



An Executive Summary for Employees' Retirement System of Rhode Island

Thank you for the opportunity to present Northern Trust's capabilities as The State of Rhode Island Office of the General Treasurer on behalf of the Employees' Retirement System of Rhode Island (ERSRI) evaluates providers for master custody services. We are excited to have the opportunity to be of service to ERSRI and believe that our RFP response illustrates the reasons Northern Trust is your ideal asset servicing partner.

The pages that follow highlight the key elements of our service proposition, focusing on the ways our proposed approach addresses your needs and challenges as you have described them. We focus on those areas of our proposal that are most in-line with ERSRI's stated requirements and those that will add the most value to your day-to-day operations. For example, we summarize our commitment to ERSRI by:

- Confirming The Northern Trust Company's registration as a foreign corporation in the State of Rhode Island
- Positioning **Harland Abraham**, as your designated Client Executive. As a Vice President at Northern Trust, Harland is strategically located in the East Coast as a full-time employee to assure regional immediacy to all your service needs
- Creating a service team that supports Harland and is focused on the needs of ERSRI by meeting its local time of operation
- Supporting a 20-MINUTE response time to inquiries
- Providing GASB 40, 53 and evolving regulatory support to the accounting needs of ERSRI
- Offering a fee structure that enhances cost efficiency to ERSRI, while optimizing all of its service needs, inclusive of custody, technology-based reporting, risk performance, cash management sweep, and all ancillaries

About Northern Trust

With more than 1,828 clients in approximately 40 countries worldwide, Northern Trust is one of the world's premier asset servicers. We have provided trust and custody services since our founding in 1889. Ever since, Northern Trust has helped define the direction of the master custody business, leading the industry in the development of value-added products and services such as risk management tools, performance measurement, regulatory reporting, compliance monitoring solutions, and online reporting. We continue to invest in the systems and services that will expand our abilities, exceed our clients' expectations, and differentiate our firm by positioning us as a best-in-class provider to public funds.

Our Solution for Employees' Retirement System of Rhode Island

We service approximately 30% of the Top 100 U.S. Public Funds and therefore understand the cultural, regulatory and economic pressures you face. This experience lends itself to a productive partnership. Additionally, our core competencies consistently evolve to exceed your stated needs and goals:

- **Industry Expertise:** Your relationship will be managed by a team detailed within our proposal. The team works exclusively with public funds, bringing experience in addressing the opportunities and challenges you face. This team understands the market environment from *your* perspective, is able to provide consultative support and advice, to become an integral part of ERSRI.
- **Support for sophisticated strategies and assets:** As ERSRI diversifies its investment strategy, Northern Trust is able to provide automation and transparency for the full range of available investments. For example:



- ◆ We have a dedicated team of experts to support the processing of subscriptions and redemptions into hedge funds and private equity partnerships, as well as intra-statement roll-forward reporting to provide the most accurate available values for your investments.
- ◆ We have extensive reporting and tracking capabilities for private equity investments, including a new capital call forecasting tool to help support liquidity management.
- ◆ We provide highly-automated trade capture, processing, and counterparty reconciliation for a broad range of OTC derivative instruments.
- ◆ Our Hedge Fund Monitor[®] tool provides an online portal for electronic delivery of subscription and redemption requests, liquidity management tools, and intra-statement performance reporting.

To support ERSRI's needs with these investments, our proposal includes capabilities that help bring automation and clarity to investments that have long been highly-manual and opaque.

- **Industry-Leading Risk Management and Analytics Services (IRAS):** As a prudent, conservatively-run organization, we have developed considerable expertise in the analysis and management of risk – a track record that has served us and our clients very well. We leverage this experience by delivering to our clients some of the most advanced risk and analytics services available. ERSRI will be assigned a consultant from our IRAS Group who will design and deliver a comprehensive performance and risk reporting package tailored to your needs, including benchmarking performance reports against a substantial universe of peer public funds. These services will help you more effectively manage risk and make confident, informed investment decisions.
- **Comprehensive compliance monitoring solutions:** Investments must generate returns, but for ERSRI they must also be in line with your organizational strategy and your cultural values. Northern Trust provides extensive compliance monitoring solutions, including concentration and Socially Responsible Investing (SRI) reports to track against restrictions. Our ComplianceRADAR[®] application offers tools that help you review and resolve guideline breaches through our Passport[®] Web portal. Together, ERSRI benefits from a comprehensive, intuitive, and accessible solution for monitoring investment strategies.
- **Support for Regulatory Reporting:** We provide our public fund clients with access to accounting expertise and a suite of tools to help them fulfil regulatory reporting obligations accurately and with minimal disruption. ERSRI will benefit from reporting packages and data analysis tools to facilitate reporting for FASB, GASB, Department of Labor, and any other regulatory reporting required. As these requirements change in response to the global economic crisis of the past 18 months, our product and accounting experts are looking ahead to public funds' future needs, and are positioned to develop new solutions and keep ERSRI ahead of the curve.
- **Sophisticated Accounting and Data Integration:** Northern Trust has extensive experience in accounting for multi-manager defined benefit plans like ERSRI's. Our public funds accounting experts can create custom reporting solutions, and our technology specialists are able to create custom data feeds for easy integration into general ledgers or other systems. Our proposal to ERSRI offers both the flexibility and the control you need to effectively manage your assets.
- **Transparency and risk tools:** We know that transparency is essential for ERSRI, and having a clear picture of total plan risk is more crucial than ever. Northern Trust brings the tools and the expertise to deliver that clarity. Our Fund Peek Through application provides detailed information on the underlying risk in commingled fund holdings. Similarly, Burgiss Group's Private i[®] software allows clients to track performance, cash flows, and transactional information on alternative investments such as private equity and real estate funds.



Why Northern Trust?

We know that selecting an asset servicing partner is an important decision – the strengths described above are a significant part of why Northern Trust is positioned to be a valuable, long-term partner to ERSRI. However, we also know that through this process, the services, capabilities, and claims made by the major custodian banks can begin to look similar, making it hard to identify the best fit for your organization. At Northern Trust, we feel strongly that it is not only what we do but *how we do it* that sets us apart from our competitors.

To that end, we ask that you keep in mind the following key differentiators of Northern Trust during your selection process. While other custodian banks share one or more of these qualities, we feel that it is the *combination* of all of these characteristics that truly differentiates Northern Trust, and makes us the best strategic fit for ERSRI:

Business Focus

Where many providers count trust and custody services as a small subset of a much larger business portfolio, at Northern Trust, custody *is our flagship business* – 75% of our revenues come from non-interest fees relating to trust and custody services.

- Trust and custody clients are at the center of our business model, and they receive personalized service, attention, and commitment from all levels of our organization.
- Particularly in the current economic turmoil, Northern Trust is able to better serve our clients because we have not been burdened by problematic businesses such as asset-backed commercial paper, subprime mortgages, investment banking, or credit cards.

Superior Client Service Model

Our services are strategically designed, top-to-bottom, to meet the trust and custody needs of our institutional clients. With over 120 years of serving institutions, we have built a service model that is at once substantial and flexible:

- You are assigned an experienced **Client Executive, Harland Abraham**, to provide strategic support and an **Account Manager, Mary Ellen Bykowski**, to manage the effective execution of the partnership on a day-to-day basis.
- Client service teams are customized with staff who have the most relevant experience, reflecting our commitment to helping you do your work more efficiently. Rather than building a “one size fits all” operational model for our own efficiency and ease, we customize our services around how clients do their work.
- Northern Trust’s senior managers participate directly in client relations, providing executive sponsorship and making themselves available to ERSRI as both a point of escalation and as consultative partners.

Our commitment to our clients finds its roots in our heritage as a personal fiduciary. From this foundation, we have developed a culture of partnership that challenges us – individually and as a whole – to set high standards, stand behind our work, and always act in our clients’ best interests. While “high touch” client service is a benefit often cited by financial services organizations, we encourage ERSRI to speak with our references as testament to how Northern Trust’s client service approach stands apart in the industry.

Technological Leadership

Northern Trust commits significant resources – nearly \$2.0 billion over the next three years – to upgrading and enhancing our systems technology, proactively identifying industry trends and emerging client needs so that our clients stay ahead of the curve. We are currently the only custodian that offers clients a single, global operating platform for all trust and custody services worldwide. As the pace and complexity of change in the market accelerates, this significant differentiator offers measurable benefits:



- Speed to market with service improvements and processing capabilities
- Best-in-class solutions for derivatives, private equity, real estate, and other complex assets
- Full data and systems integration across all services, reducing both turnaround times and the potential for errors stemming from multiple internal reconciliations
- Consistently high STP levels for a broad range of assets worldwide
- Global, 24-hour support for trading from Northern Trust's offices around the world
- Open system architecture is flexible, allowing for customized data feeds to client and third party systems.

We have the technical capabilities to meet and exceed ERSRI's requirements, and are positioned to adapt our services as your needs evolve over time.

Financial Strength and Stability

Hewing to a conservative and prudent business approach that has served us well for 120 years, Northern Trust has remained strong and stable throughout the current economic turmoil, posting solid earnings in 2009 despite significant economic headwinds, while maintaining one of the strongest balance sheets in the industry.

- As of 12/31/2011 our Tier I capital ratio of 12.5% was more than twice the "well capitalized" guideline of 6%.
- As of December 6, 2011, Northern Trust is one of only four U.S based banks to carry S&P's AA- rating at the bank level and A+ at the holding company level. Northern Trust carries the highest credit ratings assigned by S&P to U.S. banks under its current rating methodology. In addition, Northern Trust is the only U.S. based bank in the AA- category that carries a "stable" outlook from S&P.
- Northern Trust continues to maintain a relatively strong P/E ratio, however, of 13.5 as of 12/31/2011, or a 53% premium to the average P/E ratio of the 20 largest U.S. banks.

This strength speaks to our ability to protect ERSRI's assets while sustaining investment in the services we offer.

Cultural Synergy and Shared Values with Public Funds

Civil servants play a crucial role in our society, and Northern Trust respects greatly the contributions ERSRI's participants make to the community. The importance of service and community involvement is a value Northern Trust has held since the earliest days of our company – as illustrated by our long-standing track record of monetary and voluntary contributions to the communities we serve. In our view, this shared emphasis on community service is a key driver behind our historical success with public fund clients – shared philosophies improve dramatically our ability to work in effective partnership with one another.

Conclusion: It's About You

Client satisfaction: meeting obligations, exceeding expectations, and delivering real value every day. These core principles are what drive our relationships with organizations like ERSRI and we know them to be the major reasons we have been successful in this business. We know that it's about you and your goals.

We welcome the opportunity to further detail any aspect of our proposal. We look forward to our potential partnership and stand prepared to work with you as you make this important strategic decision.

THE FREEDOM TO FOCUS ON WHAT REALLY MATTERS



NORTHERN TRUST'S RESPONSE TO THE
REQUEST FOR PROPOSAL

FOR

State of Rhode Island
Office of the General Treasurer on behalf of
Employees Retirement System of Rhode Island (ERSRI)

April 10, 2012



Contact Details

Sales Manager	Gwyn E. Koepke
Company Address	The Northern Trust Company 50 South LaSalle Street Chicago, IL 60603
Work Phone	312-557-7331
Cell Phone	312-714-7705
E-mail	gwyn.koepke@ntrs.com
Web Address	www.northerntrust.com

Table of Contents

Proposal

I.	Transmittal Letter.....	1
II.	Business References.....	2
III.	Required Financial Information.....	3
IV.	Conflict Of Interest.....	4
V.	Client Satisfaction Study:.....	5
VI.	Legal Requirements.....	6
VII.	Indemnification.....	7
VIII.	Organizational Structure.....	8
IX.	Custody Relationships.....	17
X.	Professional Staff And Client Relations.....	22
XI.	Audit Control.....	28
XII.	Custody Of Assets.....	34
XIII.	Cash Management.....	53
XIV.	Transaction Services.....	58
XV.	Portfolio Accounting.....	70
XVI.	Reporting.....	80
XVII.	Benefit Payments.....	85
XVIII.	System Capabilities.....	94
XIX.	Transition / Conversion Process.....	103
XX.	Fees.....	108

Supplemental Information

In response to the items discussed in the Questions and Response document received on April 2, 2012.

Fees

Fee Schedule

Exhibits

2011 Annual Report.....	1
Northern Trust Company Call Reports.....	2
2011 10K Report.....	3
Northern Trust Corporate Biographies.....	4
SAS70 Report – September 30, 2009.....	5
SAS70 Report – September 30, 2010.....	6
SOC 1 Report – September 30, 2011.....	7
Northern Trust Insurance Certificate.....	8
Subcustodian Depositories.....	9
Listing of Subcustodians.....	10
STIF and Govt STIF White Pages.....	11
Preferred Pricing Sources and Price Types.....	12
Portfolio Statement Report Guide.....	13
Sample Benefit Payment Reports.....	14
Business Continuity and Disaster Recovery Brochure.....	15
Sample Transition Task Schedule.....	16





Northern Trust's Response to the Request for Proposal for State of Rhode Island Office of the General Treasurer on behalf of the Employees Retirement System of Rhode Island (ERSRI)

SUBMISSIONS BY PROPOSER

Please submit the following documentation and answer all questions included herein:

I. TRANSMITTAL LETTER

Proposer must submit a transmittal letter, including the main contact and his or her information for the purposes of this RFP, location and contact information of the Firm and all subcontractors;

April 6, 2012

Office of the General Treasurer
Attn: Vincent T. Izzo, Cash Manager
50 Service Avenue, 2nd Floor
Warwick, Rhode Island 02886

Dear Mr. Izzo:

On behalf of Northern Trust, I am delighted to submit our response to the Request for Proposal for Master Custody Services for the State of Rhode Island Office of the General Treasurer on behalf of the Employees Retirement System of Rhode Island (ERSRI). Our response is based upon our knowledge of the current account structure and asset composition.

We believe firmly that this is an ideal time for Northern Trust and ERSRI to embark on a long-term and mutually beneficial relationship related to custody services. You want customized solutions to meet your unique needs and a partner that serves its clients with the utmost integrity and offers the brightest ideas to help you innovate and create efficiencies. We welcome the opportunity to meet and discuss our proposal and demonstrate our technology in greater detail with you.

Finally, as the person authorized to represent and bind Northern Trust regarding all matters and commitments made in our proposal, I ask that you contact me with any questions or clarifications.

Gwyn E. Koepke
Vice President – Corporate & Institutional Services
The Northern Trust Company
50 South LaSalle Street, Chicago, Illinois 60603
Work: (312) 557-7331
Cell: (312) 714-7705
gwyn.koepke@ntrs.com

We are excited at the prospect of becoming your custodian bank and the entire team looks forward to working with you as your custody due diligence process progresses.

Sincerely,

Gwyn E. Koepke



II. BUSINESS REFERENCES

Please see section IX 3. for reference requirements.

Please see Section IX. CUSTODY RELATIONSHIPS Questions 4 and 5 for the requested reference requirements.



III. REQUIRED FINANCIAL INFORMATION

Proposers must submit one copy of their annual report and financial statements for the last three years. If the Proposer is a bank, a copy of the last four (4) call reports must also be submitted with the proposal. When filed, one copy of the most recent SEC 10K report must also be submitted. Please describe any recent material changes subsequent to the annual report.

Please refer to Exhibit 1 for a copy of our 2011 Annual Report. Please note that our Annual Report includes the last three years of financial statements, for your reference.

Exhibit 2 provides a copy of the most recent four (4) call reports for The Northern Trust Company.

For a copy of our most recent 10K Report, please refer to Exhibit 3.



IV. CONFLICT OF INTEREST

The Proposer must certify in writing to the procuring agency that no relationship exists between the vendor and the procuring or contracting agency that interferes with fair competition or is a conflict of interest. No official or employee of the State who exercises any functions or responsibilities in the review or approval of the undertaking or carrying out of this project shall, prior to the completion, voluntarily acquire any personal interest in this proposed contract.

Northern Trust hereby certifies, to the best of its knowledge and belief, that no relationship exists between the itself and the State of Rhode Island, Office of the General Treasurer, that interferes with fair competition or is a conflict of interest.



V. CLIENT SATISFACTION STUDY:

Proposers shall submit a copy of the results from most recent Client Satisfaction Study for master custody clients.

Through facilitation by an independent, external consultant – **Chatham Partners** – Northern Trust periodically conducts a formal Client Satisfaction Survey. We use the survey to assess client satisfaction, identify and prioritize emerging service requirements, identify trends and issues that impact product or relationship development, and evaluate our position versus our competitors.

The feedback from this survey forms a critical part of our efforts to continuously improve the client experience, and also to assist us in our client retention activities.

Full results of our survey remain confidential, however, we can share that our most recent results were obtained from 528 of our **Corporate and Institutional Services (C&IS)** clients via an online survey followed by e-mail and phone interviews. From those responses, we have derived the following results depicted in the table below.

Overall Satisfaction in C&IS	89%
Would Rehire Northern Trust	90%
Expectations Met/Exceeded	94%

Using Chatham’s proprietary benchmark, Northern Trust surpasses its peers in 7 out of 13 key attributes. Positive differentials are most pronounced for Benefit Payments, Fees, Cash Management, and Lead Relationship Manager.

We have included below a few quotes from our clients’ survey responses:

- *“Northern Trust has spoiled me. Even through team transitions I have had notable service.”*
- *“[Our Relationship Manager] is great, and one of the reasons we chose Northern when we switched custodians.”*
- *“I always feel like I’m a very important and valued customer.”*

We are pleased with these results because they underscore our unwavering commitment to our clients.



VI. LEGAL REQUIREMENTS

- 1. **The Proposer must submit certification that the Firm has not been in bankruptcy and/or receivership within the last five (5) calendar years, nor that said event(s) are reasonably foreseeable at this time.**

Certification

I, Gwyn E. Koepke, a Vice President of The Northern Trust Company, do hereby certify that The Northern Trust Company has not been in bankruptcy/or receivership in the last five calendar years.

Gwyn E. Koepke
Vice President

- 2. **If incorporated, identification of the Proposer's state of incorporation and a statement that the Proposer is in good standing in that state, and, if the incorporation is not in Rhode Island, a statement that the Proposer has complied with all filing requirements of the Rhode Island Secretary of State.**

The Northern Trust Company is incorporated in the State of Illinois and is in good standing in that state. The Northern Trust Company will perform all of its services outside the State of Rhode Island; however, we are in the process of filing as a foreign corporation with the State of Rhode Island and will have completed that filing before entering into any contract.

- 3. **The Proposer must submit a statement certifying that the proposer meets all applicable state and federal requirements, and has all the licenses and registrations necessary to perform the contract.**

Northern meets all state and federal requirements applicable to it as an Illinois corporation providing professional custodial services, including all required licenses and registrations necessary to perform such services.



VII. INDEMNIFICATION

The Proposer must submit written certification that they accept the provisions of the State's indemnification clause: The State follows a policy of reciprocal indemnification by the parties for negligence or willful misconduct and our contract language with the winning Proposer will reflect this policy. Additional information on indemnification state laws may be found at <http://www.rilin.state.ri.us/Statutes/TITLE9/9-31/INDEX.HTM>.

Northern agrees with the State's reciprocal indemnification requirements in that Northern will agree in the contract resulting from this RFP that it will indemnify the State for any losses or liabilities incurred by the State to the extent such losses or liabilities are the direct result of Northern's negligence or willful misconduct in the performance of its responsibilities set forth in such contract.



VIII. ORGANIZATIONAL STRUCTURE

1. The Proposer shall give a brief history of its organization including the following:

As of December 31, 2011, Northern Trust Corporation, a multi-bank holding company, had total corporate assets of \$100 billion, total assets under custody of \$4.3 trillion, and \$663 billion in assets under management. Its principal subsidiary, The Northern Trust Company, was founded in 1889 by Byron Smith and is the largest independently owned bank in Illinois.

We have provided trust and custody services since our founding. We began administering directed trust relationships in the 1950s and established our first master trust relationship in 1975. We began providing global custody services in 1981.

As a leader in the financial services industry today, we provide asset and fund administration, investment management, and information services to the following markets around the world:

- Government Entities
- Public Funds
- Insurance Companies
- Endowments
- Taft-Hartley Funds
- Large Corporations
- Investment Managers and Fund Sponsors
- Foundations
- Healthcare Systems
- Bank Trust Departments and Independent Trust Companies

We support our global custody clients from branch or subsidiary offices located in Abu Dhabi, Amsterdam, Bangalore, Beijing, Chicago, Dublin, Guernsey, Hong Kong, Jersey, Limerick, London, Luxembourg, Melbourne, New York, Singapore, Stockholm, Tokyo, and Toronto. Our primary regional asset servicing processing centers are located in Chicago, London, and Bangalore.

We provide a full range of services including:

- Settling trades and safekeeping assets in 102 global securities markets.
- Maximizing returns in foreign exchange in 73 currencies through dealing rooms in Chicago, London, and Singapore.
- Maximizing idle cash balances with cash investment and cash sweep capabilities in 19 currencies (including USD).
- Crediting income on payable date in 38 countries, enhancing cash management and reinvestment opportunities.
- Negotiating minimum tax withholding and timely reclamation.
- Notifying clients and processing corporate actions
- Providing proxy voting services in 48 markets.
- Accounting and reporting on a fully-integrated, multicurrency, trade-date basis through our online system Passport®.
- Reporting in both base and local currencies, customized to meet clients' specific reporting needs.
- Analyzing global performance and enabling clients to evaluate their performance continuously and automatically against major market indices and universes worldwide.

Northern Trust's worldwide asset servicing business meets the diverse needs of our clients through a powerful combination of service and technology. A unique blending of these two elements gives Northern Trust distinction among its peers and with our clients.



a. Year of organization

The Northern Trust Company has been operating for 123 years.

b. Year of initiation of the master custody business

Northern Trust has been providing trust and custody services since it was founded by Byron Smith in 1889.

With the passing of ERISA in 1974, we were among the first banks to enter the master custody business. Ever since, we have helped define the direction of the industry, developing value-added services such as risk management tools, performance measurement, online reporting, and other products geared toward helping our clients make informed decisions.

In 1981, we began providing global custody services, and established a global operations center in London in 1985 to support our expanding global client base. As we expanded our global footprint, Northern Trust was added to the S&P 500 in 1997, confirming our world-class financial stature.

c. Nature of Firm's ownership

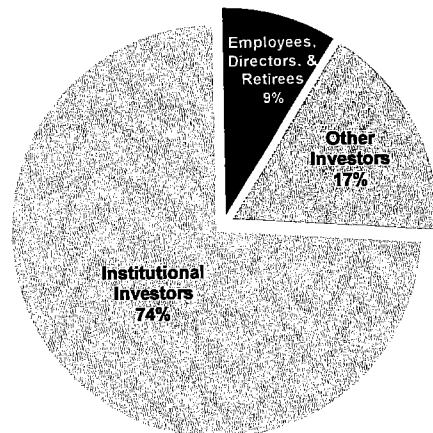
Northern Trust Corporation is a publicly listed company (NASDAQ: NTRS) incorporated in the State of Delaware. Its principal subsidiary, The Northern Trust Company, is a leading provider of asset management and asset servicing solutions for corporations, institutions, and affluent individuals.

Defined by financial strength and conservative business mix, Northern Trust has been independent throughout our history, and we have an ownership structure that is conducive to us remaining independent in the future.

As of September 30, 2011, our employees, directors, and retirees owned approximately 9% of the Northern Trust's common stock. A further 74% of common stock was held by institutional investors. Other investors accounted for 17% of common stock.

Approximately 63% of employees own Northern Trust stock. Our employees and directors are invested in the success of the business, and are motivated to serve our clients well and make the right decisions for the good of the company.

A graphical depiction of our stock ownership follows:



Note: The 'Other Investors' category includes primarily individual shareholders, either those who hold their Northern Trust shares in their own name, or those who hold their shares in "street name" with their brokerage firm.



d. Nature of relationships with affiliated companies or joint ventures

Northern Trust Corporation operates as a financial holding company and is a leading provider of asset management, administration, and servicing solutions for corporations, institutions, and affluent individuals.

The Northern Trust Company is the principal subsidiary of Northern Trust Corporation. Other subsidiaries and affiliations include banks, trust companies, and financial institutions located in 18 U.S. states and Washington D.C. and 16 countries in North America, Europe, the Middle East, and the Asia Pacific region. Further details on locations are below.

Northern Trust Corporation conducts business through various U.S. and non-U.S. entities, which may have additional underlying affiliates and/or subsidiaries. For example, Northern Trust Global Investments (NTGI) provides a broad range of investment management services and products. NTGI is comprised of various companies which provide an array of investment products and services, including, but not limited to: Northern Trust Investments, Inc. (NTI), Northern Trust Global Advisors, Inc. (NTGA), and Northern Trust Global Investments Limited (NTGIL).

NORTHERN TRUST ENTITIES

Listed below are various entities under which we operate:

- Northern Trust Corporation
- The Northern Trust Company, Chicago
- The Northern Trust Company, London Branch
- Northern Trust Global Investments Limited
- Northern Trust Global Services Limited
- Northern Trust (Guernsey) Limited
- Northern Trust Fiduciary Services (Guernsey) Limited
- Northern Trust Fiduciary Company (Guernsey) Limited
- Northern Trust International Fund Administration Services (Guernsey) Limited
- Northern Trust International Fund Administrators (Jersey) Limited
- Northern Trust Fiduciary Services (Jersey) Limited
- Northern Trust International Fund Administration Services (Ireland) Limited
- Northern Trust Fiduciary Services (Ireland)
- Northern Trust Global Services Limited, Netherlands Branch
- Northern Trust Global Services Limited, Luxembourg Branch
- Northern Trust Luxembourg Management Company S.A.
- Northern Trust Global Services Limited, Abu Dhabi Representative Office
- The Northern Trust Company, Canada Branch
- The Northern Trust Company, Melbourne
- The Northern Trust Company of Hong Kong Limited
- The Northern Trust Company, Singapore Branch
- The Northern Trust Company, Beijing Representative Office
- Northern Trust Global Investments Japan, K.K.
- Northern Trust Global Services Ltd (UK) Sweden Filial

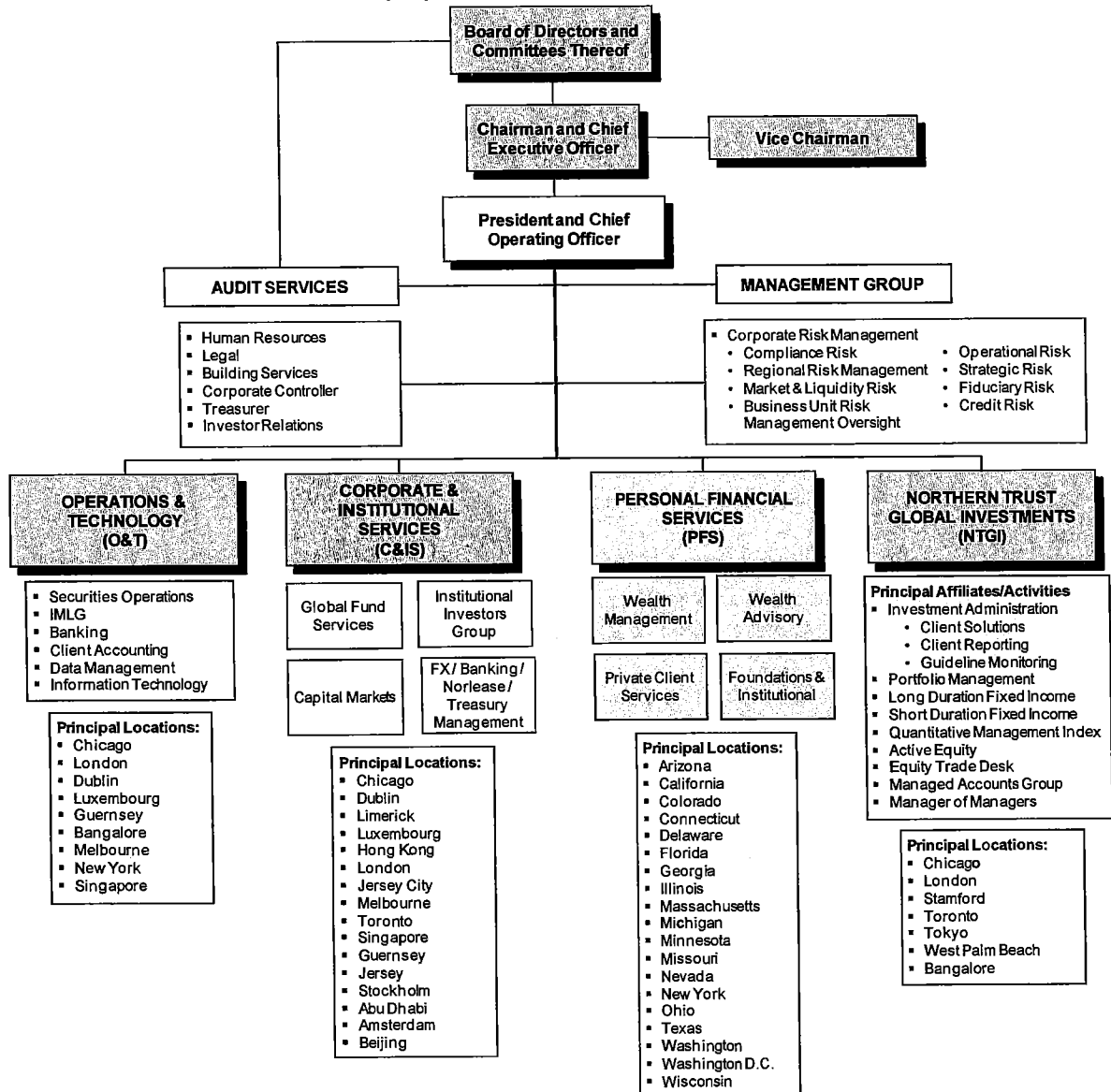


2. Describe the organizational structure of the bank and the master custody department. Provide an organization chart showing the operating relationships and authority within the master custody service unit and within the organization.

Northern Trust is composed of two core business segments. Our Corporate & Institutional Services (C&IS) business unit provides asset administration, investment management, and information services to corporations and institutions around the world. Our Personal Financial Services (PFS) business unit delivers trust, investment management, and banking services to high net worth individuals and families.

Both C&IS and PFS are supported by Operations & Technology (O&T) and Northern Trust Global Investments (NTGI). O&T provides the consistent and reliable global infrastructure necessary to support Northern Trust's global leadership position. NTGI is a global, multi-asset class investment manager serving institutions and individuals worldwide.

The below chart outlines the organizational structure of our Corporation, including how our trust/custody business fits into the overall structure of our company.





3. Describe your strategy, commitment and competitive advantages in providing master custody services. Discuss briefly your overall business objectives with respect to future growth and product research and development related to master custody.

BUSINESS STRATEGY

Over the next 5 years, Corporate and Institutional Services (C&IS) plans to grow in a strategic, controlled manner. Our strategy with regard to asset servicing and global custody is straightforward:

- **Be where our clients need us, when they need us.** Northern Trust has global operating hubs in Chicago, London, Singapore, and Bangalore. Supplemented by 14 additional worldwide offices, all Northern Trust locations are connected on a global technology platform that allows us to “pass the book” and provide 24x7 support around the world. We will continue to expand our international presence, capabilities, and client base to keep pace with globalization and client demand.
- **Leverage global expertise.** We maintain expert global staff as well as a top-tier subcustodian network which we continuously monitor and expand as needed to meet client demand. We draw on our employees’ and subcustodians’ local market expertise to drive the continued strengthening of our services. Finally, we aggregate and share this expertise with clients to help support informed investment decisions.
- **Maintain our position of industry leadership.** We have led the industry in developing value-added services such as risk management tools, compliance tools, performance measurement and online reporting. Our continued success requires we keep investing in technology and services that free our clients from administrative burdens and help them to focus on their core strategies.
- **Execute plans for strategic growth.** We are deliberate in our growth strategy, balancing our expansion plans with a commitment to sustaining client service. Our clients appreciate this approach, as they derive additional benefits from added capability and scale while still receiving high-touch service.
- **Remember all our stakeholders.** Clients are our first priority, but supporting our clients requires that we also support shareholders by generating strong, stable returns, as well as foster our employee base by providing them a positive work environment, competitive benefits, and opportunities for personal and professional growth.

COMMITMENT TO PROVIDING MASTER CUSTODY SERVICES

Asset servicing is Northern Trust’s flagship business, and the focal point of both our business model and our growth strategy. As an illustration of our commitment to the business we submit the following:

- In 4Q11, we derived 70.9% of our total revenue from fee-based, non-interest activities related to asset servicing.
- We invest heavily – \$1.4 billion over the next 2 years (2012-2013) – in our core asset servicing platform, adding and enhancing our capabilities for custody and asset servicing.
- Our asset administration business lines – operations outsourcing, fund accounting, and fund administration – all leverage our core asset servicing platform as “shared services”, making custody personnel and systems central to our overall business model.
- Our services are structured as a comprehensive “asset servicing” solution. Going beyond the core custody functions of safekeeping and entitlements, we have built a broad range of complementary value added services, such as securities lending, foreign exchange, and directed brokerage that help our clients to maximize the value of their portfolios.



These and other factors have contributed to Northern Trust's position as an industry leader in asset servicing, resulting in long-term client relationships, an expanding client base, and continuous improvement of both our technological capabilities and our clients' experience with us.

COMPETITIVE ADVANTAGES

Northern Trust is distinguished from capable peers by the following:

Business Focus: *Custody is our flagship business* – in 2011, 72.5% of our revenues came from non-interest fees relating to trust and custody services. Adhering to this strategy, which has guided our firm for 123 years, Northern Trust is not burdened by currently-problematic businesses, such as asset-backed commercial paper, subprime mortgages, investment banking, or credit cards.

Superior Client Service Model: Our service team approach, the expertise we bring in the Public Fund industry, and our willingness to customize services around how clients do their work fosters long-term partnerships – 39.9% of our clients have been with Northern Trust for 10 years or longer.

Financial Strength and Stability: Northern Trust has remained strong and stable throughout the current economic turmoil, by continuing to post strong earnings, and maintaining one of the strongest balance sheets in the industry. As of December 31, 2011, our Tier I Capital Ratio of 12.5% was more than twice the "well capitalized" guideline of 6%. Nonperforming assets represented only 1.08% of our loan portfolio, compared to an average of 3.83%¹ across the U.S.'s 20 largest banks. As of December 6, 2011, Northern Trust is one of only four U.S. based banks to carry S&P's AA- rating at the bank level and A+ at the holding company level. No U.S. based bank is rated higher than AA- and no U.S. based holding company is rated higher than A+, so *Northern Trust carries the highest credit ratings assigned by S&P to U.S. banks under its current methodology*. This strength speaks to our ability to protect the State of Rhode Island's assets while sustaining investment in the services we offer.

Technological Leadership: Our single, global system architecture supports both of our businesses and all of our distribution channels. This architecture has been an instrumental competitive edge, granting Northern Trust advantages in reconciliation, data quality, and expense management.

APPROACH TO PRODUCT RESEARCH AND DEVELOPMENT

Northern Trust's guiding principle in product development is to be client-driven and meaningful to our clients' situations and their industries. We follow a product development process through which client input is stressed at every step. We use various sources of input to maintain and enhance our products and services – including market research, client focus groups, client advisory boards, and beta testing.

Our experience in gathering client input has proven that focus groups are by far the most effective means to gathering input. Conducted by Northern Trust staff, our focus groups combine brainstorming sessions where new ideas are generated and testing sessions where new products or service prototypes are studied. Following these sessions, beta testing is the next formal interaction with clients. Ongoing contact is facilitated through our dedicated client servicing teams, the 24-hour Help Desk, and continued interaction with the product management staff.

New product development projects would usually be made up of several documents, including a business case and/or funding justification, detailed business requirements, system specifications, test plans, and test scripts. Project governance would be important to such product initiatives and one of the key documents would be the project plan often managed at workstream level by project managers and led by a Program Manager.

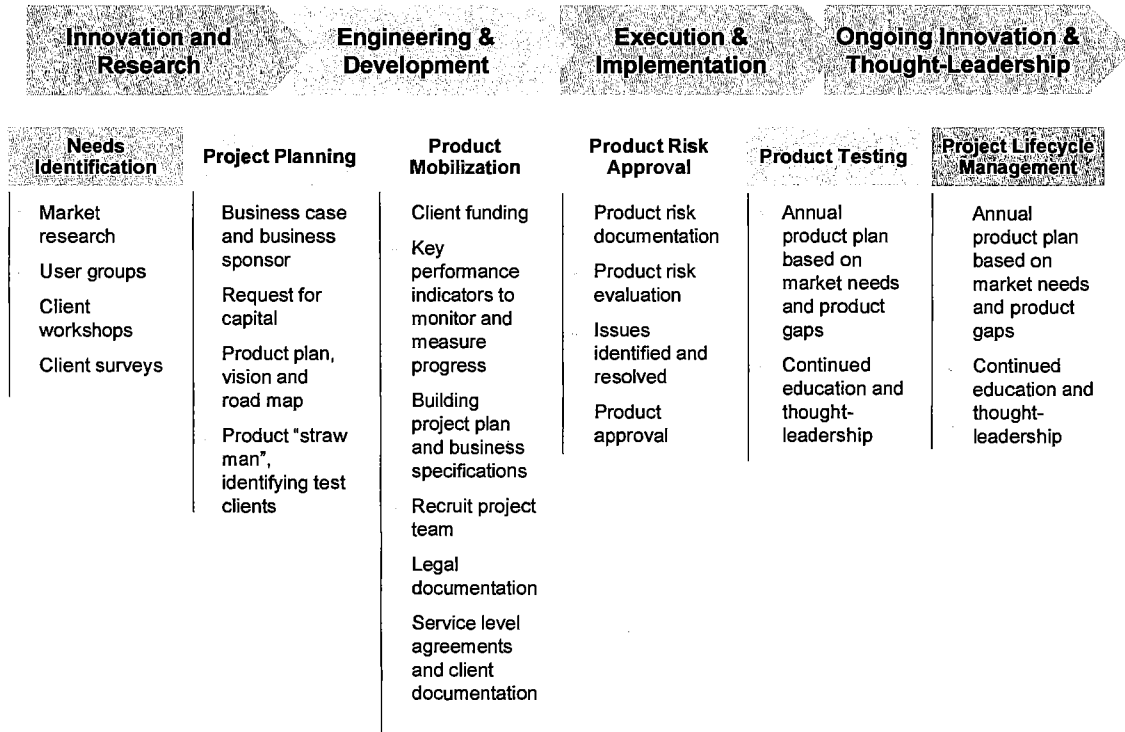
In addition, we benchmark our services to track our success. For example, if a new product is already offered in the marketplace, we benchmark the "best practices" for the product. If appropriate, we will incorporate similar

¹ As of September 30, 2011



processes into our own product design. When a product or service has been introduced, benchmarking is performed to track whether it is meeting client expectations.

The below graphic illustrates our product development process:



We participate in presentations for both the industry and client groups including discussions held at:

- Our client conferences
- Seminars held by industry associations
- Small group discussions
- One-on-one client meetings

Finally, product development projects, both general and custom, undergo a formal review process to ensure adequate operational support and risk controls are in place.

4. What were the bank's long term and short term credit ratings at the previous three (3) calendar years' end? Please provide the rating from all bank services that review the bank's financial standing at each of the requested dates (Duff & Phelps, Moody's, S&P and others). What is the Proposer's exposure to derivative instruments both in notional and net exposure and as a percent of total capital?

LONG AND SHORT TERM CREDIT RATINGS

Current credit ratings for Northern Trust Corporation and its principal subsidiary, The Northern Trust Company, are listed below.



NORTHERN TRUST CORPORATION

Rating	Standard & Poor's	Moody's	Fitch Ratings	DBRS
Issuer Rating:				
Short-Term	A-1	-	F1+	-
Long-Term	A+	A1	AA-	AA (low)
Individual				
Commercial Paper	A-1	P-1	F1+	R-1 (middle)
Senior Debt	A+	A1	AA-	AA (low)
Preferred Stock (including Trust Preferred Shares)	A-	A3	A	A (high)
Support Rating	-	-	5	-

THE NORTHERN TRUST COMPANY

Rating	Standard & Poor's	Moody's	Fitch Ratings	DBRS
Issuer Rating:				
Short-Term	A-1+	-	F1+	-
Long-Term	AA-	Aa3	AA-	-
Individual/Financial Strength				
Deposits:				
Short-Term	A-1+	P-1	F1+	R-1 (high)
Long-Term	AA-	Aa3	AA	AA
Bank Notes:				
Subordinated	A+	A1	A+	AA (low)
Support Rating	-	-	3	-

HISTORICAL CREDIT RATING CHANGES

As a result of our consistently focused business strategies in targeted segments and the lack of distraction in our business from more volatile and riskier activities, Northern Trust Corporation and The Northern Trust Company maintain very strong credit ratings, and more importantly, have retained these ratings over the long-term, through many business cycles and market environments. Please note that there have been only a very small number of changes in our credit ratings over the past 3 years (2009 to 2011). These are detailed in the tables below.

NORTHERN TRUST CORPORATION – CREDIT RATINGS CHANGES

Date of Change	Ratings Agency	Ratings Change:	New Rating	Previous Rating
December 2011	S&P	Issuer Rating: Short-Term	A-1	A-1+
		Issuer Rating: Long-Term	A+	AA-
		Commercial Paper	A-1	A-1+
		Senior Debt	A+	AA-
		Preferred Stock	A-	A

THE NORTHERN TRUST COMPANY – CREDIT RATINGS CHANGES

Date of Change	Ratings Agency	Ratings Change:	New Rating	Previous Rating
December 2011	S&P	Issuer Rating: Long-Term	AA-	AA
		Deposits: Long-Term	AA-	AA
		Bank Notes: Subordinated	A+	AA-



DERIVATIVES EXPOSURE

As of December 31, 2011, we had derivatives with a total notional value of \$244.6 billion outstanding, more than 97% of which relate to client-related and trading activities (versus Northern Trust's own risk management). The net fair value of the derivative instruments was a positive \$201.4 million, which represented 2.8% of total Tier 1 Capital.

For further details, please refer to our Annual Report, attached as Exhibit 1.

	Notional Value (\$ millions)	Fair Value (Asset) (\$ millions)	Fair Value (Liability) (\$ millions)
Client Related and Trading	244,572.2	3,250.8	3,144.4
Risk Management	5,759.6	171.0	76.0
Total	250,331.8	3,421.8	3,220.4
Net Fair Value		201.4	
Northern Trust Corporation Tier 1 Capital (12/31/2011)		7,105	
Derivatives Exposure as a Percent of Total Capital		2.8%	

5. During the past three years, has the Firm been subject to any governmental regulatory or law enforcement agency's investigation, examination, or other proceeding directly involving the Firm, its owners, or employees other than such examination or other proceedings as are routinely conducted in the ordinary course of the Firm's business? If so, please explain.

As one of the world's leading providers of asset servicing, Northern Trust and its subsidiaries occasionally receive requests for information from government and regulatory agencies. Northern Trust frequently does not know if such requests are related to a formal government or regulatory investigations or, assuming an investigation is underway, whether Northern Trust is a target of such investigation or simply thought to be in possession of information pertinent to such investigation. Northern Trust is not currently involved in any government or regulatory investigation or proceeding that would have a material impact on its ability to provide custody services to its clients.



IX. CUSTODY RELATIONSHIPS

- 1. What is the total market value of all assets held in custody? Describe the number and types of master custody clients.**

As of December 31, 2011, Northern Trust had 1,828 institutional trust and custody clients with approximately \$3.9 trillion in assets. The following table breaks out our client base by market segment.

Market Segment	# Clients	Market Value (\$billions)
Asset Managers	419	\$770.5
Banks	16	\$36.6
Central Bank/Monetary Authority	8	\$145.9
Corporations	631	\$1,116.0
Governments (national)	26	\$144.0
Insurance	125	\$372.4
Inter-governmental Agency	11	\$72.6
Local Government Entity	170	\$534.9
Not-For-Profits	312	\$313.7
Sovereign Wealth Funds	9	\$213.4
Unions/Industry Agencies	101	\$81.6
Depository Custody Services	N/A	\$74.4
Wealth Management Group	N/A	\$1.4
	1,828	\$3,877.4

- 2. Please provide, in descending order by asset size, the name of the Bank's ten largest custody relationships as of December 31, 2010. Include the name, total assets and the tenure for each relationship. Please report in the following format:**

In order to maintain client confidentiality, we cannot name our clients in the context of the RFP. However, we have included a list of the top ten largest custody relationships, as of December 31, 2011 – in an effort to provide the most current statistics – by client type.

Client Name	Custodied Assets (\$ billions)	Client Since
Central Bank / Monetary Authority	\$102,375	1990
Sovereign Wealth Fund	\$92,750	2007
Investment Manager	\$84,085	2003
Sovereign Wealth Fund	\$81,748	1988
Investment Manager	\$80,982	2004
Corporate	\$74,426	2000
Corporate	\$60,012	1999
Insurance	\$57,211	2001
Government	\$54,990	2009
Investment Manager	\$53,189	2003



- 3. Provide the client name, contact and phone number of master custody accounts gained or lost in the last three years. Provide a brief explanation for each of the account(s) lost.

The following table represents the number of clients gained and lost and their market value over the past 3 years. Please note that in order to protect our clients' confidentiality, we have omitted actual client names from the table below.

CLIENTS GAINED ²			CLIENTS LOST		
Year	Number of Clients	Market Value (\$ billions)	Year	Number of Clients	Market Value (\$ billions)
2011	76	\$87.5	2011	39	\$25.6
2010	73	\$106.5	2010	30	\$50.8
2009	49	\$50.0	2009	25	\$28.2

REASONS FOR CLIENT LOSSES

While Northern Trust welcomes a steady influx of new clients every year, an inevitable part of our business is that we also lose clients. Over the years, the primary reason that clients have transitioned away from us is that they consolidated all assets with another provider, often because of a merger or acquisition. Other common reasons are: fees, existing relationships at another provider, credit, or diversification of providers.

- 4. Provide a contact name and telephone number for three references that have an organizational structure similar to the Employees' Retirement System of Rhode Island ("ERSRI"), and whose organizations are currently using your custodian services. Include the same information as requested in question 2 above for each reference. Please also indicate whether these references use your bank's benefit payment, administrative and tax reporting services and/or additional services for which they contract with you.

North Dakota State Investment Board

Name: Connie Flanagan, Fiscal and Investment Officer
 Phone: (701) 328-9892
 Total Assets: \$5B
 Tenure: April 1983
 Services: Global Custody, Compliance Analyst, Web Cash Movement, Trade Order Entry

New Hampshire Retirement System

Lawrence Johansen, Director of Investments
 Phone: (603) 410-3510
 Total Assets: \$5B
 Tenure: August 1989
 Services: Global Custody, Domestic Custody, Performance Monitoring, Compliance Analyst, Web Cash Movement, Trade Order Entry, Transition Management

Inter-American Development Bank

Shepi Farrar, Chief Investment Management - Staff Retirement Plan
 Phone: (202) 623-3630
 Total Assets: \$4B

² Clients gained include new legal entity transitions, as well as current relationship expansions (e.g., new plan types).



Tenure: 1981

Services: Global Custody, Domestic Custody, Performance Monitoring, Compliance Analyst, Transition Management

- 5. Provide two former client references, with plans similar to ERSRI, who no longer use your custodian services and who left due to unfavorable circumstances. Include names, addresses, and telephone numbers.

Maine Public Employees Retirement System

Name: Andrew Sawyer, Chief Investment Officer

Phone: (207)512-3333

Address: 46 State House Station, Augusta, ME 04333

Municipal Employees Retirement System of Michigan

Anne Wagner, Chief Executive Officer

Phone: (800) 767-6377

Address: 1134 Municipal Way, Lansing, MI 48917

- 6. If necessary, Proposers may be asked to submit additional client, former client and/or prospective client references.

We are happy to help connect ERSRI with other Northern Trust clients and former clients as needed. Please refer to Questions 4 and 5 above for contact information of current and former clients that ERSRI may contact as references.

- 7. What methods do you use to assess your client's evaluation of your services and how are comments provided by clients acted upon by senior management?

METHODS USED TO MONITOR CLIENT SATISFACTION

At Northern Trust, we pride ourselves on continuously improving our services to benefit our clients. We monitor and improve client satisfaction by obtaining client feedback through:

- **Relationship Reviews.** The relationship team monitors client satisfaction on an ongoing basis. Relationship and Account Managers take primary responsibility for monitoring satisfaction, and meet with their counterparts regularly to discuss operational performance and service levels in person. The client determines the frequency of these meetings; although we suggest these should take place at least quarterly, and at the outset of the relationship bi-weekly or monthly.

Relationship Reviews address activity over the previous period and Northern Trust's performance and achievements against the standards set out in your Service Description. Performance against the Service Description will be monitored at regular intervals. Written performance evaluation packs can also be prepared upon specific request, documenting service standards and our achievements against these standards.

- **Senior Management Client Reviews.** Each week, senior managers within the major business units meet and discuss a number of client relationships with the assigned Client Executives and appropriate staff. Discussion topics include client service requirements, product mix, unique service needs or challenging issues, new business, and other items that warrant management attention. This review covers all clients at least annually, and more frequently when appropriate.



- **Senior Management Calling Program.** Your Division Manager or Segment Head calls on you annually to review the status of the relationship. The objective is to receive any additional feedback and to discuss any issues you raise.
- **Annual Client Service Reviews.** We issue a three-part survey to our clients soliciting client feedback on Northern Trust's products and services. Information gathered from the service review helps identify products and services that will enhance current service. Additionally, we use feedback to assess the effectiveness of your relationship management team. This feedback is a critical component in determining salaries and performance bonuses.
- **Third Party Client Service Reviews.** In addition to our internal review processes, we solicit feedback on the quality of our service through independent third-party surveys. Conducted by market research firms, consultants, and industry publications, these surveys evaluate our clients' level of satisfaction. These surveys often compare Northern Trust to our competitors and reinforce our strong reputation in the marketplace and our commitment to the business.
- **Manager Monitoring.** We also monitor investment managers, both in-house and third party, on an ongoing basis through Northern Trust's manager calling program. This program evaluates all aspects relating to your accounts at Northern Trust, as well as more general industry/market development issues such as ISITC, SWIFT, etc.

SENIOR MANAGEMENT INVOLVEMENT

Northern Trust takes every client comment and complaint seriously, and we work to resolve issues promptly. Client concerns are escalated immediately to the Client Executive, who will ensure attention and resources are applied to address the matter.

If the issue is general in nature, your client service team will work with you to achieve a satisfactory outcome. If the issue is significant (e.g., it has financial implications or alleges a breach of agreement); our compliance team is able to assist.

If the matter is escalated, the heads of all operating, compliance, and client servicing groups will be copied onto all correspondence within three days. The Compliance Department tracks all complaints and reviews them monthly with management.

8. Describe any ongoing educational seminars, publications or other services you provide for keeping clients abreast of new developments in your organization and the master trust/custody industry.

We offer a broad array of such opportunities, varying content, personnel, and media by region and segment to ensure a steady stream of applicable occasions. Regular opportunities include:

PRODUCTS/SERVICES TRAINING

We sponsor a variety of in-house programs about current industry trends and product/service developments. Available classes include:

- **Industry Series:** Designed to provide an overview of Northern Trust's departments. Each presentation includes the area's function, biographies of associated partners, and updates on any initiatives.
- **Securities Series:** Designed to provide a more detailed understanding of specific securities. Past topics have included derivatives, private equity, and hedge funds.



PASSPORT® TRAINING

We host quarterly Passport® training at our offices. These sessions can serve as refresher courses, training for new staff, deep dives for power users, or an introduction to new capabilities. Clients can learn how to customize Passport® according to their business and reporting needs. We also hold regular forums with clients and external parties to discuss future enhancements to the system, in light of developing industry practices, new regulations, etc.

CLIENT ADVISORY BOARDS

Northern Trust hosts several client advisory boards that meet periodically throughout the year. These include:

- **U.S. Executive Forum:** Comprised of senior investment professionals, representing 30 clients balanced among major market segments. Semi-annual discussions include industry trends, technological developments, new product initiatives and concept testing, as well as legislative and global economic updates.
- **Northern Trust Global Investments Client Advisory Board:** Comprised of senior investment professionals invited by the Management Committee within Northern Trust Global Investments (NTGI). Tri-annual discussions include investment trends, investment product reviews, and new product evaluations.
- **Treasury Management Client Advisory Board:** Comprised of senior treasury staff members from several client organizations. Serves as a permanent forum for ongoing advice regarding treasury management business initiatives, product development, and industry trends.

PRODUCT FOCUS GROUPS

As new products are developed Northern Trust sponsors focus groups to seek client feedback and conduct beta testing.

CLIENT CONFERENCES AND WORKSHOPS

Throughout the year we offer workshops to clients responsible for asset management, asset servicing and risk oversight. Northern Trust professionals, clients, and industry experts exchange ideas on a variety of topics – such as global investments, alternative asset classes, risk management, cost control, regulatory trends, and pension fund pooling.

Northern Trust staff regularly participates in industry conferences by attending, speaking and/or supporting trade shows via exhibit booths.

PUBLICATIONS

Designed exclusively for clients, Northern Trust's publications cover industry trends, events and market information, as well as internal news and developments. These include:

- Economic Outlook
- Investment Outlook
- Technology Update
- Securities Lending Year-in-Review
- International Insight
- Fund Focus
- NT Anchor
- Line of Sight
- Atlas Market Interactive (includes Atlas Bulletins, Atlas Reports, Atlas Quarterly Digest Newsletter)

Your Client Executive will provide you with information on any of these initiatives.



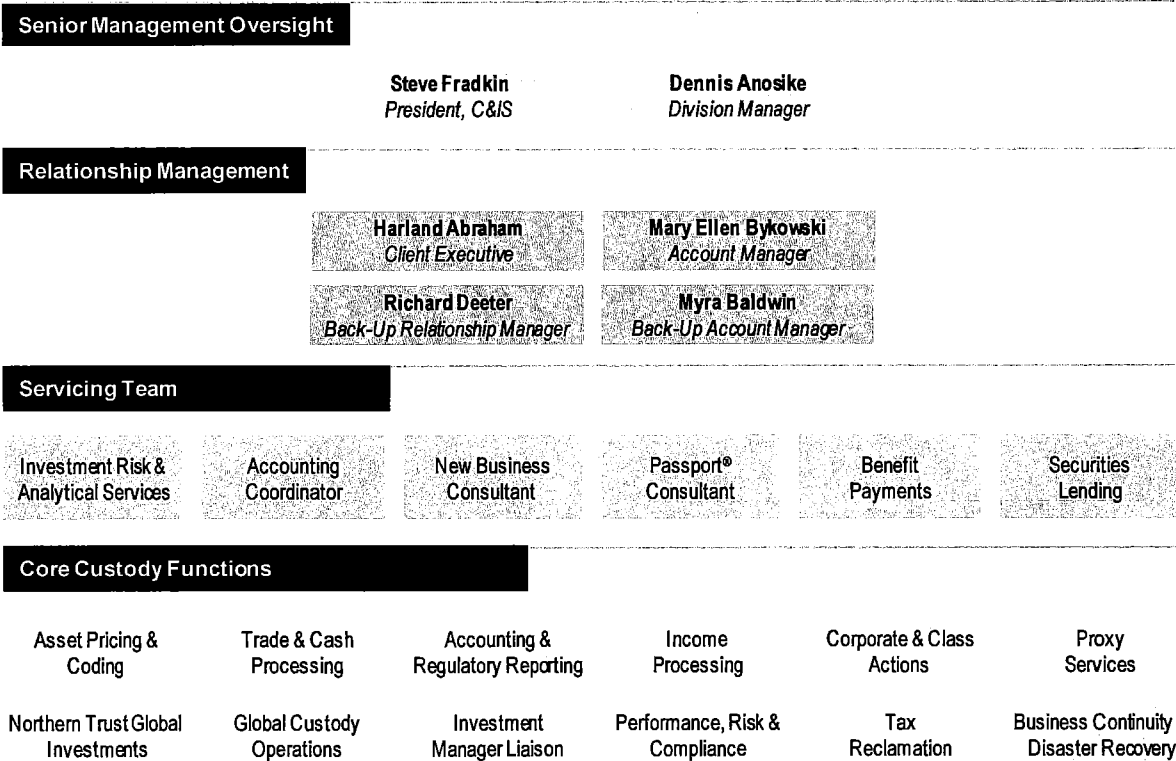
X. PROFESSIONAL STAFF AND CLIENT RELATIONS

- 1. Identify the key individuals and specific responsibilities of those who would be assigned to the ERSRI account. Describe their responsibilities and provide biographies on each person.

Our client service model revolves around delivery, expertise, and integrity. We believe in a consultative approach, focused on accountability and transparency. Our tangible means to deliver our model is the client service relationship team. Every client is assigned a dedicated group of professionals whose background and experience speaks to their specific needs and culture.

The proposed team for the Employees' Retirement System of Rhode Island (ERSRI), based from our Chicago headquarters, would be structured as follows:

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND



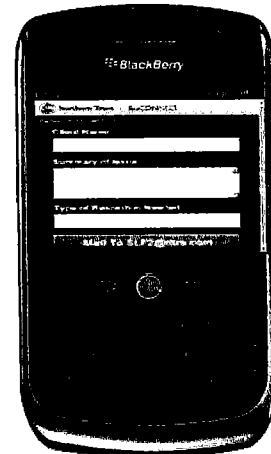
SENIOR MANAGEMENT OVERSIGHT

Senior Management Oversight ensures that Northern Trust meets its corporate commitments to ERSRI. Dennis Anosike, Division Manager of the U.S. Public Funds Division, will provide active oversight of your service delivery by ensuring that the client service team is fully supported in meeting our commitment to ERSRI. As an escalation point for ERSRI's Client Executive and the entire client service team, he will bring the necessary influence to drive timely resolution, and secure optimal service coordination for ERSRI across the Bank.



One key distinction of the Northern Trust service experience is **our clients' accessibility to senior management**. All of our senior management is available to ERSRI on a regular basis.

ExeConnect is a tangible example of how we provide our clients with 24-hour, global access to senior management and thus, more timely issue escalation and resolution. ExeConnect is an application which every Division Manager and Client Executive has installed on their mobile phones. It is an automated way to quickly raise an issue to senior management for immediate review and response.



ExeConnect Screenshot

RELATIONSHIP MANAGEMENT

Northern Trust has assigned **Harland Abraham** as **Client Executive** for ERSRI. Harland will have primary responsibility for your total satisfaction with our products and services. With over 25 years of custody related experience, and a home base of Washington, D.C., he will provide strategic leadership for your client service team, most importantly establishing team priorities to exceed your long-term and day-to-day service expectations.

In partnership with ERSRI, Harland would regularly visit your offices as well as evaluate, refine, and enhance the client service team in order to facilitate service solutions. He is responsible for coordinating strategic consulting support for ERSRI, ensuring ERSRI has all of Northern Trust's current thought leadership and coordinating direct access to our in-house or external experts on economics, market conditions, emerging client trends, and regulatory issues. Based on ERSRI's interest, Harland would coordinate your participation in client advisory boards or peer strategic summits, providing an opportunity for ERSRI to interact and share with similarly structured clients. Harland is also responsible for interaction with the ERSRI Board Members. Northern Trust asks for permission from ERSRI to attend Board meetings to ensure a full understanding of both ERSRI's strategic plan and any current challenges. At ERSRI's staff request, Harland would provide input to any Board presentations as needed for educational purposes, or to provide updates on Northern Trust services and developments.

Harland is supported by **Account Manager Mary Ellen Bykowski**, who oversees day-to-day activities such as cash movement, transaction processing, and reporting. As the day-to-day focal point of contact, Mary Ellen brings 10 years of experience in custody and reporting. She is also experienced with the intricacies of defined benefit plans. As the Account Manager, Mary Ellen is accountable for ensuring that ALL daily activities that impact ERSRI occur seamlessly and timely. Any daily service issues are her immediate priority, and she works diligently to resolve them immediately.

To ensure consistent, reliable, and uninterrupted coverage, a **Back-up Client Executive Richard Deeter**, and **Back-up Account Manager Myra Baldwin** have also been assigned. All back-up members of ERSRI's service team have access to the same data and reporting systems, and information is actively shared among the team.

CLIENT SERVICE TEAM

Northern Trust has assigned product specialists as part of the **Client Service Team** for ERSRI. Dedicated specialists will focus on the tactical issues associated with ERSRI's daily operations and account servicing needs, providing leadership and collaboration to ensure integrated service delivery to meet the unique needs of ERSRI. The Client Service Team provides an escalation point and quick resolution of any issues that arise, lead to completion any service requests for their specialties, and efficiently coordinate any service requests that cross delivery teams. The Client Service Team also provides consultative support by bringing their extensive experience to share industry best practices to ERSRI.

- The **Performance Consultant** will design and manage a customized performance and risk reporting package tailored to your requirements. They are also available to interpret data and consultative support applying the data to your strategies. The Performance Consultant's relationship with ERSRI begins immediately upon



appointment of Northern Trust as reporting agent. They will be in contact with your prior provider to coordinate receipt of historic data, build specific groupings within a Policy Tree to report returns as required by ERSRI, and secure service assumptions in ways that translate to value to ERSRI.

- The **Passport[®] Consultant** and technology team will have overall responsibility for ensuring ERSRI and Northern Trust are using technology to enhance and streamline processes. This team will make certain ERSRI is fully integrated to Northern's online system, Passport[®], and manage custom reporting and data file needs.
- Overseeing the entire transition process is a **New Business Consultant (NBC)**. The NBC ensures a transition that does not interrupt ERSRI's investment activity or operations reporting. Through a well-tested, disciplined process, the NBC will work with ERSRI staff to develop transition plans, assigning tasks as necessary to the client service team leads and ERSRI staff. Progress is monitored using a stop light report, which after transition becomes the basis for the Client Executive, Harland Abraham, to manage outstanding service requests.
- In addition, we have **Investment Manager Liaison Group (IMLG)** contacts that are available to oversee ERSRI's third party managers. This team will have responsibility for the timely settlement of all trade instructions and daily cash reconciliation. Also included in this team's responsibilities are timely and accurate responses to any inquiries on the ERSRI portfolios, including income collection, corporate actions, etc.

We have provided corporate biographies for the key members of your client service team in Exhibit 4.

2. Identify the client names and account sizes that each of these staff members currently service. If you were to be chosen as custodian, would any of these relationships change? Explain.

While due to confidentiality reasons we cannot reveal the names of the clients that your relationship team services, we can confirm that Harland currently acts as Client Executive for 6 clients with a combined \$30 billion in total assets under custody and Mary Ellen currently acts as an Account Manager for 5 clients with a combined \$30 billion in total assets under custody.

MANAGING RESOURCES AND STAFF MEMBER WORKLOADS

Senior managers track the number and complexity of client relationships for each team. Toward this end, we employ a resource planning process through an automated database. Account complexity – number of accounts, variation in asset type, and prevalence of special procedures – figures prominently in proper load balancing. At Northern Trust, this task is a function of automatically generated metrics tempered by thoughtful judgment. We would follow this process, should we be chosen as custodian for ERSRI, to determine whether or not Harland and Mary Ellen's workloads would need adjustment.

3. Record-below the level of full time personnel turnover experienced by your organization in the past three years as follows:

Our Corporate-wide turnover figure for each of the past three years is as follows³:

2011	2010	2009
9.7%	10.3%	5.2%

³ This figure denotes individuals leaving Northern Trust and does not include involuntary terminations, or those resulting from disability or retirement situations.



4. Provide the names and titles of vice presidents or higher officers who have joined or left your master custody division during the past three years.

We currently do not provide turnover statistics on an individual basis. However, 2010 turnover for our staff ranked Vice President or higher was only 6% (this figure includes retirees).

5. Describe your strategies to retain personnel in key staff positions. Please discuss the following:

We recognize that innovative work is only part of the equation of attracting and retaining employees. Competitive compensation, flexible work schedules, and an exceptional benefits package characterize our organization's philosophy.

Our comprehensive benefit package includes:

- Thrift incentive plan
- Pension plan
- Stock option plan
- Significant investment in tuition reimbursement

Our people are the essence of what makes Northern Trust a special place to work and do business. We have a diverse workforce and we make every effort to understand and respond to the different needs and aspirations of all Northern Trust people. For example, Northern Trust established itself as a local pioneer in family issues by opening the first corporate-sponsored day-care center in downtown Chicago.

We consider our employees the most important factor in our business success. We are committed to fostering an organizational environment in which outstanding people are attracted to and retained by Northern Trust regardless of race, gender, age, disability, religion or other diversity factors. The environment we seek is one that values diversity of background and experience in our workforce at all levels of the organization.

a. Recruitment/Replacement

Recruiting at Northern Trust is a shared responsibility of both the Talent Acquisition Team and Business Unit Managers. Our Talent Acquisition Team frequently participates in career fairs and campus/university visits to search for qualified individuals. In addition, we employ several tools, including job boards, Web 2.0 search tools, and internet-based searches, during the recruiting process.

The Talent Acquisition Team works to ensure that we attract and retain a diverse pool of talent through an efficient global staffing model, which delivers high touch service to business partners through expert advice and consulting.

Hiring decisions are based on a variety of factors, including educational background, relevant experience, past accomplishments, professional licensing where required, and strong evidence of integrity and ethical behavior.

Recruiting plays a vital role in creating and maintaining a diverse workforce. Our goal at Northern Trust is to continue to foster diversity at all levels of our organization, since it ultimately contributes to our ability to deliver unrivaled client satisfaction and quality.



b. Training

Northern Trust's reputation attracts new staff of the highest caliber, but it is our commitment and investment in training and development that allows us to retain these top professionals.

CORPORATE STRATEGY

Our clients operate in an increasingly complex and unpredictable business environment. To help our clients address these challenges, Northern Trust offers a more comprehensive variety of products and services than ever before.

In order to continue to deliver excellent client service in this challenging environment, Northern Trust seeks to continuously expand our staff's knowledge and skills. We are dedicated to doing this through training and development, as demonstrated by our commitment of significant human and financial resources to promote world-class training programs and educational opportunities.

Recently, WorkforceChicago2.0 designated Northern Trust as one of ten area companies that demonstrates exemplary employee development practices. The WorkforceChicago2.0 initiative, funded by the John D. and Catherine T. MacArthur Foundation, is a project sponsored by the Council for Adult and Experiential Learning, the Human Resource Management Association of Chicago and World Business Chicago to help solidify Chicago's position as a prime talent pool in the 21st century.

TRAINING AND DEVELOPMENT PROGRAMS

Northern Trust has assigned experienced training professionals to provide development programs in client servicing, products, and technology and industry practices. These professionals are dedicated to creating materials and tools to staff that gives them the opportunity to learn and become technically proficient in global custody as well as to encourage their personal development.

During their first 6 months of employment, new employees receive formal instruction that is focused on industry knowledge, regulation and compliance, health and safety, diversity and money laundering prevention procedures. Employees are then required to attend training on an ongoing basis throughout the year. Our classes offer the following curricula:

- **Relationship Management:** The hallmark of Northern Trust is our excellence in client servicing. We continue this tradition by offering programs that focus on relationship planning, relationship building, understanding client needs, and presentation skills.
- **Products, Services, and Industry Knowledge:** Northern Trust offers ongoing programs to keep our employees abreast of the latest enhancements and how they can benefit clients. Industry knowledge and trends are addressed through courses on custody, investments, international services, and treasury management. In addition to formal classes, we hold weekly update sessions that provide a forum for staff to share ideas and insights.
- **Technology:** Northern Trust has embraced technology as a powerful means to improve client service and responsiveness. We ensure that our employees are capable and confident using a wide variety of technology tools. Courses focus on all aspects of technology and how it benefits our clients.
- **Management and Interpersonal Skills:** Northern Trust holds professional growth as a core value. Professionals with leadership responsibilities need to be effective developers of their people. These skills are built through programs that train leaders to take an active role in supporting people's growth, and enable staff to manage their own careers. Developmental activities such as performance



management, presentation skills, interviewing and selection, supervisory skills and project leadership are highly valued skills.

We encourage all employees to participate in any courses that will help achieve their career goals. Managers work with their staff to assist them in creating personal development programs. Special training units provide this training for each of our businesses, allowing a high degree of focus and applicability to different jobs.

FORMAL MENTORING PROGRAM

Mentoring has always been a recognized and valued development tool within Northern Trust. It enables partners to benefit from others' knowledge, experience, and personal insights. Northern Trust has offered a formal corporate program for over 15 years and in 2008, rolled out an enhanced global mentoring program focused on the development and engagement of our partners, as well as deepening our culture of organizational learning and leadership development. This new program called *Mentoring Matters* includes an on-line system that matches mentors and mentees based on individuals' profiles and backgrounds, and supports the relationship throughout their time together. This industry-leading solution will further enhance our ability to retain and promote the sharing of our intellectual capital.

EXTERNAL PROGRAMS

In addition to our standard curricula and in-house programs, Bank-sponsored continuing education programs have encouraged a large percentage of our professional employees to pursue advanced academic degrees and professional certifications.

In addition, we encourage employees to participate in training courses offered by external institutions that will enrich their knowledge of our business or general personal development, such as language skills.

We know that nothing ensures our success more than promoting a diverse and knowledgeable staff. As such, Northern Trust invests highly in corporate development and training, so that our partners always have the right tools and expertise to deliver the very best service solutions to our clients.

- c. **Compensation**
- d. **Incentive programs**

Northern Trust recognizes the importance of maintaining a highly qualified, educated staff in order to provide clients the best possible service. In order to accomplish this, our organization has a compensation program that combines base pay, variable cash incentives, and long-term equity.

BASE PAY

Northern Trust participates in various salary surveys covering positions in business lines and geographic areas in which we operate. Approximately 60% of our positions are covered in these surveys. Pay for remaining positions is determined based on benchmark positions. Survey data serves as one of the cornerstones, along with individual performance, for individual pay decisions. We also participate in surveys that specifically cover positions in the master trust/custody area.

INCENTIVES

All employees are eligible for variable cash compensation tied to their performance. Northern Trust has one global incentive plan based on a common set of compensation principles. Within the global plan there are programs tailored to the master trust/custody area that cover our sales people. Consistent with our desire to differentiate, our variable compensation programs provide above median reward opportunities to employees who help deliver superior team or individual results.



XI. AUDIT CONTROL

1. **Provide copies of audit opinions issued by your independent auditors specifically related to your custody services for the last three years.**

Please refer to Exhibits 5, 6, and 7 for copies of our SOC 1 (and SAS70, where relevant) Reports from 2009-2011.

2. **Do you utilize an internal audit staff to review master custody operations? Describe the internal audit organization. Include size of staff and the nature of internal audit staff reports.**

Yes. Northern Trust maintains an internal audit staff (known as **Audit Services**) of approximately 100 full-time professionals, who are financial, operational, risk, compliance, and Information Technology (IT) specialists. Worldwide teams are located in Bangalore, Chicago, Dublin, London, Los Angeles, Miami, and Singapore.

All staff auditors have a college degree with a major in finance, accounting, or information systems while approximately 79% of auditors have or are currently pursuing professional certifications (such as a CPA and/or Certified Internal Auditor designations) and/or advanced degrees.

REPORTING STRUCTURE

Audit Services reports directly to the Audit Committee Chairman, who resides on the Board of Directors. All worldwide auditors ultimately report to **Executive Vice President Kandace Heck**, who reports directly to the Audit Committee and administratively to **Chairman & CEO Rick Waddell**.

KEY RESPONSIBILITIES

Audit Services is organized to parallel the Corporation's business unit structure, producing benefits such as increased contact with, and access to, business unit managers facilitating proactive discussions, specialty focus whereby knowledge of the business can be fostered, and industry experienced auditors who can deal effectively with more complex issues. Audit Services' key responsibilities include the following:

- Establish and complete a risk-based audit program focusing on high financial exposure and key control procedures with periodic coverage of all significant activities.
- Examine financial systems and operating procedures to assess the adequacy and effectiveness of controls and accuracy of financial and management information.
- Perform reviews to determine whether operations are effectively carried out in accordance with policy, regulatory and legal requirements, and sound business practices.
- Provide appropriate levels of management and appropriate audit and oversight committees with formal reports of audit findings and resulting recommendations for corrective actions and operational improvements. Follow-up activities are conducted to ensure implementation of adequate corrective measures.
- Support the Corporation's risk management initiatives through active involvement in risk committees and/or reporting to appropriate risk managers.
- Communicate with applicable regulators and external auditors to enable effective reliance on work performed.

3. **How do you assure that master custody services are provided in accordance with proper standards of care, regulatory requirements and the executed agreement for service?**

Northern Trust employs a range of controls to monitor and track our performance against both regulatory requirements and agreed standards. These include:



CLIENT SERVICE LEVEL DESCRIPTION

Northern Trust maintains strict control of processes and procedures so that all activity is within our clients' guidelines. For every relationship, we develop a written *Client Service Level Description* which details the policies and procedures set by each client. This document governs the activity of every member of your relationship team. Service Level Descriptions are altered to accurately reflect our relationship in the event of a procedural change.

CLIENT INSTRUCTION AUTHENTICATION PROCEDURE

We have enhanced processing controls for authenticating a client's instructions, documented as our Client Instruction Authentication Procedure. These include procedures to prepare, deliver, and authenticate client directions, as well as special processing guidelines.

REGULATORY STANDARDS

Northern Trust adheres to all regulatory standards that impact our activities. Our Audit and Compliance group routinely monitors processes and controls, which are continuously tested and documented in our semi-annual SOC 1 Report.

AUTHORIZED SIGNERS

We maintain an updated and accurate list of your authorized parties, ensuring that only proper individuals are involved in sign-off and authenticity.

4. Describe the process your organization uses to evaluate the effectiveness of internal controls and the on-going monitoring of the internal controls.

Audit reports provide information to key participants in Northern Trust's risk management process, including the Corporation's Management Committee and the Audit and Business Risk Committees of the Board.

Audit Services independently assesses the effectiveness of control systems and practices within each business unit and issues report "ratings", which are based on the significance of any control issues identified. The final report includes Management's planned actions to resolve each issue.

The reporting approach highlights "Major/Significant" business unit issues that result in a "Needs Improvement" or "Unsatisfactory" audit rating. Other less significant findings and recommended enhancements to otherwise reliable control practices are also reported. These other findings and comments typically reflect areas considered worthy of Management's attention or consideration, or longer-term opportunities to enhance systems and processes.

The report format used by Audit Services also facilitates tracking issue resolution, in that each identified issue or comment includes planned actions, a targeted completion date, and responsible party.

Audit Services' reporting and follow-up practices are as follows:

- All 'major/significant' findings are reported to the Corporation's Management Committee, as well as the Audit and Business Risk Committees of the Board, with tracking until resolution.
- All reported issues are labeled according to their source (e.g., management or audit identified) and nature (e.g., new, repeat, or partial repeat). The audit report facilitates Management's focus on repetitive concerns by summarizing the source and nature of all issues.
- 'Substantive' repeat issues (e.g., unresolved or recurring control weaknesses) are highlighted in the reporting process and elevated to the Management Committee and Audit Committee.



- Audit Services' issue tracking process requires business unit personnel to confirm that remedial actions have been completed for all major, significant, and substantive control weaknesses.
- Audit Services performs validation (i.e. testing) of all major, significant, and substantive issues within 90 days of the issue being remediated by management.

Finally, our independent external auditor, KPMG LLP, reviews each audit report and the plans detailing correction of deficiencies.

5. What internal control procedures exist to ensure that the following reported data is valid: Asset detail and transactions, commission rate and payees, interest and dividend received, accrued income, and amortization?

Northern Trust employs a range of data accuracy and verification procedures across all of our client data. Our data management philosophy is built on the idea that controlling accuracy **at the source of receipt** provides the most consistent and accurate data.

Each operational area manages its own data accuracy controls and procedures, but in broad terms, our approach to ensuring accuracy includes the following:

- **Emphasis on automation.** We are vocal advocates for straight through processing (STP), and provide clients with the tools to enable the highest possible STP rates. All services are integrated across a single platform so that data flows automatically without manual intervention. By promoting automation, we dramatically reduce the potential for human error.
- All trade instructions, whether manual or STP, are subject to **dozens of validations and logic checks**, pre-matched to broker instructions, and tracked in real time until settlement.
- Disbursements, wires, and other cash movements are subject to **stringent controls**, including an "Authorized Parties" list to initiate movement, a two-tiered initiation/approval structure, accuracy checks of submitted cash movement and disbursement instructions, and **extensive data security protocols**.
- All data received from third parties for pricing, security master data, accrued income, interest, and corporate actions employs **multiple vendors**, which are then "**scrubbed**" **against one another to identify variances or discrepancies**. All data is managed by experts in the data type (e.g., our Pricing Team handles pricing discrepancies) and resolved as quickly as possible.
- We **reconcile asset and cash positions against depositories and subcustodians on a daily basis**, to ensure consistency of our records. Further, we reconcile with investment managers as part of the periodic reporting audit.

In addition to the above, our Valuation Reporting Analysts perform an additional series of audit and valuation checks prior to releasing final reports.

6. Describe your audit process associated with the client's monthly portfolio statements. Also describe your reconciliation with clients and the client's outside managers.

AUDIT PROCESS FOR MONTHLY PORTFOLIO STATEMENTS

Northern Trust's Valuation Reporting Group (VR) handles the review and reconciliation functions for our clients' reporting.

Overall, VR has 626 full-time employees worldwide with teams located in Chicago, London, Bangalore, and Singapore. This global operating model allows partners from other regions to continue the follow-up and resolution



of issues with investment managers, brokers and other external partners who are located worldwide, resulting in quick and accurate issue resolution.

VR analysts perform the following steps to facilitate the delivery of accurate reports:

- Review asset portfolios and transactions and examine reports to resolve exceptions. The review process is also tailored to surround any client specific checks and sensitivities.
- Complete various reconciliation checks, such as: prices, trade prices, market to book reasonability, equity and bond accruals, cash exchange rates, and tax recoverables.
- Run through a daily audit checklist (see below), before releasing reports externally.

Additionally, our VR staff attend technical and industry knowledge classes as a means of constantly improving their skill level, learning new technology, and continuously improving performance.

Examples of daily accounting audits include:

Price Check:	Corporate Actions:
Current price to prior month price	Shares held on ex date
Systems price	Shares received
Stale price	Gain/Loss on redemptions
Zero price	Cost on parent and child lines
Trade Price Check:	Duplicate Trade Check:
Compare price on trade to current and prior month end price utilizing various tolerances	Duplicate trades
Market to Book Reasonability Check:	Equity Accrual Check:
Market versus book for reasonability on each asset using set tolerances	Drop on/drop off
Zero cost and zero market value	Rate changes
Negative holdings/negative cost	Nominal change
Residual cost	Duplicate accruals
Expired security	Negative accrual
Bonds without an accrual	Payment past due (delinquent)
Accruals greater than 10% of market value	Shares held on ex date for new accruals
Negative accruals on equities	
Futures Check:	Tax Recoverable Check:
Futures offset liabilities	Drop on/drop off
Mark to markets	Changes to local value
Transactional check for shares, market value, and cost	Filing date review for late payments
Transaction Check:	Bond Accrual Check:
Failed trades/pending trades that did not settle	Days on accrual
Late trade	Compare accrual days month to month
Corporate actions without market value	Drop on/drop off
Zero cost on trade	Missing accruals
Gain/Loss on purchases	Income received on pay/maturity date



Gain/Loss on short-term assets	Negative days accrual
New security to the bank	Accrued interest purchased/sold
Late trades	Mortgage backed securities
Forward Foreign Exchange Check:	Transition Check:
Gain/Loss on spot trades less than 10%	Verify cost, market value, and nominal on all assets including cash
Gain/Loss on forward trades less than 30%	Verify all accruals are set up
Cash Exchange Rate Check:	
Compares exchange rate on all movements to spot rate on the day of trade	

RECONCILIATION WITH CLIENTS AND CLIENTS' EXTERNAL INVESTMENT MANAGERS

We support regular reconciliations with our clients or our clients' external investment managers to help ensure that both the custody and investment books of record are in balance.

Clients/managers are provided with daily (unaudited) holdings information, which they can extract from Passport® to reconcile their books to ours. Clients/managers can contact their **Investment Manager Liaison Group (IMLG)** representative to raise issues and resolve reconciliation breaks/discrepancies. Manager practices vary, but our experience is that the majority of managers in the traditional asset classes (equity, fixed income) undertake daily reconciliation with custody records as part of their controls, and we have established processes for reviewing and resolving any exceptions raised by clients/managers as quickly as possible after they are identified.

At month end, we provide audited cash and stock positions to support the standard month-end reconciliation activities. As with the daily recons, there are established deadlines and practices for investment managers to challenge prices or identify discrepancies so that reconciliation breaks are addressed prior to monthly reports being finalized.

7. Describe the various types of insurance coverage and indemnification provided to protect clients of services proposed. Attach a copy of a valid certificate of insurance indicating liability insurance.

Northern Trust maintains the following corporate insurance coverage to protect against extraordinary events:

- **Bankers Blanket Bond and Computer Crime.** US\$150 million limit, insured with Chubb, St. Paul, Houston Casualty Co. (HCC), ACE, Zurich, CNA, Lloyd's of London, and Great American. The Bankers Blanket Bond covers criminal acts of officers and employees, loss of property (cash-securities) through burglary, robbery, false pretenses and mysterious disappearance, forgery, alteration of securities, forgery with loan participation, or trading. This annual policy expires June 1, 2012.
- **All Risk Physical Loss of Securities Insurance.** US\$50 million limit insured Lloyd's of London. This acts as excess over the Bankers Blanket Bond to provide protection for physical loss or damage of securities on Bank premises, in transit and held in various depositories. This annual policy expires May 25, 2012
- **Professional Liability E&O Insurance.** US\$75 million of coverage with CNA, Zurich, Chubb, Liberty, HCC, Axis, ACE, and Arch. This policy protects the Bank against a legal liability incurred from an act, error, or omission committed in our performance of professional services. This annual policy expires June 30, 2012.

The Depository Trust Company provides additional levels of protection for on premises and transit coverage as well as numerous other policies designed to protect institutions that use DTC services. We can provide further details if you require them.



Recognizing significant and well-thought-out loss controls, the limits of insurance in place protecting our Corporation have been determined to be adequate by the Business Risk Committee of the Board of Directors.

Insurance limits do not extend to third party clients but rather act to reimburse Northern Trust for insured loss. Client obligations and fiduciary responsibilities are not limited by insurance limits. The Corporation remains responsible for legal liability and to that end; the capital of the Corporation is available.

All Northern Trust employees are bonded and covered under the Bankers Blanket Bond insurance detailed above.

Please see Exhibit 8 for a copy of our valid certificate of insurance.

- 8. Do you prepare a Statement of Auditing Standards 70 report (SAS70)? Briefly list and describe the nature of all errors and/or weaknesses that were discovered as a result of an outside review of the SAS70. What steps have been taken to correct the errors or otherwise improve the controls? Please provide a copy of the SAS70.**

Yes, Northern Trust prepares an in-depth report on the internal controls applicable to processing client transactions. On June 15, 2011, The American Institute for Certified Public Accountants (AICPA) released the Statement on Standards for Attestation Engagements No. 16 (SSAE 16), which replaced the SAS 70 Report with new Service Organization Controls (SOC) Reports. Northern Trust now issues a Type II SOC 1 Report in accordance with SSAE 16.

We engage KPMG to perform an examination of our SOC 1 Report in accordance with the AICPA's SSAE 16 "Reporting on Controls at a Service Organization" and give us an opinion as to the operating effectiveness of the controls identified.

Northern Trust's SOC 1 Report, inclusion of the opinion provided by KPMG, is intended to relieve a client's auditor of the necessity (and corresponding expense) of a similar study of its procedures during the audit of a particular plan. The SOC 1 Report is produced on a semi-annual basis and accompanies our clients' annual reporting package.

There have been no material issues noted by internal and external audits during the past 12 months.

Please refer to Exhibit 7 for our most recent SOC 1 Report.

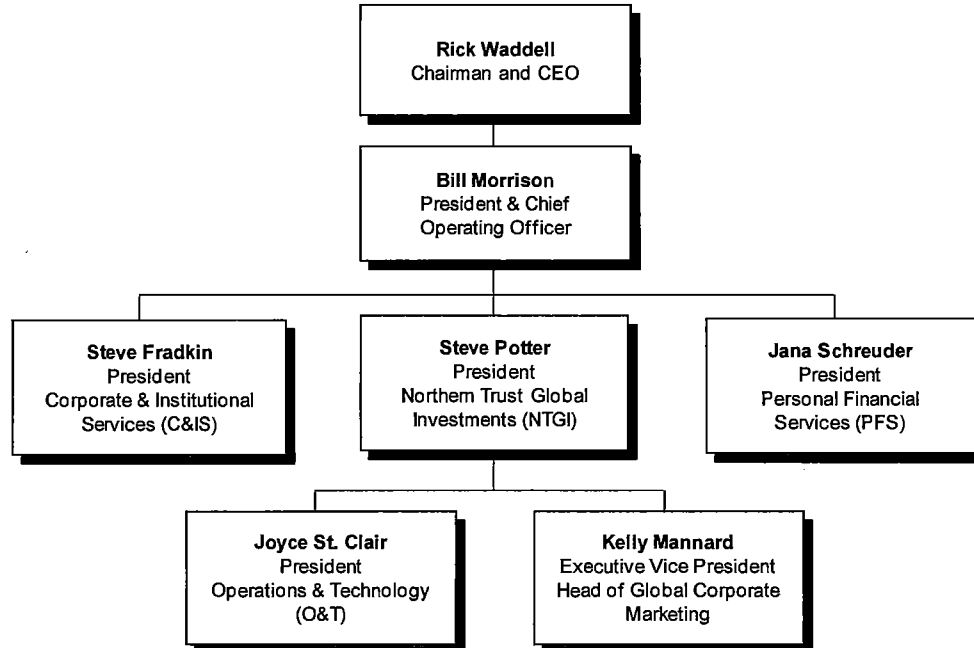


XII. CUSTODY OF ASSETS

1. Explain how the custody and safekeeping units are structured. Are the domestic and global custody operations integrated or separate units? If integrated, describe in detail.

STRUCTURE OF CUSTODY AND SAFEKEEPING SERVICES

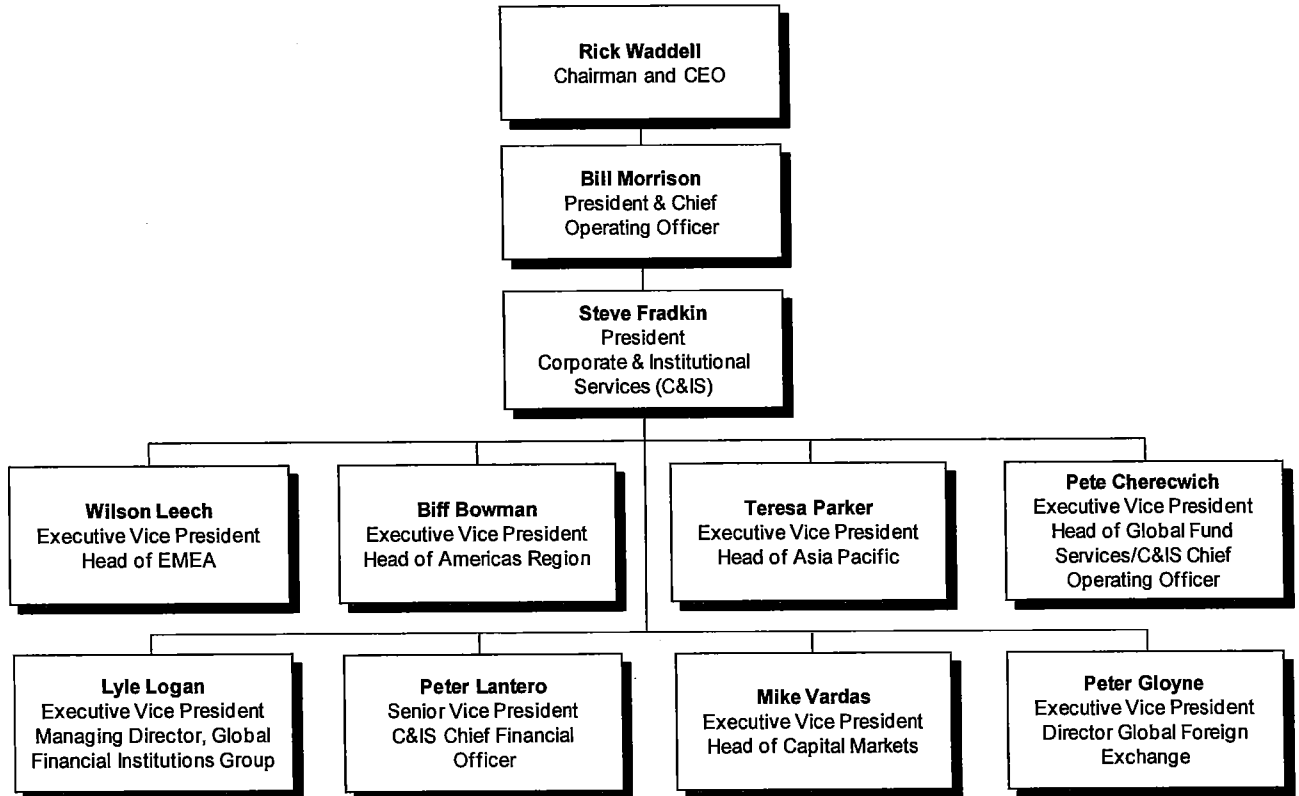
Northern Trust's custody operations are central to our organizational structure as our foundational business. The following organizational chart depicts the senior management of Northern Trust and illustrates the main departmental functions and the ultimate level of accountability for each business unit.



Institutional custody clients are serviced from **Corporate & Institutional Services (C&IS)** led by President Steve Fradkin. Custody/securities operations and technology are headed by President Joyce St. Clair in **Operations & Technology (O&T)**.

OVERVIEW OF C&IS

C&IS is responsible for the strategic direction of the business. The leadership of C&IS is as follows:

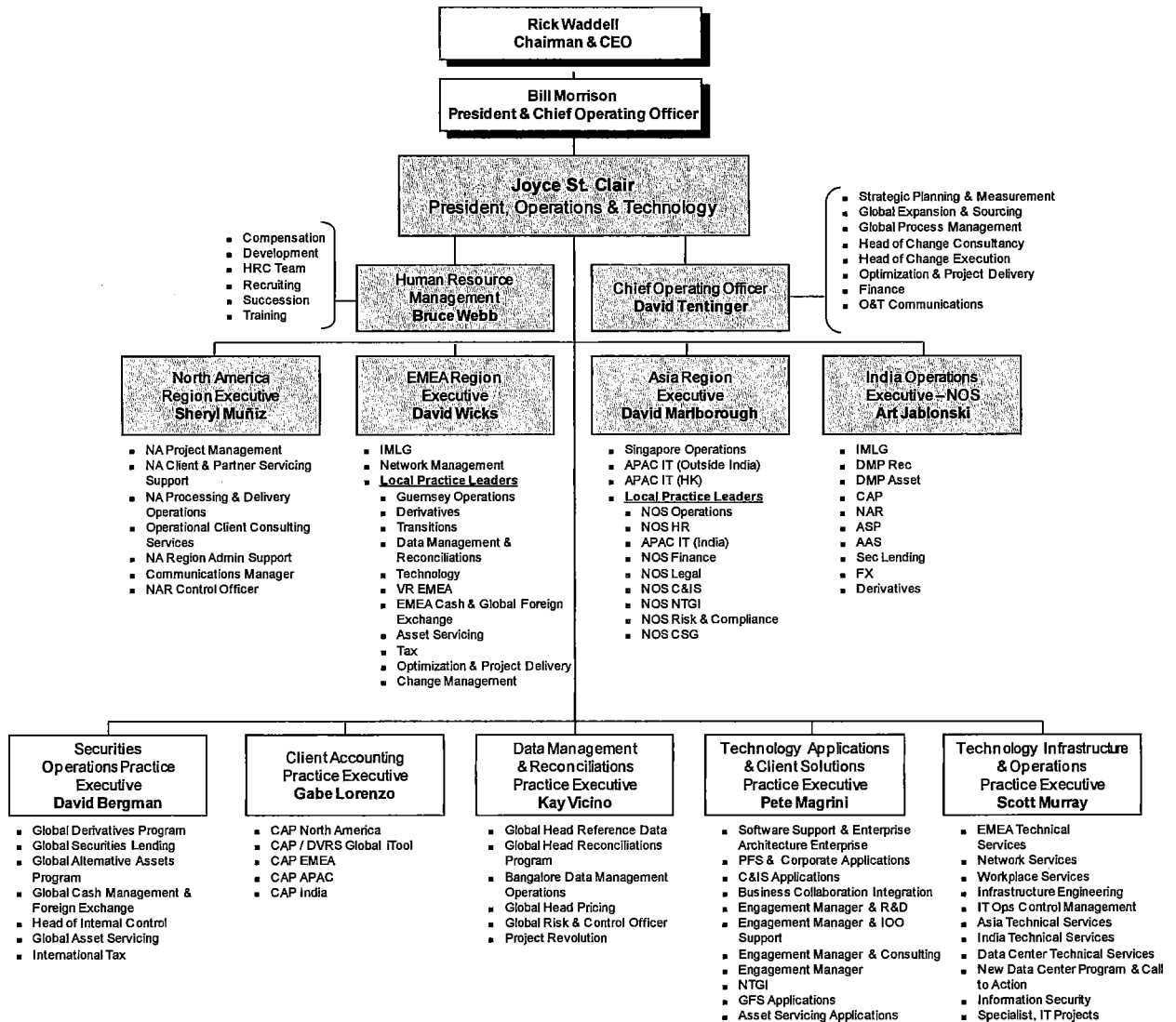


The C&IS business unit is structured to provide focus to our institutional client base and provide the technical expertise, strategic insight, and market knowledge to respond to their changing needs.

OVERVIEW OF O&T

O&T is responsible for, day-to-day processing of all securities-related activities, banking, and Northern Trust’s global technology infrastructure. O&T is organized by both regional and functional lines to promote best execution and consistency in processes worldwide, while at the same time understanding the local markets in which our clients participate and meeting their particular requirements.

An organizational chart of O&T is below:



While each of the leaders outlined above in C&IS and O&T are accountable for their specific areas of responsibility, they are all charged with the ultimate goal of working together to achieve success and satisfaction across all clients and across all disciplines.

DOMESTIC VS. GLOBAL CUSTODY SERVICES

Northern Trust supports both domestic and global custody services on a single, global operating model. This approach is a key differentiator for Northern Trust, and enables us to deliver a higher quality service with more accurate information than is possible on platforms that run multiple regional systems. The personnel support model for this platform, alluded to above, is also globally distributed.

2. Describe your global custody capabilities in detail.

The spectrum of services we offer ranges from fundamental core securities and information services to more advanced risk management and asset management offerings, as outlined below:



CORE GLOBAL CUSTODY SERVICES

SAFEKEEPING

Holding and protecting assets. Northern Trust provides safekeeping services for institutional investors in 102 global securities markets around the world. Assets in these markets are held in various different forms according to local market practice and legislation.

TRADE SETTLEMENT

Delivering precise and timely transmission of trade instructions and settlement completion. In all markets where the local practice is reliable and consistent, Northern Trust offers contractual settlement of securities transactions. Currently we offer contractual settlement in 47 global markets.

TAX RECLAMATION

Reclaiming taxes in markets where tax treaties and exemptions are in place. Our Tax Department works closely with tax offices around the world to ensure the timely turnaround of reclaims for our clients. Our system verifies received income so that the correct percentage of withholding tax is deducted; generates an automatic claim to expedite the return of the withheld income; and provides a detailed report for our clients and their auditors that notifies the status of withheld tax and associated reclaims.

INCOME COLLECTION

Collecting income entitlements on stock holdings as and when the payments fall due. As a worldwide leader in custody and investment services Northern Trust credits income and maturity proceeds on contractual payment date in 38 markets, representing more than 98% of all income payments processed. Income in all other markets is posted upon receipt.

CORPORATE ACTIONS

Ensuring timely and accurate identification of events and settlement of all entitlements. Our dedicated staff systematically gathers and researches events impacting the structure of a firm and our clients' investment in that firm. We provide managers and/or clients with event notifications, with comprehensive details of the issue, including rates, entitlements, and action required, as early as possible after we receive this information from our vendors and/or subcustodians. We communicate corporate action events via our interactive online notification and voting system, **Corporate Action Delivery & Response (CDR)**, via SWIFT, or fax.

PROXY VOTING

Carrying out voting activity in accordance with your instructions. Northern Trust was the first global custodian to notify our clients of annual and extraordinary general meetings and to facilitate the voting of subsequent decisions. Our proxy service is available in 48 markets. Northern Trust partners with Broadridge Financial Solutions for U.S. proxy and ISS for non-U.S. proxy processing to provide the very best level of service in the area of proxy event notifications and voting for annual general meetings and extraordinary meetings.

ACCOUNTING AND REPORTING

Providing accurate data and timely reports about the assets held. Through our single, integrated, multi-currency platform – **Northern Trust Passport**[®] – we are able to provide data accuracy and report consistency to our clients. Passport[®] delivers a complete range of fully-integrated report packages in a single, interactive database. Our Valuation Reporting Analysts perform various daily information audits on client data using Web-based automation tools. Passport[®] is available online 24 hours a day, 7 days a week, 365 days a year and currently serves approximately 4,800 organizations domiciled in 41 countries (this figure represents 30,000 individual institutional clients, investment managers, and consultants).

NEW BUSINESS CONVERSION/TRANSITION

Seamlessly moving assets to a new provider with accuracy and speed. Northern Trust recognizes that the transfer of assets from one custodian to another is an important event that needs to be carefully managed and controlled.



We therefore have a team of people dedicated solely to transferring new business into our custody operation. This team is made up of transition managers and new business consultants.

Building upon our core global custody solutions, we have extensive product capabilities in related areas of information management and asset servicing to help you derive maximum value from your relationship with us. These include:

VALUE-ADDED SERVICES

FOREIGN EXCHANGE

Conducting foreign currency transactions accurately and at competitive exchange rates. Northern Trust offers a comprehensive 24-hour foreign exchange service for 73 currencies through trading rooms in London, Singapore, and Chicago. The FX area functions as an integral part of the global custody product and is focused on the provision of the highest quality service for clients and investment managers. Knowledgeable and experienced IMLG representatives offer fund managers additional support in executing FX transactions. Rates are available for spot, forwards, and outright forwards, and can be quoted on an individual or block-trading basis.

INVESTMENT RISK & ANALYTICAL SERVICES

Monitoring and evaluating investment performance with our suite of risk and analytical tools. Since 1977, Northern Trust has been a leading provider of performance and measurement capabilities to institutional investors and wealthy individuals. Today, with more than \$3.6 trillion in assets in our performance database, we are one of the largest bank providers of performance services worldwide. Developed in partnership with our clients, our system features include multi-currency accounting capabilities, local and reference currency levels for accounting, performance computations and analytics, transactions incorporated on the exact day of execution, and four levels of detail.

INVESTMENT MANAGEMENT

Tailoring strategies that emphasize optimum, risk-adjusted returns. Northern Trust has \$663 billion in global assets under management. Our active and passive portfolio strategies benefit our clients by emphasizing our experience and expertise in quality growth, equity, active fixed income, and cash management as well as our full range of index products and mutual funds.

CASH MANAGEMENT

Highly efficient, automated links to investment vehicles, reducing your need to actively manage cash positions. Northern Trust is the premier provider of cash management services in the global custody marketplace, offering interest-bearing accounts in 19 currencies (including USD). Our broad array of short-term investment vehicles includes: cash investment accounts in more currencies than any other provider; fixed time deposits; short-term collective investment funds; money market mutual funds; and high-yielding investment accounts for non-U.S. residents.

SECURITIES LENDING

At Northern Trust, securities lending provides clients with an investment opportunity to maximize the value of their portfolios, while working within their individual risk tolerances. Northern Trust has offered a U.S. securities lending program since 1981. We were also among the first U.S. banks to lend globally in 1988, and continue to expand into the major and developing markets. Our global network of highly rated parent borrower organizations, 212 worldwide professional staff, and 24-hour trading from offices in Chicago, London, Hong Kong, and Toronto provide our clients flexible lending options and the best opportunity for optimizing returns for loaned securities. We offer an array of pooled collateral sections for cash collateral for diversification and liquidity, as well as custom fund options for clients interested in customizing their guidelines. Northern Trust complies with the applicable Department of Labor and Federal Financial Institutions Examination Council regulations and boasts top financial ratings.



COMMISSION RECAPTURE

Reducing commission expense and enhance performance through effective transaction cost control. This service reduces commission expense and enhances performance through effective transaction cost control. These advantages are available to you without affecting your duty to obtain best execution, your existing trading patterns, or broker relationships.

TRANSITION MANAGEMENT

Minimize the costs and risks of asset allocation through a controlled approach. We effectively manage portfolio restructures by reducing trading costs while managing opportunity costs. We analyze all aspects from pre-trade analysis through execution and settlement to post trade analysis. Through the multi-disciplinary, highly skilled expertise of our team, we develop precise and measurable implementation plans to minimize market impact while maximizing client objectives.

BENEFIT PAYMENTS

Staying current with tax-reporting regulations and offering expert, specific solutions for U.S. and Canadian plan sponsors. The employee benefit environment becomes more complicated each year. As a result, it is essential to find an expert and informed benefit payment provider. With nearly 40 years of experience in benefit payment services, Northern Trust combines knowledge and expertise to provide excellence in benefit payments. Today, our Benefit Payment Services division issues an average of 1,300,000 payments each month for defined benefit and defined contribution plans. In addition to our benefit payment capabilities on Passport[®], we offer a variety of other forms of electronic access services, including electronic data transfer, mainframe electronic data transfer, and magnetic tape.

TRADE EXECUTION ANALYSIS

Ensuring best value for execution and post-trade processing charges. We identify the drivers behind a fund's trading costs including commissions, trade execution, and local fees to meet the growing demand for better transparency into best execution practices. Information is easily accessible via Passport[®] so that clients have the ability to compare the trade executed price to the Volume Weighted Average Price (VWAP). Additionally, clients can determine the price impact of specific trade decisions on a portfolio, or across a range of portfolios.

TENURE OF SENIOR MANAGEMENT AND EXCELLENCE OF STAFF

Northern Trust's array of products alone is impressive; however, it is how we deliver our worldwide capabilities that truly distinguish us from the rest. Our people make that difference. Our senior management team averages over 32 years of industry experience, with 20 years' average at Northern Trust alone. This tenure, combined with our corporate culture that strives for total quality, ensures that we are client focused and dedicated to client satisfaction.

3. **Briefly discuss your policy and procedures for assuring that each client's assets are properly held in safekeeping and positions are accurately maintained in your accounting records. Include information on segregation of assets and distinctions between physical and book entry positions.**

ASSURING ACCURACY – RECONCILIATION WITH SUBCUSTODIANS AND DEPOSITORIES

In addition to our trade processing controls, Northern Trust reconciles clients' cash and stock positions against depositories and subcustodians on a daily basis. We have integrated one of the market's most sophisticated reconciliation systems – SmartStream's TLM – with the rest of our platform. Key aspects of our reconciliation process include:

- Reconciliation is automated – we receive cash and stock positions via SWIFT from depositories and subcustodians which are automatically uploaded to the reconciliation engine. Approximately 80% of cash and 90% of stock positions are automatically reconciled with no manual intervention. Our Reconciliations Group



then manually matches transactions not covered by the automated process, and assigns the remaining exceptions to the appropriate business area for resolution.

- We reconcile at the *transactional* level – and are among the industry's only custodians to do so. Reconciling at the transactional level rather than the position level allows for a higher degree of accuracy, and makes it easier to pinpoint the cause of reconciliation breaks.
- As an additional measure of control, we require our subcustodians to add two additional fields to their SWIFT MT536 message each day: an opening and closing balance for each asset.
- Exceptions reports are reviewed by senior management to identify trends or persistent issues with subcustodians/depositories.
- All physical securities are subject to a semi-annual audit and reconciliation.

Because all of our services are integrated in a single system, there is no need for additional internal reconciliations, which in turn supports more consistent and more accurate data. This key advantage, combined with the rigorous subcustodian and depository reconciliation process described above, can give ERSRI confidence in the accuracy of their information.

PHYSICAL SECURITIES

All physical securities are stored at DTC's custody vault in New York. Using DTC for physical custody is more efficient, and it takes advantage of DTC's technology and experience with physical securities processing. Electronic records of physical holdings with DTC are reconciled against the records in our system on a daily basis. This reconciliation closely follows the process described above, and is performed using the same reconciliation engine. DTC routinely performs vault audits to confirm that their electronic records are in line with physical holdings.

SEGREGATION OF ASSETS

By law, Northern Trust is required to segregate securities held by it on behalf of our asset servicing clients from other clients, as well as from our own assets. Northern Trust ensures that each client's assets are separately recorded on our records, in individual accounts.

Trust assets are not held by Northern Trust individually, but in its capacity as trustee or custodian for others, i.e., trust beneficiaries. The custody and control of trust assets are carried out pursuant to the provisions of a legally binding trust or custodian agreement. Irrespective of the fortunes of the Bank, the terms of the agreement with Northern Trust govern the disposition of trust assets.

We prudently select and monitor subcustodians. We and our subcustodians will take appropriate actions, to the extent available under applicable law, to "ringfence" client securities to protect them from the claims of creditors in the event of insolvency of Northern Trust or the subcustodian. We will take responsibility for securities held with our agents to the extent that any loss arises out of theft, negligence, fraud, willful default, or mysterious disappearance.

Clients' securities accounts and the underlying recordkeeping are managed in such a way to provide protection to the greatest extent possible, so that assets may not be attached or encumbered in connection with any liabilities relating to Northern Trust or its subcustodians.

In overseas markets Northern Trust always serves formal notice and obtains an acknowledgement that the assets held within our account are "fiduciary" assets, not to be mingled or mixed with the Bank's own assets, other clients' assets or the assets of the subcustodian.



4. How do you provide for the timely delivery of domestic and international proxies and proxy statements? Describe the process and reporting capabilities as it relates to securities on loan.

Proxy services are provided in conjunction with two of the industry's leading providers: Broadridge Financial Solutions supports U.S. proxy voting, while ISS Global Proxy Distribution (GPD)⁴ supports global proxy voting in an additional 48 international markets. Both are widely-recognized as industry-leading providers for proxy services.

Below are the markets we support for proxy.

Proxy Markets		
Argentina	India	Singapore
Australia	Indonesia	Slovak Republic
Austria	Ireland	South Africa
Belgium	Israel	South Korea
Brazil	Italy	Spain
Canada	Japan	Sri Lanka
China (Shenzhen and Shanghai)	Kenya	Sweden
Czech Republic	Luxembourg	Switzerland
Denmark	Malaysia	Taiwan
Egypt	Mexico	Thailand
Euroclear	Netherlands	Turkey
Finland	New Zealand	United Arab Emirates
France	Norway	United Kingdom
Germany	Philippines	United States
Greece	Poland	Venezuela
Hong Kong	Portugal	
Hungary	Russia	

Unique to Northern Trust is our dedicated Proxy Voting Team. This team monitors and follows up on any proxy voting issues and queries on behalf of our clients, their investment managers, or vote agents.

Together with our vendors, Northern Trust provides a voting service that offers timely and accurate meeting notification and vote execution employing straight-through processing wherever possible to ensure timeliness and accuracy. Our non-U.S. vote service is provided through a secure, web-based platform offering fully customizable workflow and reporting tools. A web-based platform and fully customizable workflow and reporting tools can be made available for our U.S. vote service through the vendor for an additional fee (charged by the vendor).

NOTIFICATION AND PROCESSING

When a new account is opened at Northern Trust, we request that clients provide us with proxy voting contact information. For non-U.S. proxy voting, we also send a daily encrypted file transmission of holdings to our vendor to update positions on a daily basis. If clients have established standing instructions, their vote will be cast accordingly. For U.S. proxy voting, we provide a response file to a list provided by vendor on a daily basis. Our response file contains both votable and on loan positions. There are no standing instructions for U.S. proxy ballots.

Both of our vendors offer online voting systems (www.proxyvote.com for Broadridge, ProxyExchange for ISS) to help clients efficiently manage the proxy voting process.

⁴ ISS Governance Services is the parent company of GPD.



In the U.S., the deadline is typically 11:59 PM EST on the day prior to the meeting. Globally (including ADRs), voting deadlines are a function of the local market deadline. For example, if the agent has a cut-off date of 3 days before the meeting, ISS would typically advise a cut-off time of 3 days+1. This allows enough time for ISS to coordinate with the subcustodian and ensure that votes are properly cast. A comprehensive list of cut-off times by market is available upon request.

REPORTING

ISS offers a wide range of comprehensive reports, along with the flexibility for clients to customize the format and content of these reports based on their needs. The client is also provided with detailed proxy voting records, which include ballots received, dates voted, number of shares voted, and the type of vote.

Reporting from Broadridge helps clients track upcoming security record and meeting dates. In addition, we can provide a *Position Report* that summarizes how the proxy recipient voted. This report provides the security name, share position, record/meeting date, date of position if voted, and the type of vote, along with a detailed list of individual proposals for each security.

Northern Trust also maintains a full history of non-U.S. proxy voting activity for every event voted on behalf of our clients. Additional reporting which illustrates U.S. proxy voting can be created upon request.

PROCESS FOR VOTING SECURITIES ON LOAN

When shares of U.S. or international securities that participate in Northern Trust's securities lending program are out on loan over a proxy record date, voting rights for those shares accompany the securities. Global ballots reflect the number of securities on loan. To improve communications with investment managers during proxy seasons, U.S. loan positions as well as US non-loan are illustrated on the actual proxy ballot.

In certain markets, Northern Trust may facilitate the return of the lent securities in time for a proxy voting event.

5. How do you record and report (within your system and to clients) corporate actions?

We provide fully automated corporate action decision processing via our web-based tool, **Corporate Action Delivery and Response (CDR)**. CDR is the most up-to-date interactive communication tool available in the market today; many of our clients' investment managers use this as their preferred means of receiving information from us and responding back with event instructions.

CDR allows clients and fund managers to receive and respond to corporate action events via our secure on-line system, **Passport[®]**. The CDR function streamlines the flow of information, allowing users to receive notification and send decisions through established, on-line screens. For efficient processing, CDR provides mass election and mass approval options. In addition, CDR indicates new corporate action events and organizes data by deadline or other key dates.

CDR offers the convenient feature of sending e-mail messages to alert managers and clients of all new or expiring/updated offers. Users can designate the appropriate e-mail address, and can also choose to be notified of voluntary offers, mandatory offers, or both.

For expiring offers, the user will be notified once per day beginning three (3) days prior to the expiration date of the offer. Once a decision has been entered and approved for the entire amount the account holds, the e-mail notice for that expiring corporate action will no longer be sent. For clients that have offices set-up with multiple corporate action teams, they are able to specify notification as appropriate.

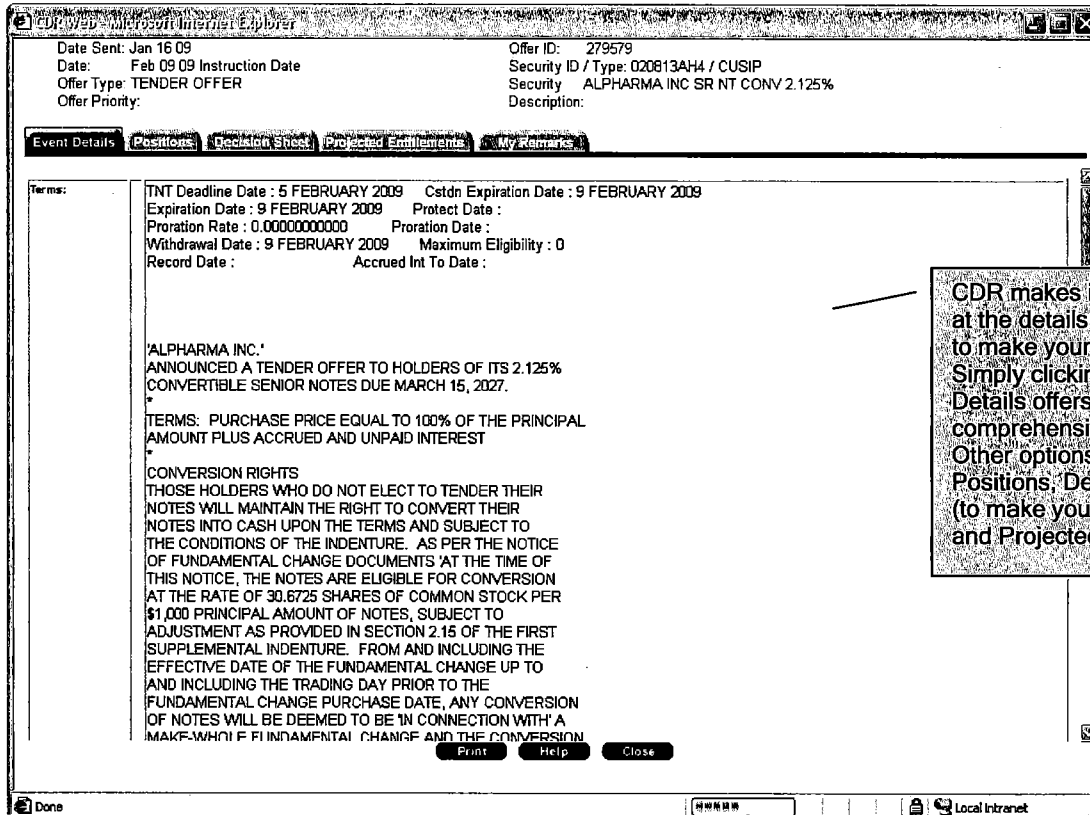
CDR protects the notification and voting process through tiered-access. Clients can restrict access by individual and by two (2) different access levels (decision or a decision/approval combination). In addition, only **Passport[®]** users have access to the CDR application.



Some examples of screenshots within CDR are shown below:

The opening screen of CDR welcomes you with easy-to-follow links on a side menu. Special information and updates are conveyed through links in the center of the screen to stand out and help you find the latest news.

This screen illustrates how the system tracks the events pertaining to your investments.



- 6. List all depositories, agents, and sub-custodian banks used in each country on behalf of the clients. Identify those that are affiliated with your company. For each country, please indicate whether you use a central depository or physical delivery.

Please refer to Exhibit 9 for a list of our worldwide depositories and Exhibit 10 for details on our subcustodians.

In terms of affiliation, we use our own branch or subsidiary companies in Canada, Ireland, the UK, and U.S. as subcustodians. For the other markets in our network, we contract with independently managed agent banks.

For depository use vs. physical settlement, we adhere to local market practice, whereby the market dictates the usage of an established central depository for the settlement of securities vs. physical delivery. In either case, we closely monitor the market practice and conduct due diligence to ensure ours and our clients' assets are held to the most stringent controls and practices.

- 7. Describe your process for monitoring the financial stability and performance of custodial agent banks in foreign markets.

After any subcustodian appointment has been made, their service levels, general operational capabilities, financial standing, procedures, and controls will be monitored rigorously on a daily basis and at more formal agreed intervals such as annually and/or semi-annually.

These various and detailed ongoing checks and assessments are made by a number of different areas within the Bank, as noted above, typically on a daily basis.



For example:

- Each operational area within Northern Trust will monitor the activities of our subcustodians and report any issues or concerns to Network Management as soon as they are identified.
- Our Credit and Risk Policy Committees will review, on an ongoing basis, the financial standing and creditworthiness of the appointed bank (versus its peers in the market).
- Senior management will review and assess the service level relating to the operational deliverables committed to by the subcustodian at the RFP and SLA stage. This will include service areas such as, settlements, corporate actions, tax, reconciliations etc.
- Our Internal Controls team will assess the ongoing reconciliation achievements of the subcustodians.
- Network Management will gather, collate and assess the information provided by all areas of the Bank in relation to the ongoing strength and capabilities of the appointed institution.
- Northern Trust will assess the business contingency preparedness and anti-money laundering controls of all subcustodians.

SUBCUSTODIAN PERFORMANCE REVIEW

The primary rating tool which Network Management utilizes to assess, monitor, and manage the service levels of its appointed subcustodians is its 'Subcustodian Performance Review'.

Fundamental to the overall subcustodian rating process and in the creation of a subcustodian's Performance Review is the 'rater's questionnaire', which is an extensive 60+ questionnaire divided into different operational sections that represent the key areas for which a subcustodian would provide service (e.g., corporate actions, cash reconciliations). The rater's questionnaire is sent to the corresponding operational group within Northern Trust for their assessment and rating, based on their experience with a subcustodian's aptitude and skill in their particular area. The rater will score various functions of the subcustodian in their particular operational section based on their current dealings with the subcustodian. If a rater evaluates a subcustodian's service in a specific area as satisfactory or worse, they must provide additional explanation. Additionally, if a rater notes a fall in service levels in a particular section, they will be prompted within the questionnaire to provide further comment.

After completing the questionnaire, the rater submits the completed form to Network Management for their review. (To note, the entire process surrounding the rater's questionnaire – from request to completion to submission – is handled electronically via Northern Trust's intranet site between the various operational teams and Network Management.)

Once Network Management has reviewed the rater's questionnaires from each operational team and completed any necessary follow-up, the responses and scores from the questionnaires form the foundation for the Performance Review. The remainder of the Performance Review is comprised of a snapshot of the subcustodian, including its external credit ratings and the value of assets that it holds for Northern Trust and our clients, as well as the volume of transactions it handles and fee assessment for Northern Trust. A performance summary, historical table, necessary comment on scores, and graph illustration of service levels are also included. Finally, Network Management's plan for addressing and resolving any service issues is highlighted.

Depending on the value of assets that a subcustodian holds for Northern Trust and its clients, a "market type" is assigned to the subcustodian (e.g. Top 5, Top 25).

Based on the market type, a service level benchmark is allocated for the Performance Review. The individual ratings for the subcustodian in each of the operational areas, as well as its overall score on the Performance Review must meet the assigned required service level benchmark.

Performance standards (upon which formal scoring is based) are documented upon the initial signing of the Subcustody Agreement (SCA) with the appointed subcustodian. However, any deviations from the agreed service standards at any time are brought to the attention of the subcustodian for rectification and compensation, if



necessary. Should service levels and/or Performance Review scores not be brought back up to the agreed standard within the time frames stipulated by Network Management, Northern Trust will not hesitate in initiating a formal review of the subcustodian's overall performance levels and transferring business to an alternative supplier if deemed appropriate.

All subcustodians receive at least one Performance Review annually, with the higher value market types receiving at least two. Performance Reviews are presented every month to the Subcustodian Oversight Committee for their review and acceptance. In addition, senior management reviews all critical functions against the servicing standards concerning the subcustodian's performance and service in their weekly operations meetings.

Network Management also shares the Performance Review with the subcustodian during onsite market visits and any service issues are addressed and monitored on a continuing basis.

As highlighted above, the Performance Review encompasses a number of checks and formal evaluations, including settlement rates, performance standards, audit and control issues, accounting capabilities, electronic interfaces, corporate action procedures, and tax reclamation standards. Not only are all of these checks conducted during the formal annual on-site visit, but they are also monitored on an ongoing basis by Network Management and other internal operational staff. With its use of Performance Reviews, Network Management has realized enhanced lines of communication, improved service levels, and increased mutual productivity with its subcustodians.

DUE DILIGENCE

As part of Network Management's service and risk management operations, annual due diligence reviews are performed for each subcustodian bank and market where third party relationships are maintained. Included in the review process is an annual onsite visitation program that covers 99% of the value of assets held with subcustodians.

One of the key review criteria that is evaluated in detail at this stage is the subcustodian's actual performance in terms of enabling Northern Trust to provide a seamless high quality service to our clients. Specifically this relates to the quality, completeness and timeliness of the information they provide for our clients and us.

This review also encompasses a number of checks and formal evaluations including:

- Confirm that the subcustodian's proprietary assets are segregated from those of our clients
- Performance review against service standards
- Operational controls e.g. trade processing, corporate actions, tax reclaims etc.
- Staffing levels, experience, expertise
- Business continuity and disaster recovery preparedness
- Anti money laundering controls
- Audit results
- Validate that the terms and conditions of the Subcustody Custody Agreement are valid and enforceable under the Laws of each jurisdiction where services are performed
- Market developments and market operational issues

All of these formalized controls, checks, and procedures aside, it is important to note that any deviations from the subcustodian's agreed service standards would need to be rectified immediately by the subcustodian and compensated for if necessary. Should service levels not be brought back up to the agreed standard within the time frames stipulated by the Network Management we will have no hesitation in initiating a formal review of the subcustodian's overall performance levels and transferring our business to an alternative supplier if deemed appropriate.



Senior management reviews all critical functions, such as subcustodian performance, at their weekly operations meetings, assessing this in the context of general service standards.

Our due diligence program provides an effective and competitive service and risk management program, while remaining cost neutral. The below table summarizes the relevant due diligence schedule:

Segment Type	Segment 1 – Markets with assets greater than US\$ 5 million	Segment 2 – Markets with assets <u>not</u> greater than US\$ 5 million	Segment 3 - Travel advisories
Due Diligence Visit Schedule	Annually	Every one to three years	Annual Remote Due Diligence

When a subcustodian is not visited during a year, a "remote" due diligence visit will be performed via telephone and e-mail, and documented in the usual way. In addition, Network Management may visit a regional operating centre of a subcustodian instead of the on-site location to conduct a due diligence review. A variety of situations may occur that would require Network Management to make unplanned visits to countries (economic and/or service crisis, credit issues, etc.) In such circumstances, the relevant interested parties within Northern Trust will assess the need for a market visit, and this will be undertaken as required.

FINANCIAL & CREDIT REVIEWS OF SUBCUSTODIANS

Northern Trust's Global Financial Institutions Group conducts (i) financial and credit reviews prior to the appointment of a subcustodian and (ii) a complete in depth review performed on a regularly scheduled basis as well as monitoring current news and market conditions which may constitute in depth interim reviews. Credit risk management activities are supervised by the Counterparty Risk Management Committee, which reviews credit exposure to all Northern Trust counterparties and is responsible with managing and monitoring counterparty risk throughout the Corporation.

Credit risk and financial reviews include:

- A review of specific key financial institution performance metrics
- An analysis of the subcustodian bank's historical, present and projected earnings in relation to the industry and its peers in its country of domicile.
- A review of the subcustodian bank's balance sheet including an analysis of its capital position in current versus former years, an analysis of its asset quality , and an analysis of the institution's liquidity and market risk profile.
- A review of the subcustodian bank's ownership/structure and its overall importance to its parent.
- An analysis of the subcustodian bank's importance to its country's financial system.

Note: A subcustodian must meet Northern Trust's credit requirements before it can first be considered as a potential provider. Only at this stage, will Northern Trust then review the subcustodian's service capabilities.

8. Describe special procedures you employ for processing, valuing, and reporting derivative products, including futures, forwards, options, short sells, etc. and to what degree are you prepared for any pending regulatory changes?

PROCESSING AND VALUING DERIVATIVE PRODUCTS

Northern Trust provides valuations for exchange-traded derivatives as an integrated part of our overall service offering. Our pricing capabilities offer several key benefits to clients:



- Independent market standards for price verification
- Fair value pricing
- Greater price transparency for investors
- Compliance with International Financial Reporting Standards (IFRS) requiring revaluation with fair market prices

VALUATION METHODOLOGY

All derivatives are valued using fair market value in line with IFRS requirements, where these prices are available, and are marked-to-market in accordance to generally accepted accounting practices.

For ETD securities, our pricing vendors deliver exchange closing prices each day. For over-the-counter (OTC) derivatives, independent valuation vendors are used. Independent vendor valuations are received daily.

Valuation methodology employed by all independent vendors reflects either generally accepted or market-leading practices, with sample models and methods available upon request. The principal vendors for both ETD and OTC derivatives are listed below.

SUPPORT FOR EXOTIC AND/OR STRUCTURED OTC INVESTMENTS

Through a strategic alliance with Numerix, Northern Trust is now able to provide fully-transparent valuations for any type of OTC instrument, including exotic and/or structured contracts. The alliance further expands Northern Trust's independent valuation capabilities, providing clients with valuation data that is defensible, consistent, transparent, and auditable.

Valuations include market data, assumptions used in the model setup (including calibration), static data, and trade definition inputs to allow for fully-transparent valuations. To provide this service, Numerix staff are physically located with our Derivative Pricing Teams in each of our global processing centers.

INDEPENDENT PRICING VENDORS

Our pricing vendors for derivatives include the following:

- **Exchange Traded:** FT Interactive Data (FTID), GMI, Reuters, Telekeurs, Bloomberg
- **Over-the-Counter:** Markit Partners, SuperDerivatives, and Numerix

VENDOR REVIEW PROCESS

When choosing vendors, Northern Trust performs an extensive quality checking process to ensure the models and market data used meet industry standards. We analyze the assumptions factored into the models and evaluate the output based on other valuation sources available to Northern Trust (e.g., Bloomberg). We also perform a due diligence process to familiarize ourselves with the price verification, threshold exception monitoring, and general data quality checks that the proposed vendor has as part of their valuation service.

When we extend coverage on OTC derivative products using current valuation vendors, Northern Trust performs a due diligence process similar to the one outlined above.

INTERNAL CONTROLS FOR PRICE VERIFICATION

Although our valuation vendors have quality control checks in place as part of their models, prices provided for derivatives are subject to the same scrubbing procedure and tolerance checks as all other asset prices received by our pricing group. Please see Question 5 in the Portfolio Accounting section for additional information on our price validation processes.



REPORTING FOR DERIVATIVE PRODUCTS

Through Passport[®], clients have access to a wide range of derivatives reports for both OTC and ETD instruments. These reports help client monitor derivative instruments and gather information for investment performance and risk reporting. Reports include:

- **Asset Allocation Summary:** Holdings by region within various asset classes showing market value before and after the derivative instruments.
- **Derivatives Asset Summary:** Futures holdings and forward currency contracts in notional value terms, both absolute and net (there is also a detailed version of this report).
- **Forward Currency Contracts Hedging Report:** Holdings by the effective currency exposure, reporting the impact of foreign exchange deals.
- **Derivatives Contract – Holdings Detail:** All derivative holdings in an account or consolidation of accounts, categorized by type of contract and underlying risk type. This report helps meet the new requirements under GASB 53. A summary version of this report is also available.
- **Derivatives Contract-Earnings Detail:** Earnings (e.g., income, expense, realized gain/loss) is shown for the reporting period for any contract held during the reporting period, categorized by contract type and underlying risk type. This report helps meet the new requirements under GASB 53. A summary version of this report is also available.
- **Derivatives Risk Exposure:** Summarizes derivative holdings by type, categorized by underlying risk and type of contract. This report helps meet the new requirements under GASB 53. Holdings-based and earnings-based variants of the report are also available.
- **Segmented Time Distribution Derivatives Reports:** Summary- and detail-level reports that outline time to maturity on derivative securities. The positions are categorized first by asset or liability, and then by instrument type. Instrument types are subcategorized by underlying risk exposure. Segmentations are based on notional market value of each security. These reports support GASB 53's revised requirements surrounding interest rate risk disclosure.

There are also various holdings reports which split out holdings by asset class or derivative type and give additional information, such as:

- Standard fixed income derivatives detail
- Futures detail
- Options detail
- Forward currency contracts detail
- Spot currency contracts detail
- Swaps detail

MONITORING REGULATORY CHANGES

The Risk Management and Compliance Group within C&IS, as well as our Corporate Legal Department are responsible for monitoring legal and/or regulatory changes that could affect the administration of our clients' accounts. These departments frequently work with our relationship management staff to help keep them – and their clients – informed of relevant legal and regulatory changes. We have several client communications, including newsletters and e-mailings that we distribute to our clients to keep them abreast of market and industry developments.

In addition, Northern Trust's legal and risk management attorneys often work with our clients and their attorneys to design and modify trust and custody agreements. By keeping abreast of emerging legislative and regulatory changes, we are able to assist our clients in developing documents, which will reflect those changes.



The Risk Management and Compliance Group is supported by six attorneys and five compliance officers. Our Legal Department currently has five attorneys dedicated to C&IS.

9. Describe special procedures you employ for processing, valuing and reporting alternative investment limited partnerships.

Northern Trust understands private equity, hedge funds, and real estate from all perspectives: as an asset manager, as an asset administrator, and as a custodian of our investors' portfolios. As this asset class has grown exponentially in recent years, Northern Trust has committed significant capital resources and personnel toward building proprietary systems that help our clients effectively manage these complex and paper-intensive instruments:

- Our **Alternative Investments Operations Team** includes over 300 individuals worldwide who are dedicated to processing and servicing alternative investments.
- **Portfolio Accounting Analysts** are assigned to each account and are available to answer questions and provide information on transactions and valuations.
- We offer clients access to our **Trade Order Entry** application via Passport[®], which allows clients to communicate investment directives from their office electronically.

Together, the technology and dedicated professionals knowledgeable in these asset classes combine to offer superior service for your portfolio.

PROCESSING AND VALUING ALTERNATIVE INVESTMENT LIMITED PARTNERSHIPS

Northern Trust's approach to accounting for private investments employs a unique process that actively pursues the manager-supplied information on your behalf. For each of the 5,000 funds we communicate with for our clients, a technician with industry experience is assigned to handle all aspects of data collection, reconciliation, and problem resolution. For example:

- If statements do not arrive by their expected date, the technician will contact the manager to ensure delivery of the statement.
- If the partnership issues a capital call and the client has not directed payment, we contact clients to notify them of the pending call to ensure deadlines are met.

Technicians collect granular information about transactions, including detail on how much of a capital call is represented by fees, the gross components of a net distribution, and valuations statement arrival date and amount. This allows Northern Trust to provide clients with the most comprehensive and detailed trust accounting reports in the industry.

VALUE ADDED SERVICES

In addition to our market leading standard reporting, we also offer two premium products:

- **Private Monitor™** is a detailed tracking and analysis service that includes funding tracking (PIC, DPI, RVPI, TVPI), state of the industry performance metrics (various IRRs and modified IRRs), 3 levels of benchmarking (opportunity cost, program universe comparisons, and vintage year comparisons), risk analyses, partnership company holdings analysis, and proprietary and state of the industry liquidity management modeling. Private Monitor can also accommodate tracking of real estate investments as well.
- **Hedge Fund Monitor™** is a premium service which provides reporting on the hedge fund portfolio, including transactional activity, estimated and statement valuations, attribution, performance, terms tracking, and liquidity projections.



ALTERNATIVE INVESTMENT LIMITED PARTNERSHIP REPORTING

Northern Trust offers clients a range of standard custody reports that provide detail regarding market values and cash activity for alternative assets. Standard reports include adjusted valuations summary, valuation status summary and reconciliation of adjusted valuation and cash flow reporting. All these reports are available via Passport® our proprietary on-line reporting tool.

Our Private Monitor™ suite of reports include valuation, detailed cash flow activity, commitment and funding reports, IRR analyses, MIRR analyses, public market equivalent analysis, vintage year comparisons, partnership holdings, valuation and exposure reporting, and attribution. Reporting is customizable and delivered via Passport®.

The Private Monitor service also includes an interactive cash flow and asset allocation modeling tool called Private Outlook™. The web models presented via Passport® allows the user to understand the likely range of capital calls and distributions under a wide range of scenarios and environments for near and long -term horizons. This model can also use the impact of the model cash flow behaviors to infer an unrealized value to help understand future asset allocation changes.

For volatility modeling, Northern Trust includes private equity in the total portfolio risk analysis using a proprietary process. The process begins by selecting an appropriate public equity benchmark that matches the private equity manager's investment strategy (i.e. small cap index for venture capital, mid-cap index for buy-out, etc.). The index is then re-weighted to reflect the manager's actual sector allocation, thus capturing the appropriate risk exposures. This market based approach removes any smoothing effects from accounting valuations and reflects the economic exposure of the private equity portfolio. The private equity proxy is then integrated into a total plan risk analysis of both public and private market assets. This resulting risk analysis captures the volatility and correlation between public and private assets so diversification benefits can be quantified and total plan risk can be forecasted.

STANDARD REPORTS

Northern Trust offers clients a range of reports that provide detail regarding market values and cash activity for alternative assets.

Valuation reports available include the following:

- **PE-LP Adjusted Valuation Summary**
 - ◆ Reflects all activity related to the partnership over selected period
 - ◆ Includes period end adjusted market value
 - ◆ Netted cash flows are broken out into components and displayed in summary form
- **PE-LP Valuation Status Summary**
 - ◆ Enables the limited partner to reconcile the date of the most recent partnership valuation, determine when it was received by Northern Trust and view our adjusted market value, taking into account subsequent cash flows since valuation date
- **PE-Reconciliation of Adjusted Valuation**
 - ◆ Highlights which cash flow transactions were added to the general partner's last statement valuation

Following are details of sample characteristic reports that are available.

- **PE-LP Exposure Summary by Type:**
 - ◆ Sorts limited partnerships by type (buy outs, venture capital, property, fund of funds etc)
 - ◆ Provides adjusted valuation in local and base currencies
 - ◆ Provides specific information on limited partnerships (vintage year, total commitment amount and types)



- **PE-LP Exposure Summary by Vintage Year:**
 - ◆ Sorts limited partnerships by vintage year
 - ◆ Provides adjusted valuation in local and base currencies
 - ◆ Provides specific information on limited partnerships (vintage year, total commitment amount and types)

- **PE-LP Exposure Summary by Local Currency:**
 - ◆ Sorts limited partnerships by local currency of limited partnerships
 - ◆ Provides adjusted valuation in local and base currencies
 - ◆ Provides specific information on limited partnerships (vintage year, total commitment amount and types)

10. Describe your procedures for processing and settling FX contracts, options, futures, etc.

Foreign currency derivatives are processed using the same system as other OTC derivatives, for which we have provided information both below and in our response to Question 8 above.

PROCESSING AND SETTLING FX INSTRUMENTS

Northern Trust has a team of OTC derivatives experts that are responsible for overseeing all processes and providing support to clients for their OTC derivative investments. Our processing capabilities include the following:

- Our global asset servicing platform utilizes Summit, which helps us deliver OTC derivative processing and accounting as an integrated part of our overall service model.

- We support connections to industry utilities such as Numerix, Markit Revaluation Services, SuperDerivatives, and Markit Trade Manager for reconciliations and confirmation processing, and a range of order management systems.

- Northern Trust uses FpML, the industry standard for communicating OTC transactions. FpML provides a messaging format that enables us to accept and deliver trade messages electronically and in a standard format.
 - ◆ For clients and/or brokers who do not use FpML, Northern Trust provides trade order templates that allow trades to be submitted through CSV, Excel, MQ, and other forms of communication via FTP, while retaining the advantages of automated processing.

- Processes requiring manual intervention are governed by rigorous controls and quality checking processes to promote accuracy.

Specific to foreign currency derivatives, we process standard spot, forward, and non-deliverable forwards as well as OTC derivatives, including currency options, exotics currency options (i.e. barrier, binary, etc.) cross currency swaps, etc. to name the most common types. Our daily valuations approach is to use WM Reuters observed rates to present value the spot, forward and non-deliverable forwards. All OTC derivatives are valued by SuperDerivatives using unbiased mid-market inputs based on market observables including executed trades and broker/dealer indicative levels. When reporting the foreign currency derivatives, we display the market values in the local currency as well as the base currency as per the client preference.



XIII. CASH MANAGEMENT

1. What investment vehicles are available for overnight investment? What alternatives are available in countries where short-term investment funds are not available? Which can be assessed automatically by a "sweep"?

Provide a description of each Short Term Investment Funds (STIF) product, including:

- a. Investment Philosophy
- b. Objectives and Guidelines
- c. Investment Performance and Average Maturities – Current and Historic
- d. Investment Management Fees
- e. Sweep Fees (if separate from investment management fees)
- f. Minimum Quality Ratings

The objective of our cash management product for qualified assets is to preserve principal, generate a competitive yield, and provide daily liquidity. Our investment style emphasizes:

- **Principal Preservation.** We believe that comprehensive risk control and an extensive credit review process are fundamental in the implementation of our investment strategy.
- **Yield Maximization.** Through the use of a consistent, well-defined decision making process and the use of high quality credits, we seek to maximize investments in higher yielding, actively managed vehicles, while maintaining necessary daily liquidity.
- **Liquidity Management.** Size and scale coupled with sophisticated technology allow for the precise management of flows and participant daily liquidity needs.

CREDIT QUALITY

Credit quality for STIF funds is managed jointly by Portfolio Management Team and the Fixed Income Research Group. Drawing on extensive industry resources and frequent company visits, the Fixed Income Research Group focuses on identifying market trends that will impact the credit quality of individual companies and industry sectors. Credit quality opinions are updated at least quarterly with written credit reviews generated no less than annually.

Based on this research, the Fixed Income Research Group develops and maintains our Master Eligible List (MEL), which identifies issuers that meet our credit risk limitations and have sufficient liquidity for investment. Portfolio managers may only invest in securities issued by names on the MEL.

The following funds are available for qualified investments:

COLLECTIVE SHORT-TERM INVESTMENT FUND (STIF)

The Short-Term Investment Fund, a collective fund of Northern Trust Investments, Inc. (NTI), is an investment vehicle for cash reserves that seeks to offer a competitive rate of return through a portfolio of high-grade, short-term, money market instruments. Principal preservation is the prime objective, with liquidity management also emphasized to provide for redemption of units on any business day. The fund invests only in high quality securities. Within quality, maturity, and sector diversification guidelines, the fund invests in those securities with the most attractive yields. Admissions and withdrawals may be made daily at a constant \$1.00 net asset value (NAV). Interest is accrued daily and distributed monthly. The fees for this fund are 15 basis points.



COLLECTIVE GOVERNMENT SHORT-TERM INVESTMENT FUND (GOV'T STIF)

The Government Short-Term Investment Fund, a collective fund of Northern Trust Investments, Inc. (NTI), is an investment vehicle for cash reserves that seeks to offer a competitive rate of return through a portfolio of obligations of the U.S. Government, its agencies or instrumentalities, and related money market instruments. Principal preservation is the primary objective with liquidity management also emphasized to provide for redemption of units on any business day. Within maturity and sector diversification guidelines, the fund invests in those securities with the most attractive yields. Admissions and withdrawals may be made daily at a constant \$1.00 net asset value (NAV). Interest is accrued daily and distributed monthly. The fees for this fund are 15 basis points.

Please refer to the STIF and Gov't STIF white pages included with this response as Exhibit 11 for information regarding objectives, average maturities, and other details.

ALTERNATIVES TO STIF

Interest-bearing accounts are designed for investors seeking to gain a competitive rate of return while maintaining maximum liquidity. If funds are left idle in a client cash account, interest is paid on the entire cash balance in each currency by default. Northern Trust's interest rates for interest bearing accounts are among the most competitive available for these "casual" cash balances.

Interest-bearing accounts are available in the 19 currencies listed below. Northern Trust pays interest on all cash balances held in any of these currencies.

Australian dollar	Hungarian forint	South African rand
British pound sterling	Japanese yen	Swedish krona
Canadian dollar	Mexican peso	Swiss franc
Czech koruna	New Zealand dollar	Turkish lira
Danish krone	Norwegian kroner	U.S. dollar
Euro	Polish zloty	
Hong Kong dollar	Singapore dollar	

ACCRUAL AND CAPITALIZATION FOR INTEREST BEARING ACCOUNTS

Interest is accrued daily and posted to your account on a monthly basis, typically the third business day after month end. This ensures that all entries have been posted to the account.

AVAILABILITY OF AUTOMATED SWEEP

Both our STIF and Gov't STIF vehicles are part of Northern Trust's automated cash management facility that sweeps all daily cash balances, net of purchase and sale activity for that day, to a zero balance, provided that cash is received by established deadlines.

2. Describe your process of maintaining full investment ("daily sweep") of US cash and foreign currency balances for plans invested globally, including:

a. Investment vehicles available to the sweep (discussed in the section as STIFs)

Please refer to our response in Question 1 above.

b. How sweep ties into trust accounting and cash forecast

The sweep of cash balances into our short-term investment vehicles is an automated process, helping to ensure that the proper balance is swept and accrued on a daily basis.



Passport® offers several standard portfolio statement reports that reflect the balances included in each day's sweep. Cash balances are clearly categorized in each report so clients and their managers can clearly identify individual cash positions and how those positions roll up into the overall valuation of the portfolio. Accrued interest (since the most recent interest capitalization) is included in cash balance reporting and clearly identified as such. More specific reports aid the client in reconciling each day's swept balance with the corresponding accrual change up to the next scheduled capitalization event.

In addition, our cash forecasting reports reflect the same cash balance information on a daily basis, but project those balances to the coming business day and future dates based on known events. Each cash balance within the portfolio is segregated to show the start-of-day amount, subsequent settlement activity (trades, income, maturities, etc.), as well as a projected end-of-day cash balance. Forecasting reports also include pending transactions that will impact future cash balances. As transactions settle throughout each trading day, the status code associated with that event will change from "pending" to "settled". Overdue / failed trades will have their own status of "pending investigation".

c. Process and timing of notification of investment managers of available cash

Investment managers and clients can view daily cash statements, containing balance and settlement activity, online via Passport®. Information is typically available from the start of each business day and updated on an intraday basis as follows:

Global Accounts – Updated every 20 minutes:

- Starting at 8:00 p.m. (Chicago), 2:00 a.m. (London), 10:00 a.m. (Singapore)
- Ending next day at 4:00 p.m. (Chicago), 10:00 p.m. (London), 6:00 a.m. (Singapore)

U.S. Domestic Accounts – Updated every 20 minutes:

- Starting at 7:00 a.m. (Chicago)
- Ending at 5:00 p.m. (Chicago)

AVAILABLE REPORTS

Standard reports available include:

- **Cash Balance Summary in Local and Base Currency:** All current liquid and invested cash balances, by currency, variation or initial margin positions, and short-term positions in fixed deposits, as well as any cash held externally (if applicable).
- **Cash Activity Summary in Local and Base Currency:** Summarizes all cash activity by settlement currency, including opening and closing cash positions. Users can select the time frame for this report.
- **Cash Activity Detail in Local and Base Currency:** Detailed listing of all cash activity, by settlement currency, including opening and closing cash positions. The user can select the time frame, and transaction narratives describe the cash movement in detail.

d. Timing requirements for notification of cash needs

For all non-trade related cash receipts, a pre-advice is requested. The currency and market deadlines influence Northern Trust's treatment of unexpected receipts after investment cut-off. Northern Trust acts on a "best efforts" basis when unexpected receipts are received after cut-off.



TRANSMISSION DELIVERY CUTOFFS FOR WEB CASH MOVEMENT

- Incoming ACH 3:55 PM CT
- Outgoing ACH 4:30 PM CT
- Check Deposit 11:25 AM CT
- Check Issue 11:35 AM CT
- Account Transfer 4:00 PM CT
- Wire Transfer In/Out 4:00 PM CT

e. Treatment of unexpected receipts after investment cut-off

As mentioned above, Northern Trust processes unexpected receipts (those received without a pre-advice) on a "best efforts" basis.

Where the receipt is within our standard cut-off times, we can generally provide immediately available funds, though we cannot guarantee it. For payments received at or near the cut-off time, the unexpected receipt may be delayed by one business day.

Depending on the type of currency, unexpected cash may be deposited into the client's trust account and swept into our overnight sweep, or be diverted to a "suspense" account for a manual post to the client's trust account.

f. Identification of automated procedures and manual procedures

All sweep procedures are automated.

g. Client and investment manager electronic access to information:

h. Cash sweep (investment) transactions

i. Details of the day's cash remittances and disbursements

j. Detail supporting calculation of day's deposit to or withdrawal from STIF

All of the above information is available daily, on-line in electronic format to both clients and investment managers.

3. Describe your program for providing fail float interest on sales proceeds from settlement date and on purchase cost during fail period.

For information on our policies surrounding compensation for failed trades, please refer to our response in Question 10 in the Transaction Services section.

4. Describe your capabilities in providing foreign exchange support to clients of master custody with global investment.

Northern Trust provides a range of trade methods and FX-related products so that our clients and their managers have the choice to execute FX deals with Northern Trust as principal in the way that works best for them. Key aspects of Northern Trust's FX services include the following:

- We facilitate FX trading in 73 currencies, acting as a market maker with respect to 38 of those currencies, with trading in 35 additional currencies supported through subcustodians



- We offer a range of options so that clients and their managers can choose how and when they execute trades with Northern Trust.
- Our traders negotiate rates for individual or block trades, quoting on spots, swaps, and forwards outright.
- We can provide transparency to clients, including (but not limited to) market snapshots, pre-agreed execution times, and time stamps.
- Clients and managers can access Northern Trust for information and research material on the FX market, and are able to speak with our traders directly.
- We are a shareholder in Continuous Linked Settlement Services Ltd. (CLS), joining forces with other industry players to reduce foreign exchange settlement risk. CLS creates a payment vs. payment environment by linking the two parts of a trade without guaranteeing them. If one entity does not honor its part of the transaction, both payments are cancelled and settlement risk is removed.

TRADING PROCESS – OPTIONS FOR MANAGERS AND CLIENTS

When an institutional investor hires an investment manager, the manager assumes responsibility for investment decision-making for that portfolio, including executing the appropriate foreign exchange trades.

Northern Trust works with clients and/or their managers to define how they want their trades handled should they choose Northern Trust as the foreign exchange counterparty. There are two primary methods a client or their manager can select to engage in FX trading with Northern Trust: direct negotiation with the FX desks or by leaving some form of standing instruction to automatically convert currency.

The vast majority of our foreign exchange activity by value is the result of **direct negotiation**. Clients or their investment managers agree to an FX rate with Northern Trust in a live market environment at the time the trade is placed. Managers can call our dealing rooms directly to negotiate a rate, or they can negotiate a rate through online trading platforms such as Bloomberg or FXall. We also offer access to direct negotiation through our own proprietary online FX trading platform, FX Passport®.

In other cases, trades (typically smaller in size) may be executed via **standing instructions** at times specified with reference to a published benchmark in those instructions. For example, a manager may arrange with Northern Trust that FX transactions are to be collected throughout the day, batched, and executed using a published benchmark specified by the manager. If standing instructions do not specify the time of execution, FX trades are batched, netted, and executed throughout the day. In either case, Northern Trust determines the rate at the time of execution. Foreign exchange transactions executed via standing instruction comprise a relatively small percentage by value of our foreign exchange activity.

Managers also have the option to select a service that will automatically convert income received into a base or preferred currency. Northern Trust sets the rates for these currency transactions each morning and income is credited to the client's account in their base currency on the day the income is paid.

In summary, there are many ways to place FX trades with Northern Trust's FX desks, and we work with clients and their managers to establish a process that is acceptable to all parties.



XIV. TRANSACTION SERVICES

1. Discuss procedures for posting trades and foreign exchange transactions to client accounts upon receipt of initial advice, including for each security class:

a. Posting date

U.S. SETTLEMENT POLICY

In the U.S. securities markets, Northern Trust offers clients actual settlement, which provides them with the maximum opportunity for investment of idle cash balances. Proceeds on sales begin earning interest at the point of settlement. In the rare instance that a trade does not settle on contractual settlement date, due to error or negligence on behalf of Northern Trust, accounts are credited with due interest. In addition, clients continue to earn interest on buy transactions until they actually settle.

Overall, our U.S. settlement rates are consistently high at 98%, so that actual and contractual settlement are nearly always identical. Fail rates for buys are slightly higher than for sells (due to our reduced amount of control over the brokers' ability to deliver timely and effectively) and this policy therefore works to the greatest advantage for our clients.

GLOBAL SETTLEMENT POLICY

In markets outside the U.S., where the local practice is reliable and consistent, Northern Trust offers contractual settlement, pending formal credit approval from Northern Trust's Credit Review Committee. Currently, we offer contractual settlement in the following markets:

Contractual Settlement Markets			
Australia	Euroclear	Latvia	Romania
Austria	Finland	Lithuania	Singapore
Bangladesh	France	Luxembourg	South Africa
Belgium	Germany	Mauritius	South Korea
Botswana	Greece	Mexico	Spain
Canada	Hong Kong	Morocco	Sweden
Chile	Hungary	Netherlands	Switzerland
China	Ireland	New Zealand	Taiwan
Cyprus	Israel	Norway	Thailand
Czech Republic	Italy	Philippines	Turkey
Denmark	Japan	Poland	United Kingdom
Estonia	Jordan	Portugal	

Our contractual settlement process settles cash on a contractual basis and securities on an actual basis, in accordance with local market practice. Contractual settlement is offered only for instruments traded on regulated exchanges. Thus, contractual settlement is not offered for over-the-counter (OTC) transactions, such as futures, options, purchases/sales in units of mutual funds, and non-DVP trades.

b. Effective date

For all security types, the effective date is the date the trade is executed by the broker and investment manager.



c. Effect on positions

For all security types, holdings are effected on the actual settlement date, unless it is a contractual market.

2. Discuss your operational procedures for settling purchases and sales – both physical and book entry, non-US and US. Include both:

- a. Actual settlement date (ASD) processing**
- b. Contractual settlement date (CSD) processing**

U.S. SETTLEMENT POLICY

As mentioned above in Question 1a, in the U.S. securities markets, Northern Trust offers clients actual settlement, which provides them with the maximum opportunity for investment of idle cash balances. Proceeds on sales begin earning interest at the point of settlement. In the rare instance that a trade does not settle on contractual settlement date, due to error or negligence on behalf of Northern Trust, accounts are credited with due interest. In addition, clients continue to earn interest on buy transactions until they actually settle.

GLOBAL SETTLEMENT POLICY

In markets outside the U.S., where the local practice is reliable and consistent, Northern Trust offers contractual settlement, pending formal credit approval from Northern Trust's Credit Review Committee. Please refer to Question 1a above for a list of the markets where we offer contractual settlement.

Our contractual settlement process settles cash on a contractual basis and securities on an actual basis, in accordance with local market practice. Contractual settlement is offered only for instruments traded on regulated exchanges. Thus, contractual settlement is not offered for over-the-counter (OTC) transactions, such as futures, options, purchases/sales in units of mutual funds, and non-DVP trades.

Northern Trust does not provide use of fund purchases under contractual settlement, regardless of amount – contractual settlement cannot be used for delivery until actual settlement takes place. All investment trades must be communicated to Northern Trust within the time frames stated in our Investment Manager Guidelines.

SECURITY SALES

Client accounts are credited with cash proceeds on the contractual settlement date as payment for securities, regardless of actual settlement taking place.

SECURITY PURCHASES

Client accounts are debited for cash on the contractual settlement date to pay for securities, regardless of actual settlement taking place.

SECURITY AVAILABILITY

The securities component of trades settles on an actual basis. Northern Trust provides reports for clients and investment managers that facilitate the management of cash and securities. The package includes:

- Security Availability Reports, which detail positions available for sale.
- Failed Trade Reports by settlement currency, broker, and settlement date, outlining which trades have failed, the settlement status of the trade, and the counterparty in each trade.
- Cash Balance and Cash Forecasting Reports, available on an intra-day basis so that investment managers know cash available for trading at any given time.



REVERSALS/ADJUSTMENTS TO CONTRACTUAL SETTLEMENTS

Northern Trust reserves the right to reverse or adjust contractual trade entries if these trades are determined to be incapable of settlement. Transactions that remain outstanding for a period of time judged reasonable by Northern Trust (typically 30 days) may be reversed and value-dated to the contractual settlement date in the amount of the original contractual value.

CASH AVAILABILITY AND CREDITING/DEBITING OF ACCOUNTS

It is the responsibility of the investment manager to have the necessary cash in the appropriate currency available on contractual settlement date. Clients will always be credited/debited with the contractually agreed amount to prevent discrepancies in cash projections or client reconciliation procedures.

Northern Trust will absorb any differences within the tolerance limits described below. Differences that exceed these amounts will be referred to the client for confirmation of the correct figure prior to arranging settlement.

UK	US\$3 or equivalent
Euroclear	US\$25 or equivalent
Other markets	US\$10 or equivalent

We provide clients and investment managers with their future cash positions through our daily online cash projection reports.

PHYSICAL SECURITIES

Northern Trust facilitates clearing and physical deliveries in the UK and the U.S.; all other clearing and physical deliveries are facilitated by our subcustodian banks.

U.S. PHYSICAL SECURITIES

The Depository Trust Company (DTC) custodies all physical certificates on behalf of our clients. Using the DTC for physical custody enables efficiency, as it takes advantage of DTC's technology and experience with physical securities processing. Northern Trust's Physical Security Tracking (PST) monitors all movements of physical securities from receipt through delivery, and provides comprehensive documentation of each physical security and transaction.

The following data is maintained on PST:

- Security name
- CUSIP number
- Transfer agent
- Carrier receipt number of receipt/delivery
- Total dollar amount paid/received
- Trade date
- Client account name and number
- Special instructions
- Number of shares/units
- Registration
- Receipt or delivery
- Date and time of receipt/delivery
- Broker name
- Settlement date
- Current location of security
- Processor's name

GLOBAL PHYSICAL SECURITIES

For physical securities outside the U.S. or UK, all transactions are booked on a trade date basis. Settlement is arranged by delivery versus payment, or in accordance with local market practice.



After authorized instructions are received, Northern Trust checks the instructions to ensure they are complete, and confirms them with the broker. Exceptions are brought to the attention of the fund manager, and resolved.

Verified instructions are given to the trade input area and entered into the security movement system. The system then automatically generates and sends instructions to the appropriate subcustodian via SWIFT to facilitate settlement.

Our Securities Reconciliation Division conducts monthly reconciliations for securities with subcustodians and/or depositories. In addition, formal cash reconciliations are conducted on a daily basis. This separation of reconciliation duties provides an additional measure of control.

3. Describe your procedures for establishing entitlements and accruals for dividends and interest and for posting dividends and interest to client accounts. Indicate whether the process is automated or manual and indicate the primary source of the data. Also, describe your procedures for calculating and posting amortization and accretion.

The collection and posting of income to client accounts differs based on the security type as follows:

SECURITIES HELD AT DEPOSITORIES

Our posting process is largely automated. For book-entry and physical securities registered in Northern Trust's nominee, information on expected payments is received electronically from the depository or agent prior to payment date via an automated interface with our income collections system. We use a variety of sources to populate this information. Differences between the depository/agent records and Northern Trust are electronically identified for resolution. Income postings are automatically released and posted to client accounts on payable date.

COUPON BOND SECURITIES

Payments on coupon bond securities are balanced on payable date. The coupon amount is compared with the expected income, and adjustments for out-of-balances are made prior to payable date. Income is paid on payable date and posted to each client's account.

REGISTERED SECURITIES

Fund payments for registered securities held in the vault are received manually. Those payments that come directly to our Income Collections Group are deposited into a clearance account upon receipt. Differences between actual income received and expected receipts are compared and resolved with adjustments, if necessary. Nominee registered securities are released to our system on payable date and posted to each client's account. Long title registered securities are posted to client accounts within one day of receipt.

AMERICAN DEPOSITORY RECEIPTS

For American Depositary Receipts (ADRs), income is posted by the income collections system to the client's account in a similar fashion to registered securities. If the client qualifies for reclamation of foreign tax based on tax status, a reclaim is initiated. The reclaim and supporting documentation is sent to either the ADR issuer/agent or the underlying country's revenue service, depending on instructions provided by DTC or the issuer. After the agent or revenue service reviews the documentation, a payment is made to Northern Trust and then posted to the client's account. Whenever possible, Northern Trust elects to receive relief at source via DTC.

Foreign accounts holding domestic securities are monitored by the Tax Department for Non-Resident Alien (NRA) tax withholdings. These payments automatically applied on payable date to reflect the correct tax withholding based on the domicile of the client and the tax documentation provided to Northern Trust.



Only authorized individuals have system access to process income payments, in accordance with Northern Trust's signing authorities. The reconciliation of internal clearance accounts is performed by individuals who do not have processing access. Exceptions resulting from daily reconciliation are reported to management and aged. Resolution and referral standards are adhered to for all clearance accounts.

CALCULATING AND POSTING AMORTIZATION AND ACCRETION

The amortization/accretion of premiums and discounts is an integral part of our accounting system. We offer amortization/accretion on a straight-line basis or on a constant yield-to-maturity (also known as scientific, effective yield of effective interest) methodology. We report securities subject to amortization/accretion by tax lot.

Amortization/accretion entries represent periodic adjustments to the cost basis of subject securities, with corresponding adjustments to interest income. Amortization/accretion applies to bonds, debentures, notes, certificates and other financial instruments that bear interest and that can be purchased at a premium or discount.

Original Issue Discount (OID) occurs when a bond is originally issued at a discount. Market Discount occurs when a bond is purchased on the secondary market at a discount. Based on client elections, Northern Trust provides for amortization of premiums, accretion of OID, and accretion of Market Discount, as applicable to both taxable and tax-exempt bond issues, including zero coupon bonds. Northern Trust's amortization/accretion process is subject to the de minimis OID and Market Discount rules.

We report amortization/accretion for securities held and for securities sold during the reporting period. For each tax lot, we report par amount, original cost, adjusted cost, and unrealized gain/loss. For each tax lot, we also report amortization of premium, accretion of OID, and accretion of Market Discount for the current period, year-to-date, and life-to-date. In addition, for securities sold or otherwise disposed of during the reporting period, we report gross proceeds from sales and realized gain/loss upon disposition.

SPECIAL SITUATIONS

We are able to amortize and accrete to a call/put date and call/put prices if our outside vendor has provided the information. Currently, we are not able to use actual sinking fund schedules nor prepayment schedules within the amortization calculations. For any mortgage backed, asset-backed, or CMO securities, we use the asset data provided to Northern Trust from outside vendors at the time the calculations are processed. For I/O and P/O securities, we follow the proper treatment in that we recalculate the effective yield every period that is used to post the principal and income components.

SHUTTING OFF THE PROCESS

We have the ability to shut off the amortization or accretion at the security level or account level. Specifically, we initiate an override at the security level. At the account level, we have updated the setup to not process any amortization or accretion.

- 4. For each country in which you have a custodial relationship, what is your policy toward crediting of interest and dividends on payable dates? Are income payments credited in same day funds? Are there any exceptions? Please list all payable dates for all income types.

POLICY TOWARD CREDITING OF INTEREST AND DIVIDENDS

Northern Trust provisionally credits income on contractual payment date in local currency for the following markets, which represents more than 98% of all income payments.

Australia	Hong Kong	Philippines
Austria	Ireland	Poland
Bangladesh	Israel	Portugal
Belgium	Italy	Singapore



Canada	Japan	South Africa
Chile	Jordan	South Korea
China*	Luxembourg	Spain
Denmark	Mauritius	Sweden
Euroclear**	Mexico	Switzerland
Finland	Netherlands	Turkey
France	New Zealand	United Kingdom
Germany	Norway	United States***
Greece	Peru	

*Contractual Income applies to "B" Class Shares only.

**Contractual Income will apply to securities held in Euroclear when the domestic market of those securities is in the above list.

***Contractual income applies if the underlying securities are held at The Depository Trust Company or The Federal Reserve Bank of Chicago, held in our nominee name.

Income for securities and/or countries not listed above are paid upon receipt or within three (3) days of receipt in the U.S. Anticipated payment timeframes after the due date vary by market.

As mentioned above, Northern Trust will provisionally credit U.S. dollar cash income to client accounts on payable date if the underlying securities are held at The Depository Trust Company or The Federal Reserve Bank of Chicago, held in our nominee name. U.S. dollar income not explicitly covered above will be paid within three (3) days of receipt.

The contractual income product provides payment of income on the contractual payment due date to clients on a provisional basis in each of the above markets. Northern Trust will provisionally pay income due to the client based upon our calculation of the income entitlement. Northern Trust reserves the right to make adjustments to provisional income payments or reverse the whole income payment if necessary.

EXCEPTIONS

Some securities must be excluded from contractual income, because the payment cannot be accurately predicted prior to pay date. The following securities are exceptions to the guidelines above:

- Securities not covered by any dividend rate, factor, or pricing service. Northern Trust will attempt to contact agents or other sources for the necessary information.
- Variable rate corporate bonds, CMOs, or GNMA's not held in a depository. CMOs and GNMA's that are depository-eligible will be paid on payable date.
- American Depository Receipt (ADR) and Global Depository Receipt (GDR) issues. Payments are made to Northern Trust after paying agents have determined correct income and exchange rates. Payments to clients are made net of applicable withholding taxes.
- Any security held in the process of transition or settlement. Income proceeds will be made upon verification of entitlement.
- Dividend re-investment programs and optional stock/cash dividends.
- Factored securities.
- Unit trust, mutual funds, or similar unitized vehicles.
- Private equity, limited partnerships, or similar alternative assets.
- Income announced in one currency but paid in another currency in markets where such a process is not standard.
- Cross-border securities, due to the non-standard withholding tax implications.
- Any security in default.



- Dividends announced in one currency but paid in another (e.g. Hong Kong or Singapore stocks which pay in USD – these will be paid once the applicable FX rates are known).

PAYABLE DATES FOR ALL INCOME TYPES

The following is our income collection schedule for U.S. payments. Where noted that income is credited on payable date, payment is credited on the following business day if payable date falls on a weekend or holiday.

Type	Date Credited
Stocks	
▪ Common	▪ Payable date
▪ Preferred	▪ Payable date
▪ Long Title	▪ Upon receipt
Corporate Bonds/Notes	Payable date
▪ Long Title	▪ Upon receipt
Convertible Bonds	Payable date
U.S. Gov't Bonds/Notes	Payable date
Municipal Bonds – Fixed Rate	Payable date
Municipal Bonds – Variable Rate	Upon receipt
Partnerships	Upon receipt
Short-Term and Cash Equivalents	Payable date
Mortgage Loans	
▪ FNMA's	▪ Payable date
▪ GNMA's	▪ Payable date
▪ GNMA's	▪ Payable date
▪ FHLMC's	▪ Payable date
SBA's	Upon receipt
Variable Rate	Upon receipt
Private Placements	Upon receipt
ADRs	Upon receipt
Real Estate	Upon notification
Preferred Securities	Payable date
Repos	Payable date
Commingled Index Funds	Upon notification
CMOs (DTC eligible)	Upon receipt
CMOs (physical)	Upon receipt
Asset-Backed Securities	Upon receipt
FHAs	Upon receipt
Interest/Principal Strips	Upon receipt
GPM	Payable date
VA/REMIC	Payable date
GNMA/REMIC	Payable date
FHLMC/REMIC	Payable date
Platinum	Payable date
GNMA2/REMIC	Payable date
GNMA/FHLMC	Payable date



5. Are funds available for reinvesting on contractual or actual settlement date? Please discuss.

Regularly scheduled dividend and non-variable rate/date interest payments on U.S. securities are credited on payable date (or the following business day in the event of a weekend/holiday), regardless of whether Northern Trust has received the funds. Fed funds are reinvested the same day in which they are credited to your account.

6. Describe the processing of tax reclaims on foreign income (by country).

Northern Trust is dedicated to securing the maximum amount of reclaimed taxes in the shortest time possible for our clients. We work closely with our subcustodians and tax authorities around the world to provide a highly efficient tax reclaim service. Stringent audit procedures are in place throughout the reclaim process to verify the accuracy and completeness of data.

We work closely with you to obtain maximum tax benefit at source in all markets wherever possible. The maximum tax benefit at source is variable, based on the country of domicile of the client, the client's domestic taxability, and the client's type (i.e. pension fund, mutual fund, etc.). As a result, we do not need to file reclaims in these markets. We collect all foreign tax that is receivable.

We have dedicated staff in our global custody operations group to follow, prepare, submit, and credit tax reclamations for our clients. In countries where we have a tax treaty, we will file appropriate documentation with local subcustodians or tax authorities in order to secure relevant tax benefits for our clients.

Tax reclaim forms are completed by Northern Trust on behalf of the client wherever appropriate. As part of this process, the reclaim forms are signed, certified, and sent to the appropriate tax authorities for processing. We are also able to accept Power of Attorney forms so that all administration involved in tax reclaims can be performed by Northern Trust rather than by the client (assuming that this is acceptable to the client).

TIMING OF FILINGS

Since timeframes for filing tax reclamations vary from country to country, it is our policy to complete tax reclaims according to the acceptable market practice in each country. In certain markets, submission of reclaim forms is regulated, and forms can only be submitted within a specified timeframe. For these countries, we must follow the specified guidelines. We also create tax reclamation schedules styled individually to a particular client's requirements, taking into account the client's investment base, as well as volume and size of tax recoverables in a particular market.

Tax reclamation schedules are reviewed regularly and are updated as new developments permit improved reclamation processes. The standard reclaim frequency is monthly. This is conditional upon the local market being able to support such frequency of claims.

MONITORING AND REPORTING

Our fully automated tax reclaim process ensures that we monitor all income and dividends received along with details of recoverable or irrecoverable withholding tax. Our system generates a recoverable withholding tax amount if applicable. The recoverable amount is determined by cross-referencing the withholding tax rates applicable to the country in which the income originated against data in the client's individual tax matrix. When an entitlement occurs, our system refers to the matrix to set-up the amount recoverable.

Our system tracks all outstanding reclaims and flags any that are considered "overdue". We then follow-up with the relevant revenue authority on a monthly basis until we receive the funds.



Each week, supervisors monitor key elements of the tax reclamation operation, including items that have been claimed, but not paid and items that are due to be claimed. Senior Management also performs a monthly review of the reclaim process.

Northern Trust accrues for all outstanding tax reclaims until funds are received. We report all tax reclaims received in both local and base currency, ensuring that clients are kept updated as to the progress of their tax reclaims at all times.

Additional controls are also in place as supervisors and managers verify that once reclaims have been received from the tax authorities of the countries involved, the funds are posted to client accounts within five (5) business days.

7. How do you prove accuracy and timeliness of receipts of US and non-US income and capital changes reported by your depositories, agents, and sub-custodians?

We use various income and corporate event sources to verify the detail provided by depositories, agents, and subcustodians. We verify information for accuracy. If we are unable to identify an item through one vendor, we refer to back-up sources, assuming other sources are available.

Our system verifies that income posted reflects the correct amount due based on holdings. Our system produces a daily exception report that lists all income due but not received. The Income Collections Group researches all exceptions and makes appropriate adjustments. On payable date, our system automatically credits all adjusted positions. The date of which income payments are allocated is dependent upon the contractual income policy in place for a given market. In addition, our management team reviews all outstanding exceptions on a regular basis to verify that discrepancies are resolved in a timely manner.

8. Describe the process for communicating with the investment managers serving your master custody clients.

As part of our premier master trust and custody services, Northern Trust maintains close relationships with the investment manager community, as it is essential that the custodian and the investment manager be able to work in concert with one another on behalf of their mutual client.

Northern Trust's **Investment Manager Liaison Group (IMLG)** is comprised of 119 professionals (34 in EMEA, 68 in North America, and 17 in APAC) who are dedicated to establishing a strong working rapport with each investment manager to deliver the highest quality service.

Each investment manager is assigned an IMLG service team that supports our work together. Service teams include members with specialized expertise in areas such as real estate, private equity, venture capital, or derivative strategies, allowing us to support more complex mandates as well as traditional asset classes. We currently work with approximately 2,668 investment managers worldwide (North America: 2,101, EMEA: 415, and APAC: 152)

Each investment manager receives a dedicated service team that includes:

- **A Relationship Manager** – responsible for overall relationship management, ensuring service expectations are met, and implementing strategic initiatives.
- **A Service Manager** – monitors the service teams, providing senior oversight for operations and risk management.
- **A Team Leader** – provides subject matter expertise and is a point of escalation.
- **Senior Representatives** – primary contacts for managers, responsible for daily processing of trades and third party foreign exchanges, monitoring cash, and resolving queries.



- **Representatives** – assist the Senior Representatives.

All investment managers – from the world’s largest and most sophisticated operations to mid-size and smaller “boutique” firms – receive the same commitment from Northern Trust: that we will work diligently to provide a level of service and support that ensures an effective working relationship and serves the best interests of our mutual client(s).

To ensure ongoing manager satisfaction, IMLG conducts regular calling programs, onsite visits, periodic phone calls, and surveys to solicit feedback and enhance our service capabilities.

9. Describe the reconciliation and audit procedures as they relate to the investment manager reconciliation process.

As mentioned in our response in Question 6 in the Audit Control section, we support regular reconciliations with our clients’ investment managers to help ensure that both the custody and investment books of record are in balance.

Managers are provided with daily (unaudited) holdings information, which they can extract from Passport® to reconcile their books to ours. Managers can contact their IMLG representative to raise issues and resolve reconciliation breaks/discrepancies. Manager practices vary, but our experience is that the majority of managers in the traditional asset classes (equity, fixed income) undertake daily reconciliation with custody records as part of their controls, and we have established processes for reviewing and resolving any exceptions raised by managers as quickly as possible after they are identified.

At month end, we provide audited cash and stock positions to support the standard month-end reconciliation activities. As with the daily recons, there are established deadlines and practices for investment managers to challenge prices or identify discrepancies so that reconciliation breaks are addressed prior to monthly reports being finalized.

10. Discuss your procedures for tracking failed trades and reporting failed trades to the client. How quickly are failed trades reported? Do you guarantee proceeds? If so, in which markets?

PROCEDURES FOR TRACKING FAILED TRADES

A delayed trade settlement can have a negative effect on our clients’ performance, so we apply strict procedures to ensure timely settlements at all times. While every effort is made to settle trades on settlement date, in the rare circumstance that a trade fails, we implement the following resolution process:

- We identify the reason for the fail and alert fund managers, brokers, and/or subcustodians as appropriate.
- Our IMLG representatives work for successful same day settlement, monitoring each fail until it is resolved.
- We document detailed fail reasons to prevent recurrence.

SALES

If a delivery attempt is made and not accepted by the receiving party on settlement date, our Investment Manager Liaison Group (IMLG) contacts the fund manager or subcustodian the same day to redirect delivery. If resolution cannot be achieved on settlement date, the trade is tracked electronically and a reason is noted for the fail. In applicable markets, our subcustodians report all unsettled trades to us with an explanation of reasons for the delayed settlement.

Once we receive verification and modified delivery instructions, we will redeliver the security for settlement. Daily monitoring and redelivery attempts will continue until the transaction settles. Consistent with the industry, Northern Trust’s experience with sell fails is lower than that of buy fails as a result of our greater control over the process.



PURCHASES

For purchase fails, we notify the fund manager on the day of the fail. The fund manager is required to contact the delivering broker and provide confirmation back to Northern Trust on expected delivery. Daily follow-up occurs until the transaction settles.

We report failed trade information electronically to clients and/or managers on a daily basis until settlement occurs. We provide various online settlement reports including daily reports of failed trades broken out by categories such as settlement date, broker, and currency.

We will ultimately seek compensation for loss of interest where the client has suffered as the result of delayed settlement of the trade, claiming from the relevant counterparties on their behalf.

FAILED TRADE REPORTING

Passport[®] offers intra-day failed trade reporting to inform clients and managers of trades past settlement date, with data updates occurring every 20 minutes throughout the day. Our reports list all failing trades by broker, by settlement date, and by settlement currency.

The following operational information is detailed on these reports:

- Broker name/location
- Trade date and settlement date
- Trade status (e.g., cash pending)
- Trade type (buy or sell)
- Security description and settlement currency
- Security identifier (CUSIP/SEDOL/ISIN)
- Reference number (NT unique transaction identification)
- Total trade amount (shares and cash)
- Outstanding trade amount (shares and cash)
- Reason for the fail

COMPENSATION FOR FAILED TRADES

TRANSACTION FAILS IN THE U.S.

BUY TRANSACTIONS

Cash remains invested in the designated short-term investment vehicle in the specific client account and continues to earn interest until the trade actually settles. If Northern Trust DK's a buy in error and is claimed by the broker, we will debit the client's account in the amount of the client's interest earnings, if the claim is appropriate.

SALE TRANSACTIONS

The account is credited with earnings it would have received had the trade settled on settlement date under our Sell Fail Protection Procedure, provided:

- Northern Trust has received complete and accurate instruction from both the broker and the fund manager by the trade cut-off deadline.
- The sell does not involve a recent purchase of a security that is failing on the buy side
- The sell does not involve recently purchased securities that are in the process of being reregistered
 - ◆ Unless notified prior to legal settlement date, bonds that are not eligible for the depository are reregistered upon receipt. This process normally takes 30 business days, during which time sell fail protection is not provided.
- The sell does not involve physical securities that are held in improper denominations for delivery



- The broker does not refuse to make payment on settlement date given good delivery by Northern Trust
- The issue is not a private placement security that must be sent to a transfer agent for re-registration.

FOR SECURITIES ON LOAN

If the investment manager provides instructions by the trade cut-off deadline and settlement does not occur on contractual settlement date, interest compensation is provided to the account based upon the cash amount as if the trade had settled on time

TRANSACTION FAILS OUTSIDE THE U.S.

For markets that support contractual settlement, managers can anticipate settlement of a sale for purposes of investing sales proceeds. However, cost or penalties associated with any resulting overdrafts will be passed on to the portfolio if the anticipated sale fails due to circumstances outside of the control of Northern Trust, such as:

- If the investment manager fails to properly fund the cash account in the proper currency – accounts are debited on actual settlement date, and non-interest bearing balances may result from differences in timing between account funding and settlement debiting.
- If the trade notification is received after local market trade date, sell fail protection may not begin on contractual settlement date. Rather, the effective notification date would be the next-occurring local market trading date, thus delaying the sell-fail protection date by a corresponding period of time.

Although infrequent, failed sales involving securities that participate in our securities lending program may necessitate a “buy-in”. Advanced notification of buy-ins is required to appropriately pass along any potential market price risk to the borrower, and as such requires written notice by the investment manager via fax 48 hours prior to the buy-in date.

11. How do you handle corrections/reversals? Do you reissue statements?

Our Valuation Reporting Analysts use a variety of web-based exception tools to maintain our accuracy standards. Monthly periodic audited data typically does not change, unless there is an error or if we become aware of a material change, i.e. perhaps via a fund manager.

In the event of an error, we will amend the entry. At client direction, we accomplish this in one of two ways, either through a **Current Period Adjustment of a Prior Period Entry** or by **Correcting a Prior Period**:

The below process is followed for a **Current Period Adjustment of a Prior Period Entry**

1. Post reversing entry, offsetting the “prior” period
2. Enter correct entry in the current period.

This results in the original entry remaining in the prior period with a corrected entry shown in the current period.

The below process is followed for a **Correcting a Prior Period**

1. Open prior period and post a reversing entry
2. Repost the corrected amount

This results in the corrected amount being shown in reporting after reports are re-run.

In either situation, we coordinate with the client to maintain balances between our respective records/books.



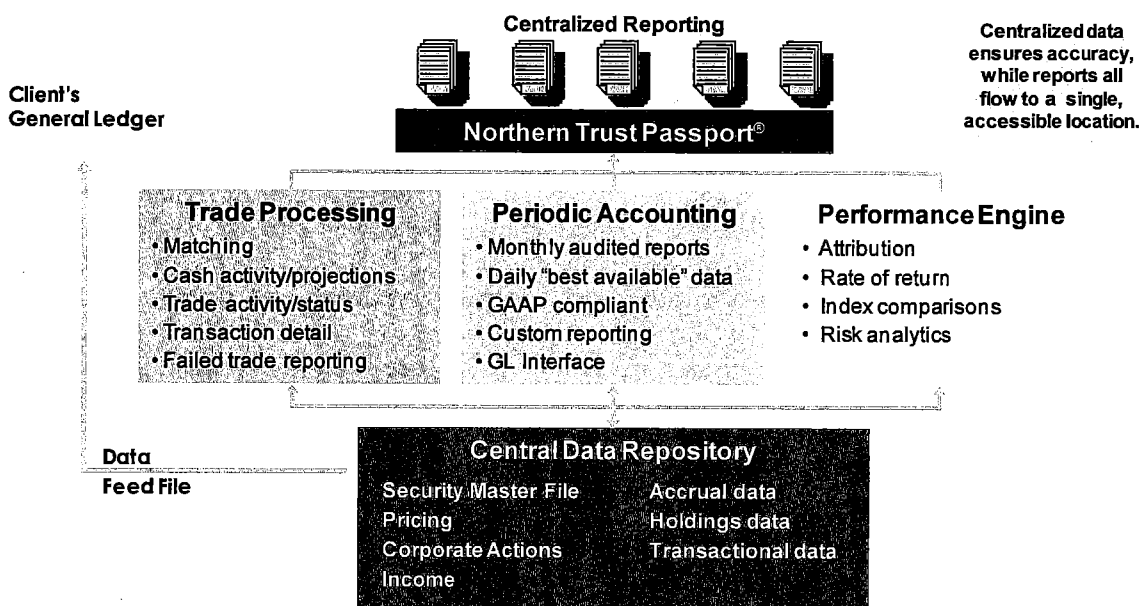
XV. PORTFOLIO ACCOUNTING

1. Provide a complete description of your accounting system including, but not limited to:

Northern Trust's custody system is a comprehensive enterprise network supporting all of our clients, regions, and staff. It provides a **single, unified system** for *all* custody activities, including worldwide transaction processing, accounting, and reporting.

Having custody and accounting systems that are fully integrated utilizing the same 'databank' eliminates the opportunity for data inconsistency. Data is stored centrally and flows directly from the custody book of record to our processing engines without the need for multiple systems or internal reconciliations.

We have illustrated our accounting data flow below:



As a component of our trust system, our worldwide portfolio accounting system provides:

- Multicurrency accounting;
- Trade date booking with full accruals; and,
- Reporting denominated to the client's base and local currency.

a) Processing cycles (cut-off, etc.)

There is a 5:00 pm (CST) daily cutoff for processing standard accounting entries into the accounting system. Wire movement transactions must be processed by 3:00 pm (CST) for same-day credit. Mutual fund purchases must be processed by 12:00 pm (CST).

b) Reconciliation reports, processes and time frames

We have extensive internal control and balancing procedures. The system automatically reconciles with external sources such as depositories, brokers, pricing services and investment managers. In addition, our



internal valuation reporting staff reviews transactions on a daily basis. We emphasize quality control with regard to data entry. Our reconciliation procedures enable us to produce high quality portfolio and plan accounting data. Northern Trust's Valuation Reporting Group (VR) handles the review and reconciliation functions for our clients' reporting.

c) Interfaces with securities movement and performance measurement systems.

Our accounting data is fully integrated with the following:

- ◆ Securities processing & pricing
- ◆ Benefit payments
- ◆ Cash sweep
- ◆ Depository balancing & reconciliation
- ◆ Income collection
- ◆ Investment management
- ◆ Investment risk & analytical services
- ◆ Securities lending

d) The system input/output sources, all data fields captured with accompanying record layout a record description, and security provisions.

Data input into the portfolio accounting system is primarily received electronically from our depositories or from client-initiated transactions. We code plan-related transactions at the time of original entry so that they are categorized properly for reporting purposes.

SECURITY PROVISIONS

Northern Trust is committed to protecting the security of our clients' account information. As a recognized leader in providing technology solutions to clients, Northern Trust continually evaluates the latest developments and strives to implement the latest in security technologies. Client account information is managed in a physically secure, state of the art data center. We have incorporated techniques to protect account information while in transit between our clients' computers and our data center.

The following system security measures are in place:

- Authorized members from a client's office specify which users are to be allowed access to programs and reports.
- At Northern Trust, all users are authorized and set-up by our Corporate Data Security function. Only approved programs are assigned to each user, and access is granted based on roles. Tracking of requests for access and associated approvals is achieved via a dedicated system – Identity Manager.
- Non-display, unique passwords are needed to log on to our system.
- Built-in time out periods automatically log users off if there has been no activity for a specified time frame.
- Efforts to use unauthorized programs are rejected. Any such violation is listed by individual and investigated by our Corporate Data Security.

For clients, each user is given a unique identifier (ID) and a password. Associated with the ID is a client identifier that denotes the client entity with which the user is associated. The link between the User ID and client identifier segregates data and prevents disclosure or access by another client firm. Highly sensitive applications require additional authentication which is achieved through the use of a SecurID token in addition to the ID and password. Based on successful authentication, the client identifier associated with the ID is used to determine which specific records in the database the user is allowed to see. There are also access rules by user, determined by the client, which can be used to limit the functions each user is allowed to perform.



Northern Trust continually reviews the adequacy of its security provisions and updates them as new technology becomes available.

e) Authorization and verification of transaction entries.

As mentioned above in part b., we have extensive internal control and balancing procedures. The system automatically reconciles with external sources such as depositories, brokers, pricing services and investment managers. In addition, our internal valuation reporting staff reviews transactions on a daily basis. We emphasize quality control with regard to data entry. Our reconciliation procedures enable us to produce high quality portfolio and plan accounting data.

f) Integration of systems for non-US and US securities.

Northern Trust's custody system is a comprehensive enterprise network supporting all of our clients, regions, and staff. It provides a unified system for all custody activities, including worldwide transaction processing, accounting, and reporting – full integration of systems for non-US and US securities.

2. Describe the history of the accounting system(s) and any major system enhancements that have occurred in the last three years. What changes are planned for the future?

As an integrated module of our main asset servicing platform, the portfolio accounting system is internally-developed and was installed as part of the initial platform launch in 1990. Like all of the aspects of the platform, it has been subject to almost continuous enhancement since then.

SYSTEM ENHANCEMENTS FROM LAST THREE YEARS

The following table details significant software/hardware developments, as well as product and service enhancements:

NEW or ENHANCED SERVICE / PRODUCT	YEAR OFFERED
Trade Order Entry – Further automation for private market investments and global funds and increased safeguards for all trade instructions	2011
Series Trust Solution	2011
After-Tax Performance Reporting Enhancement – to include U.S. state tax liabilities	2011
Terms and Conditions Query for OTC Derivatives through Sherlock	2011
Unit (Transfer) Agency Services – Australia	2011
Investment Risk and Analytical Services (IRAS) Dashboard	2011
Composite Management System (CMS)	2011
Mobile Passport®	2011
OTC Derivative Automation through Summit	2011
Insurance Schedule DL Report Enhancement	2011
Trade Order Entry – enhancements for alternative assets trade instruction	2010
Collateral Management Reporting – Dashboard creation to view real-time status of OTC Derivatives	2010
Australian Investment Accounting	2010
Data Direct™	2010



NEW or ENHANCED SERVICE / PRODUCT	YEAR OFFERED
Transfer Agency Services for Multi Currency Share Classes	2010
Exposure Analysis Reporting	2010
Syndicated Bank Loans for IOO Clients	2010
Private Equity Fund-of-Funds Tracking	2010
Daily Valuation of Property Derivatives	2010
Predictive Risk Analysis	2010
Hedge Fund Monitor (HFM) – new compliance module for UCITS FOHF	2010
Unregistered Fund Services – launch of NT Sub-Advised Collective Trust	2010
Cross Border Pooling – est. of Common Contractual Fund (CCF)	2010
Daily Fair Value NAV Pricing Tool	2010
Enhanced Risk Rptg – consolidation of predictive risk management, performance evaluation and compliance analysis within Fundamentals	2010
OTC Derivatives –daily independent pricing for structured products and other exotic instruments	2010
Enhanced Reg. Rptg – "IFRS Valuation Toolkit", FSP FAS 132(R) -1, FAS 161	2010
Fund of Hedge Fund Services (Hedge Fund Monitor)	2009
Securities Lending Block on Passport®	2009
Environmental Analytics Capabilities	2009
Enhanced Risk Monitoring Tools via Easy Event Reporting Tool	2009
Improved IOO Client Communication Capabilities via Equipos	2009
Real Estate Fund Administration Services – Enhanced Technology via Intuit	2009
Enhanced Online Risk Reporting	2009
Capital Call Modeling Tool for Private Equity Investors	2009
Transfer Agency Innovations	2009
OTC Derivative Services	2009
Custody Reporting for Community Banks and Independent Trust Companies	2009
Transition Management Reporting – Pre-Trade Analysis Report Enhancement	2009

FUTURE ENHANCEMENTS

At Northern Trust, we have one integrated technology platform that allows us to bring new system enhancements to market more quickly, as each enhancement is developed and implemented only once. Enhancements are delivered to our clients around the world, at the same time, regardless of their location. In addition, all of our technology spending goes to this one platform, allowing each dollar to go farther than if we had multiple platforms to maintain.

Northern Trust continues to implement ongoing technology initiatives that make our information more targeted, relevant, and easy to access for our clients. We have focused our enhancements around the following strategic objectives – which enable us to continue to anticipate and meet our clients' changing needs:

- Improving Transparency
- Supporting Clients' Risk Management Needs
- Leveraging our Global Architecture



IMPROVING TRANSPARENCY

Clients continue to demand more detailed information on their investments. We are investing in our data and reporting systems to provide more in-depth information, particularly related to the tracking, valuation, and reporting of complex securities.

- **OTC Derivative Servicing:** Driven by increasing demand for these instruments, Northern Trust continues to enhance and automate the processing, reconciliation, matching, and exception management for OTC derivatives, enhancing collateral management tracking and price validation services, and improving the timing of cash settlement and margin realignment.
- **Pricing Policy and Sources:** We are enhancing our systems to enable clients to more readily identify pricing sources and stale prices in response to demand for more detailed information on pricing methodologies.
- **Accounting and Regulatory Reporting:** As regulators demand increased transparency, accounting requirements are changing to focus more on risk. Northern Trust continues to enhance our reporting to assist clients in meeting new audit requirements.

SUPPORTING CLIENTS' RISK MANAGEMENT NEEDS

We continue to focus on our clients' risk management needs through enhanced reporting and flexibility for both performance analytics and compliance capabilities, additional risk model frameworks, continued development to support daily client information, as well as enhanced alternative asset analysis and reporting.

- **Analytics:** We are currently focusing on greater integration of our risk and performance platforms by incorporating additional ex post and introducing ex ante risk statistics. Additionally, we have empowered our clients to modify the type of performance data to view in Passport[®] with our no-click Dashboard capability. Finally, we have broadened our market leading attribution toolset with policy level attribution and well as extending our stock level attribution reporting.
- **Compliance Analyst[®]:** We are enhancing the capabilities of our compliance monitoring tool and expanding our library of available guidelines and reports. We are continuing to add features to our high-level online dashboard, ComplianceRADAR[™], to increase flexibility and availability.
- **Event Analyst:** We continue to add new events and enhance the functionality and reporting of existing events.

LEVERAGING OUR GLOBAL ARCHITECTURE

We continue to enhance Passport[®] functionality and ease-of-use to improve our clients' on-line experience. Using the latest web design technology available, we will make navigation more intuitive, reducing the time it takes our clients to obtain the data to make the right investment decisions. Passport[®] will continue to build on its core strength as a single entry portal by allowing clients to structure and organize their Northern Trust homepage in a way that suits them. In addition, we are increasing the mobility of Passport[®] so that clients can access their information when they need it, where they need it. Examples of some of the improvements are:

- Enhanced multi-language design, giving more clients access to Passport[®] in the language they feel most comfortable using.
- The continued development and enhancement of Passport[®] for mobile devices will increase client access to their information.
- Enhanced Alerts functions, allowing clients to receive portfolio alerts information via an e-mail address or text message
- Intra-day auto scheduler allows clients to access reports when they are needed throughout the day



- Enhanced functionality of the Account Brief report, allowing clients to email portfolio information in a secure environment without having to log in to Passport®
- Further automated instructions process to make it easier for clients to submit instructions, such as foreign exchange and cash movement, to Northern Trust
- Enhanced ad-hoc reporting tool to make it easier for clients to run customized reports
- Improved administration capabilities, allowing clients to add and delete users on their own.

3. What is the lag time between trade execution, availability of on-line transaction data to the ERSRI, and the posting of the transaction to your accounting system?

Northern Trust operates in a real-time environment.

Trade information, such as settled trades, failed trades, unaffirmed trades, and pending trades, as well as cash forecasting and corporate action information is updated on an intra-day basis, with data updates occurring every 20 minutes throughout the day. Accounting information is updated on Passport® daily.

4. Describe your procedures for computing and reporting realized gains and losses on securities sold:

- a) For US-denominated securities
- b) For non US-denominated securities
 - Total
 - From currency changes
 - From market price changes

Our system reflects unrealized gain/loss cumulative from the date the security is purchased for all average cost clients. Some taxable clients may use a different type of cost method such as LIFO, FIFO, etc.

Our reports provide the summary or detail of realized gains or losses on the sale of assets within the reporting period by country or currency within each major asset category. These gains/losses are reflected on a trade date basis and are expressed in the client's base currency. Changes in value due to fluctuations in exchange rates are reported separately from changes due to market price fluctuations. Our reports reflect net changes in unrealized gain or loss as line items that represent the difference in total unrealized gain or loss from the last reporting period end.

Realized gain or loss due to market is calculated as follows:

Proceeds in local currency minus book value in local currency, divided by the exchange rate as of trade-date minus one.

Realized gain or loss due to translation is calculated as follows:

Book value in local currency divided by the exchange rate as of trade-date minus one, minus book value in base currency.

Total realized gain or loss is equal to:

The realized gain or loss due to market, plus the realized gain or loss due to translation.



5. For all assets, provide information on your primary and supplementary pricing sources, frequency, and the mode of receipt and input of security prices. Describe your process for validating prices and using information from the supplemental sources.

PRICING SOURCES

Please see Exhibit 12 for a detailed chart of our pricing sources, methods, and frequencies for all asset classes.

Source hierarchies vary by asset type, world region, etc., but in broad terms:

- Interactive Data Company (IDC) and Telekurs are used for equity type securities.
- IDC and Standard & Poor's are the primary sources for U.S. fixed income.
- In Europe, the Middle East, Africa and Asia: IBOXX, Standard & Poor's, ICMA, and IDC are the primary fixed income sources.
- For Canadian and South American fixed income, PC Bond Group, StatPro, and IDC are used.
- Derivatives are valued using GMI for ETDs; Markit, SuperDerivatives, and Numerix are used to value OTC contracts.

Reuters and Bloomberg are used as alternate sources for all asset types worldwide.

MANUAL INTERVENTION

Although the aforementioned vendors provide excellent coverage for our clients' portfolios, occasionally they are unable to provide a current price for an asset. Such circumstances arise as a result of the nature of the transaction or the type of security involved that primarily consist of:

- Over-The-Counter Derivatives
- Private Placements / Limited Partnerships
- Illiquid Issues
- Real Property Valuations
- Esoterics

ALTERNATIVE PRICING SOURCES

When no independent price source is available, a price may be secured from an alternative source, including:

- Brokers
- Counterparties
- Fund Administrators (for the Various Types of Funds & Commingled Funds)
- Investment Managers
- Specialist Publications & Websites
- Subcustodians

If all of these sources have been checked and a price is still not available, the price defaults to the most recent day's price or the purchase price if it is a new security. All assets not priced by an automated vendor are also sent to the vendors for research and are added to the automated pricing transmission when a price is identified.

Our automated pricing transmission file is refreshed several times a day so that as soon as a valid market identifier is added to a new asset, it will be recognized by our vendors and priced by them wherever possible.



PRICING VALIDATION

To minimize the potential for inaccurate valuations, we attempt to obtain multiple price types from multiple providers whenever possible. This enables us to conduct cross-provider validations in addition to unusual movement (day to day) checks. Prices are received and put through tolerance checks (i.e. "scrubbed") throughout the day, with exceptions researched and resolved by our Pricing Analysts, all on a same day basis as part of the pricing process. The scrubbing process is handled by our internal Pricing System, which automatically validates 98% of our securities, leaving only exceptions and missing prices for human intervention. The rules this system applies are multi-dimensional and can be applied at a number of different levels, ranging from general to security specific in nature.

Industry recognized security identifiers are critical to the pricing process. This holds especially true for securities which trade across multiple markets. In these instances, Northern Trust will price the security as per the market in which it is quoted. For securities which trade on multiple exchanges within a country, we will use the primary exchange as designated at the point of initial listing.

To ensure that Northern Trust is utilizing the most accurate and up-to-date prices available, we utilize the following reports.

- **Trade Price Report:** enables the replacement of trade prices with vended prices for newly acquired securities
- **Missing Price Report:** addresses situations where no price has been received from our automated providers
- **Single Priced Assets Report:** allows for increasing coverage across providers
- **Stale Price Report:** enables self initiated challenges to our providers
- **Percentage Movement Report:** 4 eyes validation of unusually large day to day price movements

USING INFORMATION FROM SUPPLEMENTAL SOURCES

For assets not priced on a daily basis by our primary pricing vendors, such as real estate, private placements, limited partnerships and funds, we use the following sources:

- Boutique vendors
- Brokers
- Fund families (for common, collective, commingled, and mutual funds)
- Investment managers
- Specialist publications
- Subcustodians

At the point a security is newly acquired, the Pricing Team will work with the relevant partner area to determine the valuation frequency of the security. Additionally, they will determine the timeliness of receipt of those prices to ensure timely inclusion in client reporting. The goal is to receive at least two pricing sources when available, and then validate the information.

6. What is the process of incorporating new investment vehicles into your system? Who is responsible for maintaining your securities database and what are their specific responsibilities?

The Data Management Department is responsible for processing and maintaining all reference data and for developing scalable, innovative and efficient data management solutions for our clients, across all areas of Northern Trust. Northern Trust's asset administration system, AIP serves as our single source for all asset and pricing data, supporting downstream system for investment accounting, fund accounting, and custody.



AIP is Northern Trust's Asset Reference Data Repository, the single source from which we supply clients with all asset data used to feed downstream processes, from client reporting to client interface files. All data characteristics are housed within AIP. This can equate to hundreds of pieces of information for a given security.

A dedicated team of Coding Analysts code all securities before they are placed on Northern Trust's single global asset data repository, which currently stores over 1.4 million securities in an active status (meaning they are currently being maintained) and over 7.85 million securities in a vended status (meaning they have reference data available to us should a client acquire them – at which point they would become active and be maintained).

Securities are coded with the following information:

- CUSIP/ISIN/SEDOL and other local market identifiers (if applicable)
- Static reference data such as maturity date, coupon rate, dated date
- Event schedule information, including income and principal payment events
- Issue statistic data, such as shares outstanding.

All securities are assigned both a market specified identifier (i.e. CUSIP, ISIN, SEDOL) number and a Northern Trust unique identification number (security number) by the coding analysts. In addition, over 73% of new securities are auto-coded.

Securities that are eligible to be coded include:

- Preferred stock
- Common stock
- Fixed income securities issued by governments, municipalities, government agencies, and corporations
- Mutual funds
- Unit investment trusts (UITs)
- Derivative products
- Common or collective funds

Non-marketable securities are coded through a manual input process. The required information is obtained from various sources (e.g., outside vendors, physical certificates, fund families, etc.). Assets are coded based on priority (same-day settlements, future settlements, and free receipts) and on depository deadlines.

In addition to receiving electronic information from investment managers, Northern Trust subscribes to the following vendors for global asset coding information:

- Interactive Data Corporation (IDC) – All reference data
- Bloomberg – Some reference data
- Reuters – Some reference data, especially statistical data such as duration and estimated maturity data
- Standard & Poor's – CUSIPs, quality ratings, and other reference data
- KDBS – Municipal bond issue information
- MMD (Municipal Market Data) – Variable rate information for municipal bonds
- Moody's – Quality ratings
- London Stock Exchange – SEDOL master file
- CMS Bond Edge – Bond statistics
- FTSE and MSCI – Index data
- Additional vendors as needed, based on quality and comprehensiveness of data provided



QUALITY CONTROL

To allow for accurate and complete coding, our system reviews all information as it is input. The system will not allow a security to be set up without all the required information. The system performs an automatic verification daily and generates a report of possible exceptions for review.

7. Discuss your capabilities to report brokerage commissions by account and transactions.

Northern Trust offers a suite of reports that allow custody clients to monitor manager participation in the commission management program and view related rebates. Reports include an earnings report (Performance Scorecard) and an effective commission rates report, both of which are available online via Northern Trust Passport®.

Reports are updated monthly around the 15th of the following month, to allow collection and reconciliation with all relevant brokers.

Many clients tell us how our detailed reports have filled the huge gap that existed with their former commission management programs, and how our reports give them the ability to communicate the program's results to their Board, investment committee, and internal audit group in a timely manner.

The Broker Commission Report identifies the total commissions paid to each broker on transactions completed within the reporting period.

For each broker, the report identifies:

- The total value (cost or proceeds) of the transactions
- The total commissions paid for transactions completed
- The total cost per share or per unit of the commissions
- The percentage of the total trade value represented by the commission charge
- The transactions completed by security type
- The transactions completed on which separate commissions were not charged.

8. How do you account for client assets held at a location other than the custodian?

We reflect assets held elsewhere as one-line items in our accounting reports. These can be updated per client direction at the desired frequency.

9. How are errors corrected and reported to the client?

Please refer to our response in Question 11 in the Transaction Services section for detailed information on our process for handling corrections, reversals, and reporting those to the client.



XVI. REPORTING

1. Provide a complete description of your proposed reporting package, including any unique features of your standard and custom reporting packages. Describe your reporting treatment for non-standard securities (CMBS, derivatives, alternative investments, etc.) Provide sample copies of the reports available to clients.

We provide investment reporting via our **Report Center** application on Northern Trust Passport[®], our online system. Report Center combines trade, accounting, securities lending, and investment risk and analytical services information for a comprehensive view of your portfolio. Clients can create multi-currency, fully-integrated, trade-date accounting packages that incorporate data from a centralized reporting database.

We offer clients a comprehensive library of standard reports to meet their reporting needs. Clients can receive account holdings, detailed cash and security information, trade detail, corporate actions, receivables, accruals, and cash forecasting.

STANDARD REPORTING PACKAGE

The Portfolio Statement is the core of our reporting package. A succinct package of reports, the Portfolio Statement is a complete reference to a client's asset and transaction information where income is reflected on an accrual basis, and security purchases and sales are recognized as of trade date. Reports are identified by a recognized portfolio activity, such as investments, income and expense, or foreign exchange.

Northern Trust developed the Portfolio Statement through a collaborative effort with clients and accounting experts. Information in the Portfolio Statement starts at the summary level and then follows with detailed holdings and transactions. This flow of information enables individuals with different data requirements to find the reports they need – quickly and easily.

The standard portfolio statement reports are listed below and are available online via Passport[®]. These reports represent the minimum amount of information that is available online on a daily basis. Any accounting currency can be designated and reports are denominated in both local and base currencies. Northern Trust also has complete flexibility in customizing reports based on unique client requirements.

Standard reports within the Portfolio Statement include:

- Asset Summary
- Asset List Summary & Detail – Local & Base Currency
- Capital Change Detail
- Cash Activity Detail
- Change in Book and Market Value
- Change in Cash Value
- Foreign Exchange Gain/Loss Detail
- Foreign Exchange Gain/Loss Summary & Detail
- Foreign Exchange Rates to Base Currency
- Funding & Disbursement Summary & Detail
- Income & Expense Summary & Detail
- Investment Transaction Summary & Detail
- Other Corporate Actions
- Pending Transaction Detail



Northern Trust | PASSPORT

Sign Off | My Profile & Preferences | Connect Us | Help | Chicago 06:17, London 02:17, Mexico 02:17

Welcome John Smith

MY PASSPORT | REPORT CENTER | PORTFOLIO MANAGEMENT | ASSET MANAGEMENT | SUPERBANKING | PORTFOLIO ANALYTICS | CONSOLIDATED BALANCE SHEET

Home | My Profile & Preferences

Add Content | Security Exposure | Quick Quote

Account Brief

Table: Security Exposure

Current market conditions and overall custody environments for each market where Northern Trust employs a subsidiary.

Account or Consolidation	Accrued (USD)	Cost (USD)	MV% Change	MV% Change	MV% Change
Account or Consolidation	1,191	2,539,256	-0.13%	-0.13%	-0.13%
Equities	103	270,230	-0.10%	-0.10%	-0.10%
Fixed Income	984	112,119	-0.25%	-0.24%	-0.24%
Venture Capital and Partnerships	0	1,842,607	0.00%	0.00%	0.00%
Other Assets	0	195,914	-1.14%	-1.14%	-1.14%
Derivatives Offsets	0	-206,572	0.01%	0.01%	0.01%
Hedge Fund	0	0	0.00%	0.00%	0.00%
Liabilities	0	-1,634	-42.79%	-42.79%	-42.79%
All other	163	0	0.00%	-0.20%	-0.20%
Cash and Cash Equivalents	2	326,921	0.39%	0.39%	0.39%
Adjustments To Cash	0	-185	---	---	---

* Includes annuals

File Cabinet

Expand All | Collapse All | Pod | Tables | Issues

Client Private Folders

- Text: Share | Add File
- Client Shared Folders: Share | Add File
- least1245: Share | Add File
- best153: Share | Add File
- Folders Shared To Client

My Cash

Expand All | Collapse All | Account/Consolidation

Client Asset/Consolidation	Currency	Projected Claiming Balance	Openly Cash B.
Client MTL Growth Fund	USD	0.00	
Client Private Evol Fund	USD	0.00	

Report Center

Back to Home | Manage Libraries

My Report Library

- My Report Library
- Master Report Library
- Partner Report Library
- Event Report Library

My Report Library

- My Report Library
- Accounting Based Templates
- Cash Forecasting
- Custom
- Customizable Templates
- Daily Activity
- Derivative Reporting
- Fund Manager
- Fund Manager Month-End State
- GASB Reporting
- Global Securities Lending Report
- IFRS Reporting
- NTGI Accounting Reports
- Portfolio Statement
- Portfolio Statement by Pricing Co.
- SL Core USA Collateral
- SL Custom

Partner Report Library

- Partner: Eric Farnor IC
- Partner: John Doe
- Accounting
- Cash and Balances
- My Custom Templates
- Asset Allocations and Derivatives
- My Month-End Statements
- My GASB Reports

Event Report Library

- Event Report Library
- Prepare for Fund Manager Meeting
- Prepare for a Board Meeting
- Monitor Transition and Restructure
- Prepare my Portfolio Package
- Prepare for an Annual Audit
- Fund Peak Through Reporting
- Prepare my Headquarters Report

UNIQUE FEATURES OF REPORTING PACKAGES

The below summarizes our unique features and competitive advantages/differentiators in the world of accounting and valuation reporting.

- Unlike many asset-servicing institutions, Northern Trust provides an investment accounting and valuation service and a suite of consolidated investment accounting reports as part of its core asset-servicing proposal.
- Our asset servicing system combines a portfolio accounting system with a fully integrated general ledger. It is an advanced, worldwide system that provides multicurrency accounting, full accruals, and trade date booking. Any accounting currency can be designated to facilitate reporting denominated in the client's base accounting currency, as well as local currency.
- Our extensive client accounting and valuation reporting, available online via Passport® can be summarized in three distinct levels:
 - ◆ **Standard Reporting** – a comprehensive suite of our official, standard portfolio reports.
 - ◆ **Custom Reporting** – over 1,000 reports encompassing portfolio monitoring, analytical, and accounting-based presentations for financial and governing board purposes.



- ◆ **Ad Hoc Reporting** – access to our easy-to-use query tool, Sherlock, which provides a flexible way to interrogate data or format extracted results as needed. This provides our clients with direct access to the same data contained in our standard accounting and valuation reports available through Passport®
- We proactively support clients by focusing on coordinating and developing custom accounting and reporting solutions for them, whether mandated by accounting or regulatory standards such as DOL, ERISA, FASB, GASB, and IFRS.
- Our ASC 820 Fair Value Resource Toolkit is the most extensive and dynamic approach in the industry. Our comprehensive service includes instructive assistance and a tool that gives our clients critical pricing input data at the security asset type level, providing total control over the required pricing levels. We also provide background methodology on the valuation for the major category of securities, as well as the supporting information required to comply with audit and reporting standards. This toolkit is flexible enough to assist clients across various industry/market segments adhering to their respective “fair value” financial reporting requirements.

Data is available daily, biweekly, monthly, quarterly, or annually depending on your requirements, and reports can be archived for as long as you need. Reports can also be auto-scheduled in advance.

CUSTOMIZED REPORTS

Passport® allows users to control report content by developing filters to view data within specific time frames and funds or accounts. Numerous reports exist that deliver data in an overview, summary, or detail level. In addition, information can be exported into spreadsheet software for further content manipulation. Passport® also enables users to create ad-hoc reports based on specific data requirements.

In addition, Northern Trust has a variety of custom reports and templates that have already been developed and are available for our clients to use based on their reporting needs. Output formats for the various reporting tools include HTML, PDF, Excel, and Tab Delimited.

If clients still have customization needs not covered by our existing tools, Northern Trust will work with you to develop new reports to meet unique requirements. Our Passport® Consultants are experts in working with our clients and determining which reports are pivotal to their daily operations.

“NON-STANDARD” SECURITIES REPORTING

For reporting for “non-standard” securities, Northern Trust treats each alternative asset as a single line item on standard client reporting. We have several templates geared specifically towards investors in alternative assets, derivatives, and CMBS, that are available to all of our clients invested in a particular asset class.

SAMPLE REPORTS

Please refer to Exhibit 13 for our Portfolio Statement Report Guide for samples of our reporting.

2. Describe your capabilities for consolidated reporting. Include consolidating individual portfolios, accounts, foreign and domestic, etc.

As detailed in our response in Question 1 in the Portfolio Accounting section, Northern Trust provides an investment accounting and valuation service and a suite of consolidated investment accounting reports as part of its core asset-servicing proposal. We provide both consolidated and individual manager reports, foreign and domestic.



3. **Discuss the timeliness of delivery of statements and reports by hard copy and by electronic delivery. Indicate the availability of electronic feeds for transactions, cash balances, and any other relevant information.**

TIMELINESS OF DELIVERY OF STATEMENTS

We customize our reporting turnaround times for every client based on their account structure and specialized needs. We do not foresee any issues facilitating ERSRI's requirements of having fully audited month-end statements by no later than 9 business days after month-end.

Passport® accepts data real-time and updates during overnight processing, with some reporting (e.g. trade status, cash forecasting, corporate actions) being updated on an intra-day basis.

Information is available next business day via Passport®. Un-audited month-end information can be accessed on the first business day after month-end. Fully audited month-end portfolio statements are available between 3-5 business days after month-end, provided that we have all necessary valuation detail.

Reporting deadlines are agreed specifically with each client as part of their Service Description. Our achievements against the agreed-upon reporting deadlines will be measured and monitored at regular intervals by your Relationship Manager.

DELIVERY METHODS OF REPORTS

Passport® offers clients online access to their reports, with the ability to download data into the software of their choice. Passport® is available via the Internet using a web-browser. We can also provide information via custom data downloads.

Reports can be output to various formats, including HTML, PDF, Microsoft Word/Excel, Rich Text Format, XML, and Crystal RPT. In addition, users can export unformatted data directly into a spreadsheet application.

Users also have the option for reports to be delivered via e-mail as a notification of report availability to their Inbox, or, as a secure e-mail attachment.

4. **Discuss the types and timing of data available by electronic delivery, for:**
- a) **On-line accounting**
 - b) **On-line analytics**
 - c) **On-line download of formatted reports**
 - d) **On-line download of raw data**
 - e) **Report writer access**

As discussed above in Question 3, we customize our reporting turnaround timeframes for every client based on their account structure and needs. Information is available next business day via Passport®. Fully audited asset and transaction statements are available between 3-5 business days, provided that we have all necessary valuation detail.

Performance reporting (analytics) is available daily and monthly. For monthly produced results, preliminary results are available on the 1st day after month end and every day thereafter until final numbers are available. Final "signed-off" monthly performance results are available within 24 to 48 hours of the agreed upon accounting deadline. Our performance universes are available for reporting by the third week following quarter-end.



5. How long is historical data available on-line and in hard copy?

Passport® applications retain the following portfolio data:

- Transactions and month-end holdings for 24-months for both Report Center and Sherlock
- Daily holdings for 3 months
- Rate of return information is backloaded from inception
- Benchmark rates of return on over 6,000 indexes from inception
- Rolling 24-months periodic and lump sum benefit payment history

In addition, 7 years of periodic data, such as transactions and holdings, is accessible to Northern Trust staff and available per client request. Users may archive standard reports within Report Center via CD or by saving files to their hard drives at any time.

6. What steps are taken to assure the accuracy of your reports?

Northern Trust employs a range of data accuracy and verification procedures across all of our client data. Our data management philosophy is built on the idea that controlling accuracy **at the source of receipt** provides the most consistent and accurate data.

Each operational area manages its own data accuracy controls and procedures, but in broad terms, our approach to ensuring accuracy includes the following:

- **Emphasis on automation.** We are vocal advocates for straight through processing (STP), and provide clients with the tools to enable the highest possible STP rates. All services are integrated across a single platform so that data flows automatically without manual intervention. By promoting automation, we dramatically reduce the potential for human error.
- All trade instructions, whether manual or STP, are subject to **dozens of validations and logic checks**, pre-matched to broker instructions, and tracked in real time until settlement.
- Disbursements, wires, and other cash movements are subject to **stringent controls**, including an "Authorized Parties" list to initiate movement, a two-tiered initiation/approval structure, accuracy checks of submitted cash movement and disbursement instructions, and **extensive data security protocols**.
- All data received from third parties for pricing, security master data, accrued income, interest, and corporate actions employs **multiple vendors**, which are then "**scrubbed**" **against one another to identify variances or discrepancies**. All data is managed by experts in the data type (e.g., our Pricing Team handles pricing discrepancies) and resolved as quickly as possible.
- We **reconcile asset and cash positions against depositories and subcustodians on a daily basis**, to ensure consistency of our records. Further, we reconcile with investment managers as part of the periodic reporting audit.

In addition to the above, our Valuation Reporting Analysts perform an additional series of audit and valuation checks prior to releasing final reports.

7. Do asset valuations and transaction statements reflect pending transactions? Are they reported separately?

Yes, asset valuations and transactions reflect accrued income and pending transactions and they are reported separately. The *Pending Transaction Schedule* in our client report package lists all items which have not settled as of the reporting date. Our system calculates the difference in market value between a security contracted to purchase and its market value as of the date of the report.



XVII. BENEFIT PAYMENTS

1. For providing periodic and non-periodic pension payments, what system is utilized? Please describe if in-house or outside vendors are utilized. When were the system and the various enhancements introduced? What is the current capacity of the system and how many payments are processed monthly?

BENEFIT PAYMENT SYSTEM

Northern Trust's internal system for processing periodic and non-periodic pension payments is maintained in-house and has been in place since 2002. Information resides on a Sun Microsystems Enterprise M5000 server. Our Unix operating platform is Solaris 2.8 and we warehouse our data using an Oracle 10g Enterprise database.

Additionally, our online application is browser-based using Java 2 Enterprise Edition (J2EE) specification. Clients can access our system remotely using a desktop personal computer and an internet browser.

Consolidated benefit payment data is recorded on the trust accounting module nightly. This data can be viewed through Passport[®], our interactive desktop system.

We continue to modify and enhance our system to meet our clients' needs.

Northern Trust's internal system for processing benefit payments is maintained in-house and has been in place since 2002. Information resides on a Sun Microsystems Enterprise 15000 server. Our Unix operating platform is Solaris 2.8 and we warehouse our data using an Oracle 9i Enterprise database.

Additionally, our online application is browser-based using Java 2 Enterprise Edition (J2EE) specification. Clients can access our system remotely using a desktop personal computer and an internet browser.

Consolidated benefit payment data is recorded on the trust accounting module nightly. This data can be viewed through Benefit Payment Passport[®], our interactive desktop system.

ENHANCEMENTS

Northern Trust is dedicated to the enhancement of our products and services. We will continue to add functionality to our benefit payment system as services become available in the marketplace.

In the past, we have updated our services to include the following:

- We created an industry-leading on-line benefit payment application via the Internet.
- We modified the format of our checks and EFT statements to include variable tax withholding information. Tax withholding options are printed, customized by the participant's resident address, on all payments sent.
- We provided additional capabilities for customized text messages on payments.
- We continually update calculations as legislative and regulatory changes were made.
- We implemented an ad-hoc reporting tool for our clients to run queries on demand.
- We enhanced our participant check history to include digital check images of paid checks and tax forms. These items are available for viewing, saving and printing from your PC.
- We installed an on-line tool to reprint tax forms per client or participant request. This tool also retains records of phone calls, reprint requests, mailing addresses, and returned items.

In 2008, we added an on-line reporting tool to allow users to extract the standard benefit payment reports at their convenience. This enhancement includes the ability to export the data to Excel.



Our efforts have always been and will continue to be focused on accurate payment processing and timely client service.

SYSTEM CAPACITY

We can support an unlimited number of payment plans within Benefit Payment Passport®. As previously stated, we issue more than 1.5 million defined benefit and 76,000 defined contribution distributions each month.

2. **Do you offer an on-line benefit disbursement system? What is the name of the system? Can you update retiree information, reconcile, make stop payments and print documents or reports through the same system? Please describe if done in-house or through a vendor.**

Yes. Our in-house, online benefit disbursement system, **Benefit Payment Passport®** allows clients to manage all facets of defined benefit and defined contribution payments. By accessing current or historical participant and payment information, they can respond to participants' inquiries quickly and accurately. Not only can they review information, they can also choose functions to update, validate, and print participant records. Benefit Payment Passport® provides 24-hour turnaround for daily payments in the form of checks and EFT.

This component eliminates the need for most manual forms by permitting clients to perform the following on-line through the same system:

- Add new participants and payments with interactive validation
- Update participant/payment information
- Transmit and approve payment files sent electronically
- Initiate stop payments and request EFT recalls
- Reissue payments within 24 hours
- View digital check and tax form images and print duplicate tax forms on demand
- Export on-line reporting to an editable spreadsheet format.

Like other transaction-related components of Passport®, security is our top priority with Benefit Payment Passport®. We maintain a multi-layered security process that includes dual controls for data entry and approval.

Sample screen shots of Benefit Payment Passport® are provided below:



Northern Trust: Benefit Payment Passport - Microsoft Internet Explorer

Quick Search Home | Help | Logout

Northern Trust | BENEFIT PAYMENT PASSPORT

Quick Search Client ITIN Plan Last Name Reference Id Search

SUPERIOR SERVICE & FLEXIBILITY

As a busy benefit plan administrator, you want to work with someone who understands benefit payments, and has the ability to process them quickly and efficiently. At Northern Trust, we issue more than one million payments each month from defined benefit and defined contribution plans. This has given us a deep understanding of what makes a benefit payment service successful.

CONTACT US

U.S.: Large Corporate Client Services 312.630.6526 bps-lccs@ntrs.com
 Multi-Market Client Services 312.557.2878 bps-mmcs@ntrs.com

Canada: Canadian Client Services 416.365.0952 bps-canada@ntrs.com

Print

THE RESOURCE CENTER

- Resources
- Service Description
- Security Access Forms
- 2007 Tax News

RELATED LINKS

- www.irs.gov
- www.ebsa.gov
- canada.gov
- ITIN: www.irs.gov/itins

Northern Trust | BENEFIT PAYMENT PASSPORT

Participant/Status: ABE SMITH/ Active Client: 1059 - ABC COMPANY
 ITIN/RefId/PartId: 111-30-1009/ 132U/ 111301009 Plan Name: OPER - ABC PERIODIC PLAN
 Plan Type/Status: Periodic/ Active

NAME AND ADDRESS

Pay Cycle: Immediate Future mm/yy 2/2008

First Name: ABE Last Name: SMITH Title: Middle: Suffix: Country: UNITED STATES
 Address 1: 123 MAIN STREET Address 2: Save Print

Northern Trust | BENEFIT PAYMENT PASSPORT

Participant/Status: ABE SMITH/ Active Client: 1059 - ABC COMPANY
 ITIN/RefId/PartId: 111-30-1009/ 132U/ 111301009 Plan Name: OPER - ABC PERIODIC PLAN
 Plan Type/Status: Periodic/ Active

PAYMENT SUMMARY

Payable Date	Payment Activity	Payment Reference	Gross Distribution	Net Amount	Payment Status	Paid Date
01/02/2008	CHECK	27074970	\$19.24	\$19.24	OUTSTANDING	
12/03/2007	CHECK	26259436	\$19.24	\$19.24	PAID	12/03/2007
11/01/2007	CHECK	26259436	\$19.24	\$19.24	PAID	11/01/2007
10/01/2007	CHECK	25710654	\$19.24	\$19.24	PAID	10/01/2007
09/04/2007	CHECK	25234240	\$19.24	\$19.24	PAID	09/04/2007
08/01/2007	CHECK	24889728	\$19.24	\$19.24	PAID	08/01/2007
07/02/2007	CHECK	24288715	\$19.24	\$19.24	PAID	07/02/2007
06/01/2007	CHECK	23921905	\$19.24	\$19.24	PAID	06/01/2007

Release Reverse Payment Print

Northern Trust | BENEFIT PAYMENT PASSPORT

Participant/Status: ABE SMITH/ Active Client: 1059 - ABC COMPANY
 ITIN/RefId/PartId: 111-30-1009/ 132U/ 111301009 Plan Name: OPER - ABC PERIODIC PLAN
 Plan Type/Status: Periodic/ Active

PAYMENT HISTORY DETAIL

Payment Reference	Payment Activity	Net Amount	Payment Status	Payment Date	Distribution Type	Return Date
27074970	CHECK	\$19.24	OUTSTANDING	01/02/2008	7 - Qualified Periodic Payment > 30 Years	
					7 - Normal Distribution	
					0%	
					12/22/2007	

PAYMENT ADDRESS: ABE SMITH, 123 MAIN STREET, WASHINGTON DC 20009, UNITED STATES

SPECIAL HANDLING INSTRUCTIONS: Release Reverse Payment Print

Northern Trust | BENEFIT PAYMENT PASSPORT

Participant/Status: ABE SMITH/ Active Client: 1059 - ABC COMPANY
 ITIN/RefId/PartId: 111-30-1009/ 132U/ 111301009 Plan Name: OPER - ABC PERIODIC PLAN
 Plan Type/Status: Periodic/ Active

DUPLICATE TAX FORM SUMMARY INFORMATION

Participant Id	Client	Plan	Dist Type	Event Date	State	NRA Country
045228464	1059	OPER	7	06/24/2007	CT	
045228464	1059	OPER	7	06/24/2007	CT	Need Add'l Form
045228464	1059	OPER	7	01/25/2006	CT	
045228464	1059	OPER	7	12/15/2005	CT	
045228464	1059	OPER	7	12/15/2005	CT	
045228464	1059	OPER	7	12/15/2005	CT	
045228464	1059	OPER	7	12/15/2005	CT	
045228464	1059	OPER	7	12/15/2005	CT	
045228464	1059	OPER	7	12/15/2005	CT	
045228464	1059	OPER	7	12/15/2005	CT	

Support Duplicates Print



3. How do you propose to prove your on-line benefit system to ERSRI?

We are happy to provide an on-site demonstration of our on-line benefit system at the location most suitable for the ERSRI – either at your offices in Warwick, Rhode Island or in our Corporate Headquarters in Chicago

In the interim, the below link offers an overview of our Benefit Payment Passport® and its reporting capabilities:

https://web-xp2i-pws.ntfs.com/online_support/IIIP/Sales_Demos/BPP_demo.htm

Benefit Payment Passport® is user-friendly and intuitive, and our experience is that clients typically require minimal formal training to become proficient in the system. At the outset of the relationship, we will schedule a comprehensive training session with the appropriate client staff. This session may include an unlimited number of participants, and can be broken into multiple sessions by user needs if appropriate. We also set-up report templates and combinations for clients' business needs, including any custom reports.

4. What participant/plan information is retained on your system?

We maintain historical files for participants, as well as their current and future payment data records, for seven (7) years.

For both periodic and non-periodic payments, we can store the following data for each participant:

PARTICIPANT DEMOGRAPHIC INFORMATION

- Social Security Number
- Name
- Address
- Telephone number and e-mail address
- Retirement date, hire date, birth date, date of death, COLA date
- Optional miscellaneous storage fields for actuarial data and mass updates
- Up to 4 beneficiary names, Social Security Numbers, birth dates, and relationships

PAYMENT INFORMATION

- Current payment and non-tax deduction information (i.e. medical premium)
- Taxability data (i.e. Ordinary Income, Employee Contributions)
- IRS distribution codes
- Federal, state, NRA, local, and FICA withholding information
- Alternate mailing address
- EFT instructions
- Year-to-date amounts
- 24-months of payment history (available online)

5. What type of benefit plan reports are available to the client and the various plan? Are customized reports available upon request? Describe briefly the contents of each report. Please provide samples of you standard periodic and non-periodic participant payment reports.

BENEFIT PLAN REPORTS

Our comprehensive report package, available via Benefit Payment Passport®, includes:



LIVE RUN REPORTS (PRODUCED AFTER EVERY PERIODIC CHECK RUN)

- **Live Run Activity Report** lists each participant's name, check number or EFT receiving institution, payment amount for the current check run, and reflects each participant's gross /net payment amounts and itemized deductions.
- **Benefit Reconciliation Report** details the daily financial changes for all periodic plans between live run pay cycles and is used to balance one live run's distributions to the next. Activity captures funding changes, deduction changes, and tax withholding changes.
- **Expiration of Employee Contributions Report** details all participants with employee contributions expiring within one month following the date of the report and serves as a preview to upcoming changes made to the participant's payment record.

MONTHLY REPORTS (PRODUCED ON THE FIRST BUSINESS DAY OF THE MONTH)

- **Monthly Activity Report** lists each participant's name, check number or EFT receiving institution, payment amount for the current check run cumulatively for the month, and reflects each participant's gross /net payment amounts and itemized deductions. The total payment amounts will equal the transactions posted in Northern Trust's accounting reports.
- **Monthly Activity Recap Report** lists monthly activity for a periodic plan and reflects participant's gross/ net payment amounts and itemized deductions for special dated distributions. Live run pay cycle activity can be found at the end of the report in the Summary of Totals sections labeled as 'Cycled Payments'. The total payment amounts will equal the transactions posted in Northern Trust's accounting reports.
- **Change Report** details changes for all plans and captures set-ups and changes for participants, payments, deductions, and taxes. This report includes the user ids according to who entered the transaction and who approved it.
- **Vendor Check Detail/Summary Report** details the non-taxable deductions withheld from participant payments (i.e. medical premiums). Activity is captured by participant and includes the plan ID, deduction code, and deduction amount. This report will accompany the paper check if one is issued for the grand total of each deduction. If the grand total of the premium is sent via EFT then the report is sent alone to the appropriate recipient.
- **Outstanding Participant Check Report** lists checks that have been outstanding for more than 60 days. Based on the client instruction from the client, your client service team will stop payment and redeposit the check to the trust account or stop payment and reissue another check to the participant. You may also take action on any outstanding payment by utilizing Benefit Payment Passport®.
- **Outstanding Vendor Check Report** lists checks that have been outstanding for more than 60 days. Based on instruction from the client, the client service team will redeposit the check into the trust account or to reissue another check to the vendor.

ANNUAL REPORTS (PRODUCED THE THIRD WEEK OF JANUARY)

- **Annual Statement of Payments Report** lists each participant's name, social security number, check number or EFT receiving institution, payment amount for the entire tax year, and reflects each participant's gross/net payment amounts and itemized deductions.



- **Annual Tax Summary Report** reflects information that is filed with the Internal Revenue Service on the annual tax forms.

Please see Exhibit 14 for samples of our Benefit Payment reports for both standard periodic and non-periodic participant payments.

CUSTOMIZED REPORTS

We have the ability to create customized reporting. Several reports are available for our clients to request at any time. We are happy to review your requirements and customize our reports to meet your needs.

In addition, any user of Benefit Payment Passport[®] has access to Sherlock, an ad-hoc query reporting tool. Sherlock allows the user to query upon data as of the close of business yesterday. The report can be downloaded to Excel for easy data manipulation.

Passport[®] users have powerful and flexible reporting options available to meet their reporting needs. Users can control report content by developing filters to view data within specific time frames and funds or accounts. Numerous reports exist that deliver the data in an overview, summary, or detail level. In addition, data can be exported into spreadsheet software for further manipulation.

6. **How do you differentiate your benefit plan services from other institutions? What are the key elements that the client will gain from your benefit plan services?**

KEY DIFFERENTIATORS

Operationally, benefit payments is among the most mature of the "value-added" services offered by the major custodian banks, and as such, all of the major market players can provide these services efficiently and well. While the technical aspects of this service are highly standard, Northern Trust differentiates its benefit payments service offering by focusing on quality service and a superior client experience. ERSRI would benefit from the following key elements of our benefit payment service:

- **Our online system was designed with clients in mind** – our clients often tell us that one of the reasons they choose Northern Trust is because our system has such a quick response time, is intuitive and easy to use, and meets their day-to-day needs with minimal hassle.
- **Our system is flexible** – we provide custom reporting and data feeds to clients so that they can easily integrate and manage data on their systems, and all reports delivered through Passport[®] can be exported to Excel, csv, or any of several other formats for further analysis or manipulation.
- Like all of our services and systems, benefit payments **systems are fully integrated** with core asset servicing platform, which helps eliminate errors from multi-system data transfers, removes the need for multiple internal reconciliations, and benefits clients with faster access to more consistent, more accurate data.
- We are a **service-oriented organization that strives for accuracy** in every facet of our business, and benefit payments is no exception. All of Northern Trust's benefit payments tax filings balance, to the penny, every quarter, as well as annually.

7. **Do you give the plan sponsor credit for the float on funds in the plan's disbursement account? When are payments charged to the client account?**

Cash allocated to cover benefit disbursements remains invested in the client's cash account until payable date. Float earnings, if any, help defray the costs of premature check presentment and benefit disbursement servicing. We are happy to discuss any possible alternative benefit payment service under which you can receive the check float.



8. Would we be assigned one primary contact in your benefit payments area?

Yes. As part of your Client Service Team, we assign a primary specialist as your designated **Benefit Payment Client Service Representative** to oversee the delivery of all services and coordinate the staff assigned to your account.

9. How is this function staffed? What is the interaction of responsibilities and accountability between the benefits area and other aspects of master custody services?

Benefit Payment Service Teams are customized to each client's particular needs. We build a client service team to provide you with optimal coverage and experience.

The **Client Service Team** serves as a liaison with your participant recordkeeper, benefits administrator and other agents supporting your plans. The Client Service team works closely with your relationship manager (Harland Abraham— your primary contact) and others at Northern Trust as a liaison with your participant recordkeeper, benefits administrator, and other agents supporting your defined contribution, defined benefit and non-qualified plans.

As stated above, as part of your team, we assign a primary specialist as your designated **Benefit Payment Client Service Representative** to oversee the delivery of all services and coordinate the staff assigned to your account. Their primary objective is to make our services automated, efficient and accurate.

Further, the **Participant Service Team** will handle participant phone calls, questions regarding direct deposit changes, address changes, withholding changes, stop payments, and tax forms.

We assign a dedicated **Implementation Team** to work closely with your current benefit payments payer throughout the transition process. This team is responsible for the mapping and conversion of your retiree data so as to ensure a seamless and uninterrupted transition.

10. How are you organized to give direct personal service to a client in terms of handling benefit payment exceptions, reconciling problems or errors and printing year-end tax information?

Please see Question 9 above detailing our Benefit Payment Service team, available to give ERSRI personal service. In addition, our call center representatives answer questions relating to participants' payment processing, such as when and where the payment was mailed, request check reissues, photocopies of checks and duplicate tax forms, and also make tax election and direct deposit changes.

11. In the case of benefit checks that reflect funding from both qualified and non-qualified (SERP) plan assets, describe the periodic reporting to the plan sponsor and the recipient.

We would not create a single payment which co-mingles qualified and non-qualified plan assets. We would, however, establish two separate payment records and disburse funds to the recipient according to asset type. This ensures accuracy in tax withholding, plan sponsor reporting, tax reporting and escheatment.

12. Do you provide ACH/Direct Deposit services?

Yes. We can send funds electronically to a participant's account at another financial institution. Participants can have their payments direct deposited into three separate accounts by designating a dollar amount for two of the accounts and having the remaining balance deposited in a primary account. For U.S. payees, the receiving party



must be a National Automated Clearing House Association (NACHA) member, allowing payments to be directly deposited through EFT (electronic funds transfer).

Additionally, participants residing in Canada may request their funds from U.S. trusts to be electronically sent to their Canadian accounts. Payments are sent in U.S. dollars to Canada, converted to Canadian dollars, and transferred to participant accounts.

To encourage your participants to receive their payments electronically, we print a request for Electronic Funds Transfer (EFT) form on the back of every check. Participants can complete this form and then return it to Northern Trust for processing.

13. How many annuitant checks do you send each month?

We issue more than 1.5 million defined benefit and 76,000 defined contribution distributions each month.

14. How many electronic fund transfers are sent each month?

More than 79%, or more than 1,200,000 payments, are issued using electronic deposit each month.

15. How many lump sum payments are made each month?

We issue approximately 76,000 non-periodic payments each month for defined benefit and defined contribution plans.

16. How many pensioners are in your largest and three smallest benefit payments clients?

Please note that in order to protect our clients' confidentiality, we have omitted actual client names from the table below. We have provided the numbers below based on our most recent statistics as of 12/31/11.

THREE LARGEST BENEFIT PAYMENT CLIENTS		THREE SMALLEST BENEFIT PAYMENT CLIENTS	
Client	Number of Pensioners	Client	Number of Pensioners
Client A	118,000	Client D	Less than 100
Client B	50,000	Client E	Less than 100
Client C	40,000	Client F	Less than 100

17. Do you offer coordination of cash movement between accounts for disbursements? Be specific.

Your Relationship Manager will work with you to establish a process for having funds available for benefit payments. Funds are typically transferred from investments to a holding trust, also known as a cash account, prior to payable date. On payable date, Northern Trust debits the holding trust/cash account for the gross amount of the benefit payments.

18. Can you accommodate retiree-requested deductions for health, supplemental life insurance and Quadro payments? How many deduction fields can your system accommodate per retiree?



Yes. We can support an unlimited number of non-taxable deduction fields, such as medical premiums, in addition to Federal, state, NRA, and local withholding at the plan level. Participants can participate in a maximum 20 deductions in addition to tax withholding.

19. Describe your tax services responsibilities in regard to government, state and participating reporting.

Northern Trust calculates, withholds, and files federal, state, non-resident alien, and local taxes. Please refer to the following detail:

- **Federal** – We calculate Federal tax withholding based on specified amount, specified marital status, number of exemptions, percentages, and the standard withholding tables. Changes to the Federal tax tables are tracked and programmed into our system to enhance the accuracy of our calculations. The Balancing and Control Team reconciles all Federal tax withholdings with the IRS daily. We file Form 945 annually for qualified payments and Form 941 quarterly for non-qualified payments. As the payer and tax depositor, we handle all inquiries from the IRS concerning tax deposits and year-end filings.

We withhold taxes such as FICA (Social Security and Medicare) deductions for non-qualified payments and deposit them to the Social Security Administration.

- **State** – We calculate state taxes based on specified amount, specified marital status, number of exemptions, as a percentage of federal withholding, and the standard withholding tables. All changes to each state's tax tables are tracked and programmed into our system. Withholdings are remitted to each state tax agency in accordance with the individual state regulations, and all appropriate state tax forms are filed as necessary. We handle all state tax agency inquiries.
- **Local** – City and county taxes for several locations can be withheld from participant payments. Withholdings are remitted to each county in accordance with the applicable regulations, and all appropriate county tax forms are filed as necessary. We handle all city and county tax agency inquiries.
- **Non-Resident Alien** – NRA authorization forms are processed by the client service representative during the participant set-up process. NRA withholding taxes are remitted to the IRS upon each payment to a non-resident alien. We provide the 1042-S Form to NRAs if it is applicable. Northern Trust requires an accurate, original W8 beneficiary form for all non-residents.
- **Puerto Rico** – We calculate withholding for Puerto Rican plans based on the Puerto Rico rules and regulations. Withholdings are remitted to the Hacienda. We provide the necessary 480.7 tax forms to the participants.
- **Non-Taxable Deductions & Garnishments** – We can withhold various types of non-taxable deductions such as medical premiums, insurance premiums, IRS tax levies, QDRO deductions, etc. from a retiree's monthly benefit. This information is then reported to you and/or the vendor via the Vendor Check Detail Report.

We also print all relevant participant data on the appropriate tax forms (1099-R, 1099-DIV, W-2, 1042-S, and 480.7) and mail them to payment recipients annually.

20. What are your procedures for canceling and reissuing checks?

Benefit Payments will take direction from the client or the participants to cancel or reissue periodic checks on request. We can also take direction from the client to reissue a participant's lump sum payment.

Reissued checks have a 24-hour turnaround. The original outstanding check is stopped today and the reissued check is mailed the following business day. Depending on the necessary correction, a revised form will be released 2-5 business days from the date of the original correction request.



XVIII. SYSTEM CAPABILITIES

- 1. What percentage of the Firm's current annual master custody budget is allocated for MIS/CIS, systems development, and/or other computer related expenses? What is the projected budget of the next three years? Breakout by category, if applicable, and provide dollar amounts.

In 2011, Northern Trust allocated approximately 15.98% of our total revenues to technology investment.

We have one integrated technology platform for all our clients, the major benefit of which is that all of our technology spending goes to this one platform, allowing each dollar to go farther than if we had multiple platforms to maintain. Further, having one integrated technology platform allows us to bring new system enhancements to market more quickly, as each enhancement is only developed and implemented once.

Detail on the projected budget for the next three years by year is as follows:

Projected Technology Budget	
2012	\$610 million
2013	\$665 million
2014	\$725 million

Approximately 70% of our annual data processing budget is spent on systems development and enhancement and the remaining 30% is spent on systems maintenance. Approximately half of our technology budget is dedicated to our core system developments and upgrades, and the other half supports our front-end online system for clients, Passport®.

Unlike many of our competitors (whose technology dollars cover many businesses), our clients can be assured that our investment is targeted at enhancing the asset servicing services we provide.

- 2. Describe briefly your computer system's capability, describing in detail the primary and secondary hardware and data processing software configurations that serve your operations.

Northern Trust's in-house computer facilities include the following systems:

Z/OS (FORMERLY OS/390) AND Z/LINUX

Northern Trust's production mainframe environment consists of two z10 Series processors running z/OS version 1.9 in a Parallel SYSPlex environment. Additionally, each mainframe footprint is configured with two Integrated Facility for Linux (IFL) running RedHat Linux, which is providing a distributed gateway into the mainframe DB2 environment. Northern Trust's mainframe database environment consists of DB/2 Universal Database for z/OS version 8 and IMS version 9.

For business continuity purposes, another Z-series mainframe and an asynchronously maintained copy of the production DASD environment is housed at our second datacenter. Both mainframe complexes are maintained in-house by Northern Trust at current, industry-standard levels of software and hardware. Additional capacity is added as business demands warrant.

UNIX/LINUX

There are several operating system alternatives for Unix/Linux applications - Red Hat Linux ES 5.0, IBM AIX 5.3, or Sun Solaris 10.



For the Red Hat Linux (x86) 64-bit operating system, we have standardized on the IBM xSeries hardware platform. This is our preferred platform for horizontally scaled applications and databases (i.e. spread across multiple smaller systems for high availability and where additional servers are added for growth).

For the IBM AIX operating system, we use IBM pSeries hardware on the POWER5 and Power 6 architectures. This is our preferred platform for vertical scaling of large applications or databases, which must run on a single server and grow by adding CPUs.

For the Sun Solaris operating system, we support Sun Microsystems servers and Fujitsu PRIMEPOWER servers based on the SPARC processor.

All production systems are built with either a warm standby host available in a second data center or a live/live or master/slave configuration, with the hosts split between data centers. Data is kept in synch by various forms of hardware or software based DASD mirroring.

For applications that can withstand only very short unplanned outages, high availability is provided by creating a "cluster", utilizing Veritas Cluster Server (VCS) in the Solaris environment.

Our strategic Unix/Linux database platforms are Oracle 11g on Red Hat Linux ES, Solaris and AIX and Oracle RAC on Solaris.

MICROSOFT

Northern Trust is currently supports Windows 2008 64-bit for application servers, IIS version 7.0 for web servers and MS-SQL 2008 for database servers.

Applications deployed in the Microsoft environment are built on HP Blade and Proliant DL machines with 2 or 4 processors, depending on the application and size of its user base. When feasible multiple applications are consolidated onto a single host using VMWare ESX 4.x

All critical production systems are built with either a warm standby host available in a second data center or a live/live or master/slave configuration, with the hosts split between data centers. Data is kept in synch by Hitachi Mirroring.

For applications less critical that can withstand unplanned outages are recovered from daily back-ups to a designated test system or spare server from Northern's Commvault Galaxy Backup Environment.

OS/400

Northern Trust's iSeries (AS/400) environment currently runs i5/OS Version 6 Release 1. DB2 UDB is the relational database and it is integrated into the operating system.

We can advise that there is no reliance on third parties for development and customization to our systems. Northern Trust's mainframes are updated in-house at least once a year. Further, our technology platforms are constantly monitored for performance and capacity.

3. What was the percentage of downtime during the last two years? What was the number of occurrences? What were the primary causes and how were the problems corrected?

Due to the careful selection of hardware, software and systems personnel, Northern Trust's systems have minimal downtime. We average 99.9% system availability across our processing and client delivery systems over the last three (3) years.



The average length of time systems take to recover can range from minutes to several hours, depending on the situation. Problem complexity, time of day when the outage occurs, and potential need for external vendor involvement are all factors, which can affect the recovery time.

Northern Trust has sophisticated system monitoring, firecall, and escalation procedures to ensure that all appropriate resources are assigned to resolve outages as quickly as possible. In addition, we have sophisticated business continuity and disaster recovery capabilities and a T3 connection at each of our peer data centers to 2 different Internet providers. Should primary systems or connections go down, we can switch over to the back-up capability immediately.

As a result of these capabilities, any computer downtime we have experienced has had no direct impact on our clients.

4. What has been the investment in systems development for the master custody systems for each of the past three years? Differentiate between the applications for US assets and those for processing of non-US assets.

We have spent over \$1.69 billion on systems development and enhancements over the past three years. Detail on the technology spending of the past three years by year is as follows:

Technology Spending	
2009	\$456 million
2010	\$518 million
2011	\$609 million

This figure applies to both US assets and non-US assets as Passport[®] is an integrated global system.

5. What is budgeted for systems development for the next three years? Differentiate between the domestic custody applications and those for processing non-US assets. What enhancements are currently being developed and what enhancements are planned for the future?

As stated above, we have budgeted \$2.0 billion over the next three years. Detail on the projected budget for the next three years by year is as follows:

Projected Technology Budget	
2012	\$610 million
2013	\$665 million
2014	\$725 million

Again, this figure applies to both US assets and non-US assets as we have one integrated global system.

SYSTEMS ENHANCEMENTS

Processing operations and technology are at the center of our business, and our planned priorities in this area mirror its importance to Northern Trust. To be a leading asset servicing institution, Northern Trust is active not only in its own back-office development, but also within the industry. The key initiatives detailed below illustrate how Northern Trust has integrated industry priorities with its own priorities to benefit our clients.

Specific business development priorities in the product and service areas are:



- Continued focus on web-based applications empowering our clients and their investment managers with cutting-edge technological solutions through our online system, Passport®.
- Data delivery warehouse – extending our capabilities to further enhance the production of consolidated reporting based upon data collected from third parties for our asset servicing clients.
- Special and alternative assets – increasing our focus on special and alternative assets (e.g. derivatives, hedge funds, private equity and property), and developments to service them effectively.
- Enhancing the range of investment risk and performance tools available via Passport®.
- STP – Northern Trust is a firm advocate of straight-through-processing initiatives, working toward and supporting all initiatives to improve the infrastructure of local markets and promote settlement efficiency.

6. When was the software developed and was it developed internally or externally?

Our software is updated annually.

In order to meet our varied client demands, Northern Trust uses and supports various software products – some third-party, others internally developed – which comprise our single global platform. Where possible, we will buy solutions rather than build.

When obtaining software externally, we look at software solutions available in the marketplace, and then we customize these packages to our specifications. If we cannot find a solution in the marketplace that fits our needs, we rely on our systems staff to develop one internally. In situations where Northern Trust develops its own software internally to bring a unique competitive solution to bear on a problem, we develop with the following standards:

Technical Architectures:	Java, .Net, Mainframe
Languages:	Java, .C#, COBOL
DBMS:	DB2, Oracle

As our business and global presence continues to grow, we consistently evaluate our information technology requirements. We meet our requirements through adherence to and implementation of high level/strategic information technology plans designed to complement our business strategies.

7. Specify which master custody data processing applications are batch oriented and which are online / real time.

As stated throughout our response, Northern Trust operates in a real-time environment.

Trade information, such as settled trades, failed trades, unaffirmed trades, and pending trades, as well as cash forecasting and corporate action information is updated on an intra-day basis, with data updates occurring every 20 minutes throughout the day. Accounting information is updated on Passport® daily.

8. What additional equipment and software is necessary for ERSRI to obtain on-line services? Is this provided as part of your proposal?

Passport® is designed to be readily available using industry standard hardware and software. To ensure full access to Passport®, please note the following requirements:

OPERATING SYSTEM

- Microsoft® Windows® 7, XP and Vista



- Mac OSX

WEB BROWSER

- Secure Sockets Layer must be enabled
- Microsoft® Internet Explorer 6.0, 7.0 and 8.0. Versions 7.0 and 8.0 are recommended for optimal performance.
- Firefox 3.0

CONNECTIVITY

- Broadband Internet connection with a minimum speed of 1.0 mbps is required with 2.0 mbps recommended

FIREWALL

- IP addresses should be opened for ports 80 and 443

DESKTOP REQUIREMENTS

- Intel® Pentium® processor (or equivalent)
- 1GB RAM is required
- Minimum display resolution of 800 x 600 by 16-bit color

SOFTWARE REQUIREMENTS

- Adobe Acrobat® Reader 5.0 or greater
- Flash 10.0

ENCRYPTION

- Application users initiating add/change transactions need browsers with 128-bit encryption. All other applications must use a minimum of 40-bit encryption.
- Non-U.S. clients must use the maximum encryption allowable (128-bit vs. 40-bit) for their country of origin.

PLUG-IN/OPERATING SYSTEM ADD ON

- Passport® requires Adobe Acrobat® Reader 5.0 or greater. This plug-in can be downloaded free of charge from <http://www.adobe.com>

ADDITIONAL PASSPORT® INFORMATION

In addition, Northern Trust Web-based services require that clients use a Secure Sockets Layer (SSL) compliant browser. SSL is a protocol that allows each client's personal computer to establish a secure connection to our Internet server. SSL uses encryption techniques that turn all information transmitted into a series of unrecognizable numbers as the information travels through the Internet. Our servers turn the meaningless numbers into recognizable information after the secure connection has been made. This is done at 128-bit encryption. Users can recognize if session is encrypted by looking for the PADLOCK symbol in the lower left corner of screen in Internet Explorer. SSL also uses the additional protection of a digitally signed certificate that assures clients that they are communicating with Northern Trust.

9. What are the hours of operation / availability for your on-line systems?

Users may access Passport® 24 hours a day, 7 days a week, 365 days a year.

(Note: There is a weekly window reserved for any planned Passport® maintenance on Saturdays, from 5:00 pm to 4:00 am, CST.)



10. Describe report-writer systems that you have provided to clients for installation on PC's. How would you provide such a system to ERSRI with a download of transactions and position history for development of accounting and performance measurement reports and graphs?

Report customization can be achieved in a number of ways. Firstly, in addition to the extensive range of standard pre-defined reports available within Passport[®], the client can also be granted access to the appropriate custom reports already in existence.

Secondly, each client can work with Northern Trust to assist them in creating tailored reports.

Thirdly, through the "Sherlock" data interrogation and report writing tool within Passport[®], clients have the ability to specify customized online enquiries on accounting and performance data - accessing our performance and reporting database and manipulating the underlying data for the production of further customized reports.

SHERLOCK – DATA INTERROGATION AND REPORT WRITING

Sherlock is perhaps the most interactive and user-friendly function within Passport[®]. This advanced enquiry and database management tool gives complete flexibility to interrogate portfolios at any time of the day or night creating customized reports and enquiries. Using Sherlock, clients have the ability to create custom queries on accounting and performance data, which can then be built into custom reports according to the user's specifications.

This output is easily exported to other PC-based software, such as Excel, for the development and production of custom spreadsheets and presentations that may be required, for example for trustees, or annual reports. All performance reporting is multicurrency.

The output can also be delivered via e-mail as a notification of report availability to their Inbox, or as a secure e-mail attachment.

In summary, Sherlock provides users with two main capabilities:

1. It is a powerful ad-hoc enquiry tool. Sherlock can interrogate specific data elements using its drill-down capability. It then allows selecting within this database and extracting selected data to match enquiries.
2. It gives the required desktop flexibility to create reports – giving total control over the type of data reviewed, presented in a customized format.

These two functions are so easy to use that even the most inexperienced PC users can understand how to manipulate the underlying data to give them the information they want to see on screen or in report format - cutting and sorting data in any number of ways to accommodate unique reporting requirements.

11. Describe your process of secured physical access.

Physical access to computer facilities is controlled by a minicomputer-based security system. Entry to the computer room is controlled via an encoded employee identification card and a secondary authentication method, e.g. biometric scanners or a personal identification number that employees must use to gain access. The security software logs and retains all data center access event information, including violation attempts.

Telecommunication closets are controlled by an encoded identification card or lock and key. Keys are limited to specific personnel and locks are changed when needed. Employees that require ongoing access to the computer facility must be approved by Computer Operations Management and sanctioned by our Protective Services Group.



No unauthorized person is allowed access into the computer room unless he is accompanied by authorized personnel. In addition, cameras are located in the data center and key entry points to monitor all activity. Tapes are retained for 60 to 90 days depending on location and all visitor logs are retained for a minimum 18 months.

Northern Trust data centers have 24x7x365 security guard protection. Guards monitor alarms and other security systems, and regularly patrol the facility to check windows, doors and other potential access points. A guard report is produced at the end of each patrol.

12. Describe your system for prevention of damage by fire, water, and environmental hazards.

The Corporate Data Centers are protected by sophisticated fire detection and suppression systems. Smoke and heat sensors are located in the ceiling space, in the rooms themselves, as are water detection sensors under the floors. Northern Trust uses a Very Early Smoke Detection Apparatus or VESDA system to continuously sample the air in its newest processing center. A VESDA system can detect smoldering wiring up to 2 weeks prior to a potential fire. Corporate Data Centers are protected by a gas-based fire suppression system, using either FM200 or Halon.

The Corporate Data Centers are also covered by a dry-pipe, pre-action sprinkler system, whose pipes will only fill with water after the gas suppression system has discharged, but only if a fire situation still remains. Alarm systems for Northern Trust's Corporate Data Centers are connected directly to the local fire departments.

13. Describe your disaster recovery plan and results of tests performed in the past year. Provide an estimate of the maximum elapsed time before the restoration processing of ERSRI's transactions in the event of disaster to the custodian's primary processing facility. Describe any ERSRI involvement in implementing disaster recovery.

OVERVIEW OF DISASTER RECOVERY PLAN

Northern Trust's business continuity philosophy and ongoing review efforts emphasize disaster prevention, mitigation and recovery. Our work environment is regularly reviewed to identify, avoid and/or minimize potential sources of risk and the likelihood of significant service interruptions.

Because we view data security and business continuity as mission-critical, we have devoted significant planning, resources and staff to the development and implementation of our plans. The primary components of these plans are summarized below:

- 24/7 / 365 monitoring of critical support systems, using staff and electronic tools.
- Two peer Corporate Data Centers in separate geographic locations – each complete with total system redundancy, data back-up, and sufficient processing and bandwidth capacity to run the critical workloads of both centers.
 - ◆ In the event of a disaster at one of our Corporate Data Centers, the other data center can recover all critical processing within 12 hours or less. Since many of the distributed systems in use presently split their production demands between the facilities, this recovery time could likely be within 4-6 hours.
 - ◆ Data centers are connected to multiple Internet entry points to ensure connectivity, and supported by a network with a highly redundant, self-healing where possible, diverse and easily re-routable design.
 - ◆ Critical production data is continuously mirrored between both centers via a private, dedicated point-to-point fiber optic network. An electronic data vaulting program is in place between both centers to further protect client data and ensure continuity. Robotic tape backups are also created daily, and stored in both data centers.
- State-of-the-art security and fire protection systems for all data processing facilities.
- Alternate work locations for staff, including our own recovery space, contracted recovery space, and work-from-home programs.



- Regularly scheduled site hazard analyses to identify potential vulnerabilities and mitigate known risks.

All of our BC/DR plans are reviewed, tested and updated on a continual basis. Please refer to Exhibit 15 for our Business Continuity and Disaster Recovery Plan.

RESULTS OF DISASTER RECOVERY TESTS

We consider the results of the various tests confidential and therefore cannot release specific details.

TIMEFRAME TO RESTORE PROCESSING

At a minimum, we review, update, and test our disaster recovery plan on an annual basis, as corporate standards require testing of plans as part of the overall business continuity preparedness process.

Business unit management and technology support management are the final reviewers and approvers of business continuity and disaster recovery plans maintained by their groups. These managers are responsible for determining whether business continuity and disaster recovery plans meet the needs of the clients and the Corporation. Plans and test results are also subject to review by Northern Trust's Audit Services Department and banking regulators.

In the event of a disaster at one of our Corporate Data Centers, the other data center is equipped to resume **critical processing within 12 hours or less**. Since many of the distributed systems in use presently split their production demands between the facilities, **this recovery time could likely be within 4-6 hours**.

ERSRI INVOLVEMENT IN IMPLEMENTING DISASTER RECOVERY

We do not rely on clients to assist us in implementing our disaster recovery program. In the event of a disaster situation, the client's relationship team is their primary contact for communication should an applicable situation arise. The client will be contacted by phone or e-mail, whichever option is more viable at the time.

14. Describe any difficulties your organization experienced in connection with the Year 2000, or any more recent cyber-related intrusions.

During the transition into Year 2000, Northern Trust conducted wellness checks on its systems, and monitored key provider and vendor activities. As a result of our preparation and monitoring efforts, our transition was successful. Product availability, a key indicator of our performance, was normal for year-end activity.

In the last decade, disaster challenges have grown exponentially, occur more frequently, and are more wide-ranging and demanding, which greatly complicates the ability to quickly resume normal services.

In the last decade, we have had to plan for and respond to a variety of events such as electrical outages that spanned nearly half the United States, worldwide terrorist events (the September 11, 2001, attacks in the U.S.; the 2005 transportation bombings in London), transportation strikes, civil disruption, and record numbers of intense storms (hurricanes, typhoons, snow/ice).

Client data storage requirements have grown more than ten-fold over the past several years. Clients are located in virtually all time zones worldwide, creating the need to provide services as close to "continuous availability" as we possibly can.

Northern Trust addresses these challenges daily. In the event of a disaster, Northern Trust has plans in place to respond effectively and efficiently. These plans have been successfully used to respond to the potentially disastrous situations mentioned above. Periodic global events have reinforced clients' interest in business continuity and disaster recovery.



15. Describe your process for file back-up and off-site storage, including frequency and location:

- a) **Data**
- b) **Software**

Accuracy, confidentiality, currency, and availability are the primary goals Northern Trust strives for when managing our production data. To achieve those goals, Northern Trust has used a number of technologies to implement data protection schemes. For example, all critical production data is continuously mirrored via hardware and software between Corporate Data Centers. This data mirroring is facilitated by a dedicated, point-to-point fiber network which runs between the Corporate Data Centers. The fiber network is comprised of two separate sets of fiber circuits that travel along geographically diverse paths, with each circuit path having enough capacity to handle the full production demands. Using data mirroring technology allows Northern Trust to continuously maintain two copies of critical production data, on spinning disk, in our geographically disparate Corporate Data Centers. In a disaster, processing would resume on servers at the peer data center, using the mirrored disk copy of production data that was as close to the point of the disaster as possible.

Northern Trust believes that it is prudent to also employ an electronic data vaulting scheme to further protect critical production client data. Tape backups are created daily and stored both in the local and the peer data center. Enabled by the same fiber network described above, backup data is written directly to robotic tape libraries that are located in local and remote Northern Trust data centers. Backup data is only transmitted over this fiber network, so it never leaves the control of Northern Trust technical staff. We do not employ external vendors to ship and store our production backup data. As a result, we have eliminated the risk of tapes being lost or stolen in transit and having production data at risk for unauthorized access.

16. Describe your process of incorporating new systems into your operations.

Northern Trust has implemented a stringent change management process to maintain the integrity and security of our systems. Distinct production and test regions are maintained using security rules. Changes to production software must follow a specific and secure migration path that provides adequate testing and management approval of all changes. Hardware installs are done in a controlled manner after thorough testing

Relationship managers notify their clients on a regular basis of planned upgrades. In addition, the "Announcements" facility within Passport[®] automatically communicates any information pertaining to system updates and enhancements. Information is also available on Northern Trust's website.

Program changes and routine system maintenance are completed at time of minimal system use, typically on Sunday mornings, between midnight and 4:00 am (CST). Our entire system is not brought down; rather selected applications are identified for modifications.



XIX. TRANSITION / CONVERSION PROCESS

- 1. Provide a detailed task listing and schedule on how you will approach the conversion process, including actions required on the part of ERSRI and the time frame to complete each task. Clearly describe the conversion process (i.e. who is responsible for coordinating activities, who must participate, what activities must occur, etc.) Detail the type and amount of resources required from ERSRI.**

Please see Exhibit 16 for a sample transition task schedule for ERSRI, detailing actions required and timeframes, with the asset transition date of July 1, 2012.

OVERVIEW OF THE CONVERSION PROCESS

Northern Trust knows that the best start to a successful relationship is a successful transition. The transition process serves as the client's first impression, revealing the level of service and dedication the new client can expect on an ongoing basis. With Northern Trust's dedicated resources, consistent communications, careful documentation, and foundation of experience, we aim to make this first impression a strong and lasting one.

DEDICATED RESOURCES

Northern Trust was the first master trustee/custodian in the industry to form a group of specialists dedicated solely to transitioning clients' assets. While your Relationship Manager maintains ultimate responsibility for all transition activities, New Business Consultants serve as the key contact during the transition process. The New Business Consultant works very closely with your Relationship Manager throughout the transition process to cover all critical implementation tasks.

In addition to New Business Consultants, transition specialists are assigned to each conversion and are responsible for working with you, your prior trustee/custodian, investment managers, and all internal processing areas within Northern Trust. Transition specialists strive to move fund assets accurately and quickly, without interference to fund performance. Northern Trust closely monitors and schedules new business activity so that our volume does not exceed our capacity.

COMMUNICATIONS

Open communication with all parties is imperative for a smooth conversion. Initially, we meet with the client so that the Relationship Manager can discuss service needs while the New Business Consultant can fully define the client's transition needs. From this point, the client decides its level of involvement and we will communicate with the client as much or as little as preferred. Typically, we provide the client with a bi-weekly status report in the early transition stages, increasing these communications one-month prior to the transition of assets.

Communication with the prior trustee/custodian is imperative. The New Business Consultant handles this important link. Communication with the investment manager also begins with the New Business Consultants, who work with the managers to help them understand our procedures. They also make sure managers have received the proper trade instructions and have been assigned a Northern Trust expert for ongoing service concerns.

DOCUMENTATION

The road map for every client transition is the Transition Task Schedule. The Transition Task Schedule clearly outlines each transition activity, assigns a responsibility party, and sets the time frame for completion.

Your New Business Consultant designs a detailed Transition Task Schedule incorporating all of your servicing needs and requirements. The New Business Consultant also works with you to understand your ongoing needs while offering suggestions to make processes more efficient.



RESOURCES REQUIRED FROM ERSRI

While we handle the majority of the conversion, your support is vital to a successful transition. We request that one **central contact person** be assigned to work with Northern Trust during the transition process. Just as we assign a New Business Consultant to be the client's immediate and central contact point, we find that transitions run more smoothly with a counterpart at the client site.

This approach is extremely important with more complex relationships. Having a central person at the client's location helps to ease any issues or separate initiatives between parent companies and their subsidiaries, and provides a seamless communication mechanism for implementation.

To prepare for transition, we will conduct transition meetings with your staff. During these meetings, we will outline our processes and make sure your staff is comfortable with our procedures.

Other support we need from you includes:

- Copy of the termination letter sent to the prior trustee/custodian
- List of contacts at appropriate third party providers
- Prompt completion of appropriate forms
- Overview of current account structure and/or changes in the structure at the time of the transition.

2. What dedicated resources (personnel, equipment, training, consultants, etc.), procedures, and controls will you provide or recommend in the transition/conversion period to ensure that the conversion process is completed successfully in a timely and accurate manner?

We recognize that the transfer of assets from one custodian to another is an important event that must be carefully managed and controlled by the custodian from start to finish.

With our resources, communication, documentation, process, and experience, we aim to make this first impression a strong and lasting one. We have a team of people dedicated solely to transferring new business into our operations.

NEW BUSINESS CONSULTANT AND TRANSITIONS TEAM

As discussed above in Question 1, while your Relationship Manager maintains ultimate responsibility for all transition activities, the New Business Consultant serves as the key contact person during the transition process.

The New Business Consultant is nominated during the latter stages of the client's review process so that the appointed individual is familiar with all their business needs and requirements should Northern Trust be awarded the mandate. From the time of our formal appointment, the New Business Consultant oversees the entire conversion process, liaising closely with your Relationship Manager and Account Manager, as well as with your staff and appointed investment managers, in order to ensure a smooth and efficient transition. They are your primary contact during the transition period.

Supporting the New Business Consultant is our Transitions Team – a dedicated unit responsible for dealing with the actual conversion of securities and cash from the client's exiting custodian to Northern Trust. The Transitions Team is responsible for physically transferring the new business into our custody operation. They strive to move fund assets accurately and quickly, without interference to fund performance. The staff in this area are all experienced managers, having previously worked in a number of different operational and administrative roles, in order to gain the experience and understanding necessary to manage the complex transition process.



We have dedicated Transition Teams and New Business Consultants based in both Chicago and London. All appropriate Northern Trust Departments work with these two areas to ensure the client receives complete support and an effectively managed transition process.

Northern Trust closely monitors and schedules new business activity to match our capacity to our volume.

DOCUMENTATION

For every transition event, the Transition Team and New Business Consultant have a checklist of processes and procedures to follow. This starts as a generic checklist but is tailored for each event to include a client's specific requirements. These tasks are timed, working from the intended transition date. As each task is completed, a Transitions Team Leader verifies and signs-off against the checklist. When all tasks have been completed and signed off, the event is classified as closed.

During the transition event, a suite of daily exception reports are produced by the Transitions Control Team; these provide the tools to be able to address any cash and security discrepancies on a timely basis. These reports are reviewed and addressed daily by your New Business Consultant, your Client Executive, and the Transitions Team Leader. Any such discrepancies are raised with your prior custodian/investment managers for resolution.

Upon receipt of audited reports from your prior custodian/investment manager, an independent reconciliation is carried out by our dedicated Transition Accounting Team. Once we are satisfied all records have been accounted for, a sign-off is produced

Ongoing outstanding cash balances, dividends, and tax reclaims will be monitored and pursued with the prior custodian for status updates.

TRAINING

Our clients' Client Executives are ultimately responsible for ensuring that clients have been thoroughly trained on all aspects of Northern Trust's organization, products, and services. During transition meetings, the Client Executive reviews workflow and transaction processes with the client. We explain deadlines and procedures with our clients and their staff to ensure everyone is comfortable with Northern Trust policies. In addition, Northern Trust provides an initial training session for our clients' staff members to familiarize them with Passport[®], our Web-based information delivery system.

COMMUNICATIONS

As stressed above in Question 1, frequent and open communication with all parties is imperative for a smooth conversion. An initial meeting is conducted to define the client's transition needs. At this stage, the client decides the preferred level of involvement; Northern Trust then communicates with the client as much or as little as requested. Generally, Northern Trust provides the client with a bi-weekly status report in the early transition stages, increasing the frequency of these communications one month prior to the transition of assets.

A necessary task is communicating with the former trustee/custodian, and the New Business Consultant handles this important link. Communication with the investment managers also begins with Northern Trust, who works with the managers to help them understand our procedures.

3. Give a detailed description of your last comparable conversion, including the details of specific problems that occurred and the solutions instituted.

Transitions can be complex and may encounter issues – the overall success of a transition is defined by how those issues are identified and managed. Northern Trust differentiates itself by the level and experience of the resources we bring to the transition process. Our approach is underpinned by best practices identified through hundreds of



transitions, which have given us an established means of identifying issues early, surrounding them with appropriate resources, and resolving them in ways that do not impede the broader objective.

For large, complex plans, every transition process presents its own unique challenges and issues, but there are a number of themes common to all transitions. We have worked with many plans similar in size and complexity, each with its own challenges. We have outlined some of the most common challenges, and our approach to managing them, below:

Coordination: the operation of a fund large in size and complexity requires the careful coordination of a significant number of individuals and organizations: plan sponsor, custodian, investment managers, brokers, general partners, and many others. Organizing the activity of all of these groups can be a significant challenge. Our planning includes the identification of all involved parties and our transitions team reaches out early in the process. We break the transition into discrete tasks and assign staff to manage those tasks, which helps ensure that everyone is on the same page and pulling in the same direction.

Customization: every plan sponsor has unique requirements, employing different systems and processes. There can also be considerable cultural differences from one organization to the next. As such, we need to be able to customize our services – technologically and operationally – to meet our clients' needs. The flexibility of our platform is a key differentiator, allowing us to provide custom data integration and delivery options that dovetail with client systems and processes. As part of the transition process, we identify "touch points" and the customization that will be required in order to minimize the impact on our clients' day-to-day operations.

Cooperation with previous custodians and vendors: a smooth transition process depends on the active cooperation of all parties – including the prior custodian. Timely, quality information is essential for keeping the transition process on track, and there are times when receiving that level of cooperation can be a challenge. Northern Trust brings extensive expertise in managing relationships with prior custodians, and our personnel know what questions to ask and how to ask them.

4. **Provide a summary of the problems that you might reasonably expect to occur during this conversion and your approaches to those anticipated problems.**

Northern Trust prepares a detailed and customized task schedule to facilitate well-organized conversions. The schedule documents all tasks, responsibilities, and completion dates to prevent the onset of any problems.

The following problems, easily solved with Northern Trust's direction, may occur when deviation from established procedures occurs:

- The prior trustee/custodian, investment managers, fund companies, GIC vendors, limited partnerships, etc., are not notified in writing that Northern Trust has been appointed as the new provider. *Northern Trust will request the client to draft the necessary letters of notification.*
- Insufficient notice is given to Northern Trust to prepare an organized and successful transition. *Northern Trust will schedule all transitions and begin work with the client at least two months in advance.*
- The prior trustee/custodian does not provide timely delivery of audited statements. *Northern Trust will escalate any issues to the client.*
- The client, rather than prior trustee/custodian, provides asset lists. *Northern Trust will solicit asset lists from the prior trustee/custodian to verify all account data.*
- The prior trustee/custodian reflects out-of-balance assets. *Northern Trust will validate the balances prior to the transition and refer any discrepancies to the prior trustee/custodian for resolution.*



5. How do you process transactions that are pending during the transition/conversion period?

In general, the trading and investment process is not interrupted by a transition. However, there are specific requirements that are provided in detailed documents to investment managers that outline our requirements for the receipt of trade instruction and settlement of trades during the first few days of the transition.

- In a standard transition, the prior trustee/custodian would accept trades with a trade date up to and including the last business day prior to the effective date of the transition.
- The successor trustee/custodian would begin to accept trades with a trade date equal to the effective date of the transition.
- Because of these standards, the manager will have a clear understanding of who to notify for those trades that straddle the transition date lowering the risk of duplicate trades.

We are in constant communication with the manager and the prior trustee/custodian throughout the transition period to verify that duplicate transactions and deliveries are not processed and that timely and accurate settlements occur.

6. Describe training you would provide to ERSRI's staff during conversion.

Your Client Executive is ultimately responsible for ensuring that you have been thoroughly trained on all aspects of our organization. During transition meetings, your Client Executive will review all workflows and transaction processes with you. We will explain all deadlines and procedures with you and your staff to make sure everyone is comfortable with our policies.

In addition, Northern Trust provides a training session for all staff members to familiarize them with how to operate Passport®.

7. Describe the process for transfer of physical securities and appropriate client files.

Northern Trust safekeeps all U.S. physical securities with the Depository Trust Company (DTC), holding all certificates in their vault. Clients benefit both from the highest level of protection for their certificates, as well as streamlined trade and income processes.

During the transition, Northern Trust will work to facilitate the secure delivery of physical certificates and other appropriate client files to our New York facility, where they will be verified, counted, microfilmed (as an added precautionary measure), and forwarded to the DTC for deposit in their vault.

We can support the registration of private placements either in our nominee name or in long title, though our preferred approach is to register notes in Northern Trust's nominee name, as this facilitates faster trade activity and streamlines the income collections process.

- Where physical assets are registered in their name, we work with clients to coordinate the delivery of re-direct letters to all paying agents. We also would add an additional control step to verify that we are receiving all payments directly. Finally, we would request that the client export and send us a monthly spreadsheet from your systems, detailing anticipated payments that our income group can use to track physical payments and ensure all entitlements are being properly collected.
- Where physical assets are registered in our nominee name, Northern Trust will coordinate with the prior custodian to facilitate delivery, verify the certificates, and deposit them with DTC as described above. Once deposited, we will instruct DTC to initiate a re-registration into Northern Trust's nominee name for benefit of the client. We will receive and track income on these assets.



XX. FEES

- 1. Please provide a detailed fee schedule for custodial services. Please submit an all-inclusive flat fee, (non-asset based) for ALL CUSTODY services. This inclusive fee shall cover all services required under this RFP. The services include, but are not limited to the following: portfolio administration, plan accounting, portfolio trading, portfolio transactions, out-of-pocket expenses (wire charges, courier services, telex, etc.), and report generation. The annual fee submitted shall be in effect for three (3) periods. Please identify all services included in your fee quote. In addition, if your organization offers "premium" products / services (i.e. performance analytics, etc.) that are not included in your fee quote, please identify these services and the related annual cost of each.**

Proposers should consider, among other things, the base portfolio composition information as provided in Appendix One.

Please see the attached Fee Schedule for the detail listed above.



Confidentiality Statement

All materials contained in this Request For Proposal (RFP) response or later provided or referred to as part of the tendering process, including the description of Northern Trust, its systems, processes and pricing methodology, are proprietary information of Northern Trust. In consideration of acceptance of this RFP response, the recipient agrees that it will keep all such materials strictly confidential and that it will not, without the prior written consent of Northern Trust, distribute such materials or any part thereof to any person outside the recipient's organization or to any individual within the recipient's organization who is not directly involved in reviewing this RFP response, unless required to do so by applicable law.

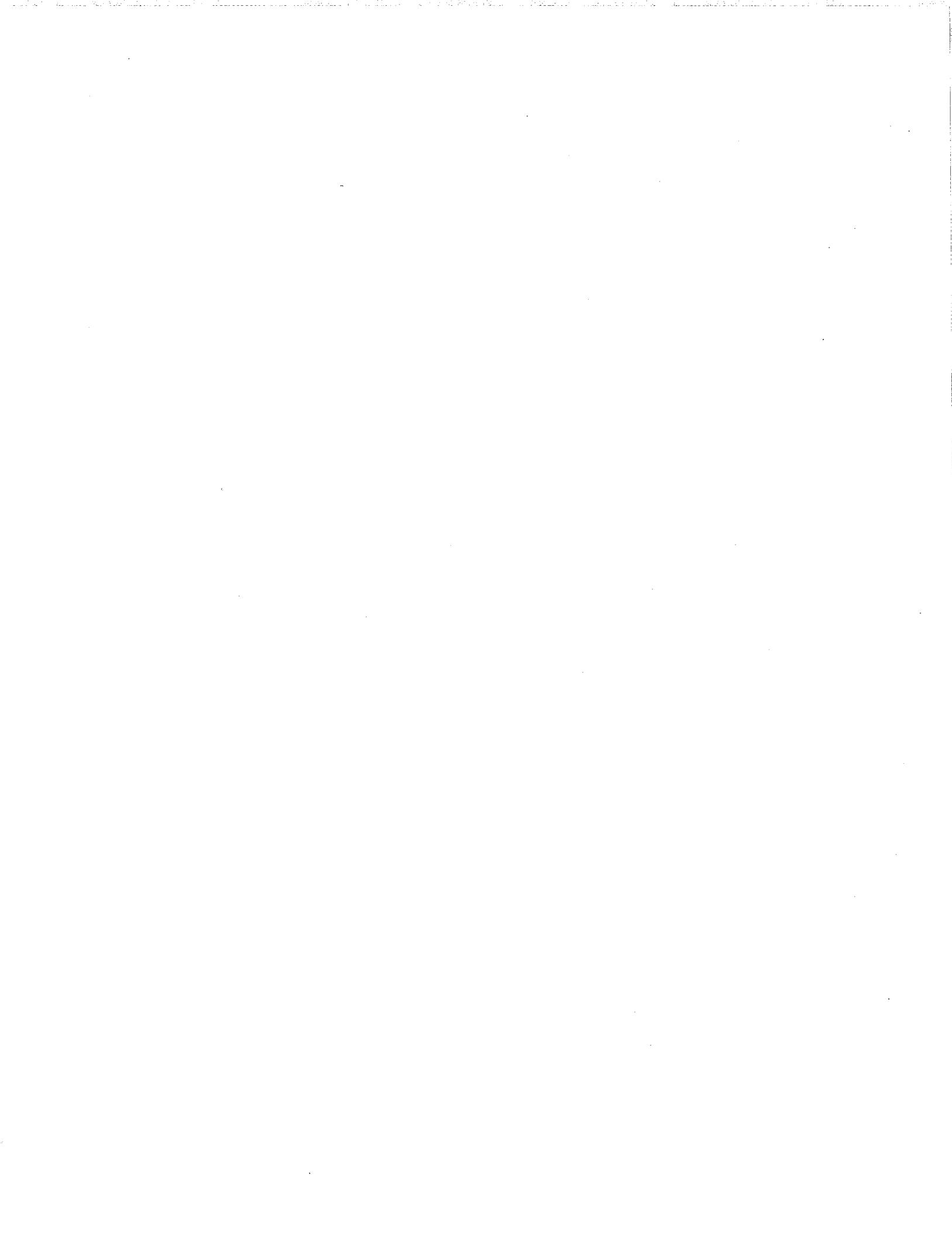
If the recipient is a consultant acting on behalf of a third party client, the recipient may share such materials with its client if it includes a copy of these restrictions with such materials. In such event, the client agrees to comply with these restrictions in consideration of its accepting such materials.

Confidentiality Notice: This communication is confidential, may be privileged, and is meant only for the intended recipient. If you are not the intended recipient, please notify the sender as soon as possible.

IRS Circular 230 Notice: To the extent that this communication or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law. For more information about this notice, see <http://www.northerntrust.com/circular230>.

Corporate Social Responsibility

As part of our Corporate Social Responsibility initiatives, Northern Trust has implemented several "green" processes into our RFP production. As such, our proposal response is printed double-sided on paper which is both FSC and Green Seal Certified, and contains 50% Post Consumer and 50% Recycled Content. If your organization would prefer a single-sided printed copy, please contact the Salesperson listed on the inside of the Title Page and we would be pleased to arrange delivery.





Northern Trust Fee Summary for

The Office of the General Treasurer

On behalf of the Employees Retirement System of Rhode Island

April 6, 2012

****CONFIDENTIAL****

Fee Summary

This fee summary is based on services and portfolio characteristics described within this Request for Proposal.

CORE SERVICES

Global Custody

ENHANCED SERVICES

Benefit Payment Services

Investment Risk and Analytical Services

Derivatives Services

OTHER FEES AND EXPENSES



Custody Fee Summary

Northern Trust Proposed Flat Fee for Custody Services: \$220,000

Global Custody fees include:

- Safekeeping of assets
- Settlement of direct trades
- Collection of income
- Tax reclamation and relief at source services
- Corporate action processing
- Proxy voting
- Consolidated monthly investment accounting and portfolio valuations delivered via Passport®
- Daily and intraday information delivered via web portal, Passport®
- For ERISA clients, one annual 5500 Supplemental Report

Not currently included in flat fee:

- An account that receives proceeds from securities class actions will be assessed a charge of 2% of the proceeds with a maximum charge of \$250 per event. This amount may change over time in response to market conditions or processing complexity.
- Overdrafts will be charged at the Prime rate.

Assumptions Used:

	Assets Under Mgmt (approximate, in millions)	# of Portfolios (1, except where noted)
ACTIVE DOMESTIC EQUITIES	\$ 139	
PASSIVE DOMESTIC EQUITIES	2,104	2
PASSIVE INTERNATIONAL EQUITIES	1,180	
CORPORATE BONDS	399	
MORTGAGE BACKED SECURITIES	405	
HIGH-YIELD FIXED INCOME	187	
CORE FIXED INCOME	393	
TIPS FIXED INCOME	370	
HEDGE FUNDS	902	
PRIVATE EQUITY	596	
REAL ESTATE	266	
REBALANCING	77	
CASH	211	
	TOTAL \$ 7,229	



Global Custody

Should the scope of custody services and/or portfolio characteristics change beyond what has been described within this Request for Proposal, Northern Trust would default to the following fee schedule, until a revised flat fee is negotiated. Please see last section – Other Fees & Expenses – for further comment on material change.

1. Account based fees: Asset based fees (include specific country tiering and specify charges for one line assets and bank loans)

- Separately managed account (Global & Domestic) \$ 500 per account p.a.
- Cash account \$ 500 per account p.a.
- Single line asset account \$ 500 per account p.a.

2. Transaction and safekeeping charges:

	Safekeeping/ Holding Charges	Transaction Charges
Tier 1a: U.S.	0.25	\$7 per
Tier 1b: Canada, Euroclear, Ireland, U.K.	0.25	\$7 per
Tier 2: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Italy, Japan, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland	2.50	\$15 per
Tier 3: Hong Kong, Iceland, Malaysia, New Zealand, Portugal, Singapore, Thailand	7.00	\$20 per
Tier 4: Argentina, Brazil, China, Czech Republic, Egypt, Estonia, Greece, Hungary, India, Indonesia, Israel, Mexico, Philippines, Poland, South Africa, South Korea, Sri Lanka, Taiwan, Turkey	18.00	\$30 per
Tier 5: Bulgaria, Chile, Croatia, Kazakhstan, Latvia, Lithuania, Malta, Morocco, Namibia, Nigeria, Pakistan, Peru, Romania, Russia, Slovak Republic, Slovenia, Swaziland, Trinidad, Tunisia, Uruguay, Venezuela, Vietnam	35.00	\$45 per
Tier 6: Bahrain, Bangladesh, Bermuda, Bosnia/Herzegovina, Botswana, Colombia, Cyprus, Ghana, Ivory Coast, Jordan, Kenya, Kuwait, Lebanon, Mauritius, Oman, Palestine, Qatar, Saudi Arabia, Serbia, Uganda, Ukraine, United Arab Emirates, Zambia, Zimbabwe	50.00	\$60 per
Commingled/Single Line Asset	\$1,500	\$85 per
Mutual Funds	\$1,500	\$85 per
Real Estate & LPs	\$1,000	\$85 per
Hedge Funds	\$1,000	\$85 per
Private Equity LPs	\$1,000	\$100 per

The transaction charges detailed below will apply to all transactions that occur for the transaction category, including transactions associated with Special Assignments

- Wire Transfers \$20 per
- Paydowns \$5 per
- Repos \$20 per open and \$20 per close



Benefit Payment Services

Scheduled Payments

Checks	\$15.60 per pensioner annually plus postage
Electronic Fund Transfers	\$12.00 per pensioner annually
EFT advice statement	\$2.40 per pensioner annually plus postage
Payment Group	\$72.00 per payment group annually

Set-up and Maintenance of each Scheduled Payment

Manual form input	\$18.00 per pensioner
Electronic input	\$6.00 per pensioner

Non-Periodic (Lump Sum) Payments

Manual form input	\$9.00 per check plus postage
Electronic input using Electronic Data Transfer, diskette or Passport	\$7.00 per check plus postage

Delivery

Via US Mail to Domestic Addresses	\$0.45 per item (including all tax forms mailed)
Via US Mail to Foreign Addresses	\$0.98 per item
Via courier Worldwide	Charged by weight and distance
Via messenger in Chicago Area	Charged by weight and distance

Participant Servicing

<i>Using Local 312 number</i>	
Per check receipt	\$.30 per participant annually
Per EFT with Advice Statement Service	\$.30 per participant annually
Per EFT without Advice Statement Service	\$1.50 per participant annually
<i>Using Toll Free number</i>	
Per check receipt	\$.60 per participant annually
Per EFT with Advice Statement Service	\$.60 per participant annually
Per EFT without Advice Statement Service	\$3.00 per participant annually

Prior Trustee File Conversion

Manual set up	\$6.00 per pensioner
Automated set up	\$5.00 per pensioner

Additional Services

Stop Payments	\$10 if electronic input/\$20 if paper input
Paid check images	\$5 if electronic input/\$10 if manual input
Photocopies of Paid Checks	\$7 if electronic input/\$15 if paper input
Tax Forms	\$1.00 per form plus postage
Electronic copy of Master File	\$250 each copy
Ad hoc report production	\$75 per report per run
Custom report design	\$150 per hour
Processing of Garnishments, Levies, NRA forms	\$25 per participant, one-time fee
Client Logo on payments	\$7,500 one-time fee
Check message	\$1,000 per message
International wires	\$35 per wire
U.S. wires	\$20 if electronic input/\$30 if paper input
Duplicate tax forms	\$1- electronic input/\$3 - manual input

Services performed at no additional charge:

- Changes or updates to existing participant records
- Federal, State, Local Tax Services
- Semi-annual US Postal Service address review
- Annual Death Search
- Reporting Package



Investment Risk and Analytical Services (IRAS)

Base IRAS Index Fee Charge

(Based on Assets under Measurement)

Assets Under Measurement (AUM)	IRAS Base Fee Charge*
Over 1 Billion (Maximum Charge)	\$10,000
Over 100 Million Under 1 Billion	1/10 of a Basis Point
Under 100 Million (Minimum Charge)	\$1,000
Additional Index Families*	\$1,000

Base fee includes a package of core indices from 5 index vendors. Add \$1,000/per additional index family to the index fee.

- An annual base index charge for any IRAS service
- One of-a-kind custom client indices will be charged directly to the client

Where applicable, fees for custom client indices will be disclosed in advance.



IRAS Performance Measurement Service Packages for Asset Owners

Fees are per account and per annum, unless otherwise noted.

Fees are per account and per annum, unless otherwise noted.			IRAS Region NAM (USD)
Service Level	Features Available	Accounts Included	
Core	Rates of Return, Index/Benchmark Comparisons, Manager/Fund Characteristics, NT Universe/Peer Group Comparisons (US only) & Ex-post risk statistics. Periodic performance reporting available on-line via Passport.	Separately Managed Accounts	\$1,500
		Single Line Asset Accounts	\$1,500
Enhanced	Includes all Core Service Level Features Attribution Analysis by Plan/Equity & Fixed Income Asset Classes, Daily Informational Rates of Return available on-line via Passport.	Separately Managed Accounts	\$3,500
		Single Line Asset Accounts	\$1,500
Premium Executive Board Level Reporting	Includes Enhanced Level Features Comprehensive customized quarterly board report. Detailed returns based analysis and commentary on your investment program. Our Consultant is available to attend or present at Board or Investment Committee Meetings.	Separately Managed Accounts	\$5,000
		Single Line Asset Accounts	\$3,000

Additional Premium Service Packages Available

Additional fees are per account and per annum, unless otherwise noted.

Stock Level Attribution for Equities	Northern Trust's analytical services have enabled clients to evaluate their investment performance across asset class, country, region and total portfolio level. We can provide you with a flexible solution to view equity stock level attribution reporting.	Separately Managed Accounts Fee applies additionally to Enhanced or Premium service levels.	\$1,000
Risk Attribution	Northern Trust's analytical services have enabled clients to decompose volatility and better quantify the sources of risk in your investment portfolio(s).	Separately Managed Accounts	\$1,000
Daily Linked Returns	Northern Trust will provide daily linked returns at the fund, asset class, and manager level. This service may impact the overall custody agreement. Please contact your relationship manager or sales associate for details.	Separately Managed Accounts Single Line Asset Accounts	\$1,000 \$1,000
Time Matched Returns	Our Synchronized Returns service will allow clients to maintain dual books of record for your Accounting and Performance, but also allow you to capture the manager valuations of your limited partnership holdings for the time period they were effective. Additional historical data backload fees may apply.	Per Limited Partnership Asset	\$600
		Per Hedge Fund Asset	\$1,400
Investment Manager Rate of Return Comparison	For public market mandates, this service provides an aggregate summary of the Northern Trust calculated rates of return compared to the Investment Manager rates of return.	Separately Managed Accounts	\$500



Unit/Plan Account Performance	We provide detailed performance, characteristics reporting, and attribution analysis at the fund, plan, asset class, and manager level, in a unitized accounting environment.	Per Performance Account	\$1,000
Account Splitting	Splitting provides clients the option of separating commingled assets within an account into separate accounts for the purposes of performance analysis.	Per Performance Account	\$1,500
Multi Reference Currency	Multi-reference accounts allow the client to view their performance in multiple base currencies.	Per Performance Account	\$1,000
Data Direct	Enhanced form of reporting automated through Microsoft Excel that is placed on the client's desktop. Outsourcing report builds are available. Additional fees if client has more than 5 users.	1 to 5 Users	\$7,500
Customized Reporting	We provide solutions for client specified reporting requirements that are not included in our standard reporting package.	Contact IRAS for pricing	

Additional Performance Consulting Services Available

Fees are project based, unless otherwise noted.

Service Level	Description	Annual Fee	IRAS Region NAM (USD)
Northern Trust Universe Report	Quarterly report summarizing Northern Trust's proprietary universe information, delivered electronically via Passport.	Per Report	\$2,500
Manager Searches	Public market mandates.	USD\$ 5,000 to \$ 20,000	Contact IRAS for pricing
Manager Reviews - Due Diligence	We perform in depth due diligence on investment managers within your program at regular intervals. We can also expand this service to investment manager(s) and/or other mandates outside your investment program.	Contact IRAS for pricing	Contact IRAS for pricing
Investment Policy Statement	We work closely with you to develop a comprehensive investment policy statements customized to your program's specifications and guidelines.	USD\$ 10,000 to \$ 15,000	Contact IRAS for pricing
Asset Allocation Analysis	We will customize a Returns Based Asset Allocation study to fit the needs of your investment program through the utilization of optimization.	USD\$ 5,000 to \$ 20,000	Contact IRAS for pricing
Asset/Liability Reporting	We will combine the asset allocation optimization modeling results with your liabilities and project over a number of years to assess the risks of your plan.	Contact IRAS for pricing	
Historical Data Backloads	We can load historical stream of returns to the inception of the performance account.	Contact IRAS for pricing	
Specialized Projects		Contact IRAS for pricing	

Please be aware that start dates for this service are subject to IRAS approval as a planning stage is required.



IRAS Post Trade Investment Compliance Monitoring Service Packages

Fees are per account and per annum, unless otherwise noted.

IRAS Region
NAM (USD)

Service Level	Features Available	Accounts Included	
Core	Client maintains Compliance Analyst system and monitors "Exception Reports" using ComplianceRADAR. Guideline Review, Training & ongoing support provided in this service level.	All Separately Managed Accounts	\$600
Guideline Implementation	Compliance Analyst Setup, Proof Package and Sign-Off with Client.	All Separately Managed Accounts	\$1,000
Enhanced	Shared Service - Northern Trust maintains Compliance Analyst system and Client monitors "Exception Reports". Implementation is included; Compliance Analyst Setup, Proof Package and Sign-Off with Client.	All Separately Managed Accounts	\$1,500

Premium Service Packages Available

Fully Outsourced Solutions. Fees are per account and per annum, unless stated otherwise. Contact IRAS Management for details.

Premium - Monthly Reporting	Monthly Report: Review of <u>one</u> specific date <u>per month</u> "Exception Reports", & communication with client as necessary. Customized reporting and guideline implementation included.	All Separately Managed Accounts	\$2,500
Premium - Weekly Reporting	Weekly Report: Review of <u>one</u> specific date <u>per week</u> "Exception Reports" & communication with the client as necessary. Customized reporting and guideline implementation included.	All Separately Managed Accounts	\$3,000
Premium - Daily Reporting	Daily Report: Review of daily "Exception Reports" & communication with the client as necessary. Customized reporting and guideline implementation included. Weekly or Monthly Reporting is an option with Daily Analysis.	All Separately Managed Accounts	\$3,500
Special Project Work	Ad hoc Customized Reporting, Special Project Work.	\$150 per hour	

The schedule above applies to custody / asset owner clients. For GFS clients via Charles River, please contact IRAS for details & pricing.



IRAS Market Risk Services Packages - Asset Owners

Fees are per account and per annum, unless otherwise noted.

IRAS Region
NAM (USD)

Core Services

Service Level	Features Available	Frequen- cy of Report- ing	Asset Cover- age	Service delivery method	Additive to core service or independent?	
Core	Summary level risk report on an ex-ante or forward looking basis. Report detail covers total plan, portfolio level, sector and country reporting	Quarterly	Multi-asset	pdf report	Core Service	\$1,600
		Monthly	Multi-asset	pdf report	Core Service	\$2,400
Enhanced	Customized risk report on an ex-ante or forward looking basis. Includes all aspects of core reporting plus optional security level reporting	Quarterly	Multi-asset	pdf report	Core Service	\$2,600
		Monthly	Multi-asset	pdf report	Core Service	\$3,600
Premium	Customized risk report on an ex-ante or forward looking basis. Includes all aspects of enhanced reporting plus commentary and consultant support.	Quarterly	Multi-asset	pdf report	Core Service	\$3,800
		Monthly	Multi-asset	pdf report	Core Service	\$4,800

Fully Outsourced Solutions. Fees are per account and per annum, unless stated otherwise. Contact IRAS Management for details.

Additional Specialist Service Packages Available

Sensitivity Reporting for Regulatory Services	Risk reporting showing a plan's sensitivity to equity, interest rate and currency fluctuations. Principally designed to achieve compliance with FRS 107.	Per Account	Multi-asset	pdf report	May be taken Independently of core service	\$2,500
Liability Benchmarking	Production of monthly benchmark including monthly reports	Per Report	Liabilities	pdf report	Additive to core service	\$15,000
Asset / Liability Reporting	Includes liability benchmarking and customized reporting showing Volatility of Surplus, as well as asset / liability modeling.	Per Report	Multi-asset & Liabilities	pdf report	May be taken Independently of core service	\$40,000
Style Research Analytics Reporting	Includes style skyline, sector, country decompositions, risk attribution, stock selection risk, liquidity analysis and limited Environmental, Social and Governance (ESG) factors.	Quarterly Monthly	Equity Only Equity Only	excel workbook / pdf report	May be taken Independently of core service	Contact IRAS for pricing



Trucost Environmental Carbon Footprint Reports	Trucost's proprietary carbon foot printing enables raw emissions and energy usage to be converted into financial data, meaning environmental impacts can be seen directly in monetary terms per security of per portfolio.	Annual, per account	Equity Only	pdf report	May be taken independently of core service	Contact IRAS for pricing
Special Project Work	Customized evaluation, one time ad hoc project requests	\$150 per hour	Multi-asset	Scope dependent	n/a	\$150

Additional Risk licensing fees may apply (Barra or Statpro) for direct client access to ex ante risk engines.

Additional fees may be applied across all products based on usage of OTC Derivatives and Alternative Assets.

Style Research and Trucost Analytics cannot be discounted due to contractual revenue share agreement.

Additional MSCIBarra licensing fees of \$10,000 apply for Core, Enhanced, and Premium level reports.

Where applicable, indicative fees will be disclosed in advance.



Limited Partnership/Private Market Services

<p>Private Monitor™ Private Monitor™ is an outsourced private markets analytical reporting service offered by the Northern Trust Investment Risk & Analytical Services group. Historical LP data loading and ongoing data capture and processing, plus full data reconciliation to Northern's custody system are standard features. Other features include:</p> <ul style="list-style-type: none"> ▪ Burgiss Private i® reports & Northern Trust proprietary reports. ▪ Executive summary narrative. ▪ Burgiss PME benchmarking module. ▪ Vintage year universe comparisons. ▪ Northern Trust PE universe program comparisons. ▪ Minimum charge of 20 partnerships. 	<p>\$1,500</p>	<p>per LP per annum</p>
<p>Company / fund holdings "peek-through" analysis This is a company/fund holdings "peek-through" analysis service provided by the Northern Trust via an agreement with the Burgiss Group LLC. A service agreement is required and all data collection, hosting, and on-line access are provided by the Burgiss Group LLC on a secure Burgiss Group site. The Burgiss Group product name for this service is PrivateInformant® <i>Optional on-line client access to Private Informant®</i></p>	<p>\$600</p>	<p>per LP per annum</p>
<p>Private Outlook™ A Northern Trust proprietary cash flow and allocation modeling tool, Private Outlook features the capability to generate capital call cash forecasts and cash flow and allocation modeling for one to five years.</p>	<p>\$5,000</p>	<p>flat fee per annum</p>
<p>Private Outlook™ A Northern Trust proprietary cash flow and allocation modeling tool, Private Outlook features the capability to generate capital call cash forecasts and cash flow and allocation modeling for one to five years.</p>	<p>\$10,000</p>	<p>flat fee per annum</p>
<p>Private Equity File Cabinet on Passport® A Northern Trust proprietary document retention tool accessible on Northern Trust Passport®</p>	<p>\$200</p>	<p>per LP per annum</p>
<p>Implementation and consulting fees</p>		
<p>Private Monitor One time set up fee for backload of historical LP data at Private Monitor start of service. Thereafter new LPs added to Private Monitor platform will not have a set up fee.</p>	<p>\$250</p>	<p>per LP one time</p>
<p>Company / fund holdings analysis One time set up fee for each LP added to Private Informant® service. This is a straight pass through of the Burgiss Group set up fee for each LP on Private Informant® platform. After startup each new LP added to Private Informant® will incur this fee.</p>	<p>\$100</p>	<p>per LP one time</p>
<p>Private Equity File Cabinet One time set up fees for each LP to be stored in PE File Cabinet. After start up each new LP added to PE File Cabinet will not have a set up fee.</p>	<p>\$100</p>	<p>per LP one time</p>
<p>Reporting / Data consulting service Consulting services to support private markets reporting and other projects are available at an hourly rate.</p>	<p>\$3,000</p>	<p>one time IT fee</p>
<p>Reporting / Data consulting service Consulting services to support private markets reporting and other projects are available at an hourly rate.</p>	<p>\$250</p>	<p>per hour</p>



Fund Peek Through Reporting

<p>Fee</p>	<p>Fund Peek Through capabilities are comprised of the following services:</p> <ul style="list-style-type: none"> ▪ Account Set up Process ▪ Monthly Look Through into the underlying holdings of a one-line asset fund that the client holds. ▪ Access to all templates in the Fund Peek Through folder in Management Reporting. ▪ Fund Peek Through Data is also available in Sherlock. <p>The fee for Fund Peek Through is USD \$3,000 for each fund annually. This fee includes all of the Fund Peek Through capabilities listed above.</p> <p>NOTE: If Fund Peek Through is required more frequently than monthly, a fee schedule for this service needs to be discussed with the Relationship Manager and Product Manager.</p>
<p>Reporting Templates</p>	<p>Once a client has elected to get our Fund Peek Through product, they will have access to the Fund Peek Through data in Management Reporting and Sherlock and will be granted access to the template below:</p> <ul style="list-style-type: none"> ▪ Effective Country Exposure ▪ Effective Currency Exposure ▪ Effective GICS Sector/Industry Exposure ▪ Manager Mix – Fund Peek Through ▪ Top Total Holdings <p><i>Note: Relationship Staff must grant clients access to these reports and the folder.</i></p> <p>Fund Peek Through data will flow to additional products and reporting suites, but may be subject to additional fees and service level agreements. Please speak to those specific product managers for more information.</p>



Derivatives Services

1. Transaction Processing (applies to ETD & OTC)

For ETD derivatives a charge applies to both buy (open) and sell (close) transactions.

All instruments \$20 per transaction

For OTC derivatives a charge applies to buy transactions (open) only.

Simple	\$125 per transaction (open)
Moderate	\$175 per transaction (open)
Exotic	Fees based on product complexity and agreed on a case by case basis

- This includes initial trade capture, set up and settlement of initial cash movement.

2. Position Maintenance (applies to OTC only)

Simple	\$250 per position per annum
Moderate	\$400 per position per annum
Exotic	Fees based on product complexity and agreed on a case by case basis

Where prices are supplied by the manager, the charge is \$100 per position per annum regardless of instrument.

- Daily independent valuations
- Periodic position reconciliations
- Lifecycle events, such as processing rate resets
- Standard accounting and reporting

3. Collateral

Passive Collateral Processing

ETD margin /OTC collateral movement \$15 per movement

4. Active Collateral Management

Active Collateral Management is an outsourcing activity where our client or their asset manager provides their credit agreements (between client and counterparty) and Northern Trust provides the following services. The annual fee range for this outsourcing activity is ~\$15,000-\$20,000 per credit agreement per annum.

Collateral Calls

- Daily Collateral Calls are recorded and processed through the Collateral Dashboard
- Respond to collateral demands made by counterparties
- Instruct custodian to move funds (undisputed amount) or to expect to receive funds
- Resolve disputes through reconciliations and valuation challenges

Reconciliations

- Proactive reconciliations with counterparty
- Periodic reconciliations with custodian

Corporate Actions

- Corporate Action tool enables us to monitor and substitute Collateral before the Corporate Action takes place
- Interest calculations on cash collateral

Reporting

- Provide access to clients to view web-based collateral management system
- Access to view live collateral management decision making activity
- Northern Trust to provide daily/intra-day collateral reporting from Colline
- Reports can be sent in Excel, PDF, and Text formats



Other Fees and Expenses

Where applicable, indicative fees will be disclosed prior to providing a service.

Additional charges may be applied for:

- Services required in respect of any directly held property, derivatives, bank loans or venture capital/private equity portfolios will be evaluated and priced on a case by case business, according to the level of work involved.
- Services associated with special events the client, its investment managers, or other service providers initiate, to the extent those events are not specifically described by the fees detailed in the Transition Related Fee Schedule
- Customized services including, but not limited to, asset rebalancing services, reporting for non-custodied assets, creating tailored reports, developing custom downloads, custom programming, special accounting or project work for any client or third party organization, class action filing services with prior custodial records, client specific data requirements
- Demand account services to support pension payment or collection activities
- Fund subscriptions and redemptions
- Manager signoff
- Services to support in-house managed accounts
- Manager fee payments
- Supporting/facilitating on-site visits by your auditors
- Mailing charges

Expenses to be passed through to clients include, but are not limited to:

- Execution attributable to settlement and associated activities in specific markets, including but not limited to market opening charges, stamp duty, securities re-registration fees, ADR/GDR agent pass through charges, third party fixed deposits, proxy voting physical representation/ad hoc expenses (Such charges will be passed through to the account where applicable.)
- Delivery and Receipt charges, which the markets' subcustodian charges Northern, will be passed through to the client and debited from client accounts where applicable.
- Out of pocket expenses including, but not limited to, fees for external legal and tax advice will be passed through to the client.
- Other security-related charges passed through by depositories

Note: all fees are subject to direct debit. Fees are due upon receipt of invoice. Northern Trust reserves the right to modify any client fee schedule should there be a meaningful change in the account structure or services provided. In such event, a revised fee schedule will be provided to the client.

This proposal will remain in effect for one year from the date of issue unless agreed upon to the contrary by all parties to the proposal.



In response to the additional detail received in the Question and Response document, we have provided supplemental information on our expertise in the following areas. We look forward to having the opportunity to meet with you and learn more about your requirements in due course. We would be pleased to visit you in your offices in Warwick, Rhode Island or welcome you to our offices in Chicago, Illinois. In the meantime if you or any of your colleagues would like further information about any aspect of our products and services, please do not hesitate to contact Gwyn Koepke at 312-557-7331.

COMPLIANCE MONITORING

Northern Trust was the first in the industry to develop a compliance monitoring tool, adding new features yearly.

Northern Trust Compliance Analyst[®] is a customizable, Web-based tool that monitors investment guidelines and reports those that are nearing or have breached established guidelines. This tool automates the compliance monitoring process so you are able to focus on other priorities.

Compliance Analyst is client driven and automated based on the pre-established parameters that you set. Every day, integrated global and domestic portfolio data is monitored against the pre-established parameters, and in the event that an investment parameter has been breached, you are notified by an "Exception Report." Compliance Analyst is accessed via Northern Trust Passport[®], our Internet based information delivery platform. Working with Compliance Analyst is a simple process. A Set-up wizard is provided to guide you through the set-up process.

Using this tool, you may create an unlimited number of guidelines. Monitoring through Compliance Analyst is defined on a client-by-client basis, taking into account individual concerns. It may be conducted on a single account or across a number of accounts at a consolidated level, per market, per region, per asset class or per security.

Clients may subscribe to Compliance Monitoring Services at any of three different levels:

- **Core** – You set up monitoring parameters on Compliance Analyst and receive exception reports.
- **Enhanced** – Northern Trust inputs and maintains parameters on Compliance Analyst, but you receive exception reports.
- **Premium** – Northern Trust sets up parameters on Compliance Analyst and receives exception reports. We then analyze reports for you and send valid exceptions in a custom report package. This level is available daily or monthly.

RISK ANALYTICS & RELATED FORECASTING

Northern Trust makes skillful oversight of your investment program easy with our comprehensive array of performance and analytic reports and tools.

Maintaining a thorough oversight process requires a substantial commitment of time and resources. Northern Trust provides the information, tools and expertise to enable you to easily manage your investment program by delivering comprehensive portfolio analytics in an organized and consistent framework.

Our Performance and Analytics Services offer:

- Easy access to answers via Northern Trust Passport[®] when you need them.
- Comprehensive analytical information for a complete picture of your investment program.
- Substantial depth of analysis from security level up to total plan.
- Informative comparison analysis via benchmarks and peer groups.

You receive a comprehensive view of worldwide investment performance including:

- Risk and Return
 - ◆ Complete performance analysis
 - ◆ Historical analysis



- ◆ Risk-adjusted return and volatility metrics
- Peer and Benchmark Comparisons
 - ◆ Extensive benchmark availability and customization
 - ◆ Robust proprietary peer groups and third-party peer groups
- Attribution Analysis
 - ◆ Total fund attribution
 - ◆ Equity, fixed, balanced and global mandates
 - ◆ Stock-level detail
 - ◆ Risk attribution
- Style Analysis
 - ◆ Fundamental portfolio characteristic analysis
 - ◆ Barra style factor analysis

PRIVATE MONITOR

Understanding Your Private Equity Needs

Portfolios containing private equity and other alternative assets require the expertise of someone who understands these investments from various perspectives: asset management, administration and servicing. With Northern Trust, you can rely on our experience, excellence and leadership in the global private equity marketplace to support even the most diverse and complex investment programs.

The Private Monitor service lets you focus on your core activity of investing while an experienced Northern Trust team uses state of the industry tools, techniques and data to organize your data, performance and other needs related to administering a private equity portfolio. Private Monitor can help you in the analysis of your program by providing performance, funding tracking, benchmarking, holdings transparency data, risk and liquidity monitoring and front office tools and capabilities.

HEDGE FUND MONITOR

Online Processing, Reporting and Risk Monitoring Solution for Hedge Fund Investments

Hedge funds are a common part of a comprehensive investment allocation plan. Unlike other asset classes, however, they can be illiquid and opaque in nature, with data that is not timely and is difficult to interpret. Performance returns for hedge funds typically are communicated manually, and the assets are traded and executed manually, without security identifiers and based on paper confirmations.

You need a solution to help you monitor your hedge funds more efficiently so you can focus on your other responsibilities. With Hedge Fund Monitor™, available via Northern Trust Passport®, you can take advantage of automated processes to gain greater clarity around and improved reporting for an often labor intensive asset class. This online tool offers more transparency into the performance and liquidity of your hedge fund investments.

Hedge Fund Monitor is a powerful portfolio management and reporting tool that provides real time information across your data needs, including daily information about:

- Current and historic valuations, at asset and portfolio level
- Estimated and final prices
- Advanced performance reporting
- Portfolio liquidity analysis
- Customizable user interface
- Detailed breakdown of hedge funds held by strategy, geography, etc.



G/L INTERFACE

For clients running their own general ledgers in-house, we have many automated custom interfaces in place for electronically feeding trust accounting data to client systems. These interfaces can run on a periodic schedule, on client demand, or both.

We have management reporting templates that provide standard financial statements as well as on-line reports to meet ad hoc reporting needs. Northern Trust has existing interfaces with a variety of vended general ledger systems including Lawson, Great Plains, and Solomon.

If your needs call for full outsourcing of your general ledger to the custodian, we welcome an opportunity to discuss goals and timelines for such a project.

