



OPEB ASSET ALLOCATION
Implementation Plan

Investment Staff | August 2022

Overview

The SIC adopted a new Strategic Asset Allocation for the OPEB Trust Portfolio on 5/25/2022.

	Asset Class	Legacy Strategic Target	Current Target
Growth	Global Equity	-	40%
	US Large Cap	65%	-
	Public Growth	65%	40%
	Private Growth	-	5%
	TOTAL GROWTH	65%	45%
Income	Equity Options	-	4%
	Liquid Credit	-	4%
	EMD (Blended)	-	4%
	CLOs	-	4%
	Private Credit	-	5%
	TOTAL INCOME	-	21%
Stability	Core Real Estate	-	4%
	Private Real Assets (ex-Real Estate)	-	4%
	Inflation Protection	-	8%
	IG Fixed Income	35%	26%
	Volatility Protection	35%	26%
	TOTAL STABILITY	35%	34%
		100%	100%

Recommendation

Authorize the execution of the proposed implementation plan, subject to legal, staff, and investment consultant review.

Implementation Plan – Summary

Private Asset Classes

- Develop seed portfolios with funds that have already been approved for ERSRI investment.
- Go-forward basis: OPEB will make commitments to funds that are approved for ERSRI investment in-line with target allocations and pacing plans, and subject to fund capacity and legal review.

Liquid Asset Classes

- Leverage existing investment manager relationships to replicate ERSRI implementation where we believe that active management at OPEB's scale is prudent and can be achieved in a fee-efficient manner.
- Utilize passive strategies where we believe that ERSRI implementation cannot be prudently replicated for OPEB.
- Continue to explore EMD implementation solutions that align with the SIC's Russia divestment objectives.

Other

- Amend custody agreement between BNY Mellon and OPEB Trust to expand scope of services, subject to staff and legal review.
- Establish Investment Policy Statement and benchmark effective date of January 1, 2023.

Implementation Plan – Initial Allocation

Process

- Staff will aim to achieve target asset class exposures for OPEB delineated in the approved asset allocation.

Target completion date: December 31, 2022

	Asset Class	Active/Passive	Structure	Investment Manager
Growth	Public Growth*	Passive	Open-Ended Comingled Fund	State Street Global Advisors
	Private Growth	Active	Drawdown Comingled Funds	Seed Portfolio (Various)
Income	Equity Options	Active	Open-Ended Comingled Fund	Neuberger Berman
	Liquid Credit*	Passive	Open-Ended Comingled Fund	State Street Global Advisors
	EMD (Blended)	TBD		
	CLOs	Active	SMA, Drawdown Comingled Fund	Neuberger Berman, Sycamore Tree
	Private Credit	Active	Drawdown and Open-Ended Comingled Funds	Seed Portfolio (Various)
Stability	Core Real Estate	Active	Open-Ended Comingled Funds	Seed Portfolio (Various)
	Private Real Assets (ex-Real Estate)	Active	Drawdown and Open-Ended Comingled Funds	Seed Portfolio (Various)
	IG Fixed Income*	Passive	Open-Ended Comingled Fund	State Street Global Advisors
Other	Short-Term Cash	Active	SMA	-
	Russell Overlay	Active	SMA	Russell Investments
	Distribution Management	Active	SMA	Hamilton Lane

* Liquid exposure to be overweighted within bucket while private asset actual exposure paces up to target

Red = deviation from ERSRI implementation

Implementation Plan – Private Assets

Pacing Plan: OPEB commit to private asset funds at sizes and times roughly in-line with the pacing plans below to achieve prudent vintage diversification.

Pacing Plans					
Allocation	Target Allocation (%)	Target Allocation (\$mm)	Average Capital Committed Per Year (\$mm)	Number of Funds Per Year	Average Commitment Per Fund (\$mm)
Private Growth - Private Equity	4%	\$20.06	\$9.2	5-10	\$1-2mm
Private Growth - Non-Core Real Estate	1%	\$5.02	\$2.0	1-4	\$0-2mm
Private Credit	5%	\$25.08	\$9.0	2-4	\$2-5mm
Private Real Assets (ex-Real Estate)	4%	\$20.06	\$8.2	2-4	\$2-5mm
Core Real Estate	4%	\$20.06	N/A	N/A	N/A

Seed Portfolios: In general, Staff will recommend OPEB commitments in-parallel to recommendations for ERSRI. As a starting point, Staff recommends seeding the private asset portfolios with commitments to the funds listed below which are currently accepting capital.

Seed Portfolios				
Private Growth - Private Equity	Private Growth - Non-Core Real Estate	Private Credit	Private Real Assets (ex-Real Estate)	Core Real Estate
Thoma Bravo Fund XV Thoma Bravo Discover IV Paine Schwartz Food Chain Fund VI Riverside Micro-Cap Fund VI	GEM Fund VII Crow Fund X	Atalaya Asset Income Fund Evergreen Shamrock Capital Content Fund III Deerpath Capital Advantage Fund VI*	KKR Diversified Core Income Fund IFM Global Infrastructure Fund	Morgan Stanley Prime Property Fund Heitman American Real Estate Trust AEW Core Property Trust AEW Essential Housing Fund

* Pending approval at August 3, 2022 SIC meeting

Implementation Plan – Liquid Assets

Implementation Strategy:

Leverage existing investment manager relationships to replicate ERSRI implementation where we believe that active management at OPEB’s scale is prudent and can be achieved in a fee-efficient manner:

	Asset Class
Growth	Public Growth
	Private Growth
Income	Equity Options
	Liquid Credit
	EMD (Blended)
	CLOs
	Private Credit
Stability	Core Real Estate
	Private Real Assets (ex-Real Estate)
	IG Fixed Income
Other	Short-Term Cash
	Russell Overlay
	Distribution Management

Implementation Plan – Liquid Assets

Implementation Strategy:

Utilize passive strategies where more practical given OPEB's scale:

	Asset Class
Growth	Public Growth
	Private Growth
Income	Equity Options
	Liquid Credit
	EMD (Blended)
	CLOs
	Private Credit
Stability	Core Real Estate
	Private Real Assets (ex-Real Estate)
Other	IG Fixed Income
	Short-Term Cash
	Russell Overlay
	Distribution Management

Implementation Plan – Public Growth

ERSRI Implementation					
Strategy	Structure	Manager	Region	Allocation (\$mm)	Allocation (% of Public Growth)
Russell 3000 Index Fund	SMA	SSGA	Domestic	\$1,321	37%
MSCI World ex-US Index Fund	Commingled	SSGA	International Developed	\$564	16%
MSCI Emerging Markets Index Fund	Commingled	SSGA	Emerging Markets	\$409	11%
QVM (Multi-Factor)	SMA	SSGA	Global Developed	\$1,270	36%



OPEB Target Implementation					
Strategy	Structure	Manager	Region	Allocation (\$mm)	Allocation (% of Public Growth)
MSCI ACWI Index Fund	Commingled	SSGA	Global	~\$200.00	100%

Recommended OPEB Implementation: SSGA MSCI ACWI Index Fund

- The ERSRI Public Growth portfolio includes a customized multi-factor strategy that invests across global developed markets.
- Implementation of a comparable strategy for the OPEB Trust is not achievable in a fee-efficient manner given the portfolio's scale.

Implementation Plan – Liquid Credit

ERSRI Implementation				
Manager	Strategy	Structure	Allocation (\$mm)	Allocation (% of Liquid Credit)
Loomis Sayles	Active US High Yield	SMA	\$100	34%
PIMCO	Active US High Yield	SMA	\$99	33%
Advent	Active US Convertible Bonds	SMA	\$99	33%



Recommended OPEB Target Implementation				
Manager	Strategy	Structure	Allocation (\$mm)	Allocation (% of Liquid Credit)
SSGA	U.S. High Yield Bond Index	Commingled	~\$20	100%

Recommended OPEB Implementation: SSGA U.S. High Yield Bond Index Fund

- Implementing customized SMAs with sufficient diversification at reasonable costs is challenging given the relatively small size of OPEB's Liquid Credit allocation. A passive approach will provide the desired asset class exposure at a low cost.

Consideration: Benchmark Misfit

- The proposed SSGA Index fund tracks the Bloomberg U.S. High Yield Very Liquid Index; the Liquid Credit asset class benchmark is the broad ICE BofA US High Yield Index.
- The indices have modest characteristic differences – the SSGA Index Fund will still provide exposure to the desired opportunity set.

Implementation Plan – Emerging Market Debt (Blended)

ERSRI Implementation				
Manager	Strategy	Account Structure	ERSRI Allocation (\$mm)	Allocation (% of EMD)
Wellington	Blended Opportunistic Emerging Markets Debt	Commingled	\$190	100%

OPEB Considerations: Russia

- Replication of ERSRI’s EMD implementation would result in exposure to Wellington’s residual Russian holdings, inconsistent with the SIC’s approval to prohibit additional investments in Russian assets.

Recommended OPEB Implementation: Continue to explore solutions that align with the SIC’s Russia divestment objectives

- Return with an implementation recommendation at a future meeting.

Implementation Plan – Investment Grade Fixed Income

ERSRI Implementation				
Strategy	Structure	Manager	Allocation (\$mm)	Allocation (% of Vol Protection)
Active Investment Grade Corp. Credit	SMA	Fidelity	\$291	49%
Active Investment Grade Securitized	SMA	Loomis	\$298	51%



OPEB Target Implementation				
Strategy	Structure	Manager	Allocation (\$mm)	Allocation (% of Vol Protection)
BBG Barc US Agg Index Fund	Commingled	SSGA	~\$130.00	100%

ERSRI vs. OPEB Allocation Discrepancy

- Unlike the OPEB Trust’s Investment Grade Fixed Income allocation that resides within the Stability Bucket’s Volatility Protection portfolio, ERSRI’s Investment Grade Fixed Income allocation excludes Treasuries.
- The OPEB Trust’s Investment Grade Fixed Income allocation is benchmarked to the Bloomberg Barclays U.S. Aggregate Bond Index.
 - The OPEB Trust’s current fixed income allocation is being implemented via an SSGA-managed Bloomberg Barclays U.S. Aggregate Bond Index Fund.



APPENDIX A

PRIVATE ASSETS

Private Asset Seed Portfolio – Private Growth

Fund Name	Proposed Commitment Size for OPEB*	Strategy	Sector	Description	ERSRI Fees	OPEB Fees	Target Close Date
Thoma Bravo Fund XV	\$2.00 million	Upper Middle Market, Large Cap Buyout	Software, Tech-Enabled Services	Makes control-oriented acquisitions of software companies at the larger end of the middle market and large cap market segments, with average equity checks of \$900 million (enterprise values between \$2 and \$10 billion).	<i>Management Fee: 1.5%</i> <i>Carried Interest: 20% (no hurdle)</i>	<i>Same as ERSRI</i>	September 2022
Thoma Bravo Discover IV	\$2.00 million	Middle Market Buyout	Software, Tech-Enabled Services	Makes control-oriented acquisitions of software companies in the middle market segment, with average equity checks of \$300 to \$700 million (enterprise values between \$700 and \$800 million).	<i>Management Fee: 2.0%</i> <i>Carried Interest: 20% (no hurdle)</i>	<i>Same as ERSRI</i>	September 2022
Riverside Micro-Cap Fund VI	\$2.00 million	Lower Middle Market Buyout	Diversified (Focus on Healthcare, Software & IT, Consumer, Education, and Specialty Manufacturing)	Makes control-oriented acquisitions of companies with EBITDA of less than \$10 million with historical revenue annualized growth rate in excess of 10% and have potential to double or triple EBITDA during the ownership period, with investments broadly diversified by industry sector.	<i>Management Fee: 2.0%</i> <i>Carried Interest: 20% (8% hurdle)</i>	<i>Same as ERSRI</i>	Q4
Paine Schwartz Food Chain Fund VI	\$2.00 million	Middle Market Buyout	Food Chain, Agribusiness	Makes middle market buyout and growth equity transactions in the sustainable food chain and agribusiness sectors across the food value-chain, with target equity checks of \$50 to \$500 million.	<i>Management Fee: 2.0%</i> <i>Carried Interest: 20% (8% hurdle)</i>	<i>Same as ERSRI</i>	Q4
GEM Fund VII	\$1.25 million	Value-Add, Opportunistic Real Estate	Diversified (Focus on Residential, Hotel, and Office)	Invests in value-added and opportunistic real estate diversified by property type and geographic location, focusing on property types such as residential, hotel, office, retail, and specialty sectors (including data centers, distressed real estate debt, real estate operating companies).	<i>Management Fee: 1.35% on committed during investment period, \$1.5% on invested after.</i> <i>Carried Interest: 20% (9% hurdle)</i>	<i>Same as ERSRI</i>	August 2022
Crow Fund X	\$1.25 million	Value-Add Real Estate	Diversified (Focus on Industrial, Apartment)	Invests in value-added real estate diversified by property type and geography, focusing on industrial/logistics, market rate apartments and niche property types (including manufactured housing, student housing, self-storage, and convenience & gas retail).	<i>Management Fee: 1.25%</i> <i>Carried Interest: 20% (9% hurdle)</i>	<i>Management Fee: 1.3%</i> <i>Carried Interest: 20% (9% hurdle)</i>	August 2022

*Subject to legal and staff review

Private Asset Seed Portfolio – Private Credit

Fund Name	Proposed Commitment Size for OPEB*	Strategy	Sector	Description	ERSRI Fees	OPEB Fees	Target Close Date
Atalaya Asset Income Fund Evergreen	\$2.00 million	Specialty Finance	Consumer and Commercial Credit-Backed Lending	Originates loans backed by financial assets and purchases portfolios of short duration performing loans backed, focusing on lending against or purchasing consumer and commercial financial assets or real estate.	<i>Management Fee: 1.5%</i> <i>Carried Interest: 15% (5% hurdle)</i>	<i>Same as ERSRI</i>	September 2022
Shamrock Capital Content Fund III	\$2.00 million	Specialty Finance	Media Content Royalties	Invests in royalty streams backed by entertainment assets, focusing on film, television, and music rights in well-known, household names	<i>Management Fee: 2.0%</i> <i>Carried Interest: 20% (8% hurdle)</i>	<i>Same as ERSRI</i>	September 2022
Deerpath Capital Advantage Fund VI	\$2.00 million	Lower Middle Market Direct Lending	Sector Diversified	Originates loans directly to lower middle market sponsor-backed corporate borrowers in the U.S. and Canada, generally with enterprise values between \$50 million and \$150 million.	<i>Management Fee: 0.9%</i> <i>Carried Interest: 15% (7% hurdle)</i>	<i>Same as ERSRI</i>	October 2022

*Subject to legal and staff review

Private Asset Seed Portfolio – Core Real Estate

Fund Name	Proposed Commitment Size for OPEB*	Strategy	Sector	Description	ERSRI Fees	OPEB Fees	Target Close Date
Morgan Stanley Prime Property Fund	\$5.00 million	Core Real Estate	Diversified - Industrial, Multifamily, Office, Retail, Healthcare, Self Storage, Student Housing	Invests in core real estate diversified by property type across the US, focusing on 3 core sectors (industrial, multifamily, office) and supplementing with specialty property types.	<i>Management Fee: 0.84%</i> <i>Carried Interest: 5% of Comp Store NOI growth capped at 35bps of fund NAV</i>	<i>Same as ERSRI</i>	September 2022
Heitman American Real Estate Trust	\$5.00 million	Core Real Estate	Diversified - Industrial, Apartment, Self Storage, Office, Retail	Invests in core real estate properties across the US diversified by five property types.	<i>Management Fee: 0.84%</i> <i>Carried Interest: None</i>	<i>Same as ERSRI</i>	September 2022
AEW Core Property Trust	\$5.00 million	Core Real Estate	Diversified - Industrial, Multifamily, Office, Retail	Invests in core real estate properties across the US in four primary property types.	<i>Management Fee: 0.50%</i> <i>Carried Interest: None</i>	<i>Same as ERSRI</i>	September 2022
AEW Essential Housing Fund	\$2.00 million	Core Plus Real Estate	Residential	Investments in stabilized, garden-style multifamily communities ranging from 20 to 60 years in age, but may also selectively invest in newer properties, single family homes, and manufactured housing.	<i>Management Fee: 0.65%</i> <i>Carried Interest: None</i>	<i>Same as ERSRI</i>	October 2022

*Subject to legal and staff review

Private Asset Seed Portfolio – Private Real Assets (ex-Real Estate)

Fund Name	Proposed Commitment Size for OPEB*	Strategy	Sector	Description	ERSRI Fees	OPEB Fees	Target Close Date
KKR Diversified Core Income Fund	\$3.00 million	Core Infrastructure	Utilities, Power & Renewables, Telecom, Transportation, Energy Transition	Invests in established brownfield infrastructure assets diversified by sector and geography with high EBITDA margins and contracted or regulated cash flow.	<i>Management Fee: 0.65%</i> <i>Carried Interest: 5% (4% hurdle)</i>	<i>Management Fee: 0.85%</i> <i>Carried Interest: 5% (4% hurdle)</i>	September 2022
IFM Global Infrastructure Fund	\$5.00 million	Core Infrastructure	Electricity generation, Airports, Water and Waste Water, Telecom, Clean Energy	Invests in core brownfield infrastructure assets that demonstrate strong market positions, high barriers to entry, certainty of revenues, and selectively invest in greenfield assets.	<i>Management Fee: 0.77%</i> <i>Carried Interest: 10% (8% hurdle)</i>	<i>Same as ERSRI</i>	September 2022

*Subject to legal and staff review



APPENDIX B

LIQUID ASSETS

Liquid Assets - Growth

Asset Class	Investment Manager	Account Structure	Proposed Investment Size for OPEB	Description	ERSRI Fees	OPEB Fees
Public Growth	SSGA	Commingled	~\$200m*	Managed using an indexing approach, by which SSGA attempts to approximate the performance of the MSCI ACWI Index over the long term.	N/A	4 bps

* Exposure may be overweighted within bucket while private asset actual exposure paces up to target

Liquid Assets - Income

Asset Class	Investment Manager	Account Structure	Proposed Investment Size for OPEB	Description	ERSRI Fees	OPEB Fees
Liquid Credit	SSGA	Commingled	~\$20mm*	Managed using an indexing approach, by which SSGA attempts to approximate the performance of the Bloomberg U.S. High Yield Very Liquid Index over the long term.	N/A	8 bps
Equity Options	Neuberger Berman	Commingled	~\$20mm	Seeks to capture implied volatility premium by writing (selling) at-the-money S&P 500 put options. The strategy promotes diversification by strike, expiration, and implied volatility levels. Short duration U.S. Treasuries are held as collateral.	Management fee: 35 bps on first \$200mm, 30 bps thereafter	Same as ERSRI
CLOs	Neuberger Berman	SMA	~\$12.5mm	Scales to a long-term strategy target of 60% NB CLO Equity/40% 3rd party CLO Mezz. \$2.5mm will be reserved as uncalled capital for opportunistic deployment, which will also serve a liquidity buffer to fund NB CLO Equity purchases when necessary.	Management fee (NB CLO Equity): 0 bps Management fee (CLO Mezz): 0 bps on first \$25mm, 50 bps thereafter Incentive Fee (only opportunistic uncalled): 20% after 12% IRR hurdle	Same as ERSRI
CLOs	Sycamore Tree	Drawdown	~\$12.5mm	Focuses on taking majority equity positions in Sycamore Tree-managed CLOs. Investment process focuses on loss avoidance through conservative/defensive portfolio construction.	Management fee: 0 bps on Sycamore related assets, 75 bps on 3rd party fund investments Incentive Fee: 20% over an 8% hurdle	Same as ERSRI

* Exposure may be overweighted within bucket while private asset actual exposure paces up to target

Liquid Assets - Stability

Asset Class	Investment Manager	Account Structure	Proposed Investment Size for OPEB	Description	ERSRI Fees	OPEB Fees
IG Fixed Income	SSGA	Commingled	~\$130m*	Managed using an indexing approach, by which SSGA attempts to approximate the performance of the Bloomberg Barclays U.S. Aggregate Bond Index over the long term.	N/A	4 bps

* Exposure may be overweighted within bucket while private asset actual exposure paces up to target

Liquid Assets - Other

Asset Class	Investment Manager	Account Structure	Proposed Investment Size for OPEB	Description	ERSRI Fees	OPEB Fees
Short-Term Cash	-	SMA	-	Operating cash reserved for purchases/redemptions, benefit payments, capital calls, and other expenses.	-	-
Rebalancing Overlay	Russell Investments	SMA	-	Reduces unintended impact of holding operating cash by overlaying with futures to capture desired risk premium, reduce transaction costs, and reduce deviation from policy benchmark.	<i>Base fee : \$95,000/year Fee on notional : 10 bps on first \$100mm, 5 bps on next \$200, 1.5 bps thereafter</i>	<i>Base fee reduced to \$35,000/year. All-in cost expected to be ~1 bp at current AUM.</i>
Distribution Management	Hamilton Lane	SMA	-	Manages and liquidates in-kind stock distributions from private equity funds. Seeks to mitigate first-day discount and enhance total return with a more patient, managed process.	<i>Base fee : 50 bps on NAV Incentive fee : 10% of the (a) net realized gain, plus (b) net unrealized gain, minus (c) net realized loss, minus (d) net unrealized loss</i>	<i>Base fee : 30 bps on net proceeds Incentive fee : 10% with high water mark</i>



APPENDIX C

OTHER

Custody – BNY Mellon

Service	Firm	Services Required	Current OPEB Fees	Proposed OPEB Fees
Custodian Bank	BNY Mellon	BNY Mellon will provide custody and accounting services for a portfolio with a higher degree of complexity relative to the legacy OPEB allocation. BNY will add capital call management (a critical function) to the scope of services.	\$15,000/year	\$75,000/year