GLOBAL EQUITY INVESTMENT POLICY

INVESTMENT BRANCH
SEPTEMBER 2018
B. Global Equity Policy

EXECUTIVE SUMMARY

In accordance with the CalSTRS Investment Beliefs and the CalSTRS Investment Policy and Management Plan, IPMP, the California State Teachers’ Retirement System Board has established an allocation for global equity securities. CalSTRS’ global equity assets are to be invested, administered, and managed in a prudent manner for the sole benefit of its participants and beneficiaries, in accordance with the California Constitution, the Teachers’ Retirement Law, and other applicable statutes. The CalSTRS Investment Beliefs provide a foundational framework to all of CalSTRS investment decision makers and shall guide investment decisions. No investment instrument or activity prohibited by the IPMP shall be authorized for the Global Equity portfolio.

This document is intended to summarize the fundamental objectives and considerations used in the investment, administration, and management of the Global Equity portfolio. These policies are designed to set boundaries that will ensure prudence and care in the management of the global equity assets while allowing sufficient flexibility in the management process to capture investment opportunities.

CalSTRS believes that environmental, social, and governance, ESG, issues can affect the performance of our investments. As a result, the CalSTRS ESG Policy has been developed as a tool that both internal and external investment managers are expected to use to assess the impact of ESG risk when making an investment on behalf of CalSTRS.

Detailed procedures and guidelines for each of the portfolios are maintained separately. As with all other plan assets, these policies cannot be altered without explicit direction from the Board. A flowchart (Exhibit 1) is included to provide the context for the policies within the general process of implementing the Global Equity portfolio. Words and terms that may be unfamiliar to the reader are referenced in the glossary.

PROGRAM OBJECTIVES

The global equity assets shall be invested to improve the diversification of the total investment portfolio and to enhance its risk-adjusted total return. The assets shall be managed to provide long-term capital appreciation as well as generate current income. Consistent with a prudent level of risk, global equity assets shall be managed to achieve optimum performance through diversification across equity market regions, styles, and capitalization.

PERFORMANCE OBJECTIVES

The CalSTRS Global Equity Portfolio includes U.S. and Non-U.S. equity strategies which, in aggregate, are to be structured to achieve a long-term total return in excess of the Global Equity policy benchmark.
Separate and distinct performance objectives and benchmarks shall be established for each of the U.S. and Non-U.S. equity mandates in order to determine whether each portfolio is representative of the market style adopted, and whether the performance objectives have been met.

**PROGRAM BENCHMARK**

The Global Equity policy benchmark is calculated using the U.S. and Non-U.S. weights of the MSCI All Country World Investable Market Index (MSCI ACWI IMI). The U.S. benchmark used in the calculation is the Russell 3000 Custom Index and the non-U.S. benchmark is the MSCI All Country World Index ex-U.S. IMI Custom Index (MSCI ACWI ex-U.S. Custom IMI).

**PROGRAM STRUCTURE**

**Asset Allocation:** Under the direction of the chief investment officer, staff has discretion, within the range, to implement tactical allocations in the Global Equity portfolio.

The target allocations of the U.S. and Non-U.S. equity portfolios shall be equal to the U.S. and Non-U.S. equity weights of the MSCI ACWI IMI, with a range of plus (+) or minus (-) 10 percent.

**Active/Passive Allocation:** The U.S. public equity assets shall be invested using both active and passive management strategies. The target for passive management is 70 percent, with a range of plus (+) or minus (-) 10 percent. The target for active management is 30 percent, with a range of plus (+) or minus (-) 10 percent.

<table>
<thead>
<tr>
<th>U.S. Portfolio Segment</th>
<th>Target Allocation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Active Portfolio</td>
<td>30%</td>
<td>20%-40%</td>
</tr>
<tr>
<td>U.S. Passive Portfolio</td>
<td>70%</td>
<td>60%-80%</td>
</tr>
</tbody>
</table>

The Non-U.S. public equity assets shall be invested using both active and passive management strategies. The emerging markets segment of the portfolio will include active management strategies and may also include ETFs and derivative products. In determining the passive/active ratio for the Non-U.S. equity portfolio, the emerging markets allocation will be excluded. Therefore, the remaining (Non-U.S. equity less emerging markets) portfolio’s target for passive management is 50 percent, with a range of plus (+) or minus (-) 10 percent. The target for active management is 50 percent with a range of plus (+) or minus (-) 10 percent.

<table>
<thead>
<tr>
<th>Non-U.S. Portfolio Segment</th>
<th>Target Allocation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-U.S. Developed Markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Portfolio</td>
<td>50%</td>
<td>40%-60%</td>
</tr>
<tr>
<td>Non-U.S. Developed Markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passive Portfolio</td>
<td>50%</td>
<td>40%-60%</td>
</tr>
<tr>
<td>Emerging Markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Portfolio</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Eligible Securities: The following securities are authorized:

i. All equity securities including listed Exchange Traded Funds, ETFs, and securities that exhibit characteristics of equity securities traded on the local market(s).

ii. Domestic equity securities consisting of all stocks domiciled in the U.S. plus eligible securities including ADRs of international securities traded on the U.S. and Canadian exchanges.

iii. International securities including GDRs of international securities traded on the exchanges of all countries contained in the MSCI All Country World Index ex U.S. and the MSCI Frontier Markets Index.

iv. Units of participation in commingled index funds or trusts.

v. Derivatives. The objectives for using derivatives, including the use of equitization of cash held by passive and active portfolios through the use of derivatives, are to assist in the efficient management of risk, asset allocation and market exposures in the Global Equity portfolio through the use of any derivative tools such as, but not limited to, futures, options, swap agreements, structured notes, warrants, asset trusts, or forward agreements. The implementation of the derivatives strategies shall be thoroughly vetted by staff to conform to the risk management guidelines of the Global Equity portfolio, along with the ranges specified within CalSTRS Global Equity Portfolio Procedures Manual (Procedures). In addition, these strategies may not increase or decrease the global equity exposure to the total fund outside the ranges identified within the IPMP. Further limitations with respect to aggregate risk control and counterparty exposure shall be documented within the Procedures.

vi. Investment restrictions included in the IPMP are hereby incorporated by reference.

Global Equity Internal/External Management: The Global Equity portfolio is managed by both internal staff and external investment managers. Within the boundaries established in the Procedures, approved by the CIO or designee, the decision to hire an external manager or utilize internal investment staff for an investment strategy is made by applying the board-approved decision criteria matrix (Exhibit 2) to evaluate a variety of decision factors including, but not limited to, cost effectiveness/control, market transparency and liquidity, market efficiency, active risk, and infrastructure/resource requirements.

Internal staff shall only implement index-based investment strategies with a maximum forecast tracking error of 50 basis points.

Within the boundaries and ranges established by this policy, staff is responsible for the selection, allocation, and oversight of internally and externally managed portfolios. Comprehensive procedures, manager guidelines, objectives, benchmark selection, forecast tracking error, portfolio composition, constraints, and trading activities are to be monitored across all Global
Equity portfolios. CalSTRS shall also maintain a pool of external managers to supplement the existing external managers or replace a terminated manager, as needed.

Investment managers are required by contract terms and investment guidelines to seek best net execution and act as a fiduciary under California law over plan assets.

Global Equity staff will assess the need for each Global Equity manager to utilize soft dollars for research and then amend each manager’s Investment Guidelines as necessary.

**Transition Management:** The Global Equity unit may use internal or external transition managers to prudently administer and liquidate, if advisable, the existing portfolios of managers that have been relieved of investment management responsibility for CalSTRS.

**Other Strategies:** Periodically the Board will approve investment strategies that may or may not be managed within the global equity asset class specifically, but are instead designed to take advantage of an opportunity and/or to meet a performance objective. Unless a strategy is addressed by a specific policy of its own, Global Equity staff is responsible for the implementation of any strategy that may be directed by the chief investment officer, within the boundaries and ranges established by this policy. Investment guidelines, benchmark selection, tracking error, portfolio composition, constraints, and trading activities are to be administered by staff and integrated into the CalSTRS strategic asset allocation process and risk budget.

**RISK MANAGEMENT**

**Delegation of Authority:** The chief investment officer or designee has the authority to manage the Global Equity asset category and may use other investment personnel to implement these policies and the processes described in the Procedures.

**Forecast Tracking Error:** Portfolios shall be managed within predefined risk or tracking error guidelines. Forecast tracking error is used as a way to control overall portfolio risk. This quantifiable risk is budgeted among the various sub-asset classes of the Global Equity portfolio. These risks are monitored on a daily basis by each portfolio manager and reported weekly to the director of global equity.

**Diversification:** Diversification within investment portfolios is critical in order to control risk and maximize returns. For the U.S. portfolio, minimum and maximum ranges with respect to investment management style and capitalization size shall be established within the context of the characteristics of the performance benchmark as identified in the Procedures. For the Non-U.S. portfolio, minimum and maximum ranges with respect to geographic region shall be established within the context of the characteristics of the performance benchmark. Such ranges, for both the U.S. and Non-U.S. portfolios, shall be documented within the Procedures and are subject to change as conditions warrant, as determined by the director of global equity.

**Authorized Traders:** Authorization letters which indicate who may transact business for the portfolio, including a copy of the most recent IPMP, shall initially be sent to the broker at the time the account is established. Whenever there is a change in authorized personnel, CalSTRS
will notify all brokers in writing within 24 hours in the event of termination, and as soon as possible in the event of a newly authorized trader(s).

Trading Parameters: The following parameters apply with respect to non-cumulative daily trade limits within the internally-managed Global Equity portfolios.

<table>
<thead>
<tr>
<th>Role</th>
<th>Trade Limit</th>
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<tbody>
<tr>
<td>Investment Officer I</td>
<td>Up to 1% per internally managed portfolio</td>
</tr>
<tr>
<td>Investment Officer II</td>
<td>Up to 2% per internally managed portfolio</td>
</tr>
<tr>
<td>Investment Officer III</td>
<td>Up to 2.5% per internally managed portfolio</td>
</tr>
<tr>
<td>Associate Portfolio Manager</td>
<td>Up to 3% per internally managed portfolio</td>
</tr>
<tr>
<td>Portfolio Manager</td>
<td>Up to 4% per internally managed portfolio</td>
</tr>
<tr>
<td>Director of Global Equity</td>
<td>Up to 5% of Total Global Equity portfolio</td>
</tr>
<tr>
<td>Deputy Chief Investment Officer</td>
<td>Up to 10% of Total Global Equity portfolio</td>
</tr>
<tr>
<td>Chief Investment Officer</td>
<td>Up to 10% of Total Global Equity portfolio</td>
</tr>
</tbody>
</table>

For derivatives and transition management portfolios, the above risk-based trading parameters are non-cumulative and are applied to the market value of the U.S. or Non-U.S. segments of the Global Equity portfolio.

MONITORING AND REPORTING

The following reports will be prepared and presented to the Board, unless otherwise stated, in order to facilitate visibility of compliance monitoring and reporting according to this document:

i. Global Equity Semi-Annual Report – prepared by staff

ii. Performance Report – prepared by master custodian/consultant (semi-annually)

iii. Investment Manager Ratings Report – prepared by staff (semi-annually)

iv. Business Plan – prepared by staff (annually)

BOARD REVIEW

Consistent with all other plan assets, the Board or the Investment Committee will review and/or alter this policy periodically, as deemed appropriate, and in keeping with its fiduciary duties and standards.

Adopted by the Teachers’ Retirement Board on June 2, 1999
Revised to approve co-investment program for the CG/Relational Program on July 7, 2004
Revised to approve the structure of the emerging markets portfolio on April 7, 2005
Revised to clarify passive/active allocations on June 7, 2006
Revised address to disposition of securities in CG/Relational Program on July 13, 2007
Revised to include Non-U.S. co-investments in CG/Activist Program and increase discretion on July 10, 2008
Revised to define allowable securities and combine internal and external policies on February 4, 2009

Revised to delegate staff authority regarding U.S./Non-U.S. allocation ranges February 4, 2009

Revised to incorporate cash equitization policy April 1, 2009

Revised to clarify delegation of Corporate Governance trade ticket daily limits August 2009

Revised to update Trading Parameters on April 8, 2010

Revised to update int./ext. mgmt. process, update Trading Parameters, and define Corp Gove Activist Mgrs. on Apr 13, 2012

Revised to confirm Special Situation Investment Authority for Corporate Governance on July 12, 2012

Revised to support additional internal asset management on April 4, 2014

Revised to support the transition to global index weights and to define APM trading limits June 8, 2016

Revised language on soft dollars, updated flowchart (Exhibit 1) to reflect APM in the hierarchy and reflect new reporting frequency on April 5, 2017

Revised to move Corporate Governance Investment Program from Global Equity Policy to the Corporate Governance Policy November 1, 2017

Revised to reflect new policy format and finalize the Program Benchmark as based on global equity index weights on September 20, 2018
EXHIBIT 1

POLICY IMPLEMENTATION FLOWCHART

CalSTRS BOARD
Establishes Policy

CHIEF INVESTMENT OFFICER/
DEPUTY CHIEF INVESTMENT OFFICER
Reviews and Advises
Policy Parameters

ASSET CLASS DIRECTOR
Develops Strategy and Oversees Implementation

PORTFOLIO MANAGER / ASSOCIATE
PORTFOLIO MANAGER
Develops and Implements Portfolio Strategy

INVESTMENT OFFICER
Analyzes, Transacts and Monitors Portfolio Activity
### Internal / External Decision Criteria Matrix

<table>
<thead>
<tr>
<th>Decision Factors</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost-Effectiveness/Control</strong></td>
<td>External</td>
<td>External/Internal</td>
<td>Internal</td>
</tr>
<tr>
<td><strong>Market Liquidity &amp; Transparency</strong></td>
<td>External</td>
<td>External/Internal</td>
<td>Internal</td>
</tr>
<tr>
<td><strong>Market Efficiency</strong></td>
<td>External</td>
<td>External/Internal</td>
<td>Internal</td>
</tr>
<tr>
<td><strong>Active Risk</strong></td>
<td>Internal</td>
<td>External/Internal</td>
<td>External</td>
</tr>
<tr>
<td><strong>Infrastructure/Resource Requirements</strong></td>
<td>Internal</td>
<td>External/Internal</td>
<td>External</td>
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**Cost-Effectiveness/Control**

After including all costs, is internal management able to add more value than external management? All things being equal, management fees increase in direct relation to the risk and complexity of the strategy being managed. Given the narrower band for tracking error (i.e., risk) described earlier in this paper, passive management usually provides opportunities for more cost-effective management of assets, while active management presents the potential to generate alpha. For active management to make sense in the Portfolio, the strategy must generate returns in excess of the benchmark net of management fees which, as discussed in last year’s active/passive study, is difficult to accomplish consistently.

The decision to manage a portfolio internally or externally should not be based solely on who provides the cheapest management fees. Even though many studies have shown that internal asset management typically has a lower cost structure than external management, a more holistic view should be used in the decision making process, which includes control of the assets and market awareness of internal staff. Internal management, it has been argued, allows better coordination over when and how assets are deployed, permits greater control over corporate governance issues, and allows for a more straightforward mechanism to customize investment mandates that align with a plan sponsor’s unique directives. In other words, internal management is able to focus on CalSTRS as its one and only client, versus the multiple accounts among which an external manager must divide its attention. Also, as internal staff begins to manage new
strategies, staff should continue to identify additional ways to take advantage of market inefficiencies when they occur. It should be noted, however, that building in-house investment management expertise can be difficult, given the employment and hiring practices dictated by State employment.

While there seem to be many benefits to internal management, we should recognize that bringing assets in-house requires significant up-front costs which can then be amortized over the investment period. These costs include sufficient staffing levels, computer support systems, specialized software/technology, and access to investment-related data. It is clear that building and sizing the infrastructure, risk management and trading systems, and people are critical to investment success. The same criteria we apply to external managers in terms of people, process, and philosophy apply internally, as well. However, once an infrastructure has been established for an asset class, the incremental costs of adding new strategies may be minimal, depending upon the strategy.

**Market Transparency and Liquidity**

Does the market have enough liquidity and transparency to allow for effective management of the strategy? While it appears that the internal versus external management debate centers around the public (i.e., fixed income and equity) markets, as opposed to the private markets (i.e., private equity and real estate), it is really the transparency and liquidity of the markets within which each strategy trades that is the primary decision factor.

Private markets are generally less transparent and liquid than other asset classes within the Fund. Public equity and debt markets are more transparent, have broadly and widely recognized indices, are highly liquid, and are amenable to structuring a broadly diversified portfolio. This liquidity and transparency, in terms of widely followed market information and pricing, make equity and fixed income portfolio management a different kind of management challenge, as the assets are broadly available for purchase and sale to all with a mandate and the proper business infrastructure/resources.

**Market Efficiency**

Does the strategy operate in a market that is efficient or inefficient? Market efficiency refers to the degree that all investors in a market have access to the same information and, at any given time, security prices reflect all available market information. The decision to manage an active or passive strategy should be directly based on the efficiency of the market. For markets that are considered highly efficient, the probability of consistently outperforming the market is relatively low, which suggests that a passive/core strategy would be appropriate. In markets that are less efficient, the opportunity exists to generate alpha. Finding these market inefficiencies requires dedicated resources to identify securities that are considered mispriced. When these inefficiencies are evident, a skilled active manager can take advantage of these opportunities and construct a portfolio that should generate fee-adjusted returns in excess of the market.

**Active Risk**

Does internal staff have the knowledge and competence to manage the strategy in house? An active strategy requires highly specialized and skilled individuals who are well versed in the pursued strategy and willing to make educated decisions to take prudent risk, in order to achieve a net return higher than the benchmark. A passive or less active strategy still requires skilled individuals; however, the goal of this type of strategy is to track or slightly exceed the strategy’s
benchmark, and the research effort is much less intensive than active managers.

Private equity and real estate are uniquely active markets in which expertise, in terms of property or company type, leverage, deal structure, deal components, and terms, make them truly active investments requiring resources capable of reviewing the fundamentals of the deal structure and capital to fund the deal. With internal management, recruiting investment professionals who have highly specialized skills in active strategies may be difficult. CalSTRS’ compensation structure and the current environment of state budget cuts may provide a headwind to attracting new investment talent. There is also the potential for key investment staff turnover. This will always be a concern in both internal and external portfolios. CalSTRS, like external managers, would seek to construct a bench of talent for any strategy undertaken.

**Infrastructure/Resource Requirements**

Does CalSTRS have sufficient infrastructure and the resources to support the strategy? Technology and risk management systems, along with proper staffing levels (front and middle office) are a key ingredient to operating a successful investment management operation. CalSTRS has gained much of this experience over the last 20 years through the development of our own internal infrastructure, in terms of communications, specialized investment software, and analytical criteria needed to operate in the public fixed income and equity markets, as well as our exposure to external managers.
GLOSSARY

ACTIVE MANAGEMENT – An active manager seeks to outperform the benchmark by buying equities that they believe will provide superior performance versus a benchmark, making concentrated decisions to over or underweight a specific stock or sector of the market based on fundamental, technical, or other criteria.

AMERICAN DEPOSITARY RECEIPTS – (ADR). ADRs represent the ownership in the shares of a foreign company trading on U.S. financial markets. ADRs are typically traded on a U.S. national stock exchange.

BASIS POINT – One hundredth of one percent or .0001 in decimal form.

BENCHMARK – A standard against which the performance of a security, mutual fund or investment manager can be measured. Generally, broad market and market-segment stock and bond indexes are used for this purpose.

BEST NET EXECUTION – Refers to executing client transactions so that the client’s total cost is the most favorable under the particular circumstances at that time. According to the U.S. Securities and Exchange Commission, some of the factors a broker must consider when seeking best execution of a client’s order include: the opportunity to get a better price than what is currently quoted, the speed of execution, and the likelihood that the trade will be executed.

BROKER – Refers to a person or entity registered with the National Association of Security Dealers and provides investment services (research, etc.) and/or execution services.

DERIVATIVE – A derivative is a security whose price/return is dependent upon the price/return of some other underlying asset. Futures contracts, forward contracts, options and swaps are the most common types of derivatives.

DIVERSIFICATION – Investing in a wide range of securities/or asset classes in order to reduce financial risk.

EXCHANGE TRADED FUNDS (ETFs) – ETFs are an investment vehicle traded on stock exchanges which hold assets such as stocks or bonds and trades at approximately the same price as the net asset value of its underlying assets. Most ETFs track an index, such as the Dow Jones Industrial Average or the S&P 500.

FORECAST TRACKING ERROR – The expected standard deviation of the difference between the portfolio return and the benchmark return.

GLOBAL DEPOSITARY RECEIPTS (GDR) – GDRs are certificates issued by a depository bank, which represent ownership of an underlying number of foreign shares. GDRs are commonly listed on international stock exchanges such as the London Stock Exchange
GROWTH STYLE – This style of investment constructs portfolios that have more earnings potential than the benchmark and therefore have the potential to produce superior returns over the benchmark. These portfolios generally exhibit more risk than the benchmark.

INDEXED PORTFOLIO – This type of portfolio is structured to replicate a specific index. The objective is to generate a portfolio that will produce the same return as the index at the same level of risk as the index.

INVESTMENT GUIDELINES – This is a document that establishes the parameters through which the investment manager will invest CalSTRS' assets. These guidelines specify valid securities for the portfolio, the return expected from the manager, how the manager will be evaluated and the period over which the manager will be evaluated.

INVESTMENT POLICY AND MANAGEMENT PLAN – This document outlines CalSTRS general and financial objectives including specific investment strategy. This document is the result of studies that include the assets and liabilities for CalSTRS.

LARGE CAPITALIZATION STYLE – Refers to the investment process that includes a range of styles, from value to growth, that provide active management using large capitalization stocks.

LIQUIDITY – Refers to availability of a stock to be traded. An issue that is readily available is considered to be liquid, an issue that does not trade very often is deemed illiquid.

PASSIVE MANAGEMENT – Passive managers utilize either a replication or optimization method to track a benchmark’s performance. With replication, every security in the portfolio is held in the exact proportion as the benchmark. Optimization seeks to mimic the risk and return characteristics of a benchmark by only holding a subset of the benchmark’s securities.

PERFORMANCE OBJECTIVE – Refers to each individual external manager’s designated benchmark (example, Russell 1000) and their performance target (example, Russell 1000 + 1½ percent).

POOL MANAGERS – Refers to investment managers who have been selected to take the place of funded managers that may be terminated. The pool managers will correct any imbalance caused by the termination of a manager and quickly correct possible unintended bets or tilts.

SMALL CAPITALIZATION STYLE – Refers to an investment process that includes a range of styles, from value to growth, that provide active management using small capitalization stocks.

SOFT DOLLARS – Refers to directed brokerage credits created and used by an investment manager rather than a plan sponsor. The use of soft dollars by investment managers is only allowable under SEC Section 28(e) safe harbor requirements. The term and use of soft dollars has created controversy and criminal actions within the investment management industry as some managers used the client’s credits for services beyond the SEC safe harbor limits.

STRUCTURED NOTE – A security with one or more special features, such as making payments based on an underlying index.
SWAP AGREEMENT (SWAP) – An arrangement between two parties to exchange one security for another, to change the mix of a portfolio or the maturities of the bonds it includes, or to alter another aspect of a portfolio or financial arrangement.

VALUE STYLE – Refers to the investment process which seeks to identify present value rather than future rewards, select stocks that will maintain their price in falling markets or periods of economic uncertainty, and look for stocks that are undervalued but fundamentally strong.

WARRANT – A security that gives the holder the right to purchase securities (usually equity) from the issuer at a specific price within a certain time frame.