An Introduction to Securities Lending

Dominick Falco
Risa Muroi

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The Pan Asian Securities Lending Association

• PASLA was incorporated in Hong Kong in 1995, and is an association of firms that are active in the business of borrowing and/or lending securities of Asian markets.
• Currently 60 members from 18 lenders, 33 borrowers, 2 alternative investment funds, and 7 other institutions.
• PASLA aims to:
  • Represent the common interests of institutions engaged in the lending or borrowing of securities in the Asian and International securities lending markets.
  • Assist in the orderly, efficient and competitive development of these markets.
  • Establish agreed global standards and good working practices taking into account local regulations.
  • Liaise with Regulators and other organizations to promote and develop appropriate regulatory frameworks for the industry.
  • Develop and maintain a standardized legal agreements for use in the securities lending industry.
Today’s Program

I. What is Securities Lending?
II. Why Securities Lending?
III. Securities Lending Market
IV. Market Overview
V. Market Trends
VI. Securities Lending Cash Collateral Investment
I. What Is Securities Lending?
Definition

- Securities Lending is a **temporary** loan of securities by a lender to a borrower.
- Lender may recall securities at any time, allowing shares to be returned within normal market settlement cycle.
- Borrower may return securities at any time.
Market Participants

<table>
<thead>
<tr>
<th>Market Participants</th>
<th>Reason for Participating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beneficial Owner</td>
<td>• Pension Funds</td>
</tr>
<tr>
<td></td>
<td>• Insurance Companies</td>
</tr>
<tr>
<td></td>
<td>• Maximizing revenue on portfolio</td>
</tr>
<tr>
<td>Intermediary</td>
<td>• Custodians</td>
</tr>
<tr>
<td></td>
<td>• Asset Managers</td>
</tr>
<tr>
<td></td>
<td>• Third Party Lenders</td>
</tr>
<tr>
<td>Lender</td>
<td></td>
</tr>
<tr>
<td>Borrower</td>
<td>• Prime Brokers</td>
</tr>
<tr>
<td></td>
<td>• Other Securities Firms</td>
</tr>
<tr>
<td>End User</td>
<td>• Hedge Funds</td>
</tr>
<tr>
<td></td>
<td>• Proprietary Traders</td>
</tr>
<tr>
<td></td>
<td>• Mutual Funds</td>
</tr>
<tr>
<td></td>
<td>• Avoidance of settlement failure</td>
</tr>
<tr>
<td></td>
<td>• Short Sale</td>
</tr>
<tr>
<td></td>
<td>hedging futures, CBs, and options</td>
</tr>
<tr>
<td></td>
<td>long-short strategies</td>
</tr>
<tr>
<td></td>
<td>other arbitrage</td>
</tr>
</tbody>
</table>
Securities Lending

- Borrower generally provides collateral and pays a borrowing fee and any distributions incurred to the lender
  - Loan is generally marked to market daily and collateral adjusted accordingly
  - Borrower return equivalent economic value of any distributions incurred during the loan – i.e., manufactured dividends, stock splits, and any other corporate actions
- Securities title transfers from the lender to the borrower unencumbered and regained upon return of loan
  - Lender gives up right to the proxy voting
  - Lender may recall securities at any time, allowing shares to be returned within normal market settlement cycle
- Intermediaries are often used in order to match the needs of end users and beneficial owners
  - Due diligence, credit review
  - Collateral management
  - Contract negotiations, documentations
II. Why Securities Lending?
Benefits of Securities Lending

- It promotes market efficiency and liquidity
  - Reduces market volatility by reducing bid/offer spread and increasing bid/offer depth
  - Allows price discovery and the arbitrage of pricing inefficiencies
  - Important part of risk management by allowing managers to hedge their positions
  - Supports the development of the capital markets by facilitating various investment strategies
  - Used for fail coverage to ensure smooth settlement cycles

- It provides lender incremental return to a portfolio
  - Securities lending fees enhances returns to an otherwise dormant securities and may be used to offset management fees and custody fees.
Demand for Borrowing

- The reasons for borrowing vary
  - To complete a settlement obligation to the market
  - To support a short trading strategy
  - To manage risks by hedging positions
III. Securities Lending Market
Signing Agreements

Types of Agreements

- Agreements between lender and borrower must be in place before SBL transaction negotiated
  - Securities Lending Authorisation Agreement between beneficial owner and lending agent
  - Master Securities Lending Agreement between lender and borrower
    - Standardized Master Agreements
      - OSLA / GMSLA – International market standard
      - USMSLA – US market standard
Signing Agreements
Securities Lending Authorization Agreement

- Outlines relationship between the owner of the securities and the agent lender.
  - the responsibilities of the agent
  - Types of collateral acceptable to the owner
    - Cash
    - Non-cash
    - Currency, etc
  - Cash collateral investment policies
Signing Agreements

Master Securities Lending Agreement

- Standard agreements - OSLA / GMSLA / USMSLA
- Outlines relationship and responsibilities of lender and borrower
  - Collateral
    - Types of collateral
    - Margins – typically 102%~110%
    - Marked to Market
    - Reinvestment
  - Fee
    - Calculation methods
  - Distributions
    - Corporate Actions
    - Voting Rights
    - Dividends
Signing Agreements
*Master Securities Lending Agreement*

- Outlines continued…
  - Recall/Return Clause
    - Lender may recall securities at any time by allowing standard settlement cycle for delivery with a notice, in the event of failed delivery lender may pass fail/buy-in cost to the borrower
    - Borrower may return securities at any time
  - Representation and Warranties
    - Capacity and authority of each parties concerned
  - Termination of the contract
    - Either party may terminate with written notice provided in an agreed upon date
    - Obligation will continue to exist until all outstanding loans are closed and collateral returned
Signing Agreements

Master Securities Lending Agreement

• Key Features
  • 2-way agreement
  • Beneficial owner and borrower are principal to the transaction
  • Borrower free to on-lend securities
  • Commercial terms cannot override regulatory issues
  • Any market anomalies specific to a certain market are covered by an additional rider/addendum specified by the counterparties
Transaction Flow

Lender (Supply)

SL Authorization Agreement

Agent Lender

Custodians 3rd party lending agents

Brokers

Prime Brokers

Borrower (Demand)

Master SL Agreement

(Prime Broker Agreement)

Beneficial Owner

Pension Funds

Insurance Company

Securities

Collateral > 100% on-loan value

Mark to Market

Rebate/Fees

Dividends / Corporate Actions

Collateral

Securities

Client

Hedge Funds Mutual Funds Proprietary Traders

Principal to Transaction
Transactions

Cash Collateral Via Agent Lender

- **Cash Investment Vehicle**
  - Cash Collateral
  - Principal and Interest Earned on Cash Collateral

- **Gross Reinvestment Return (X)**

- **Borrower**
  - Loaned Securities
  - Cash Collateral

- **Agent Lender**
  - Agent Income (X – Y – Z)

- **Beneficial Owner**
  - Lending Income (Z)

- **Rebate Income (Y)**
  - Rebate income

- **Agent Income (X – Y – Z)**
  - Lending Income
  - Lending Income
Transactions

Non-cash Collateral Via Agent Lender

Non Cash Collateral Account

Agent Income

Agent Lender

Loaned Securities

Borrower

Fee

Beneficial Owner

Non-Cash Collateral

Lending Income

Lender

Non Cash Collateral Posted

(X – Y)

(Y)
Revenue Components

Portfolio Utilization

- Utilization is the percentage of assets on loan
  - Describes how much of the portfolio is on loan.
  - The cash held as collateral for outstanding loans earns income equal to the spread between investment rate received and rebate rate paid.
Revenue Components

Spread Computation

• Spread is the sum of:
  • Rebate enhancement, based on the value of the particular securities lent, plus Yield enhancement, based on the maturity and/or credit quality of investments
Revenue Components

What is Yield?

• Yield is the incremental return to the entire lendable portfolio.
  • This return can be enhanced by any combination of lending more assets, earning a higher investment return, or paying lower rates to borrowers.
Securities Lending is a low risk activity but risk must be managed.

- Reinvestment Risk
- Market Risk
- Counterparty Risk
- Macro Risks
- Regulatory Risk
- Operational Risks
  - Corporate Actions
  - Failed Settlements

Know your customer
Know your market
Managing Risks

- **Counterparty Risk**
  - Counterparty’s inability to fulfill obligations under the contract
  - Need for proper due diligence and appropriate credit limits

- **Collateral Risk**
  - Total value of lent securities exceed total value of collateral at the time of counterparty default
    - Need for daily marked to market
    - Need for proper management of collateral

- **Reinvestment Risk**
  - Invested vehicle may downgrade or default

- **Operational Risk**
  - Settlement fail risk
  - Corporate Action notification
  - Need for established operational process
Managing Risks
How to Protect Loaned Assets

**Over Collateralization**
Loans are generally over collateralized
• Typically 102%~110%

**Daily Mark-to-Market**
Ensures that collateral received from borrowers is maintained at their specified collateral level, reflecting daily moves in security prices

**Extensive Legal Review**
• Default trigger
  - Credit rating
• Liabilities
  - Repurchase of securities
  - Fees, dividends, corporate actions

**Borrower Default Procedure**
Confirm documented procedure is in place for
• Collateral unwind
• Repurchase of securities
• Reclaim process
Issues

Taxation

• Stamp Duties and Transaction Taxes
• Tax on manufactured dividends
• Tax on securities lending fee income
• Capital Gains Tax
• Commercial requirements of the transaction
• Does the product bring an entity on shore and subject it to local taxes?
Issues

Market Limitations and Regulations

- Treatment of failed orders
  - Buy-Ins
  - Investment License Suspension
- On shore versus off shore regulations and cross border limits
  - Korea
  - Taiwan
  - India

- Regulations on short sales
  - Up-tick rules
  - Limits on short sale transactions
  - Linking of short sale and SBL regulations
  - Treatment of securities that have been lent out
- Limitations on Collateral
  - Local Currency collateral
- Documentary Registrations and Filings
IV. Market Overview
### Market Statistics

<table>
<thead>
<tr>
<th>($MM)</th>
<th>Lendable Asset</th>
<th>Percent Lendable</th>
<th>On Loan vs. Cash Collateral</th>
<th>On Loan vs. Non-Cash Collateral</th>
<th>Total On Loan</th>
<th>Percent On Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Equities</td>
<td>$5,709,074</td>
<td></td>
<td>$334,160</td>
<td>$86,628</td>
<td>$420,789</td>
<td>7%</td>
</tr>
<tr>
<td>Pac-Rim Equities</td>
<td>$686,805</td>
<td>12.0%</td>
<td>$30,234</td>
<td>$28,958</td>
<td>$59,191</td>
<td>9%</td>
</tr>
<tr>
<td>All Other Pacific Rim Equities</td>
<td>$104,906</td>
<td>1.8%</td>
<td>$3,572</td>
<td>$5,661</td>
<td>$9,233</td>
<td>8%</td>
</tr>
<tr>
<td>Total Bonds</td>
<td>$3,309,945</td>
<td></td>
<td>$353,503</td>
<td>$283,844</td>
<td>$637,347</td>
<td>19%</td>
</tr>
</tbody>
</table>

All Other Pacific Rim Equities: Asia Ex Japan, Hong Kong, and Australia

RMA Securities Lending Quarterly Aggregate Composite (Q4 2011)
Asia Market Size
As of January 31st, 2012

<table>
<thead>
<tr>
<th>Market</th>
<th>Total Balance on Loan (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>36,764,300,000</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>29,519,500,000</td>
</tr>
<tr>
<td>Australia</td>
<td>20,824,100,000</td>
</tr>
<tr>
<td>Taiwan</td>
<td>4,184,800,000</td>
</tr>
<tr>
<td>South Korea</td>
<td>4,124,200,000</td>
</tr>
<tr>
<td>Singapore</td>
<td>4,073,100,000</td>
</tr>
<tr>
<td>Thailand</td>
<td>310,300,000</td>
</tr>
<tr>
<td>New Zealand</td>
<td>111,200,000</td>
</tr>
</tbody>
</table>

Source: Data Explorers Limited – information available on  www.performanceexplorer.com
V. Market Trends
Market Trends
Equity Market Value on Loan by Region

Indexed (8/3/09=100)

Market Trends

Fixed Income Market Value on Loan by Region

Indexed (8/3/2009=100)

Market Trend
Asian Region: Change in Supply & Demand (1)

Change in Supply

Data Source: Bloomberg for Index data, and Performance Explorer for On-loan data, information available on www.performanceexplorer.com
Market Trend
Asian Region: Change in Supply & Demand (2)

Change in Demand

Data Source: Bloomberg for Index data, and Performance Explorer for On-loan data, information available on www.performanceexplorer.com
VI. Securities Lending
Cash Collateral Reinvestment
Investment Instruments Types

- Repurchase Agreements
- Commercial Paper
- Time Deposits and Certificates of Deposit
- Mortgage-backed Securities
- Asset-backed Securities
- Funding Agreements
- Master Notes
- Whole Loans
- Corporate Bonds
Securities Lending Cash Collateral Management

Cash Collateral Breakdown (1)

Source: Risk Management Association Web site, RMA Securities Lending Quarterly Aggregate Composite
Securities Lending Cash Collateral Management

Cash Collateral Breakdown (2)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Q3 2008</th>
<th>Q4 2009</th>
<th>Q4 2010</th>
<th>Q4 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Rate Instrument</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Paper (ex. Asset Backed Paper)</td>
<td>9.50%</td>
<td>23.24%</td>
<td>19.27%</td>
<td>16.30%</td>
</tr>
<tr>
<td>Asset Backed Securities</td>
<td>4.73%</td>
<td>3.49%</td>
<td>1.94%</td>
<td>4.19%</td>
</tr>
<tr>
<td>Funding Agreements</td>
<td>0.02%</td>
<td>0.03%</td>
<td>0.03%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Other Corporates (ex. Repo Collateral)</td>
<td>1.95%</td>
<td>10.44%</td>
<td>9.15%</td>
<td>7.87%</td>
</tr>
<tr>
<td>Floating Rate Instruments</td>
<td>39.49%</td>
<td>27.84%</td>
<td>21.77%</td>
<td>18.85%</td>
</tr>
<tr>
<td>Commercial Paper (ex. Asset Backed Paper)</td>
<td>0.15%</td>
<td>0.15%</td>
<td>0.03%</td>
<td>0.08%</td>
</tr>
<tr>
<td>Asset Backed Securities</td>
<td>10.53%</td>
<td>10.28%</td>
<td>5.63%</td>
<td>4.53%</td>
</tr>
<tr>
<td>Funding Agreements</td>
<td>3.21%</td>
<td>0.03%</td>
<td>0.02%</td>
<td>0.04%</td>
</tr>
<tr>
<td>Other Corporates (ex. Repo Collateral)</td>
<td>25.60%</td>
<td>17.38%</td>
<td>15.23%</td>
<td>13.44%</td>
</tr>
<tr>
<td>Repurchase Agreements</td>
<td>19.05%</td>
<td>14.76%</td>
<td>15.33%</td>
<td>17.51%</td>
</tr>
<tr>
<td>U.S. Treasuries</td>
<td>1.51%</td>
<td>1.02%</td>
<td>5.02%</td>
<td>6.07%</td>
</tr>
<tr>
<td>U.S. Government Agencies</td>
<td>17.44%</td>
<td>12.94%</td>
<td>10.01%</td>
<td>11.44%</td>
</tr>
<tr>
<td>Corporate Collateral</td>
<td>25.37%</td>
<td>25.03%</td>
<td>30.99%</td>
<td>33.53%</td>
</tr>
<tr>
<td>Investment Grade (A or Better)</td>
<td>9.52%</td>
<td>6.12%</td>
<td>6.72%</td>
<td>6.13%</td>
</tr>
<tr>
<td>Non-Investment Grade</td>
<td>1.84%</td>
<td>2.90%</td>
<td>2.69%</td>
<td>2.53%</td>
</tr>
<tr>
<td>Equities</td>
<td>1.13%</td>
<td>3.10%</td>
<td>7.49%</td>
<td>7.96%</td>
</tr>
<tr>
<td>Whole Loans</td>
<td>0.73%</td>
<td>0.00%</td>
<td>0.03%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Time Deposits</td>
<td>4.18%</td>
<td>4.41%</td>
<td>3.85%</td>
<td>4.28%</td>
</tr>
<tr>
<td>Certificates of Deposit</td>
<td>7.70%</td>
<td>8.16%</td>
<td>9.98%</td>
<td>8.76%</td>
</tr>
<tr>
<td>Other Bank Deposits</td>
<td>0.27%</td>
<td>0.34%</td>
<td>0.25%</td>
<td>1.87%</td>
</tr>
<tr>
<td>Money Market Funds</td>
<td>6.37%</td>
<td>9.14%</td>
<td>12.64%</td>
<td>11.76%</td>
</tr>
<tr>
<td>External Managed Funds (2(a) Type)</td>
<td>4.67%</td>
<td>6.13%</td>
<td>5.45%</td>
<td>5.21%</td>
</tr>
<tr>
<td>External Managed Funds (Non-2(a) Type)</td>
<td>0.00%</td>
<td>0.85%</td>
<td>7.07%</td>
<td>5.61%</td>
</tr>
<tr>
<td>Other Vehicles</td>
<td>1.70%</td>
<td>2.16%</td>
<td>0.11%</td>
<td>0.94%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Risk Management Association Web site, RMA Securities Lending Quarterly Aggregate Composite
Risk Types

Reinvestment Risk

• Credit Risk
  • Creditworthiness of the issuer - Will the issuer be able to pay the interest and repay the principal?
  • Default on principal or interest, or even late payments, can cause a loss of money
  • Downgraded investment could result in a loss

• Duration Risk (Duration Mismatch)
  • As short-term rates rise, long-term spread is reduced significantly, or can go negative

• Liquidity Risk
  • Regardless of whether the lender or borrower initiates the return, the lender MUST have sufficient cash on hand to receive them from the borrower
  • Agent Lenders should keep enough overnight investments for each lender so that liquidity is always sufficient to retrieve securities
Risk Types

Liquidity Risk at Borrower Default

- **Liquidity of the collateral**
  - Speed at which the lender can sell
  - Price that is reasonably close to the market value at which the lender is carrying the collateral

- **What are the sizes of the investments?**
  - Hundreds of small issues are much less liquid than several large pieces that constitute the same dollar value

- **Where is the market?**
  - Trying to sell a bankrupt security is more difficult and probably going to result in a much lower price than is shown on the pricing screen
  - A large demand for the security will generate market quoted prices or better

- **Who is going to do the sale?**
  - Lending desks should have a “belly-up” plan
  - Prearranged strategy with a large broker dealer to sell the securities into the market as best as possible rather than the securities lending desk selling the security
Reinvestment Guidelines

- **Minimum Credit Ratings**
  - Short-term rating typically rated A1/P1 or equivalent
  - Some lending agencies do their own internal credit reviews

- **Concentration Limits**
  - Can be expressed as an absolute number or as a percentage
  - Investors treat repos as a category of investments worthy of much different concentration limits

- **Maturity Limits**
  - To control both credit risk and duration risk associated with maturities, lenders set two maturity limits
    - A time until maturity or next interest rate reset (whichever comes first) helps to control the interest rate risk
    - Date until final maturity helps to control the credit exposure to the issuer
Cash Vehicle Types

**Individual Accounts: Advantages**

- Managing an individual cash collateral investment account for each customer

**Advantages**

- The customer owns 100% of every investment in the account
- Agents buys and sells investments for a single customer and keeps those investments segregated from the investments of other customers
- Easily Customized - Only limitation is the lending agent’s ability to track and comply with all of the restrictions
- Flexible Restrictions - Easily change restrictions as markets change
- No Commingling - Requirement of some funds that their assets not be commingled with any other assets
Cash Vehicle Types

*Individual Accounts: Disadvantages*

- Managing an individual cash collateral investment account for each customer
- Disadvantages
  - As number of agent’s customers becomes larger, it becomes hard to track complicated investment restrictions on each account
  - Small Purchase Sizes - Best prices are given to bulk buyers. In order to achieve diversification within a portfolio, customers typically limit concentrations with any one issuer to 5% or 10% of the portfolio. For a small portfolio this would mean small purchases.
  - Liquidity Costs - Individual account liquidity needs usually increase costs
Cash Vehicle Types

Cash Pool: Advantages

- Combines the investments of several different customers into a pool, with each customer owning a portion of the pool in proportion to the amount of money invested by that customer

- Advantages
  - Buy in bulk and obtain best prices for investment instruments
  - Provide better diversification than an individual account, thereby lowering their risks
  - Decreased Liquidity Need - When enough investors have combined their reinvestment cash into a pool, the volatility of the pool tends to decrease significantly
  - Compliance is easier with one set of restrictions to monitor and audit
  - The easiest way to engage in pooling is to invest money in a publicly available mutual fund, such as a money market fund
Cash Vehicle Types
Cash Pool: Disadvantages

- Combines the investments of several different customers into a pool, with each customer owning a portion of the pool in proportion to the amount of money invested by that customer.

- Disadvantages
  - Additional Fees - Accounting and shareholder record keeping can become very complex and expensive.
  - Inability to Customize
    - Can only have one set of investment guidelines. If customer does not like guidelines, the only option is to not invest in the pool.
    - Customers may feel that a pool is too risky, or not aggressive enough.
  - Some customers may be prohibited by law from investing because the pool contains investments that they are not authorized to hold.
Questions?
Thank you for your time and consideration.
Enjoy the remainder of the Conference.