



COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM

Public Investment Memorandum

Penn Mutual Asset Management, LLC.

LIBOR Plus Portfolio

Robert J. Devine, CFA

Managing Director, Fixed Income

Steven M. Derr, CPA (Inactive)

Senior Portfolio Manager

November 18, 2016



Firm Overview

Founded in 1989 and located in Horsham, Pennsylvania, Penn Mutual Asset Management, LLC (PMAM) is an institutional asset management and advisory firm focused on total-return based fixed income investing. PMAM is a wholly owned subsidiary of the Penn Mutual Life Insurance Company. Mark Heppenstall (Managing Director - Fixed Income at PSERS for over 15 years) was named Chief Investment Officer (CIO) of PMAM at the beginning of 2016. Mark was hired by PMAM as a portfolio manager in 2014.

As of November 2016, PMAM has 30 employees (including 13 investment professionals). The firm manages \$21 billion in fixed income assets across corporate and structured fixed income securities. PMAM has developed a proprietary valuation and risk model focused on identifying the most attractive investments within the collateralized loan obligation (CLO) sector.

Investment Strategy

Mark Heppenstall was the architect behind the LIBOR Plus mandate at PSERS and understands how the risk/return profile for various fixed income sectors is incorporated into the investment management process of this portfolio. PSERS' internal Fixed Income Team is unable to take advantage of the CLO opportunity without additional staffing and the ability to utilize Intex Solutions, the leading third party provider of CLO analytics. PSERS engaged in contract negotiations with Intex Solutions in 2015, but ultimately, Intex Solutions was not able to meet PSERS jurisdictional requirements. PMAM has a contract in place with Intex Solutions.

The portfolio will focus on opportunities within the seasoned CLO portion of the structured credit markets. CLOs are typically structured with floating rate coupons tied to 3-month LIBOR. 3-month LIBOR is also the benchmark swap financing rate for the participants of the PSERS LIBOR Plus portfolio.

The seasoned CLO investment opportunity is driven by improving credit quality trends for both senior and subordinated tranches as principal is repaid quarterly. Structured credit markets (including CLOs) are inefficient and typically offer higher risk adjusted expected returns versus similarly rated corporate bonds.

The portfolio will be limited to investment grade rated securities with credit quality guidelines similar to the internally managed PSERS LIBOR Plus portfolio. PMAM attempts to minimize credit and market risk by maintaining a highly diversified portfolio of CLO holdings. PMAM's investment process uses a combination of bottom up security selection and top down macroeconomic views to drive decision-making and add value. Once the overall risk and credit quality allocations are determined, PMAM uses its proprietary CLO analytical platform to identify securities with the most attractive risk adjusted return profiles.

This proposed investment provides a stable total return profile and diversifier to the existing LIBOR Plus portfolio. This proposed allocation of \$100 million would represent less than 10% of the total portfolio.



Investment Team

PMAM's investment activities are led by Mark Heppenstall, Greg Zappin, Zhiwei Ren and Trevor Williams. PMAM also has an experienced team of 9 investment professionals focused on corporate and structured credit, quantitative research and derivative hedging. Jason Merrill is the structured security specialist with primary responsibility for the CLO sector. The table below highlights the experience of PMAM's key investment professionals:

Name	Title	Yrs. Experience PMAM / Total	Prior Experience
Mark Heppenstall	Chief Investment Officer	2 / 29	PSERS / Advanced Investment Management
Greg Zappin	Managing Director & Portfolio Manager	5/21	Logan Circle / Delaware Investments
Trevor Williams	Managing Director & Portfolio Manager	2/20	Janney Montgomery Scott / Hamilton Lane
Zhiwei Ren	Managing Director & Portfolio Manager	8/11	Genworth Financial
Jason Merrill	Structured Security Specialist	3/7	Beneficial Financial

In addition to the key investment professionals listed above, PMAM's investment management committee is comprised of three additional members of senior management who bring a mix of investment, risk, and compliance experience.

Investment Instruments

The portfolio will primarily invest in CLOs but may also invest in other investment grade rated structured securities as permitted by PSERS Investment Objectives and Guidelines.

Market Opportunity

Despite historical performance which compares favorably versus both corporate and other structured sectors of the fixed income markets, CLOs continue to be associated with the distressed sectors of the 2008/2009 credit crisis. Bank and hedge fund selling of seasoned CLOs has created an attractive entry point for investors. Performance upside will be driven by early redemption activity within the sector, as most securities are priced below par. Rating misalignment between Moody's and Standard & Poor's also creates opportunity to purchase undervalued CLOs.

Investment Considerations

Investment Team
The investment team is comprised of seasoned professionals with diverse disciplines across fixed income sectors and derivative markets. PMAM uses a team-based approach, which capitalizes on individual expertise, but makes decisions collectively. The PMAM team has significant experience and expertise analyzing both corporate and structured security sectors, which is critical for the successful management of a CLO portfolio.
Technology Infrastructure
Under the leadership of Jason Merrill, PMAM has developed a proprietary analytical platform named <i>Talos</i> to help measure relative value and risk within the CLO sector. The PMAM team is continuously looking for ways to develop new credit metrics and relative value analysis within the <i>Talos</i> platform.
Investment Philosophy & Process
PMAM's philosophy centers on the belief that valuation is the source of superior returns and combines a top-down macroeconomic view with a bottom-up credit view. It also considers the technical factors in the marketplace that influence pricing and performance. The three broad components – Macro, Credit and Technical – provide the analytical framework to execute strategic and tactical asset allocation, security selection, and position-sizing.
Risk Management
PMAM employs a comprehensive enterprise risk management (ERM) approach to identify and manage uncertainty. Culture is at the core of the risk management framework. Risk appetite and tolerance for each client portfolio is measured quantitatively and qualitatively.



Investment Risks

Credit Risk
While historical losses within the investment grade rated CLO sector have been de minimis, the securities are collateralized by senior secured loans of high yield corporate borrowers. Credit ratings guidelines and limits at the individual security and total portfolio level will be similar to the internally managed PSERS LIBOR Plus portfolio.
Liquidity Risk
CLOs have less liquidity than other similarly rated corporate and structured securities. PMAM will seek to offset this risk by purchasing securities with attractive risk-adjusted yields. PMAM's focus on shorter average life seasoned CLOs (1-3 years) will help to minimize the liquidity risk compared to more recent CLO issuance.
Key Person Risk
Mark Heppenstall and Jason Merrill are critical to the success of this strategy. PSERS will include provisions in the Investment Advisory Agreement protecting PSERS against the departure of these individuals from PMAM.
Operational Risk
Aon Hewitt noted in their review that PMAM lacks a client service and consultant relations team. PSERS has a direct relationship with unlimited access to the Chief Investment Officer of PMAM, which mitigates this concern.

Portfolio Fit

The investment in the portfolio will be included in PSERS LIBOR Plus allocation. AON Hewitt is supportive of the allocation based on its due diligence of the investment strategy and its belief that the strategy will complement PSERS' current portfolio.

Finance Committee Disclosures

Relationship with AON Hewitt	None disclosed
Use of Placement Agents	None used for this investment
Political Contributions in PA	PMAM – None disclosed Penn Mutual Life Insurance Company – see Appendix A
Conflicts	None disclosed
Introductory Source	Mark Heppenstall
History with PSERS	No prior history
Allocation Implementation Committee Approval Date	11/18/16

Oversight Responsibility

Investment Office	Robert J. Devine, Managing Director – Fixed Income Steven M. Derr, Senior Portfolio Manager – Fixed Income
External Consultant	AON Hewitt

Recommendation

Staff, together with Aon Hewitt, recommends (i) that the Board retains Penn Mutual Asset Management, LLC. to manage \$100 million in a subaccount of PSERS LIBOR Plus portfolio, and (ii) that the Investment Office shall have the discretion to allocate additional sums within the target ranges approved by the Board in Exhibit E of the Investment Policy Statement, Objectives and Guidelines, as amended from time to time, provided that any allocation of an additional sum by the Investment Office shall be reported to the Board in a timely manner.



Appendix A – Political Contributions

Penn Mutual Life Insurance Company reported the following political contributions for 2016:

Payments from the Penn Mutual Political Action Committee Account for 2016:

Recipient	Amount
LICONY PAC (Life Insurance Council of New York)	\$ 5,000
Friends of Pat Toomey	\$ 2,700
PIPAC (Penn Israel Public Affairs Committee)	\$ 5,000
ACLI PAC (American Council of Life Insurers)	\$ 5,000
Committee to Elect Mike Stack	\$ 1,000
Senator Pat Browne	\$ 1,000
Senator Don White	\$ 1,000
Representative Dave Reed	\$ 500
Representative Tina Pickett	\$ 500
Representative Warren Kampf	\$ 500
Representative Mike Tobash	\$ 500
Representative Tim Briggs	\$ 500
Representative Mike Sturla	\$ 500
	<u>\$ 23,700</u>

Payments from Penn Mutual Executives for 2016:

Recipient	Amount
ACLI PAC (American Council of Life Insurers)	\$ 5,000
ACLI PAC (American Council of Life Insurers)	\$ 2,500
AALUPAC (Ambassador Program)	\$ 2,500
PIPAC (Penn Israel Public Affairs Committee)	\$ 2,500
AALUPAC (Association for Advanced Life Underwriting)	\$ 2,000
AALUPAC (Association for Advanced Life Underwriting)	\$ 1,500
AALUPAC (Association for Advanced Life Underwriting)	\$ 1,500
Senator Tim Scott	\$ 1,000
AALUPAC (T Scott for Senate)	\$ 1,000
UHS Employees Good Government Fund	\$ 1,000
ACLI PAC (American Council of Life Insurers)	\$ 1,000
Richard Burr Committee	\$ 1,000
Tim Scott for Senate	\$ 1,000
Tim Scott for Senate	\$ 1,000
	<u>\$ 24,500</u>



November 16, 2016

Board of Trustees
Pennsylvania Public School Employees' Retirement System
5 North 5th Street
Harrisburg, PA 17101

Re: Penn Mutual Asset Management, Inc. Collateralized Loan Obligations Focused Limited Maturity Bond

Dear Trustees:

Aon Hewitt Investment Consulting, Inc. ("AHIC") has worked closely with PSERS Investment Staff ("Staff") to assist in its review of Penn Mutual Asset Management, Inc. ("PMAM") Collateralized Loan Obligations Focused Limited Maturity Bond ("CLO") strategy. As a part of our consulting services to our institutional clients, AHIC routinely reviews collateralized loan obligation mandates as it is an area that continues to evolve.

Following the evaluation of the strategy by AHIC's Global Investment Manager Research Team, we concur with Staff's recommendation to initially allocate \$100 million to the PMAM CLO strategy.

Firm Background

PMAM was organized in June 1989, under the name of Independence Capital Management, Inc. and is based in Horsham, Pennsylvania. It is a wholly-owned subsidiary of The Penn Mutual Life Insurance Company ("Penn Mutual"), a mutual life insurance company that has been in the insurance and investment business since 1847. As of March 31, 2016, PMAM has approximately \$20.3 billion in assets under management.

Strategy Summary

Team Location	Horsham, Pennsylvania
Benchmark	3-month LIBOR
Target Excess Return	Approximately 150 – 250 basis points over a full market cycle
Target Tracking Error	Approximately 100 basis points per annum
Opportunity Set	Structured Securities

AHIC Assessment and Conclusion

AHIC believes it would be appropriate for the PSERS Board to invest in the PMAM CLO strategy within the Fixed Income portfolio. The use of the strategy within the Fixed Income portfolio is consistent with how PSERS has managed short-term structured security strategies historically. Additionally, the attributes of the strategy in terms of the uniqueness of the opportunity in a niche



market and the ability to capture a perceived mispricing due to manager skill is consistent with how PSERS has approached actively-managed CLOs within the portfolio and more broadly.

This recommendation is given solely for the benefit of PSERS and cannot be relied upon by other investors considering an investment in the CLO since their needs, objectives and circumstances may not be identical to those of PSERS. The scope of this recommendation is limited to the investment merits of the Strategy. AHIC does not provide legal or other non-investment related advice.

Sincerely,

Steve Cummings

Senior Partner
Aon Hewitt Investment Consulting, Inc.

Claire Shaughnessy

Partner
Aon Hewitt Investment Consulting, Inc.