

## MEMORANDUM

To: Tim Nguyen, Interim CIO, ERSRI

Date: December 6, 2016

From: Pension Consulting Alliance, LLC

Re: **Long-Duration U.S. Treasury Portfolio – Manager Review**

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### **Background:**

Long-duration U.S. Treasury securities represent 50% of the Crisis Risk Offset (CRO) Portfolio representing approximately \$300 million (4% of total fund assets). The purpose of the allocation is to perform well in periods of financial market stress. Long-dated U.S. Treasury securities have traditionally performed well in a flight-to-quality environment. The primary reasons why they perform well are that they are interest rate-related investments, and they have no corporate credit exposure.

The Rhode Island Investment staff and PCA recommends that the SIC hire two investment managers to manage this allocation: MacKay Shields and WAMCO (equal allocations).

### **Manager Review process:**

PCA distributed a Due Diligence Questionnaire (DDQ) to all five ERSRI fixed income managers on October 5, 2016. The mandate is straightforward, and all the managers are capable of performing the mandate.

- Brown Brothers, Harriman
- Fidelity Investment Management
- MacKay Shields Asset Management
- Pacific Investment Management Company (PIMCO)
- Western Asset Management Company (WAMCO)

The DDQ covered the following issues: experience with long-duration mandates, personnel tenure with the firm, responsibilities and investment experience, investment philosophy and process, risk management, analytical tools, and fees.

Manager responses were due by October 17, 2016. Manager proposals were reviewed by the Rhode Island investment staff and PCA. The investment staff and PCA scheduled a one-hour conference call with three of the proposers to gain additional insight into their management resources and investment process (Fidelity, Mackay, and WAMCO).

The three proposers were asked to submit best and final fee proposals. The three proposals were rerated; Mackay and WAMCO received the highest ratings.

### **ERSRI Long-Duration U.S. Treasury Mandate:**

To manage a portfolio of long-duration government issues and government backed securities benchmarked to the Bloomberg Barclays Capital Long-duration U.S. Treasury index. Proposed management guidelines include:

Benchmark: Bloomberg Barclays Capital U.S. Treasury Long Index

- Tracking error: 2% max
- Expected information ratio: 0.35 – 0.50
- Agency MBS: max. 50%
- U.S. Treasuries: max. 100%
- Non-U.S. Dollar Treasury Denominated: No
- Only Treasuries and Agencies are allowed
- Non-benchmark: max. 50%

Duration: benchmark +/- 10% of benchmark

Best and final fee proposal: (\$150 million portfolios)

Proposal includes client multi-product discount

Mackay Shields 7.7 bps

WAMCO 7.7 bps

## **Mackay Shields**

### **Organizational Overview, Firm Background and Developments**

Mackay Shields LLC (“Mackay”) was founded in 1938 as an economic consulting firm and became a registered investment adviser in 1969. In 1984, Mackay was acquired by New York Life Insurance Company and remains a wholly-owned subsidiary of New York Life today. The firm is headquartered in New York City with offices in Princeton, N.J., Los Angeles, C.A., and London, U.K.

Mackay operates and invests independently of the parent company, which allows it focus on the clients and maintain a long-term perspective. Mackay is a fixed income specialist, comprised of four distinct investment teams:

- Global Fixed Income
- High Yield
- Municipal Managers
- Convertibles

The teams’ investment professionals and strategies are separate, but the teams share a common compliance, legal, and operations infrastructure.

As of September 30, 2016, total fixed AUM was approximately \$97 billion, representing 331 accounts.

### **Investment Strategy**

The inception of the Long Duration strategy is April 1, 2010. The firm has been managing accounts for US tax-exempt clients since the inception of the composite in 2010. Currently, all of the strategies assets are accounts managed for tax-exempt clients.

For this mandate, Mackay Shields will use the Bloomberg Barclays Capital U.S. Treasury Long Index. Expected alpha is 10-15 bp. The alpha would primarily come from duration and curve positions. The portfolio will maintain a tracking error of < 2.0%.

Mackay currently manages a number of low tracking error portfolios, including a portfolio for the Employee Retirement System of Rhode Island. These portfolios have risk characteristics that are more closely aligned with the risk characteristics of their respective benchmarks. For this particular mandate, Mackay would employ a similar approach while operating within the limits of the investment guidelines set forth. To better ensure a low tracking error profile, they developed a proprietary based tracking error model that takes into account historical correlations and volatilities among a series of risk factors, including movements in rates, yield curves and spreads across a range of asset classes.

## Investment Process and Portfolio Construction

Mackay utilizes a team approach in all aspects of investment management and decision-making. However, ultimate decision-making authority is held with the team’s Senior Portfolio Managers and Chief Investment Officer. The investment process marries a fundamental and rigorous bottom-up investment approach with a top-down macroeconomic overlay, while a robust risk assessment informs the process. The risk assessment incorporates three critical dimensions: 1) interest rate risk, 2) structure risk, and 3) liquidity risk. The marginal risk in each category is thoroughly analyzed and understood in order to quantify the downside from each investment eligible for a client portfolio.

The top-down element incorporates an analysis of the important economic underpinnings of the market’s risk cycle. This is led by a basic understanding and appreciation for the significance of monetary policy and its impact on the capital markets. By understanding monetary policy, they are able to identify credit excesses and cross sector developments more clearly, thus allowing them to position portfolios during these turning points in the cycle.

The bottom-up component continuously feeds into macro analysis to help identify significant changes in financial market conditions and real economic developments. The investment team looks at the risk-return profile that each bond presents and considers a range of possible scenarios in order to 1) highlight those cases where the current market price does not leave sufficient potential return to compensate for the risk of loss, and 2) identify those bonds that have the most attractive profile. The goal of the analysis is to screen candidates for selection into a portfolio, as well as to determine appropriate position weights.

This model portfolio represents a collection of investments which, at any given time, represents best ideas for generating attractive risk-adjusted returns. The Investment Policy Committee is charged with setting the overall risk posture of the portfolio. The Portfolio Analysts are responsible for strategy implementation, guideline adherence, investment team coordination and benchmark risk monitoring.

## Track Record

*As of September 30, 2016*

*Gross of Fees*

|  | Quarter | 1-yr | 3-yr | 5-yr |
|--|---------|------|------|------|
| Mackay Shields Composite                     | 1.5     | 14.2 | 10.3 | 6.8  |
| Bloomberg Barclays US Govt/Credit Long Index | 1.2     | 14.7 | 10.1 | 6.3  |
| <i>Difference</i>                            | 0.3     | -0.5 | 0.2  | 0.5  |

|  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--|------|------|------|------|------|------|------|
| MacKay Shields Composite                     | 7.8  | 23.1 | 9.8  | -8.1 | 19.7 | -3.1 | 15.5 |
| Bloomberg Barclays US Govt/Credit Long Index | 8.5  | 22.5 | 8.8  | -8.8 | 19.3 | -3.3 | 15.8 |
| <i>Difference</i>                            | -0.7 | 0.6  | 1.0  | 0.7  | 0.4  | 0.3  | -0.3 |

Note: Proposed product is U.S. Government only  
Source: Mackay Shields

### Investment Team

The Global Fixed Income Team is led by the Chief Investment Officer, Dan Roberts, PhD. Dan has a background in economics and is instrumental in leading the top-down macroeconomic discussions. Dan also serves as one of the senior portfolio managers working alongside Michael Kimble and Louis Cohen. These three individuals have worked together for over 25 years and they are responsible for setting the overall risk dial of the portfolio based on the output from macroeconomic discussions. The senior portfolio managers work closely with the portfolio analysts on a day-to-day basis to ensure that the portfolios are positioned accordingly.

The following table highlights the experience of those investment professionals that will be primarily involved in the proposed product:

| Name                | Title  | Highest level of education | Institutional            | Years with Firm | Years involved with which product | Years in current capacity | Years of investment experience |
|---------------------|--|----------------------------|--------------------------|-----------------|-----------------------------------|---------------------------|--------------------------------|
| Dan Roberts, Ph.D.  | Executive Managing Director, Chief Investment Officer, Portfolio Manager | Ph.D.                      | University of Iowa       | 12              | 6                                 | 12                        | 40                             |
| Louis Cohen, CFA    | Senior Managing Director, Portfolio Manager                              | MBA                        | New York University      | 12              | 6                                 | 12                        | 39                             |
| Michael Kimble, CFA | Senior Managing Director, Portfolio Manager                              | MBA                        | New York University      | 12              | 6                                 | 12                        | 33                             |
| Steve Buckley       | Managing Director, Client Portfolio Manager                              | BA                         | University of Notre Dame | 8               | 4                                 | 4                         | 19                             |

|                     |   |                       |  |    |   |    |    |
|---------------------|---|-----------------------|--|----|---|----|----|
| Robert Kinsey       | Managing Director, Client Portfolio Manager   | MBA                   | UCLA   | 2  | 2 | 2  | 36 |
| Claude Athaide, CFA | Director, Portfolio Analyst, Investment Grade | Ph.D./1995<br>BS/1989 | The Wharton School of Business, University of Pennsylvania<br>St. Xavier College, University of Bombay | 20 | 6 | 20 | 20 |

**Management Fee (best and final fee proposal)**

| Management Fee Per Annum         |
|----------------------------------|
| 0.08% on the first \$100 million |
| 0.07% on the next \$100 million  |
| 0.06% on all assets thereafter   |

**Incorporates multi-product fee discount.**

\$150 million allocation: 7.7 bps

**Merits**

- Fixed Income specialist firm
- Experienced investment team
- Good understanding of the role long duration securities play in the portfolio
- Competitive fee

## **Western Asset Management Company**

### **Organizational Overview, Firm Background and Developments**

Western Asset Management Company (“Western Asset”) was founded on October 5, 1971 by United California Bank (which later became First Interstate), and became an SEC-registered investment advisor in December of that year. In December 1986, Western Asset was acquired by Legg Mason, Inc. (Legg Mason). An independent affiliate of that firm, Western Asset operates as an autonomous investment management company. The Firm’s sole focus is on fixed income investments.

As of September 30, 2016, total AUM was approximately \$444 billion, representing 1,018 client accounts.

### **Investment Strategy**

The investment philosophy of Western Asset is long-term fundamental value investing, using multiple diversified strategies. This investment philosophy has not changed since Western Asset’s founding, and is consistently implemented across all of the Firm’s investment strategies. Western Asset’s objective is to meet or exceed investors’ performance objectives within their tolerances for risk and in that effort the Firm deploys multiple diversified strategies that benefit in different environments so no one strategy dominates performance, helping to dampen volatility. The Firm’s Long Duration Treasury strategy seeks to outperform its typical benchmark, the Bloomberg Barclays US Treasury Long Index, by an annual average of 25-30 basis points, while targeting an annualized tracking error of approximately 50-60 basis points over the course of a market cycle.

The strategy is actively managed seeking to take advantage of relative value opportunities when they arise and certain structural premiums (e.g. yield curve steepening premium, duration premium, liquidity premium and volatility premium) that can enhance the base case yield. The end result, is a high quality, highly liquid portfolio with specific tilts to enhance base case yield.

### **Investment Process and Portfolio Construction**

Western Asset’s team approach to investment management revolves around the investment outlook developed by the US Broad Strategy Committee which is chaired by Western Asset’s Chief Investment Officer, Mr. S. Kenneth Leech. This committee is comprised of senior portfolio managers and sector heads (e.g. structured product, investment grade credit, etc.). These senior professionals, each with expertise in a specific

area of the fixed-income market, interact on a daily basis to evaluate developments in the market and the economy, and meet formally every week to review Western Asset's economic outlook and investment strategy.

With each member's area of expertise represented, the Committee reaches a consensus view on the outlook for the economy over a six- to nine-month horizon and sets the macro and sector investment themes for domestic portfolios. The portfolio managers then incorporate this outlook into their strategy within the constraints and guidelines of each individual portfolio.

The strategic goal at Western Asset is to add value to client portfolios while adhering to a disciplined risk management process. Western Asset believes inefficiencies exist in fixed-income markets and attempts to add incremental value by exploiting these inefficiencies across all eligible market sectors. The Firm believes in deploying multiple diversified strategies yet realizes that the areas and opportunities to add value to portfolios can become more or less vital depending upon economic cycles, credit cycles or relative value opportunities. In general the key areas of focus are:

- Duration/Yield Curve
- Sector & Sub-Sector Allocation
- Issue Selection

With regard to portfolio construction the Firm's Long Duration Treasury strategies will adapt to current market opportunities, but the following biases can be expected to deliver excess returns in the long-run:

- Curve steepening premium (overweight curve)
- Duration or term premium (overweight duration)
- Liquidity premium (allocation to less liquid sectors such as agency debentures and off-the-run Treasuries, with trading concentrated in liquid sectors)
- Volatility premium (selling volatility premiums through embedded options in agency mortgages and trading interest rate ranges)

As an active fixed-income manager, Western Asset positions its portfolios to take risk and culturally the Firm believes that effective risk management is critical for successful portfolio management. Western Asset seeks to construct portfolios that contain reward-generating exposures that use risk efficiently. The themes in a portfolio that are expected to generate excess returns over the benchmark should be the same themes that are expected to generate risk (volatility or other measure of future uncertainty) in the portfolio. Therefore, among other duties, risk managers monitor excess return and tracking error targets, verify alignment of the key alpha generating themes with risk themes and monitor warning level triggers for certain key risk metrics. A portfolio with risk and reward properly aligned is more likely to produce a desirable and consistent stream of returns.

Western Asset has a dedicated Risk Management Department with independent reporting lines and responsibilities. While risk management is also part of the daily investment function, this independent department provides impartial data analysis, pricing, analytics and overall risk oversight to support the investment team. It provides portfolio managers a variety of reports to evaluate risk in client portfolios and aims to ensure that accounts with comparable guidelines and benchmarks are structured similarly. Risk management is also integrated into the investment process. The Firm’s Portfolio Quantitative Analysis (PQA) Team and Risk Management Department foster superior relative-value analysis as well as increased transparency and communication among the business management, investment management and risk management teams. Both risk and investment management teams work closely together. The increased communication between risk management and investment management organizations lead to better information flow in both directions.

**Track Record**

As of September 30, 2016  
Gross of Fees

|   | Quarter | 1-yr | 3-yr | 5-yr | 10-yr |
|---|---------|------|------|------|-------|
| WAMCO US Government Composite               | 0.1     | 4.9  | 3.6  | 2.4  | 4.8   |
| Bloomberg Barclays US Government Bond Index | -0.3    | 4.0  | 3.3  | 2.2  | 4.3   |
| <i>Difference</i>                           | 0.4     | 0.9  | 0.3  | 0.2  | 0.5   |

|   | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|------|------|------|------|------|------|------|------|------|
| WAMCO US Government Composite               | 11.7 | 0.4  | 6.3  | 9.7  | 2.5  | -2.6 | 5.9  | 0.5  | 5.3  |
| Bloomberg Barclays US Government Bond Index | 12.4 | -2.2 | 5.5  | 9.0  | 2.0  | -2.6 | 4.9  | 0.9  | 5.0  |
| <i>Difference</i>                           | -0.7 | 2.6  | 0.8  | 0.7  | 0.5  | 0.0  | 1.0  | -0.4 | 0.3  |

Source: Western Asset

**Investment Team**

Western Asset’s US Government portfolios are managed by a team of portfolio managers, sector specialists and other investment professionals, with expertise and specialization across the Treasury curve. Mr. Amit Chopra and Mr. Keith Luna are responsible for the day-to-day strategic oversight of the long duration government portfolios’ investments and supervise the allocation to the various sector teams dedicated to the specific asset classes in which the strategy invests. Mr. Chopra has over 18 years of investment experience and is member of the US Broad Strategy Committee. He joined Western Asset in July 2016. Prior

to joining Western Asset, Mr. Chopra spent 15 years as a portfolio manager at Pacific Investment Management Company (PIMCO), where he specialized in Long Treasury portfolios and long duration assets in government/credit LDI strategies. Mr. Chopra was a key member of the team responsible for Treasury trading for the entire firm. Mr. Luna has over 13 years of investment experience. He joined Western Asset in 2003. Mr Luna’s sole focus is on long duration assets and the Firm’s LDI strategies.

Mr. Chopra and Mr. Luna are further supported by a larger broad market team. Western Asset's team approach unites groups of specialists dedicated to different market sectors. The investment responsibilities of each sector team are distinct, yet results are derived from the constant interaction that unites the sector teams into a cohesive whole. This structure ensures that client portfolios benefit from a consensus that draws on the expertise of all team members. The investment management team consists of 125 investment professionals with an average industry experience of 21 years.

The following table highlights Western Asset’s US Government investment team’s experience. The members listed with an asterisk are focused on long duration.

| Name                 | Title                               | Highest level of education | Institutional                                  | Years with Firm | Years involved with which product | Years in current capacity | Years of investment experience |
|----------------------|-------------------------------------|----------------------------|--|-----------------|-----------------------------------|---------------------------|--------------------------------|
| Amit Chopra*         | Portfolio Manager                   | B.S.                       | University of Southern California              | <1              | <1                                | <1                        | 18                             |
| Keith A. Luna*       | Portfolio Manager/ Research Analyst | M.B.A.                     | University of California, Los Angeles          | 13              | 13                                | 13                        | 13                             |
| S. Kenneth Leech     | Chief Investment Officer            | M.B.A.                     | The Wharton School, University of Pennsylvania | 26              | 22                                | 2                         | 39                             |
| Frederick R. Marki   | Portfolio Manager                   | B.S.                       | Massachusetts Institute of Technology          | 11              | 11                                | 11                        | 33                             |
| John L. Bellows      | Portfolio Manager Research Analyst  | Ph.D.                      | University of California, Berkeley             | 4               | 4                                 | 4                         | 7                              |
| Michael J. Bazdarich | Product Specialist Economist        | Ph.D.                      | University of Chicago                          | 11              | 11                                | 11                        | 39                             |
| Jay Lin*             | Portfolio                           | M.A.                       | University of                                  | 6               | 6                                 | 6                         | 7                              |

| Name                 | Title                      | Highest level of education | Institutional                                   | Years with Firm | Years involved with which product | Years in current capacity | Years of investment experience |
|----------------------|----------------------------|----------------------------|---|-----------------|-----------------------------------|---------------------------|--------------------------------|
|                      | Analyst                    |                            | Southern California                             |                 |                                   |                           |                                |
| Nicholas Mastroianni | Portfolio Analyst          | B.S.                       | University of Southern California               | 9               | 9                                 | 9                         | 9                              |
| Rafael Zielonka      | Portfolio Analyst          | B.S.                       | California State Polytechnic University, Pomona | 14              | 14                                | 14                        | 14                             |
| Alan Nadel*          | Portfolio Risk Manager     | Ph.D.                      | Harvard University                              | 5               | 5                                 | 5                         | 28                             |
| Scott A. Spear       | Manager, US Portfolio Risk | Ph.D.                      | University of California, San Diego             | 2               | 2                                 | 2                         | 19                             |
| James J. So*         | Product Specialist         | B.A.                       | University of California, Los Angeles           | 14              | 14                                | 14                        | 20                             |

### Management Fee (best and final fee proposal)

| Management Fee Per Annum         |
|----------------------------------|
| 0.08% on the first \$100 million |
| 0.07% on the next \$100 million  |

### Incorporates multi-product fee discount.

\$150 million allocation: 7.7 bps

### Merits:

- Fixed Income specialist firm
- Experienced investment team
- Good understanding of the role long duration securities play in the portfolio
- Strong analytical / risk management system
- Competitive fee

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