



High Yield Investing During Volatile Times

Spread levels can signal attractive return potential.

April 2020

KEY INSIGHTS

- High yield spreads have widened dramatically. However, history shows that strong positive returns can follow periods of market weakness.
- An analysis of the implied forward default and recovery rates suggested by different spread levels can help investors navigate the current backdrop.
- An active approach can help reduce potential default rates by avoiding companies and sectors more at risk of higher default rates.

The global market volatility could be creating opportunities in high yield fixed income. However, investors are understandably cautious amid ongoing uncertainty surrounding the economic and human impact of the coronavirus. With further volatility likely, it can be difficult to know whether to view sell-offs in high yield as potential buying opportunities or reasons to move away from risk assets. While the current public health crisis is unprecedented in nature, we believe history provides useful information for investors to make an informed decision about investing in high yield in the current backdrop.

High yield spreads have widened recently. In many cases, the widening has been historic—through the week ended March 20, 2020, global high

yield spreads jumped by 519 basis points,¹ the largest weekly move in history. We expect further near term swings as markets weigh the economic impacts of the coronavirus and global policy responses.

Instead of just focusing on the daily moves, investors can gain a long-term perspective by looking at historical performance. History shows that when spreads reach certain levels, forward returns over medium- and long-term horizons can be attractive. Specifically, when U.S. high yield spreads have widened to 800 basis points (bps) over underlying government bonds, the median annualized return to investors over one-year and three-year horizons was 23.6% and 15.4%, respectively.² Prior to 2020, there were 34 months with U.S. high yield spreads above the 800bps threshold, and investors reaped positive returns in all



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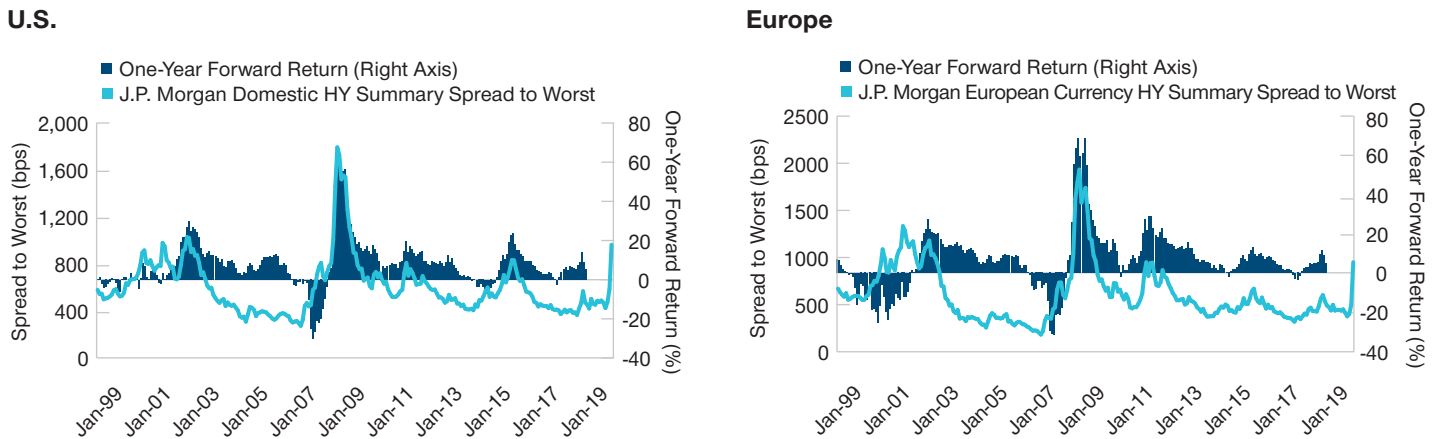
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¹ Source: J.P. Morgan Chase & Co. (see Additional Disclosures). J.P. Morgan Global High Yield Index.

² Source: J.P. Morgan Chase & Co. (see Additional Disclosures). J.P. Morgan U.S. High Yield Index. January 1, 1999 through December 31, 2019.

Positive Returns Have Followed Spread Widening

(Fig. 1) Spreads and forward returns in U.S. and Europe



As of March 31, 2020.

Past performance is not a reliable indicator of future performance.

Source: J.P. Morgan Chase & Co. (see Additional Disclosures), analysis by T. Rowe Price.

but one instance over the next 12 months. The two- and three-year time periods saw positive returns in every single instance. We find a similar story in European high yield³ when spreads reached 800bps. The median annualized returns were 35.8% and 17.8% across one year and three years, respectively. Of the 23 instances where monthly spreads were above 800bps, one-year and three-year forward returns were positive each time.

History also shows that global high yield assets can post stronger returns following downturns compared with equity markets. For example, over the three-year period beginning August 31, 2008, the month when spreads first crossed above the 800bps threshold during the global financial crisis, global high yield returned 12.12%.⁴ The MSCI All Country World Index, meanwhile, returned -0.01% over the same time frame.⁵ High yield also posted a higher Sharpe ratio,⁶ which demonstrates high yield had a higher risk-adjusted return. Volatile markets after the tech bubble and the energy crisis in 2014–2016 showed a similar pattern of

robust, risk-adjusted returns for high yield compared with equities.

These historic data highlight, in our opinion, that periods of spread widening hold the potential for strong rebounds over medium- to long-term horizons. We recognize that this coronavirus-related weakness is unique, and returns could look very different to previous periods. What we want to emphasize is that investors should pause and consider their outlook and the different possibilities for the asset class.

What If the Default Cycle Is Different?

While historic return figures suggest that current spread levels potentially offer an attractive entry point to invest in high yield markets, investors also need to keep an eye on the current market environment. To help judge a good entry point, investors can consider if a possible uptick in default rates or lower recovery rates in the event of bankruptcy is priced into current spread levels.

³ Source: J.P. Morgan Chase & Co. (see Additional Disclosures). J.P. Morgan European Currency High Yield Index.




⁴ Source: J.P. Morgan Chase & Co. (see Additional Disclosures). J.P. Morgan Global High Yield Index.

⁵ Source: MSCI (see Additional Disclosures). MSCI All Country World Index.

⁶ Sharpe ratio definition: Average return earned in excess of the risk-free rate per unit of volatility.

High Yield's History of Strong Rebounds

(Fig. 2) High yield versus equity following downturns*

| | | | Annualized Return | Sharpe Ratio |
|---|---|-------------------|----------------------|-----------------|
|  | Tech Bubble (October 31, 2000–October 31, 2003) | Global High Yield | 8.95% | 0.71 |
| | | Global Equities | -6.77 | -0.53 |
|  | Global Financial Crisis (August 31, 2008–August 31, 2011) | Global High Yield | 12.12 | 0.72 |
| | | Global Equities | -0.01 | -0.01 |
|  | Oil Price Shock (January 31, 2016–January 31, 2019) | Global High Yield | 9.84 | 1.82 |
| | | Global Equities | 12.24 | 1.05 |

Analysis as of March 20, 2020, analysis starts January 1, 1999.

Past performance is not a reliable indicator of future performance.

* Three-year time periods begin month following first time spreads crossed 800bps during each market downturn.

Global high yield is represented by the J.P. Morgan Global High Yield Index, and global equities is represented by the MSCI All Country World Index.

Source: J.P. Morgan Chase & Co. and MSCI (see Additional Disclosures).

“...bottom-up security selection could potentially reduce exposure to businesses and segments of the market most at risk, potentially lowering an investor's effective default rate.

For this purpose, we have conducted an analysis of the implied forward default rate based on different spread levels. In Figure 3, investors can find the current spread and then see what the implied default rate is based on different recovery rates. This will help investors judge whether they think current spread levels offer enough compensation for potential defaults during the difficult backdrop.

For example, a spread level of 963bps in U.S. high yield suggests that the market expects default rates between 6% and 7% with a recovery rate of 10%. This same spread implies a default rate of 11% to 12% based on a recovery rate of 50%. Looking back at history, this would imply a default cycle in line or worse than the global financial crisis, when default rates in U.S. high yield markets peaked at 10.3% annually in 2009.⁷ European high yield default rates peaked at 8.1% annually in the same year.⁸

For context, the average default rate since the beginning of 1982 through the end of 2019 in the U.S., where the asset class has a longer history, has an average default rate of 3.6% and a

recovery rate of 40.8%.⁷ European high yield's average default rate has been 2.5% with a recovery rate of 34.2% since 2005, when the European high yield market began to mature.⁸

Past default rates are hard to project given the unique current environment. However, the severity and extent of the coronavirus outbreak will result in an uptick in default rates from the historically low levels over the last couple of years. We also see reasons that might help contain the overall default rate now compared with the global financial crisis. Corporate fundamentals are generally healthier than in 2008, with many companies showing better balance sheets and lower leverage levels. Governments and central banks have also announced massive stimulus measures to help combat the economic impacts of the coronavirus.

Active Approach Can Lower Default Rates

An active investment approach could also impact whether it makes sense to take on high yield risk in the current

⁷ Source: J.P. Morgan Chase & Co. (see Additional Disclosures). J.P. Morgan Domestic High Yield Index.

⁸ Source: J.P. Morgan Chase & Co. (see Additional Disclosures). J.P. Morgan European Currency High Yield Index.

Are Default Rates Priced Into Spreads?

(Fig. 3) Current spreads and implied default and recovery rates

U.S.

Current Spread: 963bps per J.P. Morgan U.S. High Yield Index

Europe

Current Spread: 951bps per J.P. Morgan European Currency High Yield Index

| | Recovery Rate | | | | |
|-----|---------------|--------------|--------------|--------------|--------------|
| | 10% | 20% | 30% | 40% | 50% |
| 1% | 490 | 480 | 470 | 460 | 450 |
| 2% | 580 | 560 | 540 | 520 | 500 |
| 3% | 670 | 640 | 610 | 580 | 550 |
| 4% | 760 | 720 | 680 | 640 | 600 |
| 5% | 850 | 800 | 750 | 700 | 650 |
| 6% | 940 | 880 | 820 | 760 | 700 |
| 7% | 1,030 | 960 | 890 | 820 | 750 |
| 8% | 1,120 | 1,040 | 960 | 880 | 800 |
| 9% | 1,210 | 1,120 | 1,030 | 940 | 850 |
| 10% | 1,300 | 1,200 | 1,100 | 1,000 | 900 |
| 11% | 1,390 | 1,280 | 1,170 | 1,060 | 950 |
| 12% | 1,480 | 1,360 | 1,240 | 1,120 | 1,000 |
| 13% | 1,570 | 1,440 | 1,310 | 1,180 | 1,050 |
| 14% | 1,660 | 1,520 | 1,380 | 1,240 | 1,100 |
| 15% | 1,750 | 1,600 | 1,450 | 1,300 | 1,150 |
| 16% | 1,840 | 1,680 | 1,520 | 1,360 | 1,200 |
| 17% | 1,930 | 1,760 | 1,590 | 1,420 | 1,250 |
| 18% | 2,020 | 1,840 | 1,660 | 1,480 | 1,300 |
| 19% | 2,110 | 1,920 | 1,730 | 1,540 | 1,350 |
| 20% | 2,200 | 2,000 | 1,800 | 1,600 | 1,400 |

| | Recovery Rate | | | | |
|-----|---------------|------------|------------|--------------|--------------|
| | 10% | 20% | 30% | 40% | 50% |
| 1% | 440 | 430 | 420 | 410 | 400 |
| 2% | 530 | 510 | 490 | 470 | 450 |
| 3% | 620 | 590 | 560 | 530 | 500 |
| 4% | 710 | 670 | 630 | 590 | 550 |
| 5% | 800 | 750 | 700 | 650 | 600 |
| 6% | 890 | 830 | 770 | 710 | 650 |
| 7% | 980 | 910 | 840 | 770 | 700 |
| 8% | 1,070 | 990 | 910 | 830 | 750 |
| 9% | 1,160 | 1,070 | 980 | 890 | 800 |
| 10% | 1,250 | 1,150 | 1,050 | 950 | 850 |
| 11% | 1,340 | 1,230 | 1,120 | 1,010 | 900 |
| 12% | 1,430 | 1,310 | 1,190 | 1,070 | 950 |
| 13% | 1,520 | 1,390 | 1,260 | 1,130 | 1,000 |
| 14% | 1,610 | 1,470 | 1,330 | 1,190 | 1,050 |
| 15% | 1,700 | 1,550 | 1,400 | 1,250 | 1,100 |
| 16% | 1,790 | 1,630 | 1,470 | 1,310 | 1,150 |
| 17% | 1,880 | 1,710 | 1,540 | 1,370 | 1,200 |
| 18% | 1,970 | 1,790 | 1,610 | 1,430 | 1,250 |
| 19% | 2,060 | 1,870 | 1,680 | 1,490 | 1,300 |
| 20% | 2,150 | 1,950 | 1,750 | 1,550 | 1,350 |

As of March 30, 2020.

Current spread range highlighted in blue.

Data analysis based on the J.P. Morgan Domestic High Yield Index, and J.P. Morgan European Currency High Yield Index.

$(1 - \text{recovery rate}) \times \text{implied default rate} = \text{default loss}$.

$\text{Default loss} + \text{excess spread}^* = \text{estimated market spread}$.

* Assumes high yield market excess spread of 400bps (U.S.) and 350bps (Europe).

Source: J.P. Morgan Chase & Co. (see Additional Disclosures). Data analysis by T. Rowe Price.

“...periods of spread widening hold the potential for strong rebounds over medium- to long-term horizons.

environment. The implied default rates in Figure 3 refer to the U.S. and European high yield markets in their entirety. However, bottom-up security selection could potentially reduce exposure to businesses and segments of the market most at risk, potentially lowering an investor's effective default rate.

T. Rowe Price's global credit research platform has a long history of delivering a favorable default experience for our clients, with many of our high yield bond strategies exhibiting a lower default profile than the overall market.

For example, the average default rate of T. Rowe Price's High Yield Master Bond Representative Portfolio was 0.3% since 1996 through the end of 2019. This compares with a market average default rate of 2.9% over the same period.⁹ Our highest ever annual default rate since inception was 1.6% back in 2004, while the market's highest annual default rate over the same time period was 10.3% in 2009. This highlights how important security selection is when investing in the high yield asset class.

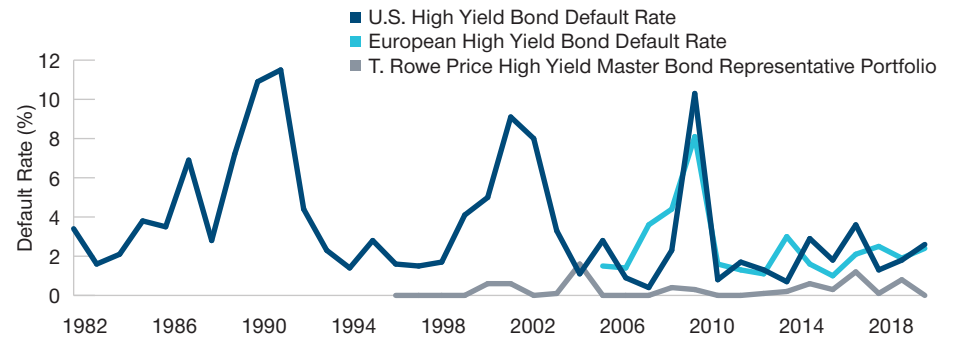
⁹ Source: J.P. Morgan Chase & Co. (see Additional Disclosures).

23.6%

median one-year return in U.S. high yield following spreads crossing 800bps threshold.¹⁰

Active Approach Could Lower Default Rates

(Fig. 4) T. Rowe Price High Yield* default rate versus benchmarks



As of December 31, 2019.

Past performance is not a reliable indicator of future performance.

*T. Rowe Price High Yield Master Bond Representative Portfolio. The representative portfolio is an account we believe most closely reflects the current portfolio management style for the strategy. Performance is not a consideration in the selection of the representative portfolio. The characteristics of the representative portfolio shown may differ from those of other accounts in the strategy. Information regarding the representative portfolio and the other accounts in the strategy is available upon request.

J.P. Morgan Domestic High Yield Index and J.P. Morgan European Currency High Yield Index.

Inception of the High Yield Master Bond Representative Portfolio: January 1995. The default data takes a year to gather therefore it is one year lagged after the inception date.

Source: J.P. Morgan Chase & Co. (see Additional Disclosures). Data analysis by T. Rowe Price.

Investors should take this into consideration when deciding when and how to invest. Even if spread levels don't imply that the asset class as a whole is oversold, certain names and sectors may be more dislocated from their fundamentals and could outperform going forward.

Breaking down global high yield, the U.S. and European markets exhibit very different characteristics. European high yield has a lower exposure to the energy sector, which has been hit hard due to falling oil prices. Sectors and credit quality differences mean the regions can behave quite differently. This is something we monitor closely, and look to take advantage of as opportunities arise.

Overall, all markets remain highly uncertain, and the duration of the coronavirus epidemic will remain the key variable for the coming months. Deciding when is the right time to buy in the current environment will never be an easy decision. However, we believe that it is important to remember that high yield bonds can potentially deliver strong positive returns following periods of steep spread widening. Understanding what default rates are priced into current spreads as well as how active security selection can impact potential returns form important starting points for medium- and long-term investing.

¹⁰ Source: J.P. Morgan Chase & Co. (see Additional Disclosures).



WHAT WE'RE WATCHING NEXT

Oil prices have faced sustained downward pressure due to reduced global demand as well as a failure by OPEC countries to agree on production cuts earlier in March. This has resulted in the energy sector underperforming. Although no signs of an agreement are imminent, we are monitoring discussions between OPEC, a Texas energy regulator, and U.S. shale producers. Progress in these talks could help stabilize oil prices, and any firm agreement could result in a rebound for the sector.

Key risks—Transactions in securities denominated in foreign currencies are subject to fluctuations in exchange rates which may affect the value of an investment. Debt securities could suffer an adverse change in financial condition due to ratings downgrade or default which may affect the value of an investment. Investments in High Yield involve a higher element of risk. Where funds invest in less developed regions returns can be more volatile than other, more developed, markets due to changes in market, political and economic conditions.

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