Global Custody and Risk Management
Comprehensive service suite, global network, single global platform

Prepared for State Universities Retirement System
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© 2010 Northern Trust Corporation
Founded in 1889, Northern Trust is a market leader of asset servicing and asset management solutions for institutions and private clients around the globe.

- **Corporate & Institutional Services (C&IS)**: worldwide institutional investors
- **Personal Financial Services (PFS)**: U.S. and European private clients

**Assets under custody**
US$3.6 trillion

**Assets under administration**
US$977.3 billion

**Assets under management**
US$603.0 billion

As of 30 June 2010 (updated quarterly)

*Includes US$160.8 billion defined contribution funds, as at 31 March 2010 (updated on a quarterly lag basis)

Source: Northern Trust
Managing operational risk is key to protecting your assets.
A Comprehensive Service Suite

Northern Trust delivers process efficiencies, automation, scale and flexibility through our comprehensive asset servicing product offering.

- Trade receipt and capture
- Trade settlement
- Safekeeping
- Income collection and tax reclamation
- Corporate actions
- Class actions
- Proxy voting
- Accounting and reporting
**Expertise Across The Full Custody Spectrum**

**Emphasis on automation, straight-through processing (STP), accuracy and timeliness...**

reducing risk, enhancing efficiency, minimizing cost and ensuring transparency.

<table>
<thead>
<tr>
<th>Trade receipt and capture</th>
<th>Safekeeping</th>
<th>Class actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Over 18.6 million trades processed globally annually</td>
<td>■ US $3.7 trillion in assets under custody, over US $2.0 trillion in cross-border assets</td>
<td>■ Gathering information, providing timely notifications, filing claims and posting disbursements</td>
</tr>
<tr>
<td>■ A dedicated global team servicing alternative assets and non-STP investments</td>
<td>■ Covering 102 markets</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Web trade services</th>
<th>Income collection and tax reclamation</th>
<th>Proxy voting</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Connected to over 2,700 end-points in the global brokerage community with automated communications to over 40 major custodians globally</td>
<td>■ Income on payable date in 37 markets</td>
<td>■ On-line proxy voting in 47 markets</td>
</tr>
<tr>
<td>■ Hitting &gt; 60,000 trades/month</td>
<td>■ Tax reclamation and relief at source</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trade settlement</th>
<th>Corporate actions</th>
<th>Accounting and reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ 98% of trades captured electronically across 102 markets</td>
<td>■ Global processing in excess of 86,000 corporate actions across 102 markets every year</td>
<td>■ Single global, integrated, multi-currency platform servicing all investment participants</td>
</tr>
<tr>
<td>■ Contractual settlement in 46 countries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As at 31 March 2010 unless otherwise stated (updated quarterly) Source: Northern Trust
Assets held in secure nominee names and as per local market practice.

**U.S. Depositories**
- The Depository Trust Company (DTC): equities, corporate bonds, physicals
- The Federal Book Entry System (FBE): U.S. government and agency securities, GNMA securities
- The Defined Contribution Clearance and Settlement System (DCC&S): Defined Contribution mutual fund transactions

**Non-U.S. Depositories**
- CREST, the U.K. settlement system
- Euroclear, Eurodollar transactions
- CDS, The Canadian Depository for Securities Limit

Securities held in omnibus accounts except where market requires segregation.
Unique qualities of private equity, infrastructure, natural resources, real estate and hedge fund portfolios.

- Supporting a full range of alternative asset types, such as limited partnerships, venture capital, real estate, leverage buyouts and hedge funds.

- Providing extensive coverage including post venture distribution communication with clients and their investment managers, and liquidation of marketable securities.

- Focusing on electronic capture and document imaging to enhance control.

- Sharing industry best practices and targeting specific issues for alternative assets through our ongoing ‘alternative assets client advisory forum’.

- Contributing to change across the industry through our membership of the NICSA Alternative Investments Committee, an industry leading organization focused on issues surrounding alternative assets.
Northern Trust’s team of alternative asset portfolio specialists facilitates the proper segregation of duties between the processing of cash flows and the rigorous audit of your investment reports.

**Alternative assets operations team**

- Extensive contact with general partners
- Initiate capital calls
- Actively pursue financial statements
- Process cash and stock distributions
- Provide-venture distribution support

**General partner focused processing**

**Client focused control**

- Deliver exception-based intra-day reports on activity and market value updates
- Monitor market value, cost and timing of transactions and holdings
- Validate/sign-off on all client reporting
Extensive controls to prevent fraudulent activity at client or Northern

Client Defined Authorizations

- Trust agreement requires Board or its designees to authorize the disbursement of trust assets
- Board resolution identifies the designees and defines their authorities

Required Authentication by Custodian

- Second approval required for non-standard transactions
- Client identifies parties to perform authentication
- Custodian performs verbal authentication of transaction on recorded line
Reconciling Your Assets

Employing automated daily reconciliations for securities and cash with sub-custodians and/or depositories.

Tightly controlled reconciliation procedures

- We operate a daily, rolling reconciliation process for managing, controlling and monitoring our clients' stock and cash positions.
- We reconcile, in many cases automatically, the securities and cash positions held on our custody system against the positions reflected by our subcustodians and local market depositories.
Accurate pricing through a broad network of vendors and controlled processes.

Flexible pricing services
- Last traded, bid and offer basis for close of business or intra-day pricing
- Support for client-specific pricing vendor or source

Extensive experience in pricing esoteric, bespoke, illiquid and derivative assets
- Vendor feeds, primary and secondary broker quotations, in-house Bloomberg models
- Investments in technology and training

Global pricing policy with clear controls
- Global and local pricing committee
- Policy development - pricing policy is subject to constant review and is developed in line with changes in market practices
- Clear process for challenging prices
  - The “Northern Trust Price Challenge Form” is used
  - Dedicated team that maintains responsibility for receiving and responding to all price challenge requests
  - Price challenges are reviewed and if the manager price prevails, it is highlighted on your report
Daily trade date accounting and multi-currency reporting solutions tailored to meet individual needs.

- Trade date accounting and multi-currency reporting
- Accounting and performance from a single integrated data source, facilitating data accuracy and consistency
- Extensive range of derivatives reporting
- Specialized, custom reporting per SURs requirements:
  - Daily unaudited information available via Passport
  - Monthly audited data available on 8th business day, performance 10th business day
  - Quarterly reports provided for Standard Investment Reports for Board Meetings
  - Annual reports for CAFR provided 30 days after month-end
- Daily information audits using Web-based automation tools
- A single source for all your information and reporting requirements through Northern Trust Passport®
- Unitization and plan accounting reporting
- Suite of reports to help you meet the reporting requirements set by the Governmental Accounting Standards Board (GASB)
- Workshops and ‘toolkits’ to help you understand and meet reporting requirements e.g. GASB 40
Daily and Monthly Checks Driving Data Accuracy

- Daily audit checks carried out
- Monthly audit cycle finishes on 8th business day
- Reports run 1st business day
- Reports audited and any exceptions identified and resolved

A clear audit cycle
## Performing a Series of Checks

<table>
<thead>
<tr>
<th>Price check</th>
<th>Trade price check tolerances</th>
<th>Market to book reasonability check</th>
<th>Equity accrual check</th>
<th>Duplicate trade check</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current price to prior month price</td>
<td>Compare price on trade to current and prior month end price utilizing various tolerances</td>
<td>Market versus book for reasonability on each asset using set tolerances</td>
<td>Drop on/drop off</td>
<td>Duplicate trades</td>
</tr>
<tr>
<td>Systems price</td>
<td></td>
<td>Zero cost and zero market value</td>
<td>Rate changes</td>
<td></td>
</tr>
<tr>
<td>Stale price</td>
<td></td>
<td>Negative holdings/negative cost</td>
<td>Nominal changes</td>
<td></td>
</tr>
<tr>
<td>Zero price</td>
<td></td>
<td>Residual cost</td>
<td>Duplicate accruals</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expired security</td>
<td>Negative accrual</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fractional shares</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pursuing closure for any issues surfaced in our audit with the claim administrator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Price check**
- Current price to prior month price
- Systems price
- Stale price
- Zero price

**Trade price check tolerances**
- Compare price on trade to current and prior month end price utilizing various tolerances

**Market to book reasonability check**
- Market versus book for reasonability on each asset using set tolerances
- Zero cost and zero market value
- Negative holdings/negative cost
- Residual cost
- Expired security
- Fractional shares
- Pursuing closure for any issues surfaced in our audit with the claim administrator

**Equity accrual check**
- Drop on/drop off
- Rate changes
- Nominal changes
- Duplicate accruals
- Negative accrual

**Duplicate trade check**
- Duplicate trades
### Performing a Series of Checks Contd.

<table>
<thead>
<tr>
<th>Futures check</th>
<th>Transaction check</th>
<th>Cash exchange rate check</th>
<th>Cash movements check</th>
<th>Forward foreign exchange check</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Future offset liabilities</td>
<td>- Failed trades / pending trades that did not settle</td>
<td>- Compare exchange rate on all movements to spot rates on the day of trade</td>
<td>- Verify all contributions, withdrawals, fees, etc.</td>
<td>- Gain / loss on spot trades less than 10%</td>
</tr>
<tr>
<td>- Mark to markets</td>
<td>- Late trades</td>
<td></td>
<td></td>
<td>- Gain / loss on forward trades less than 30%</td>
</tr>
<tr>
<td>- Transactional check for shares, market value and cost</td>
<td>- Corporate actions without market value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Zero cost on trades</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Gain / loss on purchases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Gain / loss on short term assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- New securities to the bank</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Late trades</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Tax recoverable check
- Drop on / drop off
- Changes to local value
- Filing date review for late payments

### Corporate actions
- Shares held on ex date
- Shares received
- Gain / loss on redemption
- Cost on parent and child lines

### Bond accrual check
- Days on accrual
- Compare accrual days month to month
- Drop on / drop off
- Missing accruals
- Income received on pay / maturity date
- Negative days accrual
- Accrued interest purchased / sold
- Mortgage backed securities
- Accruals greater than 10% of market value

### Transition check
- Verify cost, market value and nominal on all assets, including cash
- Verify all accruals are set up
Protecting Client Information

Client information is handled with integrity and discretion to ensure confidentiality.

Staff Responsibilities
- Code of Conduct and several policies outline staff responsibilities in handling client information
- Policies include reporting responsibility if an employee is aware of any misconduct
- Violation of the Code of Conduct or any policy can result in disciplinary action up to and including termination
- Each employee must complete an annual on-line training course specific to information security

Information Security
- Employee access is defined by both the department where they work and their individual job title
- Access is granted only by Managers and any deviations from standard requires secondary approval
- Annual reviews are conducted of both the job title and individual access
- Client identifier limits access to only that client’s data on Passport
- Role-level security can provide further limits
- Authority for transaction processing systems defined by client
- Third party access granted separately and only with written client consent
SAS 70 Report - Background

- Follows SAS No. 70 auditing standard promulgated by American Institute of Certified Public Accountants
- Completed semi-annually for trust and custody services encompassing custody, fund administration, securities lending, personal financial services (PFS), investment operations outsourcing (IOO) activities across all major Northern Trust locations (Chicago, London, Bangalore, Guernsey, Ireland, Jersey, Luxembourg, Canada, Hong Kong, Singapore)
- Type II Report, which includes tests of design and operating effectiveness
- Covers a rolling twelve months ending 31 March and 30 September
- Issued approximately 60 days after period-end
- Report includes details of testing exceptions identified:
  - New exceptions
  - Repeat exceptions
  - Carry forward exceptions
Northern Trust management is responsible for the descriptions of processes and controls contained in the document.

Audit Services work with management to produce the descriptions and agree the controls and tests to be performed and perform the majority of testing on behalf of KPMG.

KPMG provide opinion on design and operating effectiveness of controls described in the SAS70 document, including opinion on whether these controls cover all material aspects relevant to a user organisation as they relate to an audit of financial statements.

Opinion is based on “reasonable but not absolute assurance”.

In order for KPMG to give their opinion, they review the audit services work and perform some work independently.
Appendix A- Financial Strength and Stability
Since 1889 Northern Trust has demonstrated exceptional financial strength and stability. Our focused business model, strong leadership and conservative approach to risk continues to provide a stable environment for our clients' investments. Specifically, this has resulted in:

- First-class financial performance
- Outstanding capital strength
- Compelling credit quality
- Unsurpassed credit rating history
- Strong stock performance

Superlative stock performance
First-class financial performance
Outstanding capital strength
Compelling credit quality
Unsurpassed credit rating history
Strong stock performance
Strong financial performance in last two fiscal years.

<table>
<thead>
<tr>
<th></th>
<th>Full Year 2009 (USD)</th>
<th>Full Year 2008 (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust, investment and other servicing fees</td>
<td>$2,084 million</td>
<td>$2,135 million</td>
</tr>
<tr>
<td>Other non-interest income</td>
<td>$703 million</td>
<td>$897 million</td>
</tr>
<tr>
<td>Net interest income</td>
<td>$1,040 million</td>
<td>$1,128 million</td>
</tr>
<tr>
<td>Total revenues</td>
<td>$3,827 million</td>
<td>$4,160 million</td>
</tr>
<tr>
<td>Non-interest expenses</td>
<td>$2,334 million</td>
<td>*$2,964 million</td>
</tr>
<tr>
<td>Net income</td>
<td>$853 million</td>
<td>$641 million</td>
</tr>
<tr>
<td>Earnings per share</td>
<td>$3.11</td>
<td>*$2.79</td>
</tr>
<tr>
<td>Assets under custody</td>
<td>$3.7 trillion</td>
<td>$3.0 trillion</td>
</tr>
<tr>
<td>Global custody assets</td>
<td>$1.9 trillion</td>
<td>$1.4 trillion</td>
</tr>
<tr>
<td>Assets under management</td>
<td>$627.2 billion</td>
<td>$558.8 billion</td>
</tr>
</tbody>
</table>

- Approximately 73% of annual corporate revenues derived from fee-based, non-interest activities
- A high predominance of fee-related income is conducive to consistent earnings
- This is different from many of our banking peers who are focused on more volatile activities

*Includes US$536 million in voluntary client support related charges or (US$1.50) of earnings per share

As at 31 December 2009 (updated annually) Source: Northern Trust

Note: Operating basis excludes visa items
Strong, sustained financial performance with approximately 75% of Q2 2010 total revenue derived from non-interest income.

<table>
<thead>
<tr>
<th></th>
<th>Q2 2010 (USD)</th>
<th>% Change vs Q2 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets under custody</td>
<td>$3.6 trillion</td>
<td>11%</td>
</tr>
<tr>
<td>Global custody assets</td>
<td>$1.9 trillion</td>
<td>14%</td>
</tr>
<tr>
<td>Assets under management</td>
<td>$603 billion</td>
<td>8%</td>
</tr>
<tr>
<td>Trust fees</td>
<td>$544 million</td>
<td>-10%</td>
</tr>
<tr>
<td>Total revenues</td>
<td>$974 million</td>
<td>-7%</td>
</tr>
<tr>
<td>Non interest expenses*</td>
<td>$627 million</td>
<td>25%</td>
</tr>
<tr>
<td>Net interest income</td>
<td>$242 million</td>
<td>-7%</td>
</tr>
<tr>
<td>Net operating income*</td>
<td>$192 million</td>
<td>-39%</td>
</tr>
</tbody>
</table>
A strong capital position helps Northern Trust take advantage of profitable investment opportunities and withstand unforeseen adverse developments.

### Tier I ratio

<table>
<thead>
<tr>
<th>Q2 2010 (USD)</th>
<th>Q2 2009 (USD)</th>
<th>CAGR: +12%</th>
</tr>
</thead>
<tbody>
<tr>
<td>$80.0 billion</td>
<td>$75.0 billion</td>
<td>$6.3</td>
</tr>
<tr>
<td>$28.4 billion</td>
<td>$29.0 billion</td>
<td>$4.9</td>
</tr>
<tr>
<td>$6.6 billion</td>
<td>$6.1 billion</td>
<td>$3.9</td>
</tr>
</tbody>
</table>

Note: Current quarter capital ratios are preliminary until finalized in the 10Q filing. As of 30 June, 2010 (updated quarterly)

Source: Northern Trust

**Total equity (US$ Billions)**

Northern Trust Corporation as defined by regulators

<table>
<thead>
<tr>
<th>Q2 2010</th>
<th>Q2 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.7%</td>
<td>6.00%</td>
</tr>
<tr>
<td>15.9%</td>
<td>10.00%</td>
</tr>
<tr>
<td>9.2%</td>
<td>5.00%</td>
</tr>
</tbody>
</table>
Compelling Credit Quality

Ratio of non-performing assets to loans.

- Northern Trust maintains a diversified and high quality loan portfolio
- Northern Trust does not:
  - Underwrite mortgage loans to sub-prime borrowers
  - Lend directly to hedge funds
  - Offer an off-balance sheet commercial paper conduit for client liquidity

Top 20 U.S. Banks in terms of total balance sheet assets. Source: SNL Financial, Company Reports

All data is as of 30 June, 2010
Northern Trust Corporation is one of only six U.S. bank holding companies to carry a long-term unsecured debt rating of "AA-" or better from Standard & Poor's. 

- The Northern Trust Company (principal subsidiary) was upgraded to AA on May 30, 2008
- Five bank holding companies have been downgraded to below "AA-" since December 2008 and have, therefore, been eliminated from the select group
Peer Group Stock Price Performance: Recent History


-21% -21% -24% -27% -27% -32% -35% -38% -39% -40% -49% -51% -69% -71% -72% -73% -78% -80% -85% -93%

Average (excl. NTRS): -53%
S&P 500: -31%
Our unique focus on financial strength and security...

...gives you the freedom to focus on what really matters.
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