MINUTES

MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION (MCERA) RETIREMENT BOARD STRATEGIC WORKSHOP

Embassy Suites, 101 McInnis Parkway, San Rafael, California
April 17-18, 2017

Day 1
April 17, 2017

9:00 a.m.
Call to Order

Chair Murphy called the meeting to order at 9:02 a.m.

Roll Call

PRESENT: Bolger, Cooper, Given, Gladstern, Jones (alternate retired), Murphy, Piombo (alternate safety), Shaw (ex officio alternate), Shore, Silberstein, Thomas

ABSENT: Stevens

Open Time for Public Expression
Open time for public expression, from three to five minutes per speaker, on items not on the Board Agenda. While members of the public are welcome to address the Board during this time on matters within the Board's jurisdiction, except as otherwise permitted by the Ralph M. Brown Act (Government Code Sections 54950 et seq.), no deliberation or action may be taken by the Board concerning a non-agenda item. Members of the Board may (1) briefly respond to statements made or questions posed by persons addressing the Board, (2) ask a question for clarification, or (3) provide a reference to staff for factual information.

No public comment.

9:00 a.m. – 11:00 a.m.
Review of Investment Process
- **Strategic Planning**
- **Development of Investment Policy**
- **Plan Implementation**
- **Monitoring and Evaluation**

Jim Callahan, Executive Vice President, Callan Associates
Jay Kloepfer, Executive Vice President, Callan Associates
Anne Heaphy, Vice President, Callan Associates

Retirement Administrator Jeff Wickman welcomed trustees, consultants and the public to the Retirement Board's Strategic Workshop. Mr. Wickman said the purpose of the Workshop is to look into why we do the things we do in the investment process, review new capital market projections, and take another look at multi-asset class investment strategies. Jim Callahan, Executive Vice President with Callan Associates, began the day's sessions by talking about strategic planning.

Strategic Planning

Mr. Callahan emphasized the importance of the investment process and its major steps:

1. Analyze current position
2. Design optimal portfolio
3. Formalize investment policy
4. Implement policy
5. Monitor and supervise

Mr. Callahan said it is important to understand why we go through these processes, have Investment Committee meetings, and frequently go through a detailed analysis of what we owe beneficiaries in the future.

Capital market expectations are updated annually to determine reasonable assumptions for the capital markets; these are married with asset allocations to plan for the least amount of risk to reach the goal. The annual actuarial valuation and formal asset/liability study every 5 years guide investment decisions. In between the asset/liability studies, asset allocations are reviewed and updated when there is a need to do so. Given these inputs then the question is how the portfolio should be designed. The asset allocation process involves deciding what asset classes to be in and how to invest in those assets. Once designed, the portfolio is memorialized by the Investment Policy Statement (IPS). The IPS gives a clear understanding of how the portfolio is managed by setting guidelines for what managers are allowed to do and the duties and responsibilities of the parties involved. The portfolio is implemented by hiring investment managers and a custodian to safe-keep the assets.

Trustee Bolger asked whether securities lending is a worthwhile tool in the portfolio. In reply, Mr. Callahan discussed the securities lending process. He noted the loanable assets have dwindled over time as assets have been reallocated. Mr. Callahan said the revenue helps offset other portfolio-related costs. Mr. Wickman reported securities lending has returned just under $6 million over the life of the program, and $177,000 in the fiscal year ending June 30, 2016. Trustee Shore asked if securities lending is consistent across pooled funds. Mr. Callahan replied it is not because not all investment vehicles have lending or non-lending versions.

Mr. Callahan returned to talking about monitoring and supervising the portfolio and its performance. He stated this involves considerable time. Asset allocation drives the return of the Fund, he said, and therefore deviation from targets and ranges are tracked closely.

In summary, Mr. Callahan stated that the investment process is a disciplined way to think about the portfolio over a long period of time. Key elements of the fiduciary's responsibilities are:

- Prepare and periodically review written investment policies.
- Diversify the portfolio.
- Use qualified professional managers ("prudent experts") to make investment decisions.
- Control and manage investment fees and expenses.
- Monitor the activities of all money managers and service providers.
- Document the process used to derive investment decisions.

Role of Capital Market Theory

Mr. Kloepfer stated that how to design and monitor a portfolio leans on capital market theory, which is based on economics and human behavior. The relationship between return and risk is for more return you will get more risk, and human beings are biased against risk. Modern portfolio theory (MPT) shows how risk-averse investors can construct portfolios to maximize expected return based on a given level of market risk. MPT assumes returns have a normal distribution and therefore standard deviation is used as a measure to capture risk. Standard deviation is a standard variance of how much returns move over time. Mr. Kloepfer presented the distribution of returns for the stock market over 228 years. Diversification is used to control risk by investing across assets, defined as non-correlated assets, which react differently to various macroeconomic scenarios.

Trustee Cooper asked what we are doing differently now that is less risky than in 2008 and how we have responded to changing asset class correlations. Mr. Callahan responded we are in a comparable risk posture as in 2008 and asset correlations have not changed significantly over the past ten years. Diversification has been addressed in two ways: first, the private equity program was initiated to have access to private companies; second, a portion of the commercial real estate portfolio was reallocated to public real assets. These modifications did not significantly change the portfolio position on the efficient frontier. Every year Callan Associates develops a set of assumptions including correlation expectations for asset classes in order to test reasonable expectations. International equities are now more correlated with domestic equities, for example. Mr. Kloepfer explained that during a long-term strategic investment program there will be periods when asset correlations change; this is part of systemic (market) risk which is not diversifiable.

Asset Allocation Review

Asset allocation is the process of determining the optimal allocation of a portfolio among broad asset classes based upon liability characteristics, capital market expectations, cash flow, risk tolerance, investment goals and time horizon. Time is important, Mr. Kloepfer explained, because if you have one year, you take little risk, whereas if you have 30 years, more risk is appropriate.

The goal of the Asset-Liability study presented last fall is to establish a long-term strategic asset allocation target. Further informing investment decisions are grouping asset classes according economic roles, such as low or high growth and low or high-inflation environments. Simulations are run to capture possible future economic scenarios and their effect on the portfolio. Results are ranked to develop probability distributions for the projected market value of assets, actuarial liability, and funded status by policy mix. In summary, Mr. Kloepfer stated assets are allocated based on expected results and tolerance for risk and are reviewed annually. Mr. Kloepfer stressed the importance of making informed decisions and understanding how all the parts are moving together.

Chair Murphy recessed the meeting for a break at 10:10 a.m., reconvening at 10:25 a.m.

Trustee Shaw joined the meeting at 10:27 a.m.

Development of Investment Policy

Mr. Kloepfer discussed the benefits of the Investment Policy Statement (IPS) which serves to deflect short-term thinking and remain grounded in the long-term investment goals. The IPS is a guide for new trustees and is the best defense in documenting that processes are being followed. Those include policies for each individual portfolio manager and duties and responsibilities of the parties.

Plan Implementation

Given asset classes and allocations, the next step is to determine the manager structure. Risk, cost and investment philosophy are deciding factors that can look very different for different institutions. Elements to address include active versus passive management, the style of the manager, how many managers to have, separately managed or commingled vehicles, and cost effectiveness. Trustee Bolger asked whether mutual funds are more expensive than commingled funds. Mr. Callahan responded there will be times when a mutual fund makes sense, such as for cost-effective institutional share classes. For the MCERA portfolio, the idea has been simpler is better given sufficient diversification, and making sure active managers are adding value.

Monitoring and Evaluation

Having designed and implemented the portfolio, Mr. Kloepfer said, the next step is monitoring to see whether individual managers are doing what is expected. Questions include how the portfolio is behaving and is that compatible with what we thought would happen. Performance measures in the Quarterly Report include returns versus benchmarks and peers and Sharpe Ratios that measure return per unit of risk. Performance evaluation is an art and a science, Mr. Kloepfer said, and includes evaluating not only returns but whether investment processes are repeatable and understanding how the portfolio is implemented. When things are not going well, it is important to use qualitative aspects to judge the situation. Trustee Shore asked whether the economy may be evolving into something that is not as favorable for the small cap growth style. Mr. Callahan said Callan has no insight that small cap is not the place to be. The bigger question is do you want the overweight to small caps, noting that for this Board it may be too volatile.

Trustee Thomas was excused from the today's session at 11:02 a.m.

11:00 a.m. – 12:00 p.m.
Capital Markets Update and Asset Allocation Review
Jay Kloepfer, Executive Vice President, Callan Associates

Mr. Kloepfer stated Callan builds a cohesive outlook and framework based on 10-year projections with the assumption MCERA's time frame is 30 years. Mr. Kloepfer reported the U.S. stock market has had a great run over the last five years, returning 14.7% on an annualized basis, unlike international equities which returned less than half that amount. Bond markets have been more muted and finally interest rates are rising. Over 10 years U.S. equities returned 7.1% and the Barclays Aggregate fixed income index returned 4.3%.

Reviewing the economy, Mr. Kloepfer reported Gross Domestic Product (GDP) growth has been modest at best. Labor force participation has been falling since 1990 with no rise in wages until the last year. Inflation is approaching the Federal Reserve (Fed) target of 2%. Energy prices have moderated since the precipitous drop began in 2014, and Mr. Kloepfer does not see inflation pressures. Corporations are profitable because they have become more efficient. Residential investment has the biggest multiplier effect on the economy and is only half of what it once was. Consumption has crept back up over modest GDP growth levels of 2 to 2.25%. Mr. Kloepfer does not believe GDP will reach 3% growth for a variety of reasons. Emerging markets show slowing growth and there is uncertainty around global trade, which is a significant factor that the current administration is figuring out. Expectations of the Federal Open Market Committee (FOMC) for the federal funds rate range from 0.75% at the end of 2017 to 3.75% at the end of 2019, with a long term consensus of 2.7% to 3%.

Mr. Kloepfer believes the U.S. stock market is overvalued, based on historical trailing Price/Earnings multiples. Responding to Trustee Silberstein's question on whether the stock market behaves differently depending on which political party is in control, Mr. Kloepfer stated the economic cycle is the more important factor. Mr. Kloepfer explained that Callan's capital market expectations are tied to economic forecasts:

- Domestic GDP, 2% to 2.5%, lower than the average for the last half-century. A higher growth rate could be achieved through strong labor growth, expansive fiscal policies, and restrictive trade policies. Lower growth would be expected from tight monetary policy, unexpectedly high interest rates, Congressional resistance to the fiscal policies of the incoming administration, and a strong dollar.

- Developed non-U.S. markets GDP, 1.5% to 2%. There are challenges facing Europe and Japan as a result of post-Brexit turmoil and demographic issues. We may be looking at the decline of the euro, Mr. Kloepfer said.

- Emerging markets GDP, 4 to 5%.

- U.S. inflation, 2% to 2.5% over 10 years. Rising energy prices, tight labor markets, fiscal stimulus and a declining dollar would lead to more inflation. Less inflation would result from a strong dollar, competitive labor market and tight monetary policy.

- Developed non-U.S. markets inflation, 1.75% to 2.25%.

- Emerging markets inflation, 2.5% to 3.5%.

Callan Associates' capital market projections are:
- Broad U.S. Equity: 6.85%
- Global ex U.S. Equity: 7.00%
- Broad U.S. Fixed Income: 3.00%
- Real Estate: 5.75%
- Private Equity: 7.35%

Mr. Kloepfer stated that private equity is the most difficult asset class to model and it has a large risk measure. The normal spread over public equities of over 4% has been reduced due to economic volatility. Trustee Bolger inquired why private equity should be in the portfolio if the expected return is similar to public equity returns. In response, Mr. Kloepfer said it is reasonable to include private equity as Callan still believes it has a premium and will be worthwhile.

In the fixed income markets, rising interest rates will result in lower principal values which is offset by higher yield. The sooner interest rates rise, the more yield will be gained. The yield curve will flatten as short-term rates rise. MCERA's real assets portfolio consisting of public real assets and real estate is expected to return 5.85% annualized over 10 years.

Trustee Silberstein indicated share buybacks are not contributing to returns, asking whether shareholders will revolt and if this is an issue for Callan clients. In response, Mr. Kloepfer stated buybacks push share prices up but reissuing shares dilutes share value, thereby wiping out shareholder value from the buybacks. Mr. Callahan added that in the vast majority of cases managers are voting the shares in support of management. He is beginning to see more activist investors taking bigger positions with the idea of being able to affect how the company is being managed.

Based on the preceding capital market expectations, Mr. Kloepfer presented alternative asset mixes for the MCERA portfolio. The current target allocation leads to an expected return of 6.49% over 10 years. The expected real return is closer to the assumed real rate of return.

In summary, Mr. Callahan said MCERA has a growth-oriented portfolio that is weighted 54% to public equity, which is higher than peers. Therefore, Fund returns will look good in strong markets. As the Fund is in a negative cash flow position, Mr. Callahan suggested that reducing the public equity allocation would reduce risk in a weak equity market. Multi-asset class strategies (MAC, also referred to as Diversifying Assets) are one alternative to consider as a diversifier to exposure to equities. Mr. Callahan explained that Diversifying Assets smooth the return and reduce volatility significantly; for the same expected return, asset mixes employing 10% in Diversifying Assets yield lower risk.

Other methods of reducing equity risk were discussed, including Trustee Silberstein's idea of buying puts on equities. Mr. Callahan said covered calls, puts and option strategies can be used to attempt to reduce the volatility of equities. Moving equity into fixed income would reduce the return substantially, Mr. Callahan explained. Trustee Shore observed absolute return strategies have floundered since the financial crisis. Mr. Callahan replied the Diversifying Assets strategies are something to think about, adding that hedge funds have not delivered good returns, are expensive and lack transparency. The MAC strategies are an unconstrained multi-asset class method that could benefit MCERA by compressing the volatility of the portfolio.

Chair Murphy recessed the meeting for lunch at 12:05 p.m., reconvening at 1:32 p.m.

12:00 p.m. – 1:30 p.m.
Lunch (on site)

1:30 p.m. – 2:30 p.m.
Review of Multi-Asset Class Strategies and Potential Role in MCERA Portfolio
Jim Callahan, Executive Vice President, Callan Associates
Jason Ellement, Vice President, Callan Associates

Mr. Callahan introduced Jason Ellement, a member of the Callan Associates research team. Mr. Ellement explained that the goal of MAC strategies is to gain more return per unit of risk. Three categories of MAC strategies were presented for discussion: Absolute Return, Long Biased, and Risk Premia. MAC strategies are unconstrained, outcome oriented and long term, employing a hedge fund tool set including derivatives at a less expensive, flat fee. Implementation is important as the strategies are skill-based, employing dynamic risk management to move aggressively given expectations. MAC strategies shine in avoiding big drawdowns, Mr. Ellement said, but performance has been mixed during the 7-year bull market. The risk profile is asymmetric, with more upside capture than downside capture, thereby boosting the return in a long-term portfolio.

The reason to consider using MAC strategies, according to Mr. Ellement, is to diversify away from equity risk that dominates the portfolio; in MCERA's case, 87% of portfolio risk is from equities. The diversification benefit is evidenced by low correlations of MAC strategies to traditional asset classes presented in back-tested data. Mr. Ellement reviewed characteristics of each MAC strategy, indicating the long-biased absolute return strategy was a preferred strategy. Expected returns are measured in percentages ranging from 2% to 5% above the U.S. Treasury Bill rate.

Trustee Bolger asked how comfortable Callan is with the use of derivatives and how many clients use MAC strategies. Mr. Ellement responded they monitor leverage ratios and risk controls to make sure risk management is front and center. Mr. Callahan said about 10 to 15 clients use MAC strategies, including several public funds. Mr. Callahan observed there are a lot of considerations and also a lot of brainpower behind the design of the strategies.

Mr. Ellement reviewed 5-year risk/return profiles for a 10% MAC allocation in two potential investment alternatives based on back-tested data:

1. Divided equally among three strategies listed earlier, funded from a 70/30 equity/bond ratio.
2. Divided equally between two strategies, Long Biased and Risk Premia, funded from 100% equity.

Trustee Silberstein asked if buying puts would be a less expensive alternative to MAC strategies. Mr. Ellement responded it would depend on to what degree the put was in or out of the money. Mr. Callahan said there are a number of option-oriented equity strategies that include calls and puts to try to reduce the volatility of equity portfolios.

Mr. Wickman said this discussion is a follow-up to one that began two years ago, the purpose being further education in order to decide whether to look into MAC strategies further.

Chair Murphy recessed the meeting for a break at 2:49 p.m., reconvening at 3:03 p.m.

2:30 p.m. – 4:00 p.m.
Asset Class Review

- **Domestic Equity**
- **International Equity**
- **Fixed Income**
- **Real Assets**
- **Private Equity**

Jim Callahan, Executive Vice President, Callan Associates
Anne Heaphy, Vice President, Callan Associates

Domestic Equity

Mr. Callahan stated the domestic equity structure is based on market capitalization, style exposure and active versus passive management. Domestic equity is 32% of the Fund of which 70% is in the S&P 500, 15% in small cap value, and 15% in small cap growth styles. The Fund is overweight to small caps because over time the Russell 2000 (small cap benchmark) has outperformed the S&P 500, evidenced in a related chart. An analysis of equity size versus style diversification reveals the Fund has broad equity exposure with a small cap tilt. Fees for domestic equity managers were presented.

International Equity

International equities are broadly classified into either developed or emerging markets and represent a vast opportunity set. Performance data shows U.S and international equities are cyclical, with one outperforming the other over the last two 10-year periods. As a result, exposure to both domestic and international equities provides diversification for the Fund. The allocation to international equities is 22%, with 20% of that dedicated to emerging markets manager Parametric. All MCERA international equity portfolios are actively managed. The investment consultant observed that one third of the international portfolio's economic exposure is derived from emerging markets revenue. Investment fees were reviewed that Mr. Callahan said were all competitive. Responding to Trustee Silberstein's inquiry, Mr. Callahan said receptiveness to fee negotiation depends on the manager.

Fixed income

Mr. Callahan stated the MCERA fixed income portfolio is a high quality, liquid portfolio with enhanced yield that is expected to continue outperforming the Barclays Aggregate benchmark in a rising interest rate environment. Three years ago the fixed income portfolio was restructured to shorten duration by diversifying away from the U.S. Government-centric Barclays Aggregate. It consists of 50% core plus managed by Wellington Asset Management, 25% intermediate credit managed by Western Asset Management, and 25% global sovereign-only bonds managed by Colchester Global Investors. The investment consultant noted the long-term, multi-decade marked decline in interest rates that have recently begun to rise from near zero levels. The best case for rising rates, he said, would be for a quick rise in the first few years and then leveling off, thereby allowing higher yield to offset the initial decline in principal.

Real Assets

Real assets are targeted at 15% of the Fund, consisting of 8% private real estate and 7% to public real assets in equal allocations to four financially-driven vehicles: REITs, Treasury Inflation-Protected Securities (TIPS), natural resource equities, and commodities. MCERA has been a long-term investor in real estate, which is split between two open-end core real estate funds managed by AEW and UBS. Two value-add real estate funds are in the final stages of liquidation. Mr. Callahan stated the core real estate strategy is the lowest risk/return strategy and is diversified by property type and geographic region. The expectation is to benefit over the long term from income and some capital appreciation. Returns have been very good and the real estate portfolio is expected to outperform when the real estate market slows down. Mr. Callahan said he is very comfortable going forward with the current structure of the real assets portfolio.

Trustee Bolger was excused from the meeting at 4:07 p.m.

Private equity

Mr. Callahan explained that access to private companies is through fund-of-fund managers who invest in limited partnerships. When the investor makes a commitment in dollar terms, managers find limited partnerships to commit capital to over a period of years. The purpose of investing in private equity is to diversify through access to different companies and earn a rate of return in excess of the returns of publicly traded stocks and bonds. Evidence of the private equity return premium was presented in a chart of historical returns of the All Private Equity Index as compared with the S&P 500 Index.

MCERA has been investing in private equity through managers Abbott Capital Management and Pathway Capital Management for nine years. Performance as measured by Total Value to Paid-In Capital is in the 2nd quartile of the Thomson/Cambridge All Private Equity benchmark, Mr. Callahan said, so the private equity program is doing well and just has taken longer than planned. Return metrics include the Internal Rate of Return (IRR), which is dollar weighted depending on when the commitment is called, and the Distributed to Paid-In Ratio presented in every quarterly report. Mr. Callahan reviewed the private equity program diversification by strategy, geographic region, and industry. In response to Trustee Shore's inquiry, Mr. Callahan said private equity follows a business cycle; coming out of the financial crisis, distressed debt was the prominent strategy and lately venture capital is doing better.

4:00 p.m. – 4:30 p.m.
Closing and Follow-up Items from Today's Agenda

Chair Murphy recessed the meeting at 4:28 p.m.

5:00 PM
Dinner at Wild Fox
225 Alameda Del Prado
Novato, CA

Day 2
April 18, 2017

9:00 a.m.
Call to Order

Chair Murphy called the meeting to order at 9:03 a.m.

Roll Call

PRESENT: Bolger, Cooper, Given, Gladstern, Jones (alternate retired), Murphy, Piombo (alternate safety), Shaw (ex officio alternate), Shore, Silberstein, Stevens, Thomas

ABSENT: None

Open Time for Public Expression

No public comment.

9:00 a.m. – 11:00 a.m.
Behavioral Finance and How We Invest
Terrance Odean
Rudd Family Foundation Professor of Finance
Haas School of Business
University of California, Berkeley

Retirement Administrator Jeff Wickman thanked Professor Terrance Odean of the University of California at Berkeley's Haas School of Business for presenting to the Board. Trustee Shore introduced the topic stating that he learned about Professor Odean's work studying investor behavior through his books *Thinking, Fast and Slow* by Daniel Kahneman and *The Undoing Project* by Michael Lewis.

Mr. Odean began the session by quoting noted investor Benjamin Graham who said in essence that the investor is his own worst enemy whose chief problem is himself. Professor Odean illustrated this point by looking at what happened to Hedge Funds during the financial crisis when funds simultaneously attempted to liquidate their identical positions. Professor Odean posed the question of how could so many funds hold the same positions? The answer was that the likelihood of a 10 standard deviation event was impossible according to their models and investors are fundamentally human and can fall prey to probabilities. He used game simulation with the Board to make his point that one should not assume everyone will do as you expect. Professor Odean believes that long run fundamentals matter; but the long run is a long time, and in the meantime things can be different.

He discussed how the following factors play a part in investing:

- Substitution risk
- Aggregation risk
- Decision biases
- Attention
- Emotions

Mr. Odean stated substitution risk is the risk that you solve the wrong problem and results in decision bias. According to Daniel Kahneman, "When faced with a difficult question, we often answer an easier one instead, usually without noticing the substitution." In order to predict how markets would work, the hedge fund managers came up with assumptions and a model treated as the truth. In another example of substitution risk, after World War II economics was turned into a mathematical science. The idea was that a rational decision maker should abide by the rules based on models of what economic agents would do in any situation. Over the next thirty years these rules began to be treated as a model of how people *did* behave – in other words, they thought it was how the real world worked. Mr. Odean explained this leads to overconfidence when people think they know more than they do.

Further evidence of overconfidence is that people care more about the coherence of the story than the evidence. He said ten to fifteen years ago investment managers began to use behavioral finance to sell mutual funds by promoting a good recent track record and a coherent story. So, don't get too excited about recent track records or the story, Mr. Odean said. Mr. Odean believes a buy and hold strategy outperforms a more active investment approach. He noted "a man hears what he wants to hear and disregards the rest." You should be actively looking for reasons why you are wrong, Mr. Odean said, and if you cannot find any, you might be right.

Discussing how to select investments, Mr. Odean said that the question is how much of outcomes are deterministic factors and how much are random. Outcomes affect future behavior, because we are learning from induction, observation and deductions. Mr. Odean believes the stock market is not random, but there is a tendency to see it as more deterministic than it is. He said the difficult question is which stock will outperform, and the easier decision is which company is better.

When comparing investment alternatives, Mr. Odean said it is important to use annualized returns with the same time frame. Paying attention to fees is important, he said, as studies show more money flows into well-advertised mutual funds with higher expense ratios. Mr. Odean presented a chart to illustrate the difference in returns over time for the same investment, depending on whether investment fees were zero, 1% or 2%. Finally, Mr. Odean said that complexity can make it difficult to compare pricing and is used to impress people.

Mr. Odean said emotional states and limited attention spans can affect decision making. In addition, investors have bounded rationality and processing ability. When choosing stocks, investors tend to buy what catches their attention, such as stocks that trade a lot, which are a subset of the options available. An example of recency bias was evidenced when money flows increased as the NASDAQ peaked in 1999; investors who went in lost money by March of 2000 in the subsequent market decline. As one manager put it in April of 2000, "We thought it was the eighth inning and it was the ninth." The moral, Mr. Odean indicated, is that irrational markets can cause you to lose money. Responding to Trustee Gladstern's inquiry about deciding among four investment managers, Mr. Odean repeated his advice to be careful about recency bias.

In conclusion, Mr. Odean explained that in the hedge fund example managers based their model on a log normal (symmetrical) distribution of price movement. But the world is asymmetrical, he said, and it takes a long time to build value that can be destroyed quickly.

In responding to the trustees' inquiries, Mr. Odean offered his opinions when he believed they translated to institutional investing. Referencing illiquidity in 2008, Trustee Bolger asked about derivative strategies if liquidity dried up. Mr. Odean replied with derivatives you need to think who is on the other side of the trade. Trustee Silberstein discussed his viewpoints on Chief Executive Officer (CEO) pay, saying studies show no correlation between the level of CEO pay and performance. He believes fees paid to corporate leaders are too high and they end up controlling who is on the board of directors. He further stated descriptions of pay packages get complex. Mr. Odean agreed that CEOs are overpaid and said that one of the problems is companies use buybacks to push the stock price at a certain time. Trustee Jones asked how the trustees can translate discussions on individual biases to institutional investing. In response Mr. Odean repeated the points he has made: watch out for dwelling on recent returns; fees are important; what is the evidence backing up the story; think about what you are not paying attention to that might be important; think long term; and be careful with active managers.

11:00 a.m. – 12:00 p.m.
Closing and Follow-up Items from Today's Agenda

Mr. Wickman closed the session by seeking input from the Board for any future direction.

Trustee Bolger asked about a decision on small cap equities. Mr. Wickman said that MCERA's investment consultant was looking at its small cap allocation and would address this in a future meeting. In response to Trustee Shore's comment that Callan was reducing return expectations, Mr. Wickman said this was consistent with the trends that the Board has been seeing for the past year. Trustee Jones asked about the issue of increasing costs for plan sponsors. Mr. Wickman replied plan sponsors are aware of the possibility that the Board could lower expected returns. Mr. Wickman agreed with Trustee Silberstein that the MAC strategies were very complex and other options may be considered.

Trustee Piombo said we should not advocate for a low risk portfolio that has no chance of reaching the assumed return. Trustee Shore pointed out that the incremental risk is not worth the incremental return the higher you go on the efficient frontier curve.

Trustee Cooper noted the actuary said previously the assumption ranges are reasonable and he is looking forward to the new Experience Study. Trustee Given said the conversation is good and the point is to come out with a good decision based on the advice and recommendations of our professional consultants. In conclusion, Trustee Shore observed that Mr. Odean's topic was oriented to individual investors, but we do need to make decisions with imperfect information.

There being no further business, Chair Murphy adjourned the meeting at 12:12 p.m.

Laurie Murphy

Laurie Murphy, Chair

Attest: Jeff Wickman
Retirement Administrator