MINUTES OF THE REGULAR MEETING OF THE BOARD OF TRUSTEES OF THE EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII

DECEMBER 11, 2017

CITY FINANCIAL TOWER 201 MERCHANT STREET, SUITE 1200 HONOLULU, HAWAII 96813

Trustees present: Mr. Emmit Kane, Chair

Mr. Jerome Rauckhorst, Vice Chair

Mr. Vincent Barfield Dr. Catherine Chan

Ms. Jackie Ferguson-Miyamoto

Mr. Patrick Frane Mr. Wesley Machida Mr. Colbert Matsumoto

Staff present: Mr. Thomas Williams, Executive Director

Ms. Kanoe Margol, Deputy Executive Director

Ms. Donna Curry, Program Specialist Mr. Larry Wolfe, Accounting Manager

Mr. Karl Kaneshiro, Retirement Benefits Manager Mr. Vijoy Chattergy, Chief Investment Officer Mr. Aaron Au, Investment Officer – Illiquid Markets

Mr. Andrew Chen, Investment Specialist Mr. Anthony Goo, Investment Officer

Mr. Howard Hodel, Investment Officer - Risk Management

Mr. Ian Wetzel, Investment Specialist

Ms. Gerri Konishi, Member Home Loan Assistant

Ms. Wanda Kugiya, Secretary

Ms. Dale Kehau Kanae, Recording Secretary

Attorneys present: Ms. Elmira Tsang, Deputy Attorney General (Counsel for ERS Staff)

Ms. Jodi Yi, Deputy Attorney General (Counsel for ERS Staff)

Guests present: Mr. Chae Hong, Aon Hewitt Investment Consulting, Inc.

Mr. Paul Yett, Hamilton Lane Advisors, LLC Mr. Neil Rue, Pension Consulting Alliance, LLC Mr. Grant Jaffarian, Crable Capital Management, LLC Ms. Lisa Martin, Crable Capital Management, LLC

Mr. Lewis Ward, Gabriel, Roeder, Smith and Company (by telephone)

Ms. Leigh Gallagher, Graham Capital Management, LP Mr. Edward Tricker, Graham Capital Management, LP Mr. Dan McLaughlin, Kohlberg Kravis Roberts

Mr. Justin Pattner, Kohlberg Kravis Roberts

Public present: Mr. Riley Fujisaki, House Finance Committee

Mr. Robert Nishimoto, Senate Ways & Means

OUORUM/CALL TO ORDER

A quorum being present (Chair Kane, Vice Chair Rauckhorst, and Trustees Chan, Ferguson-Miyamoto, and Frane), Chair Kane called the regular meeting of the Board of Trustees (Board) of the Employees' Retirement System (ERS) of the State of Hawaii to order at 9:00 a.m.

PUBLIC COMMENT

Chair Kane called for public comment. There were no comments from public in attendance.

RECESS

Chair Kane called for a recess at 9:01 a.m. and announced that the meeting would reconvene following the conclusion of the Chapter 91 proceedings and the Investment Committee meeting.

(All in attendance left the meeting except for Chair Kane, Vice Chair Rauckhorst, and Trustees Chan, Ferguson-Miyamoto, and Frane; Executive Director, Mr. Thomas Williams, Retirement Benefits Manager, Mr. Karl Kaneshiro; and Deputy Attorney General Ms. Jodi Yi).

RECONVENE

A quorum being present (Chair Kane, Vice Chair Rauckhorst, and Trustees Chan, Ferguson-Miyamoto, Frane, Machida, and Matsumoto), Chair Kane reconvened the meeting at 10:36 a.m.

AMENDMENT OF THE **AGENDA**

Chair Kane requested that the Board amend the agenda to include the addition of the following as item number 1, under the Executive Session and that the subsequent items be renumbered to reflect the addition:

1. Pursuant to HRS § 92-5(2)(4), to consult with the Board's attorneys on questions and issues pertaining to the Board's powers and duties, and the evaluation of an officer.

On a motion made by Trustee Ferguson-Miyamoto, seconded by Trustee Frane, and unanimously carried, the Board agreed to amend the agenda as requested by Chair Kane.

GRAHAM CAPITAL MANAGEMENT, L.P.

Ms. Leigh Gallagher, Executive Director of Investor Relations and Mr. Edward Tricker, Managing Director and Head of Research & Development of Graham Capital Management, L.P. (GCM) gave an oral and written presentation on:

GLOBAL ALTERNATIVE INVESTMENT STRATEGIES GRAHAM QUANT MACRO (GQM)

Firms Background

- Firms Highlights
- Our Mission.

GCM Organizational Structure and Governance Introduction to Quantitative Trading at GCM GQM: Overview

- **Strategy Description**
- - Portfolio Summary
 - Trading Style
 - Asset Coverage
 - Volatility Target
 - Portfolio Construction/Risk Management
- Philosophy and Benefits Overall, the philosophy of GQM is premised on:

GRAHAM CAPITAL MANAGEMENT, L.P. (cont'd)

- Diversification
- Portfolio Construction & Risk Management
- Diversified Sources of Alpha
- Efficient Execution & Infrastructure

GQM: Portfolio Construction

• Signal Generation: 4 Factors

Factors: Fundamental, Value, Carry, Momentum

• Investment Universe: 55 Markets

Asset Classes: Equity Indices, Currencies, Fixed Income, Commodities

• Optimization Process: Risk Overlay

Risk Overlay: Aggregates the outputs of the underlying trading signals; Diversifies exposure across markets, sectors and trading styles; Lowers execution costs by reducing excessive and unnecessary trading.

GQM: Why Four Factors?

- GCM has significant experience investing in global macro markets through both discretionary and systematic trading. Based on this experience, GCM's Quantitative Research team identified four major themes that drive individual asset returns throughout the market cycle: carry, macro fundamental factors, momentum and value.
- Quant Macro's four factors are run at all times, and each behaves somewhat differently in various market environments, providing a level of diversification in combining these factors into one investment.

GQM: Underlying Factors

- Carry: Carry Strategies generate returns based on the yield levels of an underlying asset and changes in yield. In stable market environments, carry strategies profit as "positive carry" assets, or assets with a high yield, tend to appreciate in price while "negative carry" assets, or assets with a low yield, tend to depreciate in price. In periods of high volatility and large absolute changes in yield, GQM's carry signals benefit as positively convexed assets will tend to appreciate in price and negatively convexed assets will tend to depreciate in price.
- Macro Fundamental: Macro fundamental analysis takes into consideration non-price-based, macroeconomic drivers to predict future price movement within various markets. GQM's fundamental signals assess data including macroeconomic releases, macroeconomic surveys, supply and demand ratios, and market sentiment. In total, these signals incorporate more than 35 discrete data points across the G10 and major emerging markets and commodities.
- Momentum: Momentum signals detect persistent price movements in the
 intermediate to long-term scale. GQM's momentum signals are tactical in
 nature, gradually buying and selling based on a number of factors, including
 price and volatility. GQM's momentum signals are also adaptive, applying
 machine-learning techniques to dynamically adjust position weighting and
 response speeds as market conditions dictate.
- Value: Value signals assess price action or the relationship between price and volatility. When relationships have moved too far relative to the fair price, a convergence trade is initiated. These signals forecast the fair price of an asset and compare it with the current price to measure alpha potential.

Differentiated Alpha: Comparison vs Trend-Following Crisis Risk Offset: Ability to Profit in Various Market Environments Differentiating Characteristics GRAHAM CAPITAL MANAGEMENT, L.P. (cont'd)

- **No Long or Short Bias**: The strategy has no bias to any one market, sector, factor or direction. The strategy incorporates systematic constraints to prevent over-concentration in a particular market, sector or factor.
- **Dynamic Weighting between Factors**: Allocations to the factors are dynamic, with adjustments made on a daily basis based on the rolling six month correlations between the factors in an effort to prevent concentration to any individual factor.
- **Directional Trading**: While other multi-factor or risk premia strategies may have relative value characteristics, GQM is directional in nature. We believe this leads to lower levels of leverage and a more consistent risk profile with smaller tails. This also enables the strategy to capture market sector rotation gains, rather than remaining fully invested in sectors that may have weak expected returns.
- Money Management Controls: Money management controls limit potential drawdowns that may result from sharp reversals. These techniques are tactical in nature, scaling out of losing positions rather than acting as hard stops.
- **Portfolio Construction Process**: GCM's proprietary portfolio construction process is used to diversify risk across markets to optimize portfolio construction and enhance returns.

HIERS Managed Account: Performance Results

Following their presentation, Ms. Gallagher and Mr. Tricker left the meeting.

(Trustee Vince Barfield entered the meeting at 11:03 a.m.)

CRABEL CAPITAL MANAGEMENT, LLC

Ms. Lisa Martin, Director of Business Development and Mr. Grant Jaffarian, Portfolio Manager of Crabel Capital Management, L.L.C. (Crabel) gave an oral and written presentation on:

CRABEL ADVANCED TREND

Conclusions

Our Firm: Crabel Capital

- General
 - Nearly three decades of institutional asset management experience;
 - Deep experience in alpha strategy development;
 - Research & Development focus throughout firm's history;
 - Flagship program has added uncorrelated returns to stock/bond portfolios with controlled downside for several decades; and
 - Unique culture blends two key attributes: (i) deeply experienced and tenured portfolio management talent; and (ii) top-tier innovative technical development talent.
- Technology
 - Likely one of the top-five largest futures trading organizations* in the world has developed a similarly state-of-the-art technological infrastructure to compete with the world's best high-frequency trading firms:
 - External and internal risk controls for trade execution complement strategy specific risk management rules and controls;
 - Approximately half of personnel and budget dedicated to technological innovation.
- * Speculative. This comment is based on Futures Exchange organizations' feedback, likely only larger futures trading organizations in the world are

CRABEL CAPITAL MANAGEMENT, LLC (cont'd)

proprietary high-frequency-trading firms.

- Strategy Development
 - Only unique strategies are pursued within Crabel nothing redundant or "tired":
 - Research environment is proprietary and leverages firm's unique lowlatency execution platform and real-time-market testing environment.

Crabel Advanced Trend

- What Investors Get
 - A constantly researched approach;
 - Consistent Long Term Trend Following;
 - Deep market diversification;
 - History of benchmark outperformance (every year since inception has outperformed the volatility-adjusted Society Generale Trend Index);
 - A full "leveraging" of all that Crabel has to offer including industry leading, proprietary, low-latency algorithmic execution.
- What Investors Pay
 - A Flat Fee structure;
 - Incentive only and no management fee options also available.
- Why a flat fee?
 - Despite Advanced Trend targeting best in class trend following returns relative to expensive offerings, it is Crabel's view that investors should demand flat fee trend following;
 - The leveraging of existing Crabel infrastructure makes it possible.

Organizational Structure

Following their presentation, Ms. Martin and Mr. Jaffarian left the meeting.

HAMILTON LANE ADVISORS, LLC – PRIVATE EQUITY PROGRAM UPDATE Mr. Paul Yett, Managing Director of Hamilton Lane Advisors, LLC, gave an oral and written presentation on:

<u>PRIVATE EQUITY PROGRAM UPDATE – DECEMBER 2017</u> PORTFOLIO REVIEW

PE Portfolio Highlights – June 30, 2017

- Performance
- Value Creation

Portfolio Snapshot

HIERS Since Inception Portfolio Snapshot

Portfolio NAV Growth

• Annual NAV Growth

Portfolio Summary

Performance Review by Strategy

Portfolio Review by Vintage Year

2017 Commitment Summary

TACTICAL PLAN UPDATE

2017 Private Equity Tactical Plan (Recap)

Below are the key initiatives highlighted in November 2016 as part of the 2017 Tactical Plan

- Commit \$450M to \$600M during 2017. HL/HIERS approved \$573M in 2017 commitments; \$507.4M closed YTD (including \$50M approved by Staff).
- Focus on constructing a concentrated portfolio with largest commitments to Foundation Managers. Nine of the twelve commitments closed YTD represent re-ups to strong performing existing managers.

HAMILTON LANE ADVISORS, LLC – PRIVATE EQUITY PROGRAM UPDATE (cont'd)

- Maintain larger average commitment size. Average closed commitment size is \$42.3M, on par with 2016 average of \$45.1M.
- Primary commitment focus on Buyout investments, with tactical exposure to specific investment strategies such as Credit and Energy; moderate Venture Capital exposure. (Re-up to strong performing Credit managers: Benefit Street IV (\$50M), Ascribe IV (\$35M). Re-up to top Energy manager EnCap XI (\$50M). Re-up to a top Venture Capital manager NEA 16 (\$25M).
- Construct a geographically diverse portfolio with primary exposures to North America and Europe, coupled with opportunistic investments to Emerging Markets and Asia. YTD: the Portfolio has re-upped to top European manager CVC VII (\$50M). YTD: the Portfolio has re-upped to a top performing Emerging Markets manager Abraaj VI (\$50M). The Portfolio expects to close on first Pan-Asia relationship by year-end.

2018 Tactical Plan

- **General Partner Relationships**. Concentrate commitments with Foundation Managers.
- **Commitment Sizing**. Maintain larger average commitment size. Larger commitments to Foundation Managers.
- **Strategic Diversification**. Primary commitment focus on Buyout investments. Build exposure to Credit-related investments. Opportunistically invest in high-conviction Venture Capital managers.
- **Geographic Diversification**. Maintain current geographic exposure, with primary commitments in North America and Western Europe.
- Commitment Pacing. Hamilton Lane recommends commitment pacing of \$500-\$600 million for 2018 – Inclusive of any HIERS Staff approved commitments.

Pacing and Exposures

- **2007 2016**¹. Commitment pacing growing to meet target 46% average annual increase from 2014-2016. Committed to 6-19 partnerships.
- The Action Items. Implement annual pacing plan to reach 13.5% PE allocation \$450-\$600M in 2017. Concentrate Portfolio and increase average commitment size. Maintain commitments to performing Foundation Managers.

Commitment Pacing – PE Allocation by Year

On a motion made by Trustee Barfield, seconded by Vice Chair Rauckhorst, and unanimously carried the Board approved the 2017 Private Equity Tactical Plan.

Mr. Paul Yett, Managing Director of Hamilton Lane Advisors, LLC, continued and gave an oral and written presentation on:

PRIVATE EQUITY MARKET UPDATE

The New Normal in Private Market Fundraising...

... is reasonable, in context

- Private markets fundraising <2.0% of the MSCI World market cap (\$38.4T).
- Fundraising in 2017 expected to stay at recent levels.

More Choices, less time to close

• Buyout funds continued to close quickly during the first half of 2017 (Pitchbook) – Shortest time in last 12 years for Private Equity funds.

Discipline in the Deal Markets

Contribution pacing holds steady (below average)

Average rate of contribution from 2009 on is 34.3% compared to 39.0% for last 17.5 years (37.1% YTD)

ANNUAL STRATEGIC PLAN FOR THE PRIVATE EQUITY PROGRAM MANAGED BY HAMILTON LANE ADVISORS, LLC ANNUAL STRATEGIC PLAN FOR THE PRIVATE EQUITY PROGRAM MANAGED BY HAMILTON LANE ADVISORS, LLC (cont'd) Less Mega in "Mega" fund category.

- Aggregate value of mega deals was low in 2017
- Deal count remains reasonably active.

Does Pricing Continue to Moderate Activity?

All regions are fully priced

- Purchase price multiples remain elevated
- Notably, private markets pricing still below public markets, though tighter spread from prior decade
- Is Western Europe more competitive? Valuation growth outpacing other markets

Leverage Multiples at Acquisition

- Leverage multiples below crisis-era peak levels
- Yet, nearly one-third of loans to PE-backed U.S. companies in 2017 are leveraged six times or more. (S&P LCD)

Active Debt Markets Ahead of Looming Rate Hikes

- Leveraged loan volume is on track to hit peak levels in 2017 (\$564.6 billion through ten months)
- High-yield volume holds steady for second consecutive year
- Note: 86% of sponsor-backed deals done in the last 12 months used floating rate loans (UBS)

What about interest rates rising?

- Could current world interest rates be close to the norm?
- Long-term average of 4% suggests the answer is yes

Liquidity Levels Remain Elevated

2017 distribution activity on pace to reach or exceed highest levels

- Rate of distributions at 25.8% reaching above long-term average distributions
- Buyout represents 48% of total distributions. Venture Capital 13%
- Median holding period for buyout deals lengthens. Averaged 5.5 years 2011-2015. Jumped in 2016 to 6.2 years.
- 23% of distributions YTD 2017 are from funds 6-8 years old

IRR Leaders of the Pack?

Venture Capital

- Tech driving returns in multi-stage VC funds
- Number of US-PE backed IPOs declining since 2014 (Pitchbook)

Buyout

- EU Buyout strong performer in 2014
- US Large/Mega outperformed All private Markets by at least 190 bps last four years

All Private Markets

• Recent vintages have solid returns, yet moderated by Natural Resources sector

Mr. Paul Yett, Managing Director of Hamilton Lane Advisors, LLC, continued with an oral and written presentation on:

VENTURE INVESTING

Private Equity Strategies & Risk/Return

The sub-strategies within Private Equity have varying risk/return profiles

- Venture Capital is at the furthest end of the risk/return spectrum Venture Capital Strategy Profile
- **Key Characteristics**: Small stakes in high growth profile companies. Largely unproven businesses either launching a new product, limited revenue or negative net income. Typically non-control positions.
- **Primary Geographies**. Primarily the United States. Some exposure in

HAMILTON LANE FURTHER CONSIDERATIONS FOR VENTURE INVESTING HAMILTON LANE FURTHER CONSIDERATIONS FOR VENTURE INVESTING (cont'd)

- Europe. Less exposure in the rest of the world / emerging markets.
- **Risk-return Profile**. High risk, high return strategy, many Venture Capital funds expect to generate >10.0x gross multiples on investments. High number of failing investments. Small number of huge winners.
- **Common Terms**. 2.5% management fee on committed capital. 20% to 30% carry / no preferred return.
- Example General Partners. Accel. Spark Management Partners. Sequoia Ventures.
- **Example Companies**. Twitter, valued at >35.0x MOIC. Facebook, valued at 377.0x MOIC. Uber, valued at a 353.7x MOIC.

Periodic Table of Returns

Periodic Table Movers

- Multi-stage and seed/early venture have generated strong IRRs but the distributions have lagged other sectors.
- Distressed debt and real estate are the top-performing strategies by DPI.
- ROW performance has lagged in both IRR and DPI.

HIERS' Performance by Strategy & Attribution

- Venture Capital is the Portfolio's lowest performing strategy.
 - Representing 12.86% of commitments, it detracts 178 bps from Portfolio's IRR performance.
 - 69 VC funds. Average investment commitment: \$5.3M. Average investment commitment not including last five years: \$4.3M

Venture Capital – Observations and Looking Ahead

- Venture Capital is a difficult strategy to invest in:
 - High risk/ high reward strategy. HIERS' lowest performing strategy of scale (excludes minimal co-invest).
 - Difficult to invest with scale. HIERS' average target commitment is \$50M.
 - Allocation challenges with top tier managers. For performance to have meaningful Portfolio impact, likely \$20M+ needed in a VC Fund.
 - FOIA challenges for US Public Pensions. Venture managers are resistant to heightened disclosure/transparency given the nature of their investments (e.g. Family Offices, Endowments, etc. – not subject to FOIA).
 - Consistent with the objectives from each HL-HIERS Annual Strategic
 Plan since HL took over Portfolio, Venture Capital exposure has
 moderated considerably. Given access to top managers and appropriate
 pacing, Venture Capital can generate attractive returns. Hamilton Lane
 seeks to maintain exposure to existing top tier VC managers, while
 opportunistically seeking to gain access to select new top tier venture
 capital firms.

Accessing Venture Capital

HIERS is currently accessing Venture Capital primarily through two areas:

- Hamilton Lane Discretionary Portfolio:
 - ~\$25M to Venture Capital per year (out of \$500-\$600M).
 - Additional ~\$50M to Growth Equity managers.
- Stafford HiTIPS Program:
 - Relatively smaller commitments, opportunistic, co-investment.
 - Local Hawaii investment focus.

Additional Venture Capital Access Strategies to Consider:

- Separate Managed Accounts (SMA).
 - Strategic relationship with well-known VC manager. (Single manager

HAMILTON LANE FURTHER CONSIDERATIONS FOR VENTURE INVESTING (cont'd) risk is a concern).

- Venture Capital Fund-of-Funds
 - Access/diversify to larger VC market through Fund of Funds structure.
 (Double layer of fees is a concern).

Following his presentations, Mr. Yett left the meeting.

RECESS

Chair Kane called for a recess for lunch at 12:10 p.m.

RECONVENE

A quorum being present (Chair Kane, Vice Chair Rauckhorst, and Trustees Barfield, Chan, Ferguson-Miyamoto, Frane, Machida, and Matsumoto), Chair Kane reconvened the meeting at 12:30 p.m.

PRELIMINARY
VALUATION RESULTS
AND STRESS TEST
REPORT TO
LEGISLATURE FOR
JUNE 30, 2017, BY
GABRIEL, ROEDER,
SMITH AND COMPANY

Mr. Thomas Williams, Executive Director, with the assistance of Mr. Lewis Ward, Consultant from Gabriel, Roeder, Smith and Company via telephone, presented the ERS June 30, 2017, Preliminary Valuation Results and Stress Test Report.

Mr. Williams noted that this is a preliminary report and a more detailed report will be presented in the next Board meeting in January for adoption. The results will also be presented by ERS and Gabriel, Roeder, Smith and Company to the State Legislature, both House and Senate, as well as State Employers.

Mr. Ward reviewed a handout presented:

Summary

- Actuarial valuation results show System is on target to be fully funded in less than 30 years.
 - Primarily due to legislated employer contribution increases.
 - Investment performance improved future funding position as well.
- Stress test shows that System is sustainable in a low return environment.

On a motion made by Trustee Matsumoto, seconded by Vice Chair Rauckhorst, and unanimously carried the Board accepted the Preliminary Valuation Results and Stress Test Report that will be submitted to the Legislature.

REPORT OF THE ADMINISTRATIVE AND LEGISLATIVE COMMITTE Trustee Ferguson-Miyamoto, Chair of the Administrative and Legislative Committee reported that at their meeting held on December 4, 2017, they discussed the potential ERS legislative proposals in detail. In particular, they discussed BUF-009 (Amendment to Change the Definition of ERS Compensation for All Benefits Earned After June 30, 2018), with regard to pension spiking (not listed on the handout in the Board packet today). The Committee needs more information regarding the impact of past pension reforms and requested projections on the impact of future pension reforms to determine if additional legislation should be introduced in future legislative sessions.

Executive Director Williams added that an actuarial assessment done several years ago regarding the impact of our excluding overtime in the calculation of benefits would not be reliable today. The Committee requested that the actuaries calculate the impact of other pay exclusion on benefits and our liabilities compared to, the reduction of ERS contributions. Other changes discussed, included the revision of sick leave conversion and the impact that it would have. The Committee recommended that BUF 009 not be forwarded to the Board at this time, however, does recommend going forward with the rest of the proposals.

LEGISLATIVE PROPOSALS RELATING Ms. Donna Curry, Program Specialist provided a review of the ERS legislative proposals for the 2018 legislative session. Ms. Curry provided an amended list

TO THE EMPLOYEES' RETIREMENT SYSTEM FOR THE 2018 LEGISLATIVE SESSION citing corrections made to the list provided in the Board packet and noted that BUF-007 should be corrected to BUF-006. All ERS potential proposals BUFs -001,-002,-003,-004,-005,-006, and -008 were presented as listed. Mr. Thomas Williams, Executive Director commented that regarding BUF-003, a Legislator suggested we might improve our chances for this bill to pass if we took out the reference to "future investment staff" and just have it "relate solely to the investment specialist."

Ms. Curry discussed BUF-006 (on the list) and BUF-007 (not on the list): the two qualified domestic relation order amendments. Both amendments requested a delayed implementation date from July 2018 to July 2020 and that ERS be authorized to use its funds to upgrade its computer system. The Administrative & Legislative Committee, recommended going forward with the amendment that would also reduce the scope of the payments to the alternate payees for the lifetime of the ERS member or retiree.

On a motion made by Vice Chair Rauckhorst, seconded by Trustee Ferguson-Miyamoto, and unanimously carried, the Board approved the ERS potential proposals BUFs -001, -002, -003, -004, -005, -006, and -008 to be submitted to Budget & Finance to be included in the Governor's package for the 2018 legislative session.

(Trustee Matsumoto; Mr. Riley Fujisaki, House Finance Committee; and Mr. Robert Nishimoto, Senate Ways and Means left the meeting at 1:20 p.m.)

2017 VERIFICATION OF INVESTMENT MANAGER COMPLIANCE WITH THE EMPLOYEES' RETIREMENT SYSTEM'S DERIVATIVES POLICY Mr. Neil Rue, CFA of Pension Consulting Alliance, Inc. (PCA), presented to the Board a memorandum regarding the 2017 Verification of Investment Manager Compliance with ERS's Derivatives Policy as a receive and file. Mr. Rue, however, discussed briefly the:

Summary and Findings

The ERS's investment policies and procedures require their investment managers' use of derivatives be reviewed on an annual basis. PCA requested each of the ERs's 21 current external managers certify that they were in compliance with the objectives and constraints of the ERS' Derivatives Guidelines in the Investment Policy Statement for the fiscal year ending June 30, 2017, as well as provide a summary of derivatives used and their purpose in the portfolio. PCA received and reviewed the annual "Certification of Compliance with the ERS's Derivatives Guidelines' from all 21 of the ERS's funded managers. A table with details of which managers utilized derivatives during this period was provided. (A report, the "Derivatives Policy Review: Manager Responses"

- booklet, containing each of the manager's responses is available upon request.)
 PCA's review of the managers' responses finds:
 All managers certified they received and understand the Derivatives Guidelines as outlined in the ERS's Investment Policy Statement.
- Seventeen of 24 mandates utilized derivatives during the period for the following reasons:
 - Global Equity: One of the ERS's global equity managers utilized derivatives during the period for cash flow management and equitizing accruals/pending payables.
 - o Legal & General (Global Equity passive)
 - Options-Based Equity: All three of the ERS's options-based equity managers utilized derivatives for implementing their respective nonreplication covered calls and put-writing mandates.
 - o Gateway (Non-Replication Covered Calls and Put Write)

2017 VERIFICATION OF INVESTMENT MANAGER COMPLIANCE WITH THE EMPLOYEES' RETIREMENT SYSTEM'S DERIVATIVES POLICY (cont'd)

- Neuberger Berman
- o UBS
- Extended Global Credit: All three of the ERS's extended global credit managers utilized derivatives for similar reasons.
 - Tortoise Credit Strategies (formerly Bradford & Marzec) hedge currency exposure
 - o PIMCO manage/adjust interest rate, credit, and volatility exposure; generate income; hedge or gain exposure to foreign currencies
 - Western Asset hedge the portfolio to reduce risk and adjust exposure along the yield curve; shift portfolio duration to its target position; adjust credit and interest rate exposure; gain exposure to various currency markets and/or to hedge against foreign currency fluctuations
- Principal Protection: Both of the ERS's Non-US Intermediate Fixed Income managers utilized derivatives for the following reasons.
 - Oechsle International hedging purposes; add value
 - PIMCO manage/adjust interest rate, credit and volatility exposure; generate income; gain exposure to foreign currencies
- <u>Crisis Risk Offset (CRO)</u>: All six of the ERS's alternative return capture and systematic trend following managers utilized derivatives to implement their respective strategies.
 - Graham (Alternatives Return Capture)
 - o P/E Global (Alternative Return Capture)
 - Welton (Alternative Return Capture)
 - Aspect (Systematic Trend Following)
 - Campbell (Systematic Trend Following)
 - Crabel (Systematic Trend Following)
- Real Return: One of the ERS's real return managers, within the global inflation-linked sub-class utilized derivatives. Derivatives were used to provide efficient exposure to currency; hedge currency exposure; adjust/hedge duration and curve positioning; express a view on volatility or hedge volatility; and express breakeven positions and nominal rate curve views.
 - o BlackRock (GILS)
- None of the managers who utilized derivatives noted caveats to their compliance with the ERS's Derivatives Guidelines.

(As of October 2017, PIMCO manages two separate mandates: Extended Global Credit and Non-US Intermediate Fixed Income. BlackRock manages two separate mandates: Global Alpha Tilts and Global Inflation-Linked Securities Excerpts from the following Appendices of the Employees' Retirement System of the State of Hawaii – Investment Policy, Guidelines, and Procedures were also provided: Section D (Broad Growth Program); Section E (Principal Protection Program); Section F (Real Return Program); and Section I (Crisis Risk Offset Program).

INVESTMENT POLICY REVISIONS: APPROVAL OF REVISED REAL ESTATE PROGRAM AND OTHER ITEMS Mr. Neil Rue, CFA of Pension Consulting Alliance, Inc. (PCA), presented to the Board a memorandum on the Investment Policy Statement (IPS) Updates and the Investment Policy, Guidelines, and Procedures (approved December 2017). *Summary*

Over the last several months, the ERs Board has approved several changes to the IPS. In addition, the ERS Board reviewed recommended changes to the Real Estate section of the IPS at the November Board meeting. PCA recommends the ERS Board approve and accept the updated IPS, which contains all the above changes, in addition to other relatively minor changes that (i) reflect the above

INVESTMENT POLICY REVISIONS: APPROVAL OF REVISED REAL ESTATE PROGRAM AND OTHER ITEMS (cont'd) changes throughout other sections of the IPS, or (ii) help streamline existing ERS investment activities.

Discussion

Over the last several months, the ERS portfolio has undergone several routine and approved changes that require changes to the IPS. These changes are: Routine / Prior Approvals

- Shifting the strategic allocation to previously-approved evolving allocation targets (per 2015 A/L Study policy approval);
- Shifting the Core Real Estate to the Stabilized Growth class, shifting the Non-Core Real Estate to the Private Growth class, and eliminating the prior Real Estate class designation (per 2015 A/L Study policy approval);
- Incorporating previously approved structural changes as part of the Principal Protection class re-structuring (March 2017 Board meeting and subsequent meetings).

New Approvals

- Establishing an allocation range for Non-Core Real Estate within the Private Growth class; and
- Streamlining the ERs manager reporting requirements.

All the above changes reflect continued implementation and streamlining of the ERS Board decisions flowing out of the 2015 Asset-Liability Study. IPS changes on the horizon include potential adjustments to the Credit segment of the Stabilized Growth class, potential structural changes to the Real Return class, expected modifications to the Crisis Risk Offset class, among others. Attached is a final copy of the relevant sections of the IPS containing the above-described changes. A full copy of the new IPS has been sent to staff and will be posted to the ERS website.

Mr. Vijoy Chattergy, Chief Investment Officer and Mr. Aaron Au, Investment Officer – Illiquid Markets concur with PCA's updates and submit the following: *Recommendation*

Staff recommends that the Board of Trustees approve the proposed Real Estate program policy revisions as presented in the November 13, 2017, Board meeting. *Background and Discussion*

At the November 13, 2017 Board meeting, staff and its real estate consultant, Aon Hewitt Investment Company (Aon), presented a redlined version of the proposed changes to the Real Estate Program policy. Due to the voluminous nature of the changes, a recommendation for approval would be presented at the December 2017 Board meeting. This would afford the Trustees and others more time to review the proposed policy changes and provide comments, if any.

Staff also solicited the input of PCA and its core real estate separate account manager, Heitman. The policy language incorporates the materials and feedback developed to this point and will provide clear direction to all stakeholders on the intended process for managing and PCA and its core real estate separate account manager, Heitman. The policy language incorporates the materials and feedback developed to this point and will provide clear direction to all stakeholders on the intended process for managing and monitoring the real estate portfolio under the new risk/functional class framework.

Staff recommends that the Policy as presented at the November 13, 2017, Board meeting be approved.

On a motion made by Trustee Barfield, seconded by Trustee Machida, and unanimously carried, the Board approved the Policy as presented at the November 13, 2017, Board meeting.

2018 INVESTMENT SUMMIT

Mr. Anthony Goo, Investment Officer – Liquid Markets and Mr. Vijoy Chattergy, Chief Investment Officer, provided the Board a memorandum for informational purposes of the upcoming Investment Education Summit. This year's Summit is scheduled for July 25-27, 2018, and will be held on Kauai at The St. Regis Princeville Resort. The selection process is explained and the cost of the event, estimated at \$39,403, is provided in detail.

TRUSTEE ELECTION RESULTS

Mr.Thomas Williams discussed the process of the Board of Trustees election and presented the results provided by KMH LLP. It was declared that Genevieve S. Ley received the most votes and will be the next Board Trustee. Mr. Williams will notify all candidates by telephone and letter of the election results.

On a motion made by Trustee Barfield, seconded by Vice Chair Rauckhorst, and unanimously carried, it was declared by the Board that Genevieve Ley was the candidate receiving the highest number of votes.

RESOLUTION RELATING TO PATRICK FRANE

The Board and ERS staff recognized Trustee Frane for his many years of dedicated service to the Board with a Board commendation and an Excellence in Service Award.

ENTER EXECUTIVE SESSION

On a motion made by Vice Chair Rauckhorst, seconded by Trustee Barfield and unanimously carried, the Board entered into Executive Session at 1:39 p.m.

- Pursuant to HRS § 92-5(2)(4), to consult with the Board's attorneys on questions and issues pertaining to the Board's powers and duties and evaluation of an officer.
- Pursuant to HRS § 88-27.5(a)(1), to conduct discussions and deliberations relating to, and to make a decision upon, an investment by the Employees' Retirement System in Kohlberg Kravis Roberts (KKR) Real Estate Partners Americas II, L.P.
- Pursuant to HRS § 88-27.5(a)(1), to conduct discussions and deliberations relating to, and if appropriate, to make decisions upon Crisis Risk Offset due diligence reports.
- Pursuant to HRS § 92-5(a)(4), to update the Board regarding a pending securities class action suit that the ERS is involved in, and to consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities and liabilities with respect to such litigation, and appropriate action.
- Pursuant to HRS § 92-5(a)(4), to consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities with respect to Special Deputy Attorneys General: Tax Counsel; appropriate action.
- Pursuant to HRS § 92-5(a)(4), to consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities with respect to Special Deputy Attorneys General: Investment Counsel; appropriate action.

EXECUTIVE SESSION PURSUANT TO HRS § 92-5(2)(4), TO CONSULT WITH THE BOARD'S ATTORNEYS ON QUESTIONS AND
ISSUES PERTAINING TO
THE BOARD'S POWERS
AND DUTIES AND
EVALUATION OF AN
OFFICER

EXECUTIVE SESSION, PURSUANT TO HRS § 88-27.5(A)(1), TO **CONDUCT DISCUSSIONS AND DELIBERATIONS** RELATING TO, AND TO MAKE A DECISION UPON, AN INVESTMENT BY THE EMPLOYEES' RETIREMENT SYSTEM IN KOHLBERG KRAVIS ROBERTS (KKR) REAL **ESTATE PARTNERS** AMERICAS II, L.P.

(Chair Kane delegated his authority to Vice Chair Rauckhorst for the remainder of the meeting and left at 2:17 p.m.)

EXECUTIVE SESSION, PURSUANT TO HRS § 88-27.5(A)(1), TO CONDUCT DISCUSSIONS AND DELIBERATIONS RELATING TO, AND IF APPROPRIATE, TO MAKE DECISIONS UPON CRISIS RISK OFFSET DUE DILIGENCE REPORTS

EXECUTIVE SESSION,
PURSUANT TO HRS §
92-5(A)(4), TO UPDATE
THE BOARD
REGARDING A
PENDING SECURITIES
CLASS ACTION SUIT
THAT THE ERS IS
INVOLVED IN, AND TO
CONSULT WITH THE
BOARD'S ATTORNEYS
ON QUESTIONS AND
ISSUES PERTAINING TO

THE BOARD'S POWERS, DUTIES, PRIVILEGES, IMMUNITIES AND LIABILITIES WITH RESPECT TO SUCH LITIGATION, AND APPROPRIATE ACTION

EXECUTIVE SESSION, PURSUANT TO HRS § 92-5(A)(4), TO CONSULT WITH THE BOARD'S ATTORNEYS ON **OUESTIONS AND ISSUES PERTAINING TO** THE BOARD'S POWERS, DUTIES, PRIVILEGES, IMMUNITIES, AND LIABILITIES WITH RESPECT TO SPECIAL **DEPUTY ATTORNEYS** GENERAL: TAX COUNSEL: APPROPRIATE ACTION

EXECUTIVE SESSION, PURSUANT TO HRS § 92-5(A)(4), TO CONSULT WITH THE BOARD'S ATTORNEYS ON **QUESTIONS AND** ISSUES PERTAINING TO THE BOARD'S POWERS, DUTIES, PRIVILEGES, IMMUNITIES, AND LIABILITIES WITH RESPECT TO SPECIAL **DEPUTY ATTORNEYS GENERAL**: **INVESTMENT** COUNSEL: APPROPRIATE ACTION

APPROVAL OF EXECUTIVE SESSION MINUTES - NOVEMBER 13, 2017

EXIT EXECUTIVE SESSION

On a motion made by Trustee Barfield, seconded by Trustee Frane, and unanimously carried, the Board exited Executive Session at 2:30 p.m.

EXECUTIVE DIRECTOR'S REPORT Mr. Thomas Williams gave an oral presentation of the Executive Director's report as follows:

EXECUTIVE DIRECTOR'S REPORT (cont'd)

- Executive Director, Thomas Williams participated in a live interview on the Chris Cook Show on Hawaii Public Radio on the subject of ERS' sustainability.
- Reorganization for Enrollment Claims & Benefits Branch, now known as Retirement Benefits Branch was approved by Budget & Finance, Department of Human Resources Development and Hawaii Government Employees Association. It will take a year to completion. We will also be reorganizing the Accounting and Information Services offices.
- Cynthia Chen resigned as ERS Board Secretary and Dale Kehau Kanae agreed to assume the responsibilities and will soon be appointed permanently.
- Met with ERS-HGEA Stewards on a quarterly basis. Recent concern expressed was possible violent events in the office and as a result, an "active shooter" video was sent to staff. We were recently notified of a potential incident with an irate member and security was notified, and we were prepared.
- Met with Representative Luke's staff, Albert Vargas and Riley Fujisaki, Mark Oda and Julie Yang regarding upcoming legislation, in particular HiDRO budget. Concerns with the proposed cost were addressed.
- Cyber liability insurance to be effective December 1, 2018. The State has entered into an agreement with Aon for \$50 million, a policy with a \$500,000 deductible that covers all state agencies and departments and will be working with a broker to understand how to report and respond in the event that there is a cyber security breach.
- Chair Kane and Mr. Williams attended the New York Institutional Investor Awards on Leadership and Innovation which the Board was nominated for, however, it was award to Hartford Health. ERS did get a lot of recognition.
- Attended and was a panel member at the Wharton/Kellogg CIO Leaders in Investing Summit, as well as the Private Equity and Secondaries Investor Summit. Mr. Williams also had meetings with TPG and Torchlight. Howard Marks, Co-Chair and founder of Oaktree; Steven Hagerly, Chairman of Bain Capital; John Brennan former Director of CIA; the Honorable John W. Snow, Secretary of Treasury; Byron Leon, Vice Chairman of Blackstone, were some of the reputable speakers at the Secondaries Summit
- Provided for your information in your packets are:
 - 2018 Educational Opportunities;
 - ERS In The News articles.
- ERS held its holiday party at the Dole Cannery on December 6, 2017.
- The City Financial Tower Building also held their holiday party with tenants of the building on December 8, 2017.
- Went to Maui on Tuesday, Kauai on Wednesday to meet with the Budget & Finance Committees and County Councils to discuss contribution levels and the cost of pension spiking to the respective counties.
- Kanoe Margol, Donna Curry and Mr. Williams met with Senator Jill Tokuda, Chair of Labor to go over legislative issues. We also met with Aaron Ling Johanson, the House Labor Chair and we anticipate support from them both.
- Congratulations to Vijoy and the investment team on the award they received recently. It represents a lot of good solid work.
- Will be going on vacation from December 16th to the 29th and will be visiting Paris.
- Trustees Frane and Machida, on behalf of the Board and the ERS we thank you for all your efforts and hard work over the years, you will be missed.
- Looking forward to the year ahead and what it brings.

OPERATIONS REPORT – NOVEMBER 2017

Ms. Kanoe Margol, Deputy Executive Director presented the written operations report.

APPROVAL OF MINUTES – NOVEMBER 13, 2017 On a motion made by Trustee Machida, seconded by Trustee Ferguson-Miyamoto, and unanimously carried, the Board approved the minutes for the November 13, 2017 meeting as presented.

ADJOURNMENT

On a motion made by Trustee Barfield, seconded by Trustee Ferguson-Miyamoto, and unanimously carried, the Board adjourned the meeting at 2:40 p.m.

REDACTED SIGNATURE

Thomas Williams Executive Director

TW:dkik