What is Securities Based Lending (SBL)?

- A Line of Credit (LOC) provided to a customer by a bank, 3rd party broker-dealer or wealth manager utilizing the customer’s securities as collateral.

- The loan is typically a Non-Purpose Loan (NPL) - the loan cannot be used to purchase additional securities, but can be used for other purposes.

- Due to fluctuation of collateral (securities) value, restrictions are placed on the line of credit, usually different from approved “lendable” amount.

- Offers interest only monthly payments. Unpaid interest is capitalized - added to the principal amount.

- Default management is generally not necessary. Non-payment of interest is normally handled through capitalization.
Growth of Securities Based Non-Purpose Lending
There is an opportunity to significantly increase penetration of non-purpose loans in the marketplace.

<table>
<thead>
<tr>
<th>FINANCIAL INSTITUTION</th>
<th>LOAN BALANCES ($B)</th>
<th>PENETRATION %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merrill Lynch</td>
<td>40B</td>
<td>1.68%</td>
</tr>
<tr>
<td>UBS</td>
<td>33B</td>
<td>2.97%</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>20B</td>
<td>1.00%</td>
</tr>
<tr>
<td>JPMorgan Chase</td>
<td>20B</td>
<td>0.83%</td>
</tr>
<tr>
<td>Wells Fargo</td>
<td>6B</td>
<td>0.36%</td>
</tr>
<tr>
<td>Raymond James</td>
<td>1B</td>
<td>0.24%</td>
</tr>
</tbody>
</table>

WHAT WE ARE SEEING IN THE MARKET
The penetration rate among leading Financial Institutions and Wealth Firms for Non Purpose Lending is still relatively low compared to their loan balances.

As financial institutions search for new revenue growth opportunities, Non Purpose Lending continues to receive renewed interest for helping firms meet their strategic objectives.

Client interest in low rate loans and on-demand available financing remains strong, and will continue to increase demand in the product offering among Mass Affluent and High Net Worth clients.

Several financial institutions have already started strategic planning to increase their NPL penetration to up to 10% in the near future.
Investment in Non Purpose Lending Capabilities

Financial Institutions have increased the pace of their investment in non-purpose lending in the past 12 months and interest among other firms is growing.

WHAT WE ARE SEEING IN THE MARKET

Leading Banks have invested substantially in this product which has created huge profitability boost - one leading multi-national bank has invested $40MM+ in the platform.

This product also creates client stickiness which is very well received by analysts - Lower risk of client flight to competition when outstanding loans are tied to invested portfolios.

Democratization of investment and lending solutions will continue as disruptive players enter the lending and wealth management space – Examples include SOFI, Lending Club, CrowdFunder.
The FIS Value Proposition and Solution
An integrated end to end solution offering

- complete automation of the lending value chain
- optimization of contact center and back office processes and
- consultative expertise to deliver superior client engagement and efficient regulatory compliance

Deepen and enhance relationship with your mass affluent and high net worth customers
The Value Proposition for Financial Institutions

Deepen and enhance relationship with your mass affluent and high net worth customers

Loan Estimation and Structuring
Compliance, Suitability and Due Diligence
Credit Underwriting
Document Creation and Management
Booking and Collateral Link

Disbursements and Payments
Billing
Collateral Management
Loan Maintenance
Client Experience
Business Control

Cloud Infrastructure
Automated Workflow
Risk, Information, Security & Compliance
Component Based Turnkey Solution Covers All Aspects of Lending Lifecycle

Loan Lifecycle
- Pre-Qualification
  - Security and Entitlements
  - Loan Options
  - Asset Categorization and Pricing

Application
- Customer
- Employment
- Collateral
- Loan facility

Credit Review and Decision
- AML/KYC
- Decisioning Rules & Credit Evaluation
- Underwriting

Fulfillment
- Disclosures
- Compliant Document Generation
- eSignature
- Boarding

Servicing
- Core Processing
- Payments
- Disbursements
- eStatements, Notices

Portfolio Management
- Collateral Management

FIS Loan Components
- Origins
- FIS Collateral Management (Apex)

- Origins
- FIS Risk and Performance (Ambit)

- FIS Loan fulfillment (Origenate fulfillment)

- FIS Loan Servicing (IBS, ALS, ACBS, Profile etc.)
- Virtual Back Office (VBO)
- FIS Collateral Management (Apex)

- FIS Collateral Management (Apex)
Use a Turnkey FIS Solution or Leverage Existing Investments to Mix and Match

- Loan Application & Underwriting
- Advisor Portal
- Compliance (KYC)
- Credit Bureau
- Others
- Asset Valuation
- Loan Fulfilment
- Loan Servicing
- Banker/Underwriter
- Customer
- Originations
- Risk & Performance
- Ambit Optimist
- Security & Entitlements
- IdP
- Apex Collateral
- Originate Fulfilment
- ALS, IBS, Profile etc.
Loan Application Portals and Underwriting
• A comprehensive loan origination platform supporting retail and commercial purpose loans.

• Provided in partnership with Thetasp.

• A highly scalable architecture build on open industry standards.

• FIS and Thetasp have worked together for 10 years and have several joint installations of the Origins software.

• FIS has recently implemented SBL for a large multi-national bank and is currently working on two other projects related to Securities Based Lending for banks in the US.

• Projects are to be implemented in Q2, 2017 and Q4, 2017.
Origins supports your bank’s business

- Covers Individual/Joint, Trust and commercial entities
- Retail and commercial purpose
- Flexible Integration to core banking, KYC, credit bureau, asset management etc.

Origins Covers Retail and Commercial Purpose Loans
Responsive Relationship Manager Portal Enables Ease of Customer Application and Onboarding

- Visual confirmation of current step and steps remaining
- Transaction Summary Pane
- Advance rate and lendable amount from collateral management system
- Customer accounts selected
FIS CONNECT 2017
IMAGINING POSSIBILITIES

Asset Valuation
Apex Enterprise collateral management
Manage, trade and optimize collateral assets on a single platform

- Regulatory collateral requirements
- Repo / liquidity arrangements
- Bilateral derivatives collateral
- Lending program
- Listed derivatives collateral

**Collateral optimization**
- Optimized collateral allocation
- Collateral transfer pricing

**Collateral trading**
- SLB and Repo
- Collateral transformation

**Margin analytics and risk**
- Margin calculation
- Margin optimization
- SBA/SIMM, CCP
- Risk management

**Global collateral inventory**
- Real-time
- Multi-entity
- Forward projected balances
- Cross-entity
- Treasury inventory
- Trading inventory
- Securities lending supply
- (captive/non-captive)

**Collateral operations**
- Cross-product margin management - SecFin, bilateral OTC, cOTC, ETD, TBA...
- STP Margin Calls and disputes
- Complete automation with intuitive dashboards and workflows
- Integrated reconciliations
- Settlement, subs, fees, interest, corporate actions

**Connectivity**
- Market interfaces
- Up/downstream systems

- AcadiaSoft, TriOptima
- SLB/Repo exchanges
- CCPs, Triparty Agents
- CSDs/ICSDs
- Brokerage Platforms
- Settlements and payments
- Accounting, GL
- Trust Systems

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Defining Advance Margin Rates

Flexible rules based approach to defining advance margin rates, including the ability to reference user defined custom fields. Modifications to rules can be completely managed by business users.

- Allows user to set a margin rate against any defined criteria set, i.e. CUSIP, asset class, asset category, etc.
- Ability to mark a position within an account ineligible for an advance rate.
- Ability to look at position attributes that can affect the discount applied. E.g. Bond ratings, maturity dates, issue date, etc.
- Ability to set $ Per share Threshold Value for a given criteria set, as well as an absolute dollar minimum value, e.g. no security valued below $5.00 permitted
Defining Limits and Thresholds

- Ability to monitor concentration of an asset type within an account as either a percentage or dollar value.
Collateral Tracking & Lendable Value Assessment

The ability to see the margin rate, haircuts and latest price being applied to each piece of collateral.

Account Lendable Value Assessment. The ability to present what could be lent against an account based on the banks policy (asset eligibility and applicable haircuts).
Financial Risk Analysis for Commercial Loans Provide…

- Drive Customer satisfaction & retention
- Make more informed decisions & drive credit quality
- Improve overall profitability
- Better visibility into potential trouble spots
Capabilities of FIS Risk and Performance

More than just credit analysis...

Credit Analysis
Risk Rating
Covenant Monitoring
Pricing
Automatic Decisioning
Portfolio Reporting
Portfolio “What If”

For the entire portfolio

Commercial & Industrial
Commercial Real Estate
Personal Cash Flow
Non-Profit
Agriculture
Financial Institutions
Securities Based Lending Fulfilment
Origenate Fulfillment

• **Efficient and compliant closing documentation**
  – Warranted compliant content and custom loan documents
  – Dynamic document selection and creation engine
  – Paperless: e-Signature and secure document vaulting
  – 50 State Compliance
  – Integrated email and direct to printer distribution
Origenate Fulfillment

Compliance through internal system methodology and seamless partner integration

- FLO Business Logic
- FLO System Logic
- Sherman SCEX
- CSi DSL/Simplicity

- Imaging System API
- FLO Business Logic + CSi
- eOriginal SmartSign®
- eOriginal eVault

- Electronic Signature
- FLO Business Logic
- CSI IntelleDoc Solutions™
- CSi Simplicity™

- Calculations
- FLO Business Logic
- Document Selection (DSL)

- Dynamic Complaint Documents
- Imaging/Archival
Document Compliance
Warranted Documents From Compliance Systems, Inc.

• 20+ year history and proven track record supporting financial institutions
  • Long term FIS business partner
  • Transaction level risk management

• Document Selection Logic (DSL)
  - Smart software business rules automates document selection & content
  - Specific to federal, state rules, regulations, and case law
  - Defined by originating state, customer entity & location, collateral type/location

• Produces warranted list of required documents
  - Application > origination > closing document packages

• Provides documentation “audit checklist” for audit and compliance purposes

• Enterprise-wide consistency and control

• Tightly pre-integrated to FIS loan origination solution (FLO) & automatic updates

• On-going compliance support and consultation
eAsset™ Management Services

• Authoritative Copy Creation and Management
• Securitization
• Pledging/Collateralization
• Transfer of Location of Electronic Contracts (TOLEC)
• eAsset™ Pool Creation
• Transfer of Ownership or Control

eOriginal SmartSign® Services

• Participant Invitation
• Participant Authentication
• Disclosure and Consent
• Capture Electronic Signatures
• Workflow Management
• Template Server
• Forms/Data Capture
• Mobile, Tablet and Remote Signing Sessions

Vaulting Services

• Encryption
• Tamper Seal
• Integrity Check
• Audit Trail
• Secure Storage
• Access/Rights Management
• eCustodian Services

Transaction Services

• Ancillary Documents & Deal Jacket Management
• Certified Print®
• Paper In® Import
• Paper Out® Export
• Retention Copy™
• Non-Authoritative Copy Distribution

Transferable Record Services

• Authoritative Copy Creation and Management
• Securitization
• Pledging/Collateralization
• Transfer of Location of Electronic Contracts (TOLEC)
• eAsset™ Pool Creation
• Transfer of Ownership or Control

Transaction & 3rd Party Participants

Archive & Content Management Systems

Fully Compliant eAsset™ Management for Electronic Transactions
Loan Servicing with FIS Advanced Lending Systems (ALS)
FIS Dominates the Loan Servicing Market

- **92** Global Installs
- **46** Countries and Territories
- **74M+** Loans
- **20M** High volume on single install
- **61%** Consumer Loans in U.S.

**Market Segmentation by Asset Size**
- Large Community / Small Regional: 13%
- Midsize Community: 55%
- Super Community / Regional: 25%
- Large Regional: 6%
- Super Regional / National / Global: 1%

**Client Footprint**
- 63 Unique FIs

**Top Rankings**
- **Top 100 U.S.**
  - 7 of top 10
  - 21 of top 50
- **Top Global**
  - 15 of top 100

**Client Asset Size Range**
- **$1 Billion**
- **$2.3 Trillion**
Lines of Credit / Tiered Processing

- Security based lines of credit
- Home equity lines
- Unsecured lines
- Revolving or non revolving
- Open ended or closed ended
- Multiple installment segments (Fixed Rate Options)
- Limit control

- Multiple access methods
  - By check
  - Funds transfer
  - Card Access
- Stop/hold processing
- Flexible fee structure
  - Over-line
  - Below minimum
  - Annual
  - Commitment
  - Per item
Broker/Dealer processing

- **Broker/Dealer charge backs**
  - Unique schedules for charge offs and payoffs
- **Broker/Dealer payment methods**
  - Up-front
  - As earned
  - As collected
  - At payoff
  - 80/20 split
- **Broker/Dealer statements, reports and bills**
  - Produced at any level within the hierarchy
- **Subvention processing**
- **Broker/Dealer disbursements**
  - Transfer to deposit account or accounts payable system
  - Immediate disbursal (up front)
  - Scheduled or unscheduled
FIS Provides Back Office Support as well for Securities Based Lending

1. **Foundation**
   - Front & Back Office Operations
   - Skilled U.S. based support team
   - Defined processes & procedures
   - Regulatory adherence & business quality

2. **Operating Systems & Services**
   - Loan Servicing
   - Disburse Funds
   - Billing & Payments
   - Output Distribution
   - Content Management

3. **Service Delivery Support**
   - Digital
   - Advisor
   - Contact Center

- Support voice, IVR, chat, email
- Perform operational tasks & activities
- Banking & best practices processes
- Domain expertise
- Average over 15 years experience
- Bank operating guidelines
- Industry practices / regulatory mandates
- Internal risk, compliance, legal, audits
- Quality assurance, control, measurement
- Service levels and performance metrics
- Perform services & facilitate processes
- Manage exceptions
- Customer service request
- Case management
Large Multinational Investment Management Financial Institution
Automate And Expand Securities Based Lending To Its Vast Broker/Dealer Network

**Situation**

The client wanted to move towards a modern, flexible, scalable, and modular platform to support non-purpose loans for its customers of its vast broker/dealer network. This was a new market segment for this client.

As part of this, the client was looking for a strategic partner that can handle all aspects of loan servicing including payments, disbursements, call center and back-office processing. The client decided to handle loan origination themselves.

**Scope**

- Worked with key stakeholders to conduct requirement workshops, mapping the requirements across the loan value-chain.
- Provided input throughout the requirements to optimize client workflow using FIS/Capco experience with similar clients for Securities Based Lending.
- Facilitated a future state design for the lending product as well as establishment of a contact center and back office to service customers including funds disbursement and payment settlements.
- Led overall program management, development and implementation of the program.
- Working with the customer on the 2nd phase of the project. This involves creation of a digital portal for the relationship managers and customers to create self-service capabilities and improve overall user experience.

**Benefits**

- Provided the ability for the client to understand best-in-class for the industry across a number of attributes
- Identified missing requirements that needed to be added to their platform requirements
- Established an automated and scalable Securities Based Lending Program for the clients’ broker/dealers enabling them to enter a new market segment.
Situation
The client wanted to move towards a modern, flexible, scalable, and modular platform to support non-purpose loans for its mass-affluent and ultra high net worth brokerage customers. They were doing this but was all manual and hence they could not scale the operations.

As part of this, the client was looking for a strategic partner that can handle all aspects of loan origination and servicing including application intake, compliance, underwriting, collateral management, loan booking, payments and disbursements.

Scope
• Collected pain points across the loan value-chain
• Benchmarked the client’s customer experience, end to end process, digital capabilities, product attributes against a peer group based on Capco proprietary research
• Facilitated a future state design for the lending product and experience that included target state loan origination customer journeys
• Assisted in refining the requirements for the new loan origination platform
• Delivered an implementation roadmap that is enabling the client to prioritize their capability development
• Developed the digital design for the FA and client origination portal
• Program management and execution of the Securities Based Lending Solution.

Benefits
• Provided the ability for the client to understand best-in-class for the industry across a number of attributes
• Enabled the customer to gain internal alignment within their stakeholder group concerning the product vision, their key market differentiator, and how they would tailor their experience with specific customer groups
• Identified missing requirements that needed to be added to their platform requirements
• Enabled key areas of contention within the organization (e.g. Risk vs. Speed) to be discussed in a structured mechanism, and decisions to be reached.
• By achieving straight thru processing the client is able to scale the program to serve their customers.
Don’t forget to visit our Securities Based Lending Kiosk at the Expo Hall