

Northern Trust Global Securities Lending

Bay County Employees' Retirement System

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Emphasis on customization, automation and transparency

Philosophy

- Capital markets activity designed to enhance the return of an overall investment program
- Extract intrinsic value from each loan
- Customized collateral selection and participation to match individual risk tolerance
- Does not interfere with investment strategy

Lendable Base

- \$874 billion lendable securities for 377 clients
- \$117 billion loans outstanding
- Diverse, global client base spanning 26 countries

Borrower Network

- 53 approved parent borrowers
- 24-hour trading in 52 worldwide markets
- Top 10 borrowers represent 76% of loan volume
- Goldman Sachs, Morgan Stanley, Citigroup, JP Morgan Chase, Bank of America, Credit Suisse Group, Barclays PLC, The Royal Bank of Scotland, Deutsche Bank AG, Societe Generale

Global Team

- 190 Securities Lending partners in Chicago, London, Toronto, Hong Kong and Bangalore
- Managers average approximately 20 years industry experience
- Experts are actively engaged in global industry groups (i.e. RMA, ISLA, PASLA and CASLA)

Collateral Structure

- \$121 billion in collateral (\$81 billion cash, \$40 billion non-cash). Approximately 67% of cash is held in commingled pools, 33% is in separately managed accounts
- Cash managed by Northern Trust Asset Management (\$268.4 billion in total AUM for Short Duration Fixed Income)





Background of the Lending Process



Why do borrowers borrow and lenders lend?

It promotes market efficiency and liquidity

- Integral component of developed securities market for both domestic and international investors
 - ◆ Allows price discovery and the arbitrage of pricing inefficiencies
 - ◆ Supports the development of the capital markets by facilitating various investment strategies
 - ◆ Important part of risk management
 - ◆ Used for fail coverage to ensure smooth settlement cycles

Who lends securities and why?

- Long-Term, Institutional Investors
 - ◆ An investment tool to enhance portfolio returns
 - ◆ To offset or eliminate costs of custody and administration
 - ◆ Does not interfere with portfolio strategy – investment manager should continue regardless of securities lending

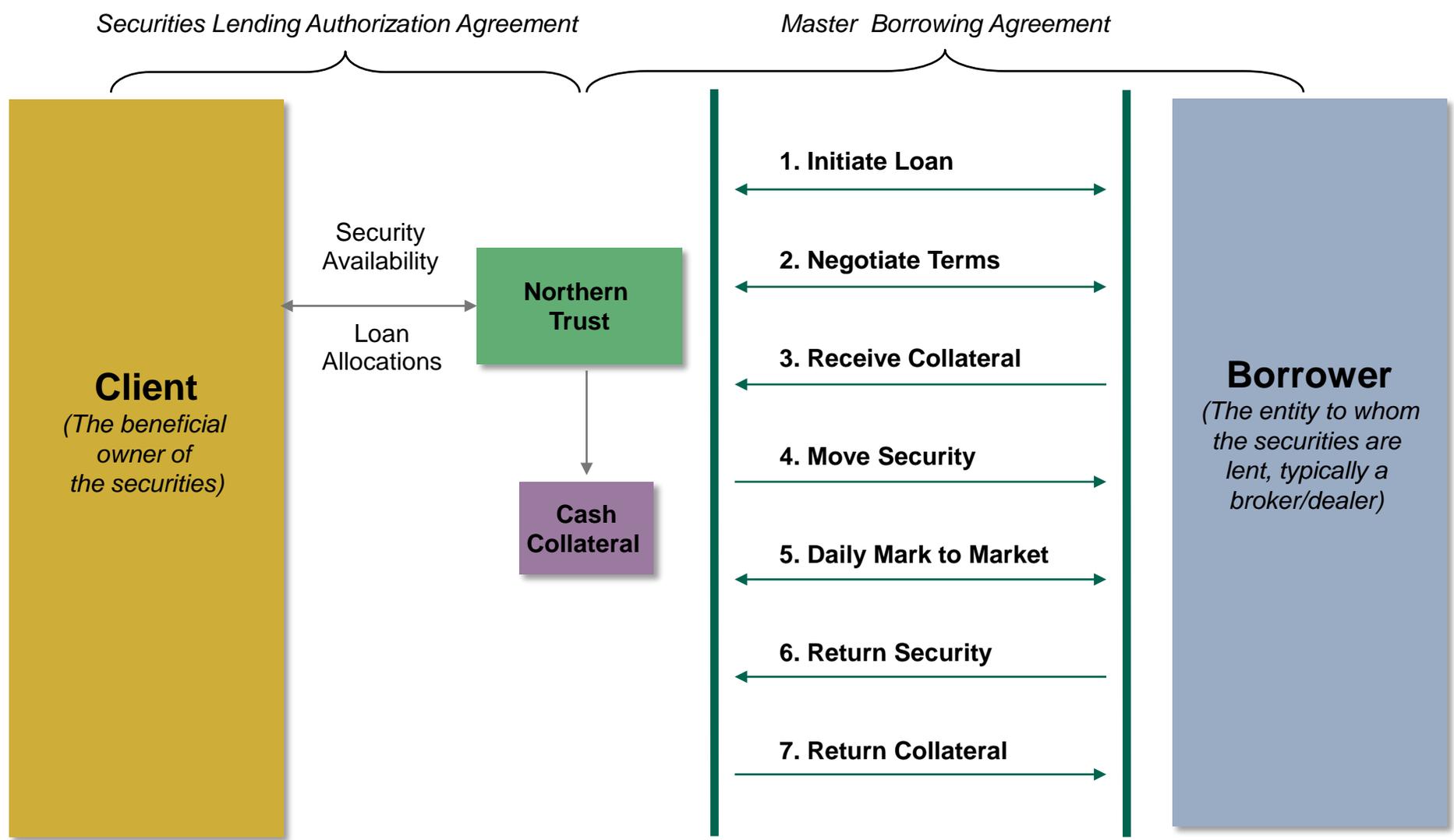
Who borrows securities and why?

- Investment banks (Prime Brokers), investment funds, prop traders, market makers and other intermediaries
 - ◆ Hedging
 - ◆ Short sell
 - ◆ Arbitrage strategies
 - ◆ Settlement obligations



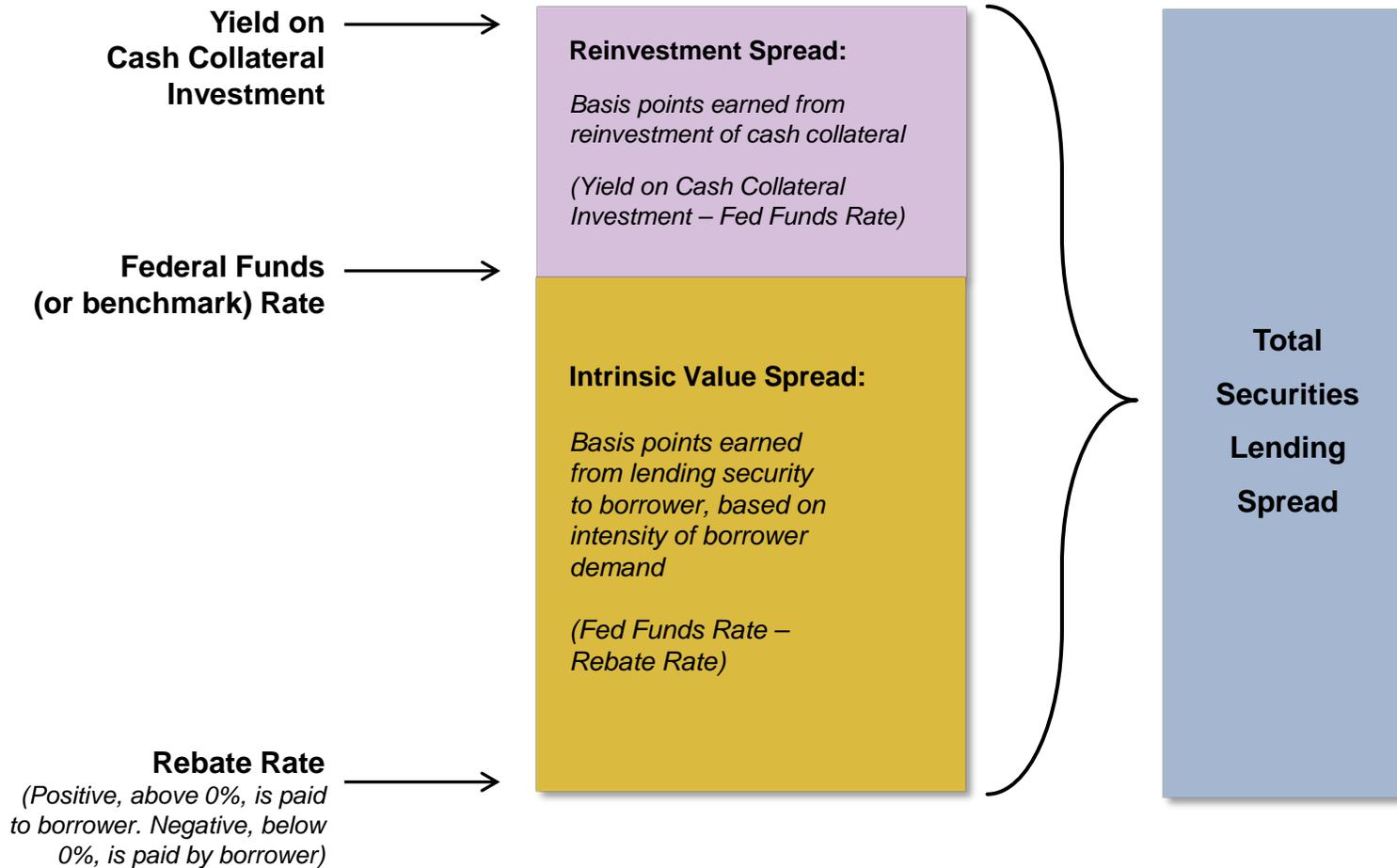


The Life Cycle of a Loan





Understanding the Components of Securities Lending Income



$$\text{Reinvestment Spread} + \text{Intrinsic Value Spread} = \text{Total Securities Lending Spread}$$
$$\text{Total Securities Lending Spread} \times \text{Loan Volume} = \text{Total Gross Securities Lending Income}$$



How Revenue is Generated: Cash Collateral Loan

Example: Northern Trust lends \$25 million of US Equity

The \$25 million market value loan is for 30 days collateralized with cash (fed funds at 0.15%)

1	Receive cash collateral valued at \$25,500,000 (102%)	
2	Cash collateral invested in a collateral pool at yield of 0.20%	\$ 4,250.00
3	Rebate paid to borrower at rate of 0.05%	\$ (1,062.50)
4	Gross Revenue (gross spread 15 bps)	\$ 3,187.50
5	Monthly lender's fee (@ 40%)	<u>\$ 1,275.00</u>
6	Net client earnings	\$ 1,912.50

- $\text{Gross Spread} = \text{Lending Spread} + \text{Investment Spread}$
- $\text{Lending Spread} = \text{Fed Funds} - \text{Rebate Rate}$
- $\text{Investment Spread} = \text{Reinvestment Yield} - \text{Fed Funds}$





Managing Risk



Risk	Definition	Mitigating Factors
Borrower Risk	Borrower default combined with insufficient collateral	<ul style="list-style-type: none"> ▪ Rigorous credit committee review of borrowers and exposure limits ▪ Daily marking of loans/collateral ▪ Borrower default indemnification ▪ Risk analysis tools (MSCI Barra) to measure and calibrate exposure
Trade Settlement Risk	Investment manager sells loaned security and borrower fails to return in time to settle the trade	<ul style="list-style-type: none"> ▪ Timely trade notification ▪ Robust automated reallocations ▪ Trade settlement protection

Additional Risks with Taking Cash as Collateral

Cash Collateral Reinvestment Risk	Cash collateral investment becomes impaired or decreases in value	<ul style="list-style-type: none"> ▪ Client approved investment guidelines ▪ Robust independent oversight of cash pools and investments ▪ Dedicated team of fixed income research analysts ▪ Daily automated monitoring of portfolio guidelines and compliance
Interest Rate Risk	Loan rebate rate exceeds earnings on cash collateral investments	<ul style="list-style-type: none"> ▪ Close daily communication between lending and cash management teams ▪ Shared risk between Northern Trust and client ▪ Weekly “gap analysis” and periodic stress testing of portfolio



Brief Overview of Key US Regulatory Developments

Northern Trust is tracking global regulatory developments that may impact securities lending and is actively engaged with various federal agencies on these regulations either directly or through industry groups.

Regulatory Development	Anticipated Impacts	Next Steps
Dodd-Frank		
Volcker Rule - 619	<ul style="list-style-type: none"> The final regulation does not exclude securities lending cash collateral pools from the scope of the Volcker Rule and therefore may curtail agent lenders' sponsorship of unregistered cash collateral pools. Lending agents may consider alternative strategies/structures for cash collateral reinvestment. 	Final Rules issued December 2013; Conformance deadline July 2015
Counterparty Concentration Limits – 165(e)	<ul style="list-style-type: none"> Limits a bank's combined credit exposure to a single counterparty to no more than 25% of the bank's capital. Credit exposure calculations include indemnified securities lending transactions; agent lenders may face constraints on providing indemnification and accepting sovereign debt as collateral. 	Awaiting final rules.
Securities Lending Transparency – 984	<ul style="list-style-type: none"> Requires SEC to increase transparency in securities lending. SEC expected to develop regulations that align with proposals from the Financial Stability Board's Workstream on Securities Lending and Repo. 	Awaiting proposed rules (overdue since mid-2012); no clear timeframe for rules to be issued
Money Market Reform		
	<ul style="list-style-type: none"> SEC adopted rules for "prime" money market funds that involve requirements such as floating NAV. Additional restrictions, such as redemption gates and liquidity fees will be at the discretion of the fund board. Funds having over 99.5% invested in government securities are exempt from these new requirements. 	Final rules approved July 23, 2014, with 2 year compliance period.
Basel III		
Capital	<ul style="list-style-type: none"> Increased capital requirements will make it more costly for agent lenders to provide indemnification. 	Final US rules released in July 2013; effective January 2015
Large Exposures	<ul style="list-style-type: none"> Similar in concept to Counterparty Concentration Limits; restricts a bank's combined credit exposure to a single counterparty to a portion of the bank's capital. 	Final Basel III standard released April 15, 2014, but treatment of securities lending exposures remains open; awaiting final rules.
Leverage Ratio	<ul style="list-style-type: none"> Indemnified securities lending activity to be captured in Basel III leverage ratio. Exposure for securities lending to be measured generally by current exposure, which should be negligible given securities lending positions are over-collateralized. Additional leverage ratio impact for any guarantees or exposures beyond replacement securities in US Agency proposal. 	Basel III standards finalized Jan 2014. US Agencies issued Notice of Proposed Rulemaking on April 8, 2014.





Changes to Cash Collateral Management

- Northern Trust's securities lending cash collateral pools are considered "covered funds" under section 619 of the Dodd-Frank Act, also known as the Volcker Rule.
 - ◆ Current securities lending pools rely on exemptions 3(c)(1) and 3(c)(7) of the US Investment company act of 1940
 - ◆ Regulatory changes under Volcker Rule identify 3(c)(1) and 3(c)(7) pools as "covered funds"
 - ◆ The Volcker Rule will take effect in July 2015

- Northern Trust will be closing our existing securities lending cash collateral pools.
 - ◆ All clients investing cash in the collateral pools will need to select a different cash collateral investment vehicle

- New and existing collateral options will be available for clients.
 - ◆ SL Core STIF, new collective fund
 - ◆ NILAP, a 2a7 Money Market Mutual Fund

- On September 22, 2014, we provided important information and documentation related to the options available for securities lending cash collateral investment.

- Clients will need to review the options and provide us with their selection by January 23, 2014.





◆ Asset Allocation & Characteristics Report

COREUSA - Core USA Fund - USD

Characteristics		
Total Book Value (in USD)		28,743,050,753
Weighted Average Maturity (Interest Reset Date)		41 Days
Weighted Average Maturity (Maturity Date)		92 Days
Average Equivalent Quality Rating		A1+
Total Number of Issues		202
Quality Distribution		
	Percentage	
A1+ (SHORT TERM)	47.32%	
A1 (SHORT TERM)	42.85%	
Agency	5.91%	
AAA (LONG TERM)	.7%	
AA (LONG TERM)	.12%	
AA- (LONG TERM)	2.72%	
A+ (LONG TERM)	.4%	
Maturity Breakdown Distribution		
	Interest Reset	Maturity Date
Overnight	36.57%	18.65%
2 - 15 Days	14.46%	12.88%
16 - 30 Days	9.69%	3.75%
31 - 60 Days	10.13%	10.99%
61 - 97 Days	13.56%	21.31%
98 - 180 Days	13.76%	20.05%
181 - 270 Days	1.22%	3.36%
271 - 366 Days	0.64%	7.36%
367 Days - 2Yrs	0.00%	1.68%

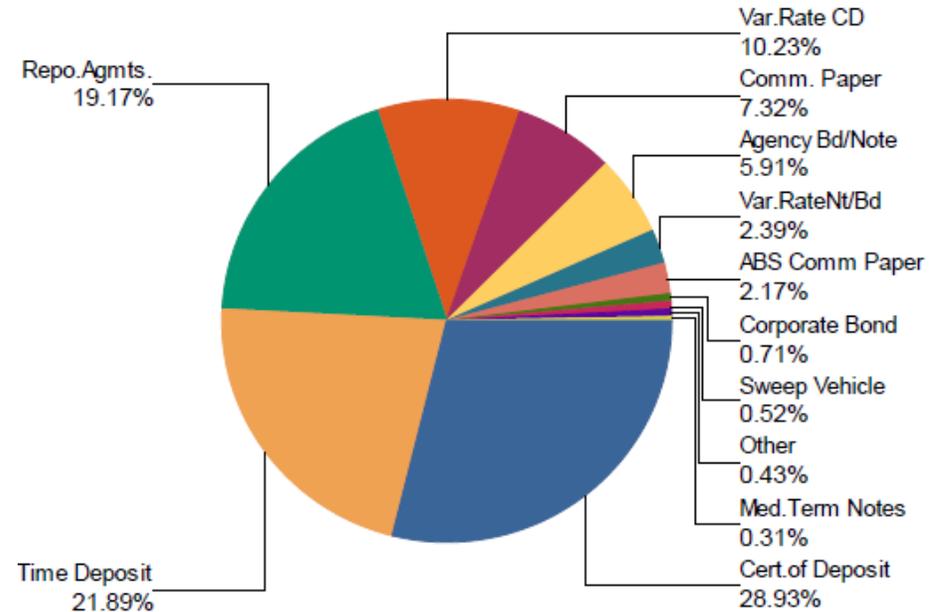
COREUSA - Core USA Fund - USD

Industry/Sector Distribution	
	Percentage
Banking Ind.	68.46%
Broker/Dealer	19.96%
Commercial&Ind	0.93%
Finance & Ins	2.93%
Finance Conduit	0.12%
Govt Agencies	7.32%
Municipals	0.28%

* Based upon traded basis from holdings reports

NOTE: This information was created using the best unaudited data available to us and may not be completely reliable, accurate, or timely. Data is prepared on a settled basis, which may differ from traded basis data on the Cash Collateral Holdings report. "Traded Basis" reflects pending trades.

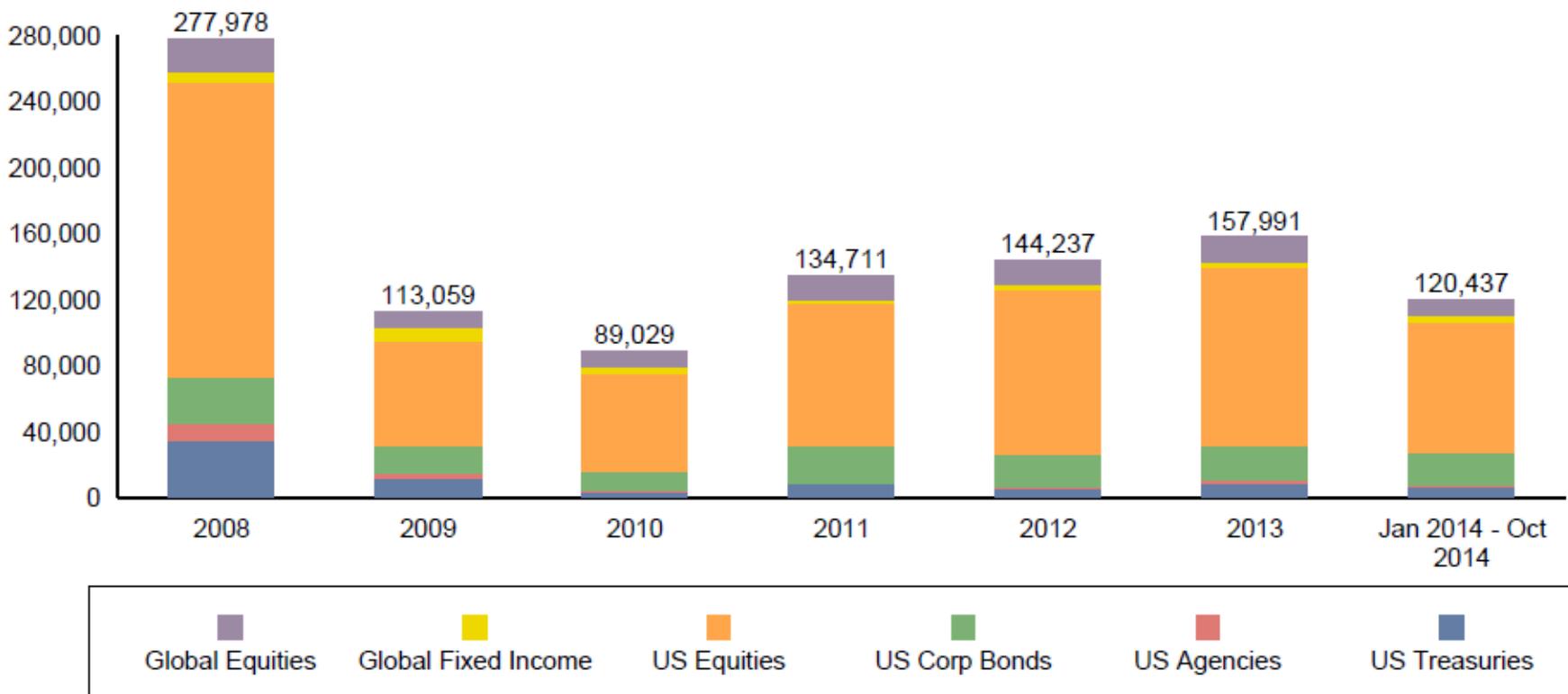
Cash Collateral Asset Class Breakdown





Northern Trust Securities Lending Historical Graph (Net Earnings) (USD) **

◆ BAY COUNTY EMPLOYEES



Northern Trust Securities Lending

Performance Scorecard - Lending and Investment Breakdown

From January, 2014 to October, 2014

(USD) **

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◆ BAY COUNTY EMPLOYEES

Security Type	Market Value (USD)		% on Loan	Gross Earnings (USD)			Spread (bps)			Gross BP Return (bp) *	Net Earnings (USD)		
	Avg. on Loan	Avg. Available		Lending	Investment	Total	Lending	Investment	Overall		Lending	Investment	Total
US Treasuries	8,742,740	8,972,974	97.4%	-474	12,034	11,560	-0.6	16.3	15.7	15.3	-284	7,222	6,937
US Agencies	358,551	1,626,180	22.0%	455	501	956	15.0	16.6	31.6	7.0	273	301	574
US Corp Bonds	10,180,870	36,500,731	27.9%	19,558	13,605	33,163	22.7	15.8	38.6	10.8	11,741	8,170	19,911
US Equities	48,751,484	161,356,218	30.2%	63,871	66,754	130,625	15.5	16.2	31.7	9.6	38,362	40,109	78,471
Global Sovereign	212,714	322,557	65.9%	186	289	474	10.3	16.1	26.4	17.4	111	173	285
Global Agencies	52,434	134,191	39.1%	53	68	122	12.1	15.4	27.5	10.8	32	41	73
Global Corp Bonds	2,177,576	9,476,743	23.0%	3,973	2,982	6,955	21.6	16.2	37.8	8.7	2,385	1,791	4,176
Global Equities	3,840,924	16,083,750	23.9%	11,406	5,259	16,666	35.2	16.2	51.4	12.3	6,849	3,162	10,011
Total	74,317,292	234,473,344	31.7%	99,029	101,492	200,521	15.8	16.2	32.0	10.1	59,469	60,968	120,437

Rebates for when USD cash is taken as collateral on applicable loans are based on the Fed Open benchmark rate.

Rebates for when EUR cash is taken as collateral on applicable loans are based on the EONIA benchmark rate.

Rebates for when CAD cash is taken as collateral on applicable loans are based on the Canadian Overnight benchmark rate.

* Gross Basis Point Return equals On Loan Spread multiplied by % on Loan. GBPR is the measure of total return on a given asset class or portfolio.

** Market Value and Earnings were converted using the month-end FX rate.



Northern Trust Securities Lending Performance Scorecard - Client (Date Range Comparison)

(USD) **

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◆ BAY COUNTY EMPLOYEES

Security Type	Market Value (USD)		% on Loan	Gross Earnings (USD)	On Loan Spread (bp)	Gross BP Return (bp) *	Net Earnings (USD)
	Avg. on Loan	Avg. Available					
From January, 2014 to October, 2014							
US Treasuries	8,742,740	8,972,974	97.4%	11,560	15.7	15.3	6,937
US Agencies	358,551	1,626,180	22.0%	956	31.6	7.0	574
US Corp Bonds	10,180,870	36,500,731	27.9%	33,163	38.6	10.8	19,911
US Equities	48,751,484	161,356,218	30.2%	130,625	31.7	9.6	78,471
Global Fixed Income	2,442,724	9,933,491	24.6%	7,551	36.6	9.0	4,534
Global Equities	3,840,924	16,083,750	23.9%	16,666	51.4	12.3	10,011
Total	74,317,292	234,473,344	31.7%	200,521	32.0	10.1	120,437
From January, 2013 to October, 2013							
US Treasuries	7,693,332	8,241,649	93.3%	11,375	17.5	16.3	6,826
US Agencies	974,644	2,644,921	36.9%	3,401	41.3	15.2	2,041
US Corp Bonds	8,426,444	32,123,329	26.2%	28,032	39.4	10.3	16,829
US Equities	57,163,780	155,039,454	36.9%	152,336	31.6	11.6	91,498
Global Fixed Income	1,891,332	7,939,359	23.8%	4,740	29.7	7.1	2,846
Global Equities	4,314,681	20,690,291	20.9%	22,615	62.1	12.9	13,578
Total	80,464,214	226,679,003	35.5%	222,498	32.7	11.6	133,618
Variance							
US Treasuries	1,049,408	731,324	4.1%	185	-1.9	-1.1	111
US Agencies	-616,092	-1,018,741	-14.8%	-2,444	-9.7	-8.3	-1,467
US Corp Bonds	1,754,425	4,377,402	1.7%	5,131	-0.8	0.4	3,081
US Equities	-8,412,297	6,316,765	-6.7%	-21,711	0.2	-2.0	-13,027
Global Fixed Income	551,392	1,994,132	0.8%	2,811	6.9	1.9	1,688
Global Equities	-473,758	-4,606,541	3.0%	-5,949	-10.7	-0.7	-3,568
Total	-6,146,921	7,794,341	-3.8%	-21,977	-0.8	-1.5	-13,181

Northern Trust Securities Lending

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Top 10 Net Earnings Report

From January 2014 To October 2014

◆ BAY COUNTY EMPLOYEES

Rank	Security Name	CUSIP/SEDOL	Net Earnings	% Of Total Net Earnings	Market Value On Loan (USD)	Average % Utilization	Average Spread
1	GOPRO INC CL A CL A	38268T103	5,239.59	4.35	21,596.94	96.15	4,675.92
2	UTD STATES TREAS 1.25% DUE 04-30-	912828ST8	2,424.60	2.01	2,923,327.65	99.35	16.04
3	INVENSENSE INC	46123D205	2,395.21	1.99	90,771.47	99.85	518.27
4	RPM INTL INC 2.25% DUE 12-15-2020	749685AT0	1,683.53	1.40	251,138.66	88.43	129.97
5	THERAVANCE INC COM STK	88338T104	1,579.56	1.31	67,215.20	97.74	451.86
6	UNITED STATES TREAS NTS DTD 0035	912828QY9	1,530.91	1.27	1,904,580.14	92.13	15.60
7	VISA INC COM CL A STK	92826C839	1,386.40	1.15	1,037,855.66	93.60	25.79
8	UNITED STATES TREAS BDS DTD 08/15	912810EQ7	1,373.72	1.14	1,805,471.39	98.93	14.68
9	NEWMONT MNG CORP SR NT CONV 1.	651639AJ5	1,339.02	1.11	254,792.83	82.57	101.71
10	APPLIED MATERIALS INC COM	038222105	1,325.39	1.10	976,013.46	56.49	26.00
Sub Total Of Top 10 Securities			20,277.93	16.84	9,332,763.40	89.34	41.99
All Other			100,159.34	83.16	64,984,529.58	29.01	29.68
Total			120,437.27	100.00	74,317,292.98	31.70	31.22



Transparency and Information Delivery

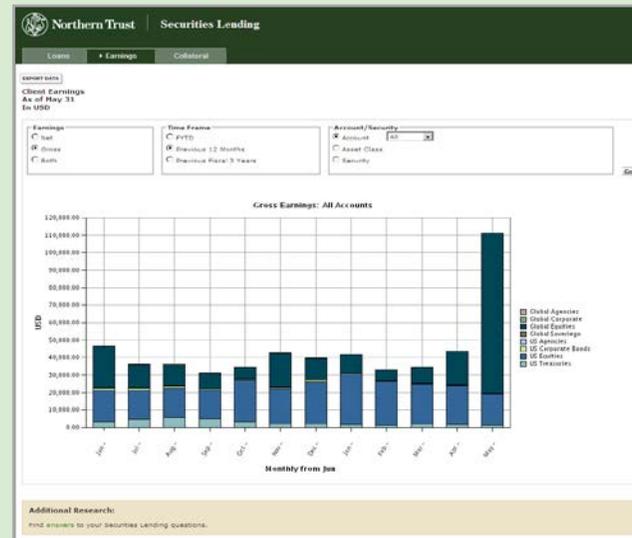
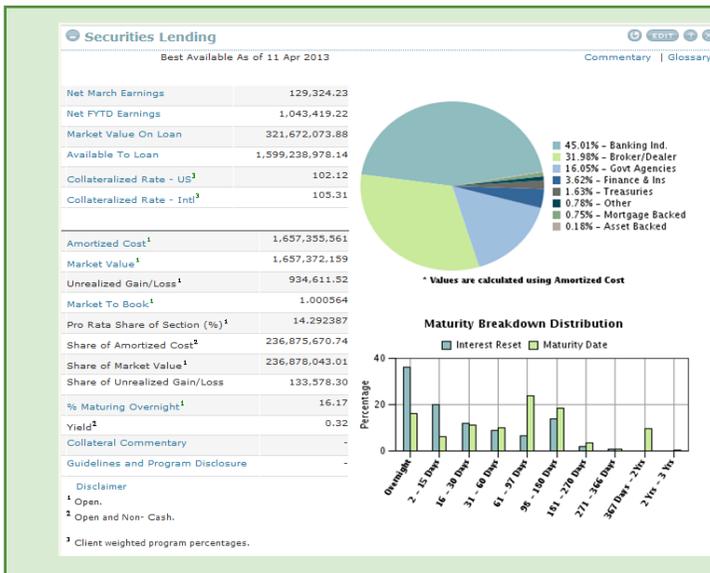
Flexible, electronic reporting: Northern Trust provides you with customized reports to help monitor your Securities Lending activity

Daily reporting

- **Securities loaned** – detail
- **Borrower utilization** – summary by borrower
- **Account utilization** – loan detail, summary by account
- **Collateral** – by security type, country and detail holdings
- **Executive Summary**

Monthly reporting

- **Performance scorecard:**
 - ◆ Account earnings and performance
 - ◆ Security level detail
 - ◆ Client by asset type and account earnings
 - ◆ Date range comparison
- **Historical statistics graph**
- **Earnings statement** - summary and detail



Securities Lending Data Block on Passport®

Helping to keep you informed about your Securities Lending performance.

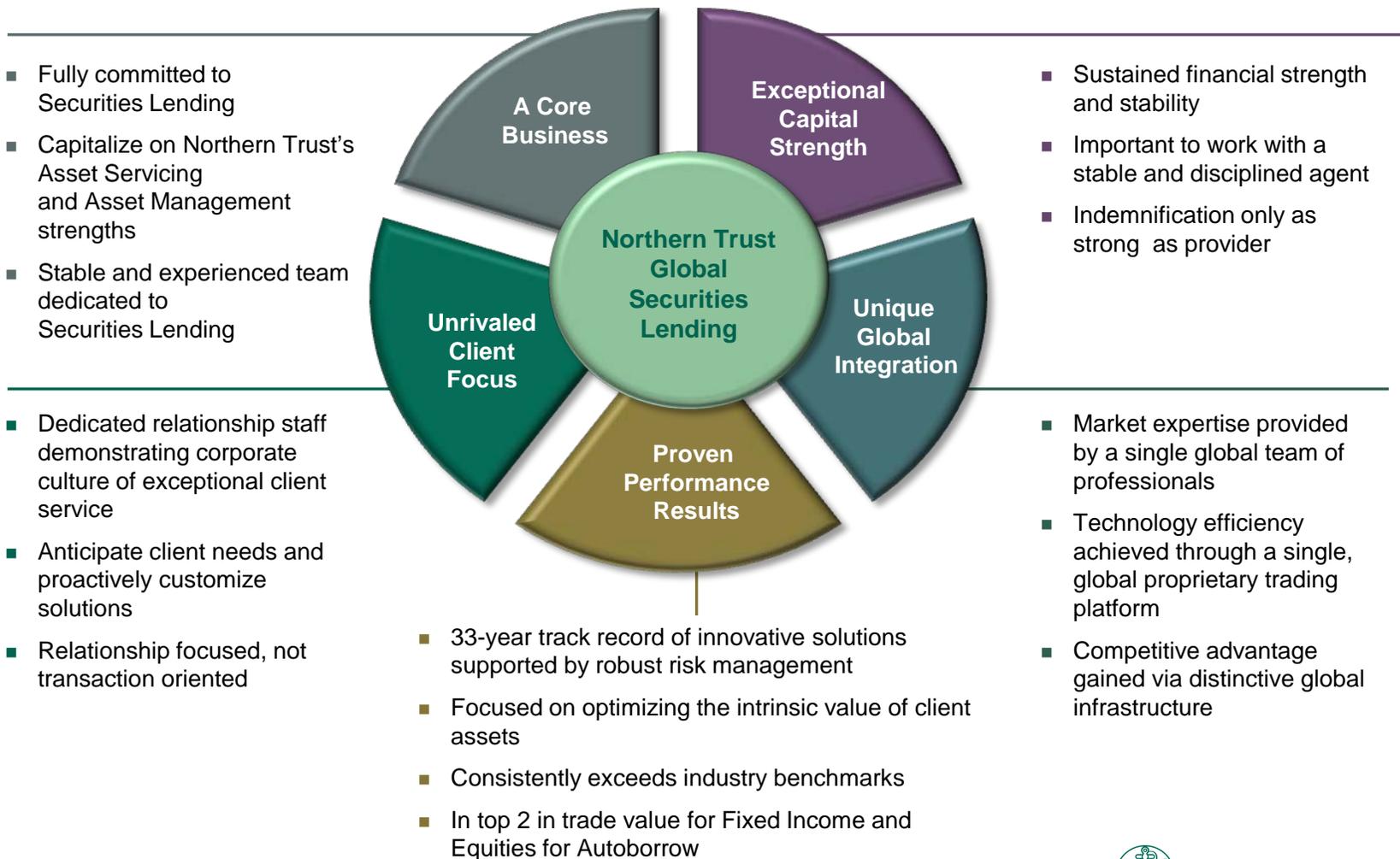
Facilitates the online distribution of vital, tailored information on each client's portfolio holdings, characteristics, investment performance and commentary





Why Northern Trust

Northern Trust provides managed risk and proven performance supported by committed professionals.





Disclosures

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Evaluations are based on the asset allocation, actual historical spread and on-loan figures provided to Northern Trust. Consequently, as changes in these factors occur and as trading patterns of the portfolio managers' shift, actual earnings generated in Securities Lending may be impacted.

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