



Regular Meeting

Item Number 10 – Open Session

Subject: Enterprise Risk Management Report

Presenter(s): Julie Underwood and Phillip Burkholder

Item Type: Information

Date & Time: September 2 , 2021 – 15 minutes

Attachment(s): Attachment 1 – ERM Heat Map
Attachment 2 – Risk Score Report

PowerPoint(s): None

PURPOSE

The purpose of this item is to provide the Teachers' Retirement Board (board) with the semi-annual Enterprise Risk Management (ERM) Report reflecting updates as of June 30, 2021.

DISCUSSION/SUMMARY

As part of the ERM framework, CalSTRS Executive Risk Committee (ERC), Risk Champions Network (RCN) and the ERM Team review and discuss enterprise risks and mitigations on a quarterly basis and provide an ERM Report to the board semi-annually. Staff's quarterly review includes enterprise-level risks and sub-risks, while considering internal and external factors which could be catalysts for emerging risks. Management's activities to mitigate risks include assessment and adjustment of business processes and internal controls as appropriate to avoid risks or ensure effectiveness of ongoing mitigation efforts, identification of risk transfer opportunities and acceptance of risks where the cost of mitigation exceeds the potential benefit.

Staff have accomplished the following risk-related activities during this reporting period:

- The Annual Risk and Internal Controls Awareness Training was completed with 100% compliance.
- ERM and Enterprise Strategy Management have partnered to enhance risk considerations as part of the strategic planning process in support of the development of the 2022-2025 Strategic Plan.
- The second annual Branch Risk Assessments were completed on June 30, 2021.

Through our ERM efforts, CalSTRS monitors 11 risk categories using a heat map and Risk Score Report. The heat map provides management and the board a graphic display of the inherent and residual risks for each risk category, providing a visual summary of the effectiveness of mitigation strategies and activities to manage inherent risks, as shown by the difference between the inherent and residual risk scores. The Risk Score Report provides a detailed visual of the overall inherent and residual risk scores for these risk categories as well as risk scores for the individual sub-risks within each of the categories. The detail allows management and the board to recognize how the sub-risk scores and consideration of priority weightings determine the overall risk category's inherent and residual risk score. Details for both are summarized below.

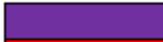
ERM Heat Map

The heat map as of June 30, 2021, which is provided in Attachment 1, includes an inherent and residual risk score plotted on the map for each of the risk categories based on the following risk score calculation:

$$\text{Risk Score Calculation} = \text{Impact} \times (\text{Probability} + \text{Velocity})$$

The risk score calculation includes the velocity metric which considers how fast a risk may impact CalSTRS. The X-axis (Risk Categories) on the heat map displays the titles of the 11 risk categories, above which is a bar for the inherent risk score on the left (the darker gray bar) and a bar for the residual risk score on the right (the lighter gray bar). The black arrows and dotted lines reflect if any period-over-period movement of the risk category occurred since the prior reporting period. The Y-axis displays the 50-point Risk Score scale for the 11 risk categories as follows:

Risk Score Key:

	very high	41-50
	high	31-40
	medium	21-30
	low	11-20
	very low	1-10

For this reporting period, all but four categories have residual risk scores within the low or very low risk range (yellow or blue) band of the heat map. The four categories with higher scores are:

- Category 4 – Pension Administration with an overall residual risk score of 24 (medium).
- Category 7 – Information Security with an overall residual risk score of 38 (high).
- Category 10 – Transformational Change with an overall residual risk score of 26 (medium).
- Category 11 – Third Parties with an overall residual risk score of 21 (medium).

There were three risk categories where inherent risk changed from the prior period. Risk category 6 – Pension Reform decreased as a result of recent court cases upholding the California Rule and reduced political threats. The Pension Reform inherent risk score was reduced from 23 to 17 to reflect the positive change to the pension reform risk environment. As a result, the risk category will still be monitored but it will no longer appear in the board reporting materials unless the risk environment changes. Two categories increased, risk category 2 – Pension Funding Actuarial and

risk category 10 – Transformational Change. Category 2 increased to reflect changes to the economic and investment environments partially due to the pandemic and an increased likelihood that inflation will outpace long-term expectations. Category 10 increased to reflect the schedule delay in the Pension Solution project. These changes reflect management’s commitment to recognizing and managing enterprise-level risks. Overall, based on management’s review of identified risks and the associated mitigation efforts, the risks for all 11 risk categories are adequately managed and reflected appropriately on the heat map.

Risk Score Report

Below is a brief summary of the current status for each of the 11 risk categories as of June 30, 2021. The report, which includes the associated sub-risks, is provided in Attachment 2.

Risk Score Report - As of June 30, 2021		Risk Status	
<p>Organizations thrive by taking risks, but falter when risks are not managed effectively. Risks are inherently present in the work we do at CalSTRS, which is why we implement internal controls to mitigate these inherent risks. However, the possibility of residual risk, after all actions are taken to mitigate risk, does exist.</p> <p>This Risk Score Report identifies the inherent risks and residual risks in each of the risk categories at CalSTRS and any corresponding changes since the last reporting period, December 31, 2020.</p>	<p>Inherent Risk Risk without any actions or controls in place to reduce likelihood or impact.</p>	<p> very high 41-50</p>	<p> high 31-40</p>
	<p>Residual Risk Risk remaining after implementing actions and controls to remove or manage risk.</p>	<p> medium 21-30</p>	<p> low 11-20</p>

1	Pension Fund - Investments	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
	Fund performance objectives not achieved as set in the Investment Policy and Management Plan.	22	No Change	18	No Change

Category 1 – Pension Fund – Investments. The overall residual risk score for this category remains at 18 and in alignment with the low risk range (yellow band) of the heat map, which reflects staff’s confidence in the ongoing mitigation efforts to control this long-term risk, including the continued evaluation of liquidity and cash flow needs of the investment portfolio. Staff continue to monitor market conditions and evaluate the residual impacts of the COVID-19 pandemic on the economic outlook to make tactical decisions. Staff has established policies in compliance with Global Investment Performance Standards and continue to propose changes to the Sustainable Investment and Stewardship Strategies program to help focus staff’s activities on the most relevant issues that mitigate risk, support long-term value creation, and promote practices that provide for a sustainable financial market. Stewardship activities are the primary means through which CalSTRS seeks to influence meaningful corporate and market change, leveraging our significant public equity ownership stakes in global companies. The Pillars Project continues to provide necessary support to the Collaborative Model which contributed to the 27.2% net return on investments for the 2020-21 fiscal year, a record high that far exceeded the investment assumption of 7.0%.

2	Pension Funding - Actuarial	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
	Actuarial methodologies and assumptions vary from experience.	22	↑3	20	↑6

Category 2 – Pension Fund – Actuarial. The overall inherent risk score for this category increased by 3 points from 19 to 22 and the residual score increased 6 points from 14 to 20. The increases reflect changes in the economic and investment environments partially due to the pandemic. These changes also reflect the increased likelihood that the inflation assumptions will be out of line with the long-term assumptions within the next six to eight months. Inflation is a key component for two important economic actuarial assumptions used in the funding of the CalSTRS Defined Benefit Program. It impacts expected payroll growth and the assumed investment return. In addition, interest rates remain at historical low levels. Low interest rates could put pressure on CalSTRS ability to earn its assumed 7% investment return over the long term. Staff will continue to monitor actuarial assumptions as part of its ongoing monitoring of the CalSTRS funding plan. If these trends were to continue in the future, it could be necessary to reduce the investment return and/or the payroll growth assumptions, leading to contribution rate increases for employers, members and the state while also negatively impacting CalSTRS ability to reach funding by 2046. The Review of CalSTRS Funding Levels and Risks report will be presented at the November meeting which will discuss inflation risks in more depth.

3	Pension Fund - Contribution Rate	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
	Insufficient contribution rates to amortize unfunded actuarial liability.	20	No Change	15	No Change

Category 3 – Pension Fund – Contribution Rate. The overall residual risk score for this category remains at 15. Based on current assumptions, the funding plan is still expected to allow the board to adopt the contribution rates needed for the employers and the state to eliminate their share of CalSTRS’ unfunded actuarial obligation by 2046. Formal assessments of contribution rates, funding levels and risks are provided to the board twice a year. These formal assessments are presented in the spring through the annual actuarial valuation report and in the fall through the Review of Funding Levels and Risks report. At the June 2021 meeting, staff presented the results of the June 30, 2020 defined benefit actuarial valuation. Based on the results of this valuation, the board maintained employer contribution rates at their existing level. Note that the 2021-22 California budget approved \$584 million in supplemental payments to CalSTRS to help keep the funding plan on track and reduce the state’s share of CalSTRS unfunded liability. These supplemental contributions are an indication of the state’s commitment to eliminate its share of CalSTRS unfunded liability by 2046 and to keep the CalSTRS funding plan on track.

4	Pension Administration	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
	Untimely and/or inaccurate delivery of benefits and services due to failure of or inadequate processes, technology systems, staff actions or data.	35	No Change	24	No Change

Category 4 – Pension Administration. The overall residual risk score for this category remains at 24 and in alignment with the medium risk range (orange band) of the heat map. Staff remain confident in the ongoing transformational change efforts and the large-scale system upgrade, BenefitConnect’s, (Pension Solution Project) ability to mitigate this risk long-term. However, due to the large-scale nature of this project and the current remote work environment, the residual risk score remains at a medium risk level, even though member benefits continue to be paid timely, benefit applications continue to be processed without delays and customer service levels continue to be maintained. Staff continue to monitor the overall pension administration activities, including service level scores, to ensure foreseeable risks are effectively mitigated. Staff will also evaluate any changes to this risk category once the updated schedule is finalized for the Pension Solution Project, discussed further in Category 10.

5	Financial Reporting	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
	Incomplete or inaccurate financial information; weaknesses in internal control jeopardize an unqualified/unmodified audit opinion or result in significant non-compliance with standards.	20	No Change	10	No Change

Category 5 – Financial Reporting. The overall residual risk score for this category remained unchanged. As discussed at the July 2021 ARM committee meeting, Financial Services has implemented additional controls to mitigate against the increasing complexity of reflecting the fair value measurement of new investment types in the financial statements. A third-party consultant has been procured to evaluate and document CalSTRS current process of measuring and reporting the fair value measurement of private investment assets and provide recommendations to CalSTRS on areas of improvement to align the organization with industry best practices and Generally Accepted Accounting Principles.

The overall residual risk score for this category is in alignment with the very low risk range (blue band) of the heat map, which reflects staff’s confidence in the mitigation efforts to control this risk, including the ongoing effectiveness of CalSTRS internal controls program.

6	Pension Reform *This category will be retired from future reports*	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
	Negative impacts to funded status of the plan and members’ retirement security caused by legislative changes or interpretation of existing law.	17	↓6	10	No Change

Category 6 – Pension Reform. The overall inherent risk score for this category decreased from 23 to 17. The residual score is in alignment with the very low risk range (blue band) of the heat map

to reflect a reduction in risk now that the current challenges to the California Rule have been addressed by the court’s decision in the Alameda County case. Staff have elected to temporarily retire this risk category from board reporting due to low risk scores and the favorable pension reform environment. This category will not be included in future board reporting and the subsequent risk categories will be renumbered accordingly. Although the risk category will not be included in future board reporting, staff will continue to closely monitor other court cases for potential impact to vested pension rights, signaling a change to the risk environment. In addition, staff continuously monitor new legislation and initiatives for any changes that may reduce guaranteed benefits or compromise contractual rights to member benefits.

7	Information Security	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
	Loss of information security or compliance violations as a result of unauthorized or unintentional breaches.	49	No Change	38	No Change

Category 7 – Information Security. The overall residual risk score for this category remains at 38 and in alignment with the high risk range (red band) of the heat map. Staff does not anticipate a future decrease in residual scoring due to the current climate of data breaches and highly persistent hackers. However, Information Security remains a constant focus for the organization and staff remain confident in the mitigation efforts to control this risk, including ongoing monitoring of CalSTRS systems and staff education in the remote work environment. Staff will provide a cyber security report at the September closed session board meeting.

8	Operational	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
	Inability to achieve business objectives due to lack of compliance with internal controls, lack of accessibility to technology systems, and/or loss of critical staff knowledge.	31	No Change	20	No Change

Category 8 – Operational. The overall residual risk score for the category remains at 20 and in alignment with the low risk range (yellow band) of the heat map. The sub-risk addressing the pandemic related operational concerns has been removed due to the effectiveness of the organization’s mitigation strategies and activities. A new sub-risk has been added to this risk category to address the risks associated with the transition to a blended working model, the changes to how we communicate, collaborate and operate as an organization and the potential impact to CalSTRS’ culture. Also, a new sub-risk has been added which addresses the CEO transition. Staff continues to monitor risks specific to the COVID-19 pandemic, including but not limited to:

- The future state and vision for CalSTRS Blended Work Environment.
- Ensuring a safe and healthy workplace by encouraging staff to take home their monitor, keyboard, docking station, mouse and office chair to create ergonomic home offices.
- Exploring new technology platforms and solutions to improve business productivity and member support and service delivery.
- Fostering excellent communication and a high level of employee engagement.

9	Reputational	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
Loss of confidence in CalSTRS as a respected fiduciary of public funds.		29	No Change	19	No Change

Category 9 – Reputational. The overall residual risk score for this category remains at 19 and in alignment with the low risk range (yellow band) of the heat map, which reflects staff’s continued confidence that ongoing mitigation efforts effectively control this risk. The remote work environment remains stable and there has been no negative press as communications to members, stakeholders, the board and staff are continuously occurring. Contributions continue to be received on time, customer service levels remain stable, and the investment portfolio’s liquidity is more than adequate for benefits to be paid timely and the FY20-21 annual return of 27.2% exceeded the assumed rate of 7%.

10	Transformational Change	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
CalSTRS is unable to accomplish major transformational change initiatives.		31	↑2	26	↑3

Category 10 – Transformational Change. The overall inherent risk score for this category increased by 2 points while the overall residual risk score increased by 3 points to reflect the Pension Solution Project delays in reaching testing milestones. The delays include executing Contractor Acceptance Testing, a high number of defects being identified, delayed User Acceptance Testing, slower than planned execution, and a lower-than-expected defect resolution rate. The project is undergoing a schedule re-planning effort which is estimated to delay the completion date 18 to 24 months.

These delays will continue to impact downstream activities (such as Functional Rollout 3 and the BusinessDirect Retrofit project) and resource availability including the risk of resource burnout and project staff turnover. The project’s contractor, CGI, performed a root cause analysis as well as a bottom-up task and resource analysis to develop a new project schedule. CalSTRS and the oversight consultants have reviewed CGI’s draft schedule and implementation alternatives for achievability, while considering impact to the project’s goals and CalSTRS’ resources. CGI is incorporating the combined CalSTRS/CGI rollout strategy into a final schedule. Progress will continue to be closely monitored against any revised project schedule and goals. Staff will provide an additional update to the board on the project’s progress at the September board meeting. The risk scores in this category will be reconsidered once the final schedule has been received and evaluated.

In addition, a sub-risk was removed from this category due to the successful transition of the Chief Benefits Officer as a project sponsor.

11	Third Parties	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
	There is a risk that CalSTRS fails to appropriately manage risks associated with third parties which could result in operational disruption, financial loss, reputational damage, compliance violations or failure to reach strategic goals.	32	No Change	21	No Change

Category 11 – Third Parties. The overall residual risk score remains at 21 and in alignment with the medium risk range (orange band) of the heat map. Staff does not expect a decrease in residual risk until establishment of the Third-Party Risk Management Program. The Office of General Counsel is the global owner of this new risk category and is leading the development of a Third-Party Risk Management Program to ensure a consistent, systematic method of governing and controlling third-party risk. The Office of General Counsel is currently working with procurement and Enterprise Compliance Services to develop a governance process and standards to help strengthen controls for third party risk identification for contract managers. Additional sub-risks will be phased into the category as the Third-Party Risk Management Program progresses. Staff will continue to provide updates on mitigation efforts to reduce risks associated with third parties as the implementation of the program progresses.

Risk Oversight

The board has a fiduciary responsibility for CalSTRS’ enterprise-wide risk oversight. CalSTRS’ staff provides the board with many different channels of risk related reporting, in addition to this report, to ensure there is a comprehensive approach and framework to anticipate, identify, analyze, prioritize and manage key risks. The reports include, but are not limited to:

- Review of CalSTRS Funding Levels and Risks report
- Independent Auditors Report on Internal Control over Financial Reporting and on Compliance and Other Matters
- Chief Executive Officer and Chief Investment Officer board reports
- Project reporting for Pension Solution, Headquarters Expansion and the Collaborative Model projects
- Information Security reports

Ongoing Monitoring

Staff is continuously monitoring all risk categories as our remote work environment continues, including the effect to the Strategic Plan and project deliverables. We are also keeping up to date on world events, including the pandemic, and social unrest. Any additional risks will continue to be mitigated to ensure the continuity of CalSTRS’ operations, while maintaining the ERM framework at the program level, and cultivating a positive risk culture.

Over the next reporting period, the ERM program will continue to mature the program by reviewing branch-level risk assessments, validating branch and enterprise level risk mitigations,

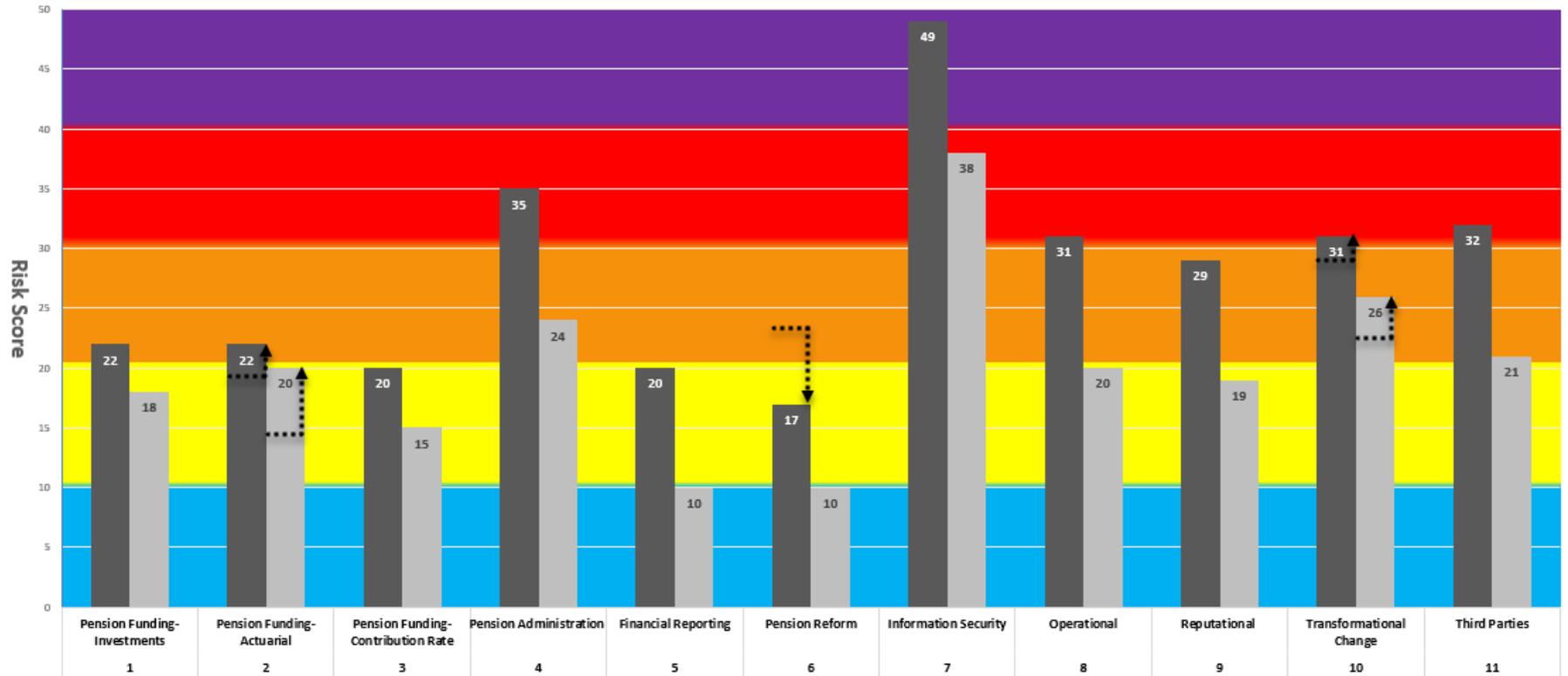
developing enterprise-level risk tolerance statements, and coordinating its efforts with other organizational assurance functions.

Summary

Since the December 31, 2020 Enterprise Risk Management Report was presented to the board in March 2021, staff continue their efforts to recognize, assess and address enterprise-level risks, including emerging risks that may impact CalSTRS ability to accomplish its strategic goals and project deliverables, and are taking the necessary actions to manage those risks.

The movement of several risk categories on the heat map displays the dynamic nature of the current risk environment. However, staff remain confident that with the ongoing risk mitigations put in place, including those associated with the COVID-19 pandemic, CalSTRS will be able to continue to deliver on its mission.

Enterprise Risk Management Heat Map as of June 30, 2021



Risk Score Key:

	very high	41-50
	high	31-40
	medium	21-30
	low	11-20
	very low	1-10

Risk Categories

■ Inherent Risk Score
 ■ Residual Risk Score

↑ Increase since prior period (December 31, 2020)
 ↓ Decrease since prior period (December 31, 2020)

Risk Score Report - As of June 30, 2021				Risk Status																
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Strategic Goals	Goal 1: Financial/Governance (G1: FG)	Strategic Objectives	A, B, C, D, E	Risk Responses	Avoid															
	Goal 2: Digital Transformation (G2: DT)		A, B, C, D		Reduce															
	Goal 3: Member/ Employer (G3: ME)		A, B, C, D, E		Share															
	Goal 4: Organizational Strength (G4: OS)		A, B, C, D		Accept															

1	Pension Fund - Investments					Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
Fund performance objectives not achieved as set in the Investment Policy and Management Plan.						22	No Change	18	No Change
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	45%	The fund will not achieve the actuarially expected return over the long term (30 years/absolute return), which may prevent CalSTRS from reaching full funding by 2046.	G1: FG	A, B, C	Reduce	20	No Change	16	No Change
B	35%	CalSTRS will not be able to implement strategies and tools necessary to manage risk associated with a more complex and volatile investment environment which may hinder Investments Branch ability to capitalize on value added investment opportunities.	G1: FG	A, B, C, D	Reduce	32	No Change	28	No Change
C	20%	The fund will not add value above the total fund benchmarks return over the long term (Relative return), which may create stakeholder uncertainty in CalSTRS ability to effectively manage risk and implement investment strategies.	G1: FG	A, B, C	Reduce	12	No Change	9	No Change

2	Pension Funding - Actuarial					Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
Actuarial methodologies and assumptions vary from experience.						22	↑3	20	↑6
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	80%	Over the long-term, actual experience significantly differs negatively from actuarial assumptions which could result in the inability to achieve full funding by 2046.	G1: FG	A	Reduce	24	↑4	24	↑8
B	10%	There is a risk that actuarial assumptions negatively differ from actuarial experience, caused by incorrect information underlying the actuarial assumptions, which could result in the inability to achieve full funding.	G1: FG	A	Reduce	18	No Change	9	No Change
C	10%	Inappropriate measures of actuarial obligations and costs, caused by invalid actuarial methodologies, could result in the inability to achieve full funding by 2046.	G1: FG	A	Reduce	9	No Change	6	No Change

3	Pension Fund - Contribution Rate					Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
Insufficient contribution rates to amortize unfunded actuarial liability.						20	No Change	15	No Change
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	70%	The board's limited authority to change contribution rates per AB 1469 could result in insufficient contributions to reach full funding by 2046.	G1: FG	A	Reduce	24	No Change	20	No Change
B	30%	Failure of the board to exercise their authority to adequately fund the Defined Benefit Program to its fullest extent could result in insufficient contributions to reach full funding by 2046.	G1: FG	A, E	Reduce	12	No Change	6	No Change

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4 Pension Administration			Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change			
Untimely and/or inaccurate delivery of benefits and services due to failure of or inadequate processes, technology systems, staff actions or data.			35	No Change	24	No Change			
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	30%	CalSTRS is unable to ensure accurate and timely benefits due to the aged pension administration system's (START) failure to pay benefits timely.	G2: DT	A	Reduce	45	No Change	32	No Change
B	30%	During the transition period, the loss of mainframe knowledgeable staff may result in the inability to continuously maintain START and properly service members until the new pension administration system is fully operational.	G4: OS	D	Reduce	45	No Change	28	No Change
C	20%	Inability to deliver timely benefits and services due to incomplete, inaccurate and late employer reporting.	G3: ME	C	Reduce	21	No Change	15	No Change
D	20%	Inaccurate benefit payments caused by current system limitations, manual processes and unknown system defects.	G2: DT	A	Reduce	24	No Change	16	No Change

5 Financial Reporting			Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change			
Incomplete or inaccurate financial information; weaknesses in internal control jeopardize an unqualified/unmodified audit opinion or result in significant non-compliance with standards.			20	No Change	10	No Change			
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	100%	Information received from subsidiary systems is recorded incorrectly in the general ledger, which could result in the financial statements being materially misstated and the external auditors issuing a modified opinion.	G3: ME	C	Reduce	20	No Change	10	No Change

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	Goal 3: Member/ Employer (G3: ME)		A, B, C, D, E		Share															
	Goal 4: Organizational Strength (G4: OS)		A, B, C, D		Accept															

6 Pension Reform *This category will be retired from future reports*			Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change			
Negative impacts to funded status of the plan and members' retirement security caused by legislative changes or interpretation of existing law.			17		10	No Change			
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	80%	Challenges to vested pension rights could affect how we administer benefits and their ability to be modified.	G3: ME	C	Accept	16		9	No Change
B	20%	Pension reform efforts and threats to the CalSTRS Funding Plan, including legislation and initiatives, could substantially reduce guaranteed defined benefits or funding or compromise contractual rights creating litigation challenges.	G1: FG	B	Reduce	20	No Change	12	No Change

7 Information Security			Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change			
Loss of information security or compliance violations as a result of unauthorized or unintentional breaches.			49	No Change	38	No Change			
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	90%	A highly volatile cyber-risk landscape and a limited number of staff could result in an information security breach or incident at CalSTRS.	G2: DT	B	Reduce	50	No Change	40	No Change
B	5%	The absence of proper Information Security Program management and oversight could result in an information security breach or incident at CalSTRS.	G2: DT	B	Reduce	36	No Change	24	No Change
C	5%	A lack of employee security awareness could result in an information security breach or incident at CalSTRS.	G2: DT	B	Reduce	40	No Change	24	No Change

Risk Score Report - As of June 30, 2021				Risk Status																
<p>Organizations thrive by taking risks, but falter when risks are not managed effectively. Risks are inherently present in the work we do at CalSTRS, which is why we implement internal controls, to mitigate these inherent risks. However, the possibility of residual risk, after all actions are taken to mitigate risk, does exist.</p> <p>This Risk Score Report identifies the inherent risks and residual risks in each of the risk categories at CalSTRS and any corresponding changes since the last reporting period, December 31, 2020.</p>		<p>Inherent Risk Risk without any actions or controls in place to reduce likelihood or impact.</p> <p>Residual Risk Risk remaining after implementing actions and controls to remove or manage risk.</p>		<table border="1"> <tr> <td></td> <td>very high</td> <td>41-50</td> </tr> <tr> <td></td> <td>high</td> <td>31-40</td> </tr> <tr> <td></td> <td>medium</td> <td>21-30</td> </tr> <tr> <td></td> <td>low</td> <td>11-20</td> </tr> <tr> <td></td> <td>very low</td> <td>1-10</td> </tr> </table>			very high	41-50		high	31-40		medium	21-30		low	11-20		very low	1-10
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Strategic Goals	Goal 1: Financial/Governance (G1: FG)	Strategic Objectives	A, B, C, D, E	Risk Responses	Avoid															
	Goal 2: Digital Transformation (G2: DT)		A, B, C, D		Reduce															
	Goal 3: Member/ Employer (G3: ME)		A, B, C, D, E		Share															
	Goal 4: Organizational Strength (G4: OS)		A, B, C, D		Accept															

8 Operational			Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change			
Inability to achieve business objectives due to lack of compliance with internal controls, lack of accessibility to technology systems, and/or loss of critical staff knowledge.			31	No Change	20	No Change			
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	15%	In the event of a disaster or disruption CalSTRS may not be able to provide mission critical business processes to our members due to inaccessibility to technology systems.	G2: DT	C	Reduce	36	No Change	24	No Change
B	15%	Solutions are not in place to mitigate a major technology system outage or partial building outage without bringing down all HQ systems.	G2: DT	C	Reduce	32	No Change	24	No Change
C	15%	CalSTRS may not be able to effectively support the Collaborative Model due to the inability to provide resources needed to fully execute the Pillars Project, which could result in missed opportunities to reduce investment management costs.	G1:FG G4:OS	A B, D	Reduce	28	No Change	15	No Change
D	15%	There is a risk that the transition to a blended working model may result in operational disruptions and a potential adverse shift in CalSTRS' culture caused by changes to how we communicate and collaborate.	G2: DT G4: OS	C, D D	Reduce	36	NEW	21	NEW
E	10%	There is a risk that the transition to a new CEO could result in a loss of confidence of members, stakeholders, investors and business partners, and employees caused by unsuccessful execution of established communication and transition plans.	G4: OS	D	Reduce	28	NEW	18	NEW
F	5%	CalSTRS lacks the ability to meet critical business functions due to recruitment challenges.	G4: OS	D	Reduce	28	No Change	18	No Change
G	5%	CalSTRS is unable to meet critical business functions or maintain service levels due to potential loss of subject matter experts and lack of CalSTRS knowledge transfer.	G4: OS	B	Reduce	32	No Change	21	No Change
H	5%	Staff and leadership turnover could result in loss of long-term business stability and sustainability.	G4: OS	D	Reduce	24	No Change	15	No Change
I	5%	CalSTRS may fail to identify risks caused by staff not being fully engaged for various reasons including competing priorities, which could result in CalSTRS being unprepared for future risks.	G4: OS	D	Reduce	36		15	No Change
J	5%	CalSTRS may not establish or maintain the proper health and safety strategies, measures, training, etc., resulting in compromised employee health and safety.	G4: OS	D	Reduce	32	No Change	21	No Change
K	5%	CalSTRS is unable to complete the Headquarters Expansion Project within the established scope, schedule and budget due to delays with construction (i.e. inspections, approvals or materials) and the additional costs/timeframes associated with those delays.	G4: OS	D	Reduce	21	No Change	18	No Change

Risk Score Report - As of June 30, 2021				Risk Status																
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	Goal 4: Organizational Strength (G4: OS)		A, B, C, D		Accept															

9 Reputational			Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change			
Loss of confidence in CalSTRS as a respected fiduciary of public funds.			29	No Change	19	No Change			
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	25%	A board or staff member engages in unethical behavior resulting in reputational damage.	G4: OS	A	Avoid	28	No Change	24	No Change
B	25%	Failure to implement transformational efforts, such as the Pension Solution, could impact stakeholders, members, staff and public confidence.	G4: OS	B, C	Reduce	32	No Change	18	No Change
C	20%	Investments may be perceived as conducting business in an imprudent and unethical manner due to a lack of transparency in CalSTRS environmentally focused investment efforts, resulting in a loss of public trust.	G1: FG	E	Reduce	30	No Change	24	No Change
D	10%	Inaccurate external reporting of long-term financial assumptions could result in misperceptions of CalSTRS actuarial-calculated funding status and loss of trust within CalSTRS member base.	G4: OS	A	Reduce	27	No Change	9	No Change
E	10%	CalSTRS is unable to meet member service expectations due to resource constraints resulting from competing priorities.	G4: OS	A	Reduce	21	No Change	12	No Change
F	5%	Perceived pension abuses (i.e., spiking) may result in negative news articles and the perception that CalSTRS is not upholding its fiduciary responsibility.	G3: ME	B	Reduce	21	No Change	12	No Change
G	5%	CalSTRS hires an individual whose qualifications are misinterpreted or misrepresented during the hiring process resulting in reputational damage.	G4: OS	D	Reduce	32	No Change	18	No Change

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	Goal 4: Organizational Strength (G4: OS)		A, B, C, D		Accept															

10	Transformational Change					Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
CalSTRS is unable to accomplish major transformational change initiatives.						31		26	
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	40%	CalSTRS is unable to successfully implement a new pension administration system and transform the associated data and business processes within the established scope, schedule and budget due to continual delays.	G2: DT	A	Reduce	32	No Change	32	
B	20%	There is a risk that CGI's staffing issues and limited pension industry experience may result in schedule delays or cost increases to the Pension Solution project.	G2: DT	A	Reduce	32		24	
C	15%	Loss of CalSTRS subject matter experts and challenges associated with replacing them may result in the inability to successfully implement Pension Solution.	G4: OS	D	Reduce	32	No Change	21	No Change
D	10%	The procured vendor does not follow the agreed upon project-related processes to provide the results and functionality necessary to meet CalSTRS' business needs.	G2: DT	A	Reduce	28	No Change	24	No Change
E	5%	Inconsistent business practices could impact design of the new pension administration system and result in operational inefficiencies, control deficiencies, and unaddressed risks.	G2: DT	A	Reduce	32	No Change	15	No Change
F	5%	Lack of cohesive project governance and communication practices could result in uninformed decision making on transformational efforts.	G2: DT	A	Reduce	24	No Change	21	No Change
G	5%	Failure of Pension Solution project to achieve desired results due to lack of stakeholder readiness, adoption, and/or change management leadership.	G3: ME	A	Reduce	28	No Change	20	No Change

11	Third Parties					Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
There is a risk that CalSTRS fails to appropriately manage risks associated with third parties which could result in operational disruption, financial loss, reputational damage, compliance violations or failure to reach strategic goals.						32	No Change	21	No Change
Sub-Risk	Weight	Sub-Risk Statement	Strategic Goal	Strategic Objective	Risk Response	Inherent Risk Score	Inherent Period Change	Residual Risk Score	Residual Period Change
A	100%	An absence of third-party risk management program governance could result in duplication of efforts or assurance gaps which could result in operational disruption, financial loss, reputational damage, compliance violations or failure to reach strategic goals.	All	All	Reduce	32	No Change	21	No Change