lowered its exposure to equities at a time of market rally and increased its exposure to debt at a time of historically low yields.

BUSINESS WITH BLACKROCK

Private equity now accounts for \$25 billion of the CalPERS portfolio, attracting interest from BlackRock leadership to manage those investments as part of what Bloomberg News called the firm's push to "expand its more lucrative alternatives business to increase fee revenue and meet client demand for investments that aren't closely correlated to the stock and bond markets."⁶²

News surfaced in September that CalPERS was having discussions with BlackRock about outsourcing some or all of the system's private equity holdings to the investment manager.⁶³ The news came two months after Mark Wiseman, chair of BlackRock's alternatives business unit and global head of active equities, spoke to the CalPERS board during a panel discussion of management models.⁶⁴

BlackRock managed CalPERS's \$1 billion apartment complex real estate portfolio from 1998 until 2010, when the pension system fired the firm in the wake of a \$500 million write down connected to a BlackRock-guided Manhattan property investment.⁶⁵

If the company teams up with the pension system on private equities, it could reunite at least two CalPERS staff members with their former employer BlackRock.⁶⁶

5. CITIES, TAXPAYERS LEFT PAYING THE BILL

CalPERS's poor performance, unfunded liabilities and risky choices in the ESG space means that the fund must rely more heavily on employer contributions to keep it afloat.

In this case, those employers are municipalities and the state – taxpayers who must bear a growing burden to make up the difference between the fund's current income and expected future liabilities. Over the past ten years, the contribution to the fund from California taxpayers has risen from \$7.2 billion to \$12.3 billion a year.⁶⁷

And those extra (forced) contributions are starting to have real-world impacts on communities' ability to provide basic services to their residents. "We cannot afford to lose funding for law enforcement officers in exchange for a socially responsible investment policy," Lt. Jim Auck of the Corona Police Officers Association told the CalPERS board in May.⁶⁸

The burden will likely grow, according to a recent Stanford Institute for Economic Policy Research report.⁶⁹ And the impact on communities will only get worse, according to the study's author, Joe Nation.

"Pension costs have crowded out and will likely to continue to crowd out resources needed for public assistance, welfare, recreation and libraries, health, public works, other social services, and in some cases, public safety," said Nation, a former Democratic state assemblyman.⁷⁰

City officials all across California – from Oroville to Lodi, in Hayward, Laguna Hills, Escondido and Sacramento – are desperately searching for ways to keep police stations staffed and libraries open in the face of mounting pension payments.

"We don't know how we're going to operate," said Ruth Wright, Oroville's finance director. "We've been saying the bankruptcy word."⁷¹

Lodi's annual pension contribution is set to more than double, from \$6 million to \$13 million.

"That's our library, parks and recreation department, a police beat and a fire station," said City Manager Steve Schwabauer.⁷²

Escondido officials outsourced the city's library services.⁷³ Oroville laid off a third of its workers and cut police salaries by 10 percent.⁷⁴ Without additional revenues, Sacramento could be forced to cut 25 percent

"We cannot afford to lose funding for law enforcement officers in exchange for a socially responsible investment policy."

– Lt. Jim Auck of the Corona Police Officers Association

of fire and police services, Nation predicts.

"It's not sustainable," said Sacramento finance director Leyne Milstein. "These costs are going to make things incredibly challenging."⁷⁵

Many community leaders are pointing fingers directly at CalPERS.

"The returns on (CalPERS) investments have been embarrassingly small. It seems like they're horribly off the mark on managing the retirement funds," Sacramento Councilman Steve Hansen told the Sacramento News & Review after CalPERS told officials there to expect a three-tiered rate hike over the next eight years. "If they don't start to get better returns, it's going to be calamitous."⁷⁶

Local leaders face a choice between maintaining critical community services and risking the financial futures of retirees.

When Loyalton defaulted on payments to the pension fund and pulled out of CalPERS, the city's former water and sewer system administrator saw his pension cut by 60 percent.⁷⁷

"I'm scared to do anything. I'm scared to spend much money," retiree John Cussins told the Los Angeles Times. "I guess worst comes to worst, we'd even have to sell our property and try to go to some low-income housing deal."

"The returns on (CalPERS) investments have been embarrassingly small. It seems like they're horribly off the mark on managing the retirement funds."

– Sacramento Councilman Steve Hansen

6. ESG INVESTING FOR THEE – BUT NOT FOR ME

As CalPERS continues to defend its focus on environmental investing – adding to a statewide pension and municipal budget crisis – it's worth looking at whether top pension board officials practice what they preach: Do they personally invest in the kinds of E-portfolio funds or "clean" energy/technology equities favored by the fund they manage?

Theodore Eliopoulos, Chief Investment Officer, reported a personal portfolio of 28 investments, including exposure to the railway, oil & gas and pharmaceutical sectors. Mr. Eliopoulos reported no economic interest in any funds with exposure to renewable/clean energy.

Bill Slaton, Investment Committee Vice Chair, reported a personal portfolio of 41 investments, including significant exposure to the industrial, manufacturing and oil & gas sectors. Mr. Slaton reported no economic interest in any funds with exposure to renewable/clean energy.

Anne Simpson, Investment Director, Sustainability, reported a personal portfolio of one equity holding, Standard Life, an insurance company in the United Kingdom. She has not disclosed any ESG-focused funds dating back to 2014 (when disclosures began).

The answer is clear. Based on review of California's Form 700 Statement of Economic Interest for all board members and senior investment officer, it was discovered that **none** had any personal capital allocated to any environment-focused funds or equities.⁷⁸

CalPERS spent more than \$1 billion on fees to investment advisors, hedge funds and private equity in 2017. These three people had access to \$1 billion worth of investment advice and chose to steer clear of the type of investments they direct pensioners' money into.

Table 5: Personal Investments

Theodore Eliopoulos, CIO, List of holdings:

AT&T (Communications)	iShares MSCI Hong Kong (ETF)	Liberty Broadband Corp A (Communications)
Audi (Auto)	iShares Tips (ETF)	Liberty Broadband Corp C (Communications)
Coca Cola (Beverage)	Koninkl jke Philips (Technology)	Lions Gate Entertainment B (Entertainment)
CSX (Railway)	Liberty Inter Co Ventures Series A (Communications)	Medtronic (Medical Technology)
Discovery Comm Ser C (Communications)	Liberty Interactive Co Inter A (Communications)	Merck (Pharma)
Discovery Comm Sera (Communications)	Liberty Global A (Communications)	Morgan Stanley China (ETF)
ETFC (Technology)	Liberty Global C (Communications)	Qualcomm (Communications)
Express Scripts (Pharma)	Liberty Interactive A (Technology)	Wisdom Tree Dreyfus (ETF)
HollyFrontier Corp (Energy)	Liberty Media Sirius (Technology)	
iShares (ETF)	Liberty Media Sirius A (Technology)	

Bill Slaton, Investment Committee Vice Chair, List of holdings:

3M (Industrial)	ePlus, Inc. (Technology)	Nordstrom (Clothing)
Alcoa (Manufacturing)	Equifax (Credit Info)	PC-Tel (Telecom)
Aflac (Insurance)	Exxon (Energy)	Pepsico (Beverage)
American Water (Water Services)	Frontier Communications (Communications)	Predicta (Brand Management)
Air Products & Chemicals (Industrial)	Fusion Real Estate Network (Real Estate Training)	Shalako Investors (Land Partnership)
Anheuser Busch (Beverage)	Home Depot (Construction Products)	Shinnecock Partners (Alternative Lending)
Archer Daniels (Food Products)	IBM (Technology)	Socotra Fund LLC (Real Estate Lending)
AT&T (Communications)	International Paper (Paper Products)	Strategic Options Group, LLC (Hedge Fund)
Broadstone Racquet Club Investors (Health Club)	Illinois Tool Works (Industrial Products)	Union Pacific (Transportation)
Caterpillar (Equipment)	Intel (Technology)	Verizon (Communications)
Centurylink (Communications)	John Deere (Equipment)	Vodaphone (Communications)
Connect and Sell (Sales Assistance)	Johnson & Johnson (Consumer)	Yum! Brands (Restaurants)
Country Oaks Racquet Club (Health Club)	Kraft Foods (Food Products)	
EDH Fitness (Health Club)	Neroly Sports Club Investors (Health Club)	
EDPO, LLC (LP for acquiring propane companies)		

7. ACTIONABLE RECOMMENDATIONS

RECOMMENDATION #1

State and municipal pension funds should be required to conform to the same “discount rate” guidelines/principles that apply to public company pensions.

The annual Milliman Corporate Pension Funding Study reviews financial disclosures of the 100 largest corporate defined benefit (DB) pension plan sponsors. As of the 2017 report, corporate pension plans finished 2016 with \$1.4 trillion in assets and projected benefit obligations (PBO) of \$1.7 trillion, resulting in a funded ratio of 81.2 percent. The median discount rate used to estimate long-term obligations was just 3.99 percent.

Take for example GE, whose discount rate on projected benefit obligations was 4.1 percent in 2016, yet had an expected rate of return of 7.5 percent. Within their financial disclosures, the company states, “Projected benefit obligations are measured as the present value of expected payments. We discount those cash payments using the weighted average of market-observed yields for high-quality fixed-income securities with maturities that correspond to the payment of benefits.”

Another example is Lockheed Martin, whose discount rate was also 4.1 percent for the year. Regarding establishing a discount rate, Lockheed Martin reports, “As part of our evaluation, we calculate the approximate average yields on corporate bonds rated AA or better selected to match our projected postretirement benefit plan cash flow.” Like GE, Lockheed also had an expected long-term rate of return of 7.5 percent.

The argument can be made that by lowering the discount rate, and thus increasing the estimated liabilities, funds are more incentivized to “keep their eye on the ball” and focus on the funding status and returns of the pension portfolio. Over the last ten years, CalPERS has returned below 2.5 percent annually on five separate occasions, whereas corporate pension funds – as identified by the Milliman Corporate Pension Funding Study – has only hit a mark that low just twice. In fact, corporate pensions have returned in excess of 9.9 percent in six of the last ten years.⁷⁹

CalPERS recently went on the defense after multiple Op-Ed’s were released attacking the fund’s discount rate, saying: “CalPERS pays pensions for decades to come. Our Investment Office and actuaries must take into account carefully considered projections 10 years ...

and beyond. In fact, the new investment portfolios and asset allocation mix the CalPERS Board is considering, looks at returns over the next 60 years.”⁸⁰ However, this ignores a critical component of the discount rate puzzle:

- The expected rate of return and discount rate are not synonymous in the world of finance. The discount rate, by practice, is the rate at which you can conservatively expect to grow, which is why the private sector, including GE, Lockheed Martin and many others, separate these line items and peg their discount rate to high-quality fixed income securities like AA bonds. CalPERS is ignoring best practice in order to mask the true level of underfunding.

RECOMMENDATION #2

Public pension funds should have a non-political, outsourced fund manager whose sole guiding principle would be to increase the value of the fund while protecting California taxpayers.

The lack of investing experience on the CalPERS Board is well documented. The current Board consists of 13 individuals, none of which have professional portfolio management experience. As a result, poor investment decisions and lagging returns have reduced the funding ratio below 70 percent, as pension liabilities surge beyond \$138 billion. If and when this issue worsens, the repercussions will not only directly impact the beneficiaries, but also municipalities and state taxpayers as well. One actionable item that would help “stop the bleeding” would be to outsource its investment management responsibilities whose sole guiding principle would be to increase the value of the fund and protect California taxpayers.

In 2012, Daron Pearce, Head of Investment Manager Services for EMEA and Asia-Pacific at BNY Mellon Asset Servicing, warned that increased disclosures and transparency will push pension funds to outsource its investment management responsibilities. “There is an inexorable drive for greater transparency through regulation – MiFID II, Solvency II – and that will permeate through to the pension funds. And the more they have to deliver granular and transparent reporting, the more likely it is that outsourcing will gain some momentum.”⁸¹

Five years later, there have been a handful of large

corporations outsourcing their investment management responsibilities. Recent examples include American Airlines, General Motors and Owens-Illinois. In July 2017, General Electric followed suit by selling GE Asset Management - which oversaw defined benefit and pension plans - to State Street Global in a deal valued at \$485 million. The Company deposited the net proceeds from the sale into its pension trust. Upon the close of the deal, State Street assumed responsibility for managing the assets of GE's primary benefit plans currently managed by GEAM, including the GE pension plan (~\$46 billion).⁸²

At what point does this momentum carry over into public pensions?

RECOMMENDATION #3

Public pension funds should insist that its outside money managers (e.g. BlackRock, State Street, Vanguard) only vote for proposals that add material value to the holding.

The overriding objective of large, passive funds such as those managed by firms such as BlackRock and Vanguard is to mirror the performance of an index - not actually do better than it. In that way, these funds generally lack the incentive to closely track the thousands of companies in which it has an interest. The bottom-line reality here is that, irrespective of how these companies are run or perform, BlackRock and Vanguard **are required to own them** if the companies in question are part of the particular index that the funds are trying to match.

Notwithstanding this fact, activism on the part of BlackRock, Vanguard and other passive-fund managers continues to rise. And because of their size and influence (88 percent of S&P 500 firms count BlackRock, Vanguard or State Street as their largest shareholder), having just one of the so-called "Big Three" vote in support of a shareholder proposal can be the dispositive factor in allowing such a resolution to pass.

As retail investors continue to shift more of their money toward passive investing, the people who manage those passive and institutional funds will continue to see their power and influence grow as well - providing them with outsize ability to determine the outcome of any given shareholder proposal under consideration. But passive funds aren't set up to serve that function: they're certainly not regulated that way, and the

current incentive structure is such that very little time or resources tend to be devoted to closely studying the various proposals on which these funds' routinely vote.

Whether big public pension funds like CalPERS decide to outsource these shareholder proposal voting responsibilities or keep the function in-house (or some combination of both), they should insist that their outside money managers (such as BlackRock and Vanguard) only vote for shareholder proposals that are directly linked to improving the performance of the company being targeted.

CalPERS, BlackRock, Vanguard and others should also be forthright in regularly reporting back to their retail investors on how they voted, and why - as well as providing quantitative evidence that these votes and proposals are likely to positively influence the performance of the affected company. As well, a mechanism should be installed whereby retail investors in these large, passive funds have the ability to challenge the voting decisions made by fund management. CalPERS's beneficiaries should be given similar power and authority. After all, it's their money on which these votes are ultimately being cast.

RECOMMENDATION #4

State taxpayers, pension beneficiaries and municipalities need to pressure the Board to stay true to its word. Inherent in becoming the de facto spokesman for socially responsible investing, CalPERS has effectively reduced its guiding principle from "ensuring the ability to pay promised benefits... **is the primary measure of success**" to simply "ensuring the ability to pay promised benefits is a measure of success."

This proxy season, like last proxy season, CalPERS will vote in favor of proposals that could negatively impact its own holdings. Not only does this directly contradict the fund's guiding investment principle, but it also seems to contradict the CalPERS proxy voting guidelines: "CalPERS implements its proxy voting responsibility in a manner that is consistent with these Principles unless such action may result in long-term harm to the company that outweighs all reasonably likely long-term benefit; **or unless such a vote is contrary to the interests of the beneficiaries of the System.**"

It is hard to believe that the decision to vote in a way that negatively impacts the overall return of the fund is not "contrary to the interests of the beneficiaries of the system."

8. CONCLUSION

CalPERS continues to mislead taxpayers and pensioners to the true underperformance and underfunded nature of the fund by using an artificially high discount rate. Despite the inability to effectively act in a fiduciary capacity, the fund continues to make ill-advised decisions including:

- Increasing member distributions without the requisite support of exceptional performance – all to the detriment of taxpayers who must cover the deficient;
- Concentrating their efforts on filing proposals that damage the very companies they invest in rather than working with those companies to improve performance, driving pension returns higher; and
- Refusing to allow investment, or even financial, professionals run the largest public pension fund in the United States.

In addition, CalPERS' consistent underperformance over the past decade can be linked to the continued prioritization of politically motivated investment decisions, rather than the consideration of investments that could more adequately provide returns to pensioners. Though the fund managers themselves don't invest their own money in such a way, they feel compelled to take the lead on ESG investments. This seemingly represents more of their political beliefs than their fiduciary duty to stabilize the fund.

Individual investors have every right to invest in assets, ventures or enterprises that align with causes and issues they deem worthy and important – irrespective of expectations on returns or long-term performance. After all, it's their money. But large, public funds like CalPERS should be held to a different standard, and be expected to execute an investment strategy that prioritizes stable, long-term performance for beneficiaries who expect and need these resources to be available to support their retirement.

To make matters worse for the average investor, CalPERS has begun to pressure large institutional money managers and proxy advisor firms to vote and advise in ways that align with its own controversial position. Given the size of the CalPERS fund, this pressure has been effective given that it doles out billions of dollars in annual fees to large institutional investors like BlackRock, in addition to proxy advisory firms (ISS and Glass, Lewis) and other business transactions (CalPERS runs billions of dollars per year through BlackRock managed funds).⁸³

And as usual, the taxpayer is expected to serve as the backstop under a scenario in which the system described above forces the nation's largest public pension fund to ask for a "recapitalization" to avoid insolvency. In the end, this effects all U.S. taxpayers – and not just those who happen to live in California. In that way, the point-of-no-returns at which CalPERS finds itself today is actually a point of no return for us all.

Notes

¹ <http://money.cnn.com/2017/10/11/investing/trump-obama-bull-market-stocks/index.html>.

² CalPERS, **2016-17 Comprehensive Annual Financial Report**. (2017), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2017.pdf>.

³ Robert Clark, Lee Craig, Jack Wilson, Page 6, <http://pension-researchcouncil.wharton.upenn.edu/wp-content/uploads/2015/09/0-8122-3714-5-1.pdf>.

⁴ Ibid.

⁵ John Schoen, August 25, 2016, <https://www.cnbc.com/2016/08/25/state-pension-fund-gap-to-top-1-trillion.html>.

⁶ <http://www.latimes.com/business/la-fi-calpers-misses-investment-target-20150713-story.html>.

⁷ Little Hoover Foundation, **Public Pensions For Retirement Security**, LCH. (February 24, 2011), <http://www.lhc.ca.gov/sites/lhc.ca.gov/files/Reports/204/Report204.pdf>.

⁸ Steven Malanga, **The Pension Fund That Ate California**, City Journal. (Winter 2013), <https://www.city-journal.org/html/pension-fund-ate-california-13528.html>.

⁹ Steven Greenhut, **Report: Officials Masked Big Pension Hike**, (2015), <http://www.sandiegouniontribune.com/news/politics/sdut-pension-grand-jury-capitol-legislators-marin-2015may27-story.html>.

¹⁰ CalPERS, **2005-06 Comprehensive Annual Financial Report**, (2006), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2006.pdf>.

¹¹ CalPERS, **2015-16 Comprehensive Annual Financial Report**. (2016), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2016.pdf>.

¹² CalPERS, **2016-17 Comprehensive Annual Financial Report**. (2017), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2017.pdf>.

¹³ Emily Chasan and John Gittelsohn, **Calpers digs in on proxy voting climate efforts**, Bloomberg. (March 16, 2017), <https://newsletters.briefs.bloomberg.com/document/ZAq33YrjblsCER-50poBT1g--9ez25goq72ezes8vkh/front>.

¹⁴ CalPERS, **Towards Sustainable Investment & Operations**. (2014), <https://www.calpers.ca.gov/docs/forms-publications/esg-report-2014.pdf>.

¹⁵ EPA defines sustainability as the ability to maintain or improve standards of living without damaging or depleting natural resources for present and future generations.

¹⁶ CalPERS, **CalPERS Beliefs**. (May 2015), <https://www.calpers.ca.gov/docs/forms-publications/calpers-beliefs.pdf>.

¹⁷ CalPERS, **Towards Sustainable Investment & Operations**. (2014), <https://www.calpers.ca.gov/docs/forms-publications/esg-report-2014.pdf>.

¹⁸ CalPERS, Private equity program fund performance review, (last visited Nov. 27, 2017), <https://www.calpers.ca.gov/page/investments/asset-classes/private-equity/pep-fund-performance&FWAction=printfunds>.

¹⁹ See Section 6: ESG Investment for Thee - But Not For Me

²⁰ Alex Morales, **Suntech says it received notice of default on bonds due**, Bloomberg. (March 18, 2013), <https://www.bloomberg.com/news/articles/2013-03-18/suntech-says-it-received-notice-of-default-on-bonds-due>.

²¹ Ehren Goossens and Justin Doom, **Biggest solar collapse in China imperils \$1.28 billion**, Bloomberg. (March 21, 2013), <https://www.bloomberg.com/news/articles/2013-03-20/biggest-solar-collapse-in-china-imperils-1-28-billion-energy>.

²² All share price and position data for each of the respective solar case studies provided by Factset.

²³ **Yingli could be circling the drain**, Seeking Alpha. (March 8, 2017), <https://seekingalpha.com/article/4053083-yingli-circling-drain>.

²⁴ **China green energy firms have record debt due as Yingli defaults**, Bloomberg. (May 12, 2016), <https://www.bloomberg.com/news/articles/2016-05-13/china-green-energy-firms-have-record-debt-due-as-yingli-defaults>.

²⁵ Trefis Team, **Why is the Chinese government stepping in to help Yingli Green Energy?**, Forbes. (Feb. 29, 2016), <https://www.forbes.com/sites/greatspeculations/2016/02/29/why-is-the-chinese-government-stepping-in-to-help-yingli-green-energy/#13ae3f556163>.

²⁶ Peg Brickley, **Evergreen Solar to abandon Massachusetts factory**, Wall Street Journal. (March 12, 2012), <https://www.wsj.com/articles/SB10001424052702304450004577277632600824356>.

²⁷ Nichola Groom, **Solar company that Obama visited will shut down**, Reuters. (Aug. 31, 2011), <http://www.reuters.com/article/us-solyndra/solar-company-that-obama-visited-will-shut-down-idUSTRE77U5K420110831>.

²⁸ **Protest over factory pollution in E. China enters third day**, China Daily. (Sept. 18, 2011), http://www.chinadaily.com.cn/china/2011-09/18/content_13727154.htm.

²⁹ **Sustainable Investing**, CalPERS, (last visited Oct. 19, 2017), <https://www.calpers.ca.gov/page/investments/governance/sustainable-investing>.

³⁰ Peter Cohan, **4 reasons \$2.86 billion Tesla Motors/SolarCity bid is the opposite of a no-brainer**, Forbes. (June 22, 2016), <https://www.forbes.com/sites/petercohan/2016/06/22/4-reasons-tesla-motors-solarcity-is-a-2-86-billion-anti-no-brainer/#597aa4945fc6>.

³¹ James R. Copland and Margaret M. O'Keefe, **Climate-change proposals break through**, Proxy Monitor. (2017), <http://www.proxy-monitor.org/Forms/2017Finding1.aspx>.

³² Cydney Posner, **Are shareholder proposals on climate change becoming a thing?**, Harvard Law School Forum on Corporate Governance and Financial Regulation. (June 21, 2017), <https://corpgov.law.harvard.edu/2017/06/21/are-shareholder-proposals-on-climate-change-becoming-a-thing/>.

³³ J.P. Morgan, **The 2017 Proxy Season**. (July 2017), <https://www.jpmmorgan.com/jpmpdf/1320739681811.pdf>.

³⁴ Staff, **Five lessons from the S&P 500's 2017 Proxy Season**, Ipreo. (June 27, 2017), <https://ipreo.com/blog/sp-500s-2017-proxy-season/>.

³⁵ James R. Copland and Margaret M. O'Keefe, **Climate-change proposals break through**, Proxy Monitor. (2017), <http://www.proxy-monitor.org/Forms/2017Finding1.aspx>.

monitor.org/Forms/2017Finding1.aspx.

³⁶ CalPERS, **2015-16 Comprehensive Annual Financial Report**, (2016), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2016.pdf>.

³⁷ Emily Chasan, **BlackRock finds shareholder action goes both ways**, Bloomberg. (March 16, 2017), <https://newsletters.briefs.bloomberg.com/document/ZAq33YrjblsCER-50poBT1g--9ez25goq72ezes8vkh/front>.

³⁸ Attracta Mooney, **BlackRock and Vanguard's climate change efforts are glacial**, Financial Times. (Oct. 15, 2017), <https://www.ft.com/content/adc7973a-b001-11e7-beba-5521c713ab-f4?mhq5j=e5>.

³⁹ Attracta Mooney, **BlackRock and Vanguard's climate change efforts are glacial**, Financial Times. (Oct. 15, 2017), <https://www.ft.com/content/adc7973a-b001-11e7-beba-5521c713ab-f4?mhq5j=e5>.

⁴⁰ BlackRock Investment Institute, **Adapting portfolios to climate change**, (Sept. 2016), <https://www.blackrock.com/investing/literature/whitepaper/bii-climate-change-2016-us.pdf>.

⁴¹ James R. Copland and Margaret M. O'Keefe, **Climate-change proposals break through**, Proxy Monitor. (2017), <http://www.proxy-monitor.org/Forms/2017Finding1.aspx>.

⁴² Emily Chasan and John Gittelsohn, **Calpers digs in on proxy voting climate efforts**, Bloomberg. (March 16, 2017), <https://newsletters.briefs.bloomberg.com/document/ZAq33YrjblsCER-50poBT1g--9ez25goq72ezes8vkh/front>.

⁴³ CalPERS, **2016-17 Comprehensive Annual Financial Report**, (2017), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2017.pdf>.

⁴⁴ CalPERS reports preliminary 11.2 percent investment return for fiscal year 2016-17, CalPERS. (July 14, 2017), <https://www.calpers.ca.gov/page/newsroom/calpers-news/2017/preliminary-fiscal-year-investment-returns>.

⁴⁵ CalPERS, **2016-17 Comprehensive Annual Financial Report**, (2017), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2017.pdf>.

⁴⁶ Analysis of data from: CalPERS, **2015-16 Comprehensive Annual Financial Report**, (2016), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2016.pdf>.

⁴⁷ Ibid.

⁴⁸ CalPERS, **2016-17 Comprehensive Annual Financial Report**, (2017), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2017.pdf>.

⁴⁹ Ibid.

⁵⁰ CalPERS, **2016-17 Comprehensive Annual Financial Report**, (2017), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2017.pdf>.

⁵¹ CalPERS, **2015-16 Comprehensive Annual Financial Report**, (2016), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2016.pdf>.

⁵² Randy Diamond, **CalPERS eyes vote to reduce assumed rate of return**, Pensions & Investments. (Nov. 16, 2016), <http://www.pionline.com/article/20161116/ONLINE/161119919/calpers-eyes-vote-to-reduce-assumed-rate-of-return>.

⁵³ Rory Carroll, **CalPERS votes to lower expected investment return rate to 7 percent by 2020**, Reuters. (Dec. 21, 2016), <https://www.reuters.com/article/us-california-calpers/calpers-votes-to-lower-expected-investment-return-rate-to-7-percent-by-2020-idUSKBN14A2EE>.

⁵⁴ Applying additional 50 bps in annual returns between 2007-2016; market value figures provided in 2015-16 Comprehensive Financial Annual Report, Page 116.

⁵⁵ Applying 5.6% annual return to the 2007 market value provided in 2015-16 Comprehensive Financial Annual Report, Page 116, then dividing by the Actuarial Liabilities provided within the same table to obtain funding ratio.

⁵⁶ <http://www.pewtrusts.org/~media/assets/2017/04/pew-pension-investment-data.xlsx>.

⁵⁷ Zorast Wadia, Alan H. Perry and Charles J. Clark, **2017 Corporate Pension Funding Study**, Milliman. (April 2017), <http://www.milliman.com/uploadedFiles/insight/2017/2017-corporate-pension-funding-study.pdf>.

⁵⁸ Adam Shapiro, **CalPERS cuts pension benefits for first time**, Fox Business. (Dec. 20, 2016), <http://www.foxbusiness.com/politics/2016/12/20/calpers-cuts-pension-benefits-for-first-time.html>.

⁵⁹ Dave McKinney and Karen Pierog, **Illinois governor's office warns of crippling pension payment hike**, Reuters. (Aug. 23, 2016), <https://www.reuters.com/article/us-illinois-pensions/illinois-governors-office-warns-of-crippling-pension-payment-hike-idUSKCN10Y28Z>.

⁶⁰ CalPERS, **CalPERS Reports Preliminary 11.2 Percent Investment Return For Fiscal Year 2016-17**, (Jul 14, 2017), <https://www.calpers.ca.gov/page/newsroom/calpers-news/2017/preliminary-fiscal-year-investment-returns>.

⁶¹ CalPERS, **CalPERS Reports Preliminary 11.2 Percent Investment Return For Fiscal Year 2016-17**, (Jul 14, 2017), <https://www.calpers.ca.gov/page/newsroom/calpers-news/2017/preliminary-fiscal-year-investment-returns>.

⁶² Melissa Mittelman, Sabrina Willmer and John Gittelsohn, **BlackRock is in talks for Calpers's buyout business**, Bloomberg. (Sept. 7, 2017), <https://www.bloomberg.com/news/articles/2017-09-07/blackrock-is-said-to-be-in-talks-for-calpers-s-buyout-business>.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ **CalPERS drops BlackRock as manager of apartment portfolio**, Bloomberg. (Oct. 4, 2010), <http://articles.latimes.com/2010/oct/04/business/la-fi-calpers-blackrock-20101004>.

⁶⁶ CalPERS, **2016-17 Comprehensive Annual Financial Report**, (2017), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2017.pdf>.

⁶⁷ Analysis of data from: CalPERS, **2015-16 Comprehensive Annual Financial Report**, (2016), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2016.pdf>.

⁶⁸ Adam Ashton, **Before CalPERS can save the world, public workers want it to save their pensions**, Sacramento Bee. (July 17, 2017), <http://www.sacbee.com/news/politics-government/the-state-worker/article161772508.html>.

⁶⁹ Joe Nation, **Pension Math: Public Pension Spending and Service Crowd Out in California, 2003-2030**, Stanford Institute for Economic

Policy Research. (Oct. 2, 2017), <https://siepr.stanford.edu/sites/default/files/publications/17-023.pdf>.

⁷⁰ Eric Boehm, **Pension debt will force cuts to government services**, Orange County Register. (Oct. 17, 2017), <http://www.ocregister.com/2017/10/17/pension-debt-will-force-cuts-to-government-services/>.

⁷¹ Brad Branan, **California cities get next year's pension bill. 'It's not sustainable,' Sacramento official says**, Sacramento Bee. (Oct. 13, 2017), <http://www.sacbee.com/news/investigations/the-public-eye/article178561476.html>.

⁷² Leonard Gilroy and Austill Stuart, **Unions try to make it harder for local governments to make pension payments**, Orange City Register. (June 16, 2017), <http://www.ocregister.com/2017/06/16/unions-try-to-make-it-harder-for-local-governments-to-make-pension-payments/>.

⁷³ J. Harry Jones, **Escondido takes on looming pension crisis**, San Diego Union-Tribune. (Sept. 28, 2017), <http://www.sandiegounion-tribune.com/communities/north-county/sd-no-escondido-pensions-20170928-story.html>.

⁷⁴ Steven Greenhut, **Cities Facing Fiscal Mess Plead With CalPERS as Pensions Consume Budgets**, Reason. (Sept. 29, 2017), <http://reason.com/archives/2017/09/29/cities-facing-fiscal-mess-plead-with-cal>.

⁷⁵ Brad Branan, **California cities get next year's pension bill. 'It's not sustainable,' Sacramento official says**, Sacramento Bee. (Oct. 13, 2017), <http://www.sacbee.com/news/investigations/the-public-eye/article178561476.html>.

⁷⁶ Scott Thomas Anderson, **Debt race: Sacramento police get pay raises as state's retirement fund is projected to reach an unprecedented deficit**, Sacramento News & Review. (Sept. 28, 2017), <https://www.newsreview.com/sacramento/debt-race-sacramento-police-get/content?oid=25071196>.

⁷⁷ Phil Willon, **This tiny Sierra Valley town voted to pull out of CalPERS. Now city retirees are seeing their pensions slashed**, Los Angeles Times. (Aug. 6, 2017), <http://www.latimes.com/politics/la-pol-ca-loyalton-calpers-pension-problems-20170806-ht-mlstory.html>.

⁷⁸ Review of California Form 700, Statements of Economic Interests, accessed from: <https://www.calpers.ca.gov/page/about/organization/transparency-accountability>.

⁷⁹ <https://www.calpers.ca.gov/page/newsroom/for-the-record/2017/critics-pick-facts-ignore-truth>.

⁸⁰ Annual Milliman Corporate Pension Study, 2017, <http://www.milliman.com/PFS/>.

⁸¹ Pension Fund Outsourcing: A Scarce Activity, April 2012, <http://www.funds-europe.com/pension-fund-outsourcing-a-scarce-activity>.

⁸² GE Press Release, July 1, 2017, <http://www.genewsroom.com/press-releases/ge-completes-sale-ge-asset-management-state-street-283072>.

⁸³ Analysis of data from: CalPERS, **2015-16 Comprehensive Annual Financial Report**. (2016), <https://www.calpers.ca.gov/docs/forms-publications/cafr-2016.pdf>.

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