



July 19, 2017

**Mendocino County Employees'
Retirement Association**

Securities Lending Discussion
Preliminary June Flash Report

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Securities Lending Education

Securities Lending – What We Believe

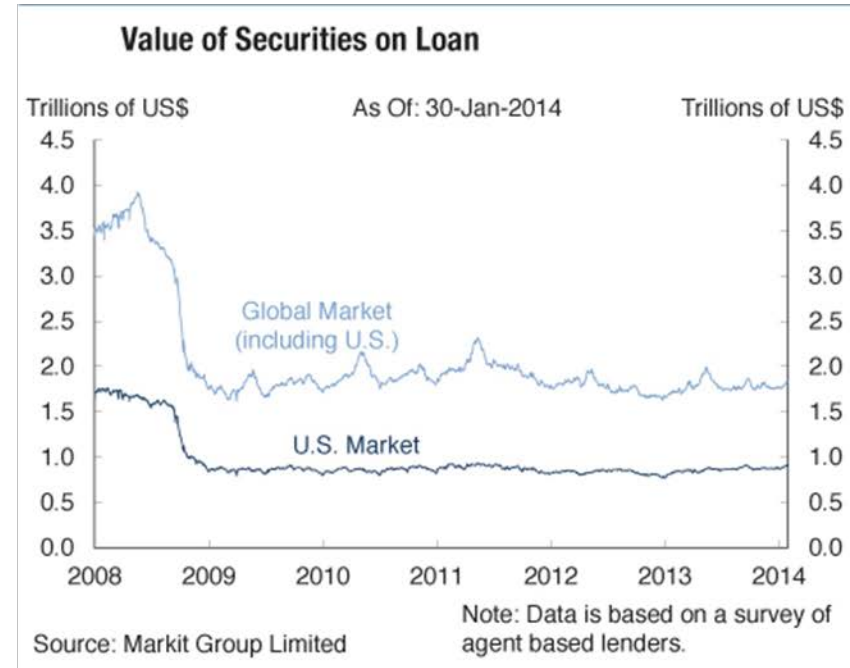
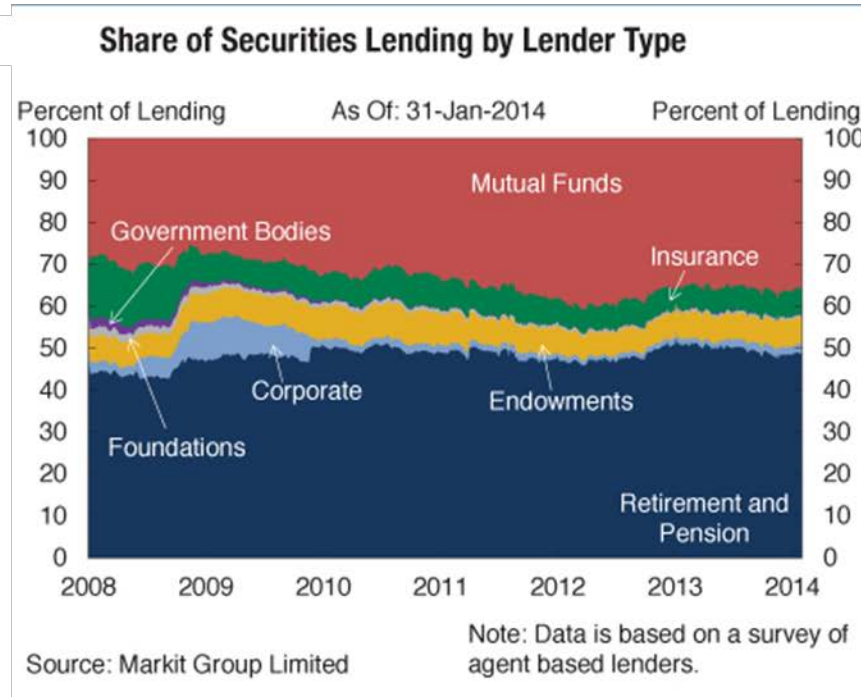
- Securities lending is a critical component to a well functioning **Capital Markets** and an essential tool for liquidity, securitization, financing, risk management, and pricing efficiency.
- Callan has been a firm believer that risk management takes precedence over revenue generation. By virtue of the fact that a lending agent can have huge blocks of securities out-on-loan and is charged to reinvest large amounts of cash collateral on any given day, the lending agent can be the **Single Largest Investment Manager** of a client.
- Financial Crisis exposed that Securities Lending was not the issue but that of **Cash Collateral Management**. This was exacerbated by the fact that Securities Lending has **Asymmetric Risk** wherein collateral losses are skewed to the disadvantage of a client and not the provider.
- There is **No Free Lunch** with securities lending. We do believe that a program focused on risk management is far superior to a revenue-driven program. Clients who are not familiar and understand the mechanics and risks involving securities lending should refrain from participating whether direct (separate accounts) or indirect (through commingled funds).

What is Securities Lending?

- Securities lending is the market practice where securities are temporarily borrowed by one party (the borrower) from another party (the lender).
- Borrowers tend to be hedge funds or other investors who need to cover a short position.
- Securities are borrowed for a certain period of time and the borrower gives collateral in exchange for the securities.
- Collateral generally consists of:
 - Cash
 - Government securities, or
 - Letters of credit
 - Other negotiated collateral
- Revenue sharing percentages range from 50/50 for smaller programs to 90/10 for larger programs.

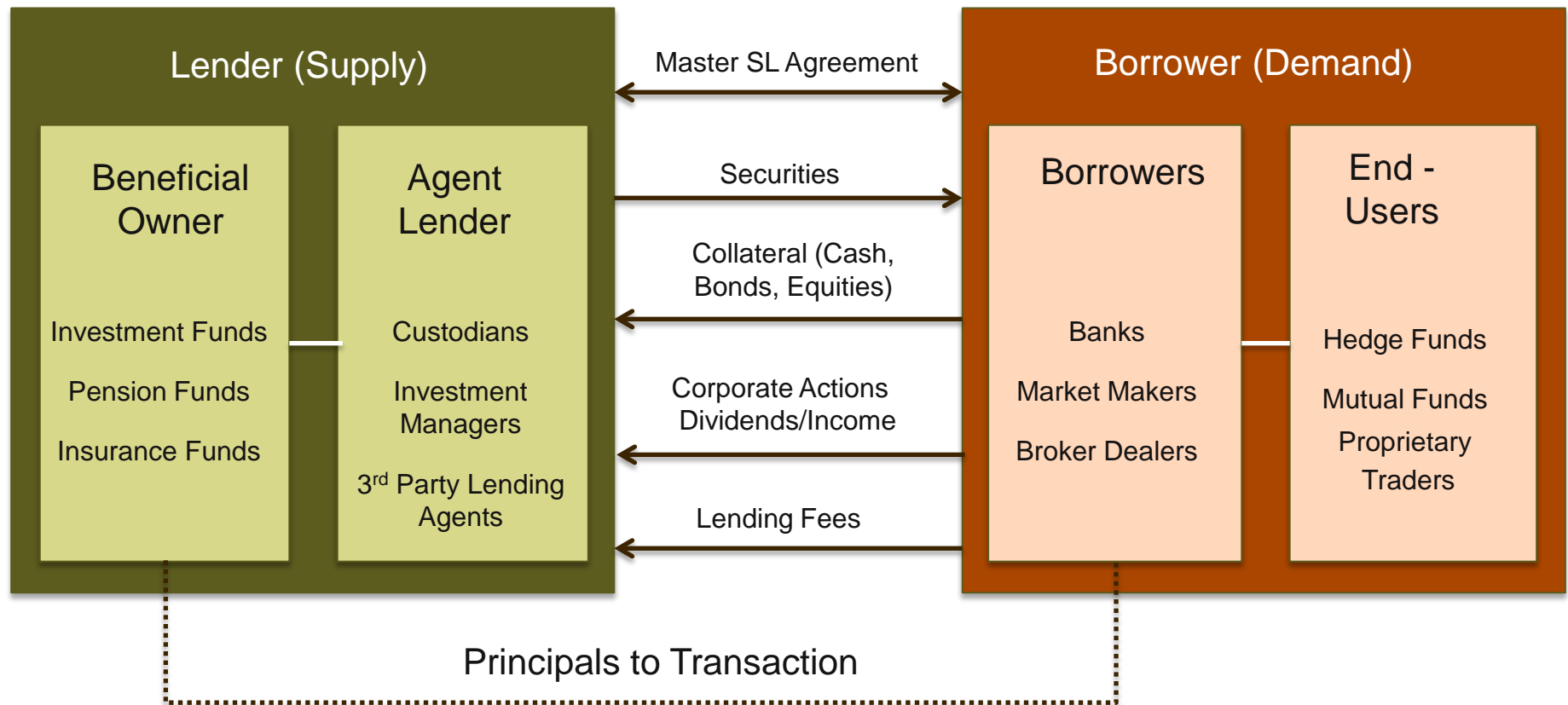
Securities Lending Snapshot

Size of the Market and Participants



How it Works?

Agent Lending and Borrowing



Source: Securities Lending An Introductory Guide (ISLA 2010)

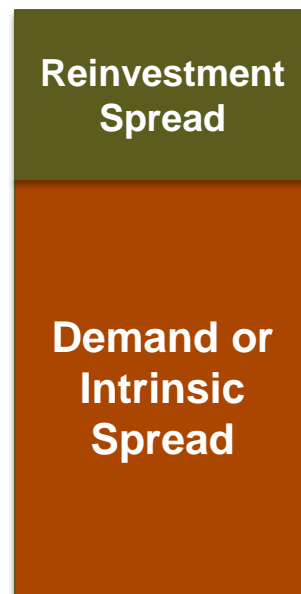
Components of Revenue from Securities Lending

Changing Dynamics

Prior to 2008



Post 2008



Reinvestment Spread - The spread generated by the lending agent from reinvesting the cash collateral posted by the borrower.

Intrinsic or Demand Spread – The spread generated from the scarcity value of a security that a borrower is willing to pay to secure almost exclusive access to the security.

Securities Lending Basic Premise

- Why Lend? Extra revenue or returns (often to cover administrative and custody costs).
- What is it? Owner of a security agrees to lend the security to a borrower according to negotiated terms and the owner is secured with collateral.
- Why Borrow? To make delivery of securities to avoid fails and money is not tied in the cash market.
- Do you Own What You Lend? No, but you are entitled to the economic benefits of ownership, except for proxy voting. You receive collateral for the lent securities at 102% (Domestic) and 105% (Int'l). Collateral should at least be 100% all the time.

Securities Lending Risks

- **Borrower Default Risk**

- The risk that the borrower will not return the securities due to insolvency.
 - *To mitigate this risk the lender requires that the borrower “over collateralize” the position and perfection of collateral*
 - *Seek borrower default indemnification*
 - *Lending agent review the financial condition of the borrower and comply with FFIEC requirement (Federal Financial Institute Examination Council)*

- **Collateral Reinvestment Risk**

- The risk that the investment of the cash collateral will not earn a sufficient return to cover the agreed upon rebate rate due to Interest Rate Risk, Liquidity Risk and Credit Risk.
 - *Institute an “intrinsic value” lending program to control amount of assets out on loan or asset at risk*
 - *Intrinsic value lending programs generate revenue from the demand for the security itself, rather than from the reinvestment of the collateral*
 - *Manage duration gap of loans vs. reinvestments*
 - *Minimum demand spread for loans around 25 to 50 bps*
 - *Follow SEC rule 2a-7 investment guidelines, requiring the use of a government-only Money Market Fund (MMF) in order to maintain a stable \$1 NAV*
 - *Select experienced cash collateral manager*
 - *Acceptable collateral restricted to ERISA safe harbor requirements*

Securities Lending Risks

- **Operational Negligence**

- The risk that an agent fails to mark to market collateralization levels, posting of corporate actions and income, including all economic benefits of ownership except for proxy voting.
 - *Operational discipline of the lending agent - stringent policies, controls, audit procedures, and transparency to monitor daily activities of program*

- **Trade Settlement Risk**

- The risk that an investor sells a security that is out on loan and that the loaned security is not returned by the borrower and that a trade fails or the seller is charged with an overdraft fee; or for that matter missing a proxy vote
 - *Control how much of a position should be loaned out*
 - *Proper recall procedures by lending agent and employ substitution*

- **Country and Currency Risks**

- Political, Exchange Rate, Economic, Sovereign and Transfer Risks
 - *Overcollateralization to 105% for cross currency exposures; Vigilance by lending agent to track cross-border events and market dynamics*

Noteworthy Litigation

Losses Stemming from Financial Crisis of 2008

- There has been a great deal of legal activity across all major lending agents regarding losses in securities lending cash collateral investment funds during the financial crisis. Examples are:
 - State Street.
 - A settlement, in the amount of \$10 million and additional securities lending disclosures, has been reached in the litigation known as *Glass Dimensions, Inc. v. State Street Bank & Trust Co., et al.*, Case No. 1:01-CV-10588-FDS. (Heffler Claims Group – March 17, 2014)
 - BNY Mellon.
 - BNY Mellon paid \$280 million to a group of investors that filed a lawsuit accusing the bank of improper securities lending losses stemming from investments with Sigma Finance Corp. (CIO Magazine - July 6, 2012)
 - JP Morgan Chase.
 - JP Morgan's \$150 million settlement of a lawsuit over losses from the bank's securities lending program won approval from a federal judge. The suit was filed by three union pension funds, which represent a class of investors that lost money placed for them by New York-based JPMorgan in medium-term notes issued by Sigma Finance Corp., a structured investment vehicle that collapsed in 2008. (Bloomberg - June 6, 2012)
 - Northern Trust Corp.
 - NT paid \$36 million to settle a class-action lawsuit filed by 1,500 retirement plans that accused the firm of causing large losses stemming from the bank's securities lending program during the financial crisis. (Pensions & Investments – June 18, 2015)
 - Wells Fargo & Co.
 - Wells Fargo settled a federal class-action lawsuit led by the \$132 million Farmington Hills (Mich.) Employees' Retirement System that claimed the bank breached its fiduciary duty when it lost money through its securities lending program, according to court documents. (Pension & Investments - March 16, 2014)

How Tax-Exempt Funds Responded?

The Three Approaches: Shut-Down, De-Risk, or Continue Business As Usual

- **Shut-Down**

- DC, LGIP, Corporate Treasury Funds
- Limitation of Size (less than \$1 billion in total assets)

- **Continue Business as Usual**

- Not Really, Nobody is Maintaining Business as Usual

- **De-Risk**

- Intrinsic Value Lending
- Revisit Indemnification Clauses
- Identify Collateral Risk
- Go Further and Tighten Guidelines
- Proper Balance of Risk/Reward Trade-off



Decision Variables for Plan Sponsors

- Tolerance for Risk
 - Risk Averse, Mitigate as Much of the Risk
- Is It Worth It?
 - As long as Risk/Reward is consistent with a Risk Averse Approach, and Revenue driven by Intrinsic Lending
- Continue, Shut-Down or De-Risk
- Type of Agency Lending Program
 - Custody, 3rd Party Lending or Exclusives
- Pursue Further Tightening
 - Cash Collateral Reinvest via Indemnified Overnight REPO
 - Term Loans Limited to Short Duration
 - Open Loans – Fully Matched
 - Demand or Intrinsic Spread of 25 to 50 bps
 - Perfect the Collateral and Indemnification Covers SIPC Bankruptcy and Dodd Frank Issues
- Monitor and Evaluate
 - Achieve Transparency
 - Daily Monitoring





Current Managers

Current Managers – Sec Lending Participation Status

Manager	TICKER	L / NL	Notes
Domestic Equity Funds			
Large Cap Funds			
Vanguard S&P 500 Index	VINIX	L	~0.06% of total fund assets are out on loan
Dodge & Cox Stock	DODGX	L	0%; Dodge & Cox Funds are permitted to lend securities, but none have done so to date.
Boston Partners Large Cap Value	N/A: CIT, C	NL	
Harbor Cap Appreciation	HNACX	L	~1.3% of total fund assets are out on loan
Janus Research	JRANX	L	0%; JIF Research Fund has participated in the securities lending program but the PMs participate on an opportunistic basis. Deutsche Bank, the lending agent, will notify Janus Henderson if a security held by the Fund is in high demand and Janus will reach out to the PMs to see if they would like to lend the security. JIF Research Fund has not lent a security since April of 2016.
Mid Cap Funds			
Fidelity Low Priced Stock	FLPSX	L	~1% of total fund assets are out on loan
Janus Enterprise	JDMNX	L	~2% of total fund assets are out on loan
Small Cap Funds			
Prudential QMA Small Cap Value	TSVQX	L	~9% of total fund assets are out on loan
AB US Small Growth	QUAZX	L	~6% of total fund assets are out on loan
International Equity Funds			
American Funds EuroPacific Growth	REERGX	L	0%; EuroPacific does have the flexibility to engage in sec lending. However, the fund has not engaged in this activity in the past, and does not intend to engage in this activity going forward.
Harbor International	HNINX	L	~5% of total fund assets are out on loan
T. Rowe Price SC	N/A: CIT	L	0%; Does not & has never participated in securities lending.
Oakmark International	N/A: CIT, 1	NL	
Mondrian International	N/A: LP	L	0%; The LP does allow for securities lending but has not done so in the past.
Investec EME	N/A: CIT	L	0%; Does not participate in sec lending.
Fixed Income			
PIMCO Total Return	PTTRX	L	0%; The TR Fund (& all PIMCO U.S. Funds) are allowed to participate in securities lending. However, the U.S. Funds, including PTTRX have not done so since inception.
Dodge & Cox Income	DODIX	L	0%; Dodge & Cox Funds are permitted to lend securities, but none have done so to date.

* L = Lending NL = Non-lending



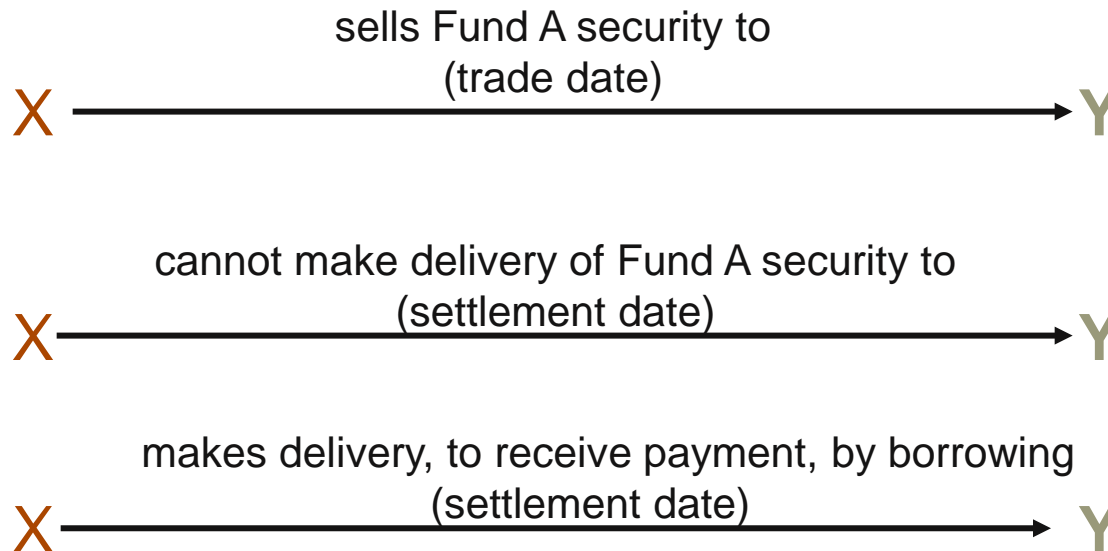
Appendix

Why Do They Borrow?

Borrowing to Cover a Settlement Failure

Example

If securities firm X sells a customer's stock to securities firm Y and on settlement date the customer has not delivered the stock, X cannot make delivery of the stock to Y. X will not receive payment. One way to solve this issue is to borrow securities in order to make delivery.

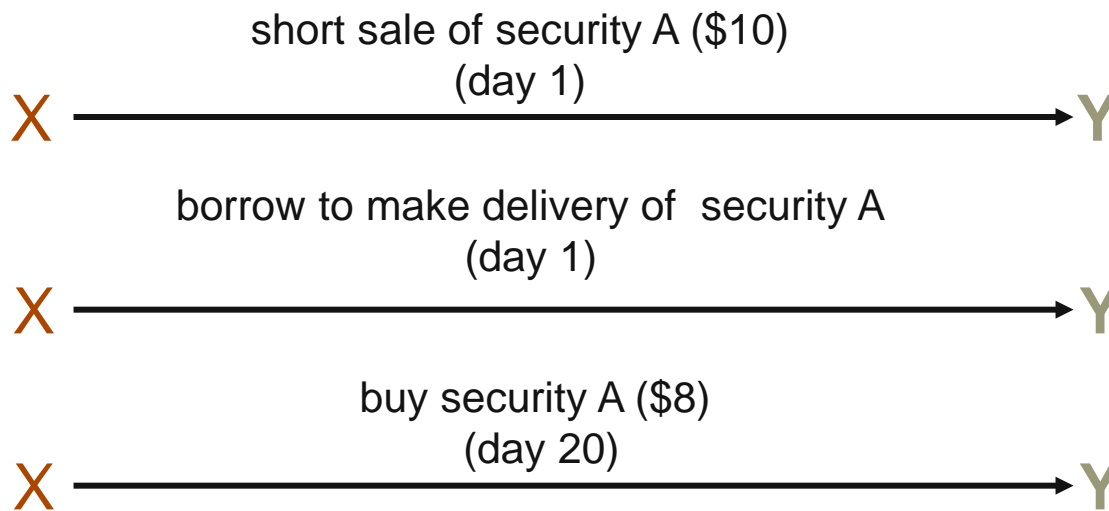


Why Do They Borrow?

Borrowing to Cover a Short Trading Position

Example

Naked (unhedged) Short: When a dealer believes a security is overpriced and wishes to profit from the anticipated price decline, he may sell the stock “short” (sell the stock that he does not own) and buy the securities in the market when the price has fallen. In a short sale, he has to borrow to make delivery to the counterparty in a short sale.



Why Do They Borrow?

Borrowing as part of an Arbitrage Transaction

Example

Arbitrage: To manage the risk involved in a naked position, a simultaneous buy or sell of a similar security or derivative may be employed. This strategy involves a dealer taking advantage of perceived price discrepancies.

- a) Sell short (and borrow) 10-year U.S. Govt Bonds and simultaneously purchase five-year U.S. Govt Bonds.
- b) Sell short (and borrow) IBM shares and buy IBM call options.
- c) Sell short (and borrow) the 500 issues comprising the S&P 500 Index and buy the S&P 500 Futures.
- d) Tax dividend arbitrage in foreign markets.



Glossary of Terms



Securities Lending

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- **ASYMETRIC RISK** – Within the context of securities lending, asymmetric risk is a significant mismatch between revenue gains and losses between client (lender) and the lending agent. Securities lending gains are shared based on the revenue sharing arrangement or split, while securities lending losses are often one sided and significantly borne by the client (lender). For example, a 60/40 split means the client (lender) receives 60% of gains and the lending agent collects the remaining 40% of gains. When losses materialize, the 60/40 split is often not applicable, wherein all losses (or 100%) are the responsibility of the client (lender).
 - **BORROWER/COUNTERPARTY DEFAULT RISK** – The failure by a borrower to return securities on demand or upon recall. The default can arise from financial difficulty or bankruptcy.
 - **COLLATERAL** – Security for a loan in the form of assets with monetary value. The creditor holds either the asset itself or title to it until the loan is repaid.
 - **COLLATERAL REINVESTMENT RISK** – The risk associated with the reinvestment loss in the cash securities in which the lending agent and/or beneficial owner choose to reinvest the cash collateral. The real risk is that the investment of the cash collateral will not earn a sufficient return to cover the agreed upon rebate rate because of interest rate, liquidity and/or credit risks.
 - **DEMAND SPREAD (or INTRINSIC VALUE)** – Intrinsic value means the scarcity value of a security that a borrower is willing to pay to secure almost exclusive access to the security. Thus, the demand spread is the actual value of a security that is out on loan less reinvestment spread.
 - **DURATION MISMATCH RISK (GAP RISK)** – Risk known to occur when the interest rate sensitivity of the asset (cash collateral reinvestment) is longer or shorter than the interest rate sensitivity of the liabilities (loan).
 - **FED FUNDS RATE** – The rate of interest charged for an overnight loan from one bank to another of excess reserves, that is, cash and deposits in excess of the reserves it is required to have on hand. Because the interest rate for such loans depends largely on supply and demand, it is regarded as a very important barometer of monetary conditions at any given time.
 - **GAP RISK** – Risk known to occur due to duration mismatch.
 - **GROSS SPREAD** – The difference between the yield or return generated by the cash collateral and the negotiated rebate (intrinsic value) paid on a securities loan (or, in the case of loans vs. non-cash collateral, the premium). The gross spread is the sum of the demand spread and the collateral reinvestment spread.
 - **INDEMNIFICATION** – An agreement to compensate for damage or loss.
 - **INTRINSIC VALUE** – See Demand Spread.

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- **LENDABLE ASSET BASE** – Market value of securities available for lending.
 - **LENDING AGENT** – An entity that undertakes a securities loan and negotiates the terms with borrowers on behalf of the owner of the securities that are out-on-loan.
 - **MARGIN** – The amount or percentage by which the collateral value exceeds the value of the securities that are on loan.
 - **MARKING TO MARKET** – The daily process of adjusting the value of a portfolio to reflect daily changes in the market prices of the assets held in the portfolio.
 - **MATCHED BOOK** – Within the context of a securities lending transaction, the duration of the liability of the loan is synchronized and matched to the duration of the cash collateral reinvestment.
 - **OPEN LOAN** – A securities loan with no fixed maturity date.
 - **OPERATIONAL RISKS** — The risk that the lending agent did not administer the program as agreed. This includes the failure of the agent to mark to market collateralization levels, and to post corporate actions and income including all economic benefits of ownership except for proxy voting.
 - **OUT ON LOAN** – Actual securities from the lendable asset base that is out on loan or currently borrowed by a counterparty or borrower.
 - **PROXY** – A written form that is given by shareholders to record their vote or to authorize someone else to vote in their place at a shareholder’s meeting. Shareholders or investment managers typically receive proxy notification specific to a pending vote.
 - **REBATE RATE** – The negotiated interest rate that a securities lender pays the borrower on cash collateral. The negotiated interest rate or rebate rate is determined by the scarcity value of a security or demand for a specific security in the marketplace.
 - **RECALL** – The ability to receive a security without fail that is out-on-loan to complete a sale transaction or to exercise a proxy vote.
 - **REINVESTMENT SPREAD** – The spread generated by the lending agent from reinvesting the cash collateral posted by the borrower. The reinvest spread is generated from investing in short term securities for additional yield which is a typical strategy deployed by money market funds.

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- **REPURCHASE AGREEMENT (REPO)** – A contract whereby an investment is sold with the stipulation that the seller will buy it back (repurchase it) at a specified price and, normally, on a specified date. It is in effect a loan in which the investment serves as collateral and the difference between selling price and repurchase price represents interest. The investment may consist of bonds, notes, certificates of deposits, or other securities, but most often is US Government securities.
 - **REVENUE SPLIT (REVENUE SHARING ARRANGEMENT)** – The practice within securities lending specific to the sharing of revenue spreads between the client (lender) and the lending agent generated from the demand spread of securities on loan and the reinvestment spread of the cash collateral. For example, a 60/40 split means the client (lender) receives 60% of revenues and the lending agent collects the remaining 40% of revenues.
 - **TERM LOAN** – A security loan with a fixed maturity date.
 - **TRADE SETTLEMENT RISK** – The risk that an investor sells a security that is out-on-loan and that the loaned security is not returned by the borrower, and that a trade fails or the seller is charged with an overdraft fee.



Preliminary June Flash Report

June Flash Report – Preliminary

Asset Distribution as of June 30, 2017

	June 30, 2017			Inv. Return	May 31, 2017	
	Market Value	Weight	Net New Inv.		Market Value	Weight
Domestic Equities	\$184,983,033	38.23%	\$(1,000,000)	\$1,328,058	\$184,654,975	38.33%
Large Cap Equities	\$130,520,869	26.98%	\$(1,000,000)	\$248,425	\$131,272,444	27.25%
Vanguard S&P 500 Index	24,392,433	5.04%	0	150,678	24,241,755	5.03%
Dodge & Cox Stock	21,217,575	4.39%	(500,000)	308,023	21,409,551	4.44%
Boston Partners	31,259,059	6.46%	0	0	31,259,059	6.49%
Harbor Cap Appreciation	32,644,524	6.75%	0	(206,361)	32,850,885	6.82%
Janus Research	21,007,278	4.34%	(500,000)	(3,915)	21,511,193	4.47%
Mid Cap Equities	\$27,484,888	5.68%	\$0	\$284,814	\$27,200,074	5.65%
Fidelity Low Priced Stock	13,696,982	2.83%	0	84,788	13,612,195	2.83%
Janus Enterprise	13,787,906	2.85%	0	200,027	13,587,879	2.82%
Small Cap Equities	\$26,977,276	5.58%	\$0	\$794,819	\$26,182,457	5.44%
Prudential Small Cap Value	12,883,482	2.66%	0	467,057	12,416,425	2.58%
AB US Small Growth	14,093,794	2.91%	0	327,762	13,766,032	2.86%
International Equities	\$146,094,419	30.20%	\$(1,500,000)	\$13,003	\$147,581,416	30.64%
EuroPacific	25,122,142	5.19%	(7,000,000)	325,106	31,797,036	6.60%
Harbor International	31,221,758	6.45%	(500,000)	245,615	31,476,143	6.53%
Columbia Acorn Int'l	17,018,340	3.52%	0	(64,332)	17,082,672	3.55%
Oakmark International	34,105,596	7.05%	(1,000,000)	133,240	34,972,356	7.26%
Mondrian International	31,638,418	6.54%	0	(614,792)	32,253,210	6.70%
Investec	6,988,165	1.44%	7,000,000	(11,835)	-	-
Domestic Fixed Income	\$103,528,672	21.40%	\$(110,855)	\$119,472	\$103,520,055	21.49%
Dodge & Cox Income	51,906,821	10.73%	0	55,721	51,851,101	10.76%
PIMCO	51,621,851	10.67%	(110,855)	63,752	51,668,954	10.73%
Real Estate	\$46,437,957	9.60%	\$(19,619)	\$679,189	\$45,778,387	9.50%
RREEF Private Fund	20,682,820	4.27%	0	()	20,682,820	4.29%
Barings Core Property Fund	24,605,138	5.09%	0	373,570	24,231,567	5.03%
625 Kings Court	1,150,000	0.24%	(19,619)	305,619	864,000	0.18%
Cash	\$2,783,411	0.58%	\$2,630,474	\$0	\$152,937	0.03%
Total Fund	\$483,827,493	100.0%	\$0	\$2,139,723	\$481,687,770	100.0%

June Flash Report – Preliminary

Performance as of June 30, 2017

	Last Month	Last 3 Months	Last 12 Months	Last 36 Months	Last 60 Months
Domestic Equities	0.72%	3.36%	22.12%	8.28%	14.60%
Russell 3000 Index	0.90%	3.02%	18.51%	9.10%	14.58%
Large Cap Equities					
Vanguard S&P 500 Index	0.62%	3.08%	17.86%	9.59%	-
S&P 500 Index	0.62%	3.09%	17.90%	9.61%	14.63%
Dodge & Cox Stock	1.43%	1.76%	28.65%	8.48%	16.36%
Boston Partners	0.00%	0.46%	17.52%	5.94%	13.29%
S&P 500 Index	0.62%	3.09%	17.90%	9.61%	14.63%
Russell 1000 Value Index	1.63%	1.34%	15.53%	7.36%	13.94%
Harbor Cap Appreciation (1)	(0.63%)	6.02%	24.46%	10.69%	15.26%
Janus Research (2)	(0.05%)	5.48%	18.49%	9.80%	15.59%
S&P 500 Index	0.62%	3.09%	17.90%	9.61%	14.63%
Russell 1000 Growth Index	(0.26%)	4.67%	20.42%	11.11%	15.30%
Mid Cap Equities					
Fidelity Low Priced Stock	0.62%	3.29%	16.79%	6.15%	13.18%
Russell MidCap Value Idx	1.49%	1.37%	15.93%	7.46%	15.14%
Janus Enterprise (2)	1.47%	6.45%	21.15%	12.20%	16.14%
Russell MidCap Growth Idx	0.30%	4.21%	17.05%	7.83%	14.19%
Small Cap Equities					
Prudential Small Cap Value (3)	3.76%	(0.89%)	25.51%	7.36%	13.94%
US Small Cap Value Idx	2.77%	0.11%	21.08%	7.37%	14.07%
Russell 2000 Value Index	3.50%	0.67%	24.86%	7.02%	13.39%
AB US Small Growth (4)	2.38%	6.15%	28.77%	6.09%	13.23%
Russell 2000 Growth Index	3.44%	4.39%	24.40%	7.64%	13.98%

June Flash Report – Preliminary

Performance as of June 30, 2017

	Last Month	Last 3 Months	Last 12 Months	Last 36 Months	Last 60 Months
International Equities	(0.00%)	6.42%	22.95%	0.69%	7.84%
MSCI ACWI ex-US Index	0.35%	5.99%	21.00%	1.27%	7.70%
EuroPacific (1)	0.97%	7.69%	22.18%	3.72%	9.61%
Harbor International (5)	0.76%	6.81%	17.77%	(0.03%)	6.77%
Oakmark International (4)	0.38%	6.44%	41.26%	3.83%	12.75%
Mondrian International	(1.97%)	3.89%	15.22%	(0.47%)	6.67%
MSCI EAFE Index	(0.18%)	6.12%	20.27%	1.15%	8.69%
MSCI ACWI ex-US Index	0.35%	5.99%	21.00%	1.27%	7.70%
Columbia Acorn Int'l (2)	(0.38%)	8.07%	17.47%	1.16%	8.47%
MSCI ACWI ex US Small Cap	0.42%	6.24%	20.32%	3.31%	10.02%
Domestic Fixed Income	0.12%	1.65%	2.69%	2.71%	3.10%
BB Aggregate Index	(0.10%)	1.45%	(0.31%)	2.48%	2.21%
Dodge & Cox Income	0.11%	1.50%	3.24%	2.85%	3.45%
PIMCO	0.12%	1.80%	2.14%	2.57%	2.75%
BB Aggregate Index	(0.10%)	1.45%	(0.31%)	2.48%	2.21%
Real Estate	1.48%	1.48%	4.78%	9.70%	10.19%
Real Estate Custom Benchmark (3)	0.54%	1.62%	5.72%	10.28%	10.64%
RREEF Private	0.00%	0.00%	5.36%	10.44%	11.31%
Barings Core Property Fund	1.54%	1.54%	7.17%	9.71%	9.45%
NFI-ODCE Equal Weight Net	0.54%	1.62%	7.35%	10.71%	10.86%
625 Kings Court	35.40%	35.40%	45.73%	20.71%	20.83%
Total Fund	0.44%	3.72%	15.65%	5.23%	9.52%
Total Fund Benchmark*	0.48%	3.38%	13.18%	5.71%	9.24%

Disclaimer

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