The Impact of Bond Risk in Pooling

Presented By
Dan Byrnes, CFA
Senior Portfolio Manager
AAM
About AAM

- We manage over $25 billion in assets – all for insurance companies
- 12 risk pools
What We Will Discuss

• Bond risks? What are we talking about?

• While safe there are embedded risks to consider
  • We will delve into two today
    • Interest rate risk
  • Credit risk

• Take a brief look at what may impact these in the near term
## A Quick Quiz

<table>
<thead>
<tr>
<th>Ticker</th>
<th>Strategy</th>
<th>Price Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLT</td>
<td>20+ Year Treasury Fund</td>
<td>21.2%</td>
</tr>
<tr>
<td>GLD</td>
<td>Gold</td>
<td>18.6%</td>
</tr>
<tr>
<td>SPX</td>
<td>S&amp;P 500</td>
<td>16.7%</td>
</tr>
<tr>
<td>ISTB</td>
<td>1-5 Year Bonds</td>
<td>3.2%</td>
</tr>
<tr>
<td>EEM</td>
<td>Emerging Market Equities</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Source: Blackrock, State Street, Bloomberg, AAM through 8/31/2019
Risk Pool Holdings

Bond Portfolio Composite

Portfolio Duration: 5.3
Market Yield: 2.25
Average Rating: AA-

Source: Clearwater Analytics as of 8/31/2019
Alignment of Interest Rate Risk

- North Carolina League of Municipalities (NCLM) has three pools
- Began working together in late 2017

**Portfolio Duration In 2017**

Health Pool: 3.1

Property/Liability Pool: 3.4

Work Comp Pool: 3.3
Aligning interest rate risk

Portfolio Duration now

Health Pool: 3.7

Property/Liability Pool: 4.5

Work Comp Pool: 5.9

• Why change?
  • Optimizes the risk and return of each pool’s bond portfolio
  • We changed the duration of each portfolio based key factors
What Did We Consider?

• Coordination with actuarial, accounting and investments
  • Understand the cash flow stream
  • Estimate duration of liabilities
  • Consider cash flow needs – premium schedule?

• NCLM is well capitalized

• Need to consider other uses of capital (riskier assets, member services, wellness programs, rate stability)
The Outcome

• Increased price volatility when interest rates change

<table>
<thead>
<tr>
<th>Price Impact of a 1% increase in Interest Rates</th>
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<tbody>
<tr>
<td>Health Pool</td>
</tr>
<tr>
<td>Property/Liability Pool</td>
</tr>
<tr>
<td>Work Comp Pool</td>
</tr>
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</table>

• But there is also more income

<table>
<thead>
<tr>
<th>Portfolio Yield</th>
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<tbody>
<tr>
<td>Health Pool</td>
</tr>
<tr>
<td>Property/Liability Pool</td>
</tr>
<tr>
<td>Work Comp Pool</td>
</tr>
</tbody>
</table>

Source: AAM, FactSet. Interest rates as of 8/31/19. Yields as of 12/31/18
Interest risk - Callability

- Monitor call risk in the portfolio
- A callable security can offer more income when interest rates are stable
  - When rates change, the risk profile of the bond changes
- Some call risk is ok, but should be monitored
- We try to keep overall callability in portfolios low to bring cash flow and duration stability
Focus on Credit Risk

CNBC: A $9 trillion corporate debt bomb is 'bubbling' in the US economy
Forbes: The U.S. Is Experiencing A Dangerous Corporate Debt Bubble
The Economist: Should the world worry about America’s corporate-debt mountain?

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Debt Has Increased

Size of Investment Grade Bond Market

Changing Market Composition

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Treasury</td>
<td>22%</td>
<td>40%</td>
</tr>
<tr>
<td>U.S. Corporate</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>Agency MBS</td>
<td>39%</td>
<td>27%</td>
</tr>
</tbody>
</table>

- The US Government borrowing is the leader
- Corporations have taken advantage of prolonged low interest rates
- There are portfolio implications

Source: Bloomberg Barclays Aggregate data through 8/31/2019

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Corporate Borrowers Getting Riskier

- The corporate bond market has gotten riskier
- Why do companies do this?
  - The cost of BBB ratings is low
  - More financial flexibility
  - Because they can

Source: Bloomberg Barclays Aggregate data through 8/31/2019
Key Driver of BBB Ratings

- Companies have gotten to BBB ratings by adding more debt
- Leverage is high
  - Acquisitions
  - Share buybacks
- Some industries considered “safer” – consumer related
- More at risk – companies that are relying on growth and asset sales

Corporate Leverage is Rising

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Timing Matters

- Refinancing needs peak in the next few years
  - Should be manageable
  - Could be a driver of downgrades
Downgrade possibilities

5-10% of the corporate bond market is at heightened risk to falling to below investment grade

What should my pool do? – do not panic

Source: Morgan Stanley (historical periods), AAM (forecasts)
• The market prices in likely downgrades before they happen
• There is a reshuffling of holders after a downgrade
• Prices tend to rebound in the months following downgrade

Source: Bloomberg, Morgan Stanley Research
What’s a Pool To Do?

• With the potential for downgrades growing as the economy gets late in the cycle, what should a pool do?

• Time for a portfolio review
  
  • This may be a good time to take some risk out of the portfolio
  
  • Be cognizant of the income give up

• Consider your Investment Policy Statement (IPS)
  
  • Most Investment Policies include language that bonds must be investment grade
IPS Flexibility

- There are very good reasons your IPS specifies that bonds must be investment grade
- What does your policy say about downgrades?
  - Downgrades happen in portfolios, be prepared
  - Forced sales, unless required by statute, should usually be avoided
  - Often language allows securities to be held if approved by the Board and/or management
- County Reinsurance (CRL) took a different approach
CRL IPS Change

• At CRL we added this language to the IPS
  • Securities rated below BBB are not eligible for purchase
  • Securities which fall below the rating of BBB due to credit rating action are limited to the lesser of 5% of Surplus or 2% of Assets
  • This has proven beneficial over the years
  • Still significantly limits the risk profile
  • Eliminates the need for snap Management/Board decisions
CRL’s IPS Language in Action

• Late 2015/Early 2016 energy crisis

• Oil prices collapsed in early 2016 hitting $26/barrel

• We held a Continental Resources bond that was due in 2024
  • Purchased in 2014 rated BBB
  • Energy company focused on domestic production
CRL’s IPS Language in Action

- Continental Resource bonds fell in price…then rating

Source: Bloomberg Prices, Moody’s, Standard & Poor’s
An Area To Watch – CLO

• What is a CLO?
  • Package of below investment grade loans
  • Due to the structure of many notes they get investment grade ratings
  • “Within business debt, the staff also reported that in the leveraged loan market, the share of new loans to risky borrowers was at a record high” – Federal Reserve Minutes July 2019
  • Stay up in quality at this point of the economic cycle
What is the Economic Outlook

<table>
<thead>
<tr>
<th>Domestic Economic Activity</th>
<th>2017</th>
<th>2018</th>
<th>2019*</th>
<th>2020*</th>
<th>2021*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP (Y/ Y% SAAR)</td>
<td>2.20</td>
<td>2.90</td>
<td>2.30</td>
<td>1.80</td>
<td>1.80</td>
</tr>
<tr>
<td>Consumer Spending (Y/ Y% SAAR)</td>
<td>2.60</td>
<td>3.00</td>
<td>2.50</td>
<td>2.20</td>
<td>2.00</td>
</tr>
<tr>
<td>CPI (Y/ Y%)</td>
<td>3.00</td>
<td>2.50</td>
<td>2.50</td>
<td>2.20</td>
<td>2.00</td>
</tr>
<tr>
<td>Unemployment (%)</td>
<td>4.40</td>
<td>3.90</td>
<td>3.70</td>
<td>3.70</td>
<td>3.90</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>International GDP</th>
<th>2017</th>
<th>2018</th>
<th>2019*</th>
<th>2020*</th>
<th>2021*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eurozone</td>
<td>2.40</td>
<td>1.90</td>
<td>1.10</td>
<td>1.10</td>
<td>1.20</td>
</tr>
<tr>
<td>Japan</td>
<td>2.00</td>
<td>0.80</td>
<td>1.00</td>
<td>0.40</td>
<td>0.90</td>
</tr>
<tr>
<td>China</td>
<td>6.80</td>
<td>6.60</td>
<td>6.20</td>
<td>6.00</td>
<td>5.80</td>
</tr>
<tr>
<td>Global</td>
<td>3.80</td>
<td>3.60</td>
<td>3.20</td>
<td>3.20</td>
<td>3.00</td>
</tr>
</tbody>
</table>

- Global growth has been called into question
  - Trade is the obvious major issue
  - Brexit?
  - Federal Reserve actions
- Domestic consumers continue to spend for now
The Fed

- The Fed over tightened in 2018 and is changing course
- The Fed is trying to correct course, but remain data dependant
  - Inversion?!

![Fed Funds Rate Chart]

**Fed Funds Rate (mid point of range)**

- **Yr End 2019**
- **Yr End 2019 (‘18)**
- **Yr End 2020**
- **Yr End 2020 (‘18)**
- **Yr End 2020 (Curr)**

![U.S. Yield Curve Chart]

**U.S. Yield Curve**

- 12/31/2017
- 10/31/2018
- 9/27/2019

Source: Federal Reserve, Bloomberg, US Treasury

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• Negative debt globally has grown significantly

• 2 key considerations
  • Creates demand for US assets
  • Can it happen here?

• Generally not working as hoped for in Europe

Source: Bloomberg
The Future is Uncertain

• “Our main expectation is not at all that there will be a recession,” – Fed Chair Jay Powell, September 2019

• “This economy still has momentum for this year. There’s no way you’re going to get a recession.” – Mohammed El-Erian, Chief Economic Advisor Allianz

• “Sovereign bond yields around the world are sending an ominous message, which investors in risk assets ignore at great peril.” - Scott Minerd, CIO Guggenheim Investments

• “We advise investors to prepare for recession. We are only 15 minutes to midnight now.” – Citigroup Global Investors
Do What is Best for Your Pool

• Most important is to discuss risk with your Committee and Board before an issue arises

• Markets move quickly and a well crafted policy or communication stream can ultimately protect the assets of your pool

• Some basic modeling will help you gauge your risks
The end

Any Questions?