CLO Valuation and Investor Due Diligence

The 1st Annual
CLO AND LEVERAGED LOAN CONFERENCE

March 26th 2012
New York Marriott Downtown
New York, NY

A Presentation by Dr. Stanley J. Feldman

Axiom Valuation
## Topic Outline

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Structure of Basic CLO

- **Syndicated Loans**
- **Servicer**
- **Special Purpose Vehicle**
- **Trustee**
- **Investment Grade Debt Tranche**
  - Payment Services
  - Fixed Rate Interest and Principal
- **Speculative Grade Debt Tranche**
  - Bond Proceeds
- **Equity Tranche**
  - Floating Rate Cash Flows

- **Bond Proceeds**
- **Floating Rate Interest and Principal**
- **Swap Counterparty**
Identifying CLO Risks

• Transparency Risk
  - Incomplete information on the obligor (e.g. private firm), stale credit rating, no rating assigned to collateral

• Portfolio Credit Risk
  - Independent credit risk of individual assets
  - Cross industry credit risk: business operations are correlated

• Counterparty Risk
  - Swap counterparty
  - Servicer risk

• Interest rate risk

• Liquidity risk
CLO Case Study:
Fair Value of CLO Tranches
Axiom Client CLO Collateral Portfolio Industry Breakdown

- **Electronics, 8.90%**
- **Manufacturing, 6.60%**
- **Medical, 17.80%**
- **Real Estate, 2.30%**
- **Consumer Goods - Durable, 2.00%**
- **Consumer Goods - Non-durable, 4.00%**
- **Containers, Packaging & Glass, 0.80%**
- **Energy - Oil & Gas, 3.00%**
- **Finance, 0.80%**
- **Retail, 9.80%**
- **Services - Business, 15.10%**
- **Services - Consumer, 3.80%**
- **Media - Advertising, Printing & Publishing, 2.60%**
- **Hotel, Gaming & Leisure, 4.20%**
- **Transportation - Cargo, 0.40%**
- **Telecommunications, 0.50%**
- **Transportation - Consumer, 1.90%**
- **Aerospace & Defense, 0.50%**
- **Banking, 0.20%**
- **Beverage, Food & Tobacco, 7.80%**
- **Chemicals, Plastics, and Rubber, 2.50%**
- **Metal & Mining, 0.90%**
- **Farming & Agriculture, 0.50%**
Develop Raw Credit Rating: Beverage, Food & Tobacco Example

<table>
<thead>
<tr>
<th>Industry Financials</th>
<th>Axiom Credit Rating Platform</th>
<th>Industry Raw Rating</th>
</tr>
</thead>
</table>

RMA Beverage, Food & Tobacco Industry Data
Source: RMA

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales</td>
<td>$1,356,736,053</td>
</tr>
<tr>
<td>Cost of Sales (Calculated)</td>
<td>$1,059,484,380</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>$297,251,671</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>$220,078,304</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>$77,193,868</td>
</tr>
<tr>
<td>All Other Expenses (net)</td>
<td>$15,644,888</td>
</tr>
<tr>
<td>Profit Before Taxes</td>
<td>$61,858,277</td>
</tr>
<tr>
<td>Cash &amp; Equivalents</td>
<td>$31,100,426</td>
</tr>
<tr>
<td>Trade Receivables (net)</td>
<td>$108,267,136</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>$296,341,214</td>
</tr>
<tr>
<td>Fixed Assets (net)</td>
<td>$239,859,607</td>
</tr>
<tr>
<td>Intangibles (net)</td>
<td>$70,160,056</td>
</tr>
<tr>
<td>Notes Payable-Short Term</td>
<td>$48,172,709</td>
</tr>
<tr>
<td>Cur.Mat.-L/T/D</td>
<td>$20,296,093</td>
</tr>
<tr>
<td>Trade Payables</td>
<td>$68,565,424</td>
</tr>
<tr>
<td>Total Current Liabilities</td>
<td>$192,116,905</td>
</tr>
<tr>
<td>Long-Term Debt</td>
<td>$123,210,832</td>
</tr>
<tr>
<td>Net Worth</td>
<td>$295,328,076</td>
</tr>
<tr>
<td>Total Liabilities &amp; Net Worth</td>
<td>$651,296,391</td>
</tr>
</tbody>
</table>

Axiom Credit Rating Platform

BB-
### Develop Portfolio Credit Rating

<table>
<thead>
<tr>
<th>Raw Rating</th>
<th>Final Rating</th>
<th>Portfolio Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axiom Industry Raw Rating</td>
<td>Axiom Industry Correlation Matrix 2001-2010 *</td>
<td>Axiom Industry Final Ratings</td>
</tr>
<tr>
<td><strong>Aerospace &amp; Defense</strong></td>
<td>B-</td>
<td>B</td>
</tr>
<tr>
<td><strong>Automotive</strong></td>
<td>C</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Banking</strong></td>
<td>BBB-</td>
<td>D</td>
</tr>
<tr>
<td><strong>Beverage, Food &amp; Tobacco</strong></td>
<td>BB-</td>
<td>B</td>
</tr>
<tr>
<td><strong>Chemicals, Plastics, and Rubber</strong></td>
<td>B+</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Construction &amp; Building</strong></td>
<td>B-</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Consumer Goods - Durable</strong></td>
<td>BB-</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Consumer Goods - Non-durable</strong></td>
<td>B</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Containers, Packaging &amp; Glass</strong></td>
<td>BB-</td>
<td>B</td>
</tr>
<tr>
<td><strong>Energy - Oil &amp; Gas</strong></td>
<td>B-</td>
<td>B</td>
</tr>
<tr>
<td><strong>Finance</strong></td>
<td>BB</td>
<td>B</td>
</tr>
<tr>
<td><strong>Insurance</strong></td>
<td>B+</td>
<td>B</td>
</tr>
<tr>
<td><strong>Real Estate</strong></td>
<td>B-</td>
<td>C</td>
</tr>
<tr>
<td><strong>Healthcare &amp; Pharmaceuticals</strong></td>
<td>BB</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Hotel, Gaming &amp; Leisure</strong></td>
<td>D</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Media - Advertising, Printing &amp; Publishing</strong></td>
<td>CCC+</td>
<td>CCC+</td>
</tr>
<tr>
<td><strong>Media - Broadcasting &amp; Subscription</strong></td>
<td>CCC-</td>
<td>CCC+</td>
</tr>
<tr>
<td><strong>Metals &amp; Mining</strong></td>
<td>CCC-</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Retail</strong></td>
<td>B</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Services - Business</strong></td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td><strong>Services - Consumer</strong></td>
<td>BB-</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Telecommunications</strong></td>
<td>B</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Transportation - Cargo</strong></td>
<td>B+</td>
<td>CCC+</td>
</tr>
<tr>
<td><strong>Transportation - Consumer</strong></td>
<td>CC</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Wholesale</strong></td>
<td>B+</td>
<td>CCC</td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td>BB-</td>
<td>B-</td>
</tr>
<tr>
<td><strong>Farming &amp; Agriculture</strong></td>
<td>BBB-</td>
<td>CCC+</td>
</tr>
</tbody>
</table>
| **Electronics** | CCC+ | *Final Industry Credit Rating Vector= Industry Correlation Matrix *Raw Rating Vector

* Final Industry Credit Rating Vector= Industry Correlation Matrix *Raw Rating Vector

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**Axiom Industry Correlation Matrix 2001-2010 *:**
Tranche Pricing Based on 2001-2010 Correlation Matrix

- CCC+ Yield Spread
- Portfolio Weighted Average Coupon: 9%
- Portfolio Weighted Average Duration: 5 years

Portfolio:
- Portfolio Price: 91.73
- Portfolio Face Value: $550,000,000
- Portfolio Market Value: $504,520,355

A-1 Tranche:
- LIBOR + 2.5%, AAA Rating, Face Value: $301,500,000
- Cash Flow: Full Principal Coverage
- After A-1 Cash Flow: Full Principal Coverage

A-2 Tranche:
- LIBOR + 2.5%, AAA Rating, Face Value: $46,000,000

B Tranche:
- LIBOR + 3.75%, AA Rating, Face Value: $22,000,000
- After A-1, and A-2 Cash Flow: Full Principal Coverage

C Tranche:
- LIBOR + 4.75%, A Rating, Face Value: $33,000,000
- After A-1, A-2, and B Cash Flow: Full Principal Coverage

Equity Tranche:
- No Rating, Face Value: $147,500,000
- After A-1, A-2, B, and C Cash Flow: 69.1% Principal Coverage

Cash Flow Waterfall
Tranche Pricing Using a Different Correlation Matrix (1990-2000)

B+ Yield Spread

- Portfolio Weighted Average Coupon: 9%
- Portfolio Weighted Average Duration: 5 years

Portfolio Price: 99.39
- Portfolio Face Value: $550,000,000
- Portfolio Market Value: $546,620,195

A-1 Tranche: LIBOR + 2.5%, AAA Rating, Face Value: $301,500,000
- Cash Flow: Full Principal Coverage

A-2 Tranche: LIBOR + 2.5%, AAA Rating, Face Value: $46,000,000
- After A-1 Cash Flow: Full Principal Coverage

B Tranche: LIBOR + 3.75%, AA Rating, Face Value: $22,000,000
- After A-1, and A-2 Cash Flow: Full Principal Coverage

C Tranche: LIBOR + 4.75%, A Rating, Face Value: $33,000,000
- After A-1, A-2, and B Cash Flow: Full Principal Coverage

Equity Tranche: No Rating, Face Value: $147,500,000
- After A-1, A-2, B, and C Cash Flow: 97.7% Principal Coverage

Cash Flow Waterfall
Overview of
Axiom Valuation’s
Credit Risk Platform
Axiom Valuation’s Fair Value Assessment Framework

- Stress Test Covenants
- Competitive Advantage Assessment
- Credit Risk Platform
- Enterprise Protection Rating

Initial Fair Value Assessment

Fair Value Range

Market Price Data
- LoanX
- Markit
- Reuters
- FINRA
- Bloomberg
Axiom Valuation’s Credit Rating Model

Firm Financials
• Income Statement
• Balance Sheet
• Cash Flow
• Principal & Interest

Financial Market Data
• Financial & Return data for public companies
• Calculation of systematic risk for private firms

Credit Rating and Valuation Platform

Credit rating-yield spread matrix

Fair Value Assessment Based on Axiom Valuation’s Proprietary Credit Model
Why Choose Axiom Valuation?

Our Principals Offer Both Academic Rigor and Real World Experience.

Principals
• Dr. Stanley Feldman, Ph.D., Chairman and Chief Valuation Officer
  - Former member of the FASB’s Valuation Resource Group, an advisory panel on establishing fair value standards
  - Tenured Associate Professor of Finance at Bentley University, retired
  - Primary researcher on numerous refereed published articles on valuation related issues
  - Author of two well known books on valuation
• Roger Winsby, CMEA, President
Well Positioned to Meet Fair Value Review Requirements

• Stable and scalable resource base allows Axiom Valuation to increase the number of assets it fair values and still *meet hard financial reporting deadlines*.

• Real world experience in fair valuing illiquid fixed income instruments.

• Our work has been vetted by the all leading auditing firms.

• We fair value all types of financial securities from vanilla fixed income instruments to complex derivatives.

• *Axiom Valuation is the most cost-effective valuation firm in the country.*
Axiom Valuation is a nationally recognized financial security and business valuation firm. We have conducted valuation assignments for clients throughout the U.S., Europe and Asia. We regularly conduct fair value assignments for financial institutions in terms of fair valuing portfolio assets and liabilities as well as acting as an advisor and assessing whether internal transfers between funds meet the fair value standard. Our Co-founder and Chairman, Dr. Stanley Jay Feldman, was a member FASB’s Valuation Resource Group, an advisory group to FASB on fair value issues. Axiom Valuation develops and updates a state-of-the-art credit risk platform to value debt instruments effectively, efficiently, and with full documentation of assumptions and findings.

For more information, please visit
www.axiomvaluation.com
www.avairas.com
www.hedgefundvalue.com

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