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**JUNE 1, 2016**

Cash Overlay Providers

**Fresno County Employees' Retirement Association**

# Executive summary

- Over the past year, the Board has heard various educational presentations on overlay services
- Verus received direction to perform an RFI for overlay services and to solicit responses from both Parametric and Russell Investments, two leading providers in the space
- Both firms are capable of successfully implementing and maintaining an overlay service for FCERA
- The goal of this presentation is to briefly review the purpose of an overlay as well as outline key responses from the RFI
- The final section of this presentation contains additional due diligence write-ups on each firm
- We've also included the full RFI responses as an appendix for your review

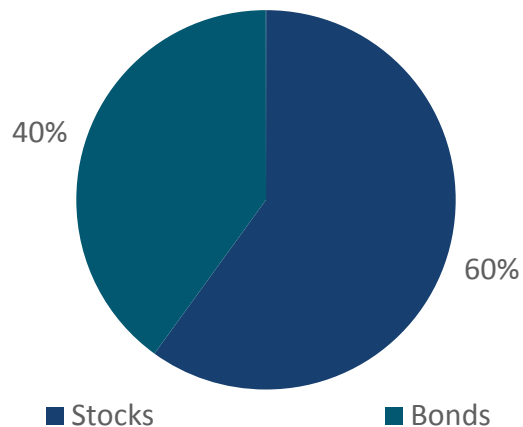
# The role of overlay providers

# The challenge

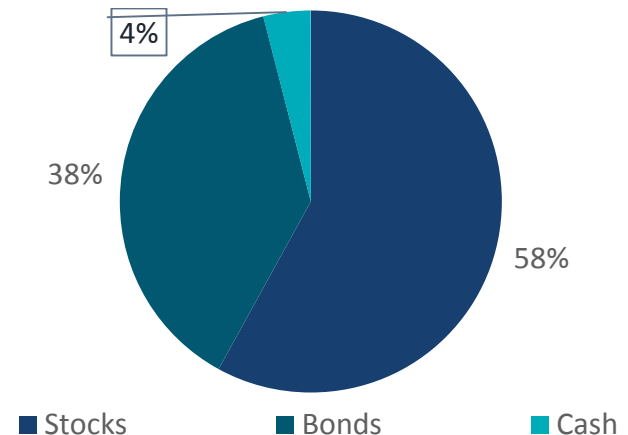
Holding cash in a portfolio is usually necessary, but comes with side effects

- Excess cash prevents the portfolio from being fully invested according to policy
  - Example: a 60/40 portfolio with 4% cash may actually be a 58/38/4 portfolio
- Tracking error thus results from the portfolio being out of balance relative to its policy
- Over time, cash generates a “drag” on return since it underperforms most other asset classes

INTENDED PORTFOLIO



ACTUAL PORTFOLIO



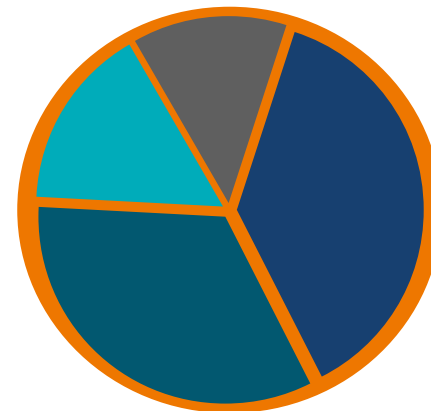
# The solution

- Through the use of derivatives, cash overlay strategies efficiently gain exposures in a portfolio to reduce the effects of holding cash
- Derivatives allow the portfolio to gain the expected exposures to various asset classes without investing in the “physical” securities
- Overlay strategies may “equitize” the cash position or rebalance a portfolio as desired
- Ultimately, the goal of an overlay is to “fill the gaps” due to holding necessary cash

PORTFOLIO WITHOUT CASH OVERLAY



PORTFOLIO WITH CASH OVERLAY



# Services offered and expected benefits

While Russell and Parametric offer all of these services, Verus recommends FCERA only implement option 1 in a “walk before running” approach

<b>Strategy</b>	<b>Expected Benefit</b>
1) Cash equitization / liquidity management	Increases flexibility to hold cash for liquidity purposes while not sacrificing long-term return potential. (most straight-forward)
2) Passive rebalancing / asset allocation	Allows the realignment of asset class exposures without the transaction costs associated with physicals and does not disrupt underlying managers. Reduces tracking error.
3) Active rebalancing/tactical	Discretionary tilts and active management with the goals of increasing returns (most complex)

# Overlay providers key details

# Provider details

	Parametric Portfolio Associates, LLC	Russell Investments
<b>Headquarters</b>	Seattle, WA	Seattle, WA
<b>Firm Inception</b>	1987	1936
<b>Overlay Service Inception</b>	1987	1992
<b>Ownership</b>	Majority-owned subsidiary of Eaton Vance Corp.	Will be owned by TA Associates and Reverence Capital Partners
<b>Indicative Fee Schedule</b>	<ul style="list-style-type: none"> <li>- \$1,500/month plus</li> <li>- 0.15% first \$50 mil of notional value</li> <li>- 0.10% on the next \$100 mil</li> <li>- 0.05% on the next \$350 mil</li> <li>- 0.03% on the next \$500 mil</li> <li>- 0.02% thereafter</li> <li>- Minimum Fee: \$75,000 per year</li> </ul>	<ul style="list-style-type: none"> <li>- Option 1: Annual \$200,000 base fee plus</li> <li>- 0.015% to 0.05% of notional value</li> <li>- Option 2: Annual \$50,000 base fee plus</li> <li>- 0.05% to 0.10% of notional value</li> </ul>
<b>Fees at notional amounts:</b>		
<b>\$250mm</b>	\$243,000	\$175,000 - \$325,000
<b>\$500mm</b>	\$368,000	\$275,000 - \$550,000
<b>\$1,000mm</b>	\$518,000	\$350,000 - \$1,050,000
<b>Product Offerings</b>	<ul style="list-style-type: none"> <li>- Cash equitization</li> <li>- Exposure management</li> <li>- Liquidity management</li> <li>- Currency management</li> <li>- Rebalancing/overlay management</li> <li>- Tactical asset allocation</li> </ul>	<ul style="list-style-type: none"> <li>- Cash equitization</li> <li>- Exposure management</li> <li>- Liquidity management</li> <li>- Currency management</li> <li>- Rebalancing/overlay management</li> <li>- Tactical asset allocation</li> </ul>

Sources: Verus, Parametric, Russell



# Provider details (continued)

	Parametric Portfolio Associates, LLC	Russell Investments
Percentage of revenue from overlay services (3 yr average)	75.4% <sup>1</sup>	9% <sup>2</sup>
<b>Number of clients and AUM:</b>		
• <b>Total Institutional:</b>	- \$65.7 billion is managed for 189 institutional clients	- \$42.0 billion is managed for 78 institutional overlay clients
• <b>Public:</b>	- \$15.6 billion is managed for 27 public funds	- \$17.6 billion is managed for an undisclosed number of public clients
<b>Account Sizes (notional):</b>		
• <b>Median:</b>	- \$52.3 million	- \$250 million
• <b>Mean:</b>	- \$394.4 million	- \$540. million
• <b>Largest:</b>	- \$13.8 billion	- \$6.0 billion
<b>Employees</b>		
• <b>Total</b>	• 318 Employees (80 in Minneapolis)	• 1,900 worldwide
• <b>Investment Professionals</b>	• 76 Investment Professionals (35 in Minneapolis)	• 23 dedicated overlay professionals

Sources: Verus, Parametric, Russell. <sup>1</sup>Applies only to Minneapolis Investment Center. 3 year total firm average is 11.5% <sup>2</sup>Russell only releases limited financial information – this number applies to implementation services in totality, not only overlay services.

# Provider details (continued)

	Parametric Portfolio Associates, LLC	Russell Investments
<b>Reporting</b>	Daily tracking report available online which include <ul style="list-style-type: none"> <li>- fund cash levels</li> <li>- manager values</li> <li>- asset class exposures</li> <li>- margin summary</li> <li>- custom portfolio metrics</li> </ul>	Customized reporting that can include: <ul style="list-style-type: none"> <li>- synthetic index replication analysis</li> <li>- counterparty exposure</li> <li>- total fund risk management</li> <li>- liquidity at risk</li> <li>- overlay highlights</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>- Core business is focused on portfolio solutions</li> <li>- Experience with highly customized overlays</li> <li>- Extensive use of asset class, sub-asset class, and style specific instruments including futures, forwards, swaps, and ETFs</li> <li>- Daily tracking reports available online</li> <li>- Low relative base fee</li> </ul>	<ul style="list-style-type: none"> <li>- Experience with large overlay mandates</li> <li>- Largest asset base</li> <li>- Two separate fee structures available</li> <li>- Customized reporting available</li> </ul>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>- Smaller relative client and asset base</li> <li>- Have indicated willingness to customize fee schedule</li> </ul>	<ul style="list-style-type: none"> <li>- Two ownership changes since 2014</li> <li>- High relative base fee (specifically “option 1”)</li> <li>- Overlay exposures gained primarily through the use of broad market futures</li> </ul>

Sources: Parametric, Russell

# Appendix

# Risks

Risk	Description
Basis risk	Risk attributable to uncertain movements in the spread between a futures price and a spot price
Communication / Information risk	Overlay index exposures are maintained based on underlying investment values provided by one or more third parties. There are often delays in the receipt of updated information which can lead to exposure imbalance risks. Inadequate communication regarding cash flow moves into and out of fund and manager changes can lead to unwanted asset class exposures and loss.
Tracking error	Futures (synthetic) returns do not perfectly track benchmark index returns. This divergence between the price behavior of a position or portfolio and the price behavior of a benchmark is tracking error and impacts performance.
Margin / Liquidity risk	Potential that the market moves in a manner adverse to the futures or swap position causing a mark-to-market loss of capital to the fund and a resulting need to raise liquidity or to close positions; this could happen at a time when underlying fund or positions are also declining in value.
Leverage	Creation of market exposure in excess of underlying collateral value may lead to significant capital losses and result in position liquidation.
Counterparty	Counterparty credit risk on OTC trading and trade disruption risk related to exchange traded futures.
Collateral	The program may experience losses on the underlying designated assets in addition to potential losses on the index market exposure overlaying these assets.
Market risk	Market performs in a way that was not anticipated. For example, cash outperforms capital markets.

# Forwards and Futures

- **Forward contracts**: More credit risk, price fixed at the start, cash flows settled on delivery
  - Traded OTC as customized contracts that are privately negotiated between parties
  - Entail more credit risk and market risk as they are not backed by the exchange's clearing house
  - Settled at the forward price agreed on at the trade date
  - No cash flows until delivery
- **Futures contracts**: Protected by clearing house, price fixed on last trading day, cash flows settled with margin calls
  - Exchange traded, standardized instruments transacted through brokerage firms
  - Default exposure lives with the exchange's clearing house
  - Settled at the settlement price fixed on the last trading day of the contract
  - Requires initial margin and periodic margin calls
- **Similarities**: Forward settlement via cash or physical asset, require leverage
  - Both contracts are binding agreements to act at a later date
  - May be physically settled or cash settled
  - Both require leverage

# Manager write-ups

# Overlay Services Manager Evaluation

## Parametric Portfolio Associates, LLC

LAST UPDATED: MAY 2016

### PROVIDER DETAILS

Headquarters:	Seattle, WA
Firm Inception:	1987 (Parametric) 1972 (predecessor firm)
Overlay Services Inception:	1987
Ownership:	Majority-owned subsidiary of Eaton Vance Corp.
Product Mix:	Fund cash equitization Manager cash equitization Overlay transition and reallocation management Rebalancing Exposure management Currency management Interest rate management
Indicative Fee Schedule:	\$1,500/month plus: <ul style="list-style-type: none"> <li>- 0.15% first \$50 mil of notional value</li> <li>- 0.10% on the next \$100 mil</li> <li>- 0.05% on the next \$350 mil</li> <li>- 0.03% on the next \$500 mil</li> <li>- 0.02% thereafter</li> </ul> Minimum Fee: \$75,000 per year
Fee at notional amounts:	
\$250mm	\$293,000
\$500mm	\$543,000
\$1,000mm	\$1,043,000

### Firm Background and History

Parametric Portfolio Associates, founded in 1987, is a majority-owned subsidiary of Eaton Vance Corp that focuses on the delivery of engineered portfolio solutions, including rules-based alpha-seeking equity, alternative and options strategies, as well as implementation services including tax-managed core equity, futures overlay and centralized portfolio management.

Eaton Vance owns 93% of the firm with the remaining equity ownership at Parametric distributed among senior management and investment professionals. Parametric is comprised of three investment centers – Seattle (headquarters), Minneapolis and Westport, CT. The firm's institutional overlay strategies reside within the Minneapolis investment center which was formerly The Clifton Group (founded in 1972) prior to Parametric's acquisition of the firm in 2012.

As of December 31, 2015, Parametric had 318 employees, including 76 investment professionals, and approximately \$152bn in assets under management including \$65bn in overlay strategies managed out of Minneapolis.

### Strategy Background

Parametric has over 30 years of exposure management experience dating back to The Clifton Group. The firm's cash overlay services are known internally at Parametric as Policy Implementation Overlay Services (PIOS). The objectives of PIOS are to: 1) increase day-to-day availability of cash and provide operational efficiency for cash flow management, 2) eliminate performance drag due to unintended cash, 3) enable staff to obtain a daily snapshot of total fund exposures, and 4) maintain asset class exposure during manager changes.

## Key Investment Professionals

The Minneapolis investment center's team is experienced and deep with 35 investment professionals and 80 team members in total, and is focused predominantly on providing overlay services. Minneapolis CIO Jack Hansen has been with the firm for more than 30 years.

Parametric uses a team approach whereby no one individual manages a client portfolio. Parametric believes that the team approach is a key aspect in providing clients with continuity as it mitigates the risks involved with the departure of key personnel, and brings together the experience and perspective of a number of investment professionals. Each team consists of portfolio managers and investment analysts who all work closely together to manage each client's overlay mandate.

## Process

Parametric's cash overlay program provides an efficient way for portfolios to maintain their target asset allocation in a systematic fashion through cash securitization at the fund and manager level and to rebalance asset classes back to target within defined bands.

The process for establishing an overlay program begins with the creation of detailed investment policy guidelines. Parametric works with the client's staff, board, and consultant in developing an overlay investment philosophy to reflect specific fund objectives. Items to be determined include: assets to be incorporated in the program, target allocations, how cash is to be applied to the overlay program, fund rebalancing thresholds, asset class benchmarks, and reporting needs. The final guideline document is used to determine how overlay positions are adjusted as markets, exposures, and cash balances change over time.

The cash overlay program is invested using a wide array of instruments including futures, forwards, swaps, index funds, and ETFs. The decision to use specific instruments is made based on client guidelines, market availability of

instruments for the specific asset class or sub-asset class, liquidity, tracking error, and cost.

Cash balances are reviewed daily by Parametric's analysts and portfolio managers, and changes to exposures are made based on the client's guidelines. All open futures positions are marked-to-market daily, and trades are reviewed and verified by the portfolio management team and trade order managements system prior to execution to ensure compliance with policy guidelines. A daily account specific tracking report is posted to Parametric's website for client viewing that includes a comprehensive view of the portfolio's exposures including fund cash levels, manager values, asset class exposures and imbalances relative to target allocations, margin summary, and custom portfolio metrics (e.g. funded ratio).

## Risk Management

Parametric seeks to minimize risks through a team-based portfolio management approach that utilizes electronic trade confirmation, a daily portfolio monitoring process, and operational safeguards including daily mark-to-market and segregated margin accounts. Parametric also utilizes a proprietary risk management system that incorporates accounting, trading and portfolio management functions.

## Performance

Parametric estimates that a 2% residual cash balance over the last 10 years in a plan with a policy mix of 60% equities, 35% fixed income, and 5% commodities would have resulted in performance slippage of 9 bps per year.

## Potential Concerns

Minneapolis CIO Jack Hansen remains actively involved in the firm; however, succession planning should be monitored given that Hansen has been with Parametric for over 30 years.

Smaller relative client and asset base.

Higher relative asset based fee.

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*The material may include estimates, outlooks, projections and other "forward-looking statements." Due to a variety of factors, actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. **Past performance is no guarantee of future results.***



# Overlay Services Manager Evaluation

## Russell Investments

LAST UPDATED: MAY 2016

### PROVIDER DETAILS

Headquarters:	Seattle, WA
Firm Inception:	1936
Overlay Services Inception:	1992
Ownership:	Will be owned by TA Associates and Reverence Capital Partners
Product Mix:	Cash equitization Exposure management Beta management for portable alpha Liability-driven investing Fund restructuring Tactical asset allocation Currency overlays Liquidity management
Indicative Fee Schedule:	Option 1: Annual \$200,000 base fee plus: - 0.015% to 0.05% of notional value Option 2: Annual \$50,000 base fee plus: - 0.05% to 0.10% of notional value
Fee at notional amounts:	
\$250mm	\$175,000 - \$325,000
\$500mm	\$275,000 - \$550,000
\$1,000mm	\$350,000 - \$1,050,000

### Firm Background and History

Founded in 1936, Russell Investments is headquartered in Seattle, WA and has over 350 investment products which focus on 5 capabilities: asset allocation, capital markets insights, factor exposures, manager research, and portfolio implementation. Russell operates from U.S. offices in Seattle, New York, Chicago, San Diego, and Milwaukee.

Russel Investments is currently owned by the London Stock Exchange Group, however in October 2015 it was announced that private equity firms TA Associates and Reverence Capital Partners will be acquiring Russell from the London Stock Exchange Group. It is expected that Russell will retain its operational independence following the close of the transaction in June 2016.

As of December 31, 2015, Russell had approximately 1,800 employees across 21 offices worldwide, and approximately \$241.8bn in assets under management including \$509bn in exposure management strategies. Russell has approximately 76 exposure management clients globally including large public funds, corporate plans, foundations, insurance companies, and other institutions.

### Strategy Background

Russell has over 25 years of overlay services experience, known internally at Russell as Dynamic Exposure Management. The objectives of these services are to identify, analyze, and minimize unintended exposures in order to increase return and reduce risk using a variety of synthetic tools.

### Key Investment Professionals

Russel's overlay team is comprised of 23 dedicated team members. Portfolio managers have an average of 13 years of experience.

The portfolio management team is responsible for the overall outcome of the client's overlay program, and manage all portfolio and custodial data including margin and collateral. They monitor daily cash balances to ensure there is sufficient liquidity to meet the client's obligations, as well as perform reconciliations with the client's custodian.

## Process

Russell's Dynamic Exposure Management services seek to provide plans with increased efficiency as overlays provide more flexibility to enact changes to portfolios in a cheaper and quicker way compared to trading physical assets.

While plans must often hold cash in order to make benefit payments, capital calls and distributions, and purchases and redemptions, Russell's Dynamic Exposure Management services seek to reduce the unintended impact of cash by overlaying with futures in order to capture desired risk premium while retaining immediate liquidity and reducing transaction costs.

Mandates can be designed in various ways based on the client's preference of where they want discretion to reside. On one end of the spectrum, "client-directed" mandates rely on the client to direct Russell to make allocation changes. This option is used by clients who are looking to make periodic updates to tactical asset allocation targets, make tactical market access trades, and use options as tactical hedges. Under "guideline-specified" mandates, Russell uses rules-based overlays, set by the client, in order to manage cash, currency, or asset class exposure, and is often used as part of a liability driven investing program. Finally, clients can grant discretion to Russell to manage their overlay program which often takes the form of enhanced asset allocation overlays, downside protection programs, and derivative-based smart beta.

## Risk Management

While the portfolio management team is responsible for the day to day activities and monitoring of the overlay

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*The material may include estimates, outlooks, projections and other "forward-looking statements." Due to a variety of factors, actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. **Past performance is no guarantee of future results.***

program, Russell has dedicated quant, operations, and trading teams to assist in the implementation and risk management of the overlay program. The quant team is responsible for designing custom strategies and providing analytical support, the trading team provides 24-hour trading services, and the compliance team performs daily compliance reviews and periodic internal audits.

Another facet of Russell's risk management program is the broad and diverse list of counterparties used by the Dynamic Exposure Management team. Russell uses a panel of over two dozen global, non-affiliated banks and four trading platforms in order to diversify counterparty risk and manage execution costs.

Russell also provides customized reporting to overlay clients in order to help provide detailed information about portfolio exposures including but not limited to counterparty exposure, total fund risk management, liquidity at risk, and overlay highlight reports.

## Performance

Using back-tested market data from December 31, 1987 through December 31, 2014, Russell estimates that overlaying a 2.5% average cash exposure would have resulted in a 12 bps gain per year for the total fund.

In general, Russell expects that managing total fund liquidity utilizing an equitization overlay can add 10-15 bps to total fund returns annually, and reduce tracking error by 75%.

## Potential Concerns

Two ownership changes since 2014.

High relative base fee (specifically "option 1").

Overlay exposures gained primarily through the use of broad market futures.

# RFI Reponses



# Fresno County Employees' Retirement Association Overlay RFP

**Parametric Portfolio Associates® LLC**

5/6/2016

## Introduction

The Fresno County Employees' Retirement Association ("FCERA" or "The Association") is a defined benefit pension plan with approximately \$3.9 billion in assets. The purpose of this RFI is to solicit information from selected portfolio solutions firms, specifically regarding potential employment as an overlay service provider at FCERA.

The notional exposure of the program, while varying, is expected to be 1% to 3% of overall FCERA assets; historically, the Fund has averaged 1.3% in cash or equivalents over the past five years and requires approximately \$20 and \$25 million per month for operational purposes.

Verus Advisory will be assisting the Board of Trustees with the RFI process, and if the Board so chooses, implementation.

## Response Requirements and Timeline of Process

Questions regarding this RFI should be submitted via e-mail only to [avierra@verusinvestments.com](mailto:avierra@verusinvestments.com) by April 29<sup>th</sup>, 2016. Full RFI responses are due to Verus Advisory no later than May 6<sup>th</sup>, 2016 at 5:00pm PST. Responses should be sent electronically (in Word **and** PDF formats) to Austin Vierra of Verus Advisory at [avierra@verusinvestments.com](mailto:avierra@verusinvestments.com).

After reviewing and analyzing the RFI responses, Verus Advisory and the Board of Trustees will discuss the next steps appropriate for FCERA; RFI respondents will be notified of any requested information or proposal in due time.

Costs for developing the responses to this RFI will fall entirely on the responding firm. Under no circumstances shall costs or expenses be billed to or reimbursed by FCERA.

## Request for Information:

Please provide information on your firm's overlay services offerings by responding to the following questions:

**1. Please give a brief overview of the firm that includes, but is not limited to, the following information:**

**a. When was the company founded?**

Parametric Portfolio Associates ("Parametric") was founded in 1987. The concept of Parametric's centralized overlay investment management program was developed in 1986 by The Clifton Group in partnership with the firm's first overlay service client and its consultant. The Clifton Group was acquired by Parametric on December 31<sup>st</sup>, 2012.

Parametric is a leading global asset management firm providing investment strategies and services to institutions and individual investors around the world. The firm's clients include endowments and foundations, retirement plans, insurance companies, sovereign wealth funds, sub-advised funds, financial professionals and family offices. The firm takes an engineer's approach to asset management – mathematical, pragmatic, and testable. The value the firm adds comes from portfolio construction – carefully considering risk, taxes, and costs – and does not rely upon predictive judgments about markets or individual securities.

Parametric serves clients through two categories of offerings: **Alpha Strategies and Customized Exposure Management**. Alpha strategies cover a range of equity asset classes, commodities, currency, managed options, and market neutral. Specialty applications include portfolio strategies of closed-end funds and master limited partnerships and legacy enhanced beta strategies that combine futures-based index exposure with active collateral management.

Customized Exposure Management, including comprehensive overlay programs, involves constructing and managing portfolios to assist clients in meeting their market exposure, risk management, tax management, and return objectives in a cost-effective manner. The firm works with clients to design and build customized solutions, and then implements these programs using individual securities, exchange-traded funds, futures, options, and other derivative instruments.

Parametric's capabilities span global markets, traditional and specialty asset classes, and physical and synthetic instruments. Investors can access the firm's strategies through various channels, including individual and institutional separate accounts and pooled investment structures, and, while the firm offers a diverse range of portfolio strategies, each account is engineered to seek the right blend of expected return, risk, and cost control.

**b. Where is the company headquartered?**

Parametric is headquartered in Seattle, Washington.

**c. What is the ownership structure of the firm?**

Eaton Vance Corp., through its wholly owned affiliates Eaton Vance Acquisitions and EVA Holdings LLC, maintains 100% voting control of Parametric, a current profit interest of 92%, and a current capital interest of 97%. Employees of Parametric and its subsidiary Parametric Risk Advisors LLC (“PRA”), through ownership in Parametric Portfolio LP, currently hold a combined indirect profit interest of 8% and capital interest of 3%.

**d. What is the organizational structure of the firm?**

Please see [Appendix A](#) for a copy of the Parametric Minneapolis Investment Center’s organizational structure, where the overlay product is managed.

**e. Discuss the financial stability of the firm; please provide recent reports from credit rating agencies such as Standard & Poor’s or Moody’s**

Parametric is currently experiencing growth via institutional and retail distribution channels and remains appropriately positioned for continued growth. The firm is financially stable and independent. Parametric has always been and currently remains a solvent organization with adequate funds to sustain ongoing operations. Credit rating reports are not applicable.

**f. Identify and describe any material litigation or investigation by a regulatory authority that the organization or officers have been involved in over the last three years that relate to overlay services**

Neither Parametric, nor any of its officers or principals, have been involved in any material business litigation, regulatory, or legal proceedings in the last three years.

**g. Please describe any merger and/or acquisitions the firm has been involved in over the past five years. Do you anticipate any mergers and/or acquisitions involving the firm in the near future?**

Prior to December 31<sup>st</sup>, 2012, the Minneapolis Investment Center was known as The Clifton Group. The Clifton Group Investment Management Company (“Clifton”) was majority owned by Dougherty Financial Group. On December 31, 2012, Parametric acquired Clifton, based in Minneapolis, MN.

To the best of our knowledge, Parametric does not anticipate any mergers and/or acquisitions in the near future.

**2. Please give a brief overview of the Firm's overlay services, that includes, but is not limited to, the following information:**

**a. Describe the organizational structure of the overlay services group**

Parametric utilizes a team approach for portfolio management which expands client coverage through shared responsibilities. The team approach assists in broadening the investment perspective by incorporating the expertise and experience of the entire group on each investment decision. The team approach is a key aspect in the continuity plan as it mitigates the risks involved with the departure of key personnel. Each team consists of Portfolio Managers and Investment Analysts who all work closely together to service our clients and their unique overlay needs.

Please see [page 3](#) of [Appendix A](#) for the organizational structure of the overlay team.

**b. How long has the firm been providing overlay services? Please provide a brief history of the firm's growth in this area.**

The concept of Parametric's customized overlay investment management program was developed in 1986 in partnership with the firm's first overlay service client and its consultant.

Below is a brief summary of Parametric's overlay program annual growth since 2011.

<b>Year</b>	<b>AUM</b>	<b># of Clients</b>
2015	\$64,522 MM	187
2014	\$55,751 MM	170
2013	\$43,669 MM	155
2012	\$31,996 MM	131
2011	\$27,344 MM	121

**c. What is the total number of institutional overlay clients? What is the total notional value of these clients' assets? What portion of these assets constitute public funds?**

As of March 31<sup>st</sup>, 2016, Parametric manages \$65.7 billion for 189 overlay clients. Of the total overlay notional AUM, approximately \$15.6 billion is managed for 27 public funds.

**d. As it relates to the firm's overlay clients, please provide the following information (notional AUM):**

All data below is as of March 31<sup>st</sup>, 2016:

- i. Median account size:** \$52.3 million
- ii. Mean account size:** \$349.4 million
- iii. Largest account size:** \$13.8 billion



**e. Please describe the strengths that differentiate the firms' overlay services from other service providers. Identify any areas targeted for improvement. Discuss briefly the overall business objectives with respect to future growth and product research and development related to overlay services**

The value created by Parametric's approach centers around the firm's focus of delivering overlay services to the institutional marketplace. Parametric's people, processes, policies, procedures, and infrastructure have been designed to support efficient implementation of customized overlay strategies and maximize the value for clients. This includes the Minneapolis Investment Center's proprietary information technology platform, transparent, overlay focused reporting methodology, policy-driven investment process, and consultative investment organization arising from many years of overlay management experience. Parametric's clients view the firm as a trusted partner for implementing prudent synthetic strategies free from conflicts of interest.

As testament to Parametric's service, approximately half of the firm's existing overlay client relationships have been generated from client referrals and consultant recommendations.

The Parametric overlay program is a primary focus of the firm, with over three decades of research and development and with significant investments in both people and technology to provide the highest level of service for the firm's current and future overlay client base. To manage expected growth and control operational risks, the firm has made, and continues to make, meaningful investments in its proprietary technology platform that supports portfolio management, order management, operations, accounting, and compliance. The firm also employs a best practice of hiring additional personnel in advance of anticipated need to ensure that growth does not negatively impact the firm's ability to provide outstanding service and support to existing clients.

Given the overlay program is a key focus for the firm, Parametric will continue to invest firm resources into infrastructure, research and development, and additional investment professionals in order to maintain a first-in-class overlay solution.

Examples of how Parametric has, and will continue to invest in the program includes:

- Adding people dedicated to the overlay service.
- Overlay research in areas such as rebalancing optimization, instrument availability, index replication, trading techniques (e.g. Block Trade at Index Close - BIC trades) and other areas designed to improve program success.
- Investment in technology to deliver a customized program to clients in an efficient and risk-controlled manner.
- Utilization of a broad array of instruments based on client needs including:

- Futures
- Options
- OTC instruments
- ETFs
- Government securities

Parametric will continue to make these kinds of investments to further refine, expand and enhance our overlay solutions and services.

**f. Please describe your firm's approach to risk management as it pertains to overlay implementation**

The list below describes the risks involved in an overlay strategy and how Parametric monitors and controls them:

Market Risk: The risk that the market performs in a way that was not anticipated. For example, cash outperforms capital markets. Systematic market risk is an inherent part of the overlay program and can neither be diversified away nor mitigated. Client specific policy guidelines are established to clearly define desired market risk based on client asset allocation targets.

Data/Communication Risk: The risk that information received from outside sources is inaccurate, incomplete, or stale. Parametric establishes an electronic link to the custodial bank, third-party, and other custody providers on a daily basis. Fund data is downloaded into the Parametric Minneapolis Investment Center's proprietary system, Investment Management System (IMS). Automation reduces the potential for human error in data transmission.

IMS has numerous business rules against which data is checked automatically. Investment team members also "scrub" data for accuracy. Portfolio holdings such as commingled vehicles are updated via proxy to mutual fund or index returns as agreed to by the client. Analysts also review individual manager security and cash balance changes versus the previous day, as well as total account percentage change, for reasonableness. For example, if a manager account changes by more than 3% in a day, the account is reviewed to determine the nature of the change. Changes can be attributable to a market move, pricing error, cash flow, or other events. Parametric will investigate changes that appear unreasonable based on market conditions. Each manager's daily change is also compared to a benchmark change as a continuity check. Parametric will coordinate with the client and consultant regarding anticipated changes in cash and asset balances in the fund.

Trades are not initiated until Parametric is confident that the data fairly represents fund exposures. We may verify fund positions by contacting the custodial bank, individual managers, and/or the client/consultant. The independent review of the

fund's positions and daily customized reports on those positions provide the client, consultant, and any third-party with a valuable monitoring tool to address information errors originating from outside sources. The Minneapolis Investment Center has been providing an independent review of third-party custodial data for over 30 years and will continue to do so in the future. This review is critical to the effective execution of the overlay program.

Margin/Liquidity Risk: The risk that market movements will result in the need for the posting of incremental variation margin or the accumulation of excess collateral in the margin pool. A section of the Daily Tracking Report (DTR) is dedicated to margin required, the excess amount available and an estimate of the magnitude of an adverse market move which would require additional funds. Investment staff monitor this report daily. When market moves dictate, a Portfolio Manager will notify the client and/or consultant that either additional margin is needed or that excessive margin collateral exists. Parametric will work proactively with all parties to maintain adequate liquidity for the program.

Cash Flow Risk: The risk that unexpected cash flows result in sub-optimal overlay execution. Parametric will work with the client and consultant to establish a communication system to track anticipated cash flow moves into and out of the fund along with any reallocation of manager positions.

Recognition of these flows in advance of their occurrence will result in more efficient exposure maintenance. This process is not time intensive and usually involves copying Parametric on current communication. Generally, clients and third-parties communicate with Parametric via email or fax when flows are expected. Emails are received by our central email address set up to receive client information ([MN-Investments@paraport.com](mailto:MN-Investments@paraport.com)). All investment professionals view this information. Faxes are automatically scanned and sent to this address. Telephone direction is verified by confirming emails. This information is posted to Parametric's master internal electronic trading calendar which all investment personnel monitor continuously to ensure proper exposure maintenance. Diligent maintenance of important client information in a central location provides important risk management control. If an unexpected cash flow should occur, Parametric will investigate. Through communication of anticipated cash flows and Parametric's monitoring of the portfolio's positions, Parametric seeks to ensure that data is accurate and the overlay program is implemented correctly and efficiently.

Tracking Error Risk: The risk that synthetic exposure of an index has tracking error to the cash index. Parametric seeks to minimize tracking error by utilizing optimized futures baskets of very liquid futures contracts. All derivative contracts will have some tracking error that cannot be mitigated by an overlay manager.

Trading Risk: The risk that an error is made in the execution of a trade on behalf of the client. Parametric's first step in minimizing trading risk is to accurately collect and

analyze data. Investment staff then enter and review trades for compliance. The review process helps to ensure that trades executed fulfill Investment Guidelines and no errors have been made. Trades are settled by back office staff within hours using continuously updated electronic trade reconciliation systems. Parametric has limited the number of brokers it works with to help maintain strong relationships which, in turn, promote back office accuracy, trading capabilities, and timely pricing. Through the institution of multiple levels of risk management, Parametric seeks to ensure that trade executions are correct. Trading activity is a relatively low risk area for an overlay program because of the infrequency and size of trades relative to total portfolio size. No trades are executed until two separate Portfolio Managers review the trade. Investment staff members physically sit next to each other in the trading room so communication flows are frequent and direct.

The overlay program utilizes a proprietary system, IMS, which has integrated trade error verification functionality into the trade management process. Client-specific guideline parameters, or “business rules,” are coded into the system during account set-up, and can include a wide range of rules-based factors to prevent unauthorized trades and/or trade allocations from occurring within a client portfolio. For example, client-prohibited contract types are prevented from reaching trade execution and, thus, allocation to client accounts. Various parameters related to trade size limits, short positions, purchase/sale of previously un-held or unauthorized contract types, and long-short transition trades can be constructed during account set-up to minimize the risk of trading errors.

### **Overlay Management Investment Policy Guidelines**

A set of comprehensive guidelines will be created. These guidelines will detail specific exposure targets, policy ranges, and other unique risk targets for each overlay strategy employed. The “Investment Guidelines” serve as the base document from which the overlay strategies will be executed and managed. Upon review and approval by all parties, overlay strategy parameters are entered into IMS, and the guidelines are posted to the client-specific webpage for easy access. As exposure targets, ranges, client-specific risk targets, or other parameters changes are communicated by the consultant and/or the client, the Investment Guidelines and IMS are amended accordingly. On a daily basis, the client’s portfolio data is obtained, processed by IMS, verified for accuracy, and reviewed by investment staff. Overlay exposure modifications necessary to maintain compliance with client targets are automatically calculated as part of the daily process.

In addition to the risk management strategies identified above, Parametric employs the following safeguards:

- All futures contracts are marked-to-market daily and clients receive a summary of the daily gain or loss for periods extending back to program inception.

- Daily Tracking Reports (DTR) have several internal risk management sections which confirm compliance with guidelines or flag inconsistencies that need to be resolved.
- Parametric can provide the client direct electronic access to the clearing account for independent confirmation of exchange-traded derivative positions.
- All key personnel are available to respond to the client and all stakeholders' questions or inquiries.
- All positions for the client will be held with a single clearing broker thus lowering the risk of back office errors or the accumulation of positions outside of the guidelines.

Finally, Parametric provides detailed analysis and reporting to ensure compliance with client-specific risk targets. Additionally, client-specific risk thresholds can be incorporated into the DTR and automated with respect to execution. It is important to note, however, that Parametric cannot assure timely execution of required transactions due to market disruptions or force majeure.

**g. Please review the recommended approach to designing an overlay program; how do you work with the Board and Consultant?**

Generally, each new relationship set-up process begins with an onboarding conference call with Parametric, the client's staff, interested board members, and the client's consultant. Parametric will assign a project manager to assist all stakeholders through every step of the design process. In our experience, a futures-based overlay program can be set-up within one to three months.

The process for establishing an overlay program begins with the creation of detailed Investment Policy Guidelines. Parametric works with the client's staff, board, and the client's consultant to provide guidance on cash overlay services best practices. Parametric has experience with numerous fund sponsors in successfully implementing overlay programs.

Parametric will assist in customizing the client overlay investment philosophy through the Investment Policy Guidelines template to reflect specific fund objectives. Items to be determined include: assets to be incorporated in the program, target allocations, how cash is to be applied to the overlay program, fund rebalancing thresholds, asset class benchmarks, and reporting needs. This document is posted to Parametric's secure website for client/consultant viewing, and is used to determine how overlay positions are adjusted as markets, fund exposures, and cash balances change.

A futures account at a clearing broker and a custodial account need to be in place for an overlay program to begin trading. Also, a signed investment management agreement needs to be completed. Parametric has master agreements and templates available to streamline this process.

The client will direct the custodian bank to open an account for Parametric to process trades. The custodian will also need to be given direction from the client to allow Parametric to download the daily fund security values and cash balances for the fund. This information is required to create the comprehensive Daily Tracking Report (DTR). Parametric also has template letters for clients to send to custodial banks to assist with this portion of the set-up process.

Please see **Appendix B** for a copy of Parametric’s Onboarding Presentation.

On an ongoing basis, the board, staff, and consultants will have daily access to a dedicated team of investment professionals and other support staff.

**h. How does the firm define fiduciary responsibility in the context of this engagement?**

Parametric complies with all fiduciary responsibilities as a registered investment advisor in the context of managing the overlay program.

**i. List all insurance coverage relevant to overlay services. Indicate the type and amount.**

Please see the table below for a summary of Parametric’s insurance coverage.

Type	Carrier	Amount
Investment Company Blanket Bond Insurance	ICI Mutual	\$85,000,000 Occurrence Limit in excess of \$150,000 Deductible amount
Directors & Officers/ Errors & Omissions Liability Insurance	ICI Mutual Twin City Fire Alterra American Everest National Arch Insurance Companies Axis Ins. Co.	\$100,000,000 Aggregate Limit in excess of \$1,000,000 Deductible amount
ERISA Bond Insurance	Berkley Regional Federal Insurance Co. (Chubb) Great American Insurance Co. Continental Insurance Co. (C.N.A.) Hanover Insurance Co. Axis Insurance XL Specialty Insurance Co.	Aggregate Limit: 10% OF ACCOUNT up to a maximum of \$500,000 per plan (\$1 million if plan holds employer securities), whichever is less.
Cyber Risk Liability Insurance	National Union Fire Insurance Co., a subsidiary of AIG	Up to \$5 million

**j. What percentage of the firm's revenues does the overlay services business line generate?**

The table below summarizes the percentage of firm revenue the overlay strategy generates based on revenue from the Minneapolis Investment Center.

	2015	2014	2013	2012
<b>% of Total Revenue</b>	71.54%	74.99%	79.71%	86.38%

The table below summarizes the percentage of firm revenue the overlay strategy generates based on total firm revenue.

	2015	2014	2013	2012
<b>% of Total Revenue</b>	13.06%	10.68%	10.74%	13.58%

**k. Please provide the number of overlay service clients the firm has gained and lost for each of the last five years through December 31, 2015 (include notional values, if possible).**

	2015	2014	2013	2012	2011
<b>Gained Clients</b>	17	28	26	10	14
<b>Gained AUM<sup>1</sup></b>	\$832	\$4,899	\$1,356	\$1,387	\$1,156
<b>Lost Clients</b>	8	5	6	13	3
<b>Lost AUM<sup>1</sup></b>	\$184	\$17	\$506	\$1,452	\$4

<sup>1</sup> Values are reported in millions.

**l. Please describe any key professional turnover (hiring or departures) over the past three years.**

Below are the investment professionals who have been hired by the Minneapolis Investment Center, where the overlay strategy is managed, in the past 3 years as of March 31<sup>st</sup>, 2016.

Name	Title	Start	Years with Firm	Years in Industry
Andrew Carlson	Associate Portfolio Manager	3/28/16	>1	4
Michael Zaslavsky	Associate Portfolio Manager	11/30/15	>1	7
Dane Fickel	Associate Portfolio Manager	07/23/15	1	7
Jan Mowbray, CFA	Associate Portfolio Manager	06/08/15	1	21
Joseph Zeck, CFA	Associate Portfolio Manager	11/10/14	1	8
Yupeng "Perry" Li	Associate Portfolio Manager	10/06/14	1	2
Clinton Talmo, CFA	Portfolio Manager	09/29/14	1	13
Wei Ge, CFA	Senior Researcher	06/30/14	2	9
Jason Nelson, CFA	Associate Portfolio Manager	06/18/14	2	7

Below are the investment professionals who have departed from the Minneapolis

Investment Center, where the overlay strategy is managed, in the past 3 years as of March 31<sup>st</sup>, 2016.

Name	Title	Depart Date	Years with Firm
Matthew Liebl, CFA	Portfolio Manager	12/22/15	9
Amanda Carter, CFA	Portfolio Manager	06/02/15	11
Jeffrey Rodgers, CFA	Portfolio Manager	01/23/15	10
Justin Persuitti, CFA	Associate Portfolio Manager	06/04/14	1
Andrew Spellar	Portfolio Manager	05/15/13	2

**3. Please provide information on the data processing and computer systems as it relates to the overlay services that includes, but is not limited to, the following information:**

**a. Location of the administrative operations and computer facilities that support overlay operations**

The Minneapolis Investment Center houses the administrative, operations and computer facilities that support the overlay program.

**b. Software and procedures in place to protect financial information from hackers or other malicious users**

The firm employs the following technical controls to prevent and detect potential attacks:

- Network firewalls are implemented in a high-availability framework to secure data stored on the network.
- Intrusion detection appliances are deployed to detect unauthorized access to data and systems; activity is monitored at all times by a third-party managed service provider.
- Enterprise-wide anti-malware, web filtering and email filtering technologies are employed to minimize exposure to and proliferation of computer viruses.
- Desktop security includes complex passwords, regular password changes, laptop encryption, idle screen lock, endpoint anti-malware, and USB device controls.
- Multi-factor authentication is required for remote access.
- Secure managed file transfer technologies are utilized to transmit and receive data to and from business partners.
- Critical data is replicated to a back-up datacenter. Additionally, incremental back-ups are taken daily in the production datacenter and copied to the recovery datacenter. Weekly full back-ups are written to disk, then to encrypted tapes which are then shipped to a secure off-site location.



- Security data is collected and analyzed in a Security and Information Event Management (SIEM) system.
- Software vulnerabilities are routinely managed, prioritized and patched according to criticality.

**c. Significant system enhancements that have been made over the past five years**

The Minneapolis Investment Center utilizes a proprietary Investment Management System (IMS) which supports all aspects of the Minneapolis Investment Center's business.

- Built from the ground up over a two year period and fully replaced the previous proprietary system used by the Minneapolis Investment Center.
- Final migration to the new IMS occurred on October 3<sup>rd</sup>, 2011.
- The development approach focused on the following:
  - Empower end-users by developing highly configurable modules with administration screens that allow very flexible customization via user interface.
  - Architect application in a manner which will allow future development work to reuse many portions of the existing code so new development projects take less time to complete and are easier to maintain.
  - Implement "agile" methodologies that result in frequent, iterative deliverables to end-users. Provide end-users with enhancements and modifications to components of the application so they can better understand what functionality is available to them and what changes may be needed.
  - Use leading technologies to standardize architecture and development techniques.
- IMS continues to evolve to support Minneapolis' new business initiatives and improve existing processes.
  - As an example, the system now has the ability to calculate the attribution of returns by both asset class and by overlay component (cash securitization, transition management, rebalancing, etc.).
- In IMS and by the Portfolio Management Team, counterparty exposures are traded daily. Counterparty monitoring is conducted in real-time daily on the trading desk with a standardized summary report distributed weekly to the Portfolio Management Team.

**d. Planned system enhancements**

Parametric plans to make the following enhancements to IMS:

- Automation of valuation of all OTC securities using Markit
- Enhance margin analysis to enable efficient support for new broker rules
- Add support for SWIFT Messaging
- Redesign the client portal
- Redesign the client facing performance reporting

**e. Disaster recovery procedures**

The Minneapolis Investment Center’s Business Continuity solution is very important to the overall operation of the company. We operate our BCP/DR solution based off of three pillars which can be initiated independently or all together. They are all tested in depth on a yearly basis with our disaster recovery plan tested monthly.

- Workspace Recovery
  - Protects against facilities interruptions (Weather, Evacuation, Power Outage, Flood, Fire)
  - Utilizes a mobile-unit office recovery space with a 48-hour SLA
  - Can mobilize anywhere in the Midwest and house up to 48 employees
- Business Continuity
  - Protects against workforce unavailability (Illness, Pandemic, Weather)
  - Business Impact Analysis performed and reviewed by senior management annually
  - Plans can be initiated independently per department if needed
- Disaster Recovery
  - Protects against Datacenter Outage (Network, Communications, Servers)
  - Tested and reviewed on a monthly basis with resiliency and full failover testing performed yearly
  - RPO of 15 minutes with RTO time of two hours.

Please see [Appendix C](#) for an overview of the Minneapolis Investment Center’s Disaster Recovery Plan.

**f. Percentage of downtime during the past two years and the primary causes of the downtime**

To the best of our knowledge, there have been no system outages over the past two years.

**g. How do you work with custodians? Do you have existing overlay clients with Northern Trust?**

Yes, we have several existing overlay clients that utilize Northern Trust. Of Parametric's 189 overlay clients, there are 56 currently working with Northern Trust.

In general, the client will direct the custodial bank to open an account for Parametric to process trades. The custodial bank will also need to be given direction from the client to allow Parametric to download the daily fund security values and cash balances for the fund. This information is required to create the comprehensive Daily Tracking Report (DTR). Parametric has template letters for clients to send to custodial banks to assist with this portion of the set-up process.

A detailed account reconciliation is conducted on a monthly basis upon receipt of the audited account statement from the custodian. Any discrepancies with the custodian balances are addressed at that time and are corrected by the necessary party.

Given the extensive number of client relationships that utilize Northern Trust, Parametric has been able to work with Northern Trust to create several efficiencies and risk controls. Some of these unique enhancements include:

- A single file that contains all of Parametric's/Northern Trust's client information. Any additional Northern Trust clients are added to this existing file thus reducing the time and effort needed to onboard new accounts.
- FTP file communication that automatically delivers client information directly into IMS. This removes any manual work that is required to gather client information used to implement the overlay program each day.
- Utilization of an Audit Indicator Report in order to speed up the accounting reconciliation process.

**h. Please provide a copy of the most recent SSAE 16 or comparable report, preferably prepared by an independent third party**

Parametric's Minneapolis Investment Center currently does not have an SSAE 16 but has designed its systems, policies, and procedures around the protection of client assets and confidentiality. Parametric periodically reviews and tests investment strategies for client and firm guidelines. As a registered investment adviser, Parametric is regulated by the Securities and Exchange Commission and the Commodity Futures Trading Commission through the National Futures Association. The regulatory environment has increased certain requirements placed on registered advisors including controls in regards to client confidentiality, business continuity, and custody. Through its parent company, Eaton Vance, Parametric is subject to internal audits from the Eaton Vance Audit Committee.

**4. Please detail the capabilities of the firm’s online portal as it relates to overlay services. Responses should include, but are not limited to, the following information:**

**a. Please provide a description of reporting capabilities as well as examples of commonly used reports**

Each client has a password-protected account where they can view:

- Comprehensive program information updated daily
- Historical program information
- Monthly Performance Summary
- Current program guidelines
- Authorized parties list

Parametric utilizes a Daily Tracking Report (DTR) to track asset class and manager positions of client portfolios as well as required overlay positions. Investment Guideline parameters are coded into an internal system during account setup. These parameters are utilized to calculate the asset allocation, target overlay positions, required daily trades, cash flows, fund rebalancing thresholds, margin requirements, and other required variables as delineated in the Investment Guidelines. Each report is customized to reflect unique client parameters.

Clients are also provided a month-end DTR, a monthly Performance Summary, and a monthly/quarterly Accounting Reconciliation Report. Additional custom reporting can also be provided (example, File Transfer Protocol, “FTP”) at a client’s request.

The monthly Performance Summary details market returns, average overlay exposures, overlay gain/loss data, overlay program returns, and customized benchmark returns.

Please see **Appendices D and E** for a sample of Parametric’s Daily Tracking Report and a sample of the monthly Performance Summary, respectively.

**b. How often are reports available for client and consultant use?**

Data used to create the Daily Tracking Report is accessed beginning at 5 a.m. Central Time to ensure the report is posted by 10:30 a.m. Central Time daily.

The monthly Performance Summary is produced on a monthly basis and is posted to Parametric’s secure website by a mutually agreed deadline.

Accounting Reconciliation Reports are generated monthly and are available upon request.

**c. Please review your approach for measuring/reporting the performance of the overlay program as well as the impact on the overall Association**

Performance measurement is critical to any overlay program. However, performance

attribution for overlay strategies is different than traditional investment strategies. Given that traditional attribution methodologies are not appropriate for measuring the success of an overlay strategy, outlined below are several other relevant measures:

#### Absolute Dollar Effect

Highlights whether the overlay strategy made money and the gain/loss on the overlay position in absolute dollar terms. Parametric reflects this calculation in the “PIOS® (Policy Implementation Overlay Service) Incremental Return” chart on the monthly Performance Summary provided to clients. A sample is contained in [Appendix E](#).

#### Fully Invested – Customized Return

The implementation of an overlay strategy requires the creation of a cash account available to the overlay manager. This cash account is used to support the margin requirement for the overlay positions. Because the overlay manager is affecting cash outside of the overlay manager cash account (e.g. fund level cash and manager cash), the overlay manager cash account is often leveraged multiple times to bring the fund as a whole close to a fully invested level. In order to remove the optical leverage effects, calculating a return based on the targeted overlay exposures is calculated. Parametric reflects this calculation as “Client Return” in the “Portfolio Performance” section of the monthly Performance Summary (see [Appendix E](#)). The calculation uses daily linked performance numbers based on index performance. Synthetic return calculations assume that collateral earns a money market return.

#### Fully Invested - Customized Benchmark

A customized benchmark will be created based on the client’s Investment Policy Guidelines. For example, given a policy mix based on current targets, the customized benchmark index might be comprised as follows:

≈ 27% Russell 3000

≈23% MSCI ACWI ex. U.S

≈46% Barclays Capital U.S. Aggregate

≈4% Dow Jones UBS Commodity

This customized benchmark would be the most appropriate benchmark against which to compare the client’s fully invested-customized return (as described above) versus policy expectations and is reflected in the “Benchmark Return” in the “Portfolio Performance” section of the monthly Performance Summary (see [Appendix E](#)). The individual indexes used to create the Benchmark are presented in the “Market Returns” chart of the monthly Performance Summary (see [Appendix E](#)).

## Plan Impact – Completion Fund Concept

This concept transforms the “Absolute Dollar Effect” (above) into a rate applicable to total fund performance. It determines how the overlay strategy affected the return of the fund. If the sum of the futures gains and losses was positive, the overlay had a positive effect on the performance of the fund. This calculation can be seen in the “Total Gain/Loss” column of the “Parametric Portfolio Gain/Loss” chart on the monthly Performance Summary (see **Appendix E**). The number is similar to the “Client Return” in the “Portfolio Performance” chart described under the “Absolute Dollar Effect”, but the denominator in the calculation is the total fund value (linked monthly). The performance impact represents the contribution to total fund performance from the overlay program. This result is often the most important measure to a fund sponsor.

## Summary

Through the data presented by the four measurement approaches described above, fund managers can ascertain how an overlay strategy has impacted performance. Parametric’s internal systems automatically capture all data required to calculate the customized benchmark index and the overlay return. Parametric reconciles all positions and cash flows with the custodial bank on a monthly basis to resolve any pricing and valuation issues.

When establishing the overlay relationship, a determination will be made as to how many custodial accounts may be needed to satisfy the client’s exposure and performance tracking needs. Most clients utilize a single account where Parametric represents the return and exposure attribution. Some clients prefer separate accounts for each asset class or strategy within the program to allow for customized benchmarking.

**5. Please providing information on trading as it relates to overlay services that includes but is not limited to the following information:**

**a. Describe your firm’s global trading capabilities and experience in traditional equity and fixed-income markets, as well as derivative instruments (OTC, FX, Commodity futures, etc.)**

Portfolio Managers at Parametric are responsible for trading overlay strategies. This group has, on average, 13 years of industry experience trading both exchange traded and over-the-counter derivatives (futures, swaps, options, forwards and swaptions), as well as physical instruments such as stocks, bonds, exchange traded funds, and fixed income securities. Each Portfolio Manager possesses general capabilities as well as specific areas of expertise. The markets in which Parametric actively trades and maintains client exposures (using both linear and non-linear vehicles) may include:

- Domestic, international developed, and international emerging market equities

(futures, OTC, options, ETFs)

- Domestic and international fixed income (futures, OTC, physicals, Repo, ETFs)
- Commodities (futures, OTC, options, ETFs)
- Domestic and international inflation linked securities (futures, OTC, physicals, Repo, ETFs)
- Developed and emerging market currencies (futures, forwards, physicals, options, ETFs)
- Credit (centrally cleared OTC, OTC, ETFs)
- Volatility (futures, OTC, options)

Trades are executed by Parametric's staff across the globe based on the specific objectives for each client account. The firm has developed a risk controlled process for managing the trade execution and booking of global derivative trades. Our capabilities are born out of our 30 year commitment to the overlay area.

All trade activity and trade allocations are controlled by a detailed internal trade management policy designed to produce consistency, fairness, and best execution price realizations across accounts.

**b. How do you identify and resolve potential conflicts of interests while trading?**

Throughout the year, Parametric's Compliance Department performs ongoing compliance testing to consider whether any new or unidentified potential conflicts of interest between Parametric and its clients have arisen for which adequate policies and procedures to address such potential conflict do not exist.

Additionally, Parametric seeks to mitigate conflicts of interest by implementing a comprehensive Code of Ethics that is designed to identify, monitor and prevent conflicts of interest with client accounts.

**c. Please review sources of profit for all trading activities**

No compensation is earned from trading activities.

Parametric's implementation of overlay services is somewhat unique because of the service provider model. Parametric's culture is based on serving the clients' exposure management, portfolio monitoring, research, and back office support needs. Parametric's only source of compensation is based on a transparent fee schedule.

**6. Please discuss the pros and cons associated with the different approaches to overlay management:**

**a. Policy replication with long only synthetic exposure to liquid asset classes**

Effective liquidity management presents an implementation challenge to institutional plan sponsors by introducing cash drag into the portfolio. A cash securitization overlay program can solve this problem by allowing institutions to remain fully invested while retaining the benefits of “on demand” liquidity. By expanding their investment toolkit and embracing a cash securitization overlay program, institutions can address the challenge of liquidity management and strive to maximize the efficiency of their investments. Through the cash securitization program, a fund should experience both increased expected return and potential reduced tracking error relative to their policy allocation.

Despite being a lower expected return long-term investment, institutions typically need to carry some cash exposure as a practical necessity. Cash is required for a variety of reasons which may include payments of pension benefits, various distributions, capital call commitments, and other expenses accrued during operations. Selling just the right amount of invested assets to make these payments with perfect precision would be onerous if not impossible. Additionally, when cash comes in to the institution via contributions or other sources, investing the cash in the desired vehicle(s) is not always immediately possible or cost effective. Institutions typically keep at least some cash ready in order to meet these “on demand” liquidity needs. Holding cash introduces cash drag and can create deviation from the investment policy.

The largest risk investors face when implementing a long only cash securitization program is the risk that cash outperforms a balanced allocation to capital market exposure. This was experienced during the Global Financial Crisis when a cash securitization program experienced losses that would not have been experienced had the cash exposure not been invested. However, over long periods of time, cash securitization should be additive to returns as it is expected that the capital markets produce a positive risk premium.

Another modest drawback of a long only cash securitization program is that by not including short positions, the potential rebalancing benefit (described further in question “b” below) is dampened.

A more complete analysis of the benefits and potential risks of synthetic exposure to liquid asset classes can be found in the attached paper, “Cash Securitization” ([Appendix F](#)).



**b. Active policy rebalancing, where overlay functions to neutralize deviations in the underlying portfolio relative to the static policy target**

Based on over 30 years of experience in implementing and managing synthetic rebalancing strategies, Parametric believes that there is no 'optimal' rebalancing strategy. While there are several factors to consider when designing a disciplined rebalancing program, implementation in and of itself is expected to add value over time.

Rebalancing activity can include the use of changing cash levels as a means to incrementally rebalance, asset class rebalancing bands (thresholds), or a combination of these two approaches.

Parametric will work with the client and consultant to establish a rebalancing approach prior to program initiation, which may be altered at any time based on market conditions, client needs, performance, liquidity requirements, and other factors. Parametric can provide, if desired, a detailed back-tested analysis to quantify the expected risk/return trade-offs associated with various rebalancing approaches and targets (rebalance back to target, half-way, etc.).

Two large benefits an investor should experience using a disciplined synthetic rebalancing program include:

1. Closing Exposure Gaps - An overlay program can simultaneously purchase and sell instruments the same day, allowing a fund to reallocate asset class exposures without introducing the exposure gaps typically found when attempting to rebalance with physical instruments.
2. Real-Time Decision Making – Because a portfolio wide snapshot of fund exposures is observed each day, an overlay program has the ability to rebalance daily. This does not mean it is prudent to actually rebalance each day but having the ability to do so should enhance risk controls. For example, October of 2014 saw the equity market drop significantly the first half of the month. Subsequently, the equity markets recovered sharply the second half of the month. Many of our rebalancing clients purchased equity exposure during the middle of the month as rebalance thresholds were breached. After the equity markets recovered, the long equity rebalance positions were then removed after the upper thresholds were breached. This buy low/sell high approach captured significant incremental performance for our clients. Attempting to do the same with physical exposures and without real-time monitoring would make replicating this tactic challenging at best.

A few of the risks that should not be ignored when implementing an overlay rebalancing program include:

1. Liquidity – As additional positions are added for rebalancing purposes, additional cash may be needed to support the overlay positions.
2. Basis Risk – Underlying physical exposure may experience returns that are different than the derivative instruments that seek to track the benchmark for that asset class.
3. Private Market Asset Classes – Certain asset classes do not offer an efficient way to gain or remove exposure via derivative instruments.

A more complete analysis of the benefits and potential risks of synthetic rebalancing can be found in the research brief – “Maximizing the Rebalance Benefit”, attached as **Appendix G**.

**c. Inclusion or exclusion of manager cash**

Residual or transactional manager cash exposure (e.g. 1-3% of the total portfolio) creates another source of expected long-term performance drag versus the policy portfolio.

Manager cash securitization allows Parametric clients to nearly eliminate the drag from frictional cash held by their investment managers. Clients will have the ability to create their custom manager cash securitization program to include all or some of their equity managers. Clients can opt to securitize manager cash from each manager to the manager’s unique benchmark or a policy mix. The program is non-disruptive to the equity managers. The benefit is that the expected performance of the fund increases by removing the cash drag associated with this cash exposure.

Because the manager cash levels that are securitized each day are based on information from the previous days’ market close, overlay positions may be greater than or smaller than the actual manager cash in the portfolio. Ongoing communication between Parametric and the client identifying cash flows into and out of manager cash accounts should help to alleviate this risk.

Another potential consideration of securitizing manager cash is that active manager decisions to raise cash tactically may be neutralized if this cash is deployed via the overlay program. This risk can be minimized by first identifying which managers have the latitude to raise cash in a strategic manner. The overlay program can then be customized to either ignore cash balances in these managers or to cap the amount subject to the overlay (e.g. only overlay the first 3% of cash balances). Through this approach, the core tenants of the overlay program are captured while simultaneously maintaining any active manager decisions.

**d. Determining the appropriate size of the cash overlay, factoring in the desire to mitigate the need for margin calls while maximizing the amount invested in traditional long-only strategies.**

The size of the cash overlay program relates directly to the client’s need for on-demand cash. For example, if monthly cash outflows are required, the client may choose to hold multiple months’ worth of outflows in a cash account knowing that cash is securitized through the overlay program.

Typically, initial margin requirements total around 3-6% of the total overlay position. Additionally, Parametric recommends that 5-15% of the total overlay position be held in cash above and beyond the initial margin requirements.

The variation margin is held as cash at the client’s custodian. This variation margin serves as the capital pool to satisfy the daily mark-to-market function of futures contracts. This additional liquidity would not only serve as the capital base for the mark-to-market function, but could also serve as liquidity for ongoing fund needs such as capital calls and benefit payments. Parametric recalculates the required initial margin and recommended variation margin amounts daily to support overlay index positions.

The amount of variation margin held can be calibrated to the client’s specific liquidity constraints. For example, if a client has access to additional liquidity on short notice, this capital pool can be smaller. Conversely, if a client does not have efficient access to liquidity, Parametric would recommend holding a larger cash buffer.

**7. Please provide your standard fee arrangement, and indicate whether there is flexibility associated with the terms in light of FCERA’s size and how the program may ultimately be structured.**

For the overlay program, Parametric’s standard fee arrangement contains an asset-based component and a retainer fee for a variety of account support services. The asset-based management fee is based solely on the notional value of assets under management, not on the client’s total fund assets or strategies employed. This schedule is shown below:

Retainer Fee: \$1,500 per month

Overlay Asset-Based Fee:

	Overlay Portfolio Assets	Annual Fee as a % of Portfolio Assets
First	\$50 million	.15%
Above	\$50 million	.10%

\$18,750 minimum quarterly fee

The annual fee for managing \$100 million in notional exposure would be \$143,000 (\$18,000 retainer fee + \$125,000 asset-based fee).

The fees listed above include the management of any and all overlay positions, including comprehensive daily portfolio reporting, research, consultation, exposure management coordination during transitions, custom performance reporting, and all other related account activities. Parametric only charges fees based on exposures managed, and does not distinguish between the types of contracts held or overlay strategy employed within the program; notional exposures across strategies and instruments are aggregated and the fee schedule applied accordingly. In addition to the above, Parametric applies an annual fee of \$5,000 for each additional separate account that the client desires.

Parametric is willing to discuss a more customized fee arrangement given FCERA's size and anticipated structure of the overlay program.

**8. Please provide any additional information relating to overlay services that you would like to be considered for review.**

Parametric's overlay program offers clients a broad toolkit to address many implementation challenges. Beyond the components of an overlay program that have already been discussed, there are additional applications that can be used as client needs arise. These include:

Overlay Transition/Reallocation Management

During times of manager changes, manager reallocations, liquidation of illiquid holdings (e.g. hedge funds), and changes to target allocations, exposure gaps may be introduced and/or funds could meaningfully deviate from target exposures. Parametric attempts to reduce or eliminate exposure gaps using index overlays or ETFs. The expected benefits are:

- Mitigation of exposure gaps which reduces performance risk
- The manager termination point can be accelerated or a new manager search period can be extended as long as needed without losing targeted market exposure
- Exposures can be maintained during long-settled liquidations (e.g. hedge fund receivables)

With Parametric overlay transition management, each client may be able to keep funds fully invested as cash is transferring from one manager to another. Transition management via futures reduces cash drag, improves tracking error to the investment policy, and most importantly, prevents assets from being out of the market during the movement of capital. Transition management also includes addressing exposure issues related to long settle transactions (e.g. hedge fund receivables).

Clients may contact its Parametric Portfolio Management Team when it decides to engage in an asset transition. Transitions may be triggered by events including manager terminations or

changes to the investment policy. Parametric's Portfolio Management Team will work with the client to determine what futures positions are most appropriate, when positions should be put on and taken off, and how the transition positions will affect margin requirements. Once the transition begins, the transition exposure will be reviewed and reported daily.

### Currency Exposure Management

Currency management is a common extension of Parametric's core overlay components. Utilizing the existing overlay structure to implement a currency management program may provide an efficient and risk-controlled method to implement a program.

Parametric's currency management programs are generally passive in nature. We seek to add or remove the desired exposure on a benchmark or specific currency(ies) basis. We work with the client to create a framework for how the currency management program will be monitored and implemented. As with any overlay component, the goal is to balance tracking error and cost of implementation. Two of the key advantages to using a broader overlay program to manage currency exposure are:

- Daily Portfolio Monitoring – Each day, the client's fund-wide currency exposure is reviewed and adjustments to the currency overlay are completed as needed. In practice, Parametric utilizes tolerance bands to limit excessive trading. This daily monitoring ensures that the fund's overall currency exposure is always within the desired ranges.
- Recognition of Currency Profits/Losses – As a best practice to implementing a currency management program, Parametric encourages clients to recognize the ongoing profit/loss of a currency program in to a cash securitization program. By including the profit/loss of the currency program, the fund can eliminate the occurrence of cash drag or leverage as a result of the currency hedge.

Please see **Appendix H** for a short white paper on creating a currency management program.

### Other Client Applications

In addition to the core applications discussed above, we have included other client applications of the overlay program in **Appendix I** to include Portable Alpha, Interest Rate Management, and other custom exposures.

### Summary

Parametric's overlay program is an area of focus, growth and investment for the broader organization. For approximately 30 years, Parametric has run custom overlay programs for institutional fund sponsors. During that time, Parametric has developed the infrastructure necessary across the organization to support the unique needs of clients and continues to refine and enhance its services to remain a first-in-class provider.

# Fresno County Employees' Retirement Association

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May 6, 2016

Russell's Response to Request for Information



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Seattle, WA 98101  
www.russell.com

tel 206-505-7877  
fax 206-505-1565  
toll-free 800-426-7969

May 6, 2016

Austin Vierra  
Verus  
999 Third Avenue, Suite 4200  
Seattle, Washington 98104

Dear Austin,

Russell Implementation Services Inc. ("RIS") is pleased to be among the firms chosen to respond to Fresno County Employees' Retirement Association's ("FCERA") request for proposal for liquidity overlay assignment. RIS is recognized as an innovator and leader in portfolio implementation techniques, including aggregate exposure management and strategic overlay assignments. Our firm has more than 27 years of experience in the overlay management business which has grown out of our long history of helping major clients improve investment performance results and manage risk.

We manage overlay programs for dozens of the world's largest institutional investors with complex designs and highly customized needs. In the pages that follow, we hope to demonstrate that our holistic exposure management solution and our deep expertise in the strategic overlay business qualifies RIS as a leading candidate to manage your overlay needs.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Steven K. Cauble".

Steve Cauble  
Regional Director  
Russell Investments

# Fresno County Employees' Retirement Association

## Russell Investments' Response to Request for Information

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**May 6, 2016**

**Submitted by:**

Steve Cauble  
Regional Director  
Russell Investments  
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Date of first use: May 2015

RIS- 2849



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▪ Sample Quarterly Performance Report	
▪ Sample Asset Summary	



# RFI Response

# Questionnaire

**1. Please give a brief overview of the firm that includes, but is not limited to, the following information:**

**a. When was the company founded?**

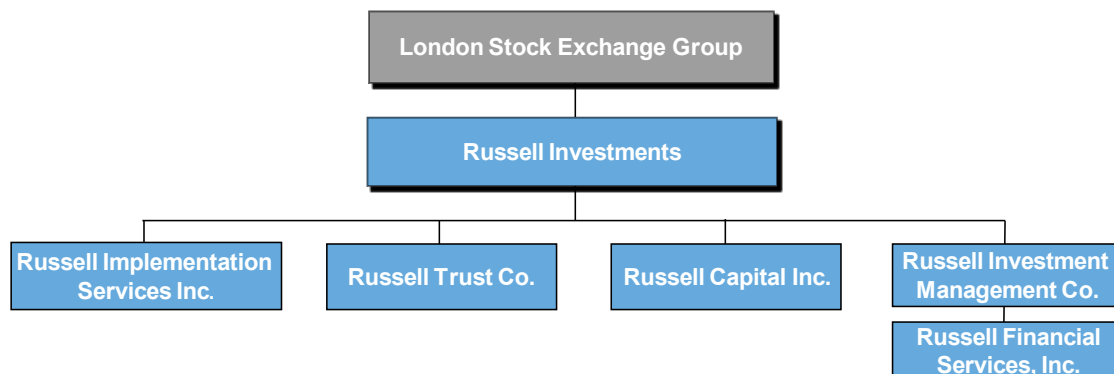
Russell Investments was founded in 1936. Russell Implementation Services Inc. ("RIS") was incorporated and registered as a broker-dealer with the SEC in 1953 and has been registered as an investment adviser with the SEC since June of 1982.

**b. Where is the company headquartered?**

Russell Investments and RIS are headquartered in Seattle, Washington. Our overlay services group is located in the Seattle, New York, London and Tokyo.

**c. What is the ownership structure of the firm?**

RIS is a wholly-owned subsidiary of Russell Investments, a Washington State corporation. Russell Investments is a wholly owned subsidiary of publically held London Stock Exchange Group ("LSEG"). An organization chart showing the Russell Investments affiliates that serve our U.S. clients is shown below.



**d. What is the organizational structure of the firm?**

With over 1,900 associates, the organizational structure of Russell Investments is too large to show on one organizational chart. As of 12/31/2015, Russell Investments, has 571 investment professionals, 310 investment professionals in the Investment Division with 99 investment professionals in RIS which is part of the Investment Division. In the **Attachments**, we have included organizational charts showing Executive Committee, the RIS leadership team, Overlay Services, and the Transition Management team.

**e. Discuss the financial stability of the firm; please provide recent reports from credit rating agencies such as Standard & Poor's or Moody's**

Russell Investments does not have a credit rating and releases only limited financial information externally. However, we can attest that our capital position is sound. In each of the last five fiscal years, Russell Investments earned more than \$1 billion in revenue. Audited financial information for our parent company, London Stock Exchange Group, is available at: <http://www.lseg.com/investor-relations/presentations-and-webcasts/annual-reports>.

**f. Identify and describe any material litigation or investigation by a regulatory authority that the organization or officers have been involved in over the last three years that relate to overlay services**

Russell Implementation Services Inc. – the entity that oversees and implements our overlay services program – has not been subject to material litigation or regulatory actions in the past three years.

On a greater scale, Russell Investments is a global financial services firm and, as such, is called to engage in legal proceedings for our clients, the funds we manage, or on our own behalf from time to time. Examples include employment matters, class action suits that we may join as plaintiff on behalf of Russell Investments funds, and bankruptcy proceedings relating to fund holdings. However, none of these proceedings involve allegations of fraud, negligence, criminal activity or breach of fiduciary duty by Russell Investments or its consultants, officers, or principals. We do not believe that any current legal proceedings compromise our ability to provide services to our clients.

**g. Please describe any merger and/or acquisitions the firm has been involved in over the past five years. Do you anticipate any mergers and/or acquisitions involving the firm in the near future?**

In October 2015, LSEG announced it had entered into an agreement to sell the investment management and solutions business of Russell Investments to TA Associates for \$1,150 million in cash. Reverence Capital Partners (Reverence Capital), has partnered with TA Associates and will be a significant minority investor. At closing (expected 2Q2016), Russell Investments' management team will continue to lead and manage the day-to-day business of Russell Investments.

Headquartered in Boston, and with offices in Menlo Park, London, Mumbai and Hong Kong, TA has a long and successful track record of partnering with management teams to invest in industry-leading, growing companies, including asset managers. TA Associates has been a leading partner to asset managers for more than 25 years, having made 17 investments in the asset management space to date. Since 1968, TA Associates has invested in more than 450 companies globally and across industries, and has raised more than \$18 billion in capital.

Based in New York, Reverence Capital was founded in 2013 by former partners of Goldman Sachs and General Atlantic. Its partners have more than 90 years of combined experience in the financial services industry, and the firm has invested in several asset management firms since its founding.

TA Associates and Reverence Capital have known Russell Investments and some of the management team for more than 20 years and both have been attracted to our strong reputation, industry leading investment capabilities, the quality of our client services, and our differentiating execution capabilities. TA Associates and Reverence Capital believe that these factors together will continue to differentiate Russell Investments, which makes Russell Investments a highly strategic investment for both firms.

Working with TA Associates and Reverence Capital, Russell Investments' existing businesses will be well positioned to continue to compete in the constantly evolving global asset management industry. TA Associates and Reverence Capital are not just buying Russell Investments, but are also committed to partnering with the firm for the long-term to invest in, grow, and support our collective vision to further enhance Russell Investments as a leader in multi-asset solutions.

**2. Please give a brief overview of the Firm's overlay services that includes, but is not limited to, the following information:**

**a. Describe the organizational structure of the overlay services group**

The Overlay Services group consists of a dedicated team of 23 portfolio managers and analysts responsible for the overall client relationship and day to day implementation of the investment strategy. The overlay team also works directly with several key groups within RIS to provide these services. Those include the Global Trading Team and Operations team for clearing and collateral management.

**Trading Team.** The 35 member global trading team is staffed to trade in markets around the globe. Our derivatives trading team trades in almost all of the available exchange traded futures contracts including US, International, Emerging market equity futures, Commodity futures and Interest rate futures in US and around the Globe (e.g. Canada, UK, Europe, Japan and Australia).

**Operations Team** is responsible for the integrity and timely delivery of daily position level data, trade settlement/processing, and collateral management for derivative positions.

To complement these dedicated investment functions, additional support comes from broader corporate/parent resources in back office operations, technology, legal, compliance oversight, credit research, risk management and others.

An organizational chart for our overlay services group has been provided in the **Attachments**.

**b. How long has the firm been providing overlay services? Please provide a brief history of the firm's growth in this area.**

RIS's overlay service offering was a natural outgrowth of our parent company's multi-manager funds business. In 1986, we began overlaying frictional cash to facilitate daily cash flows in and out of these funds and, along the way, began applying flexible overlays to rebalance between asset classes more efficiently than trading in the physical markets.

As these services were refined and expanded, we formed a specialized team to offer these services to external clients, and officially launched our overlay services program with our first public pension plan client in 2001. Over the past 15 years we have grown steadily in both staff and notional assets under management.

**c. What is the total number of institutional overlay clients? What is the total notional value of these clients' assets? What portion of these assets constitute public funds?**

The requested information has been provided in the table below. All 3<sup>rd</sup> Party includes stand-alone FX clients, Multi-asset overlay clients are representative of the proposed strategy. The decrease in total AUM is a function of several large clients requiring less notional exposure in order to execute their strategy, rather than due to any accounts lost. The three accounts lost in 2015 (as noted in question "k" below) were smaller clients with less than \$500mm in AUM combined.

	Notional Value of all 3 <sup>rd</sup> Party Client Assets	Institutional Multi-asset Overlay Clients	Notional Value of Multi-asset Client Assets	Portion Attributed to Public Funds
Year-end 2015	76.8	78	42.0	42%
Year-end 2014	89.0	76	51.5	41%
Year-end 2013	74.8	72	43.6	47%
Year-end 2012	65.8	71	46.2	45%

**d. As it relates to the firm's overlay clients, please provide the following information (notional AUM):**

- i. Median account size:**
- ii. Mean account size:**
- iii. Largest account size:**

The requested information has been provided in the table below.

Year-end 2015	Assets (\$M)
Median Account Size	\$250MM
Mean Account Size	\$540MM
Largest Account Size	\$6,000MM

**e. Please describe the strengths that differentiate the firms' overlay services from other service providers. Identify any areas targeted for improvement. Discuss briefly the overall business objectives with respect to future growth and product research and development related to overlay services**

**Our Competitive Advantages**

We offer the following as reasons why RIS stands out among its competitors:

■ **Performance Oriented Business Model**

Russell Investments' overlay capability originated to maximize performance of our internal funds, rather than to sell to third parties. This performance orientation is differentiated from other business models that were constructed with operational simplicity as the initial objective. Russell Investments committed significant resources to create world class trading capabilities that produce better performance results by keeping more control of the trading process, maintaining anonymity and competing brokers whenever possible.

■ **Strategic Advisor**

Our approach is to develop a relationship with overlay clients and their consultants where they see us as more than an investment manager or implementer but as a strategic advisor and an extension of your staff. Whether planning for an upcoming asset allocation shift, comparing instruments to replicate an asset class or a proactive research update on new strategies, our portfolio management team takes pride in working with staff to help accomplish your goals.

■ **Exposure Management—Not Just Cash Equitization**

RIS takes a holistic, integrated approach to managing the desired exposures for our clients. With our long history of managing both physical and synthetic exposures, RIS is not constrained to delivering a solution utilizing one instrument or the other. We use the best solutions available to help manage the exposures for our clients in the most efficient manner possible.

■ **Experience with Similar Assignments**

RIS manages exposure management/overlay strategies for a broad range of clients. We have many large clients with \$5 billion or more in plan assets and we are intimately familiar with the nuances associated with instrument selection, trading, reporting, and communication with multiple parties. Importantly, we are not making this up as we go along. Rather, we have been down this path before and we believe our experience with liquidity management, implementation strategies and focus on research driven solutions makes RIS an excellent service provider for your implementation needs.



### Areas of Improvement and Future Growth

Recent years have seen a significant amount of change with respect to instrument trading, clearing and collateralization. RIS has evolved our overlay platform to keep up with this changing environment, yet there remains evolution and improvement to maintain efficiency. We have integrated Bloomberg's SEF trading platform to be able to trade new cleared swap instruments across a broad range of platforms effectively and leverage resources in this area. On the margin side we have implemented CloudMargin as a centralized margin management tool, to consolidate collateral requirements across a variety of instruments, such as futures, interest rate swaps, total return swaps and FX forwards. The margin and collateral process is now more streamlined and automated than the former processes and we have gained scale by this investment, and will be able to keep pace with continued evolution in this area.

On the product side, we maintain a focus on our core offerings, but have also evolved into natural extensions of our platform in the past several years. Specifically, we have added an active tilting product call Enhanced Asset Allocation (EAA), to complement our passive rebalancing solution used by most. Similarly the growth of interest in liability driven investing has led us to develop a broad risk management platform oriented to liability hedging. The risk management tools used firm wide have been integrated into this multi-asset risk management platform, which has uses for both asset and liability oriented investors. In both cases, EAA and LDI platforms are currently used by a minority of our clients but we do expect more growth in both areas in the future as they have both been well received by clients and proven successful in both return and risk management.

Finally, we have seen substantial interest in futures based downside protection programs outside of the US, and options based programs in the US. These two areas are also expected to provide future growth to complement our core policy related implementation capabilities.

#### f. implementation

There are two types of risk involved in overlay strategies: investment risk and operational risk. RIS's investment processes are designed to mitigate the impacts of both types of risk.

#### INVESTMENT RISK

##### Basis Risk

Exposures available through the synthetic market may not be a perfect match to that which is desired. For example, a useful futures contract (one that tracks the index well and has sufficient liquidity for the amount of exposure that a large fund typically requires) does not exist for MSCI EAFE. Instead, a basket of individual country futures contracts can be assembled as an adequate proxy. While futures prices can deviate from fair value, they are generally tied to the price of the underlying asset by arbitrage (e.g., if the physical securities are expensive relative to the futures, arbitrageurs will go short the physicals and go long the futures until prices move back together). Basis risk can be mitigated either by entering into a swap (generally used for stable, longer term exposures) or by carefully constructing synthetic baskets of futures. It is also important to note that basis risk tends to be uncorrelated across asset classes and with other active risks in the portfolio, and therefore tends to be diversified away at the total fund level.

##### Counterparty (Swaps) and Clearing House (Futures) Risk

Swaps are over-the-counter agreements between two counterparties. Therefore, one counterparty is exposed to the creditworthiness of the other. This risk can be mitigated with careful negotiation of terms, such as collateralization of gains/loss, zero thresholds and low minimum transfer amounts. In addition to credit ratings available in the market place, current and candidate OTC counterparties are also monitored independently by Russell Investments' credit team to maintain credit quality.

Unlike OTC instruments, each exchange has a clearinghouse that guarantees every futures trade. The clearinghouse does this by splitting each futures trade and thereby acts as the seller for every buyer and the buyer for every seller. Therefore, it is the clearinghouse that protects each party from default by being on the other side of the trade. In the history of U.S. futures trading, the clearinghouse has never

defaulted. To protect the clearinghouse, the exchange requires traders to post collateral/initial margin before any trading takes place. Gains and losses are exchanged daily through a process called marking-to-market. The result is that any losses for the day are removed from/gains added to the client's account. Consequently, the exposure for the clearinghouse is limited to losses associated with market activity from a single day.

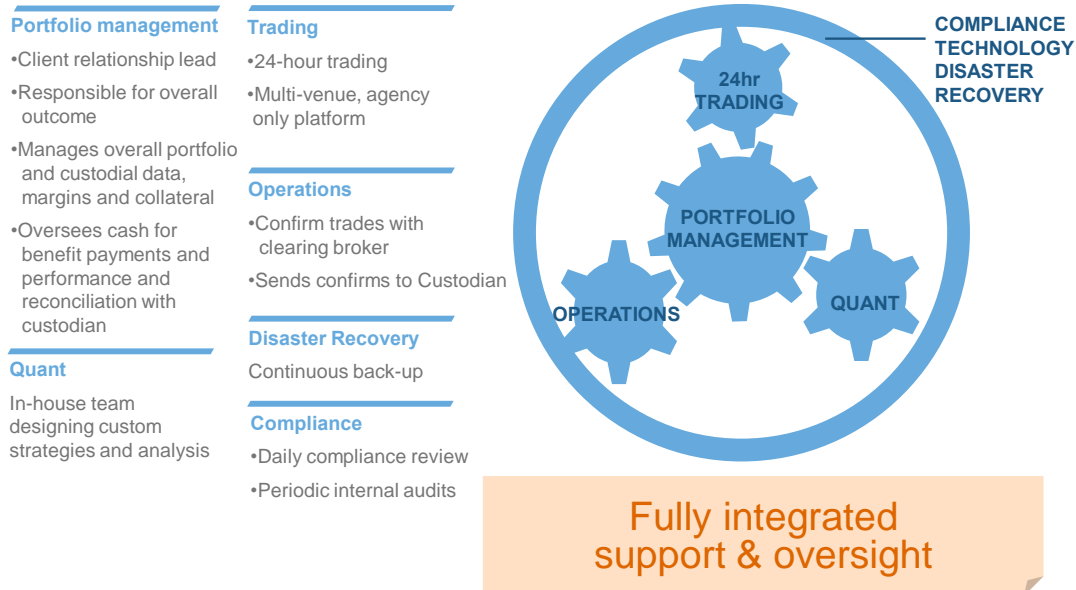
## OPERATIONAL RISK

### Daily Risk Controls

RIS's daily operational process, as illustrated in the following graphic, is geared towards ensuring that all trades are correct and client investment guidelines are consistently followed. Importantly, the entire process is a "closed loop," and is implemented every single trading day.

## Comprehensive engagement and oversight

A relationship that truly supports your needs and guides your fund



Our daily process begins by creating an asset summary based on data downloaded from the client's custodian bank and utilizing trade date cash rather than settled cash. With even the best custodians, the data we download is rarely completely accurate. For example, it is not unusual to find instances where the custodian has entered the manager's buys for the day but not the sells. This causes the account to appear overdrawn and could result in an unnecessary trade (i.e., closing a position because cash appears to have decreased). In reality, managers rarely overdraft their accounts and the trade that would be suggested before scrubbing the data is unnecessary.

RIS has developed electronic alerts to identify potential errors in the data we receive. Using a series of electronic queries we scrub the data we download for obvious issues such as overdrafts, large changes in cash or a large change in the value of a portfolio relative to the change in the assigned benchmark. In addition, we identify portfolios with stale market values and, where appropriate, increment these with a proxy index return. We also adjust for large cash flows real time rather than waiting for them to show up in the custodian data the following day.

This attention to detail is very important as the objective is to create an improved asset summary that is the true reflection of economic exposure of the fund in both market value and frictional cash based on the best information available. This also helps reduce unnecessary or inappropriate trades based on erroneous underlying data.

When portfolio managers are comfortable that the data is accurate, our system generates recommended trades that are consistent with the client's guidelines and do not create leverage or underexposure. Exposure to each asset class is a key consideration of our daily trades, which keeps exposure to each asset class within guidelines (typically +/-1%) on a daily basis.

These trades are reviewed by a portfolio manager as a double check to ensure the trades are sensible. Trades are then passed to a separate trading desk for execution. These trades are also reviewed by the trader for reasonableness as a second human check prior to execution.

Once trades have been filled, they are reviewed by the trader and then uploaded into our system. Our analysts then run through a second set of alerts to ensure that the trades were executed as instructed and that the executed trades did not cause guidelines to be violated. We then perform this same reconciliation directly with the broker.

RIS uses this daily risk management / trading process to ensure that the data are accurate, the trade instructions are appropriate and the plan is not leveraged. These risks are properly managed daily to ensure compliance with investment guidelines. Pre-specified policy ranges are coded into our portfolio management systems and if the thresholds are breached, the system identifies those clients where the breach has occurred and the portfolio manager can propose trades necessary to rebalance the plan portfolio to within target ranges.

### **Leverage**

Our strategies hedge away unwanted exposure rather than speculating (i.e., leveraging the portfolio). To assure guideline compliance we check for unintended leverage at the beginning of each trading day and adjust positions if necessary. Our ability to accurately adjust exposure depends on the frequency and quality of updates from custodians, managers, and prime brokers. At the end of each day, a member of our Risk Management Group reviews exposures across our clients to check for any potential unintended leverage. This practice was implemented as a final check and balance to help identify and report issues appropriately.

### **Trade Errors**

RIS invests a great deal of time and resources to minimize potential errors for ourselves and our clients. Despite these efforts, there is a human element in what we do, and any investment process has the potential to involve trade errors. RIS budgets for this risk and also purchases errors & omission insurance. To date, we have never used this insurance coverage or surpassed our budget for trade errors. We minimize the occurrence and severity of trade errors by investing in top-notch people and systems. While RIS requires its employees to abide by a strict code of ethics, additional checks and balances are prudent to prevent unethical behavior. We have separated the trading and back office operations functions (each group reports to different managers) and employ multiple systematic checks throughout the day to ensure the client exposures that we have in place are those intended.

### **Client Specific Risk Targets**

Typically there are no stop-loss limits for cash/rebalancing overlays, however clients have the ability to alter the level of cash invested or widen/tighten the rebalancing ranges. We can monitor position limits relative to the size of the plan (ex. absolute notional exposure cannot exceed 15% of total plan value), and liquidity-at-risk (L@R) based on the cash available in the overlay account to support the notional exposure. These targets can be systematically implemented and monitored daily by the portfolio manager.

**g. Please review the recommended approach to designing an overlay program; how do you work with the Board and Consultant?**

RIS does not have an off-the-shelf overlay product or a comingled overlay product. All overlay accounts are separate account mandates with a custom overlay solution. Designing a new liquidity overlay program is a customized process based on each client's preferences, cash flows, account structure, existing plan guidelines and limitations in exposure and/or instruments.

From an investment perspective, we review the client's asset classes and related benchmarks to determine how to best replicate the various exposures using derivatives (futures + applicable currency forward contracts or swaps). This includes a review of the expected notional size of the exposures on an ongoing basis. Based on that initial analysis, we determine the most appropriate overlay exposures and instruments and provide the client team (Board and Consultant) with a detailed analysis of expected replication costs, tracking error and any trading considerations.

Furthermore, we also consider operational aspects such as which cash accounts will be designated "frictional" cash that needs to be included in the cash overlay (examples: operational cash accounts, cash amounts in active/separate account equity managers), how each manager account falls within the asset classification, and how to handle assets in alternatives that are not well replicated by liquid futures contracts.

As part of the process, the overlay team provides the Board and Consultant with an asset summary report of the client's total plan exposure and suggested overlay trades prior to launch. The overlay program can commence once RIS and the client team are in agreement with asset summary values, proposed overlay strategy and initial trades.

Finally, our clients often evolve their implementation needs and our platform and approach evolves with them and helps client meet changing needs. The flexibility, broad capabilities and insights and experience we provide all help our clients achieve their goals in dynamic and often volatile markets.

**h. How does the firm define fiduciary responsibility in the context of this engagement?**

RIS defines "fiduciary responsibility" under the respective regulations such as the DOL ERISA regulations or as an investment advisor under the Advisers Act of 1940. RIS will contract as an investment advisor in its agency capacity, meaning FCERA can be assured RIS will act as your fiduciary agent and will not trade as a principal or engage in other activities which may benefit RIS at the expense of our clients.

Acting as a fiduciary in the management of the assignment and the absence of affiliated trading relationships are important and differentiating factors which distinguish RIS from its competitors. The role as fiduciary and agent aligns RIS interests with those of FCERA and results in: greater trust and prudence in the mandate management, increased transparency and improved investment performance through reduced trading costs.

**i. List all insurance coverage relevant to overlay services. Indicate the type and amount.**

The table below summarizes Russell Investments' current insurance coverage. Please note that we have never been denied coverage for errors and omissions, directors and officers, or fiduciary liability insurance.

Coverage Type	Coverage Amount	Provider and latest A.M. Best Rating
Errors & Omissions / Directors & Officers	\$60 million in the aggregate	Travelers (St. Paul), A+ XV Chubb (Federal), A++ XV National Union (AIG), A XV ACE American, A XV
Fidelity Bond	\$25 million single (per loss) \$50 million aggregate	St. Paul Fire & Marine, A+ XV National Union (AIG), A XV Chubb (Federal), A++ XV
ERISA Bond	Varies per requirements under Section 412 of ERISA	Chubb (Federal), A++ XV

**j. What percentage of the firm's revenues does the overlay services business line generate?**

Russell Investments releases only limited financial information. As of 12/31/2015, Implementation Services accounted for 9%<sup>1</sup> of the total revenue of Russell Investments.

**k. Please provide the number of overlay service clients the firm has gained and lost for each of the last five years through December 31, 2015 (include notional values, if possible).**

The requested information has been provided in the table below.

Firm Wide	12/31/2015	12/31/2014	12/31/2013	12/31/2012	12/31/2011
Accounts Gained	5	6	5	10	13
Assets Gained (as of subsequent year-end)	\$940MM	\$215MM	\$226MM	N/A	N/A
Accounts Lost	3	1	5	7	1
Assets Lost (as of prior year-end)	\$403MM	\$47MM	\$3,700MM	N/A	N/A

**l. Please describe any key professional turnover (hiring or departures) over the past three years.**

RIS has had three changes to key investment professionals in the last three years.

- A portfolio manager left RIS in April of 2016 to pursue other opportunities. We are currently interviewing for a replacement.
- John Moore left the implementation team in March 2015 to become President, Russell Investments -Japan
- In June 2014, John Venardos became Director, Implementation Services – Australasia

<sup>1</sup> Excluding Indexes

**3. Please provide information on the data processing and computer systems as it relates to the overlay services that includes, but is not limited to, the following information:**

**a. Location of the administrative operations and computer facilities that support overlay operations. (under construction)**

The primary location of Russell Investments' administrative operations and Information Technology team is our headquarters located in Seattle, WA. Our state-of-the art data storage center is in Quincy, WA, and our disaster recovery data center is located in Florence, KY.

**b. Software and procedures in place to protect financial information from hackers or other malicious users**

The current Russell Investments Information Security department jointly with the Dell Information Security Operations Center (ISOC) provides 24x7 handling of all information security components. We have an established cyber security awareness program, and all associates are trained on a semi-annual basis.

Russell Investments' Information Security/Risk & Data Privacy Program is built upon the NIST, Cobit and ISO/IEC 27000 framework for Information Security Management Systems which includes ISO/IEC 27002 (Information Security Code of Practice) and ISO/IEC 27001 (Information Security Requirements Specifications). This includes corporate global policies, standards, and procedures created to protect the confidentiality, integrity and availability of assets while ensuring the security and privacy of confidential client information.

Here are some examples of the information technologies and programs implemented to reduce, monitor, and react to cyber-crime:

**Prevention**

- Network Security Technologies
- Firewalls, Anti-Virus, End-point security
- Annual external penetration testing
- Regular Vulnerability scanning and patching for all infrastructure components
- Data Encryption and Data Loss Prevention/Detection
- Policy Management
- IT Audit control self-testing - processes embedded with regulatory controls
- Logical Access Controls
- Internal and external audits

**Detection**

- Intrusion Detection Systems
- Security Incident and Event Management (SIEM)- real-time detection and alerting that provides event monitoring and audit logs
- Database monitoring
- Dell's Information Security Operations Center (ISOC)
- Data Loss Detection/Prevention (DLP)

**Recovery**

- Security Information and Response Management (CSIRT) integrated with Incident Management and Corporate Event Escalation policies and procedures
- Information Backups and regular restore testing
- Data Loss Prevention



- Redundancy and disaster recovery sites
- Disaster Recovery (DR) program and collaboration with Business Continuity (BC)

**c. Significant system enhancements that have been made over the past five years.**

Russell Investments is committed to our information technology systems. The level of spending on technology is a clear demonstration of that commitment. In 2015, our corporate technology budget was 8.6% of overall revenue. Examples of recent key upgrades include:

- **DATACENTER MIGRATION** – Migrated our datacenter from Tacoma to Dell's new state of the art datacenter in Quincy, WA.
- **DATABASE SERVER MIGRATION** – Migrated our main RIS/Investment Division databases off of windows 2000 database servers and onto windows 2012 database servers.
- **APPLICATION SERVER MIGRATION** – In the process of migrating all RIS/Investment Division supported applications off of windows 2003 servers and on to windows 2012 servers (only a few more applications left to migrate)

**d. Planned system enhancements.**

Russell Investments' systems are continuously reviewed and updated to insure we meet the highest of industry standards and best practices.

**e. Disaster recovery procedures**

Russell Investments has developed BC/DR plans to protect us and our clients from a broad range of catastrophic events. Our plan encompasses five major components: Crisis Management/Emergency Operations Center, Life/Safety Emergency Response, Facilities Disaster Recovery, Business Resumption and IT Disaster Recovery.

These plans cover data processing, data communication links, computers, work space, voice communication, and documents, and address potential disruptions to business operations, both internal and external. A copy is available to each associate for use in an emergency situation.

Training includes team level training, table top exercises, and a company-wide DR scenario exercise annually. Training is designed to reinforce the steps which need to be taken during a DR event, to familiarize participants with response decisions, to determine strengths/gaps of the current plan, to understand cross department dependencies, and to identify additional training needed by participants.

Key provisions of our business continuity/disaster recovery (BC/DR) plan include:

- **Remote Operations** All associates have secure access to servers and applications to perform their work from home or other remote locations.
- **Remote Trading** If necessary, our traders have system capabilities and access to vendor platforms to effectively manage our clients' transactions when away from Russell Investments offices.
- **Back-up Power Sources** Our main building is supported by emergency generators designed to provide uninterrupted power supplies in the event of a failure of the primary electric power grid.
- **Data Back-Up** The previous evening's backup is sent off-site each morning to our data storage vendor. We also employ a more frequent replication cycle during the day for our critical business applications, in alignment with their specific recovery requirements. Business units with very small recovery timeframes, such as our trading area, also copy their data onto portable, secure drives. Efforts have been made to ensure prompt recovery of such critical business areas. Our tape rotation policy is to be able to recover all data back five weeks. Full system back-ups are performed weekly, and monthly back-ups are stored in compliance with federal requirements. Backup data is replicated to a secondary data center and physical tape copies are encrypted and stored at a third-party vault.
-

**f. Percentage of downtime during the past two years and the primary causes of the downtime**

For the years 2014 and 2015, there were no Severity 1 issues, an average of 1.1 hours of down time per month for Severity 2 issues, and an average of 11.6 hours per month for Severity 3 issues. It is important to note that Severity 3 issues include either single user or single process issues. They are not business impacting or entire system/process outages.

**g. How do you work with custodians? Do you have existing overlay clients with Northern Trust?**

RIS imports data from the client's custodian directly on a daily basis. This process involves an electronic data file that is sent from the custodian and imported into systems overnight. We have specific processes where the data is analyzed to identify potential errors or omissions prior to being used as inputs for trading.

Ongoing client communications would include notifications of large cash flows for contributions, retiree payments or capital calls, addition or deletion of accounts from the investment manager line-up, changes to strategic or tactical targets, and any asset allocation changes. This information is typically gathered from the custodian. In cases when there is a significant change in account NAVs or cash values that are larger than the pre-defined thresholds, we would first reach out to the custodian to identify the reason for the large change. This could be an incorrect booking, pricing discrepancy or an unknown cash flow. If we cannot resolve the issue with the custodian first we may reach out to the client directly. We rarely, if ever, reach out to third party investment managers for any information related to their accounts, although we could do so if needed in extreme cases.

RIS works with Northern Trust and other major custodians and we are very familiar with the information platforms and the electronic file transfer processes of all major custodians. Clients would typically notify the custodian when RIS is hired as an overlay manager, and provide authorization to the custodian to initiate the data feed to RIS. The data feed that we would require for the Trust accounts is most likely a standard feed we get from Northern Trust for other clients. RIS would work directly with Northern Trust to setup the appropriate data feeds. RIS has significant experience working with custodians across the globe including Northern Trust and we make the setup process fairly transparent and seamless to clients.

**h. Please provide a copy of the most recent SSAE 16 or comparable report, preferably prepared by an independent third party**

As part of Russell Investments, RIS is audited annually by PricewaterhouseCoopers ("PwC"), an independent auditing firm. Our latest annual Statement on Standards for Attestation Engagements (SSAE) 16 report is included in the **Attachments**.

**4. Please detail the capabilities of the firm's online portal as it relates to overlay services. Responses should include, but are not limited to, the following information:**

**a. Please provide a description of reporting capabilities as well as examples of commonly used reports**

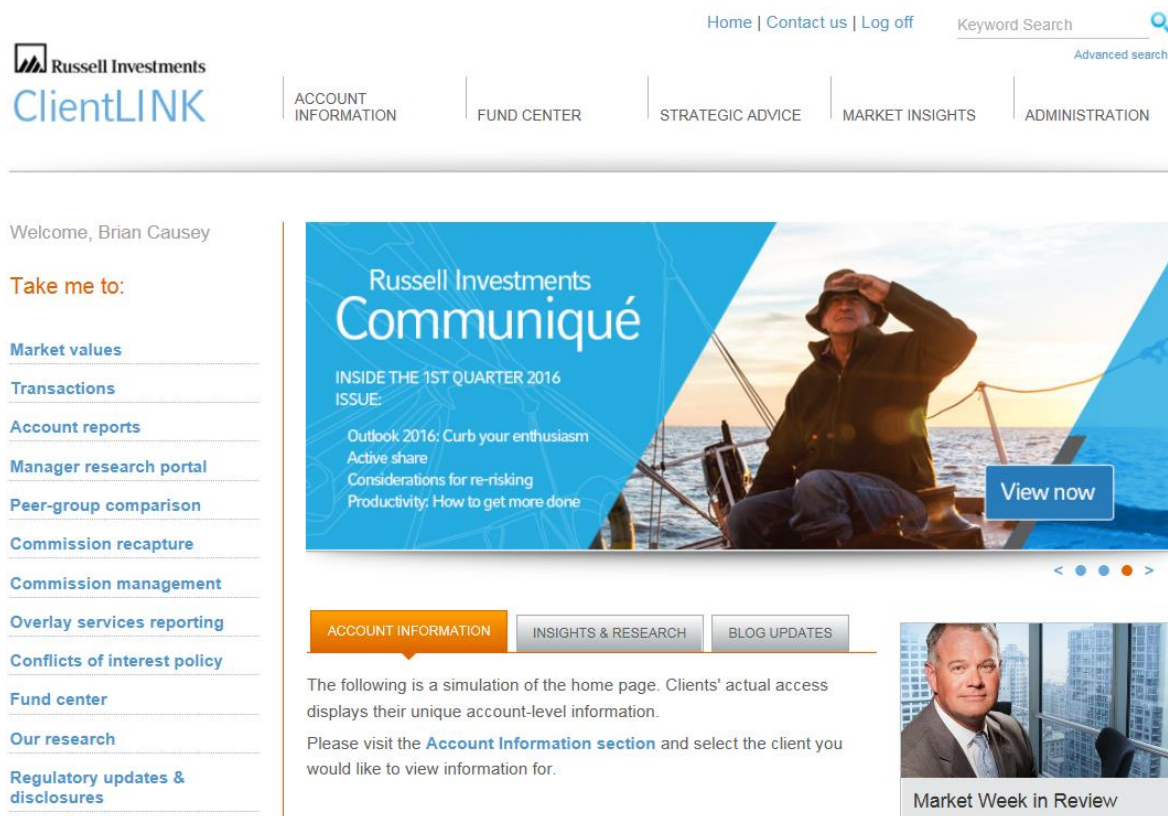
RIS has a comprehensive suite of reporting capabilities that allow clients and their consultants to evaluate the effectiveness of the overlay program, attribute performance, and provide an overview of derivatives exposures. In many cases we are able to customize reports to meet your specific reporting requirements. The assigned portfolio manager, relationship manager, and RIS's operations team, would help ensure that FCERA's servicing and reporting needs are met.

A sample quarterly performance report for overlay services assignments is included in the **Attachments**.

A sample Asset Summary report is also included in the **Attachments** and is available daily on our online portal ClientLINK. The Asset Summary report is a total plan exposure report showing the



physical and synthetic positions by asset class and in relation to the policy target weights. It provides data to ensure that the overlay has not created a leveraged position and that the cash and cash equivalent exposure is overlaid with the correct market exposure.



**b. How often are reports available for client and consultant use?**

Performance reports are delivered electronically on a monthly basis and posted online via ClientLINK (Russell Investments' secured website featuring personalized information related to client investments, current Russell Investments research, market insights, and regulatory updates). Asset summaries can be sent via email and are available as often as daily depending on clients' preference, and are also posted daily to ClientLINK. Most clients prefer a weekly email and accessing through ClientLINK as needed in between.

**c. Please review your approach for measuring/reporting the performance of the overlay program as well as the impact on the overall Association**

Performance measurement is customized to the specific strategy that RIS implements. For plan level cash and rebalancing overlays performance is reported at the fund level with the contribution from the overlay, the passive gain/loss from the deviation in physical exposures away from targets and the net of the two. Overlay performance can also be reported for each asset class with the return of the derivatives basket as a percent of the asset class exposure or as a percent of the plan.

To calculate the performance of the overlay and its impact on the Association, we reconcile and recognize gains or losses on futures and currency forwards daily. For OTC swaps and options, we calculate gains/losses daily and reconcile these monthly with the custodian. The total gain or loss from derivative positions represents the numerator in all performance reporting. The denominator is the total market value of the assets included in the overlay. This approach is necessary because all of the cash

being overlaid may not reside in the account where the synthetic exposures are reflected. This daily return is then geometrically linked to produce monthly, quarterly, and annualized returns.

Similarly, we create a benchmark return whereby the numerator is the daily gain or loss assuming perfect implementation (i.e., assumes all trades are executed at the previous day's close, no transaction costs and earning the cash market return of the underlying asset class benchmarks). Comparing these two return streams determines our implementation efficiency in the overlay program.

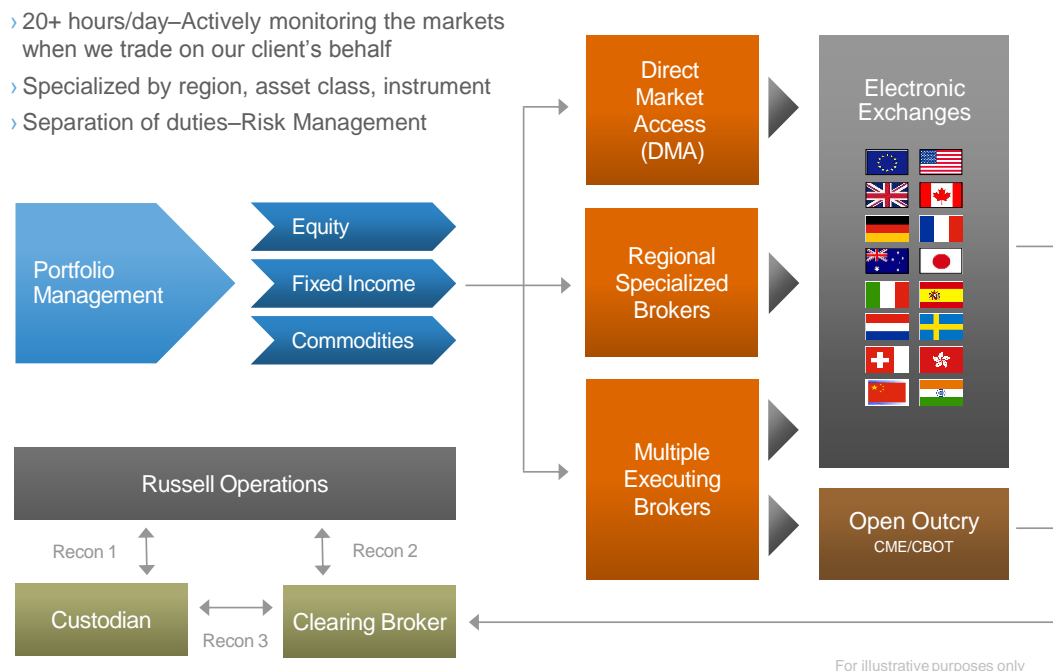
Our process also includes reconciling gains/losses and positions with each client's custodian on a monthly basis to ensure that the overlay impact is reflected properly in performance and asset summary reports. RIS can also provide attribution and tracking error data not only on the entire program, but on each of the underlying asset classes. Typically the client's performance provider would calculate the total fund composite with and without the overlay. The difference between the two should closely reflect the performance reported by RIS.

**5. Please providing information on trading as it relates to overlay services that includes but is not limited to the following information:**

**a. Describe your firm's global trading capabilities and experience in traditional equity and fixed-income markets, as well as derivative instruments (OTC, FX, Commodity futures, etc.)**

RIS has global expertise in trading and managing a variety of physicals and derivatives instruments including equity and fixed income securities, index futures, total return swaps for both equity and fixed income, interest rate swaps and swaptions, index options, credit default swaps and spot and forward FX transactions. Our trading desk is specialized by asset class (equity, fixed income, commodities, and currencies), instruments (physicals, futures, forwards, swaps, and options) as well as by region (Americas, EMEA, and Asia Pacific).

## Futures trading



### **Derivative Securities**

Our derivatives trading team trades in almost all of the available exchange traded futures contracts including US, International, Emerging market equity futures, Commodity futures and Interest rate futures in US and around the Globe (e.g. Canada, UK, Europe, Japan and Australia). RIS trades OTC instruments such as total return swaps on equity and fixed income indexes globally including emerging markets equity/debt, commodities and infrastructure, swaps on CDX Indexes (credit), swaptions on US and international interest rates, and options on equity indexes. Our fixed income desk trades nominal interest rate derivatives for many overlay mandates, and our commodity trading includes passive replication of commodity indexes using a basket of commodity futures, total return swaps as well as trading custom commodity futures baskets.

To our knowledge, our global derivatives trading group represents the largest dedicated overlay trading desk of its kind. To ensure quality execution, our desk is staffed around the clock, trading actively in real time. Our diligence and focus on active trading are especially important when we initiate or close large positions. This is in contrast to other providers who instruct trades during their normal business hours and leave execution up to their brokers. We won't do this for our parent company's funds, and we won't do it for our external clients.

We continually evaluate and enhance the instruments we use to create synthetic exposure. Not only do our clients demand this but our own multi-manager funds group is also pushing our trading desk to look for new and better ways to synthetically replicate market exposure. For example, over the last two years we have added the MSCI Emerging Markets e-mini future contract and individual emerging market country futures (such as China H-Shares, India Nifty, Brazil Bovespa etc.) to provide emerging markets exposure. We monitor the liquidity and open interest of new futures contracts and as liquidity increases and transaction cost decreases we would add these new contracts to our suite of instruments to be traded for clients.

### **Physical Securities: Equity and Fixed Income**

RIS transacts through a global, multi-venue trading platform which gives us access to a broad network of execution sources across markets and all asset classes, including U.S. Equity, Non-U.S. Equity, and Fixed Income. Among those sources are best-in-class venues, which have the world's leading traders and program trading systems, as well as exchange access. We also have floor coverage when appropriate, as well as access too many electronic trading venues, including trading algorithms and crossing networks.

### **Currency Management**

Our specialized currency management team supports the overlay services group and was formed to minimize foreign exchange costs. What makes us unique is that RIS manages foreign currency trading as an agent for our clients. As an agent, we are closely aligned to our clients' interests and offer a transparent execution outcome. This is not possible for other providers who may trade on a principal basis and predominantly use affiliated bank counterparties. RIS utilizes a large panel of non-affiliated bank counterparties and competitively bids foreign exchange trades to ensure clients receive the most competitive relative execution rates at all times.

### **Best Execution through Unbiased Multi-Venue Trading**

RIS has spent years developing diverse and effective global trading networks with the goal of achieving efficiency and best price execution. These liquidity sources include global direct exchange access to all developed exchanges and market centers, an extensive network of local coverage in emerging/developing markets, access to all global crossing networks, all major Electronic Crossing Networks (ECNs) and Alternative Trading Networks (ATNs), as well as the ability to utilize the natural flow of major global portfolio trading desks. RIS is a pioneer of agency foreign exchange trading, a model which has generated significant savings in trading costs for clients.

### **RIS's Unique Capabilities**

We believe exposures should be viewed holistically and that the impact of any derivatives position should be viewed at the total fund level. Our approach is to view exposures of our client's at the total fund level. Whether it's short duration, an overweight to foreign currencies or a non-strategic allocation to cash, we have designed our systems and processes to manage these exposures in aggregate. By doing so, we can greatly simplify the operational aspects of managing a fund for our clients. Examples include a single collateral pool, one set of trades and cash flows, one set of legal agreements and a single source for managing counterparty risk. In addition, we can often accomplish multiple goals with a single position. For example, by overlaying cash with the underweight asset class we can capture the desired risk premium while simultaneously rebalancing the fund.

RIS has the expertise and experience in implementing a variety of customized overlay solutions across a broad range of asset classes. As an exposure manager, RIS will bring to FCERA the most current thought leadership on implementation strategies, new derivatives instruments that come to market, and provide the trading, risk management, reporting and operations support needed for implementing a multi-asset overlay solution.

#### **b. How do you identify and resolve potential conflicts of interests while trading?**

Multi-product service providers often face potential conflicts of interest, and Russell Investments has gone to great lengths to create an environment and system of controls to help prevent conflicts of interest in our business activities. We do not believe any conflicts of interest would be created should we be hired to provide the scope of services requested by FCERA.

A few of the measures Russell Investments has enacted to help keep our interests best aligned with our clients are highlighted below:

- Russell Investments' agency only trading platform and role as an investment manager ensures that our interests are aligned with our clients' interests in any trading we do. We are never on the other side of a trade.
- We have created principles that guide how we execute all trades. In our contracts we include our Trading Practices to document these principles. Our trading practices are updated periodically and provided to each of our clients.

#### **c. Please review sources of profit for all trading activities**

Russell Investments always acts as a fiduciary and not a principal in our implementation services offering. In short, our interests are completely aligned with our clients – a better price for our clients is a better price for us. RIS's only form of compensation for our Overlay Services is an asset management fee. All commissions associated with trading futures are completely transparent, fully disclosed by RIS, and paid directly to the selected clearing/executing brokers. RIS does not share directly or indirectly in those commissions. We do not participate in the spread on any trade including currency trades associated with futures positions we put on. In addition, we do not receive any compensation from firms with which we trade.

### **6. Please discuss the pros and cons associated with the different approaches to overlay management:**

#### **a. Policy replication with long only synthetic exposure to liquid asset classes**

Policy implementation with a long only restriction has the benefit of picking up the market risk premium on cash held for liquidity purpose, which has historically averaged 10-15 bps per year for most plans. Cash exposures will be invested in the underweight asset class(es), which serves to reduce risk. However, limiting the exposures to long only reduces the risk reduction benefits of a full rebalancing overlay. Based on our past experience with other plans we expect a long only

policy implementation mandate to reduce about 40-60% of the tracking error from unintended asset allocation drift, whereas a long/short is between 60-80%.

**b. Active policy rebalancing, where overlay functions to neutralize deviations in the underlying portfolio relative to the static policy target**

We strongly believe that a rebalancing overlay should reduce unintended risk exposures, which you do not expect to be compensated for, and not intentional risk exposures where you would expect to be compensated. In almost all of our mandates we overlay to policy and assume benchmark exposures from the underlying managers. One nuance to this is where the policy is segmented into sleeves, such as US and Non-US equity, where the implementation of each sleeve is through dedicated manager allocations, but the overall target is a global equity benchmark such as MSCI AC World index. In that case deviations in weight to one segment are viewed as unintended exposures and are included in the rebalancing overlay.

**c. Inclusion or exclusion of manager cash**

We have the ability to include or exclude manager cash on a manager by manager basis, so can be very flexible, but our default position is to include manager cash. Our experience suggests that equity managers' fully invested portfolios hold 2-4% cash as "dry powder", which represents frictional cash. Overlaying frictional cash captures the available market risk premium and has a strong positive expected return. Further, our experience researching managers suggests that few managers possess skill in timing the cash vs. equities. However, in cases where the client has a manager that does have the ability to time markets, we recommend excluding that particular manager's cash so that the benefit of the decision can be realized.

Fixed income managers are very different. In most cases they hold cash as part of their duration and curve positioning and many use derivatives on top of the cash. Therefore our default position is to exclude fixed income manager cash.

**d. Determining the appropriate size of the cash overlay, factoring in the desire to mitigate the need for margin calls while maximizing the amount invested in traditional long-only strategies.**

Determining the appropriate size of the cash overlay is as much art as science. The goal of the overall portfolio is to minimize the cost of liquidity provision, and maximize the return of the portfolio, which includes both beta vs. cash and the active return of managers. As a rule of thumb this balance is maximized at around 3-6 months-worth of benefit payments which is approximately 2-3% cash. About 20% of this value would reside in the overlay account to cover both required initial margin and daily variation margin. Refinements in these values are made to customize to the client's experience and preferences as well as prevailing market conditions which can dictate higher or lower cash reserves to avoid margin calls. RIS portfolio managers work closely with clients to balance these competing needs of liquidity and excess return from the active portfolio. One of the tools portfolio managers use is called Liquidity-at-risk (L@R), and is based on the cash available in the overlay account to support the notional exposure under different market conditions and estimates the maximum drawdown over the next three days.

**7. Please provide your standard fee arrangement, and indicate whether there is flexibility associated with the terms in light of FCERA's size and how the program may ultimately be structured.**

Our Investment Management fee is structured with an annual base fee reflecting the scope of the assignment and data requirements, plus a variable basis point fee based upon notional assets under management

RIS's proposed investment management fee schedule for the liquidity overlay is as follows:



- An annual base fee of \$100,000 for cash overlay in isolation or,
- An annual base fee of \$150,000 for cash and rebalancing overlay (policy implementation with total fund risk management), using futures only.\*

Plus, a variable fee based on your account's notional exposure:

- 5.0 bps per annum on the first \$200 million notional
- 3.0 bps per annum on the next \$200 million notional
- 1.5 bps per annum above \$400 million notional

RIS defines notional exposure as the absolute value of any derivatives position we have on i.e. the sum of long positions and absolute value of short positions for any futures, swaps and currency forwards or other instruments.

\* Base fee will be \$50,000 higher if OTC positions are involved.

**8. Please provide any additional information relating to overlay services that you would like to be considered for review.**

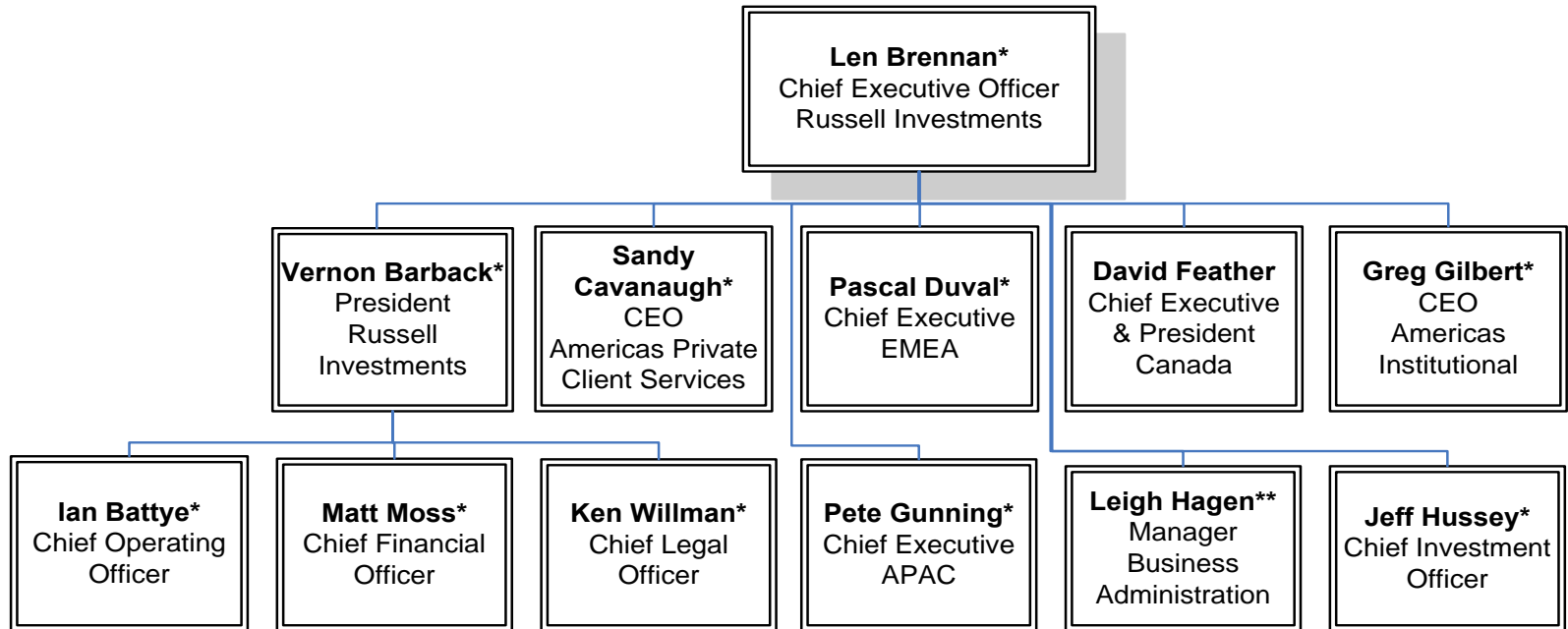
RIS has been managing multi-asset derivative overlays for more than 25 years. Our overlay team is one of the largest dedicated teams of its kind and we manage overlays for some of the largest pension funds in the world. The overlay team has extensive experience in managing such overlays with total assets under management of over \$70 billion.

More importantly our broad implementation services capabilities and custom separate account structure allows us to be fairly agnostic in terms of type of instruments used, whether it is futures, swaps, ETFs or physical securities, in terms of delivering the desired beta management outcome. We are not oriented to use a simpler futures contract that may incur additional transaction costs and risk in pursuit of operational convenience.

Russell Investments' extensive implementation capabilities, and our expertise in managing multi-asset, multi-strategy funds for a broad set of clients, would enable us to help FCERA improve and evolve the investment program to be more robust and successful.

# Organizational Charts

# Russell Investments

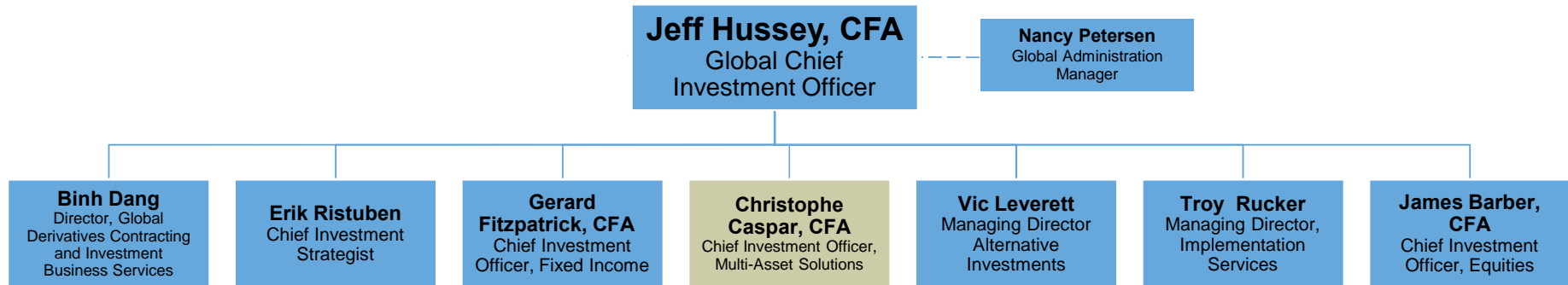


\*Executive Committee Member  
\*\*Executive Assistant to the CEO

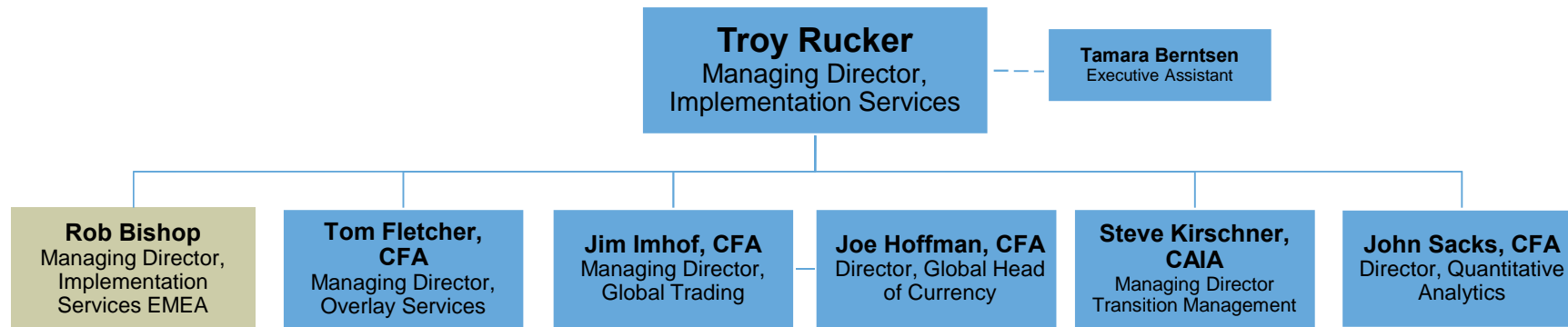
As of January 2016



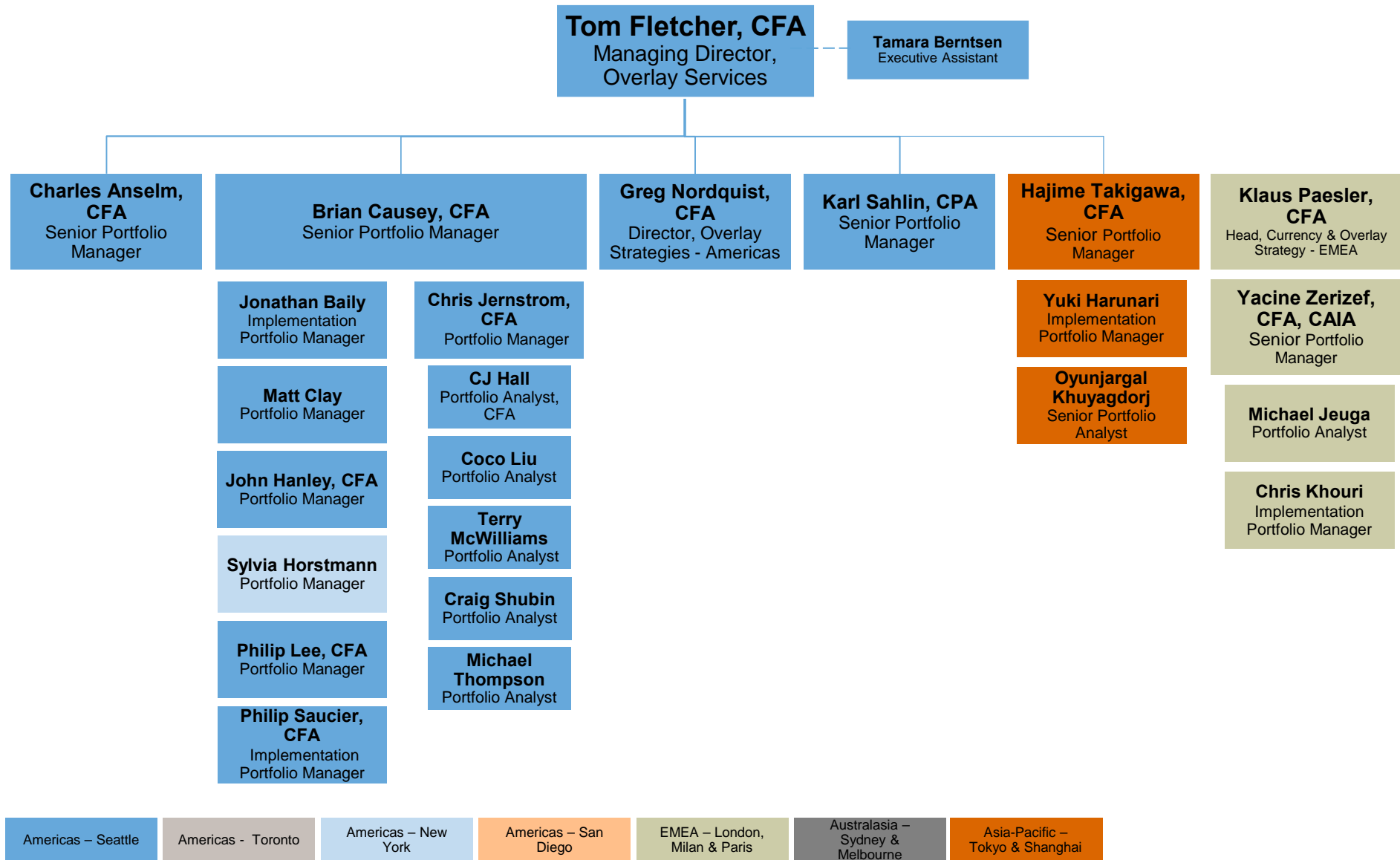
# Investment Division Management Team



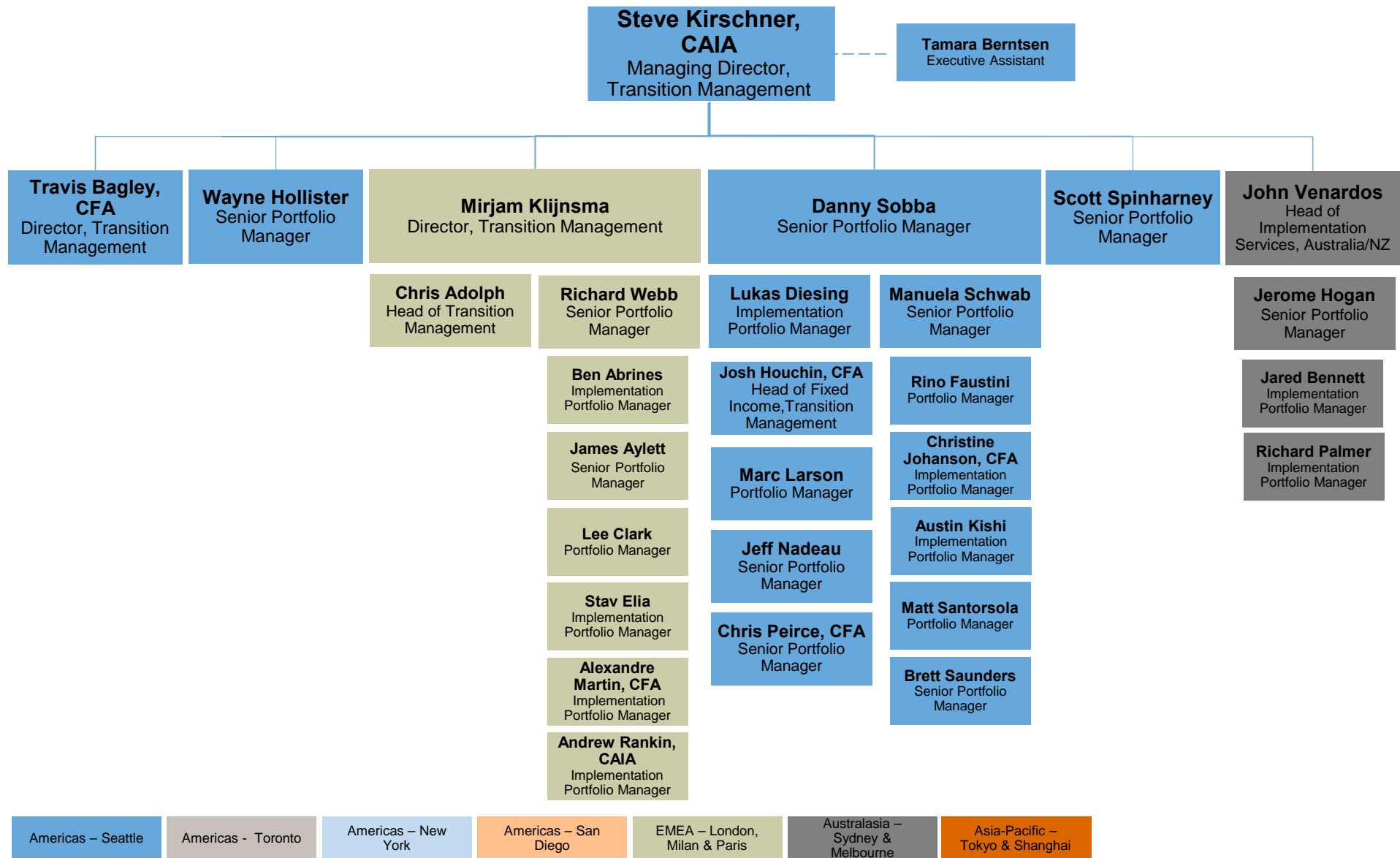
# Implementation Services Management Team



# Overlay Services



# Transition Management



SSAE 16



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Enclosed is a copy of Frank Russell Company's description of its discretionary investment advisory, management and implementation services for institutional clients serviced in the United States of America, the United Kingdom, Australia, New Zealand and Japan and separately managed accounts in the United States of America, the United Kingdom and Japan throughout the period from October 1, 2014 to September 30, 2015 (the "description") and the suitability of design and operating effectiveness of controls to achieve the related control objectives stated in the description. This report is neither designed nor intended for any users other than the Company's customers during the period covered by report and their external auditors (i.e., "user entities" and their "independent auditors (user auditors)" as such terms are described in the American Institute of Certified Public Accountants' Statements on Standards for Attestation Engagements (SSAE) No. 16 "Reporting on Controls at a Service Organization.").

With your receipt of this report from us, you acknowledge (i) that the report is intended solely for the information and use by us, our current customers and the independent auditors of our current customers and is not intended to be and should not be used by anyone other than these specified parties; (ii) that this report was prepared at our direction and may not include all information and/or procedures deemed necessary for your purposes; (iii) that certain findings and information may have been communicated to us that are not reflected in the report; (iv) that any use of the report is your sole responsibility and at your sole and exclusive risk; (v) that you may not rely on the report if you are not a current customer or the independent auditors of our current customer; (vi) that you do not acquire any rights as a result of such access against any party that you would not otherwise have had and that PricewaterhouseCoopers LLP does not assume any duties or obligations to you in connection with your receipt of the report from us; and (vii) you are not permitted to disclose or distribute the report, or information contained in the report, to any other party.

A handwritten signature in blue ink, appearing to read "Lenore Cote".

Lenore Cote  
Director, Global Operational Risk Management  
Russell Investments



# Report on Management's Description of Russell Investments Internal Controls and the Suitability of the Design and Operating Effectiveness of Controls

FOR THE PERIOD OCTOBER 1, 2014  
THROUGH SEPTEMBER 30, 2015



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*This report is intended solely for use by the management of Russell Investments, its user entities, and the independent auditors of its user entities and is not intended and should not be used by anyone other than these specified parties*



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## I. REPORT OF INDEPENDENT SERVICE AUDITORS

### TO THE MANAGEMENT OF RUSSELL INVESTMENTS:

#### SCOPE

We have examined Russell Investments' ("Russell"), the marketing name used to represent Frank Russell Company and its global subsidiaries (the "Company"), description of its system for processing user entities' transactions relating to Russell's discretionary investment advisory, management and implementation services for institutional clients serviced in the United States of America, the United Kingdom, Australia, New Zealand and Japan and separately managed accounts in the United States of America, the United Kingdom and Japan throughout the period October 1, 2014 to September 30, 2015 (the description) and the suitability of the design and operating effectiveness of Russell's controls to achieve the related control objectives stated in the description. The description indicates that certain control objectives specified in the description can be achieved only if complementary user entity controls contemplated in the design of Russell's controls are suitably designed and operating effectively, along with related controls at the service organization. We have not evaluated the suitability of the design or operating effectiveness of such complementary user entity controls.

Russell uses a number of subservice organizations for all of its asset custody, fund accounting and administration, transfer agency, trustee services, and proxy research and voting services. The description in Section III includes only the control objectives and related controls of Russell and excludes the control objectives and related controls of the asset custody, fund accounting and administration, transfer agency, trustee services, and proxy research and voting services of the subservice organizations. Our examination did not extend to controls of the asset custody, fund accounting and administration, transfer agency, trustee services, and proxy research and voting services of the subservice organizations. We have not evaluated the suitability of design or operating effectiveness of such subservice organizations controls.

#### SERVICE ORGANIZATION'S RESPONSIBILITIES

In Section II, Russell has provided their assertion about the fairness of the presentation of the description and suitability of the design and operating effectiveness of the controls to achieve the related control objectives stated in the description. Russell is responsible for preparing the description and for the assertion, including the completeness, accuracy, and method of presentation of the description and the assertion, providing the services covered by the description, specifying the control objectives and stating them in the description, identifying the risks that threaten the achievement of the control objectives, selecting the criteria, and designing, implementing, and documenting controls that are suitably designed and operating effectively to achieve the related control objectives stated in the description.

#### SERVICE AUDITOR'S RESPONSIBILITIES

Our responsibility is to express an opinion on the fairness of the presentation of the description and on the suitability of the design and operating effectiveness of the controls to achieve the related control objectives stated in the description, based on our examination. We conducted our examination in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform our examination to obtain reasonable assurance about whether, in all material respects, the description is fairly presented and the controls were suitably designed and operating effectively to achieve the related control objectives stated in the description throughout the period October 1, 2014 to September 30, 2015.

An examination of a description of a service organization's system and the suitability of the design and operating effectiveness of the service organization's controls to achieve the related control objectives stated in the description involves performing procedures to obtain evidence about the fairness of the presentation of the description and the suitability of the design and operating effectiveness of those controls to achieve the related control objectives stated in the description. Our procedures included assessing the risks that the description is

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not fairly presented and that the controls were not suitably designed or operating effectively to achieve the related control objectives stated in the description. Our procedures also included testing the operating effectiveness of those controls that we consider necessary to provide reasonable assurance that the related control objectives stated in the description were achieved. An examination engagement of this type also includes evaluating the overall presentation of the description and the suitability of the control objectives stated therein, and the suitability of the criteria specified by the service organization and described in management's assertion in Section II. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

### **INHERENT LIMITATIONS**

Because of their nature, controls at a service organization may not prevent, or detect and correct, all errors or omissions in processing or reporting transactions or identification of the function performed by the system. Also, the projection to the future of any evaluation of the fairness of the presentation of the description, or conclusions about the suitability of the design or operating effectiveness of the controls to achieve the related control objectives is subject to the risk that controls at a service organization may become inadequate or fail.

### **OTHER INFORMATION PROVIDED BY THE SERVICE ORGANIZATION**

The information included in Section V, "Other Information Provided by Russell Investments", is presented by management of Russell to provide additional information and is not a part of Russell's description of its system of processing user entities' transactions made available to user entities during the period October 1, 2014 to September 30, 2015. Information about Russell's business continuity planning, anti-money laundering practices, data privacy, information security practices and management action responses to exceptions, has not been subjected to the procedures applied in the examination of the description of the system of processing user entities' transactions and of the suitability of the design and operating effectiveness of controls to achieve the related control objectives stated in the description of the system of processing user entities' transactions and accordingly, we express no opinion on it.

### **OPINION**

In our opinion, in all material respects, based on the criteria described in Russell's assertion in Section II,

- › the description fairly presents the system of processing user entities' transactions that was designed and implemented throughout the period October 1, 2014 to September 30, 2015.
- › the controls related to the control objectives Russell stated in the description were suitably designed to provide reasonable assurance that the control objectives would be achieved if the controls operated effectively throughout the period October 1, 2014 to September 30, 2015 and user entities applied the complementary user entity controls contemplated in the design of Russell's controls throughout the period October 1, 2014 to September 30, 2015.
- › the controls of Russell tested, which together with the complementary user entity controls referred to in the scope section of this report, if operating effectively, were those necessary to provide reasonable assurance that the control objectives stated in the description were achieved, operated effectively throughout the period October 1, 2014 to September 30, 2015.

### **DESCRIPTION OF TESTS OF CONTROLS**

The specific controls tested and the nature, timing, and results of those tests are listed in Section III.F.

### **INTENDED USERS AND PURPOSE**

This report, including the description of tests of controls and results thereof in Section III, is intended solely for the information and use of Russell, user entities of Russell's system of processing user entities' transactions relating to Russell's discretionary investment advisory, management and implementation services for

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institutional clients serviced in the United States of America, the United Kingdom, Australia, New Zealand and Japan and separately managed accounts in the United States of America, the United Kingdom and Japan during some or all of the period October 1, 2014 to September 30, 2015, and the independent auditors of such user entities, who have a sufficient understanding to consider it, along with other information including information about controls implemented by user entities themselves, when assessing the risks of material misstatements of user entities' financial statements. This report is not intended to be and should not be used by anyone other than these specified parties. If report recipients are not user entities that have contracted for services with Russell for the period specified above or their independent auditors (herein referred to as a "non-specified user") and have obtained this report, or have access to it, use of this report is the non-specified user's sole responsibility and at the non-specified user's sole and exclusive risk. Non-specified users may not rely on this report and do not acquire any rights against PricewaterhouseCoopers LLP as a result of such access. Further, PricewaterhouseCoopers LLP does not assume any duties or obligations to any non-specified user who obtains this report and/or has access to it.



Seattle, Washington  
November 23, 2015

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## II. MANAGEMENT ASSERTION

We have prepared the description of the Russell Investment's system of processing user entities' transactions relating to Russell's discretionary investment advisory, management and implementation services for institutional clients serviced in the United States of America, the United Kingdom, Australia, New Zealand and Japan and separately managed accounts in the United States of America, the United Kingdom and Japan (the "description") for user entities of the system during some or all of the period October 1, 2014 to September 30, 2015 and their user auditors who have a sufficient understanding to consider it, along with other information, including information about controls implemented by user entities of the system themselves, when assessing the risks of material misstatement of user entities' financial statements. We confirm, to the best of our knowledge and belief, that:

1. the description fairly presents the system of processing user entities' transactions relating to Russell's discretionary investment advisory, management and implementation services for institutional clients serviced in the United States of America, the United Kingdom, Australia, New Zealand and Japan and separately managed accounts in the United States of America, the United Kingdom and Japan, made available to user entities of the system during some or all of the period October 1, 2014 to September 30, 2015 for processing their transactions. The description indicates that certain control objectives specified in the description can be achieved only if complementary user entity controls contemplated in the design of Russell Investment's controls are suitably designed and operating effectively, along with related controls at Russell Investments. The service organization uses a number of subservice organizations for its asset custody, fund accounting and administration, transfer agency, trustee services, and proxy research and voting services. The description in Section III includes only those control objectives and related controls of the service organization and excludes the control objectives and related controls of the asset custody, fund accounting and administration, transfer agency, trustee services, and proxy research and voting services performed by the subservice organizations. The criteria we used in making this assertion were that the description:
  - a. presents how the system made available to user entities of the system was designed and implemented to process relevant transactions, including, if applicable:
    - i. the types of services provided, including, as appropriate, the classes of transactions processed.
    - ii. the procedures, within both automated and manual systems, by which services are provided, including as appropriate, procedures by which transactions are initiated, authorized, recorded, processed, corrected as necessary, and transferred to the reports and other information prepared for user entities of the system.
    - iii. the related accounting records, supporting information, and specific accounts that are used to initiate, authorize, record, process, and report transactions; this includes the correction of incorrect information and how information is transferred to the reports presented to user entities of the system.
    - iv. how the system captures and addresses significant events and conditions, other than transactions.
    - v. the process used to prepare reports or other information provided to user entities of the system.
    - vi. specified control objectives and controls designed to achieve those objectives including, as applicable, complementary user entity controls contemplated in the design of the service organization's controls.
    - vii. other aspects of our control environment, risk assessment process, information and communication systems (including the related business processes), control activities, and

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monitoring controls that are relevant to processing and reporting transactions of user entities of the system.

- b. does not omit or distort information relevant to the scope of Russell's system of processing user entities' transactions, while acknowledging that the description is prepared to meet the common needs of a broad range of user entities of the system and the independent auditors of those user entities, and may not, therefore, include every aspect of Russell's system of processing user entities' transactions that each individual user entity of the system and its auditor may consider important in its own particular environment.
2. the description includes relevant details of changes to the service organization's system during the period covered by the description.
3. the controls related to the control objectives stated in the description, which together with the complementary user entity controls referred to above, if operating effectively, were suitably designed and operated effectively throughout the period October 1, 2014 to September 30, 2015 to achieve those control objectives. The criteria we used in making this assertion were that:
  - a. the risks that threaten the achievement of the control objectives stated in the description have been identified by the service organization;
  - b. the controls identified in the description would, if operating as described, provide reasonable assurance that those risks would not prevent the control objectives stated in the description from being achieved; and
  - c. the controls were consistently applied as designed, including whether manual controls were applied by individuals who have the appropriate competence and authority.

Signed on behalf of the Management of Russell Investments

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### III. DESCRIPTION OF SYSTEM

#### A. SCOPE OF REPORT

This report, which covers the period October 1, 2014 through September 30, 2015, is intended to provide clients of Russell Investments, together with their independent auditors, with information about controls for the processing of transactions for such clients. This report has been prepared in accordance with the guidance described in the American Institute of Certified Public Accountants (the "AICPA") Statement on Standards for Attestation Engagements (SSAE) No. 16, Reporting on Controls at a Service Organization.

The scope of this report, including the description of controls and the related control objectives, is limited to investment advisory, management and implementation services for Russell Investments institutional clients that are serviced by operations and systems platforms located in the United States of America ("U.S."), the United Kingdom ("U.K."), Australia, New Zealand and Japan, including separately managed accounts in the United States of America, the United Kingdom and Japan. Section III of this report describes control objectives and related controls in place at Russell Investments and contains the description and results of controls testing performed by PricewaterhouseCoopers LLP, the independent service auditor. Additionally, the user controls that Russell Investments believes should be present for each client and which were considered in developing the control objectives and related controls are highlighted in Section III. As this description is intended to focus on elements that may be relevant to internal controls of clients, it does not encompass all aspects of services provided or procedures followed for client accounts.

The scope of this report does not include: (1) Russell Investments Select Holdings portfolios and short-term investment funds; (2) controls relating to or implemented on operational and system platforms in Russell Investments other operations beyond the geographical scope of this report as discussed above; and (3) the controls of any investment manager or other subservice organization (as described in Section III) engaged by Russell Investments.

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#### B. OVERVIEW

##### ABOUT RUSSELL

Russell Investments (or the "Company") delivers financial products, services and advice through a combination of interlinked businesses. Russell Investments has more than \$237 billion in assets under management (unaudited), including \$72 billion of derivative overlay (unaudited), as of September 30, 2015, and serves individual, institutional and advisor clients in more than 35 countries.

Our global network of investment professionals helps investors around the world develop, implement, and maintain investment programs. We offer a range of services that includes comprehensive advice, research and implementation capabilities. Russell Investments products and services are based on an investment approach developed for and used by many investors.

Russell Investments uses a multi-asset approach to investing. We design, construct and manage portfolios that deliver a rate of return at a level of risk that our clients can survive. Russell Investments researches the best money managers from around the world, as well as developing in-house managed positions strategies. Our Funds take advantage of our expertise in allocation, manager selection and direct investing. The result is a set of continuously managed targeted exposures in a total portfolio with the highest probability of achieving Fund objectives. Founded in 1936, Russell Investments is headquartered in Seattle, Washington. Russell Investments is operated by a number of legal entities which are indirect subsidiaries of London Stock Exchange Group plc ("LSEG"). On December 2, 2014, LSEG completed its acquisition of Frank Russell Company and its subsidiaries (including Russell Investments), such acquisition taking place by way of statutory merger. On October 8, 2015, Frank Russell Company, LSEG and Emerald Acquisition Limited, a

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company incorporated under the laws of England and Wales (“Buyer”), entered into an agreement pursuant to which the Buyer will acquire Russell Investments from LSEG. Buyer is a newly formed acquisition vehicle through which private equity funds affiliated with TA Associates will acquire a majority ownership interest and private equity funds affiliated with Reverence Capital Partners (“RCP”) will acquire a significant minority ownership interest in Russell Investments. It is expected that the transaction will be consummated the first half of 2016, subject to receipt of regulatory and other required approvals. More information about Russell Investments products and services is available at [www.russell.com](http://www.russell.com).

## C. CORPORATE GOVERNANCE

Corporate governance is the responsibility of the Company’s Board of Directors. Russell Investments senior management is supported by committees and control functions (Enterprise Risk Management, Compliance, Internal Audit, Legal and Finance) and reflects Russell Investments’ risk-based approach to business and client management.

The Board of Directors delegates authority for the management of Russell Investments to the Chief Executive Officer (“CEO”), who in turn has established the Executive Committee to oversee the management of the business. The Executive Committee has established a committee structure through which authority is delegated for managing specific aspects of Russell Investments’ ongoing business. Committees are often supported by subcommittees and working groups that report to them. Governing principles and a committee administration standard have been established to assist with the functioning of the governance framework.

### GOVERNANCE COMMITTEES

#### Executive Committee

The Executive Committee is the most senior management group at Russell Investments. The primary focus of the committee includes determining the Company’s business strategy and overseeing its implementation. It is also responsible for reviewing and approving business unit annual operating budgets and overseeing the various committees in which the committee members participate in and chair. The committee membership is determined by the CEO.

#### Audit Committee

The Audit Committee assists the Board of Directors of the Company (the “Board”) in fulfilling its oversight responsibility relating to accounting and financial reporting practices of the Company and the integrity of the annual financial statements, the performance of the Company’s Internal Audit function, the Company’s internal control environment and management of major risks, and compliance by the Company with legal and regulatory requirements. It is recognized, however, that ultimate responsibility for the aforementioned functions, and the fair presentation of the Company’s financial statements, rests with management of the Company. The Audit Committee’s role is also to oversee the qualifications, independence and performance of the independent public accounting firm performing the annual audit (the “Independent Auditor”) and to foster free and open communication among the Company’s Board, its financial management, compliance, internal audit, risk management and legal staffs and the Independent Auditor.

The Audit Committee was dissolved effective December 2, 2014 resulting from the transaction with LSEG. Following the transaction close, Russell Investments now utilizes the LSEG Audit Committee in a comparable role.

#### Global Risk Management Committee (“GRMC”)

The Global Risk Management Committee acting in its oversight capacity is authorized and directed to review and evaluate investment, credit and operational risks and to provide guidance to the business units to properly identify, assess, monitor and mitigate investment, credit and operational risk.

The GRMC is authorized by the Executive Committee and its responsibilities relate to all legal entities and businesses operated by Russell Investments worldwide. Global oversight by the committee for risk

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management practices is supported by regional risk management subcommittees in each of Russell Investments' current business regions.

The GRMC is populated by the most senior officers of Russell Investments including the Chief Executive Officer, Chief Investment Officer, Chief Financial Officer, Chief Operating Officer, Chief Legal Officer, Chief Risk Officer, Global Chief Compliance Officer, and other senior management. This committee is operated by Global Risk Management (GRM), Russell Investments' independent enterprise risk management function, and meets at least three times annually to review and evaluate the material risks inherent in Russell Investments' business as reported through the regional risk committees and to provide guidance to the senior executives and business units on firm-wide risk issues. The GRMC oversees Russell Investments' risk management program. Together, the GRMC and the Audit Committee work to establish Russell Investments' overall risk vision, risk management framework, and risk management objectives.

The GRMC also oversees the three functional risk committees including Credit Risk Committee, Investment Risk Committee and Operational Risk Committee. The Investment Strategy Committee ("ISC") is primarily responsible for the oversight of investment related activities at Russell Investments as well as reviewing investment performance and establishing investment policy and strategy. The ISC is authorized by the Executive Committee and its responsibilities relate to all legal entities and businesses operated by Russell Investments worldwide. The ISC also provides an oversight function for the Board by providing regular reporting to the Investment Committee of the Board.

#### **Credit Risk Committee ("Credit RC")**

The Credit Risk Committee supports the GRMC in the identification, management and oversight of the credit risks associated with Russell Investments' global businesses. The Credit RC is responsible for the research and evaluation of the credit quality of issuers and counterparties used by Russell Implementation Services ("RIS") in its business activities. In its role, the Credit RC provides Russell Investments senior management and Portfolio Managers with credit research data that is used to manage credit risks arising from the investment decisions and business operations. It is responsible for ratifying all changes to the Russell Investments' Approved Lists of counterparties, issuers and guarantors.

#### **Investment Risk Committee ("Investment RC")**

The Investment Risk Committee is responsible for the oversight of the investment risks that Russell Investments undertakes on behalf of its clients and in its businesses. The Investment RC will assist the GRMC in its oversight of Russell Investments' investment risk governance structure, investment risk framework and policies, and investment risk tolerances and limits.

#### **Operational Risk Committee ("Operational RC")**

The Operational Risk Committee is responsible for the oversight of operational risks inherent in Russell Investments' global businesses and legal entities, including people, process, technology, vendor, regulatory and reputational risks. The Operational RC will assist the GRMC in its oversight of Russell Investments' operational risk governance structure, operational risk management framework and policies, and operational risk tolerances and limits.

#### **Regional Risk Committees ("Regional RC")**

The Regional Risk Committees are responsible for the oversight of operational risks for the businesses managed by the regional offices, including people, process, technology, vendor, regulatory and reputational risks. The Regional RCs will report to the GRMC items not already covered within the Investment, Operational and Credit Risk Committees.

#### **Trade Management Oversight Committee ("TMO")**

The Trade Management Oversight Committee, a subcommittee of the ISC, is responsible for providing the framework for construction, review and evaluation of Russell Investments' trade management policies and procedures and for making recommendations, when appropriate, to senior management and the individual



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trading groups to improve trading practices. The TMOC is responsible for reviewing best execution practices, transaction cost measurements and the broker ranking, review, selection and appointment process.

## CONTROL FUNCTIONS

### Enterprise Risk Management

Global Risk Management (“GRM”), Russell Investments’ independent enterprise risk function maintains a framework designed to establish accountability, oversight and governance of risks across the firm. This framework includes the principles that guide our approach to risk management as well as the governance model we use to provide risk oversight.

The framework includes risk management principles with supporting credit, investment and operational risk principles. A crucial risk principle is the concept of “5 lines of defense” (LoD). This principle establishes the risk management responsibilities of the business line management (1<sup>st</sup> line), global risk management and compliance (2<sup>nd</sup> line), Internal Audit (3<sup>rd</sup> line), executive management (4<sup>th</sup> line) and Board of Directors (5<sup>th</sup> line).

The risk governance structure is designed to maintain broad coverage, clear responsibilities and efficient escalation pathways. The primary risk governance body is the Global Risk Management Committee which includes many of our most senior executives. Subsidiary committees include three functional committees (Credit, Investment and Operational) and Regional Risk Committees.

Russell Investments has dedicated risk management professionals across the globe responsible for the identification, measurement, monitoring and reporting of risks inherent in its day-to-day business operations and associated with its relationship with major subservice organizations. Russell Investments takes a risk-based approach to the implementation of systems and controls, which include monitoring and reporting to business unit management. Periodic risk reviews, internal audits and subservice organization reviews are also performed as a part of our overall risk management approach.

### Internal Audit

The Company’s Internal Audit department (“Internal Audit”) provides independent assurance on the effectiveness of the system of internal controls to the Audit Committee, senior leadership, and business unit management. To provide for the independence of Internal Audit, its personnel report to the Chief Auditor, who reports functionally to the Audit Committee of the Board and administratively to the Chief Legal Officer.

### Compliance

The Company’s senior management has responsibility for compliance with the relevant laws, regulations and Russell Investments policies applicable to our complex business. Given the complexity of our business, Russell Investments has dedicated significant resources and professional expertise to assist senior management in meeting their obligations.

Compliance is comprised of regional teams reporting to the Global Chief Compliance Officer who reports directly to Russell Investments’ Chief Legal Officer. Compliance functions include, but are not limited to, the following:

- › Promoting a culture of compliance
- › Fostering regulatory relationships
- › Leading regulatory examinations
- › Providing guidance on regulatory requirements
- › Tracking regulatory developments
- › Developing policies and procedures
- › Delivering Training
- › Monitoring and Surveillance

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## › Business unit compliance reviews

While regional compliance programs are managed on a local basis, Compliance also develops and implements policies on a global basis where practicable.

### **Office of the Chief Financial Officer (“CFO”)**

The Office of the CFO is responsible for financial accounting and reporting, regulatory reporting, tax compliance and reporting, management reporting, as well as the development and implementation of Russell Investments’ financial accounting controls. These responsibilities are carried out through a global team of finance professionals.

### **Legal**

The Company’s legal department provides counsel that helps Russell Investments successfully navigate complex legal and regulatory environments. The legal department consults with both senior and line management within the business units to maximize business opportunities, and minimize legal, regulatory, reputational and other risk. The legal team is comprised of attorneys, paralegals and legal assistants located in Seattle, London, Sydney and Tokyo. In limited circumstances, Russell Investments engages outside counsel who are selected based upon expertise, location, and past experience.

### **Code of Ethics**

All Russell Investments associates are required to maintain a standard of ethics as defined by Russell Investments’ Global Code of Conduct and regional Codes of Ethics or equivalent documents. The Global Code of Conduct and regional Codes of Ethics or equivalent documents include general guidance on ethical conduct and the importance of integrity, as well as specific provisions relating to privacy and confidentiality, personal account dealing, gifts and entertainment, and conflicts of interest. The Global Code of Conduct and regional Codes of Ethics or equivalent documents are regularly reviewed and updated as necessary by Global Compliance Operations and regional compliance teams, respectively. Associates are required to certify in writing at least annually the Global Code of Conduct and their regional Code of Ethics or equivalent documents.

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## D. PROCESS OVERVIEW

### NEW CLIENT ACCOUNTS

During the sales process, Russell Investments' client executive, or equivalent regional role, will work with a prospective client to determine the scope of a future relationship as well as Russell Investments funds and/or services to meet the client investment objectives. The role of the client service team or equivalent regional role is to facilitate the transition of new client accounts/relationships into Russell Investments funds and/or services in a timely and consistent manner. The client on-boarding process is region and client specific (i.e. fiduciary management, separate accounts, etc.) based upon the applicable regulatory environment and may consist of preparation and negotiation of legal and fee agreements, obtaining, reviewing and approving account setup at the custodian bank, authorized signature lists, setup of accounts at the custodian bank and internal application set up. The client executive and/or client service team is responsible for ongoing relationship management and may work with the client to develop the plan asset allocation and investment policy statement, as well as determine fund rebalancing requirements. The client executive, supported by client service, will be the primary contact on investments and will provide ongoing support and regular investment reviews, where applicable.

Additionally, clients investing in Russell Trust Company ("RTC") Funds must be accepted and approved by the Trust Acceptance Committee. This committee was established by RTC's board to meet the regulatory requirements for acceptance and review of fiduciary account by Washington State Chartered Bank Trust Departments.

### INVESTMENT MANAGEMENT AND RESEARCH FUNCTIONS

Russell Investments' corporate purpose is improving financial security for people. Within that context, Investment Division ("ID") objectives are to consistently deliver superior investment results, to maintain a diverse set of investment capabilities in order to meet client needs, and to continually develop new alpha-generating ideas.

ID is divided into five broad functional areas:

1. Manager Research and Portfolio Management
2. Investment Division Operations
3. Asset Allocation and Portfolio Strategy
4. Client Investment Strategies
5. Implementation Services

#### Manager Research and Portfolio Management

The Chief Investment Officer (CIO) Equities, CIO Fixed Income, CIO of Multi-Asset Solutions, and the Managing Director (MD) of Alternatives are accountable for manager research and portfolio management, including the performance of the funds, the quality of the investment content and money manager recommendations for their respective areas. The CIOs and MD oversee the portfolio managers, implementation portfolio managers, portfolio analysts and manager research analysts.

- › Portfolio managers have a dual role that encompasses both portfolio design and portfolio management. Once they have created a fund, they have the responsibility to ensure that it delivers the expected performance.
- › Implementation portfolio managers are accountable for the day-to-day implementation of portfolio management decisions and fund activity within guidelines established by the portfolio managers.
- › Portfolio analysts support the portfolio managers in both fund construction and portfolio management, delivering the analytics and reports necessary to complete these tasks.

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- › Manager research analysts provide understanding and knowledge of the universe of money managers, delivering a buy list to the portfolio managers to use in the design and construction of multi-manager funds.

Working as asset class teams, these teams fulfill the following roles necessary to complete the following investment process employed at Russell Investments:

- › *Manager research*: to provide the in-depth knowledge of money managers essential to successful portfolio design and management decisions.
- › *Portfolio design*: to choose an effective mix of managers and/or directly invested positioning strategies for a fund, taking into account the objective, overall risk/return profile and any requirements in terms of tracking error, alpha targets, fee targets, or benchmark
- › *Portfolio management*: ensure individual managers and directly invested positioning strategies, the aggregated mix of managers and positioning strategies, and the overall risk/return profile of the fund follow the set objectives of a fund, thus delivering expected performance. Multi-asset fund portfolio managers provide integrated investment solutions and work closely with the Client Investment Strategies Group to evaluate and implement asset allocations in these funds.

### The Research Process

Based on the belief that past performance is an insufficient foundation for choosing an investment manager, Russell Investments' Manager Research process emphasizes both fundamental (organization, people and investment process) and quantitative (portfolio structure/style, performance) analysis in conducting comprehensive evaluations of individual investment products. Russell Investments' fundamental and quantitative analysis, performed over time, allow Russell Investments to establish the investment merit of specific products. Russell Investments' Manager Research analysts are organized into teams, each of which focuses on a particular asset class and geography, and when appropriate within a team, particular investment styles.

This specialization allows for a focused and in-depth analysis process, which includes ongoing re-evaluation of the products based on on-site meetings and extensive monitoring.

Russell Investments' policy is to meet with investment managers and to supplement these face-to-face meetings with telephone conference calls. Russell Investments' meetings with investment managers assess in great depth the people, investment process, portfolio structure and investment performance. Based upon information gathered during these meetings and through independent analysis, Russell Investments' research analysts assign rankings to the investment manager's product.

Russell Investments also evaluates portfolio structure and performance through a variety of tools. Russell Investments' objective is to validate the investment characteristics displayed in the portfolio as consistent with the process described during Russell Investments' meetings and to determine the investment manager's appropriate style and role within the portfolio. Russell Investments also seeks to evaluate the skill with which the investment manager is dynamically adapting to changing macro and microeconomic fundamentals in their portfolio positioning and subsequent performance. Performance is evaluated across multiple dimensions including: on an absolute-return basis; on a risk-adjusted basis; on a relative basis to appropriate peer group universes; and on a relative basis to stated investment style and expectations and across multiple time periods.

### Manager ranking

The outcome of Russell Investments' research is a ranking that reflects the level of out-performance relative to a benchmark that Russell Investments expects from a product and the stability or reliability of the sources of that out-performance. This is supported by detailed documentation summarizing Russell Investments' research teams' opinion on the relative strengths and weaknesses of the product on both an absolute and peer-relative basis.

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Russell Investments analyzes historical performance data to align Russell Investments' understanding of an investment manager's investment philosophy and process with Russell Investments' knowledge of capital markets. Russell Investments analyzes the performance patterns relative to historic market trends, comparing the investment manager's performance to appropriate benchmarks and to peer group performance statistics. This analysis demonstrates not only the investment manager's adherence to the stated investment philosophy in volatile markets, but also helps quantify alpha potential relative to various risk scenarios.

As mentioned, by examining all of the above criteria, each research analyst group is charged with making relative assessments of investment managers in their respective asset class in order to better discriminate among investment manager choices.

### Portfolio construction

Russell Investments uses a DESIGN-CONSTRUCT-MANAGE framework to deliver outcome-oriented portfolios.

#### › *Design*

In the DESIGN phase, we identify a quantifiable investment target for an outcome-oriented portfolio. We then apply this within the context of our wider capital markets assumptions and forecasts. The result is the strategic asset allocation of the portfolio.

#### › *Construct*

Asset allocation decisions are then brought to life in the CONSTRUCT phase. This stage is about faithfully implementing the portfolio design, while prudently using our full suite of tools and capabilities to make investor money work harder.

We start by considering the market exposures that we believe offer the most attractive returns in order to achieve portfolio goals. Next, we consider how to access these areas of the market, thus developing our strategic preferred positioning. We identify third-party high conviction investment managers we believe will add excess return consistent with our beliefs. We often find that the combination of third party managers exposes the portfolio to unintended risks or that the aggregate exposures are not precisely aligned with our strategic preferred positioning or that allocating to a third party manager may not be the best way to obtain a specific exposure. If any of these is the case, we integrate custom strategic positioning strategies, run directly by Russell Investments that aim to more precisely align the portfolio with our strategic preferred positioning.

#### › *Manage*

Our investment portfolios need to adapt to several changes, including market changes, manager changes and circumstance changes. To do so, the first step in the MANAGE stage is to clearly understand the current investments, the current exposures and the sources of risk. We use state of the art analytical tools from both market leading providers and those internally developed to support our investment process that enable our portfolio managers to monitor their portfolios daily. We then incorporate our forecasts around the current market opportunities and risks to identify the changes we may like to make to adapt to the ever-changing environment. We then use a wide range of tools at our disposal to adapt the portfolios: adjusting manager weights, changing managers, or using a wide array of directly managed dynamic positioning strategies such as smart beta strategies, equity futures, or currency forwards to fine-tune exposures. This results in portfolios that are continually aligned to reflect our best thinking.

### Investment Strategy Committee

Russell Investments' Investment Strategy Committee (ISC) is responsible for the oversight of all investment related activities under the supervision of Russell Investments' Executive Committee and Investment Committee. The ISC also reviews investment performance and establishes investment policy and strategy. Additionally, the ISC evaluates new funds or fund changes from an investment perspective, for consistency with the fund's objective, and based on sound investment principles.

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The ISC is comprised of:

- › Global CIO (Chair)
- › Chief Investment Strategist
- › Managing Director, Investments
- › Managing Director, Global Trading
- › Managing Director, Alternatives
- › Managing Director, Direct Investments
- › Chief Risk Officer
- › CIO, Fixed Income
- › CIO, Multi-Asset Solutions
- › CIO, Equities

Russell Investments Japan also has a regional specific committee, The Investment Policy and Management Committee (IPMC), which is responsible for assessing the performance of the regional products and funds.

The ISC delegates to asset class-specific Portfolio Management Sounding Boards (PMSB) and the Direct Investments Sounding Board (DISB) the detailed review, from an investment perspective, of portfolio manager proposals to create new investment products, or that relate to new fund/account launches, the termination or hire of any money managers, and/or significantly alter a fund or product structure. Ultimately, however, the ISC is responsible for making decisions on recommendations provided by the sounding boards and other sub-committees of the ISC. The committee has a mandate and it meets regularly and maintains documentation of all decisions. The asset class-specific PMSB and the DISB report to the ISC.

The Investment Division has chartered a separate committee, the Russell Investments Asset Allocation Committee (RAAC), to provide oversight of asset allocation decisions for each product line and collaborate with information technology to develop an asset allocation system and database to support research, provide transparency into asset allocations across regions and provide a means to share views and forecasts to facilitate implementing them in the portfolios. The RAAC reports to the ISC.

### Investment Division Operations

Investment Division Operations consists of seven distinct teams that comprise the non-investment related functions essential to ensure a robust operating infrastructure for Russell Investments' investment process.

#### Portfolio Contracting Team (PCT)

This team serves as one of the primary points of contact with Russell Investments money managers. The team's responsibilities include the following:

- › *Contract negotiations:* Manage contract negotiations and maintenance with money managers for new assignments, termination of assignments, and other amendments as necessary.
- › *Transition coordination:* Coordinate manager changes and facilitate timing relative to legal, regulatory, compliance, trading and operational requirements.
- › *Brokerage allocation arrangements:* Coordinate with money managers for brokerage allocation instructions relative to soft commission arrangements and commission recapture.
- › *Investment guideline coordination:* During contract negotiations, Russell Investments works with the money manager to determine agreed upon investment guidelines. PCT provides the investment guidelines to Global Investment Operations for set-up and implementation for monitoring of investment guidelines.



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### Derivatives Contract Management and Investment Business Services Team

The Investment Division interacts with many internal and external service providers. The Derivatives Contract Management and Investment Business Services Team is responsible for optimizing the effectiveness of this model and is accountable for the process to facilitate maximization of resources and service delivery of all internal and some external services. This team serves as the single point of contact for both internal and external Investment Division service providers on process, roles and key deliverables and, is responsible for management of the derivatives contract management function.

### Product and Governance Team

This team is responsible for the centralized oversight and management of Russell Investments' global product launch and product change activities within the Investment Division. Russell Investments' investment process is organized around portfolio management and construction decisions. The Investment Division has developed regular forums, peer review, and governance structures to ensure that all aspects of portfolio decision-making are addressed.

### Investment Practice Team

This team provides project leadership and oversees a variety of ongoing initiatives for the Investment Division that focus on the measurement, evaluation, and articulation of Russell Investments' investment process while leading projects aimed at continuous improvement of investment practice. These responsibilities include developing and overseeing approaches for analyzing and evaluating performance and risk characteristics and leading efforts to improve the investment process itself plus the process infrastructure that supports investment decision-making. In seeking to improve Russell Investments' investment approach, the team serves as thought leaders on best practice in investment management.

### Global Manager Oversight & Diligence (GMODD) Team

This team is responsible for the Global Manager Oversight & Due Diligence Review Program (Oversight Program), which provides a process for evaluating compliance and operational risks of money managers and pooled vehicles that may materially impact the Russell Investments Funds, clients or Russell Investments by way of initial and ongoing re-reviews (Oversight Review) in a globally consistent manner. The scope of GMODD reviews does not include legacy private equity pooled fund managers, managers inherited by clients (i.e. managers that were in a client portfolio for which Russell Investments assumes discretion) and certain non-discretionary accounts (both as determined on a contract by contract basis), or pooled funds to which Russell Investments makes an allocation pursuant to an enhanced portfolio implementation (EPI) contract. The Oversight Program and Oversight Reviews performed are not: (1) designed to be full scale audits; (2) designed to replace regulatory examinations; or (3) geared to detect or prevent fraud.

### Investment Services Team

This team provides administrative, analytical, and technical support throughout all aspects of the investment process, from manager research and fund construction through implementation and monitoring.

### Investment Division Communications and Reporting Team

This team collaborates with investment professionals to produce and refresh client-facing Investment Division content to describe our investment philosophy, process, new funds, as well as monthly and quarterly fund performance commentary. This team also facilitates Board reporting activities within the Investment Division.

### Asset Allocation and Portfolio Strategy

The Asset Allocation and Portfolio Strategy Team is responsible for the Investment Divisions' capital markets research agenda. Through the study of complex problems such as long-term asset allocation and forecasting, active-versus-passive management, tactical asset allocation, economic forecasting and financial theory, Russell Investments has gained a thorough and unique understanding of the types of manager strategies that are successful and under which circumstances, which long-term portfolio structures are more likely to succeed, and how portfolios need to evolve in changing market environments. This includes a variety of research projects and activities that utilize advanced quantitative techniques to progress Russell Investments'

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understanding of markets and develop insights on how best to research managers and construct multi-manager portfolios. This research falls into three different categories:

- › Understanding the opportunities and risks of active management through research projects that attempt to improve Russell Investments' ability to forecast manager excess returns or refine Russell Investments' portfolio construction methodology. These projects can be global in nature or focus on particular asset classes or geographies.
- › Understanding asset markets through investigation of evolving sources of risk and return and their impact on investors.
- › Product support and development focused on developing proof of concept research, strategy validation and monitoring, as well as practical issues surrounding implementation.

The team also has responsibility for model strategies, as well as for long and short-term forecasts for capital markets and various asset classes. These forecasts are used to develop the glide path for some of the funds. Research is also conducted that leads to the development of glide paths for rebalancing portfolios over time. The team also conducts extensive research into retirement issues such as longevity risk and its impact on spending rates, investment returns and mortality. This is used to create and evaluate methodologies for generating income in retirement. The team is also responsible for asset allocation research and development of model portfolio strategies.

### Client Investment Strategies

The Client Investment Strategies group (CIS) acts as an external voice on the economy, capital markets, portfolio strategies and investor behavior for financial intermediaries, institutional clients and media outlets. In addition, the group supports the Investment Division in the development of client ready papers, tools and one-on-one communication as requested.

### Implementation Services

Most of the products and services currently provided by Russell Implementation Services Inc. ("RIS") were initially developed as a result of its long experience as a consultant and multi-manager advisor to institutional investors. Today, RIS offers its products and services in flexible combinations designed around the individual needs of its clients. For convenience, these services and related controls are described in their individual components below.

### Exposure Management

Exposure management is used by Russell Investments fund portfolios to capture or hedge the desired market exposure using derivative overlays. This process uses futures contracts, options and currency forwards in the cash portion of the portfolio as well as stand-alone accounts. It can be employed as a temporary or continuing investment management assignment.

The daily variation margin on futures contracts is calculated by BBH for all Russell Investments portfolios. This calculation is then reconciled with broker records by BBH. Once the daily variation margin is reconciled, BBH sends the wire validation report to Global Investment Operations for their review and approval. Once reviewed and approved, the wire validation report is sent by Global Investment Operations to BBH which authorizes the payment of wires. The instructions are then sent to the custodian bank by BBH.

### Overlay Services

Overlay Services can efficiently manage multiple exposures at the total fund level and uses a derivatives overlay such as tactical asset allocation, currency overlay and downside protection. When a client initially establishes its investment guidelines, Overlay Services receives an executed investment management agreement including the investment guidelines for overlay services. The investment guidelines provide a general description of the overlay program and include the policy targets. Policy targets are the client's desired asset class allocation targets and are used to determine which derivatives are to be traded. Policy targets are entered into the Policy Implementation ("PI") system by an analyst and reviewed for accuracy by the Portfolio



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Manager. Depending on the type of exposure management assignment, the investment guidelines may include specific constraints or objectives such as the inclusion of maximum notional exposure as a percent of total fund/account market value, target for invested cash, and desired target exposures. These specific constraints or objectives are tracked in our systems, and violations are checked daily, at a minimum. Clients may make subsequent changes to the policy targets by sending an instruction in the form of an email, a letter of direction, or an amendment to the investment guidelines.

In general, increases in the total cash balance are converted to market exposure through the purchase of derivatives or physicals in accordance with guidelines specified in the investment guidelines. Once appropriate trades have been executed, the PI system is updated to reflect the new exposure amounts. Reflections of these items are reported in the Trade Worksheet and Asset Summary reports.

For overlay services rebalancing clients, Trade Worksheets generated daily for each portfolio by the PI system also include automated alerts that indicate when portfolio composition varies from target asset allocation ranges. Exceptions of rebalancing triggers are corrected on the next trading day or in accordance with client direction. The Trade Worksheets are reviewed by the Portfolio Management team after the rebalancing to ensure all alerts are resolved.

The PI system also generates Trade Worksheets which identify instances of leverage (long derivative and/or physical positions exceed cash plus synthetic cash created from short derivative positions) on a daily basis. Adjustments are made in accordance with the guidelines specified in each client's terms of business agreement.

#### Currency Implementation and Currency Risk Management

There are two primary services provided to clients which are currency implementation and currency risk management (which includes dynamic currency overlay, passive currency overlay and conscious currency) by which clients can outsource their foreign exchange trading and currency risk management. Clients enter into a currency implementation agreement that gives RIS the authority to transact trades on the accounts specified in the schedule of this agreement. This service is unusual in that RIS operates in an agency capacity within a market that is traditionally traded on a principal basis. Russell Investments uses a panel of bank counterparties as well as other execution outlets to achieve competitive execution for its clients. Foreign exchange bank counterparties are reassessed on a quarterly basis to monitor execution quality, post trade service and business knowledge. The counterparty assessment reports are formally reviewed and approved by the Trade Management Oversight Committee ("TMOC"). All execution benefits are passed to the client; and clients gain from a defined service offering with a fully disclosed fee structure. In addition to acting as an execution agent, Russell Investments facilitates the settlements of all client trades.

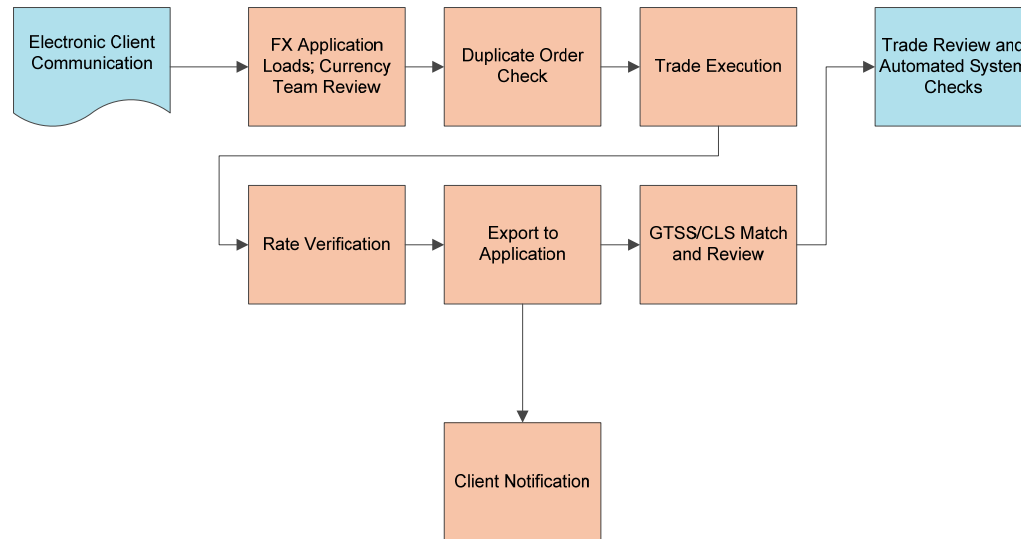
The settlement process ensures all foreign exchange trades are matched and confirmed daily with Russell Investments' FX trading counterparties through Global Trading Support Services ("GTSS"), a third party foreign exchange trade comparison system that Russell Investments has read-only access to. Foreign exchange transaction activity is verified utilizing a daily checklist that is reviewed by the Director of Foreign Exchange or the director's delegate. Any issues identified are researched and resolved.

The Dynamic currency overlay and passive currency overlay allow clients to manage their currency risk which is inherent in a portfolio of international securities. Clients approve investment guidelines which provide criteria by which RIS manages the currency overlay program. The guidelines identify key components such as when the currency overlay is to be updated, what trading banks are client approved and other requirements as determined by the client. Signed investment guidelines, as well as amendments to guidelines, are required for RIS to provide this service. The settlement process ensures all passive currency overlay trades within Continuous Linked Settlement ("CLS") eligible accounts are matched and confirmed daily to counterparties through CLS, a third party foreign exchange system which facilitates settlement of currency transactions and which is managed at the custodian bank. Russell Investments has monitoring controls with the custodians on an exception basis. For any accounts not CLS eligible Russell Investments will address issues on an exception basis which are highlighted to Russell Investments by custodians.

Conscious Currency is where RIS implements a currency overlay based on the rules of the Russell Investments Conscious Currency Index and/or sub-indexes. The objective of this program is to provide investors with a transparent and systematic way to invest in the currency market in order to achieve an absolute return. This service can be managed in isolation or in conjunction with a passive currency overlay or other Russell Investments services.

The currency overlay trading activity is verified utilizing a daily checklist that is reviewed by the Director of Foreign Exchange or the director’s delegate. Any issues identified are researched and resolved.

*Trade*



**Transition Management**

Transition management is an interim investment management assignment to direct the exposure and execution processes of a client portfolio as assets are moved from legacy to target holdings. The Transition Management team facilitates and manages the overall transition management assignment ensuring a cost effective and risk controlled event.

A post-transition summary report is prepared upon the completion of the transition event. This report includes information around timing, implementation strategy and cost analysis. Charles River Investment Management System (“Charles River”) provides purchase and sales data that is used to compile post trade summary reporting. Charles River contains information on all portfolio holdings, as well as trade detail information on all securities, either purchased or sold for the client.

Trade error logs are maintained by Compliance to record identified trade errors and to document their resolutions.

**Portfolio Trading Services - Cash desk**

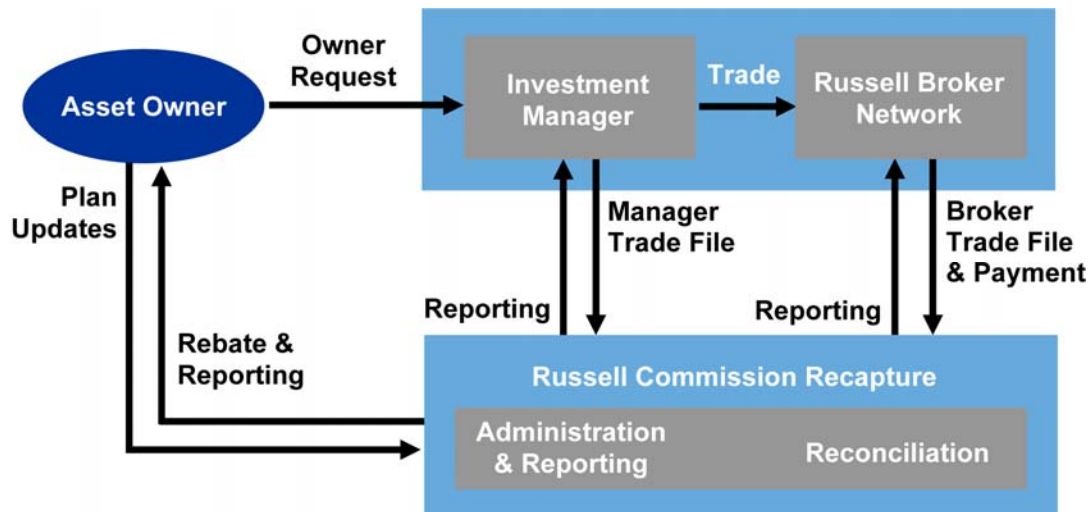
The Cash Desk manages the Russell Investments fund’s cash allocation and redemption process to ensure each fund maintains its prescribed manager weightings and liquidity reserve targets within Investment Management guidelines.

**Commission Recapture**

Commission Recapture (“CR”) is a tool available to institutional clients that allows them to manage commission expense and also control the total compensation delivered to external asset managers.

*This report is intended solely for use by the management of Russell Investments, its user entities, and the independent auditors of its user entities and is not intended and should not be used by anyone other than these specified parties*

CR is a continuing assignment whereby asset managers, on behalf of the CR client, execute trades with Russell Investments' network of brokers. The trades are designated as CR trades and part of the commissions associated with these trades is sent to Russell Investments. Russell Investments then rebates a portion of the commission to the client in the form of cash or payment of bona fide fund expenses.



When new CR relationships are established, they are set up in Commission Allocation System ("CAS"). The setup is reviewed by the client relationship managers or trading analysts to ensure the accounts were properly established. As asset managers execute trades on their client's behalf, trades at the time of allocation are designated for recapture. The broker who executes the trade retains a component of the commission, and sends the balance to Russell Investments along with the trade data.

The commissions' balances are held in the "Special Account" for the exclusive benefit of CR clients. CAS automatically credits all CR rebates to proper client accounts. CR program trade discrepancies within CAS are researched and resolved by trading analysts. CAS generated reports summarizing CR activity and outstanding balances are produced and reported to clients on a frequency and basis as defined by each client. CR payments are reported to clients at least quarterly and are verified to bank detail to ensure wire payments were made as directed by the client.

## GLOBAL INVESTMENT OPERATIONS

Global Investment Operations is responsible for daily margin variation on futures contracts as well as implementing investment guideline monitoring. Russell Investments utilizes internal monitoring or BBH, the third party subservice organization, to perform oversight of the investment guidelines. Internal monitoring utilizes Bloomberg AIM for parameters and guideline testing. Russell Investments' guideline monitoring tool identifies breaches and monitors through resolution. BBH enters the parameters into their system and performs daily tests to ensure compliance with the guidelines. BBH ensures any changes made to the investment guidelines are updated. BBH will send out notifications when breaches occur. The Russell Investments Portfolio Manager ("PM") and Compliance are responsible for escalation with the investment manager to ensure that all exceptions/breaches are rectified in a timely manner.

## PERFORMANCE REPORTING

Confluence Technologies, Inc. ("Confluence") is Russell Investments' subservice organization that provides fund and benchmark performance data for use in performance reporting. Confluence receives daily fund price and distribution files from Russell Investments' custodians/accounting vendors. Performance figures for the day are calculated by Confluence and exported to Russell Investments' supporting tools, such as the FundSite system which publishes information on Russell Investments' extranet sites, where relevant, and both internally

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and externally released reports. All changes to fund performance reporting information must be sent by Russell Investments to Confluence for processing.

Russell Investments conducts additional reasonableness checks over the fund performance calculation. Verifications involve checking fund prices and dividends vs. secondary sources of the data, questioning fund custodians on exceptions and in some cases verifying that fund performance occurred as expected with the fund portfolio management team. Once the reasonableness checks are completed, the fund performance reports are prepared by Russell Investments or by other subservice organizations by region; Fund Assist, Genpact and BNY Mellon (“BNY”). The reports are reviewed by the Russell Investments Performance and Reporting Team and subservice provider, and the team completes a final review over fund reports that have been identified as new or revised for client accounts which have contractual agreements in place for Russell Investments to provide performance reports.

State Street Investment Analytics (“SSIA”) and BNY, subservice organizations, provide client consulting and manager performance reporting services to Russell Investments in the U.S., Canada, Australia, New Zealand, Japan and U.K.. SSIA and BNY have internal control activities over the accuracy of the client performance reporting and review client performance reports. After the client performance reports are provided to Russell Investments, an investment performance analyst or Client Executive (“CE”) reviews the reports for reasonableness of data accuracy. Following the reasonableness review, the client performance reports and fund performance reports are used to produce the client Quarterly Investment Review (“QIR”). The QIR is reviewed by the investment performance analyst or CE for reasonableness prior to distribution to the appropriate clients, except in the United Kingdom, where institutional client QIRs are completely outsourced to SSIA.

## GLOBAL INFORMATION TECHNOLOGY

Russell Investments’ Global Information Technology (“IT”) is organized to facilitate and support the interaction of Russell Investments’ people, processes and information resources across the globe. Global IT is organized into logical areas, including:

- › *Technology Infrastructure:* Responsible for the delivery and management of Global IT’s infrastructure services, as well as information security policies, standards and guidelines. This area is also responsible for vendor management and service level management activities as they relate to infrastructure services.
- › *Application Development:* Responsible for the delivery and management of application services, including software and data consultation, solution design, application development, ongoing application support and maintenance. This area is also responsible for vendor management and service level management activities as they relate to application services.

### Governance

Policies, guidelines, standards and procedures exist for various Information Technology domains. Policies are reviewed each year. The different documents are defined as follows:

- › *Policy:* Governs how people operate, generally, defined at a high level for all associates, contractors, and vendors who are expected to adhere to the provisions defined within. Policies are mandatory, and exceptions must be approved by management and documented.
- › *Standard:* Governs how systems operate, in support of policy and can define other non-policy related standards.
- › *Guideline:* Documenting acceptable best practices, potentially moves to Standard once normalized in environment.
- › *Procedure:* Defines how to implement standard, step by step description of the operational processes employed to achieve compliance with a policy. Procedures should include a description of operational controls and the associated escalation process to address exceptions.

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Policies and standards are in place for the following key general computing control areas. They are reviewed or updated periodically.

### Logical Access

All access provisioning is documented in Russell Investments' OPAS ticketing system, managed by Russell Investments' third party service provider Dell. Workflows within OPAS are preset for all user access provisioning. These workflows state in chronological order the steps that must be taken in order to provision new system access. All new Russell Investments employees are granted Active Directory ("AD") access upon hiring date. For all additional in-scope systems, the first step in each workflow is to obtain approval prior to granting access to a given user. As with user access provisioning, access terminations are processed through Russell Investments' OPAS ticketing system, managed by their third party service provider Dell. A departure process manages the required actions when the employee leaves the company or transfers to a new position and his or her access to a given system is no longer needed. Service desk personnel are instructed to disable AD network access after an employee's last day so that the user still has network access through the end of their last day. Within OPAS, distinct workflows are configured for both the provisioning and terminations process. The terminations workflow states that AD network access is disabled first, while privileged and AD group access is removed following network access. In the event of an employee transferring to a new position, access to all systems, AD-dependent or otherwise, that is no longer needed for the new position is removed for the employee.

For AD integrated applications, the third party service provider Dell provides the reviewers the user access lists for their respective systems on a periodic basis. For all other applications, the access reviewer creates a user access list. The reviewers then review the users for appropriateness; if any access changes are identified as a result of the review, the reviewers request the change to the service desk for AD integrated applications and to the appropriate person for the other applications. Once the reviewers verify the service desk has processed the change request, the reviewers sign off on System Access Review form indicating completion of the review. This process is performed for each in-scope application. Additionally, periodic user access reviews are performed for employees with elevated access permissions. For any new or modified administrators, research is performed to determine whether the access is approved, and if not, provide a suggested action. If corrections are necessary, requests for modifications are communicated to the service desk for implementation. The database accounts which appear to be associated to individuals who have been terminated are not reviewed in detail. This is because the relevance of database access relies on AD controls and reviews. We rely on processes and procedures around these controls in the termination process to ensure the departed person no longer has access to the information in the database.

On a daily basis, privileged database account activity is monitored and reviewed by appropriate IT personnel. On a monthly basis a summary report is sent to the Database IT Services Manager for review. The Database IT Services Manager scans the consolidated listing of activity and signs off via certification form on all exceptions. In addition, test transactions are run to ensure the system catches appropriate exceptions. Password settings are reviewed on a periodic basis by Information Security.

Active Directory security parameters require password complexity including number of characters, upper and lower case as well as numeric digits and special-characters. Password settings also include history of passwords, age, lockout settings and duration, as well as other criteria.

### Change Management

There are two principal categorizations of changes: normal and emergency changes. Normal changes require user acceptance testing and system owner approval prior to being implemented. Current system owners and backup approvers for in-scope systems are managed in Russell Investments' Application Portfolio Manager (APM) and updated on an ad-hoc basis. Normal changes are presented at the weekly Russell Investments Change Advisory Board (CAB) meetings. If a request for change must be implemented before its computed lead time, this becomes an expedited request for change. Expedited requests require an additional approval from the Russell Investments Change Manager, after which the Dell Change Manager approves to bypass the computed lead time. Expedited changes still require peer and manager approval. The second category –



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emergency changes – are tied to a Severity 1 or 2 incident to address a break-fix situation. Emergency changes bypass approvals and can be implemented immediately to restore the system to service. System owners are contacted afterwards to document their approval of the emergency change.

For Fundsite, in order to monitor the separation of duties (“SoD”) between developers and the production environment, Russell Investments has implemented an in-house reporting tool. On a daily basis, a report is run that compares read access within development servers to write access within production servers. This report serves to detect all users with access to both the development and production environments for a given application.

For RIS applications, Octopus makes it possible for developers and testers to be allowed to deploy specific projects to pre-production environments, but not production environments. To support these scenarios, Octopus supports a permissions system based around the concept of Teams, which have been established for developers. Members of these teams do not have permission to deploy to production. The daily report shows ALL deployments and indicates if the account that did the deployment was in either of these two groups.

Daily report notifications are sent to both Information Security and the Managed Service Provider (“MSP”). The MSP reviews each report on a daily basis to determine if any SoD conflicts were detected. If a conflict is found, Information Security then inquires with the applicable system owner to determine if the conflict is permissible per the user’s job function or if the conflict needs to be resolved and the user’s access needs to be removed. Until the SoD conflict is resolved, the conflict will remain in the daily output reports.

Russell Investments is now in a transition period where some applications are monitored by Bora Bora and some are monitored by Octopus.

Daily Octopus monitoring started in February 2015. At that time Russell Investments went back and all Octopus deployments from October 2014 to March 2015 were saved and reviewed retroactively.

### IT Operations

The Russell Investments IT Service Manager and MSP receive an automated daily report that shows backup successes and failures for servers over a weeks’ period of time. In addition to the weekly report, Russell Investments receives an automated email every morning. This email provides detail of each backup run on all data center servers from the previous day. Russell Investments identifies servers that had errors and investigates with backup technicians and works to resolve the issue that day. Each failure is listed in the report with a unique numeric code that will help the technician diagnose the reason for the backup failure. These Reports provide evidence of daily and weekly backup and resolved failures on all in-scope servers globally. The weekly report contains a report out of each day and is therefore the report Russell Investments relies on to identify chronic or more significant failures. Per Russell Investments Electronic Backup and Restore Standard, the MSP must monitor backup jobs and investigates and resolve job failures within a set amount of calendar days. Backup media shipping containers are rotated offsite on a daily basis. An offsite tape receipt is used to document and record the daily shipments. Each receipt contains the backup date, the shipping date, containers to be shipped and signatures evidencing the offsite rotation.

### Software Development Life Cycle (“SDLC”)

Russell Investments has a formalized SDLC policy which outlines those terms that are mandatory. The policy is reviewed each year. In addition, Russell Investments has documented a detailed set of guidelines which is available via the internal web for all developers and support personnel. It outlines which items are required depending upon the size of the project. A third party tool is used to document progress, key milestones, key emails, and approvals. In most cases the Agile approach is used for new development. There is an organizational segregation between development, QA and support. A third party tool is used to document required evidence such as application changes and testing. Evidence of user testing is retained as is evidence of the user approval to move to production.

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## APPLICATIONS

Russell Investments uses a variety of subservice organizations and proprietary applications to support its investment strategy, investment research, and implementation services functions.

Applications supporting Russell Investments investment management services, within the scope of this report, are:

- › *Policy Implementation System (“PI”)*: A proprietary system used to capture client holdings, and asset allocation. Trade worksheets are used to monitor tracking error to client policy and implement transactions to bring closer to client targets.
- › *Commission Allocation System (“CAS”)*: A proprietary system used to collect, reconcile and allocate client commission recapture credits to clients.
- › *FundSite*: A proprietary system used to collect, manage, and publish information about Russell Investments’ funds, including holdings, objectives and performance. Publishing is in a variety of formats including hard copy and web pages.
- › *Charles River Investment Management System (“Charles River”)*: A trade order management system from Charles River Development, Inc. Charles River is used for portfolio management, including trade order routing.
- › *Bloomberg AIM (“AIM”)*: AIM is the order management system used by the Short Term Investments (“STI”) group. It is also used as a compliance engine for Guideline Monitoring on a batch mode, running compliance rules and outputting results on a weekly basis.
- › *Guideline Monitoring Interface (“GM Interface”)*: Guideline Monitoring application that interfaces with Bloomberg AIM to monitor compliance rules and violations associated with guidelines for managers in Russell Investments funds.

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## E. USE OF OTHER SUBSERVICE ORGANIZATIONS

Russell Investments contracts with subservice organizations for asset custody, fund accounting and administration, transfer agency, trustee services, and proxy research and voting services.

State Street Bank and Trust Company, together with its affiliates including State Street Investment Analytics (“SSIA”), provides custody, accounting, administration, and trustee services to Russell Investments’ investment and fund businesses in the U.S. (with the exception of Russell Investments U.S. Institutional Funds, LLC), Australia, Japan and U.K. SSIA provides client performance reporting to the Russell Investments U.S. Institutional Funds, LLC.

BNY Mellon provides custody and accounting services to the Russell Investments U.S. Institutional Funds, LLC and client performance reporting to the Russell Investments U.K. Institutional Funds.

Confluence provides fund and benchmark performance data to Russell Investments on a daily basis for use in performance reporting used in all regions.

Glass, Lewis and Co. provides proxy research and voting services to Russell Investments for all of our assets globally.

BNY Mellon Asset Servicing provides data, analytical tools that are used in both the manager research and portfolio management processes.

Brown Brothers Harriman (“BBH”) performs daily tests to monitor investment parameters at the investment manager level, for contractually agreed upon accounts that are not monitored internally, and calculates the daily variation margin for Russell Investments portfolios. BBH also provides custody and performance reporting services for specified separately managed accounts in Japan.

Genpact provides fund level performance reporting services used in reporting materials to support both fund and client reporting, along with client relationship management.

Fund Assist provides fund fact sheet reporting utilizing source data provided by Russell Investments. Russell Investments may use fund fact sheets in some client reporting.

Dell is the primary managed service provider for Russell Investments. They provide basic IT services and monitor the health of the environment.

Russell Investments’ selection and oversight of major subservice organizations follows a disciplined and formal process including service level management agreements, ongoing monitoring of critical operations, periodic operational and executive management meetings, and on-site process reviews (as necessary).

The operations of investment managers as well as these other subservice organizations are not part of this report.



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## F. CONTROL OBJECTIVES AND RELATED CONTROLS

On the following pages, Russell Investments outlines the control objectives and the related control procedures in place to achieve the objectives it believes are relevant to its clients and independent auditors.

Included with each control objective are: (i) a description of the controls designed to achieve the objective, (ii) an indication of the nature, timing and extent of tests of operating effectiveness of such controls performed by PricewaterhouseCoopers LLP and (iii) the results of such tests.

1. New and Existing Client Accounts
2. Investment Process
3. Monitoring of Russell Portfolios
4. Exposure management
5. Overlay Services
6. Currency Implementation
7. Transition Management
8. Commission Recapture
9. Performance Reporting
10. Information Technology
  - a. Logical Access
  - b. Change Management
  - c. IT Operations
  - d. Software Development Life Cycle

**1.0 NEW AND EXISTING CLIENT ACCOUNTS**

Controls provide reasonable assurance that new investment management client accounts and amendments to accounts for existing clients are authorized, required approval is obtained and account reviews are completed.

Controls specified by Russell	Tests performed by service auditor	Results of tests
<b>Inspection</b>		
<p><b>1.1</b> U.S. Control During the client account set up process, a client acceptance and approval checklist is completed by a member of the Conversion Team authorized to accept new clients. Additionally, clients contracting with Russell Trust Company are accepted and approved by the Trust Acceptance Committee. The client acceptance and approval checklist includes necessary client servicing, legal and compliance, and investment management documentation.</p>	<p>U.S. Test For a sample of new investment management clients ascertained through inspection evidence that the client acceptance and approval checklist was completed by a member of the Conversion Team and was approved by the Trust Acceptance Committee prior to the execution of the client agreement and investment activity.</p>	<p>No exceptions noted.</p>
<b>Inspection</b>		
<p>U.K. Control During the client account set up process, the necessary account opening documentation is obtained, reviewed and approved by appropriate Russell associates. This includes authorization from the business to open the new account.</p>	<p>U.K. Test For a sample of new investment management clients, ascertained through inspection evidence that the necessary client servicing, compliance and investment management documentation was reviewed and approved by appropriate Russell associates prior to the opening of the new account.</p>	<p>No exceptions noted.</p>
	<p>For a sample of new fiduciary management clients, ascertained through inspection evidence that the necessary client servicing, compliance and investment management documentation was reviewed and approved by appropriate Russell associates prior to the opening of the new account.</p>	<p>No exceptions noted.</p>
	<p>For a sample of new separately managed account clients, ascertained through inspection evidence that the necessary client servicing, compliance and investment management documentation was reviewed and approved by appropriate Russell associates prior to the opening of the new account.</p>	<p>No exceptions noted.</p>

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p>Japan Control During the client account set up process, the new mandate check sheet is monitored by a member of the Investment Development Team to ensure progress of the account set up. A new account opening application form is completed and reviewed by separate members of the client service team authorized to accept new clients. The mandate check sheet and account opening application form includes necessary client servicing, legal and compliance, and investment management documentation.</p>	<p><b>Inspection</b>  Japan Test For a sample of new investment management clients, ascertained through inspection evidence that the new account opening application was completed and reviewed by separate members of the Investment Development Team authorized to accept new clients prior to the execution of the client agreement and investment activity.</p>	<p>No exceptions noted.</p>
<p>Australia Control During the client account set up process, a client acceptance and approval review is completed by a member of the Global Operations Team authorized to accept new clients. The client acceptance and approval process includes obtaining the necessary account opening documentation.</p>	<p><b>Inspection</b>  Australia Test For a sample of new investment management clients ascertained through inspection evidence that the client acceptance and approval documents review was completed by a member of the Global Operations Team authorized to accept new clients prior to the execution of the client agreement and investment activity.</p>	<p>No exceptions noted.</p>
<p><b>1.2</b> U.S. Control A client agreement or terms of business letter is obtained for clients. These documents always include an asset allocation policy and may also include details of investment objective and any investment restrictions imposed by the client.</p>	<p><b>Inspection</b>  U.S. Test For a sample of new investment management clients ascertained through inspection evidence that the client agreement or terms of business letter included an asset allocation policy and, if applicable, the investment objective and any investment restrictions.</p>	<p>No exceptions noted.</p>
<p>U.K. and Japan A client agreement or terms of business letter is obtained for clients. These documents include details of the investment mandate awarded to Russell and any investment restrictions imposed by the client.</p>	<p><b>Inspection</b>  U.K. and Japan For a sample of new investment management clients, ascertained through inspection evidence that the signed client agreement or terms of business letter contained details of the investment mandate awarded to Russell and any investment restrictions.</p>	<p>No exceptions noted.</p>

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p>Australia Control The Russell Client Account Manual acts as a formal legal agreement between Russell and the client. All clients are required to sign the declaration in the Client Account Manual which binds them to those obligations as well as those of the Fund Prospectus. Clients who task Russell with periodically rebalancing their portfolio or who contract with Russell to carry out account transitions will have their arrangements defined in their Implemented Consulting agreements.</p>	<p><b>Inspection</b>  Australia Test For a sample of new investment management clients, ascertained through inspection evidence that the signed declaration within the Client Account Manual or Implemented Consulting agreement were authorized and contained reference to the terms of the Fund Prospectus and contracted arrangements.</p>	<p>No exceptions noted.</p>
<p><b>1.3</b> U.S. Control A client account review is performed on all new RTC client accounts within 30 days of the following month end of the initial client invoice. The review includes inspection of the required account documentation and investment asset allocation information. The review is approved by an authorized Russell associate.</p>	<p><b>Inspection</b>  U.S. Test For a sample of new RTC U.S. investment management clients, ascertained through inspection evidence that the client account review was approved by an authorized Russell associate within 30 days of the following month end of the initial client invoice and to determine whether required account documentation and investment allocation information were included as part of the review.</p>	<p>No exceptions noted.</p>
<p><b>1.4</b> U.S. Control A client account review is performed annually on all existing RTC client accounts. The review includes inspection of the required account documentation and investment asset allocation information. The review is approved by an authorized Russell associate.</p>	<p><b>Inspection</b>  U.S. Test For a sample of existing RTC U.S. investment management clients, ascertained through inspection evidence that the annual client account review was approved by an authorized Russell associate and required account documentation and investment allocation information were included as part of the review.</p>	<p>No exceptions noted.</p>

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>1.5</b> Amendments to existing client asset allocations require signed authorized instruction from an appropriate client representative or Russell designee. Client instructions are authenticated by their corporate seal or by reference to a list of authorized signatories prior to being implemented.</p>	<p><b>Inspection</b></p> <p>For a sample of client asset allocation amendments implemented, ascertained through inspection evidence that the asset allocation amendment was authorized by the client's corporate seal or signed instructions from an appropriate client representative or Russell designee prior to the implementation.</p>	<p>No exceptions noted.</p>

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## 2.0 INVESTMENT PROCESS

Controls provide reasonable assurance that investment manager product appointments and terminations are authorized.

Controls specified by Russell	Tests performed by service auditor	Results of tests
	<b>Inspection</b>	
<b>2.1</b> External investment manager product appointment decision must be formally approved by the Investment Strategy Committee ("ISC") prior to the investment manager product appointment.	For a sample of external investment manager product appointments, ascertained through inspection evidence that the investment manager product appointment decision was formally approved by the ISC prior to the investment manager product appointment.	No exceptions noted.
	<b>Inspection</b>	
<b>2.2</b> Any external investment management product termination decision must be formally approved by the ISC prior to the investment manager change.	For a sample of external investment manager product terminations, ascertained through inspection evidence that the investment management product termination decision was formally approved by the ISC prior to the investment manager change.	No exceptions noted.
	<b>Inspection</b>	
<b>2.3</b> Members from the Portfolio Contracting Team ("PCT") ensure that all external investment managers sign an Investment Management Agreement ("IMA"). The signed IMA, which includes or references the investment guidelines acknowledges acceptance of the investment guidelines.	For a sample of external investment managers appointed during the year, ascertained through inspection the associated signed IMA and verified that the agreements contained or referenced investment guidelines and the agreements had been signed by a representative of the appointed investment manager.	No exceptions noted.
	<b>Inspection</b>	
<b>2.4</b> External unlisted pooled fund subscription decision must be formally approved by the ISC prior to the pooled fund subscription execution.	For a sample of unlisted pooled fund subscriptions, ascertained through inspection evidence that the unlisted pooled fund subscription decision was formally approved by the ISC prior to subscription execution.	No exceptions noted.
	<b>Inspection</b>	
<b>2.5</b> External unlisted pooled fund termination decision must be formally approved by the ISC prior to the pooled fund full redemption.	For a sample of unlisted pooled fund terminations, ascertained through inspection evidence that the unlisted pooled fund termination decision was formally approved by the ISC prior to the unlisted pooled fund full redemption.	No exceptions noted.

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### 3.0 MONITORING OF RUSSELL PORTFOLIOS

Controls provide reasonable assurance that the performance of Russell portfolios is monitored and reviewed.

Controls specified by Russell	Tests performed by service auditor	Results of tests
	<b>Inspection</b>	
<p><b>3.1</b> The Global Manager Oversight &amp; Due Diligence (“GMODD”) Team ensures each investment manager review is scheduled following company policy and a review is completed to assess the investment managers’ operational and compliance risk, except for investment managers reviewed by the Joint Venture (“JV”). The GMODD Team, or assigned third party consultant, documents the material findings in an internal report and ensures the results and recommendations are monitored and followed up on as needed.</p>	<p>For a sample of existing investment managers, ascertained through inspection evidence that the review included an analysis of the manager’s operational and compliance functionality, material findings were documented for monitoring and the current and subsequent investment manager reviews were scheduled following company policy.</p>	No exceptions noted.
	<p>For a sample of new investment managers, ascertained through inspection evidence that the review included an analysis of the manager’s operational and compliance functionality, material findings were documented for monitoring and the subsequent investment manager review was scheduled following company policy.</p>	No exceptions noted.
	<b>Inquiry</b>	
<p><b>3.2</b> Any investment manager on-site review performed by the JV is reviewed and approved by the ISC.</p>	<p>Inquired with management and confirmed there were no on-site reviews performed by the JV from October 1, 2014 to March 26, 2015, the date the JV was terminated.</p>	No exceptions noted.
	<b>Inspection</b>	
<p><b>3.3</b> Russell’s Chief Investment Officers and selected portfolio managers hold meetings periodically (at least quarterly) with the Investment Strategy Committee to assess the performance of Russell’s investment products and funds. All Russell investment products and associated funds are reviewed in these meetings.</p>	<p>For a sample of Investment Strategy Committee meetings, ascertained through inspection evidence that the Russell Chief Investment Officers and selected portfolio managers held meetings periodically with the Investment Strategy Committee to assess the performance of Russell’s investment products and funds.</p>	No exceptions noted.

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>3.4</b> U.S., U.K and Australia. Control – External Monitoring Each week a member of the compliance team reviews the BBH investment parameter exception summary reports and examines the details associated with open (or closed) items. These reports are reviewed, detail examined and if any questions are outstanding from the review, the questions are discussed with Portfolio Contracting Team (PCT) Members or BBH for clarification.</p> <p>In addition for Australia, Australian Compliance team rely on the weekly monitoring done by the US Compliance team and are notified as may be required of any exceptions which may affect the Australian portfolios as part of the escalation process.</p>	<p><b>Inspection</b></p> <p>U.S., U.K. and Australia Test For a sample of weekly BBH summary reports, ascertained through inspection evidence that the review was performed by a member of the compliance team and that exceptions identified were investigated.</p> <p>Australia Test For a sample of weekly BBH summary reports, ascertained through inspection evidence that the review was performed by the Australian Compliance team and that exceptions identified were investigated.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>
<p>Japan Control Relevant portfolio managers or PCT members review the BBH investment parameter exception report daily and IPMC reviews the BBH summary report to ensure monthly compliance of investment guidelines of investment managers and perform investigation, if necessary.</p>	<p><b>Inspection</b></p> <p>Japan Test For a sample of BBH summary reports and IPMC minutes, ascertained through inspection evidence that the review was performed by IPMC and that exceptions identified were investigated.</p>	<p>No exceptions noted.</p>
<p>Japan Control For Discretionary Investment Accounts (except the account investing in the funds), the Compliance team reviews the BBH daily guideline monitoring reports. These reports are reviewed, detail examined investigation is performed.</p>	<p><b>Inspection</b></p> <p>Japan Test For a sample of BBH daily guideline monitoring reports ascertained through inspection evidence that the review was performed by a member of the Compliance team and that exceptions identified were investigated.</p>	<p>No exceptions noted.</p>

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>3.5</b> Internal Monitoring            Money Manager guideline monitoring exception breaches outstanding for three weeks are escalated to the Compliance Team. These breaches are reviewed, detail examined, and if any questions are outstanding from the review, the questions are discussed with the respective portfolio manager or analyst for clarification and resolution.</p>	<p><b>Inspection</b>            For a sample of exception breaches, ascertained through inspection the evidence that the review was performed by a member of the Compliance Team and that any exceptions identified were investigated and resolved.</p>	<p>No exceptions noted.</p>
<p><b>3.6</b> Internal Monitoring            Guidelines and investment parameters for Hedge Funds are monitored monthly and breaches are escalated to the Portfolio Manager or Managing Director for resolution. All breaches and remediation are reported to the Fund's Directors.</p>	<p><b>Inspection</b>            For a sample of monthly guideline monitoring workbooks, ascertained through inspection evidence that the guidelines and investment parameters for Hedge Funds were monitored and breaches were escalated to the Portfolio Manager or Managing Director for resolution and reported to the Fund's Directors.</p>	<p>No exceptions noted.</p>
<p>Internal Monitoring            Guidelines and investment parameters for Real Estate Funds are monitored quarterly and breaches are escalated to the Managing Director for resolution.</p>	<p><b>Inspection</b>            For a sample of quarterly guideline monitoring workbooks, ascertained through inspection evidence that the guidelines and investment parameters for Real Estate Funds were monitored and breaches were escalated to the Managing Director for resolution.</p>	<p>No exceptions noted.</p>

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>3.7</b> The Global Manager Oversight &amp; Due Diligence (“GMODD”) Team ensures each unlisted pooled fund review is scheduled following company policy and a review is completed to assess the unlisted pooled funds’ associated fund and regulatory risks based on the type of fund product reviewed. The GMODD Team, or assigned third party consultant, documents the material findings in an internal report and ensures the results and recommendations are monitored and followed up on as needed.</p>	<p><b>Inspection</b></p> <p>For a sample of existing unlisted pooled funds, ascertained through inspection evidence that the review included an analysis of unlisted pooled fund, including the associated fund and regulatory risks, material findings were documented for monitoring and the current and subsequent unlisted pooled fund reviews were scheduled following company policy.</p> <p>For a sample of new unlisted pooled funds, ascertained through inspection evidence that the review included an analysis of unlisted pooled fund, including the associated fund and regulatory risks, material findings were documented for monitoring and the subsequent unlisted pooled fund review was scheduled following company policy.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>

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## 4.0 EXPOSURE MANAGEMENT

Controls provide reasonable assurance that the Russell portfolio exposure management process is monitored, transactions are authorized, and positions are settled accurately.

### Controls specified by Russell

### Tests performed by service auditor

### Results of tests

**4.1a** Market exposure from derivative positions held by Russell portfolios is monitored daily against cash balances held in the liquidity reserve account and with investment managers. Suggested derivative positions are reviewed by the trading team and adjusted to reflect updated cash balances.

#### Observation

Observed the monitoring of market exposure from derivative positions held by Russell portfolios against cash balances held in the liquidity reserve account and with investment managers.

No exceptions noted.

#### Inspection

Ascertained through inspection evidence that the market exposure from derivative positions held by Russell portfolios were monitored daily against cash balances held within the liquidity reserve account and adjusted to reflect updated cash balances.

For 3 of the 45 Russell portfolio monitoring selections, the custodial information being used by the analyst in the determination of the cash balance was inaccurate during the period October 1, 2014 to May 19, 2015.

**4.1b** For the Russell fixed income funds, Portfolio Managers review monthly fund metrics and compare against the respective benchmark metrics. Any significant deviations between the portfolio and benchmark are researched and investigated.

#### Inspection

For a sample of Russell fixed income funds, ascertained through inspection evidence that Portfolio Managers are comparing fund metrics against the respective benchmark metrics and any significant deviations were researched and investigated.

No exceptions noted.

Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>4.2</b> All over-the-counter derivative counterparties must be formally ratified by the Credit Risk Management Committee prior to appointment and thereafter on an annual basis. Over-the-counter derivative transactions entered into by Russell portfolios for exposure management are made with approved counterparties, which are restricted by the credit research database.</p>	<p><b>Inspection</b></p> <p>For a sample of counterparty-based derivatives trades entered into by Russell portfolios for exposure management purposes, ascertained through inspection evidence that the counterparty was ratified by the Credit Risk Management Committee prior to appointment and thereafter on an annual basis.</p>	<p>No exceptions noted.</p>
<p><b>4.3</b> Any derivative broker appointment decision must be formally approved by the Trade Management Oversight Committee (“TMOC”) prior to appointment. All derivative transactions made by Russell portfolios on an agency basis for exposure management are executed with approved brokers, which are restricted by the credit research database.</p>	<p><b>Inspection</b></p> <p>For a sample of derivative transactions entered into by Russell portfolios for exposure management purposes, ascertained through inspection evidence that the executing broker was approved by the TMOC.</p>	<p>No exceptions noted.</p>
<p><b>4.4</b> All financial futures transactions are reviewed and approved daily by an authorized investment professional.</p>	<p><b>Inspection</b></p> <p>For a sample of days, ascertained through inspection that the Trade Authorization Summary for evidence that financial futures transactions were approved by an authorized investment professional.</p>	<p>No exceptions noted.</p>
<p><b>4.5</b> Once the daily variation margin is reconciled, BBH sends the wire validation report to RIS Operations for their review and approval. Once reviewed and approved, the wire validation report is sent by RIS Operations to BBH which authorizes payment of wires.</p>	<p><b>Inspection</b></p> <p>For a sample of days, ascertained through inspection evidence that the wire validation report was reviewed and approved by an authorized associate from RIS Operations team.</p>	<p>No exceptions noted.</p>

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>4.6</b> Trading brokers and counterparties are reassessed on a quarterly basis to monitor execution quality, post trade service, operations, quantitative analysis and technology. The broker and counterparty list is approved quarterly and the assessment reports are formally reviewed and approved by the TMOC when presented every other quarter.</p>	<p><b>Inspection</b></p> <p>For a sample of trading brokers and counterparties, ascertained through inspection evidence that the trading brokers and counterparties were reassessed on a quarterly basis to monitor execution quality, post-trade services, operations, quantitative analysis and technology. The counterparty assessment reports were formally reviewed and approved by the TMOC.</p>	<p>No exceptions noted.</p>

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## 5.0 OVERLAY SERVICES

Controls provide reasonable assurance that compliance with each client's investment guidelines is monitored with regard to discretionary equitization and rebalancing activities.

Controls specified by Russell	Tests performed by service auditor	Results of tests
	<b>Inspection</b>	
<b>5.1</b> For exposure management portfolios: Updated portfolio cash balances and market values, as defined in the individual terms of business agreement, are received from the custodian daily and presented in portfolio Trade Worksheets. Each Trade Worksheet also contains key terms from the terms of business agreement and the portfolio's current futures exposure. Increases in the cash balance are converted to market exposure through the purchase of futures in accordance with guidelines specified in the terms of business agreement. Once appropriate futures trades have been executed, the Trade Worksheet is updated to reflect the new exposure amounts.	For a sample of daily portfolio balances, obtained the Trade Worksheets and ascertained through inspection evidence that for instances of underexposure, additional futures were purchased to equitize the portfolio in accordance with portfolio guidelines.	No exceptions noted.
	<b>Inspection</b>	
<b>5.2</b> Trade Worksheets identify instances of leverage (long futures position exceeds cash plus synthetic cash created from short futures position) on a daily basis and are adjusted in accordance with the guidelines specified in each client's terms of business agreement.	For a sample of daily portfolio balances, obtained the Trade Worksheets and ascertained through inspection evidence that for instances of leverage, futures were sold to eliminate leverage in accordance with portfolio guidelines.	No exceptions noted.

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>5.3</b> For rebalancing portfolios: Trade Worksheets are generated daily for each portfolio, and include automated alerts that indicate when portfolio composition varies from target asset allocation ranges. Exceptions of rebalancing triggers are corrected on the next trading day or in accordance with client direction. The Trade Worksheets are reviewed by the Portfolio Management team or Implementation Portfolio Management team after the rebalancing to ensure all alerts are resolved.</p>	<p><b>Observation</b></p> <p>Observed a Portfolio Manager generate test scenarios and implemented them into the Trade Worksheets application to identify that the automated alerts appeared when portfolio composition varied from target allocation ranges.</p>	<p>No exceptions noted.</p>
	<p><b>Inspection</b></p> <p>For a sample of rebalancing portfolios, ascertained through inspection that the Trade Worksheets reviewed by the Portfolio Management team or the Implementation Portfolio Management team for the portfolio which included the futures rebalancing asset allocation range to determine that the portfolio composition did not exceed target asset allocation ranges. For instances where portfolio compositions exceeded target asset allocation ranges, inspected evidence that breach alerts were resolved the next trading day.</p>	<p>No exceptions noted.</p>
<p><b>5.4</b> Investment guidelines are utilized to determine policy targets. Policy targets entered into the PI system by an analyst are reviewed for accuracy by the Portfolio Manager or Implementation Portfolio Manager.</p>	<p><b>Inquiry</b></p> <p>Inquired of appropriate personnel that amendments to policy targets for existing client rebalancing portfolios entered into the PI system by an analyst are reviewed for accuracy by the Portfolio Manager or the Implementation Portfolio Manager.</p>	<p>No exceptions noted.</p>
	<p><b>Inspection</b></p> <p>For a sample of existing client rebalancing portfolios, ascertained through inspection evidence that the amended policy targets entered into the PI system agreed to the change requested by the client.</p>	<p>No exceptions noted.</p>

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Controls specified by Russell	Tests performed by service auditor	Results of tests
	<p data-bbox="722 254 852 283"><b>Inspection</b></p> <p data-bbox="722 306 1187 541">For a sample of new client rebalancing portfolios, ascertained through inspection evidence that that the policy targets entered into the PI system agreed to the Investment Management Agreement (“IMA”) and are reviewed for accuracy by the Portfolio Manager or Implementation Portfolio Manager.</p>	<p data-bbox="1226 306 1393 365">No exceptions noted.</p>

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## 6.0 CURRENCY IMPLEMENTATION

Controls provide reasonable assurance that foreign exchange transactions are undertaken in an accurate manner and with approved counterparties.

Controls specified by Russell	Tests performed by service auditor	Results of tests
	<b>Inspection</b>	
<b>6.1</b> All foreign exchange trades, except those noted as exceptions, are matched and confirmed to counterparties through Global Trading Support Services ("GTSS"), a third party foreign exchange trade comparison system.	For a sample of foreign exchange trades, ascertained through inspection evidence that the foreign exchange trade was matched and confirmed to counterparties through the GTSS trade list.	No exceptions noted.
	<b>Inspection</b>	
<b>6.2</b> The daily trading checklist is reviewed by the Manager or delegate. Any issues identified are researched and resolved.	For a sample of days, ascertained through inspection evidence that the daily trading checklist was reviewed by the Manager or delegate and that any issues were researched and resolved.	No exceptions noted.
	<b>Inspection</b>	
<b>6.3</b> Foreign exchange bank counterparties are reassessed on a semi-annual basis to monitor execution quality, post trade service, and business knowledge. The counterparty assessment reports are formally reviewed and approved by the Trade Management Oversight Committee ("TMOOC").	For a sample of periods, ascertained through inspection evidence that the foreign exchange bank counterparties were reassessed to monitor execution quality, post trade service, and business knowledge. The counterparty assessment reports were formally reviewed and approved by the TMOOC.	No exceptions noted.
	<b>Inspection</b>	
<b>6.4</b> The daily Currency Management/Overlay checklist is reviewed by the Manager or delegate. Any issues identified are researched and resolved.	For a sample of days, ascertained through inspection evidence that the daily Currency Management/Overlay checklist was reviewed by the Manager or delegate and that any issues were researched and resolved.	No exceptions noted.
	<b>Inspection</b>	
<b>6.5</b> New investment guideline agreements are signed by client prior to implementation.	For a sample of new clients, ascertained through inspection evidence that the investment guideline agreements were signed by the client prior to implementation.	No exceptions noted.

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>6.6</b> Amendments to existing investment guideline agreements are authorized by the client prior to implementation.</p>	<p><b>Inspection</b></p> <p>For a sample of amendments, ascertained through inspection evidence that the amendment was authorized prior to implementation.</p>	<p>No exceptions noted.</p>
<p><b>6.7</b> All eligible Continuous Link Settlement (“CLS”) foreign exchange trades not matched are reviewed and resolved by a trading operations team member.</p>	<p><b>Inspection</b></p> <p>For a sample of eligible CLS foreign exchange trades not matched, ascertained through inspection evidence that the trade was researched and resolved on CLS.</p>	<p>No exceptions noted.</p>

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## 7.0 TRANSITION MANAGEMENT

Controls provide reasonable assurance that transition events are performed in accordance with internal transition guidelines.

Controls specified by Russell	Tests performed by service auditor	Results of tests
	<b>Inspection</b>	
<b>7.1</b> Completion and signoff of a transition checklist by a member of the transition team is required for all transition events. This checklist includes the transition setup requirements and trading protocols.	For a sample of transition events, ascertained through inspection evidence that the transition checklist was completed and signed off by a member of the transition team.	No exceptions noted.
	<b>Inspection</b>	
<b>7.2</b> A post-transition summary report is prepared upon the completion of the transition event, as defined by the sale of all securities except those the manager has formally accepted and reported to clients. Client reports include either a cost summary or a transition performance summary and either an event matrix or an executive summary.	For a sample of transition events, ascertained through inspection evidence that the post-transition summary report included either a cost summary or transition performance summary, and either an executive summary or an event matrix.	No exceptions noted.
	<b>Inspection</b>	
<b>7.3</b> A trade error log is maintained by Compliance to record identified trade errors and to document their resolutions.	For a sample of trade errors, ascertained through inspection evidence that of resolution to the trade error identified in the trade error log.	No exceptions noted.
	<b>Inspection</b>	
<b>7.4</b> Transition performance reporting is completed in accordance with the T Standard, a standardized measurement of portfolio performance during a transition.	For a sample of transition events, ascertained through inspection evidence that the transition performance reporting was completed in accordance with the T Standard.	No exceptions noted.

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## 8.0 COMMISSION RECAPTURE

Controls provide reasonable assurance that securities transactions directed through the commission recapture process are properly rebated and reported to clients.

Controls specified by Russell	Tests performed by service auditor	Results of tests
	<b>Inspection</b>	
<b>8.1</b> All new relationships established in CAS between an investment manager and a client are reviewed by the client or client relationship manager to ensure that the accounts were properly established.	For a sample of new investment manager trading accounts for clients, ascertained through inspection evidence that new relationships established in CAS between an investment manager and client were reviewed by the client or client relationship manager.	No exceptions noted.
	<b>Inspection</b>	
<b>8.2</b> Payments from brokers for commission recapture clients are held in the "Special Account" for the exclusive benefit of commission recapture clients.	For a sample of commission recapture client payments from brokers, ascertained through inspection evidence that the payment received was held in the "Special Account" for the exclusive benefit of commission recapture clients.	No exceptions noted.
	<b>Inspection</b>	
<b>8.3</b> CAS automatically credits all commission recapture rebates to proper client accounts. Commission recapture program trade discrepancies within CAS are researched and resolved by trading analysts.	For a sample of commission recapture trades selected from CAS, ascertained through inspection evidence that the commission recapture rebate was credited to the proper client account. Any rebate discrepancies within CAS were researched and resolved by trading analysts.	No exceptions noted.
	<b>Inquiry</b>	
<b>8.4</b> CAS generated reports summarizing commission recapture activity and outstanding balances are produced and reported to clients on a frequency and basis as defined by each client.	Inquired of appropriate personnel that reports summarizing commission recapture activity generated and outstanding balances are produced and reported to clients on a frequency and basis as defined by each client.	No exceptions noted.
	<b>Inspection</b>	
	For a sample of commission recapture clients, ascertained through inspection evidence that the CAS reports were generated, which included a summary of commission recapture activity and outstanding balances.	No exceptions noted.

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>8.5</b> Commission rebate payments are reported to clients at least quarterly and are verified to bank detail to ensure wire payments were made as directed by the client.</p>	<p><b>Inspection</b></p> <p>For a sample of commission recapture clients, ascertained through inspection evidence that the commission rebate payments were reported at least quarterly and wire payments were made as directed by the client.</p>	<p>No exceptions noted.</p>

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## 9.0 PERFORMANCE REPORTING

Controls provide reasonable assurance that client performance reports are accurate.

Controls specified by Russell	Tests performed by service auditor	Results of tests
<b>9.1</b> U.S. and Japan Control Russell fund and benchmark performance data is received from a third party through an automatic feed into Russell's FundSite database. The FundSite database then produces reporting performance data that is used to populate the Russell fund reviews.	<b>Inspection</b>  U.S. Test Ascertained through inspection evidence of the Russell fund and benchmark performance data were fed into Russell's Fundsite database from a third party.	No exceptions noted.
	<b>Observation</b>  U.S. Test Observed that the performance reporting data from Fundsite was used to populate the Russell quarterly fund reviews.	No exceptions noted.
	<b>Observation</b>  Japan Test Observed that fund and benchmark performance data was received from a third party through an automatic feed into Russell's Fundsite database which produced data used to populate the Russell fund reviews.	No exceptions noted.
Australia Control Russell fund performance data is received from a third party through an automatic feed into Russell's FundSite database. The performance data is used to populate the clients' extranet site.	<b>Inspection</b>  Australia Test For a sample of Russell funds, ascertained through inspection evidence that Russell fund performance data was received from a third party through an automatic feed into Russell's Fundsite database and used to populate returns on the client's extranet site.	No exceptions noted.

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>9.2</b> U.S. Control QIR fund specific reporting pages for existing Russell funds are prepared by Genpact and reviewed for data accuracy by agreeing to source data by the Fund Performance and Reporting Team for select Russell funds based on its risk assessment of the funds.</p>	<p><b>Inspection</b>  U.S. Test For a sample of existing Russell funds, ascertained through inspection evidence that the QIR fund specific reporting pages were reviewed by a member of the Fund Performance and Reporting team for data accuracy.</p>	<p>No exceptions noted.</p>
<p>Japan Control All Russell fund-specific reporting pages are reviewed for data accuracy by agreeing to source data by a Russell associate prior to being included in client reports.</p>	<p><b>Inspection</b>  Japan Test For a sample of Russell funds, ascertained through inspection evidence that the portfolio reporting templates and source data used to populate the templates were reviewed by a Russell associate for data accuracy by agreeing to source data.</p>	<p>No exceptions noted.</p>
<p>Australia Control All standard Russell fund-specific reporting pages are reviewed for data accuracy by ensuring that data elements agree with the relevant source systems or data. These pages are then included in client reports.</p>	<p><b>Inspection</b>  Australia Test For a sample of Russell funds, ascertained through inspection evidence that the standard pages included in client reports were reviewed by a Russell associate to ensure the data elements agree with the relevant source systems or data.</p>	<p>No exceptions noted.</p>
<p><b>9.3</b> U.K. Control Russell portfolio performance, which is obtained from third parties, is checked for reasonableness against performance expectations. Any discrepancies are identified and resolved prior to completion of the monthly report.</p>	<p><b>Inspection</b>  U.K. Test For a sample of investment manager products, ascertained through inspection evidence that the Russell portfolio performance was checked for reasonableness against performance expectations by a member of the portfolio team. Any discrepancies were identified and resolved prior to completion of the monthly report.</p>	<p>No exceptions noted.</p>

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>9.4</b> Reviews are performed over Investment Strategy or Investment Performance client reports as defined by the Russell associate for reasonableness of data accuracy.</p>	<p><b>Inquiry</b></p> <p>Inquired of appropriate personnel that supervisory reviews are performed over QIR reports for reasonableness of data accuracy.</p>	<p>No exceptions noted.</p>
	<p><b>Inspection</b></p> <p>For a sample of clients, ascertained through inspection evidence that the QIR reports were reviewed for reasonableness prior to being sent to clients.</p>	<p>No exceptions noted.</p>

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<b>10.0(a) INFORMATION TECHNOLOGY LOGICAL ACCESS</b>		Controls provide reasonable assurance that logical access to production systems and data is restricted to appropriately authorized personnel.	
<b>Controls specified by Russell</b>		<b>Tests performed by service auditor</b>	<b>Results of tests</b>
<b>10.1</b>	IT Security policies, standards and procedures are updated, reviewed and approved each calendar year.	<b>Inspection</b> Inspected IT Security policies standards and procedures and ascertained that policies are updated, reviewed and approved each calendar year.	No exceptions noted.
<b>10.2</b>	User access additions to the in-scope applications, databases, and privileged operating system accounts require approval by an appropriate access approver or designated back-up.	<b>Inspection</b> For a sample of new users, obtained the user access requests to applications, databases, and privileged operating system accounts and ascertained through the inspection that each new user request was approved by an authorized approver prior to access being granted.	No exceptions noted.
<b>10.3</b>	Terminated user account AD access is disabled upon notification. Terminated user account access is subsequently removed from in-scope applications and privileged operating system accounts.	<b>Inspection</b> Compared in-scope application, in-scope AD groups, and privileged operating system account listings to the year-to-date terminations listing to ensure no terminated users retained access.	No exceptions noted.
<b>10.4</b>	User accounts for in-scope applications and privileged operating system accounts are reviewed periodically to verify that access rights are commensurate for the user's job function. Discrepancies are researched and resolved.	<b>Inspection</b> For a sample of periods, obtained the user account reviews and ascertained through inspection the reviews were performed and any discrepancies were researched and resolved.	No exceptions noted.
<b>10.5</b>	Activity for shared privileged operating system accounts is reviewed periodically to detect unauthorized activities being performed outside of normal job functions.	<b>Inspection</b> For a sample of periods, obtained the shared administrator account reviews and ascertained through inspection the reviews were performed and any discrepancies were researched and resolved.	No exceptions noted.

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<p><b>10.6</b> Database administrator activity for in-scope databases is logged on a daily basis and periodically reviewed to detect unauthorized changes or activities being performed outside of normal job functions.</p>	<p><b>Inspection</b></p> <p>For a sample of periods, inspected evidence of reviews performed over database administrator activity and accompanying evidence of investigation and resolution.</p>	<p>No exceptions noted.</p>
<p><b>10.7</b> Password settings are periodically reviewed to ensure compliance with password policy and standards. Discrepancies are researched and resolved.</p>	<p><b>Inspection</b></p> <p>For a sample of periods, obtained the password setting reviews and ascertained through inspection the reviews were performed and noted that password settings complied with password policy and standards.</p>	<p>No exceptions noted.</p>

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**10.0(b) INFORMATION TECHNOLOGY  
CHANGE MANAGEMENT**

Controls provide reasonable assurance that only appropriately authorized, tested and approved changes are made to applications and databases.

Controls specified by Russell	Tests performed by service auditor	Results of tests
	<b>Inspection</b>	
<b>10.8</b> Change Management policies, standards and procedures are updated, reviewed and approved each calendar year.	Inspected the change management policies, standards and procedures and ascertained that policies are updated reviewed and approved each calendar year.	No exceptions noted.
	<b>Inspection</b>	
<b>10.9</b> Changes for applications and databases are tested in accordance with Company policy before being placed into production.	For a sample of changes for applications and databases, ascertained through inspection that each change was tested in accordance with Company policy prior to being placed into production.	No exceptions noted.
	<b>Inspection</b>	
<b>10.10</b> The Russell owner approves changes for applications and databases in accordance with Company policy prior to being placed into production.	For a sample of changes for applications and databases, ascertained through inspection that each change was approved in accordance with Company policy prior to being placed into production.	No exceptions noted.
	<b>Inspection</b>	
<b>10.11</b> To prevent developers from making unauthorized changes to applications, administrative access required for release to production is logged and reported on a daily basis and reviewed on a monthly basis. Identified segregation of duties conflicts are investigated and resolved.	<p>For the period October 2014 to February 2015, ascertained through inspection that no changes were made to RIS Applications through the Octopus application.</p> <p>For a sample of months, ascertained through inspection that reviews of production access were performed identifying any developers with access to both development and production and discrepancies were investigated and resolved.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p>

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<b>10.0(c) INFORMATION TECHNOLOGY IT OPERATIONS</b>		Controls provide reasonable assurance that computer systems are backed up on a periodic basis and that procedures are employed to maintain the integrity of the media.	
<b>Controls specified by Russell</b>		<b>Tests performed by service auditor</b>	<b>Results of tests</b>
		<b>Inquiry</b>	
<b>10.12</b>	Operational policies, standards and procedures are updated, reviewed and approved each calendar year.	Inquired of management to determine that IT operational policies, standards and procedures are updated, reviewed and approved each calendar year.	No exceptions noted.
		<b>Inspection</b>	
<b>10.13</b>	At a minimum, full backups of data and applications are performed weekly as well as daily incremental backups. Backups are monitored for completion and failures are investigated and resolved.	<p>Inspected the backup schedule to evidence that backup were scheduled to run daily and weekly.</p> <p>For a sample of periods, ascertained through inspection that backup configurations were reviewed and discrepancies with policy were investigated and resolved.</p> <p>For a sample of backup failures, ascertained through inspection that the backup failures were investigated and resolved.</p>	<p>No exceptions noted.</p> <p>No exceptions noted.</p> <p>No exceptions noted.</p>
		<b>Inspection</b>	
<b>10.14</b>	Russell performs tests on a periodic basis to demonstrate the ability to restore backups. Unsuccessful restoration is investigated and resolved.	For a sample of periods, inspected the restoration report and ascertained that selected restorations were successful and unsuccessful restorations were investigated and resolved.	No exceptions noted.

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Controls specified by Russell	Tests performed by service auditor	Results of tests
<b>10.0(d) INFORMATION TECHNOLOGY Software Development Life Cycle (“SDLC”)</b> Controls provide reasonable assurance that major system changes and new major systems are authorized, tested and approved by final stakeholders.		
<b>Inspection</b>		
<b>10.15</b> Global Software Development Life Cycle (“SDLC”) policies, standards and procedures are updated, reviewed and approved each calendar year.	Inspected SDLC policies, standards and procedures relating to major new system development and ascertained that policies are updated, reviewed and approved each calendar year.	No exceptions noted.
<b>Inquiry</b>		
<b>10.16</b> Testing is performed per Company policy on major application development projects including data migrations (when applicable) prior to migration to the production environment.	Inquired of management to determine if testing was performed per Company policy on major application development projects and determined that there were no new development projects during the reporting period.	No exceptions noted.
<b>Inquiry</b>		
<b>10.17</b> Formal approval from the stakeholders for all major application development projects is given prior to implementation in production	Inquired of management to determine if formal approval from stakeholders for all major application development projects was given and determined that there were no new development projects during the reporting period.	No exceptions noted.
<b>Inquiry</b>		
<b>10.18</b> Development environments are logically separate from production environments for major application development projects.	Inquired of management to determine that for all major application development projects, the development environment are logically separate from production environments and determined that there were no new development projects during the reporting period.	No exceptions noted.

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## G. COMPLEMENTARY USER ENTITY CONTROLS CONSIDERATIONS

Russell Investments' controls relating to the processing of transactions for accounts cover only a portion of the overall internal control structure of each account. Therefore, each client's internal controls must be evaluated in conjunction with Russell Investments' controls and the test results of their operating effectiveness summarized in the preceding section of this report.

This section highlights those control responsibilities that Russell Investments believes should be present for each client and has considered in developing the aforementioned controls described herein. In order for a client to rely on the controls reported on, the client must evaluate its own internal controls to determine if the controls set forth below are in place. Furthermore, the controls described below are intended to address only those controls surrounding the interface and communication between each client and Russell Investments. Accordingly, this list does not purport to be, and is not, a complete listing of the controls that provide a basis for assertions underlying the financial statements of clients.

- › Instructions and information provided to Russell Investments are in accordance with the provisions of the agreement governing the account or other applicable agreements or documents between Russell Investments and the client.
- › Sufficient controls over physical and logical access to Russell Investments' systems using terminals at client locations are established, monitored and maintained by the client.
- › Timely written notification of changes to the client account objectives, guidelines or provisions of the governing agreement is adequately communicated to Russell Investments.
- › Timely review of reports provided by Russell Investments is performed by the client, as prescribed in the governing agreement, and written notice is provided to Russell Investments of discrepancies, if any, with the client's own records.
- › Timely notification of changes in related parties for purposes of identifying related party transactions is adequately communicated to Russell Investments.
- › Timely written notification of changes in individuals authorized to instruct Russell Investments regarding activities on behalf of the client are communicated to Russell Investments.

## H. CHANGES TO CONTROL PROCEDURES

The following changes to control procedures were implemented during the period October 1, 2014 through September 30, 2015.

Controls specified by Russell	Changes to control procedures
<b>2.0 INVESTMENT PROCESS</b>	Controls provide reasonable assurance that investment manager product appointments and terminations are authorized.
<b>2.4</b> External unlisted pooled fund subscription decision must be formally approved by the ISC prior to the pooled fund subscription execution.	The SOC 1 report scope was expanded to include alternative investments.
<b>2.5</b> External unlisted pooled fund termination decision must be formally approved by the ISC prior to the pooled fund full redemption.	The SOC 1 report scope was expanded to include alternative investments.
<b>3.0 MONITORING OF RUSSELL PORTFOLIOS</b>	Controls provide reasonable assurance that the performance of Russell portfolios is monitored and reviewed.
<b>3.2</b> Any investment manager on-site review performed by the JV is reviewed and approved by the ISC.	The JV was terminated by Russell on March 26, 2015.
<b>3.6</b> Internal Monitoring Guidelines and investment parameters for Hedge Funds are monitored monthly and breaches are escalated to the Portfolio Manager or Managing Director for resolution. All breaches and remediation are reported to the Fund's Directors.	The SOC 1 report scope was expanded to include alternative investments.
Internal Monitoring Guidelines and investment parameters for Real Estate Funds are monitored quarterly and breaches are escalated to the Managing Director for resolution.	The SOC 1 report scope was expanded to include alternative investments.

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Controls specified by Russell	Changes to control procedures
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**3.7** The Global Manager Oversight & Due Diligence (“GMOOD”) Team ensures each unlisted pooled fund review is scheduled following company policy and a review is completed to assess the unlisted pooled funds’ associated fund and regulatory risks based on the type of fund product reviewed. The GMOOD Team, or assigned third party consultant, documents the material findings in an internal report and ensures the results and recommendations are monitored and followed up on as needed.

The SOC 1 report scope was expanded to include alternative investments.



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#### IV. INFORMATION PROVIDED BY THE INDEPENDENT SERVICE AUDITOR

This report is intended to provide interested parties with information sufficient to understand the controls relating to services provided by Russell Investments. The document also reports the controls that may affect the processing of client transactions and provides information about the operating effectiveness of the controls that were tested. This report, when combined with an understanding of the internal controls in place at client locations, is intended to assist clients' independent auditors in planning the audit of client organizations and in assessing the control risk for assertions in client organizations' financial statements that may be affected by the controls of Russell Investments.

The work performed over Russell Investments' controls was restricted to those control objectives and the related controls outlined by management in the matrices contained in Section III. F of this report. Russell Investments management believes these are the relevant key controls for the stated objectives. Our work was not extended to control activities in effect at client locations or at investment managers, agents or other service organizations used by Russell Investments. The examination was performed in accordance with AICPA Statement on Standards for Attestation Engagements (SSAE) No. 16, Reporting on Controls at a Service Organization.

We performed a variety of tests which provide varying levels of audit satisfaction. The combined results of these tests provided the basis for our understanding of the framework for control and whether the controls described by management were in place as of September 30, 2015 and were operating effectively for the period from October 1, 2014 to September 30, 2015.

It is each interested party's responsibility to evaluate this information in relation to the internal controls in place at each user's organization. Complementary user entity control considerations are outlined in Section III. If an effective user internal control is not in place, the controls within Russell Investments may not compensate for such weaknesses.

The objective of internal control is to provide reasonable, but not absolute, assurance as to the safeguarding of assets against loss from unauthorized use or disposition and the reliability of financial records for maintaining accountability for assets. The concept of reasonable assurance recognizes that the cost of a system of internal accounting control should not exceed the benefits derived and also recognizes that the evaluation of these factors necessarily requires estimates and judgments by management.

#### CONTROL ENVIRONMENT

The control environment represents the collective effect of various factors on establishing, enhancing or mitigating the effectiveness of specific controls. In addition to the tests of specific controls described below, the procedures performed included tests of, or considered the relevant elements of Russell Investments' control environment including:

- › Russell Investments' organizational structure and approach to segregation of duties;
- › the functioning of the Board of Directors of the Company and of Russell Investments' committees, particularly the committees which oversee the investment management activities;
- › management control practices;
- › personnel policies and practices; and
- › the Internal Audit Department.

The tests of the control environment included the following procedures, to the extent considered necessary: (a) a review of the Russell Investments organizational structure, including the segregation of functional responsibilities, policy statements, accounting and processing manuals, personnel policies and internal audit's policies and reports; (b) discussions with management, operations, administrative and other personnel who are responsible for developing, ensuring adherence to and applying control activities; (c) observations of personnel

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in the performance of their assigned duties; and (d) a review of actions taken in response to recommendations to improve controls made by the Internal Audit Department.

The control environment was considered in determining the nature, timing and extent of the testing of the operating of controls relevant to the achievement of the control objectives.

## CONTROLS

The tests of the operating effectiveness of controls included such tests as considered necessary in the circumstances to evaluate whether those controls, and the extent of compliance with them, were sufficient to provide reasonable, but not absolute, assurance that the specified control objectives were achieved for the period from October 1, 2014 to September 30, 2015. The tests of the operating effectiveness of controls were designed to cover a representative number of transactions and procedures for the period from October 1, 2014 to September 30, 2015, for each of the controls listed in the matrices in Section III. F., which were designed to achieve the specified control objectives. In selecting particular tests of the operating effectiveness of the controls, the following were considered: (a) the nature of the controls being tested; (b) the types and competence of available evidential matter; (c) the nature of the control objectives to be achieved; (d) the assessed level of control risk; (e) the expected efficiency and effectiveness of the test; and (f) the testing of controls relevant to the stated control objective. Such techniques were used to evaluate the fairness of the description of the controls and to evaluate the operating effectiveness of the specified controls as indicated in the matrix.

## TESTS OF EFFECTIVENESS

Tests performed of the operational effectiveness of the controls detailed in the matrices in Section III.F were undertaken on a judgmental basis and are described below:

**Inquiry:** Inquired of appropriate personnel. Inquiries seeking relevant information or representation from Russell Investments personnel were performed to obtain, among other things:

- › Knowledge and additional information regarding the controls.
- › Corroborating evidence of the control.

**Inspection:** Inspected documents and records indicating performance of the controls. This includes, among other things:

- › Inspection of reconciliations and management reports that age or quantify reconciling items to assess whether balances and reconciling items are properly monitored, controlled and resolved.
- › Examination of source documentation and authorizations to verify propriety of transactions processed.
- › Examination of documents or records for evidence of performance such as the existence of initials or signatures.
- › Inspection of systems documentation, such as operations manuals, flow charts and job descriptions.

**Observation:** Observed the application or existence of the specific control as represented.

**Reperformance:** Reperformed the control or processing application of the control to ensure the accuracy of its operation. This includes, among other things:

- › Reperforming the matching of various system records by independently matching the same records and comparing reconciling items to the business group's prepared reconciliations.
- › Obtaining evidence of the mathematical accuracy by either re-computing the Russell Investments computation or performing independent calculations.

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In addition to test of inquiry described in Section III. F: “Control objectives and related controls” for certain control activities, the service auditor also performed tests of inquiry to each inspection and/or re-performance test described. Additionally, observation and inspection procedures were performed as it relates to system generated reports and queries to assess the completeness and accuracy (reliability) of the information utilized in the performance of our testing of the control activities.

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## V. OTHER INFORMATION PROVIDED BY RUSSELL INVESTMENTS (UNAUDITED)

### **BUSINESS CONTINUITY PLAN**

Russell Investments maintains a disaster recovery/business continuity plan which provides for critical business function recovery procedures to be executed by each business unit and coordinated with senior management. The plan includes detailed procedures for emergency response, disaster declaration and mobilization, network and system restoration, operations, administration and critical application processing. Russell Investments has contracted with vendors to provide access to both a secondary work area recovery site and a secondary data center in the event of an emergency.

### **ANTI-MONEY LAUNDERING**

Russell Investments is required to comply with the relevant anti-money laundering (“AML”) legislation and regulatory requirements in jurisdictions in which it operates. Where required, the Company has developed AML Compliance Programs for its businesses. The AML Compliance Programs include, among other things, appointing designated AML Compliance Officers, developing appropriate policies, procedures and controls, conducting independent testing of AML Compliance Programs and providing training to all appropriate associates.

### **DATA PRIVACY AND INFORMATION SECURITY**

Russell Investments is required to comply with relevant data protection legislation and regulatory requirements in jurisdictions in which it operates. Where required, the Company has developed Data Privacy and Information Security Programs (“ISP”) designed to address administrative, technical and physical safeguards to ensure the security and confidentiality of information entrusted to Russell Investments is not compromised. The ISP includes, for example, designating specific individuals with accountability, developing written policies, procedures and controls consistent with industry standards and regulatory requirements, overseeing service providers and providing training to all appropriate associates.

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## MANAGEMENT ACTION

The table below details the management action in response to the exception described in Section III Control Objectives and Related Controls of this report.

### 4.0 EXPOSURE MANAGEMENT

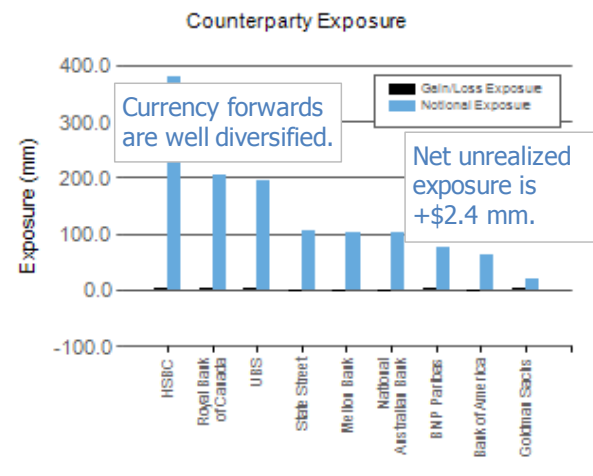
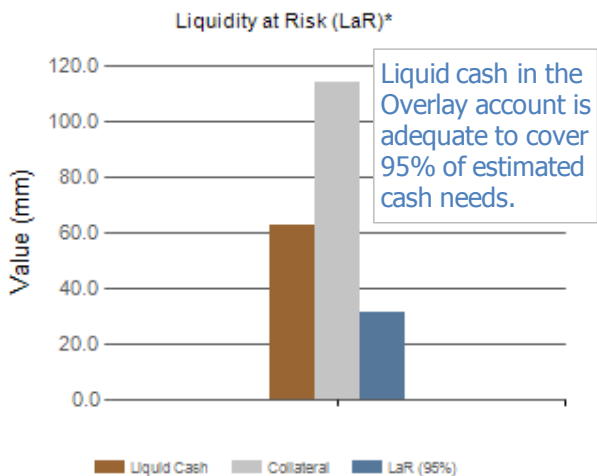
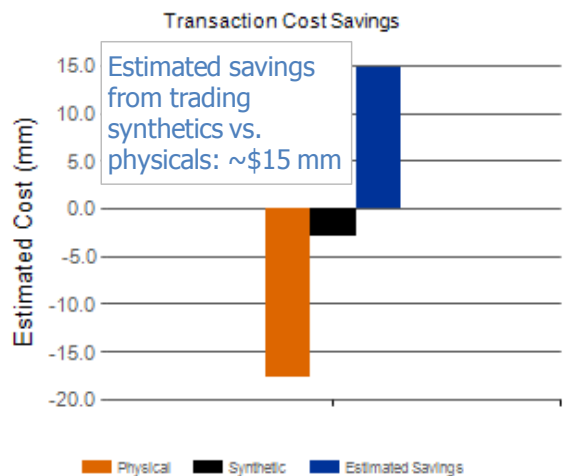
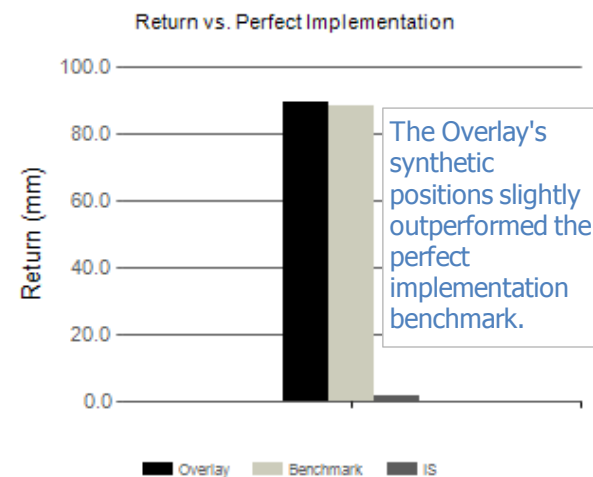
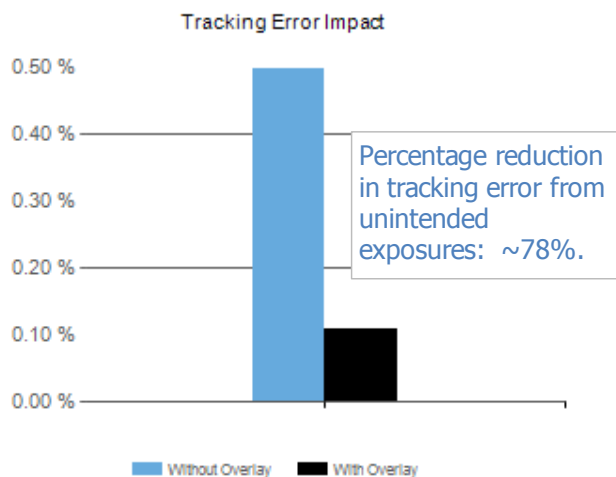
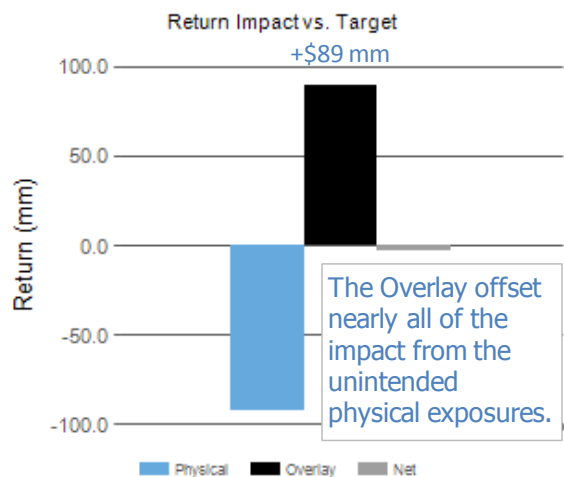
Controls provide reasonable assurance that the Russell portfolio exposure management process is monitored, transactions are authorized, and positions are settled accurately.

Controls specified by Russell	Results of tests	Management response
4.1 Market exposure from derivative positions held by Russell portfolios is monitored daily against cash balances held in the liquidity reserve account and with investment managers. Suggested derivative positions are reviewed by the trading team and adjusted to reflect updated cash balances.	For 3 of the 45 Russell portfolio monitoring selections, the custodial information being used by the analyst in the determination of the cash balance was inaccurate during the period October 1, 2014 to May 19, 2015.	Management agrees the initial cash balances were not accurate. Management identified this issue in May 2015 and promptly corrected the issue. Management determined the issue did not negatively impact the funds. Management has revised the cash balance mapping process to ensure cash balances are properly calculated.

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Sample Quarterly  
Performance Report

# Overlay Highlights - Client XYZ

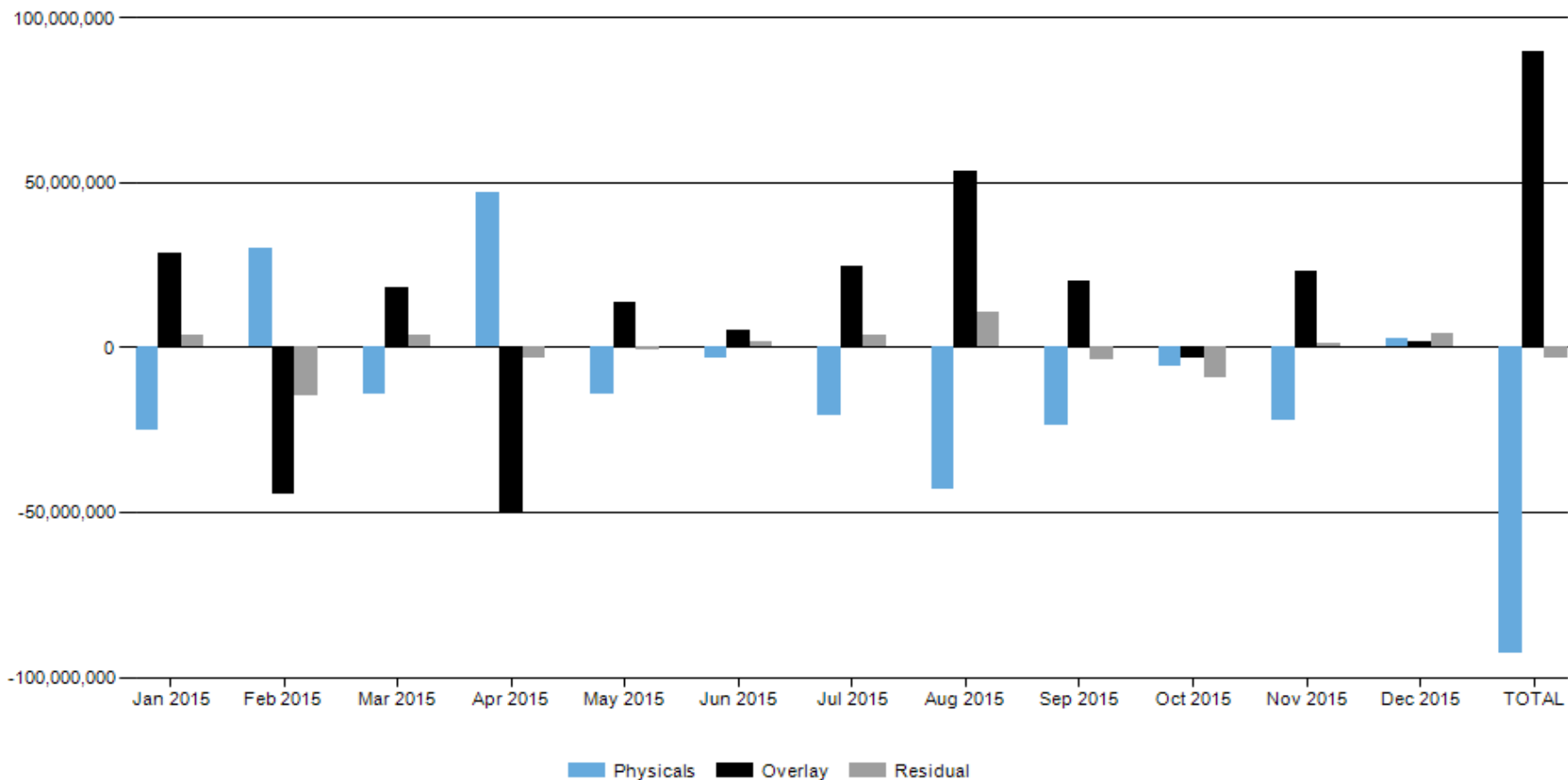


\*Assumes 3 day returns

For illustrative purposes only. Data is historical and not an indication of future performance.

# Return Impact vs. Physical Portfolio

Monthly Gain/Loss

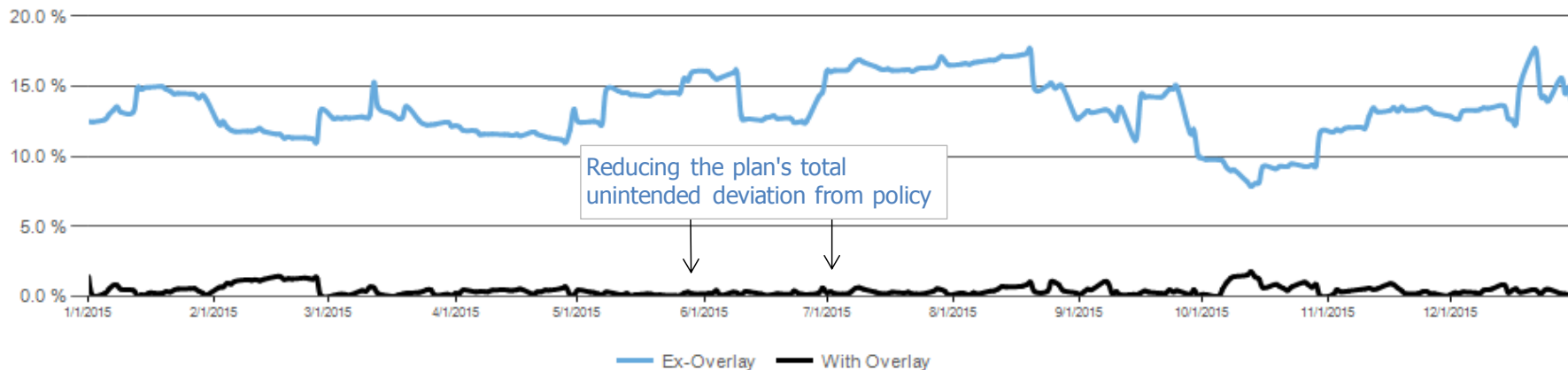


For illustrative purposes only. Data is historical and not an indication of future performance.

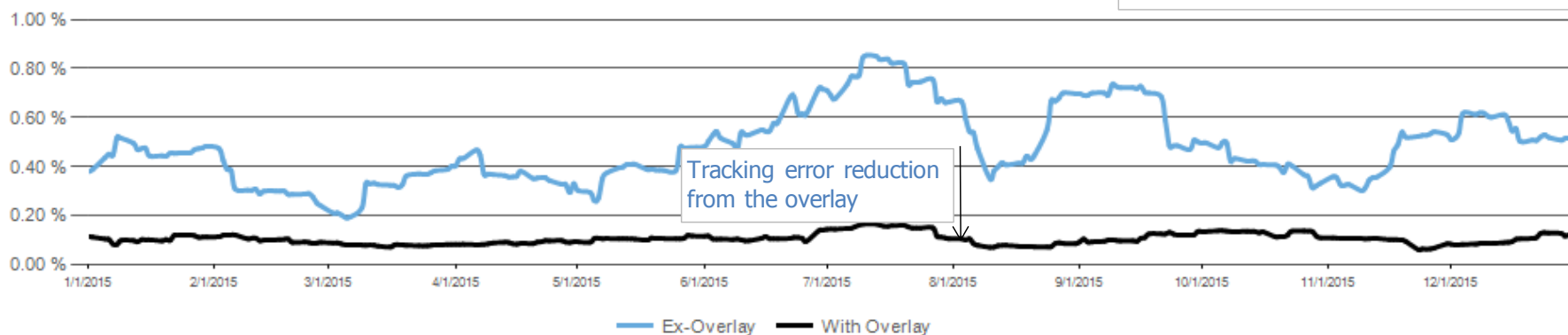


# Total Fund Risk Management

Daily Absolute Deviation



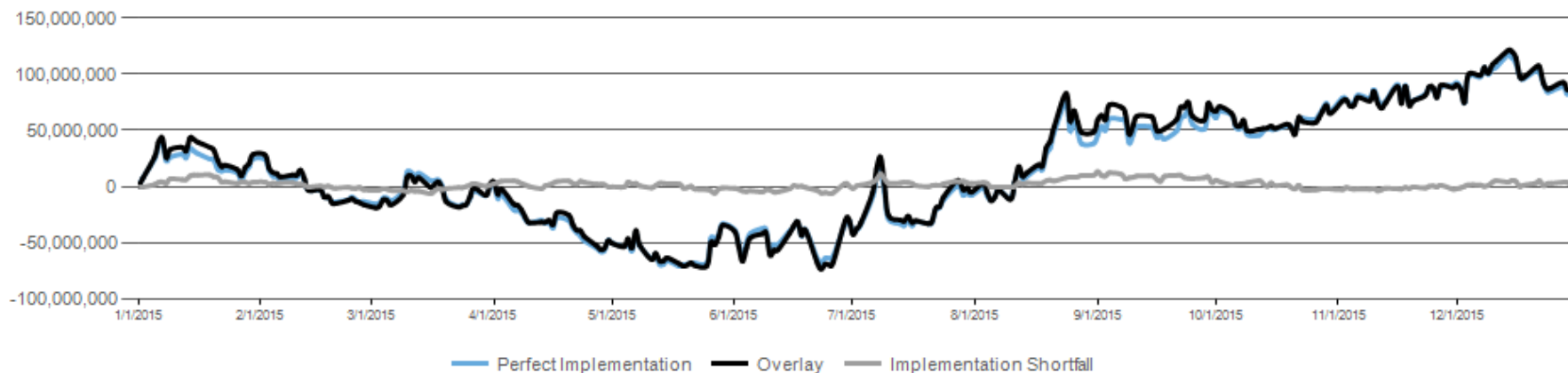
Rolling 20-Day Tracking Error



For illustrative purposes only. Data is historical and not an indication of future performance.

# Implementation Efficiency

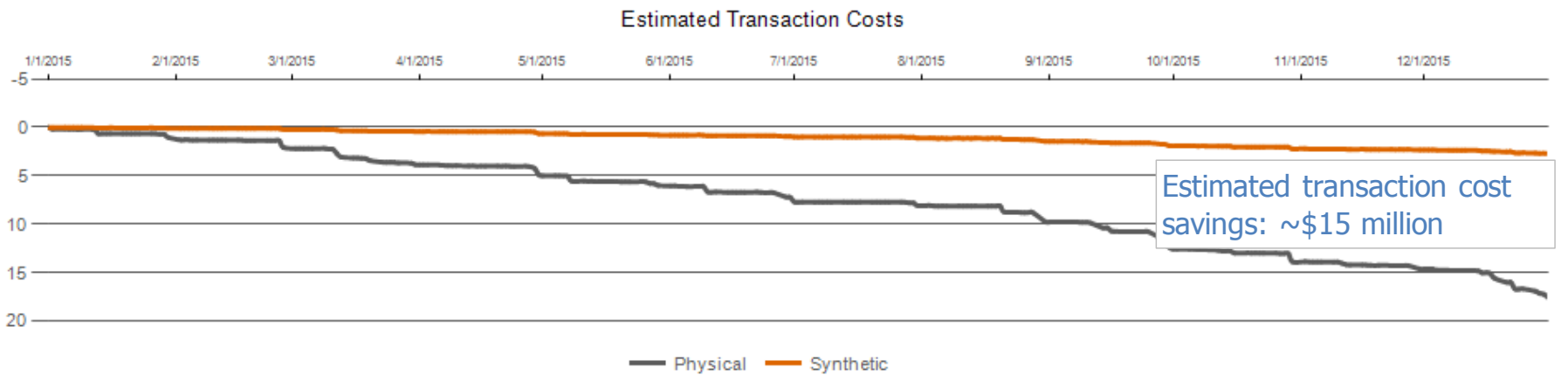
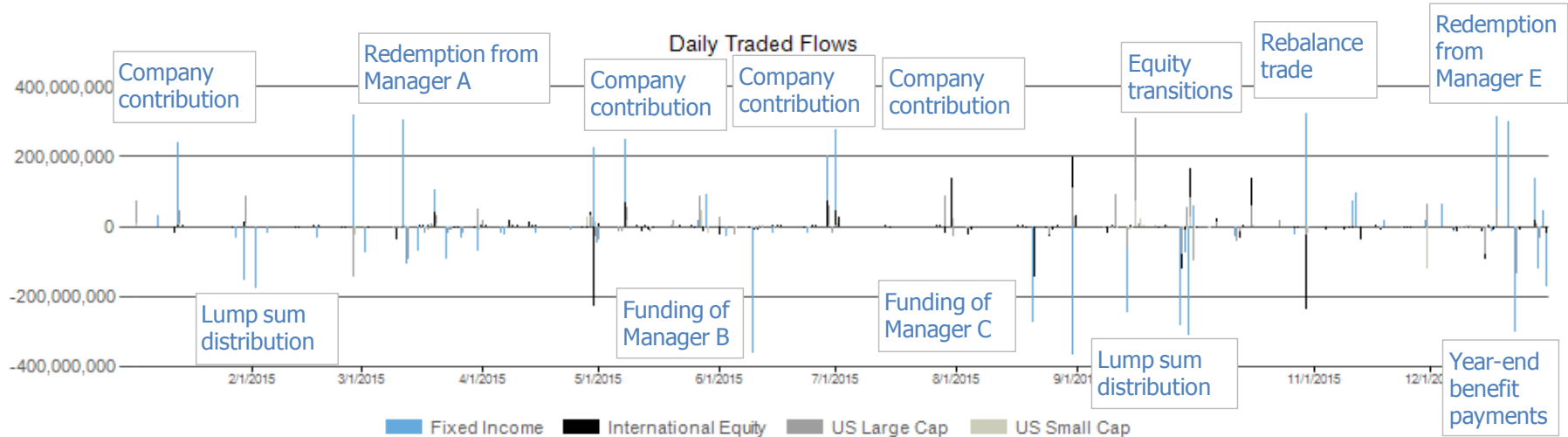
## Running Performance vs. Perfect Implementation



During the year, the Overlay's synthetic positions tracked very closely to the perfect implementation benchmark, ending the year in slightly positive territory. The long position in US Treasury futures was the primary contributor to this year's outperformance relative to the benchmark.

For illustrative purposes only. Data is historical and not an indication of future performance.

# Transaction Cost Savings

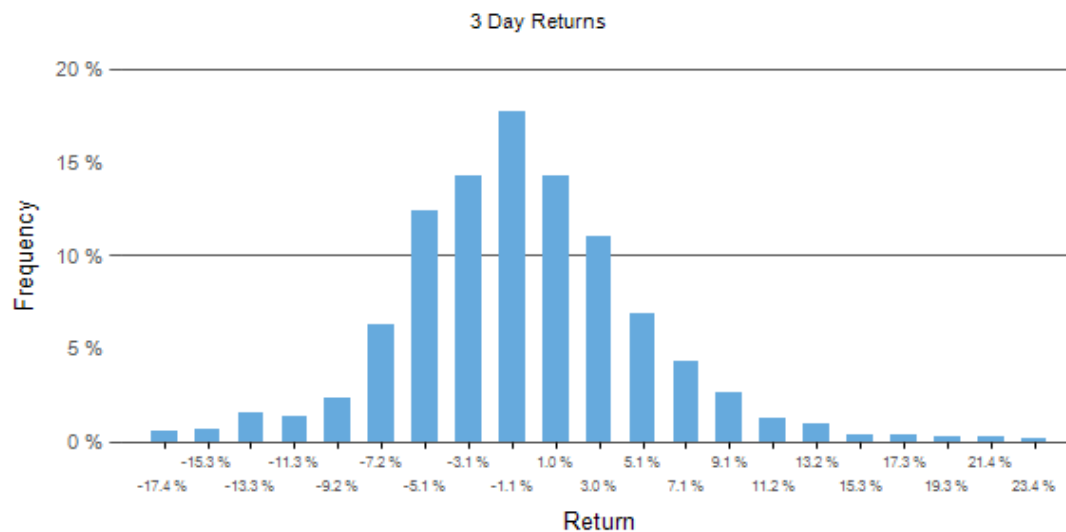


For illustrative purposes only. Data is historical and not an indication of future performance.

# Liquidity at Risk

Account Cash	
Margin Cash	179,222,582
Security Collateral	0
Cash Collateral	104,961,182
Unrealized G/L	2,419,565
Liquid Cash	71,841,836

Drawdown Analysis	
Liquidity at Risk	31,309,694
Max Drawdown	57,967,697
Times Below 0	0



Asset Class	Notional	Volatility	LaR
Fixed Income	1,110,430,651	3.65%	7,287,164
International Equity	-1,258,276,998	16.27%	36,853,628
US Large Cap	500,403,090	14.76%	13,292,148
US Small Cap	-19,129,250	18.41%	634,057
<b>Total:</b>	<b>2,888,239,990</b>		

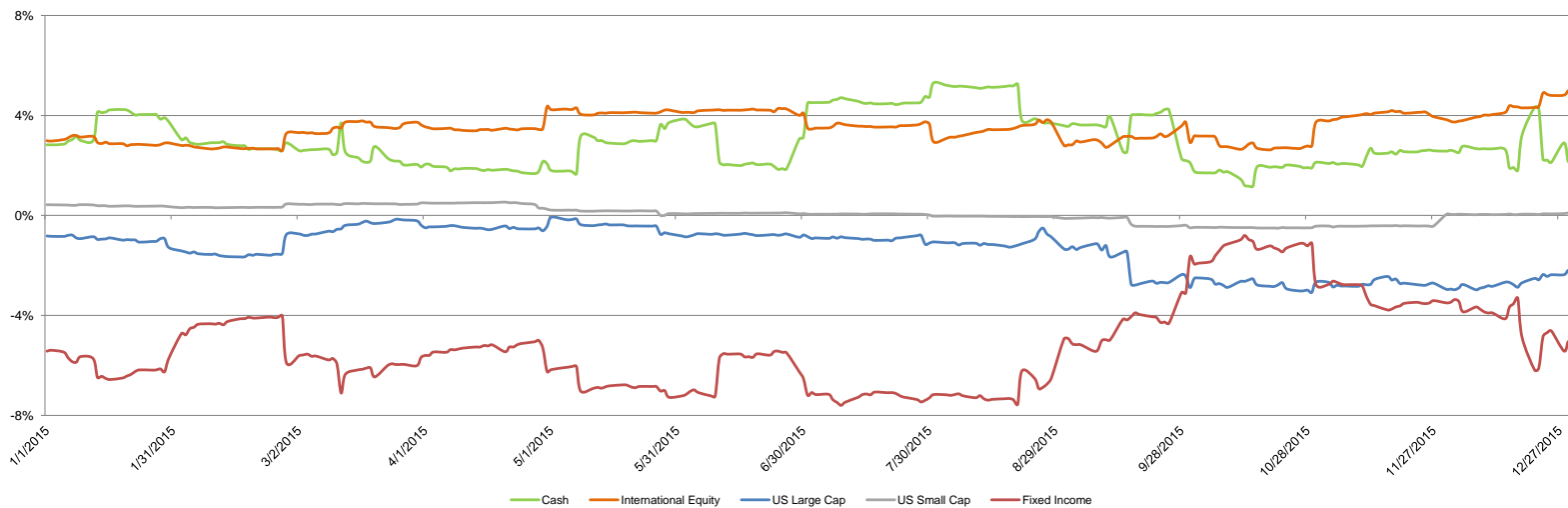
Security Type	Notional	Volatility	LaR
Futures	2,888,239,990	5.27%	27,384,923
Currency	1,160,208,365	5.76%	12,036,255
<b>Total:</b>	<b>4,048,448,355</b>		

For illustrative purposes only. Data is historical and not an indication of future performance.

# Total Fund Risk Management

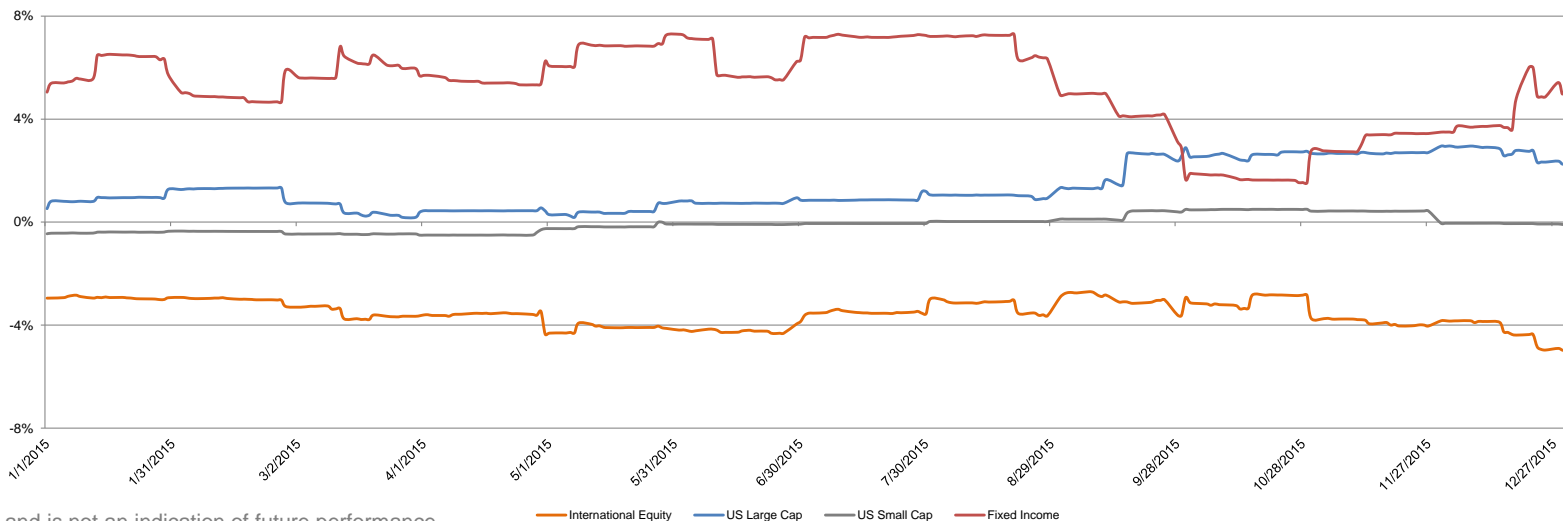
Unintended Exposures

Daily Physical % vs. Target



Russell Investments Offset

Daily Notional Exposure Percentage

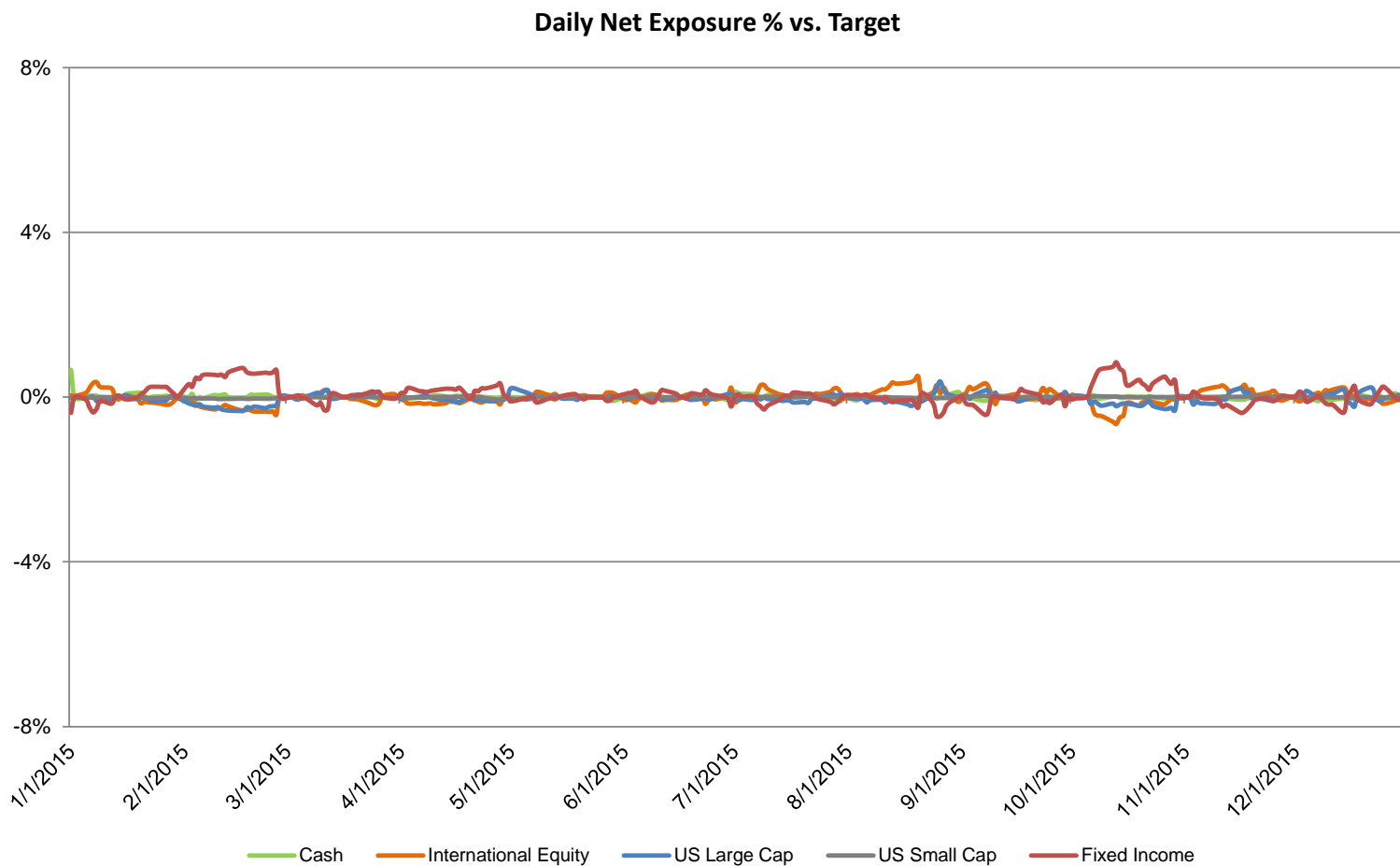


Data is historical and is not an indication of future performance.

International Equity US Large Cap US Small Cap Fixed Income

# Total Fund Risk Management

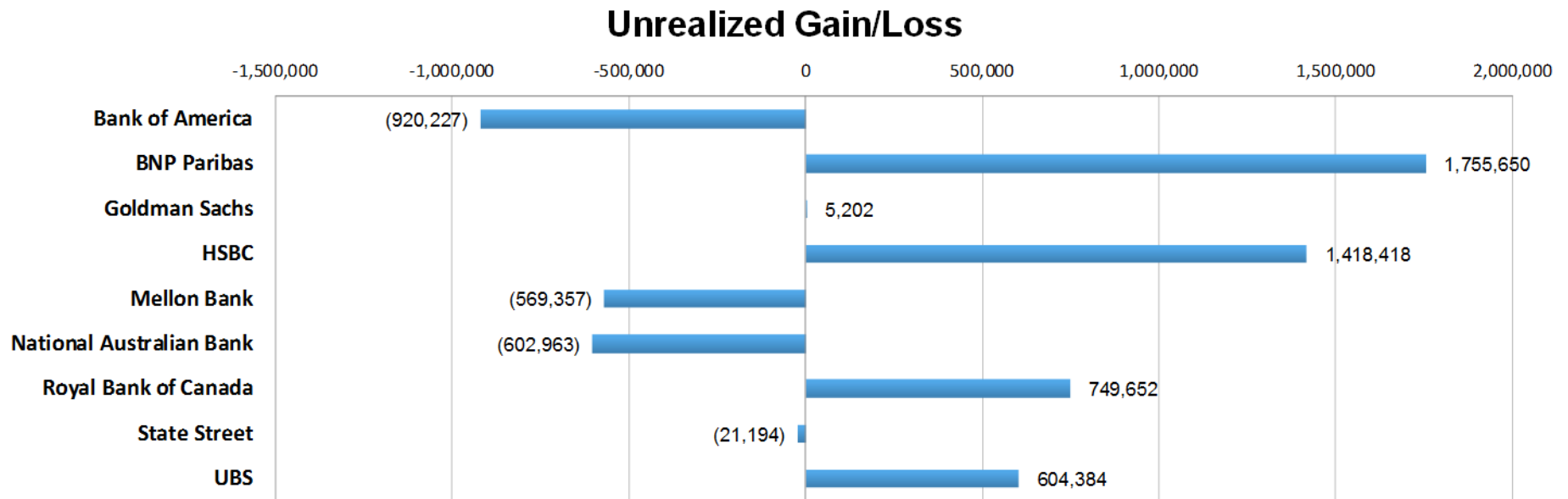
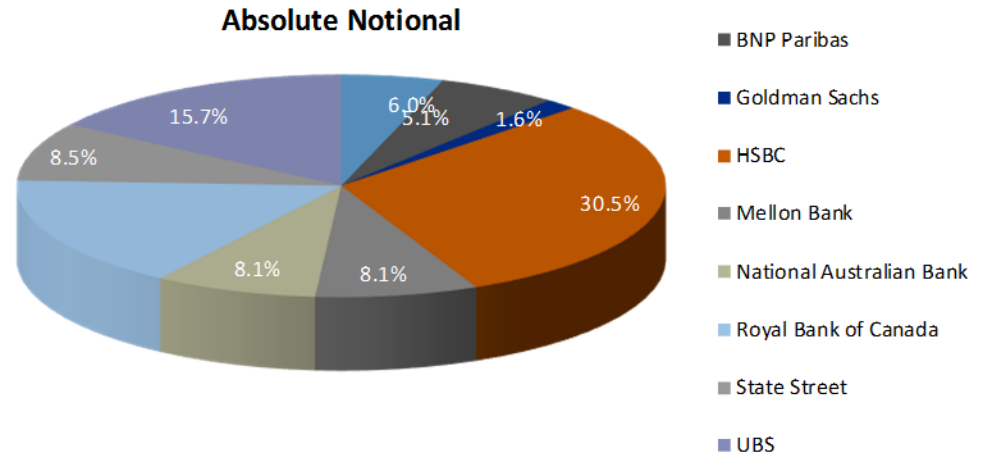
= Net Unintended Exposures



Data is historical and is not an indication of future performance.

# Counterparty exposure – Client XYZ

Counterparty	Absolute Notional	Unrealized Gain/Loss
Bank of America	63,234,939	(920,227)
BNP Paribas	74,367,098	1,755,650
Goldman Sachs	19,895,066	5,202
HSBC	379,205,023	1,418,418
Mellon Bank	100,808,999	(569,357)
National Australian Bank	100,775,394	(602,963)
Royal Bank of Canada	203,353,440	749,652
State Street	105,841,639	(21,194)
UBS	195,498,666	604,384
<b>Total</b>	<b>1,242,980,263</b>	<b>2,419,565</b>



For illustrative purposes only.

# Sample Asset Summary



# Asset Summary

<u>Asset Class</u>	<u>Physical Exposure</u>		<u>Synthetic Exposure</u>		<u>Net Position</u>		<u>Overlay Target</u>		<u>Policy Target</u>	
<b>Total Market Value</b>	<b>24,683.6</b>	<b>100.0%</b>	<b>0.0</b>	<b>0.0%</b>	<b>24,683.6</b>	<b>100.0%</b>	<b>24,683.6</b>	<b>100.0%</b>	<b>24,683.6</b>	<b>100.00%</b>
<b>Cash</b>	<b>370.8</b>	<b>1.5%</b>	<b>-333.4</b>	<b>-1.4%</b>	<b>37.4</b>	<b>0.2%</b>	<b>9.3</b>	<b>0.0%</b>	<b>0.0</b>	<b>0.00%</b>
Cash	370.8	1.5%	-333.4	-1.4%	37.4	0.2%	9.3	0.0%	0.0	0.00%
<b>Equity</b>	<b>9,874.6</b>	<b>40.0%</b>	<b>-777.0</b>	<b>-3.1%</b>	<b>9,097.6</b>	<b>36.9%</b>	<b>9,129.5</b>	<b>37.0%</b>	<b>9,132.9</b>	<b>37.00%</b>
International Equity	5,694.3	23.1%	-1,258.3	-5.1%	4,436.1	18.0%	4,441.4	18.0%	4,443.1	18.00%
US Large Cap	3,693.6	15.0%	500.4	2.0%	4,194.0	17.0%	4,219.3	17.1%	4,220.9	17.10%
US Small Cap	486.6	2.0%	-19.1	-0.1%	467.5	1.9%	468.8	1.9%	469.0	1.90%
<b>Fixed</b>	<b>14,438.3</b>	<b>58.5%</b>	<b>1,110.4</b>	<b>4.5%</b>	<b>15,548.7</b>	<b>63.0%</b>	<b>15,544.8</b>	<b>63.0%</b>	<b>15,550.7</b>	<b>63.00%</b>
Fixed Income	14,438.3	58.5%	1,110.4	4.5%	15,548.7	63.0%	15,544.8	63.0%	15,550.7	63.00%

### Deviations from Target Allocation



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