Past performance is no guarantee of future results.

The views expressed are as of the date indicated and may change based on market or other conditions.

Unless otherwise noted, the opinions provided are those of the speaker or author, as applicable, and not necessarily those of Fidelity Investments. The experts are not employed by Fidelity and no compensation was received from Fidelity for their services. Fidelity Investments is not affiliated with any other company noted herein and doesn’t endorse or promote any of their products or services.

Please determine, based on your investment objectives, risk tolerance, and financial situation, which product or service is right for you.

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.

References to individual securities are for illustrative purposes only, and should not be construed as recommendations or investment advice.

The third-party trademarks and service marks appearing herein are the property of their respective owners.

Fidelity Brokerage Services LLC, Member NYSE, SIPC, 900 Salem Street, Smithfield, RI 02917

843662.2.0
Let’s Challenge Long-Held Bond-Investing Beliefs

• Investors can’t beat the index
• Always hold bonds to maturity
• Build a laddered bond portfolio
• Focus on a bond’s yield not the price at which you buy
• Bonds only return 2-4%
• If ‘interest rates’ rise, bond prices ALWAYS fall
• A credit rating and a yield is all you need to evaluate a bond
Attributes of Individual Corporate Bonds

- Contractual interest payments and return of principal
- Financial covenants that protect investors
- Senior to common and preferred stock
- Wide variety of risk/reward opportunities
- Many areas of corporate bond market performed well when stocks collapsed in Q4 2018
Individual corporate bonds can help to balance stock market volatility

**APPLE STOCK**

Falls 10% from $158.34 to $142.09

**APPLE 3.45% ’45 BONDS**

Unchanged at 88.50*

* Source: FINRA TRACE market data

Images licensed from Getty Images.
**Important To Focus on Yield AND Capital Appreciation**

‘Buy low and sell high’ can apply to bonds and generate returns higher than a bond’s YTM

<table>
<thead>
<tr>
<th>Credit</th>
<th>Interest Rate</th>
<th>Bond</th>
<th>Bond Price: Investment Date vs. Sell Date</th>
<th>Investment Date YTM</th>
<th>Annualized Return Through Sale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Highest</td>
<td>Apple 3.850% ’43</td>
<td>85.07 vs. 95.32 10/28/13 vs. 5/9/18</td>
<td>4.8%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Higher</td>
<td>Low</td>
<td>Cablevision 5.875% ’22</td>
<td>79.25 vs. 99.12 12/8/15 vs. 1/9/18</td>
<td>10.1%</td>
<td>17.6%</td>
</tr>
<tr>
<td>Highest</td>
<td>None</td>
<td>Toys R Us 10.375% ’17</td>
<td>83.08 vs. 102.59 2/12/16 vs. 9/29/16</td>
<td>24.6%</td>
<td>54.2%</td>
</tr>
</tbody>
</table>

Please note: Selling bonds prior to maturity will not always result in returns in excess of the bond’s Yield To Maturity. Selling prior to maturity may result in lower returns than if the bond was held through to maturity.

For Illustrative purposes only
Question 1: How can investors find value in the US corporate bond market?
Question 2: Why buy bonds if ‘interest rates’ can only go up?
# ‘Interest Rates’ – An Often Misused and Overused Term

‘Interest rates’ set by the Fed often have limited impact on corporate bond prices

<table>
<thead>
<tr>
<th>Term</th>
<th>Interest Rates</th>
<th>Treasury Yields</th>
<th>Corporate Bond Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>Fed funds rate</td>
<td>10-Year Treasury yield</td>
<td>Verizon 3.85% 11/1/42</td>
</tr>
<tr>
<td></td>
<td>Federal Reserve</td>
<td>Market supply &amp; demand</td>
<td>Albertsons 7.45% 8/1/29</td>
</tr>
<tr>
<td>Determined by</td>
<td>Prime rate, car loans,</td>
<td>Investment-grade corporate</td>
<td>Inv Grade: Credit spreads +</td>
</tr>
<tr>
<td></td>
<td>credit card rates,</td>
<td>bonds, bank loans,</td>
<td>Treasury yields</td>
</tr>
<tr>
<td>Impacts</td>
<td>mortgages</td>
<td>mortgages</td>
<td>High Yield: Credit quality changes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Investment profit</td>
</tr>
</tbody>
</table>
Credit Spreads – Step 1 To Understanding Bond ‘Value’

Benchmark Treasury YTM 2.716%

+ 
Credit Spread 1.445%

= 
Verizon 3.85% ‘42 YTM 4.161%

Source: Bond quotes and pricing data are from Fidelity.com and are as of 10:38am EDT on May 23, 2019.
Deciding When To Sell a Bond

Marriott Int’l 3.125% 6/15/26 Bond

December 12, 2018 Investment Date

- Benchmark Treasury YTM: 2.80%
- Credit Spread: 1.78%
- Corporate Bond YTM: 4.58%
- Ask Price: 90.83

May 15, 2019 Update

- Benchmark Treasury YTM: 2.31%
- Credit Spread: 1.09%
- Corporate Bond YTM: 3.40%
- Ask Price: 98.29

- Since December 12, Treasurys rallied AND the bond’s credit spread fell to a level below that of comparable bonds
- No credit rating change during the five-month period
- We saw little upside remaining in the bond on May 15

Source: YTM, pricing, and credit spread data from Fidelity.com. Example is for illustrative purposes only.
## Overlaying Financial Metrics with Credit Spreads

<table>
<thead>
<tr>
<th>EBITDA</th>
<th>INTEREST COVERAGE RATIO</th>
<th>LEVERAGE RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings before interest, taxes, depreciation &amp; amortization</td>
<td>EBITDA ÷ Interest Expense</td>
<td>Long-Term Debt ÷ EBITDA</td>
</tr>
</tbody>
</table>

*Higher = lower default risk

*Lower = lower default risk

“Purer” of the two ratios
Corporate Bond ‘Sweat Meter’

LEVERAGE RATIO

- Lower credit risk: \(\leq 2.5x\)
- Higher credit risk: \(\geq 5.5x\)

INTEREST COVERAGE RATIO

- Lower credit risk: \(\geq 10x\)
- Higher credit risk: \(\leq 2.5x\)

INVESTOR STATE OF MIND

Lower credit risk: Lower
Higher credit risk: Higher

Credits: Beach chair image licensed from Canva. Sweating man image licensed from Shutterstock.
Credit Ratings Can Be Helpful But Have Shortcomings

<table>
<thead>
<tr>
<th>Moody's</th>
<th>S&amp;P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaa</td>
<td>AAA</td>
</tr>
<tr>
<td>Aa1</td>
<td>AA+</td>
</tr>
<tr>
<td>Aa2</td>
<td>AA</td>
</tr>
<tr>
<td>Aa3</td>
<td>AA-</td>
</tr>
<tr>
<td>A1</td>
<td>A+</td>
</tr>
<tr>
<td>A2</td>
<td>A</td>
</tr>
<tr>
<td>A3</td>
<td>A-</td>
</tr>
<tr>
<td>Baa1</td>
<td>BBB+</td>
</tr>
<tr>
<td>Baa2</td>
<td>BBB</td>
</tr>
<tr>
<td>Baa3</td>
<td>BBB-</td>
</tr>
<tr>
<td>Ba1</td>
<td>BB+</td>
</tr>
<tr>
<td>Ba2</td>
<td>BB</td>
</tr>
<tr>
<td>Ba3</td>
<td>BB-</td>
</tr>
<tr>
<td>B1</td>
<td>B+</td>
</tr>
<tr>
<td>B2</td>
<td>B</td>
</tr>
<tr>
<td>B3</td>
<td>B-</td>
</tr>
<tr>
<td>Caa1</td>
<td>CCC+</td>
</tr>
<tr>
<td>Caa2</td>
<td>CCC</td>
</tr>
<tr>
<td>Caa3</td>
<td>CCC-</td>
</tr>
</tbody>
</table>

**Bond rating shortcomings**
- Can often go years without changing
- Don’t speak to the value of a bond
- Smaller companies with better financials often have lower ratings than bigger companies with worse financials

**Investment Grade**

**Non-Investment Grade or “High Yield”**

**BUT...Understanding ratings is still important:**
- Rating impacts bond’s Treasury-yield sensitivity
- Upgrades and downgrades can impact corporate bond prices
Finding Value by Comparing Credit Spreads* and Financials

<table>
<thead>
<tr>
<th>Leverage Ratio (1)</th>
<th>2.4x</th>
<th>1.4x</th>
<th>1.8x</th>
<th>3.6x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash (1)</td>
<td>$2.3</td>
<td>$225.4</td>
<td>$4.6</td>
<td>$0.9</td>
</tr>
<tr>
<td>Debt (1)</td>
<td>$113.7</td>
<td>$112.6</td>
<td>$3.7</td>
<td>$9.8</td>
</tr>
<tr>
<td>Rating</td>
<td>Baa1 / BBB+</td>
<td>Aa1 / AA+</td>
<td>Ba1 / BBB</td>
<td>WD** / CCC+</td>
</tr>
</tbody>
</table>

*Bond quotes taken on Fidelity.com between 10:38am and 11:00am EDT on May 23, 2019. **Moody’s withdrew its rating 3/28/13 due to ‘insufficient’ information to support rating.

(1) $ in billions. Figures calculated based on financial information as of, or for the 12 months ending March 31, 2019, except Albertsons, which is as of Feb 23, 2019.
Understanding ‘credit value’ is key; however, investors must also understand how different bonds can react to changes in Treasury yields
How Credit Quality Impacts Interest Rate Risk

Corporate bonds of higher credit quality tend to have greater interest rate risk due to their:

- Longer initial maturities
- Lower coupons
- Institutional trading being indexed to the benchmark US Treasury

Source: Bond quotes taken on Fidelity.com between 10:38am and 11:00am EDT on May 23, 2019. Expedia is ‘split rated,’ as it is rated below investment grade by Moody’s (Ba1) and investment grade by S&P (BBB).
Corporate Bonds Don’t Move in Lockstep with Treasurys

Investment-grade and high-yield corporate bonds react differently to changes in Treasury yields

Verizon 3.85% 11/1/42 vs. Benchmark Treasury – Sep 25, 2017-Apr 30, 2019

Verizon 3.85% 11/1/42

US Treasury 2.75% 11/15/42

Total Return* +13.3%

Total Return* +1.9%

Source: Historical Verizon ‘42 and US Treasury prices are from FINRA market data. Treasury CUSIP is 912810QY7.

* Verizon return based on market price on September 25, 2017 on Fidelity.com and Fidelity statement price on April 30, 2019. Total returns include interest income and capital gains or losses.
Not All Bonds Go Down When Treasury Yields Increase

Even as the comparable Treasury fell 7 points, this Albertsons ’29 bond returned 33.6%* due to strong performance and reduced concern around the Amazon / Whole Foods merger.

Albertsons 7.45% 8/1/29 vs. Benchmark Treasury Price Performance – Sep 25, 2017-Apr 30, 2019

Albertsons 7.45% 8/1/29

US Treasury 6.125% 8/15/29

Albertsons Leverage Ratio:

6/17/17: 4.3x
2/23/19: 3.6x

* Albertsons return based on 9/25/17 offer price from Fidelity.com and 4/30/19 price from Fidelity brokerage statement. Treasury CUSIP: 912810FJ2. All other historical prices are from FINRA market data. Total returns include interest income and capital gains or losses.
How To Invest Actively in Corporate Bonds
‘Buy Low and Sell High’ Applies to Stocks AND Bonds

Bond investors should be mindful of an effective ceiling on bond prices

**Investment-Grade Bond Offer Prices – 1,587 Bonds – June 13, 2019**

- Bonds trading at a discount generally have greater upside and less downside than premium bonds
- In a taxable account, $1 of capital gain is worth more than $1 of interest income
- Bond prices have ceilings, which often requires selling prior to maturity to maximize returns

*Investment-grade corporate bond search conducted June 13, 2019 on Fidelity.com for bonds with yields to worst of at least 4.00%. Bonds are quoted as a percentage of their face value.*
Active Corporate Bond Investing vs. Bond Laddering

Active bond investing has a number of advantages vs. traditional bond ladders

**Illustrative $100k Bond Ladder**

- ‘Big bang’ initial investment with high timing risk
- Return capped at YTM
- Unable to exploit market opportunities
- Maturity-based investment criteria

**Illustrative Active Corporate Bond Investing**

- Reduce timing risk by investing over time
- Potentially increase returns by selling pre-maturity to enhance capital appreciation
- Modify approach as environment changes
- Bond selection based on value and not just a maturity date

For illustrative and educational purposes only.
What Active Corporate Bond Investing Is and Is Not

**Active Corporate Bond Investing **IS NOT**
- Day trading
- Selling as soon as a bond goes up 10 points
- Selling as soon as a bond goes down 10 points

**Active Corporate Bond Investing **IS
- Generally 1- to 4-year holding period
- Maximize returns over 1- to 4-year periods
- Add to positions over time, including when prices fall
Key Takeaways

• Individual corporate bonds are not a monolithic asset class

• Investors can evaluate a bond’s relative value by considering:
  — Credit spreads and financial ratios of comparable bonds and issuers
  — Dollar price relative to par value and opportunity for price appreciation
  — Sensitivity to Treasury yields based on credit rating and time until maturity

• Bond investment opportunities present themselves over time and bond prices have ceilings
  — These factors support an active approach to bond investing vs. bond laddering

People who invest regularly in individual corporate bonds gain a strong understanding of the market, which can help improve performance over time
Thank you

Steve Shaw
steve@bondsavvy.com

(201) 748-9862

WWW.BONDSAVVY.COM
BondSavvy Disclaimer

InvestorG2 LLC d/b/a BondSavvy is not registered as an investment adviser under the Investment Advisers Act of 1940, as amended ("Advisers Act"), or the securities laws of any state or other jurisdiction, nor is such registration contemplated. **All opinions expressed by Steven Shaw and BondSavvy during this presentation are solely Shaw’s opinions and not those of Fidelity Investments.**

Any screenshots, charts, or company trading symbols mentioned are provided for illustrative purposes only and should not be considered an offer to sell, a solicitation of an offer to buy, or a recommendation for the security.

As BondSavvy operates under the publishers’ exemption of the Advisers Act, the **investments and strategies discussed in this presentation do not take into account an investor’s particular investment objectives, financial situation or needs.** In making an investment decision, each investor must rely on its own examination of the investment, including the merits and risks involved, and should consult with its investment, legal, tax, accounting and other advisors and consultants.

The information in this presentation is based on data currently available to Shaw, as well as various expectations, estimates, projections, opinions and beliefs with respect to future developments, and is subject to change. Neither Shaw nor any other person or entity undertakes or otherwise assumes any obligation to update this information.

**There are risks inherent in investing in bonds, which may adversely affect the bonds’ investment returns.** These risks include, for example, market decline, interest rate fluctuations, inflation, default, liquidity, and asset class risks. There is no guarantee that investors will be able to meet their investment objectives. **Past performance is no guarantee of future results.** Investors could lose all or part of their investment in a bond, particularly when investing in a high yield bond. Investing in bonds could also produce lower returns than investing in other securities. Investing in bonds does not constitute a complete investment program.