

Enterprise Risk Profile | November 2019

Benefit Administration Enterprise Risk Profile					
Enterprise Risk	Owner		Oversight	Category	
Benefit Administration	Deputy Executive Officer, Customer Service and Support		Pension & Health Benefits Committee	Strategic	
Strategic Plan Goal		<b>Reduce Complexity:</b> Reduce complexity across the enterprise by simplifying programs to improve service and/or reduce cost.			
Functional Objective	To ensure accurate and timely benefits and information to members, retirees, and beneficiaries.				
Risk Statement	CalPERS members, retirees, and beneficiaries may not receive timely and/or accurate benefits.				
<b>Risk Analysis:</b>					
The noted risk analysis is based on an understanding that the complexity of the Benefit Plan Design results in inherent risks that may impact benefit calculations and increase costs. In addition, we are dependent upon the employers to submit and maintain accurate membership and payroll data in a timely manner. <i>The following are high-level entity controls; and is not an exhaustive list of all controls in place.</i>					
<b>Residual Risk</b>	<b>Probability</b>	<b>Impact</b>	<b>Velocity</b>	<b>Rating</b>	<b>Risk ↑ / ↓</b>
	Rare	Major - Extreme	High	High Impact Low Probability	↑
<b>Risk Driver #1: Inaccurate employer reporting</b>					
<b>Controls in Place:</b>					
1.1 Automated controls to edit and confirm employer data 1.2 Tools and reports for employers to identify and fix data issues 1.3 Employer training through various mediums 1.4 Employer Response Team 1.5 Quality assurance reports 1.6 Business partner identity account management 1.7 Public Agency audits					
<b>Future Mitigations:</b>					
<ul style="list-style-type: none"> <li>Enterprise Data Management (FY 2019-20 Business Plan)</li> </ul>					
<b>Risk Driver #2: Lack of team member knowledge and awareness of relevant laws, regulations, and policies</b>					
<b>Controls in Place:</b>					
2.1 Comprehensive training for CalPERS team members 2.2 Team member communication tools 2.3 Required second approvals and peer reviews 2.4 Documentation and regular updates of desk procedures and process documents 2.5 Audits of internal processes 2.6 Quality assurance programs 2.7 Lean process improvement 2.8 Compliance reviews					

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<b>Risk Driver #3: Inaccurate benefit and system calculations</b>
<b>Controls in Place:</b>
3.1 System testing 3.2 Clear procedures and process documents 3.3 Audits of internal processes 3.4 Quality assurance programs 3.5 Documentation of system functionality 3.6 System enhancements 3.7 Reconcile Retirement Roll 3.8 Identification and correction of data issues 3.9 Lean process improvement
<b>Risk Driver #4: Increase to the complexity of the benefit plan design due to external influences</b>
<b>Controls in Place:</b>
4.1 Board engagement and influence 4.2 Legislative impact analyses 4.3 Various employer and stakeholder communication tools
<b>Future Mitigations:</b>
<ul style="list-style-type: none"><li>• CEM Complexity Score Maintenance (FY 2019-20 Business Plan, Policy Research and Data Analytics)</li></ul>
<b>Risk Driver #5: Inability to implement statutory and regulatory changes</b>
<b>Controls in Place:</b>
5.1 Legislative impact analyses 5.2 Statutory and regulatory changes and implementation process 5.3 Various employer and stakeholder communication tools

Business Continuity Enterprise Risk Profile					
Enterprise Risk	Owner	Oversight	Category		
Business Continuity	Deputy Executive Officer, Operations and Technology	Finance & Administration Committee	Operational		
Strategic Plan Goal		<b>Risk Management:</b> Cultivate a risk-intelligent organization.			
Functional Objective	CalPERS' ability to resume business following a major business interruption.				
Risk Statement	Inability to recover timely and resume business functions following a business interruption event.				
<b>Risk Analysis:</b>					
The limitations to updating and testing recovery plans and the complexity of interdependencies of the systems used create potential risks despite the existence of an enterprise-wide prioritized list of critical functions in the CalPERS Master Enterprise Business Continuity Plan (BCP). <i>The following are high-level entity controls; and is not an exhaustive list of all controls in place.</i>					
Residual Risk	Probability	Impact	Velocity	Rating	Risk ↑ / ↓
	Rare	Major	Very High	High Impact Low Probability	↓
<b>Risk Driver #1: Inaccurate and/or outdated data from divisions</b>					
<b>Controls in Place:</b>					
1.1 Annual review of individual division Business Continuity Plans (BCPs) 1.2 Biennial testing of individual division BCPs with critical functions 1.3 California Office of Emergency Services (Cal OES) checklist					
<b>Risk Driver #2: Inability to restore critical business systems within expected timeframes</b>					
<b>Controls in Place:</b>					
2.1 Disaster recovery exercises 2.2 Dedicated off-site Emergency Operations Center 2.3 Migrated backup and disaster recovery to cloud-based technologies 2.4 Alignment of disaster recovery objectives with enterprise and individual division BCPs					
<b>Risk Driver #3: System changes are not recorded and reported timely to the disaster recovery vendor</b>					
<b>Controls in Place:</b>					
3.1 Disaster recovery exercises (system/data recovery) 3.2 System backup, replication, and recovery is automated 3.3 System changes are reported to the vendor as part of the IT Change Management Process					
<b>Risk Driver #4: Inability to react to an emergency situation</b>					
<b>Controls in Place:</b>					
4.1 Incident Command System 4.2 Emergency Operations Team 4.3 Annual drills 4.4 Annual emergency table top exercise 4.5 Team member location application 4.6 CalPERS Emergency Hotline 4.7 Partner with federal and local safety responders					

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<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Partner with first responders to conduct emergency response drills at Headquarters</li> </ul>
<b>Risk Driver #5: Dependency on the State Controller's Office (SCO)</b>
<b>Controls in Place:</b>
5.1 Documented workarounds to the SCO functions 5.2 SCO Disaster Recovery Exercise 5.3 Virtual Private Network (VPN) tunnel to SCO disaster recovery site
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Participation in annual SCO testing (Fall 2019)</li> </ul>
<b>Risk Driver #6: Mass regional disaster event impacting access to Emergency Operations Center</b>
<b>Controls in Place:</b>
6.1 Access data applications through cloud-based systems 6.2 Transition plan for long term displacement (greater than six months) 6.3 External conference bridge lines for communication 6.4 VPN connectivity from anywhere to CalPERS systems at the cloud-based disaster recovery site 6.5 Cloud-based Contact Center functionality that would allow agents to take calls from anywhere
<b>Risk Driver #7: Inability to keep stakeholders informed following a major business interruption</b>
<b>Controls in Place:</b>
7.1 Stakeholder Relations maintains a stakeholder key personnel contact database 7.2 CalPERS manages social media outlets (Facebook, Twitter, Instagram)
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Communication plan to keep stakeholders informed regarding major business interruptions and recovery times</li> </ul>

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Governance and Control Environment Enterprise Risk Profile					
Enterprise Risk	Owner	Oversight	Category		
Governance and Control Environment	Chief Compliance Officer, Chief Financial Officer	Risk & Audit Committee	Operational		
Strategic Plan Goal		<b>Risk Management:</b> Cultivate a risk-intelligent organization.			
Functional Objective	To establish good governance and a strong control environment.				
Risk Statement	Lack of a strong internal control environment, which includes documentation and testing, could result in increased non-compliance and litigation risk, operational risks due to inefficiency and improper activity, loss of authority or reputation, and/or incurred penalties.				
<b>Risk Analysis:</b>					
There is a need to strengthen documentation of CalPERS' standards, processes, and structures to sustain and maintain a strong control environment while promoting the organization's integrity and ethical culture. While the organization has done much to strengthen the internal control environment, enterprise governance continues to mature. <i>The following are high-level entity controls; and is not an exhaustive list of all controls in place.</i>					
<b>Residual Risk</b>	<b>Probability</b>	<b>Impact</b>	<b>Velocity</b>	<b>Rating</b>	<b>Risk ↑ / ↓</b>
	Unlikely	Moderate	Medium	High Impact Low Probability	↓
<b>Risk Driver #1: Lack of strong governance impacts organizational maturity, decision making, and efficiency</b>					
<b>Controls in Place:</b>					
1.1 Policy Management framework 1.2 Annual Board review of committee delegations 1.3 Team member delegated authority framework 1.4 Enterprise Policy Management ensures that key stakeholders are involved in policy development 1.5 Formalized committees (Senior Leadership Council, Integrated Assurance Risk Council, and Asset Liability Management Advisory Committee) 1.6 Biennial board self-assessment evaluation					
<b>Future Mitigations:</b>					
<ul style="list-style-type: none"> <li>• Implementation of the Insight tool for streamlined Board oversight</li> <li>• Enterprise Data Management (FY 2019-20 Business Plan)</li> <li>• Automated Policy Management Tool</li> </ul>					
<b>Risk Driver #2: Lack of oversight and monitoring of controls</b>					
<b>Controls in Place:</b>					
2.1 Enhanced roles and responsibilities for Integrated Assurance 2.2 State Leadership Accountability Act report 2.3 Third-party assurance 2.4 Annual Compliance Report 2.5 Internal audits 2.6 Program area quality assurance processes 2.7 Embedded Compliance and Risk Liaisons 2.8 Operational Risk Event reporting process					

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<b>Risk Driver #3: Unclear roles and responsibilities around applicable laws and regulations</b>
<b>Controls in Place:</b>
<ul style="list-style-type: none"> <li>3.1 Mandated and business-related training</li> <li>3.2 Annual compliance communication plans</li> <li>3.3 Embedded Compliance and Risk Liaisons</li> <li>3.4 Compliance and ethics discussion guides</li> <li>3.5 Operational policies and procedures</li> <li>3.6 Compliance and Risk communication and training plans</li> <li>3.7 Code of Conduct</li> <li>3.8 Equal Employment Opportunity (EEO) Office oversight of EEO related laws and regulations</li> </ul>
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>• Develop communication content (FY 2019-20 Work Plan)</li> </ul>
<b>Risk Driver #4: Ineffective controls and monitoring activities to prevent unethical behavior</b>
<b>Controls in Place:</b>
<ul style="list-style-type: none"> <li>4.1 Core values</li> <li>4.2 Policies, regulations, and ethical behavior standards</li> <li>4.3 Personal Trading Regulation</li> <li>4.4 Monitoring regulated employee trading activities</li> <li>4.5 Escalation procedures for Personal Trading Regulation violations</li> <li>4.6 Compliance reviews of complex, cross-branch functions</li> <li>4.7 State Whistleblower Hotline and CalPERS Ethics Helpline</li> <li>4.8 Monitoring of mandated trainings</li> <li>4.9 Monitoring of my CalPERS, accounting and invoice functions, and investment trade settlement</li> <li>4.10 Internal audits</li> <li>4.11 Internal investigation</li> <li>4.12 Code of conduct</li> <li>4.13 Centralization of fraud administration/reporting</li> </ul>
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>• Policy Awareness (FY 2019-20 Work Plan)</li> <li>• Centralization of fraud administration (FY 2019-20 Work Plan)</li> </ul>

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Health Care Administration Enterprise Risk Profile					
Enterprise Risk	Owner		Oversight	Category	
Health Care Administration	Deputy Executive Officer, Health Policy and Benefits Branch		Pension & Health Benefits Committee	Strategic	
Strategic Plan Goal		<b>Health Care Affordability:</b> Transform health care purchasing and delivery to achieve affordability.			
Functional Objective	To offer high quality, accessible, affordable, and sustainable health care.				
Risk Statement	Inability to offer high quality, accessible, affordable, and sustainable health care at a competitive price.				
<b>Risk Analysis:</b>					
There are substantial inherent risks from rising healthcare and pharmaceutical costs; however, CalPERS is mitigating these risks well and continues to offer high quality and affordable health care, as evidenced by the 2019 and 2020 Health Care Plan Rates. <i>The following are high-level entity controls; and is not an exhaustive list of all controls in place.</i>					
Residual Risk	Probability	Impact	Velocity	Rating	Risk ↑ / ↓
	Possible	Moderate - Major	Low	High Impact Low Probability	↑
<b>Risk Driver #1: Increases in health care costs</b>					
<b>Controls in Place:</b>					
1.1 5-year health plan contracts (2019-2023) that include negotiated administrative fees for the 5-year term and annual benefit cost negotiations. Contractual professional, facility, ancillary, and total cost trend performance measures with monetary penalties for health plan carriers failing to meet the measures. 1.2 Triple Aim Strategies from Let's Get Healthy CA Task Force: Better Health, Better Care, and Lower Costs 1.3 Dependent Eligibility Verification (every 3 years) 1.4 Transition eligible enrollees over 65 to Medicare plans 1.5 Contractual provisions to promote and maintain healthy lifestyles, and improve high intensity case management and patient centered care through medical homes 1.6 Incentives for members to use lower cost sites of care program 1.7 Value-Based Purchasing Design using reference pricing 1.8 Alignment of medical and pharmacy benefits across health plans to close clinical gaps in care, improve shared-decision making, control specialty drugs, improve palliative care and support preventive care					
<b>Future Mitigations:</b>					
<ul style="list-style-type: none"> <li>PPO Plan Assessment</li> <li>Ensure high-quality and affordable mental health care by working strategically and innovatively with health plan providers and stakeholders (CalPERS Strategic Goal, 2017-2022)</li> <li>Value-Based Insurance Design</li> </ul>					
<b>Risk Driver #2: Increases in pharmaceutical costs</b>					
<b>Controls in Place:</b>					
2.1 Evaluation of pharmacy benefits under medical management 2.2 Academic detailing programs and formulary management 2.3 Evaluation of site of care opportunities for reducing cost of specialty infusion drugs 2.4 Initiation of new programs to reduce specialty drug costs 2.5 Pharmacy Benefit Manager contract with negotiated 5-year pricing for covered drugs and administrative fees 2.6 Annual market check of PBM prescription drug pricing by independent consultant 2.7 Analysis of prescription drug benefit including over and under utilization					

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<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Developing pharmaceutical strategies that reduce costs, for example value-based contracting in which payment for a drug is at least partially based on the drug's effectiveness (annually)</li> <li>Reference-based pricing for prescriptions</li> </ul>
<b>Risk Driver #3: Public agencies and schools electing to leave CalPERS' Health Benefit Programs</b>
<b>Controls in Place:</b>
<p>3.1 Annual negotiations of Health Plan Premiums (Rate Development Process) completed in June providing agencies the opportunity to plan for the next calendar year well in advance.</p> <p>3.2 Health plan choices across public agency regions</p> <p>3.3 Public Employees Medical and Hospital Care Act (PEMHCA) provision precluding agency return to CalPERS Health Benefit Program for 5 years after leaving. Board action when regional factors do not align to CalPERS actuarial assumptions</p> <p>3.4 Regional geographic factor assessment every 5 years</p> <p>3.5 Communication and marketing efforts to retain existing agencies and attract new ones to the program</p>
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Implement strategic communication and outreach plan specific to public agencies in collaboration with PAOF</li> </ul>
<b>Risk Driver #4: Unfavorable changes in state and federal policies and regulations</b>
<b>Controls in Place:</b>
<p>4.1 Monitoring and tracking of state and federal policy, regulation, and legislation</p> <p>4.2 Proactive outreach and education to federal and state congressional and legislative members</p> <p>4.3 Identification and communication of policy issues/ballot initiatives</p> <p>4.4 Board may sponsor or take position on legislation</p> <p>4.5 Actively engage in state and federal legislative and regulatory processes</p>
<b>Risk Driver #5: Sustainability of the Health Care Fund (HCF)</b>
<b>Controls in Place:</b>
<p>5.1 Evaluation of HCF Portfolio Investment Strategy</p> <p>5.2 Evaluation of health benefit cost and savings</p> <p>5.3 Comprehensive asset allocation review of the HCF</p> <p>5.4 Maintain proper actuarial reserves, including a Risk Based Capital required reserve at 250% of the authorized control level for PPO plans.</p> <p>5.5 Annual resetting of the health care premiums through rate negotiations</p> <p>5.6 Annually assess state and federal regulations for compliance</p> <p>5.7 Reevaluate HCF Reserve Policy (every four years)</p> <p>5.8 Monitor reserves through the strategic risk measures (annually)</p>
<b>Risk Driver #6: Health plan contract management non-compliance</b>
<b>Controls in Place:</b>
<p>6.1 Contract management oversight, audits, and quarterly business review corrective action plans</p> <p>6.2 Changes to 5-year contracts and agreements with health providers</p> <p>6.3 Cyber insurance requirement for all health plan carriers</p>
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Evaluate current health plan performance measures and adjust as needed</li> </ul>
<b>Risk Driver #7: Inability to maintain high quality health care benefits for members</b>
<b>Controls in Place:</b>
<p>7.1 Monitor member health status on Population Health Management dashboard</p> <p>7.2 Clinical performance measures with financial penalties for plans if targets are not met</p> <p>7.3 Grievance and appeals process for members</p> <p>7.4 Analysis of misuse of medical and pharmacy services including over/underutilization</p>
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Evaluate current health plan performance measures and adjust as needed</li> </ul>

Information Security Enterprise Risk Profile						
Enterprise Risk	Owner		Oversight		Category	
Information Security	Deputy Executive Officer, Operations and Technology		Finance & Administration Committee		Operational	
Strategic Plan Goal		<b>Risk Management:</b> Cultivate a risk-intelligent organization.				
Functional Objective	To ensure CalPERS information assets are safeguarded.					
Risk Statement	Failure to protect and secure information assets.					
<b>Risk Analysis:</b>						
Due to a constant changing environment, there are substantial inherent risks associated with information security. CalPERS is actively managing this risk; however, the ever-changing environment requires the identification of emerging risks and continual development of mitigations and controls in response to those risks. <i>The following are high-level entity controls; and is not an exhaustive list of all controls in place.</i>						
<b>Residual Risk</b>	<b>Probability</b>	<b>Impact</b>	<b>Velocity</b>	<b>Rating</b>	<b>Risk</b> ↑ / ↓	
	Likely	Major - Extreme	High	High Impact High Probability	↓	
<b>Risk Driver #1: Lack of a security conscious culture in the organization</b>						
<b>Controls in Place:</b>						
1.1 Annual mandatory information security and privacy training 1.2 Quarterly phishing email education and training 1.3 Weekly information security and privacy awareness communications 1.4 Information Systems Security and Confidentiality Acknowledgement Agreement (ISSCA) 1.5 Information Security Control Standards 1.6 Privacy impact assessments 1.7 Annual HIPAA assessment						
<b>Future Mitigations:</b>						
<ul style="list-style-type: none"> <li>FY 2020-25 Information Security Strategic Roadmap (May 2020)</li> </ul>						
<b>Risk Driver #2: Failure to adequately identify, assess, and respond to a data breach and security incidents</b>						
<b>Controls in Place:</b>						
2.1 Security information and event management technologies 2.2 Third-party independent assessments to validate the organization's ability to respond to events 2.3 Ongoing web application penetration test 2.4 Monitoring of CalPERS systems for unauthorized activity 2.5 Lines of Business Incident Response Plans 2.6 Information Security Incident Response Plan (IRP) 2.7 Conduct IRP tabletop exercises and continuously refine process 2.8 Threat Intelligence 2.9 Malware protection						
<b>Future Mitigations:</b>						
<ul style="list-style-type: none"> <li>FY 2020-25 Information Security Strategic Roadmap (May 2020)</li> </ul>						
<b>Risk Driver #3: Inability to balance business innovation and strategic security risks</b>						
<b>Controls in Place:</b>						
3.1 my CalPERS Change Advisory Board (MCAB) 3.2 Data Governance Committee						

3.3 Integrated Assurance Workgroup
3.4 Business relationship meetings
3.5 Information security communication and outreach
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>FY 2020-25 Information Security Strategic Roadmap (May 2020)</li> </ul>
<b>Risk Driver #4: Failure to enforce role-based access to all users and data</b>
<b>Controls in Place:</b>
4.1 Audit team member access rights
4.2 Constant monitoring of all electronic accounts that have access
4.3 Access controls
4.4 Two-factor authentication
4.5 Identity Access Management
4.6 Enhanced knowledge-based authentication
4.7 Citation of a process: ISSCA and Business Association Agreement (BAA)
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>FY 2020-25 Information Security Strategic Roadmap (May 2020)</li> </ul>
<b>Risk Driver #5: Failure to protect all critical business systems and applications</b>
<b>Controls in Place:</b>
5.1 Physical Security Policy
5.2 Badge Card Policy
5.3 Two-factor authentication requirements in confidential areas
5.4 Enhanced practices for protected health information
5.5 Control standards
5.6 All data storage capable devices are encrypted and either sanitized (wiped) or destroyed
5.7 Certified confidential document destruction bins
5.8 Enterprise-wide badge access reviews
5.9 Building safety and security communications
5.10 Badge Card Access Procedure
5.11 Perform third-party audit and internal audits
5.12 Access controls: ISSCA, BAA
5.13 Annual information/physical security training
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>FY 2020-25 Information Security Strategic Roadmap (May 2020)</li> </ul>
<b>Risk Driver #6: Failure to mature the enterprise data governance program</b>
<b>Controls in Place:</b>
6.1 Enterprise Data Council
6.2 Data Steward Committee
6.3 Senior Leadership Council
6.4 CalPERS Data Dictionary
6.5 HIPAA officer
6.6 Data governance policy manual
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Data Management Business Plan Initiative (June 2020)</li> <li>Incorporate Information Security in the internal Governance Program Charters (July 2020)</li> </ul>
<b>Risk Driver #7: Inability to enforce a third-party vendor information security risk management program</b>
<b>Controls in Place:</b>
7.1 Contracts, engagements, and solicitation requests are reviewed to include the applicable information security forms (NDA, BAA, SEIA, ISSCA, etc.)
7.2 Contracts include a Criminal Background Check Certification form

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7.3 All applicable contracts include Business Continuity language and Protection of Information Assets language
7.4 Perform third-party audits and internal audits
7.5 Control Standards
7.6 Require third-parties to have insurance
<b>Future Mitigations:</b>
<ul style="list-style-type: none"><li>• Enhance vendor security risk management program (June 2020)</li></ul>

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Pension Funding Enterprise Risk Profile					
Enterprise Risk	Owner	Oversight	Category		
Pension Funding	Chief Financial Officer, Chief Actuary, Chief Investment Officer	Finance & Administration Committee, Investment Committee	Strategic		
Strategic Plan Goal		<b>Fund Sustainability:</b> Strengthen the long-term sustainability of the pension fund.			
Functional Objective	To ensure the sustainability of the pension system to deliver retirement benefits.				
Risk Statement	Failure to meet pension benefit obligations.				
<b>Risk Analysis:</b>					
<p>Pension Funding risk drivers are complex and interconnected. While the long-term objective is to be 100% funded with less volatility, higher returning investment strategies tend to increase volatility. Adopting a more conservative portfolio allocation, on the other hand, though likely to reduce volatility and lessen the impact to the Fund of a severe drawdown, would typically also mean lower returns, which may in turn lead to higher contribution requirements from employers. It is worth noting that the purpose of the controls/mitigations enumerated below is less about prevention and more about positioning the Fund to weather these events as/when they occur, given that the risk drivers we enumerate are largely outside the control of CalPERS. Current mitigations are strong, but our ability to fully and effectively mitigate the effects of these risk drivers remains uncertain.</p> <p><i>The following are high-level entity controls; and is not an exhaustive list of all controls in place.</i></p>					
Residual Risk	Probability	Impact	Velocity	Rating	Risk ↑ / ↓
	Possible	Extreme	Low	High Impact Low Probability	↑
<b>Assets: Risk Drivers</b>					
1a: Financial markets suffer a severe downturn					
1b: Investments underperform the discount rate on an extended year-over-year basis					
1c: Low funded status limits investment options					
1d: Government constraints and regulations reduce portfolio diversification					
1e: Employers default on contracted pension contribution payments					
1f: Portfolio size and complexity challenges efficient investment processes and limits investment universe					
<b>Controls in Place:</b>					
1a, 1b, 1c, and 1f. Strategic Asset Allocation Targets and Ranges					
1a, 1b, and 1c. Investment Strategy Group focused on portfolio allocation, trust level review, risk and attribution, and sustainability					
1a, 1b, and 1c. Integrated trust-level processes, including Trust-Level Portfolio Management and Investment Risk and Performance, which bring trust-level perspective, transparency, and accountability					
1a, 1b, and 1c. Identification of trust-level strategies designed to manage liquidity and leverage throughout the business cycle					
1a, 1b, and 1c. Cost-effective trust-level risk mitigation strategies					
1a. and 1b. CalPERS Board reporting controls in place, including monthly investment performance and risk reporting, and biannual (February and August) CalPERS Trust-Level Review					
1a. Funding Risk Mitigation Policy					
1b. Actuarial Amortization Policy					
1b. Contribution Allocation Policy					

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<ul style="list-style-type: none"> <li>1b. Asset Liability Management (ALM) process ensures cyclical review of assets and liabilities to recalibrate discount rate as needed</li> <li>1c. Communicating value of pre-paying pension obligations to strengthen the Fund and reduce individual employer costs in the future</li> <li>1d. Monitoring and evaluating proposed legislation to assess potential impacts</li> <li>1d. Legislative and stakeholder outreach to clear obstacles and constraints</li> <li>1e. Enhanced employer contracting process</li> <li>1e. Employer contract termination process</li> <li>1e. Outreach to employers and associations to educate them on Unfunded Actuarial Liabilities pay down strategies</li> <li>1e. Extension under Actuarial Amortization Policy due to a severe financial hardship</li> <li>1f. INVO Roadmap Initiatives and Target Operating Model</li> <li>1f. ALM Policy and cross-enterprise Asset Liability Management Advisory Committee to facilitate strategic decision making</li> <li>1f. Investment Office Operating Committee to focus on governance, processes, compliance, and operational efficiency</li> <li>1f. Disciplined investment processes and teamwork to focus efforts on repeatable, predictable, and scalable portfolios and practices</li> <li>1f. Reduction in external managers</li> </ul>
<b>Liabilities: Risk Drivers</b>
2a: Actual experience deviates significantly from the actuarial assumptions
2b: Benefit design enhancements
2c: Employer contribution rate increases insufficient to reduce unfunded liabilities over time
<b>Controls in Place:</b>
<ul style="list-style-type: none"> <li>2a. Actuarial Assumption Policy</li> <li>2b. Outreach and education to employers, labor leaders, and legislators regarding cost impacts of enhanced benefit design and value of pre-paying pension obligations</li> <li>2b. and 2c. Actuarial Cost Method Policy, Actuarial Amortization Policy</li> <li>2c. Increased employer education</li> <li>2c. ALM Process</li> </ul>
<b>Additional Risk Drivers</b>
3a: Pension reform legislation or referendums that reduce employer obligation to honor pension contracts
3b: Judicial decisions that alter benefit design or contribution requirements
3c: Changes to actuarial standards
<b>Controls in Place:</b>
<ul style="list-style-type: none"> <li>3a. Engagement with member, retiree, and employer associations</li> <li>3b. Engagement with legislative leaders and consultants</li> <li>3c. Development and promotion of support materials demonstrating the sustainability and value of the System</li> <li>3d. Provide technical expertise and industry thought-leadership to ensure sound decision-making</li> </ul>

Stakeholder Confidence Enterprise Risk Profile					
Enterprise Risk	Owner	Oversight	Category		
Stakeholder Confidence	Deputy Executive Officer, Communications and Stakeholder Relations	Finance & Administration Committee	Strategic		
Strategic Plan Goal		<b>Fund Sustainability:</b> Strengthen the long-term sustainability of the pension fund.			
Functional Objective	To ensure CalPERS is recognized as a respected and trusted steward of the system and fiduciary in delivering retirement and health benefits.				
Risk Statement	Inability to maintain stakeholder confidence in CalPERS as a trusted fiduciary.				
<b>Risk Analysis:</b>					
<p>The risk analysis notes an elevation to the inherent risk surrounding Stakeholder Confidence due to system sustainability decisions. Stakeholder confidence is closely correlated to fund sustainability inputs such as discount rate modifications, amortization schedule changes, and investment returns. Although CalPERS has developed a mature engagement strategy that effectively addresses unbalanced reporting and public perception, some risk continues due to the present external environment, as well as public opinion of public defined benefit plans.</p> <p><i>The following are high-level entity controls; and is not an exhaustive list of all controls in place.</i></p>					
<b>Residual Risk</b>	<b>Probability</b>	<b>Impact</b>	<b>Velocity</b>	<b>Rating</b>	<b>Risk ↑ / ↓</b>
	Possible	Moderate	Low	High Impact Low Probability	↔
<b>Risk Driver #1: Negative, inaccurate, or unbalanced information reporting</b>					
<b>Controls in Place:</b>					
<ul style="list-style-type: none"> <li>1.1 Proactive, positive narrative of CalPERS actions and policies through all communications channels</li> <li>1.2 Monitor and report on the perception of CalPERS in the media and on social media to identify opportunities and challenges</li> <li>1.3 Respond and correct negative, inaccurate, or unbalanced reporting</li> <li>1.4 Develop and maintain good working relationships with media outlets</li> <li>1.5 Author messaging on key CalPERS actions, views, or policy changes</li> <li>1.6 Leverage CalPERS leadership and program experts to help educate</li> <li>1.7 Enterprise Data Management</li> </ul>					
<b>Risk Driver #2: Negative public perception of CalPERS and/or public defined benefit plans</b>					
<b>Controls in Place:</b>					
<ul style="list-style-type: none"> <li>2.1 Proactive, positive narrative of CalPERS actions and policies through all communication channels</li> <li>2.2 Reporting on positive CalPERS economic impacts</li> <li>2.3 Leverage communications through member and employer associations</li> <li>2.4 Timely fulfillment of Public Record Act requests</li> <li>2.5 Build and nurture positive relationships with stakeholders</li> <li>2.6 Involvement in national public pension associations</li> <li>2.7 CalPERS communication of advantages of the defined benefit plan</li> <li>2.8 Asset Liability Management collaboration and communication</li> <li>2.9 Develop relationship with influential California allies across various industries and sectors</li> </ul>					

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**Risk Driver #3: CalPERS failure to engage, educate, and inform members, employers, stakeholders, and the CalPERS team**

**Controls in Place:**

- 3.1 Framework of recurring stakeholder meetings
- 3.2 Ad hoc stakeholder outreach meetings
- 3.3 Digital communications
- 3.4 Employer information and education events
- 3.5 Member information and education events
- 3.6 Live webcasts of board meetings and transcripts of those meetings
- 3.7 Webinars and webcasts, including Board education workshops
- 3.8 Social media channels
- 3.9 Survey stakeholder segments to gauge sentiment and orient messaging and efforts
- 3.10 Share information with all team members to empower them to help educate
- 3.11 Host publicly noticed stakeholder forum as part of annual Board meeting schedule

**Risk Driver #4: Inability to inform, shape, or implement state and federal legislation**

**Controls in Place:**

- 4.1 Engage with legislative leaders and consultants on relevant legislative proposals, regulatory issues, and initiatives
- 4.2 Build alignment and nurture relationships between CalPERS and key governmental leaders
- 4.3 Hold periodic briefings to educate legislative members on CalPERS issues concerning their constituents
- 4.4 Annually update legislative briefing packets
- 4.5 Monitor, assess, and advocate on proposed legislation
- 4.6 Provide technical expertise and cost analysis for proposed legislation

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Talent Management Enterprise Risk Profile					
Enterprise Risk	Owner		Oversight	Category	
Talent Management	Deputy Executive Officer, Operations and Technology		Performance, Compensation, & Talent Management Committee	Operational	
Strategic Plan Goal		<b>Talent Management:</b> Promote a high-performing and diverse workforce.			
Functional Objective	To successfully recruit, develop, and retain an engaged, diverse, and qualified workforce.				
Risk Statement	Inability to recruit and retain a diverse and qualified workforce compromises the ability to meet business objectives.				
<b>Risk Analysis:</b>					
<p>The inherent risk of 25% of the workforce projected to retire by 2022 raises challenges for CalPERS to retain institutional knowledge and fill hard-to-recruit senior level positions. CalPERS is actively investing in team members' professional growth to maintain continuity in the workforce and mitigate talent risks, including ongoing knowledge transfer to support retention. The lack of an end-to-end or otherwise integrated HR system creates manual workload that leads to data gaps between existing solutions. These gaps and lack of automation may create risk for the organization.</p> <p><i>The following are high-level entity controls; and is not an exhaustive list of all controls in place.</i></p>					
<b>Residual Risk</b>	<b>Probability</b>	<b>Impact</b>	<b>Velocity</b>	<b>Rating</b>	<b>Risk</b> ↑ / ↓
	Unlikely	Major	Low	High Impact Low Probability	↓
<b>Risk Driver #1: Skills and competencies of all team members not keeping pace with evolving technology, member, and system needs</b>					
<b>Controls in Place:</b>					
1.1 CalPERS 2018-22 Workforce Plan 1.2 Employee Performance and Development process: EPADs available electronically 1.3 CalPERS Informal Mentoring Program 1.4 Educational, developmental, and training opportunities 1.5 CalPERS Succession Planning Program 1.6 CalPERS competencies: Includes team members and leadership 1.7 Unit-level workforce assessments: Flight risk, retirement risk, and critical risks to be measured in the Workforce Planning Dashboard (FY 2019-20 Workforce Plan, Aug. 2019) 1.8 CalPERS Emerging Leader program					
<b>Future Mitigations:</b>					
<ul style="list-style-type: none"> <li>Administer team member engagement survey annually (FY 2019-20 Business Plan, Oct 2019)</li> </ul>					
<b>Risk Driver #2: Loss of institutional knowledge</b>					
<b>Controls in Place:</b>					
2.1 CalPERS Emerging Leader program 2.2 Knowledge transfer stipulation for multi-year consultant contracts 2.3 Illuminet 2.4 CalPERS Informal Mentoring Program 2.5 CalPERS Succession Planning Program 2.6 Implement Lean training across the enterprise					

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2.7 Knowledge Transfer Workshops (FY 2019-20 Workforce Plan, Winter 2019-20)
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Implement the recommendations of the CalPERS Workforce Plan (FY 2018-2022)</li> </ul>
<b>Risk Driver #3: Inability to recruit and select qualified candidates</b>
<b>Controls in Place:</b>
3.1 Recruitment Life Cycle Tool Kit 3.2 Recruitment calendar 3.3 Strengthened selection process controls 3.4 Continue to develop targeted recruitment strategies and activities for hard to fill positions with critical positions overlay 3.5 Utilization of skilled, in-house recruiters and external search firms 3.6 Career fairs and advertising in non-traditional mediums 3.7 Salary survey of comparable positions 3.8 Examination and Certification Online System 3.9 Market CalPERS as a destination employer 3.10 Incentive compensation programs and policies 3.11 Utilization of Student Assistants / Graduate Students 3.12 CalPERS Student Internship Program 3.13 Statewide IT Apprenticeship Program 3.14 CalPERS competencies
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Implement reporting functionality of the Start Talent Acquisition Request System to capture, compile, and measure recruitment data (FY 2018-22 Workforce Plan, June 2020)</li> <li>Expand HR Workforce Metrics Program (June 2020)</li> <li>State-wide civil service classification consolidations</li> </ul>
<b>Risk Drivers #4: Inconsistent levels of support for engagement across the enterprise</b>
<b>Controls in Place:</b>
4.1 Enterprise Enrichment programs 4.2 New employee onboarding including, customized onboarding plans for senior leaders and executives 4.3 Diversity and inclusion events 4.4 Innovation platforms (Idea Factory and other Enterprise platforms/forums) 4.5 Annual Employee Engagement Survey 4.6 Implement engagement survey action items (Business Plan Initiative) 4.7 CalPERS Emerging Leader program
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Expand the Diversity and Inclusion Program (June 2020)</li> </ul>
<b>Risk Drivers #5: Antiquated HRMS</b>
<b>Controls in Place:</b>
5.1 Data mapping and data clean-up of HCM and SCO systems 5.2 Position history and reconciliation with Budget Office 5.3 Employee separation process restructured within HRSD 5.4 Streamline employee separation process (project led by PRDA)
<b>Future Mitigations:</b>
<ul style="list-style-type: none"> <li>Procure modern HRMS or improve existing system to increase operational efficiencies in HRSD and provide self-service for team leaders and team members (June 2020)</li> <li>Work with ITSB to identify alternative solutions to bridge the gap with the antiquated HRMS (FY 2019-20)</li> <li>HRSD Data Dictionary in development (FY 2019-20)</li> <li>Develop strategy for the procurement of an HRMS (Completion TBD: pending decisions on strategic direction with ITSB and OPT Senior Leaders)</li> </ul>