



PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



AUGUST 3, 2016

A presentation to: FCERA

Parametric Cash Overlay Implementation

FCERA & Overlay

— The goal of this deck is to review:

- Agreed-upon pricing structure
- The investment strategy of the overlay portfolio
 - Policy index
 - Securities used
 - Transaction costs
- The account structure, size of program
 - How much cash to fund
 - How much notional futures exposure
 - Stress environment & margin calls

Process undertaken

- The Board heard an education presentation from Verus at last year's retreat and elected to add it to this years' work plan
- The Board heard an education presentation from Parametric in March and approved an RFI for overlay services
- Verus then presented an education presentation along with a review of RFI responses from Russell and Parametric; the Board approved moving forward with contract negotiations with Parametric
- **Since that time, Verus and staff negotiated with Parametric to secure the following fee schedule:**

Notional Value of Overlay Assets	Negotiated Fee Structure
First \$25 million	0.15%
Next \$75 million	0.10%
Above \$100 million	0.40%
Retainer fee	\$1500/month
Example on \$200 million	\$170,500/year
Minimum Quarterly Fee	\$25,000/quarter

8.5 basis points, which is comparable to the cost of the same market exposure using index funds:

Vanguard Inst. Index Fund Fees	
Russell 3000 US Equity	0.08%
All World Ex-US Int'l Equity	0.11%
Intermediate Term Gov Bond	0.07%
Cost of exposure using funds:	0.083%

FCERA AA Policy vs. Overlay Policy

Reconstruction of the asset allocation target using liquid futures

FCERA Asset Allocation Target		
Asset Class	Benchmark	Weight
US Equity	Russell 3000	17%
International Equity	MSCI ACWI ex-US	19%
Private Equity	Russell 3000 Index + 250 Bps	6%
Private Credit	Barclays US Aggregate + 250 Bps	8%
Global Fixed Income	Barclays Global Aggregate Bond Index	31%
Real Estate	NCREIF ODCE	8%
Commodities	DJ UBS Commodity	3%
Hedge Funds	HFRI Funds of Funds	8%

- The goal is to invest the cash in a manner that tracks the broader asset allocation policy, while being limited by some practical considerations.
- U.S. & international equity is relatively straight forward to replicate.
- It is more expensive and requires OTC agreements to replicate credit exposure, so we create the interest rate exposure using treasury futures.

FCERA Overlay Replication Methodology
Replication of Russell 3000
Replication of MSCI ACWI ex-US
Replication of Russell 3000
Replication of Russell 3000
Replication of U.S. Interest Rates (BC US Agg)
Pro Rata
Pro Rata
Pro Rata

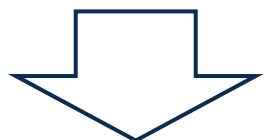
- Because of the negative rate environment internationally we are advocating using a U.S. based index for duration exposure.
- To compensate for the lack of credit exposure in the fixed income bucket, we are advocating to map the private credit exposure to the Russell 3000, rather than pro rata or to rates.
- Commodity exposure can be replicated with individual commodity contracts, but given the small allocation size (0.18% of portfolio), we determined mapping pro rata made more sense.

Because some asset classes are not investable, we need to make some judgement calls regarding how best to recreate certain exposures.

Proposed cash overlay program

Consistent with the allocation methodology on the prior page

Proposed Overlay Target Index	Weight
Russell 3000	36%
MSCI ACWI ex-US	24%
Barclays U.S. Aggregate	40%



Benchmark / Futures Contracts	Initial Margin (%)	One-Way Transaction Cost (bps)
Russell 3000		
S&P 500	3.9%	1.0
S&P 400	4.0%	1.0
Russell 2000	4.5%	1.5
MSCI ACWI ex US		
MSCI EAFE	6.0%	2.5
MSCI EM	5.2%	3.0
S&P/TSX 60	5.1%	2.0
Canadian Currency	1.9%	1.5
Barclays US Agg		
5yr Note	1.0%	1.0
10yr Note	0.9%	1.0
"Classic" Bond	0.8%	1.0

- There is no futures contract that directly aligns with the indices used in the policy target.
- Instead, Parametric will use a basket of futures, which, in aggregate should match the performance of the target index.
- These are very liquid futures contracts, and the transaction costs are between 1-3 bps.
 - The contracts are rolled quarterly, which results in an additional total annual explicit cost of 2-4 bps.
- We back-tested performance to ensure the strategy behaves similar to the broader AA policy target:

	Return	Standard Deviation	Correlation	Tracking Error
FCERA Policy Index	4.5%	8.8%		
Overlay Policy Index	5.3%	9.7%	0.98	1.90%

Trailing ten years as of 3/31/16

Target index weights were rounded to the nearest whole number. FCERA Policy Index the same as prior page, except for the "+ 200 / + 250 bps" illiquidity hurdles. Futures contract data provided by Parametric. Margin requirements change in response to market dynamics. The primary difference in performance from the FCERA index and the overlay index is the use of U.S. rates exposure rather than global rates.

Sizing the account

Determining the right amount of notional exposure and size of account

- “Notional” refers to the amount of market exposure we want to create using futures contracts.
- This amount will align with the amount of cash we want to hold for:
 - Ongoing operational needs
 - Private equity commitments
 - Investment manager frictional cash
 - Dry powder/liquidity buffer
 - Initial & maintenance margin for futures
- The goal is to size the program in a way that maximizes the benefit in terms of improving liquidity, while minimizing margin calls

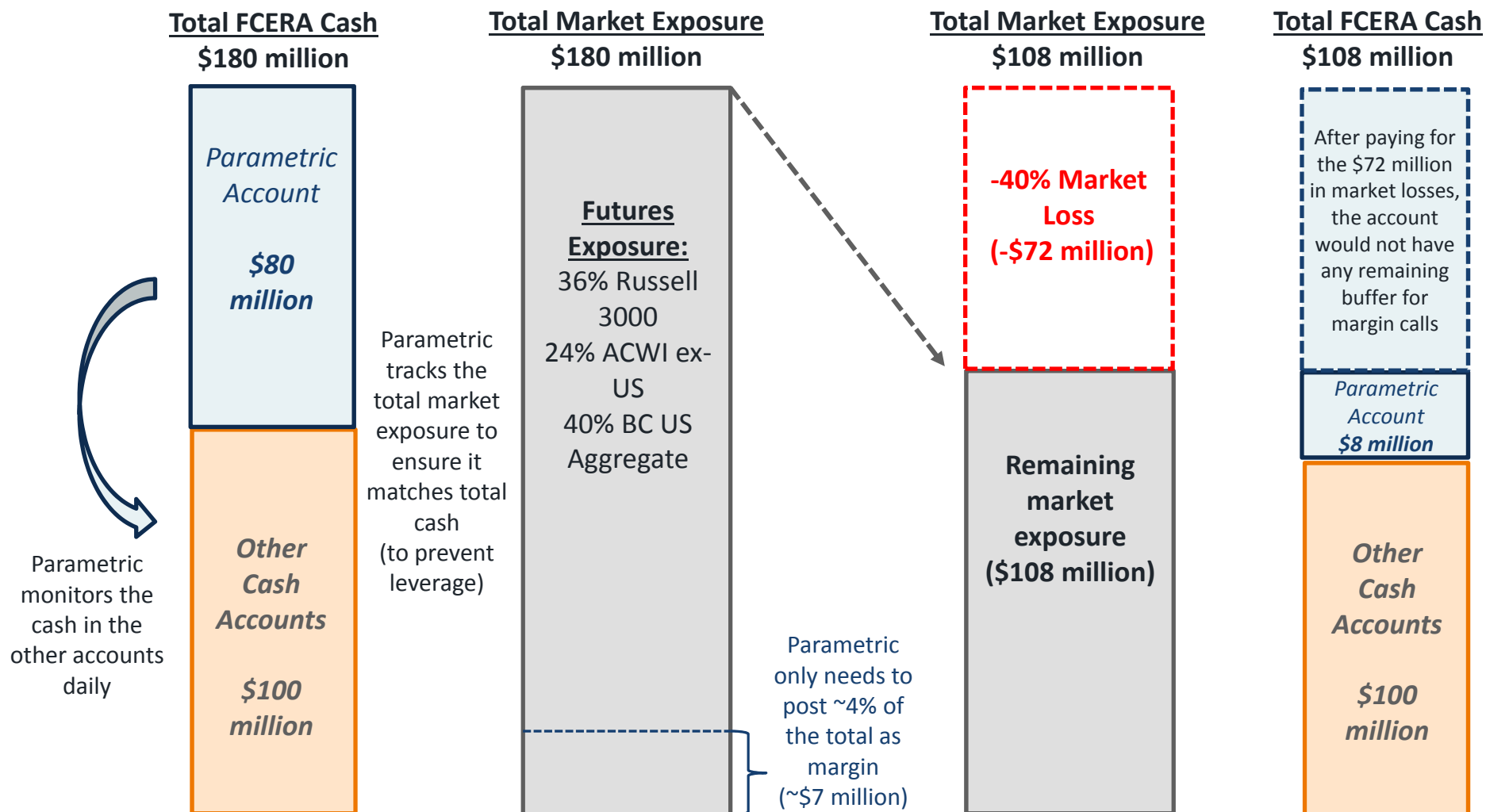
Sizing the account cont'd

Account	Average/ Target cash amount	Observations/Rationale
Unallocated Cash Account	\$50 million	Quarterly contributions average \$50M. Benefits average \$60M. Operational expenses (including investment mgmt fees) average \$4M. Net quarterly outflow is \$14M. We want to keep a ~2 quarter liquidity buffer on hand (which is additive to the normal monthly flow).
Investment Manager Accounts	\$20 million	The domestic & international equity managers have frictional cash usually amounting to 1-3% of their portfolio.
Private Markets Account	\$30 million	Private markets investments have been cash flow positive, but that trend is reversing as FCERA ramps up commitments (There is more than \$250 million in undrawn commitments to PE, PC, & private RE).
\$100 million in cash that will be held in various operational & investment accounts		
Overlay Account (NEW)	\$80 million	Parametric's account will be funded with \$80 million in cash. They will use that cash to manage the exposure to the entire \$180 million in cash held across the portfolio.
Total Target Notional Amount:	\$180 million	This will fluctuate with the underlying cash balance

The market values will fluctuate and Parametric will monitor on a daily basis to ensure that futures exposure matches cash exposure.

Sizing the account cont'd

A visual representation of the account structure:



Monitoring performance

- Calculating the performance of the overlay portfolio using traditional metrics (change in market value/starting market value) does not apply, since only a portion of the overlay exposure is held in the cash accounts.
- Accordingly, Verus typically advocates showing total fund performance with & without the impact of the overlay.
- This is a helpful way of showing the impact at the total portfolio level.
- Parametric also prepares daily cash monitoring reports that will provide useful snapshots of the amount of exposure at a given time.

Next steps

- Board approval of the enclosed investment guidelines
- Legal is completing legal review & negotiations with Parametric regarding the investment management agreement and the separate agreement with Morgan Stanley as prime broker.
- Verus will coordinate with staff and custodian to set up new accounts and fund the overlay account, using dry powder currently invested in Barclays U.S. Aggregate Bond Index Fund.

Parametric Portfolio Guidelines

These Investment Guidelines form an integral part of that certain Investment Management Agreement dated _____ by and between Fresno County Employees' Retirement Association and Parametric Portfolio Associates LLC.

Effective Date:

Client Name: Fresno County Employees' Retirement Association ("Client")

Investment Manager: Parametric Portfolio Associates LLC ("Investment Manager")

Investment Strategy:

- Cash Securitization – Fund Level (Appendix B)
- Cash Securitization –Designated Managers (Appendix B)
- Exposure Maintenance including Rebalancing (Appendix C)
- Transition Exposure Management (Appendix D)
- Interest Rate Management (Appendix E)
- Currency Exposure Management (Appendix F)
- Beta Management of Portable Alpha (Appendix G)

Benchmark: Custom benchmark based on Investment Strategy

Fund Asset Allocation: Defined in Appendix A

Investment Objectives and Guidelines:

Client may seek to securitize fund level cash in a manner consistent with the stated benchmark(s) and methodology as defined in Appendix B. To the extent possible, Client will notify Investment Manager in advance of any material cash flows into or out of fund accounts which are used to determine required overlay positions.

Client may seek to securitize cash held in designated manager portfolios as defined in Appendix A. Cash will be securitized as specified in Appendix B. Client will notify Investment Manager in the event changes to the manager cash overlay component are desired.

Client may seek to adjust market exposures or to rebalance the fund's liquid asset class exposures. The specifics of how portfolio exposure changes or how rebalancing moves will be made are defined in Appendix C.

Client may seek to manage gaps in market exposure resulting from transition events including, but not limited to: A) change in managers, B) change in asset allocation, C) fund contribution or distributions, D) or other related temporary fund disruptions. The specific parameters related to each "transition event" are defined in

Appendix D. Each transition event will be reviewed individually and clear written instructions must be provided to Investment Manager by Client for each transition in which Investment Manager is asked to participate.

The Client may seek to manage interest rate risk. The fund's duration may be modified, subject to the duration constraints of the fund. The duration overlay position, when combined with the estimated duration of Client's fixed income portfolio and the assumed duration of other asset positions identified by Client to be used in the calculation, will seek to achieve effective fixed income allocation duration consistent with the established target and related ranges as defined in Appendix E.

The Client may seek to manage currency exposure. The currency overlay position, when combined with the underlying assets in the fund, seeks to achieve an effective currency exposure consistent with the established target and related ranges defined in Appendix F.

The Client may seek to manage the beta component of an Alpha Transport program. The overlay program can be used to transport alpha from one asset class to another. Appendix F outlines the terms of the strategy.

Portfolio Monitoring

On a daily basis, Investment Manager will seek to obtain relevant information from the custodian regarding the market value of the Client's designated cash and/or external manager portfolios ("Information") involved in the Investment Strategy. In the case of commingled funds (e.g. mutual funds) or other assets where a daily market value is not available, a proxy pricing methodology may be established for the designated portfolio as defined in Appendix H.

Subject to the foregoing, where electronic interfacing is reasonably available for the purposes set forth herein, Investment Manager will be responsible for establishing a communication link and electronic interface methodology enabling the transfer of Information from the Custodian. Client acknowledges and agrees that Investment Manager will rely on Information provided by these methods without further investigation or confirmation. From time to time, such communication link may be unavailable due to system outages or other technical issues outside of Investment Manager's reasonable control, which include, but are not limited to internet problems, hardware or software issues. In the event that Information cannot be transferred on any given day, regardless of the reason, Investment Manager will attempt to receive Information through an alternative method. Client will reasonably assist Investment Manager in obtaining Information.

If, as part of the Investment Strategy, Investment Manager is required to monitor Client assets beyond Overlay Portfolio, Investment Manager will review the asset data in an attempt to verify its accuracy but it makes no assurances in this regard.

Execution Guidelines

In accordance with these guidelines, Investment Manager has the authority to execute trades which are intended to achieve Investment Strategy objectives and are consistent with the structure as described herein.

A Daily Tracking Report ("DTR") will be generated by Investment Manager using information as described above, subject to certain limitations. If transactions are not executed due to uncontrollable events (e.g. trading halts), the Investment Manager will contact Client to discuss alternatives.

A margin pool will be established in a designated Custodian account for Investment Manager to provide the initial and variation margin necessary to support and manage overlay positions required by all Investment Strategies. The size of the margin pool will be a function of the size of overlay positions as well as Client's desire to increase the level of overall fund liquidity. Investment Manager is responsible for providing Client's representative(s) with an estimate of the initial margin required to support the overlay positions as specified by the exchange on which the overlay positions are traded; recommended variation margin, or liquidity buffer, required to meet ongoing mark-to-market obligations; and margin pool level for the Investment Strategy on a daily basis via Investment Manager's website: www.parametricportfolio.com. Investment Manager will seek to contact Client's representative if the margin pool moves to a level requiring the addition of variation margin or if margin pool balance has grown to a level estimated to be significantly beyond recommended levels.

While margin is regarded as a form of leverage, Client agrees that PIOS® is not regarded as a levered strategy as positions are managed to align with underlying collateral. However, due to market factors, timing differences, and/or actions taken by Client outside the control of the Investment Manager; or during periods of trading activity by Investment Manager required to achieve Overlay Program objectives, there may be periods where the notional value of the Overlay Portfolio exceeds that of the underlying collateral. By example, if overlay positions to be traded in non-U.S. markets are targeted for purchase, any portion of that purchase requiring offsetting sales in U.S. markets will be managed such that the final value of overlay positions do not exceed the estimated, final value of the underlying collateral.

By way of further example, removing fixed income duration through futures contracts does not typically require sale of a notional amount of contracts equal to the notional amount of underlying fixed income securities held (e.g., \$10 in fixed income holdings with a duration of 5 can become "zero" duration cash through the sale of \$5 in treasury futures with a duration of 10). An opposite example occurs for gaining international equity exposure in that for every dollar of aggregate exposure desired, one dollar of foreign stock index futures contracts plus one dollar of foreign currency futures contracts are needed (e.g., to gain \$10 in FTSE 100 index exposure, \$10 in FTSE 100 futures are required plus \$10 in British pound futures). This is because foreign stock index futures alone do not include exposure to exchange rates.

In each of the foregoing examples, it is the synthetic index exposure which remains unleveraged. By combining the foregoing two principles, the concept of not introducing leverage within the PIOS® program is illustrated:

Assume under the PIOS® program a client fund ("Fund X") has \$100 in total assets consisting of \$30 in large cap equity securities at a manager with a S&P 500 benchmark, \$50 in fixed income securities with a duration of 5 at a manager with a Barclays Capital Aggregate Index benchmark, \$10 in international equity exposure with an

MSCI EAFE Index benchmark and \$10 in cash. Fund X desires to be fully invested 40% in large cap, 40% in fixed income with a duration of 5, and 20% in international equity. Under the PIOS® program, Investment Manager would purchase \$10 in S&P 500 futures contracts, sell \$5 in fixed income futures contracts with a duration of 10 and purchase \$10 in foreign stock index futures and \$10 in foreign currency futures to bring Fund X into compliance with its asset allocation targets.

The net notional amount of contracts outstanding would be \$25 (long \$10 in S&P index futures minus \$5 short in treasury futures for the fixed income exposure reduction plus \$20 in foreign stock index and currency futures to gain the international equity exposure). Yet the position is neutral from a market exposure stand point because the synthetic index exposure of \$10 in long S&P futures, \$10 in short Barclays index exposure and \$10 in long MSCI EAFE index exposure (with \$10 in currency exposure) does not exceed the then cash amount of \$10 in Fund X.

Notwithstanding the foregoing discussion of leverage, the use of margin, which is a form of leverage, has special consideration as described above under the caption "Special Considerations and Risks."

Permissible Instruments:

The permissible instruments for the Investment Strategy include:

- Domestic and international equity futures
- Domestic and international fixed income futures
- Commodity futures
- Foreign currency futures, forwards, and physical holdings
- Domestic and international equities
- Exchange Traded Funds (ETFs) and Exchange Traded Notes (ETNs)
- Exchange Traded Options on Equities, ETFs and indexes
- U.S. Government/Agency Securities

Investment Manager will have discretion to employ long or short permissible instruments to seek to achieve the Investment Strategy(ies) consistent with the Investment Objectives and consistent with these guidelines. Client recognizes that this process may produce tracking error with the Benchmark(s). For the avoidance of doubt, the classification of international is determined from a U.S. domiciled perspective unless otherwise stated.

Notification Procedures:

Client acknowledges that Investment Manager's positions may be directly related to the underlying physical investments of the fund. Therefore it is critical that Client notify Investment Manager prior to any material changes in the fund's underlying physical positions. These changes could include, but are not limited to: distributions, contributions, physical rebalancing or reallocations, and manager terminations/additions.

All investment-related items will be provided by Client to Investment Manager by email to: MN-Investments@paraport.com. For all actions deemed actionable or substantive, Client should not consider an email received until Investment Manager responds with an email confirmation. If Client does not receive the confirmation email, Client must call Investment Manager at 952.767.7700. Client is responsible for informing Investment Manager, at its earliest opportunity, of any changes in any managers, manager capital allocations or when asset class assignments are revised.

Reporting:

The Investment Manager will provide the Client with the following:

- If desired by Client, a DTR summarizing the fund's allocations, manager values, overlay positions, and other key Investment Strategy parameters. Client will be able to access the DTR through Investment Manager's website: www.ParametricPortfolio.com.
- A quarterly performance summary report describing the performance of the Investment Strategy.
- A quarterly accounting report reconciled to Client's Custodian statement.
- Access to key employees of Investment Manager's team to address questions or clarify activity.
- Annual performance reviews, or more frequently at Client's request.

Special Considerations and Risks:

Market Risk: The potential that the market moves in an adverse manner causing a loss.

Liquidity Risk: To the extent the overlay position generates a loss in excess of the margin balance or collateral available, the fund will require liquid assets to satisfy any outstanding commitments or experience liquidation of positions.

Margin Pool Risk: The fund may experience losses on the margin pool in addition to potential losses on the index market exposure overlaying these assets.

Options Risks: Client has received, read and understood the Characteristics and Risks of Standardized Options published by The Options Clearing Corporation which includes option sensitivity risk. Unlike a futures-based hedge which immediately removes market exposure on a one-for-one basis, options contracts with time remaining before expiration are less sensitive to changes in market prices. Therefore, prior to expiration, the gain (loss) in the value of the hedge positions will likely be less than the loss (gain) in the underlying portfolio.

OCC Counterparty Risk: The Options Clearing Corporation ("OCC") guarantees that all obligations of the contracts that the OCC clears are fulfilled. The OCC and the options markets have broad discretion in their rules to take a variety of actions in particular circumstances and no party should assume that the OCC or other option market participant will exercise its discretion in a particular way in any particular circumstance. The OCC may

experience a negative credit event that would limit or eliminate its ability to satisfy any outstanding obligations to the Account Assets thus causing a loss to the Client.

Futures Clearinghouse Counterparty Risk: The Futures Clearinghouse guarantees that all obligations of the contracts that the Futures Clearinghouse clears are fulfilled. The Futures Clearinghouse and the futures markets have broad discretion in their rules to take a variety of actions in particular circumstances and no party should assume that the Futures Clearinghouse or other futures market participant will exercise its discretion in a particular way in any particular circumstance. The Futures Clearinghouse may experience a negative credit event that would limit or eliminate its ability to satisfy any outstanding obligations to the Account Assets thus causing a loss to the Client.

Information Risks: As described above, Investment Manager will maintain index market exposures based on designated values provided by one or more third party(ies). The Investment Manager cannot verify these values but will rely on this information as being reflective of true fund values. If actual fund values are different from the values provided by such third parties, losses may result from over or under exposure to the desired index.

Benchmark Exposure Risk: In the implementation of the Investment Strategy(ies), Investment Manager believes there may be tracking error between the actual Overlay Portfolio and benchmark allocations described in these Guidelines. For example, futures contracts may not exist for certain indices. To attempt to track such index results, a blend of futures contracts is utilized. This blend of futures contracts may or may not track the performance of the actual index. This is a form of tracking error. Tracking error could be material. Other sources for tracking error may include, among others:

- Execution value versus previous day's closing index value
- Change in relative futures premiums
- Imprecise benchmark replication
- Mid-day information flows
- Time differences between futures and local market closes
- Transaction and synthetic financing costs

Tracking Error: Exposure Maintenance using the PIOS® synthetic index approach, by gaining or reducing exposure to various asset classes, will modify the systematic or market risk associated with Client's total fund. The non-systematic risk, or tracking error that the individual managers exhibit relative to the asset class benchmark, is not changed by application of PIOS®. Trading error related to Exposure Maintenance component may create significant losses to the Client.

Leverage Risk: Notional exposure in excess of portfolio capital or fund collateral may produce a significant loss to the fund. Futures, options, swaps, and related derivative instruments have the potential to create leverage. In certain situations, Client's Overlay Portfolio, on a temporary or permanent basis, may be exposed to leverage in part by having a notional value of overlay positions which is more than the value of the underlying margin

pool which may produce a significant loss the fund. Leverage introduces special risks and will change the volatility of Client's underlying assets (manager portfolios). If the Overlay Portfolio does create leverage, adverse moves in the overlay positions can require Client to post additional margin beyond those amounts initially deposited. Failure to maintain sufficient margin may result in the closing out of overlay positions in a manner not consistent with these Guidelines.

Market Exposure Timing: In order to achieve anticipated cash level change or desired risk exposure, Investment Manager may trade at the market close one business day before each anticipated cash level change or other market exposures changes. To the extent that any unanticipated change occurs after trades are executed and before other adjustments are made, trades may need to be reversed and Client may experience an unexpected economic outcome.

For clients utilizing the Beta Management of Portable Alpha Investment Strategy, the following section will apply:

Embedded exposure: In Client programs utilizing the Beta Management of Portable Alpha Investment Strategy Client's designated alpha portfolio (e.g. a market neutral hedge fund) may have embedded beta exposure which may cause the portfolio to experience significant losses beyond those realized from the overlay component. This embedded beta exposure would be in addition to the beta exposure maintained by the Investment Manager. Excess beta exposure could result in performance inconsistent with Client's expectations.

(Signature page follows)

There can be no assurance Client will achieve its objective through the use of PIOS®. For all Investment Strategies, Investment Manager seeks to execute transactions on a best efforts basis but makes no assurances in this regard. Past performance does not guarantee future results. Investment Manager does not warrant any rate of return or level of tracking error relative to the Benchmarks.

Completed and Reviewed by Client:

By: _____
Name: _____
Date: _____

List of Authorized Client Representatives are set forth in Exhibit B.

Completed and Reviewed by Investment Manager:

By: _____
Name: _____
Date: _____

Appendix A

Fund Asset Allocation

The Fund's asset allocation targets and associated benchmark indexes are as follows:

<u>Asset Class</u>	<u>Target %</u>	<u>Benchmark Index</u>
Domestic Equity ¹	17.00%	Russell 3000 Index
International Equity ¹	19.00%	MSCI ACWI ex. US Index
Global Fixed Income ¹	31.00%	Barclays Global Aggregate Index
Private Credit ²	8.00%	Barclays US Aggregate Index + 250 bps
Private Equity ²	6.00%	Russell 3000 Index + 250 bps
Hedge Funds ²	8.00%	HFRI Fund of Funds Index
Real Estate ²	8.00%	NCREIF ODCE Index
Commodities ²	3.00%	DJ UBS Commodity Index

¹Investable Asset Classes.

²Uninvestable Asset Classes.

In order to account for the uninvestable asset classes listed above in the overlay program, the uninvestable asset class targets will be set equal to actual levels, with the difference between the long term target allocation and the actual allocation for each asset class being allocated as follows, resulting in a new, Adjusted Target asset allocation:

<u>Asset Class</u>	<u>Allocation of Difference</u>
Private Credit	Domestic Equity
Private Equity	Domestic Equity
Hedge Funds	Proportional across investable asset classes
Real Estate	Proportional across investable asset classes
Commodities	Proportional across investable asset classes

It is Client's responsibility to establish and revise as necessary the asset class categories.

Appendix B

CASH SECURITIZATION – Fund Level

☒ Utilized

☐ Not Utilized

Client will designate specific fund level cash accounts to be overlaid by Investment Manager. These assets will be overlaid as described below:

<u>Asset Class</u>	<u>Target %</u>	<u>Benchmark Index</u>
Domestic Equity	36%	Russell 3000 Index
International Equity	24%	MSCI ACWI ex. US Index
Global Fixed Income	40%	Barclays US Aggregate Index ¹

¹For purposes of the overlay program, Investment Manager will target Barclays US Aggregate Index instead of Barclays Global Aggregate Index

CASH SECURITIZATION – Manager Level

☒ Utilized

☐ Not Utilized

Investment Manager will invest Manager cash as able in the asset classes as described below. It is Client's responsibility to communicate to Investment Manager which managers should be included in the manager cash overlay for each asset class.

<u>Asset Class</u>	<u>Benchmark Index</u>
Domestic Equity	Russell 3000 Index
International Equity	MSCI ACWI ex. US Index

Appendix C

EXPOSURE MAINTENANCE INCLUDING REBALANCING ☐ Utilized ☒ Not Utilized

Appendix D

Transition Exposure Management ☐ Utilized ☒ Not Utilized

____ Transition Form

Client: _____

	Distribution/Termination	Contributions/New Hire
Manager Name:		
Asset Class:		
Dollar Value:		
Manager Account Type: (check one)	<input type="checkbox"/> Separate Account <input type="checkbox"/> Commingled	<input type="checkbox"/> Separate Account <input type="checkbox"/> Commingled
TCG Action:	<input type="checkbox"/> Buy <input type="checkbox"/> Sell <input type="checkbox"/> None	<input type="checkbox"/> Buy <input type="checkbox"/> Sell <input type="checkbox"/> None
Trade Date:		
Information as to when Investment Manager should trade: (check one)	<input type="checkbox"/> Market Close (NAV) <input type="checkbox"/> Contact Manager – <input type="checkbox"/> Through Download <input type="checkbox"/> Other	<input type="checkbox"/> Market Close (NAV) <input type="checkbox"/> Contact Manager <input type="checkbox"/> Through Download <input type="checkbox"/> Other
Index Exposure to Sell/Buy: (check one)	<input type="checkbox"/> Policy Mix: <input type="checkbox"/> Index: <input type="checkbox"/> Other:	<input type="checkbox"/> Policy Mix: <input type="checkbox"/> Index: <input type="checkbox"/> Other:
Contact for Transition: (i.e. manager, transition manager)	Name: Phone: E-mail:	Name: Phone: E-mail:
Other Comments:		

Authorized Party: _____

Date: _____

Transition positions may create the need for additional margin in Investment Manager's account to support overlay exposure.

If incomplete information is provided by Client or outside party, Investment Manager will work as able to complete necessary transition transaction in a manner which maintains market exposure in an unlevered manner. If incorrect information is provided, leverage or lack of full market exposure may result.

Appendix E

INTEREST RATE MANAGEMENT

☐ Utilized

☒ Not Utilized

Duration Target:

Duration Range:

Target Calculation:

Investment Manager with duration exposure to be included in duration exposure calculation:

Manager

Duration or Index Benchmark

Other Interest Rate Management monitoring requirements:

Appendix F

CURRENCY EXPOSURE MANAGEMENT ☐ Utilized ☒ Not Utilized

Benchmark Index:

Foreign Currency Exposure :

If hedge, % of underlying manager exposure to be hedged:

Rebalancing band % :

Rebalancing frequency :

Portfolios selected by Client to be subject to currency overlay are as follows:

Appendix G

BETA MANAGEMENT OF PORTABLE ALPHA COMPONENT

☐ Utilized

☒ Not Utilized

Benchmark Index:

"Absolute Return" manager(s) to be overlaid:

Embedded Absolute Strategy Beta:

Overlay Management Direction Related to Embedded Beta:

It will be the responsibility of Investment Manager to request regular updates on the value of the designated alpha pool or other overlaid assets for which values are not received from the Custodian. Because Investment Manager does not control these managers, it is possible that Investment Manager will not receive information in a timely manner from such managers or other parties. It is also possible that this information will not be accurate. Client agrees that Investment Manager may rely on such information as provided by the source without further investigation or confirmation.

Manager	Frequency*	Method of Update**	Benchmark Index	Index Bloomberg Ticker (if applicable)

As more managers are added, it will be Client's responsibility to contact Investment Manager and assist in developing a method for updating values for each new manager.

[*insert daily, weekly, monthly, whatever is applicable]

[**Unaudited value downloaded, Receive email, Unaudited NAV, Receive value from Client, whatever is applicable]

Appendix H

OTHER OVERLAID ASSETS

It will be the responsibility of Investment Manager to request regular updates on the value of the designated alpha pool or other overlaid assets for which values are not received from the Custodian. Because Investment Manager does not control these managers, it is possible that Investment Manager will not receive information in a timely manner from such managers. It is also possible that this information will not be accurate. Client agrees that Investment Manager may rely on such information as provided by the source without further investigation or confirmation.

<u>Manager</u>	<u>Frequency*</u>	<u>Method of Update**</u>	<u>Benchmark Index</u>	<u>Index Btick</u>

As more managers are added, it will be Client's responsibility to contact Investment Manager and assist in developing a method for updating values for each new manager.

[*insert daily, weekly, monthly, whatever is applicable]

[**Unaudited value downloaded, Receive email, Unaudited NAV, Receive value from client, whatever is applicable]

Approved and Confirmed Changes to the Guidelines

Date

Guidelines Change

Verified by