The Case for a More Active Approach to Bond Investing

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Founder & President, BondSavvy

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In general, the bond market is volatile, and fixed income securities carry interest rate risk. (As interest rates rise, bond prices usually fall, and vice versa. This effect is usually more pronounced for longer-term securities.) Fixed income securities also carry inflation risk, liquidity risk, call risk, and credit and default risks for both issuers and counterparties. Any fixed income security sold or redeemed prior to maturity may be subject to loss.

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What Does an Active Approach to Bond Investing Look Like?

**STEP 1: Bond Selection**
- Find compelling relative value – not bound to laddered maturities
- Focused on capital appreciation and yield

**STEP 2: Add to or Reduce Positions**
- Closely monitor performance of issuing companies and bonds
- Add or reduce based on company performance and bond price movements

**STEP 3: Selling Pre-Maturity**
- Guard capital appreciation carefully (especially for lower-yielding bonds)
- How does current bond’s upside compare to new opportunities?

**Combine fundamental with technical analysis**

**STEP 4: Apply everything we learned when making next bond selections**
Why Should Bond Investors Consider a More Active Approach?

Several factors enable corporate bond investors to actively invest and achieve potentially higher returns

- Unlike stocks, bonds typically have price ceilings that can make selling prior to maturity a good way to lock in capital appreciation and increase returns
- Bonds typically trade within a pricing range investors can use to determine entry/exit points
- A robust, two-sided marketplace (e.g., 90% of corporate bond offerings on Fidelity have both bid and offer quotes)
- Select events that can create unique buying and selling opportunities such as fund in/out flows and ratings up/downgrades
- Investment-grade corporates benchmarked to Treasurys creates buying opportunities when rates rise
A Trading Range That Informs Investment Decisions

Corporate bond buy and sell decisions can be more ‘scientific’ than with stocks given the pricing ceilings and floors bonds can have

**Investment-Grade Bond Bid Prices – 2,092 Bonds YTM 4+%**

- Even after a years-long bond bull market, selective investors can still find bonds at compelling values
  - Especially after rates increased
- BondSavvy targets bonds priced at a relative discount that can achieve strong capital appreciation
- Bonds don’t have ‘infinite appreciation’ like some stocks, which can justify selling bonds when upside potential wanes

* Corporate bond search conducted March 29 on Fidelity.com. Bonds are quoted as a percentage of their face value.
Corporate Bonds Trade in Ranges Investors Can Use To Lock in Gains Before Maturity

These price-history charts show the importance of actively managing buy and sell decisions:

- Trough-to-peak moves often occur over 6-20 months
- Capital appreciation can exceed a bond’s yield – often by a large amount
- In these examples, longer-dated bonds had price swings of 20 to 30 points vs. 5 to 12 points for 7- to 10-year bonds

Data source: FINRA Market Data

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Technology Has Put Individual Investors on a More Level Playing Field with Institutional Players

25 Years Ago

Today

Investing online enables investors to see broad inventory at competitive prices
Corporate Bonds: A World Away from Munis

Investors can buy and sell bonds in a competitive marketplace with reasonable bid/ask spreads – a big advantage over muni bonds

### Avis Budget Car Rental 5.50% ‘23

<table>
<thead>
<tr>
<th></th>
<th>Bids</th>
<th>Offers</th>
<th>Key Takeaways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield</td>
<td>Quantity (Min)</td>
<td>Price</td>
<td>Price</td>
</tr>
<tr>
<td>5.555</td>
<td>2000(10)</td>
<td>99.750</td>
<td>99.794</td>
</tr>
<tr>
<td>5.644</td>
<td>45(2)</td>
<td>99.355</td>
<td>99.850</td>
</tr>
<tr>
<td>5.650</td>
<td>200(15)</td>
<td>99.330</td>
<td>99.969</td>
</tr>
<tr>
<td>5.671</td>
<td>100(10)</td>
<td>99.240</td>
<td>100.170</td>
</tr>
<tr>
<td>5.705</td>
<td>25(10)</td>
<td>99.090</td>
<td>100.199</td>
</tr>
<tr>
<td>5.812</td>
<td>250(10)</td>
<td>98.620</td>
<td>100.625</td>
</tr>
<tr>
<td>5.886</td>
<td>10(2)</td>
<td>98.300</td>
<td>100.750</td>
</tr>
<tr>
<td>5.965</td>
<td>11(2)</td>
<td>97.957</td>
<td>100.790</td>
</tr>
<tr>
<td>6.094</td>
<td>75(10)</td>
<td>97.400</td>
<td></td>
</tr>
</tbody>
</table>

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Bid-Offer Spreads Conducive to Active Trading

Seventy-five percent (75%) and 65% of investment-grade and non-investment-grade bonds on Fidelity have bid-offer spreads of 1 point or less, respectively.

**DISTRIBUTION OF BID-OFFER SPREADS**

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**Investment-Grade*\**

- Bid-Offer Spreads Across 4,534 Investment-Grade Corporate Bonds -- Apr 23, 2018

<table>
<thead>
<tr>
<th>Bid-Offer Spread (Points)</th>
<th># Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;= 0.5</td>
<td>50%</td>
</tr>
<tr>
<td>&gt;0.5&lt;=1.0</td>
<td>25%</td>
</tr>
<tr>
<td>&gt;1.0&lt;=1.5</td>
<td>10%</td>
</tr>
<tr>
<td>&gt;1.5</td>
<td>9%</td>
</tr>
<tr>
<td>No bid side</td>
<td>7%</td>
</tr>
</tbody>
</table>

**Non-Investment-Grade*\**

- Bid-Offer Spreads Across 1,377 High-Yield Corporate Bonds -- Apr 23, 2018

<table>
<thead>
<tr>
<th>Bid-Offer Spread (Points)</th>
<th># Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;= 0.5</td>
<td>26%</td>
</tr>
<tr>
<td>&gt;0.5&lt;=1.0</td>
<td>39%</td>
</tr>
<tr>
<td>&gt;1.0&lt;=1.5</td>
<td>12%</td>
</tr>
<tr>
<td>&gt;1.5</td>
<td>13%</td>
</tr>
<tr>
<td>No bid side</td>
<td>10%</td>
</tr>
</tbody>
</table>

* Data from bond search conducted on Fidelity.com on April 23, 2018. Search included 4,534 investment-grade bonds and 1,377 non-investment-grade bonds.
Locking in gains before maturity is central to BondSavvy’s approach, but first we have to make initial investment decisions
How We Begin Narrowing Down Bonds

General searches for corporate bonds return what can be an intimidating number of bonds...

Investment-Grade Corporate Bond Search*

YTM 3+% & 110 Max Ask Price

<table>
<thead>
<tr>
<th>U.S. Treasury</th>
<th>CDs</th>
<th>Agency/IGSE</th>
<th>Municipal</th>
<th>Corporate</th>
<th>All Offerings</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.58%</td>
<td>4.07%</td>
<td>2.77%</td>
<td>5.83%</td>
<td>3.69%</td>
<td>(111,110)</td>
</tr>
</tbody>
</table>

* Based on a corporate bond search conducted on Fidelity.com on April 23, 2018.

...Luckily, the number of different issuers is smaller and we can further narrow down based on our expertise

<table>
<thead>
<tr>
<th>Criterion</th>
<th># Bonds</th>
<th># Issuers</th>
</tr>
</thead>
<tbody>
<tr>
<td>YTM 3+%, Offer Price &lt;=110</td>
<td>4,534</td>
<td>785</td>
</tr>
<tr>
<td>Remove: Gas services, petroleum and tobacco</td>
<td>(380)</td>
<td>(65)</td>
</tr>
<tr>
<td>First Cut</td>
<td>4,154</td>
<td>720</td>
</tr>
</tbody>
</table>

Approximately 4,534 Matching CUSIPs

* Based on a corporate bond search conducted on Fidelity.com on April 23, 2018.
Finalizing Four Investment Recommendations

Three-Step Filtering Process

**FIRST CUT**
- 4,154 Corporate Bonds
- 720 Issuers

**SECOND CUT**
- 50 bonds

**DEEP DIVE**
- 10

4 Final Recommendations

Components of Each Step

- Fidelity search

- Sector focus: telecom, media, retail, tech, ecommerce, industrials, financials (exc. insurance)

- Assess risk/reward based on pricing, yields, liquidity and knowledge of issuers

- Review SEC filings, listen to earnings calls, conduct news searches

- Compare credit ratios, growth, upcoming maturities, financial covenants, etc.
### Key Terms To Evaluate Bonds

<table>
<thead>
<tr>
<th>EBITDA</th>
<th>INTEREST COVERAGE RATIO</th>
<th>LEVERAGE RATIO</th>
</tr>
</thead>
</table>
| Earnings before interest, taxes, depreciation & amortization | \[
\frac{\text{EBITDA}}{\text{Interest Expense}}
\] | \[
\frac{\text{Long-Term Debt}}{\text{EBITDA}}
\] |

*Higher = lower default risk*

*Lower = lower default risk*
Selecting a Bond from Same Issuer – Verizon Case Study

- Typically find strong liquidity for investment-grade bonds
- Even though the YTM bid-ask spread is narrow (.045%) on this ‘42 bond, the ‘dollar price’ spread is 0.57 points
  - Typically wider dollar price spreads for long-duration bonds
- Favor lower-priced bonds vs. higher-priced bonds with similar yields
- ‘Term premiums’ in specific corporate bond vs. Treasury curve (seeking anomalies)
Selecting a Bond from Same Issuer – Albertsons Case Study

• Liquidity can be a bigger issue for non-investment-grade:
  — Issuance size
  — Bid-offer spread
  — Frequency of trading and types of trades (customer buy/sells, dealer to dealer)

• Pricing discrepancies across bonds (balance low prices vs. yield)

• Relative seniority of bonds

• Benefits of different issuers within same company

For illustrative and educational purposes only.
## Sample Analysis: Credit Metrics & Growth

<table>
<thead>
<tr>
<th>Bond</th>
<th>$ in millions</th>
<th>Quote (1)</th>
<th>Offer Price</th>
<th>Credit Ratios</th>
<th>Last FY YOY</th>
<th>Last 12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Bid</td>
<td>Offer</td>
<td>Spread to Treasury</td>
<td>Interest Leverage (2)</td>
<td>Interest Coverage (3)</td>
</tr>
<tr>
<td>Lennar 4.750% 5/30/25 (4) 526057BV5</td>
<td>98.61 / 99.23</td>
<td>4.88%</td>
<td>2.12%</td>
<td>Ba1 / BB+</td>
<td>$500</td>
<td>3.7x</td>
</tr>
<tr>
<td>Aecom 5.125% 3/15/27 00774CAB3</td>
<td>96.73 / 97.30</td>
<td>5.51%</td>
<td>2.64%</td>
<td>Ba3 / BB-</td>
<td>$1,000</td>
<td>4.6x</td>
</tr>
<tr>
<td>Alphabet 1.998% 8/15/26 02079KAC1</td>
<td>90.58 / 91.03</td>
<td>3.22%</td>
<td>0.43%</td>
<td>Aa2 / AA+</td>
<td>$2,000</td>
<td>0.1x</td>
</tr>
<tr>
<td>Expedia 3.800% 2/15/28 30212PAP0</td>
<td>92.18 / 93.52</td>
<td>4.62%</td>
<td>1.76%</td>
<td>Ba1 / BBB-</td>
<td>$1,000</td>
<td>2.2x</td>
</tr>
</tbody>
</table>

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(1) Quotes only shown with quantities available of at least 50 bonds and are as of March 7, 2018 @ 1:00pm ET.

(2) Most recent quarter’s long-term debt divided by last twelve months’ EBITDA.

(3) Last twelve months’ EBITDA divided by most recent quarter’s annualized interest expense.

(4) Lennar completed its acquisition of CalAtlantic on February 12, 2018. The company has provided select pro forma combined numbers, but they are not comprehensive and are generally out of date.

The numbers shown here are for Lennar standalone.

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### Sample Analysis: Balance Sheet and Capital Structure

<table>
<thead>
<tr>
<th>Bond</th>
<th>Offer Price Yield to Maturity</th>
<th>Spread to Treasury</th>
<th>Credit Ratios</th>
<th>Credit Facility</th>
<th>Upcoming Maturities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Leverage (2)</td>
<td>Interest Coverage (3)</td>
<td>Debt</td>
</tr>
<tr>
<td>Lennar 4.750% 5/30/25 (4) 526057BV5</td>
<td>4.88%</td>
<td>2.12%</td>
<td>3.7x</td>
<td>6.2x</td>
<td>$6,410</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aecom 5.125% 3/15/27 00774CAB3</td>
<td>5.51%</td>
<td>2.64%</td>
<td>4.6x</td>
<td>4.0x</td>
<td>$3,952</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alphabet 1.998% 8/15/26 02079KAC1</td>
<td>3.22%</td>
<td>0.43%</td>
<td>0.1x</td>
<td>374x</td>
<td>$3,943</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expedia 3.800% 2/15/28 30212PAPA0</td>
<td>4.62%</td>
<td>1.76%</td>
<td>2.2x</td>
<td>8.2x</td>
<td>$3,749</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(2) Most recent quarter’s long-term debt divided by last twelve months’ EBITDA.
(3) Last twelve months’ EBITDA divided by most recent quarter’s annualized interest expense.
(4) Lennar completed its acquisition of CalAtlantic on February 12, 2018. The company has provided select pro forma combined numbers, but they are not comprehensive and are generally out of date.
The numbers shown here are for Lennar standalone.
(5) Lennar’s cash is net of $1.2 billion of cash portion of CalAtlantic acquisition.
How BondSavvy Approaches Credit Ratings

While credit ratings don’t speak to the value of a bond, investors must understand ratings momentum given how strongly ratings changes impact bond prices

• Given the number of bonds that have the same rating, BondSavvy digs further to understand which bonds represent compelling value

• Many investors simply react to rating upgrades (by buying) and downgrades (by selling), which creates opportunity
  — Ratings can, at times, go years without changing, which provides investors who regularly review updated financials a leg up

• Prior to investing, BondSavvy reviews upgrade and downgrade notes to understand potential causes and likelihood of rating changes
  — Investors must be ‘extra sure’ about BBB- investments given pricing decrease resulting from downgrade to non-investment-grade

<table>
<thead>
<tr>
<th>S&amp;P Rating</th>
<th># Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBB+</td>
<td>1,756</td>
</tr>
<tr>
<td>BBB</td>
<td>1,392</td>
</tr>
<tr>
<td>BBB-</td>
<td>794</td>
</tr>
<tr>
<td>BB+</td>
<td>274</td>
</tr>
<tr>
<td>BB</td>
<td>141</td>
</tr>
<tr>
<td>BB-</td>
<td>214</td>
</tr>
</tbody>
</table>

* Based on corporate bond search conducted on Fidelity.com on April 23, 2018.
Key Takeaways

• Technology has helped create a more level playing field to invest in corporate bonds
• Since bond prices have ceilings, active investing can help increase returns
• Active bond investing does not mean ‘day trading’
• New opportunities present themselves over time – not all at once
  — Companies report earnings throughout the year
  — Merger & acquisition activity
  — Ratings changes and fund flows can move markets (not always rationally)
• Take advantage of ratings changes rather than just follow the herd
• Higher-rated bonds may have less default risk but don’t necessarily have less overall risk
Thank you

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Q&A

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