# U.S. Lending Standards Indicator

## Report Overview

The Model Signal Reports translate Quant Pack Leading Indicators into asset allocation insights. This report provides the historical performance data of each sample model since 2000 and will be updated on an annual basis going forward. You can find more information on the indicator and it's latest model signal in the MarketDesk Quant Pack published each Friday.

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# Model Signal – U.S. Lending Standards Indicator

Overview

### Overview of Indicator

- The U.S. Lending Standards Indicator forecasts net % of banks tightening lending standards 12 months ahead.
- Based on a composite of 6 macro inputs (interest rates, monetary policy, industrial momentum, housing activity, labor markets, etc.) that exhibit a high statistical correlation with the year-over-year change in bank lending standards.
- The leading indicator (1) forecasts the directional trend and next 12-month change in the net % of banks tightening lending standards, and (2) informs portfolio positioning across asset classes, equity sectors, and credit sectors.

### Overview of Model Signal

When U.S. Lending Standards Indicator's 12-month forecast shows the year-over-year change will rise above zero, own 100% Risk-Off Exposure (i.e., Defensive Sectors, High-Quality Credit, and Bonds). When U.S. Lending Standards Indicator's 12-month forecast shows the year-over-year change will fall below zero, own 100% Risk-On Exposure (i.e., Cyclical Sectors, Low-Quality Credit, and Stocks). All sample model portfolios are rebalanced monthly to equal weight.

### Figure 1: Historical Model Signals (Risk-On vs Risk-Off)

The table shows the indicator's historical model reading for each month since 2000

| | Model Signals Based on U.S. Lending Standards Indicator | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
| 2000 | Risk-On | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-On |
| 2001 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2002 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2003 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2004 | Risk-On | Risk-On | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off |
| 2005 | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off |
| 2006 | Risk-Off | Risk-On | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2007 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2008 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2009 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2010 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off |
| 2011 | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-On | Risk-On |
| 2012 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2013 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2014 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off |
| 2015 | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2016 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2017 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off |
| 2018 | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off |
| 2019 | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2020 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On |
| 2021 | Risk-On | Risk-On | Risk-On | Risk-On | Risk-On | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off |
| 2022 | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off | Risk-Off |
| 2023 | Risk-Off | Risk-Off | Risk-Off | Risk-Off | | | | | | | | |

### Figure 2: Annual Model Returns

| | *Page 3* | *Page 4* |
|---|---|---|
| S&P 500 | U.S. Sector Rotation | U.S. Credit Rotation |
| -4% | 35% | 16% |
| -12% | 1% | 8% |
| -22% | -19% | -4% |
| 29% | 36% | 30% |
| 11% | 7% | 6% |
| 5% | 9% | 5% |
| 16% | 22% | 6% |
| 5% | 6% | 2% |
| -37% | -40% | -29% |
| 26% | 37% | 57% |
| 15% | 9% | 3% |
| 2% | 11% | 13% |
| 16% | 18% | 17% |
| 32% | 36% | 14% |
| 14% | 16% | 15% |
| 1% | -2% | -8% |
| 12% | 14% | 18% |
| 22% | 14% | 8% |
| -4% | 1% | 0% |
| 31% | 20% | 14% |
| 18% | 22% | 22% |
| 29% | 31% | 6% |
| -18% | 0% | -20% |
| 9% | 1% | 5% |

Source: MarketDesk Quant Pack. Data as of 4/30/2023. Past performance does not guarantee future results. Performance is shown as total returns with dividends and income reinvested. The performance information shown herein does not reflect the deduction of advisory and/or other fees normally incurred in the management of a portfolio. Hypothetical performance results are presented for illustrative purposes only.

# U.S. Sector Rotation Model

**Sample Model**

### Indicator Signal Overview – U.S. Sector Rotation Model

When U.S. Lending Standards Indicator's 12-month forecast shows the year-over-year change will rise above zero, own 100% Risk-Off Exposure. When U.S. Lending Standards Indicator's 12-month forecast shows the year-over-year change will fall below zero, own 100% Risk-On Exposure. The sample model is rebalanced monthly to equal weight. Refer to page 2 to see when the model held Risk-On or Risk-Off exposure for each month since January 2000.

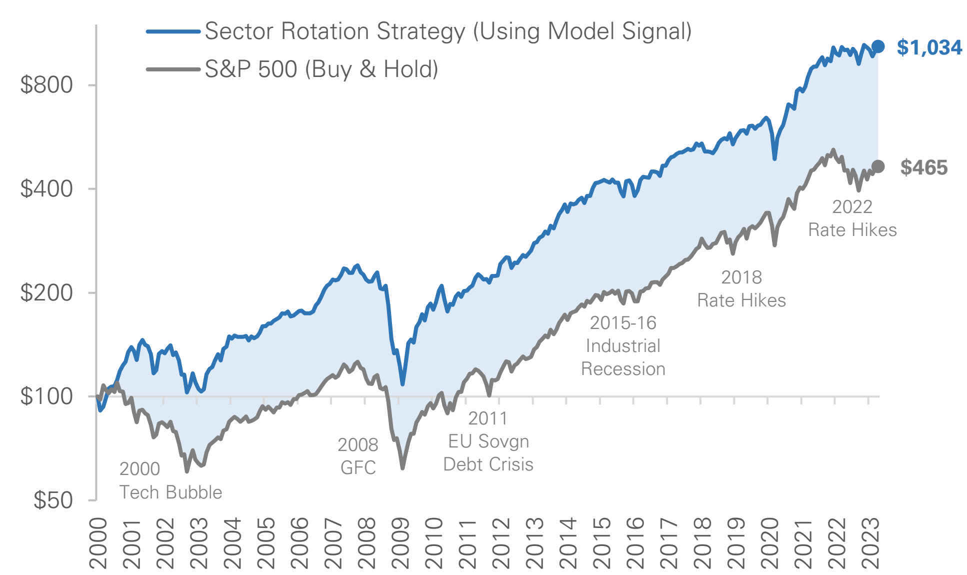
- **Risk-On** = Cyclical Sectors (Industrials, Materials, Cons. Discretionary)
- **Risk-Off** = Defensive Sectors (Utilities, Health Care, Cons. Staples)

### Figure 3: Performance Statistics – U.S. Sector Rotation Model

| Annual Statistics of Returns & Risks | S&P 500 (Benchmark) | U.S. Sector Rotation Model |
|---|---|---|
| Average Return | 8.2% | 12.3% |
| **Strategy CAGR** | **6.8%** | **10.6%** |
| Maximum Drawdown | -51% | -55% |
| **% of Positive Years** | **74%** | **87%** |
| Upside Capture | 100% | 107% |
| Downside Capture | 100% | 23% |
| **Net Capture** | **0%** | **+84%** |
| Max Positive Year | 32% | 37% |
| Max Negative Year | -37% | -40% |
| **Max Risk / Reward Ratio** | **0.88** | **0.93** |

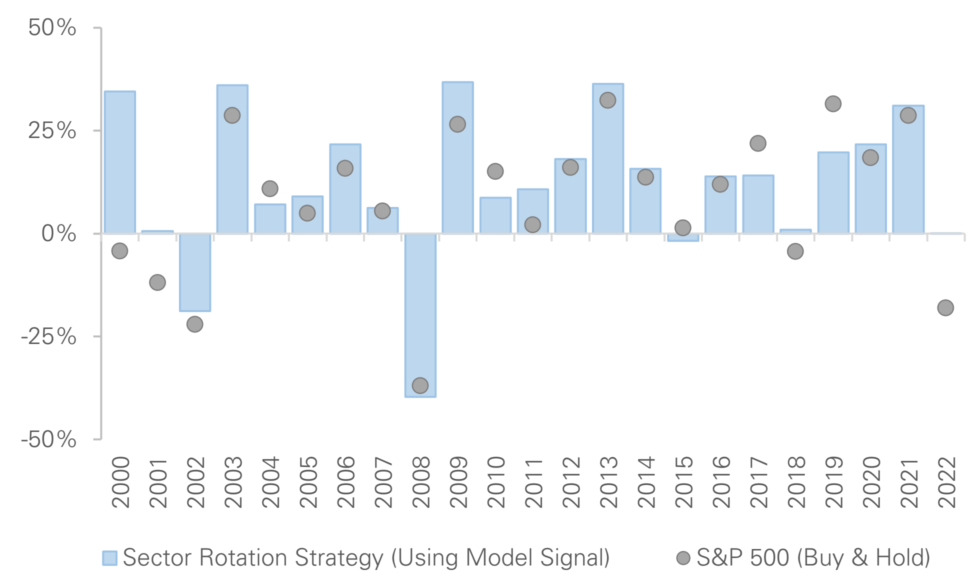
Source: MarketDesk Quant Pack. Based on annual calendar year returns since 2000.

### Figure 4: Total Returns – U.S. Sector Rotation Model



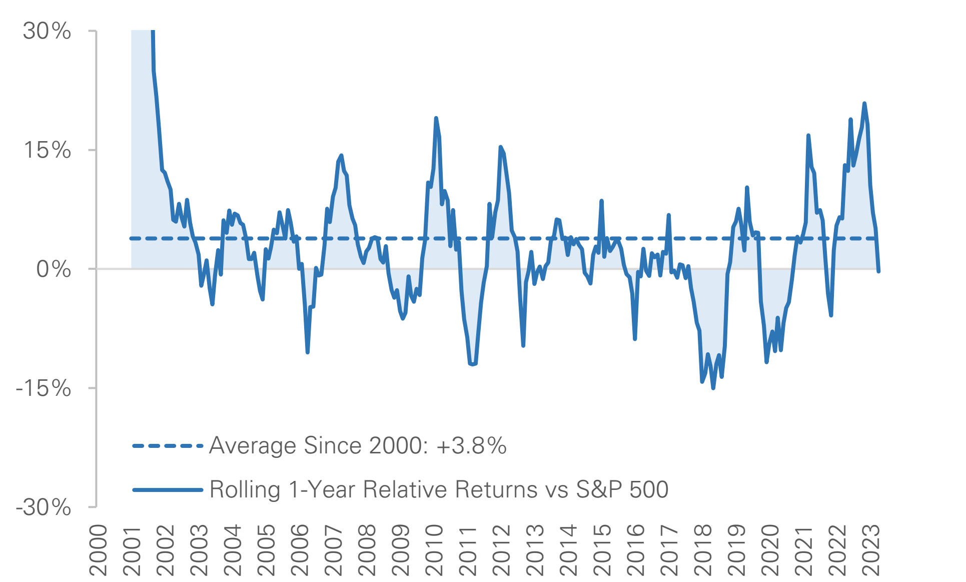

Source: MarketDesk Quant Pack. The portfolio is rebalanced monthly.

### Figure 5: Historical Annual Returns – U.S. Sector Rotation Model



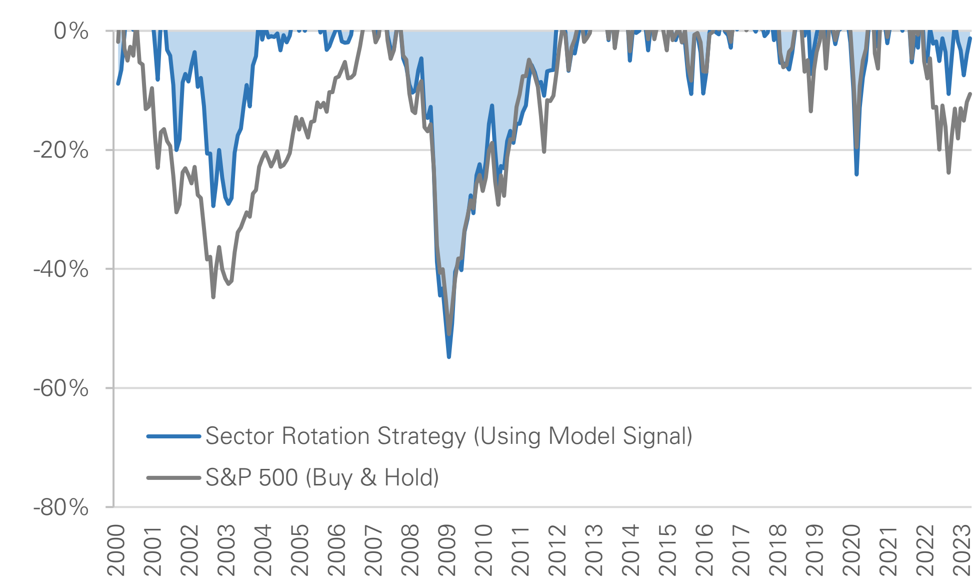

Source: MarketDesk Quant Pack

### Figure 6: 1-Year Relative Returns – U.S. Sector Rotation Model




Source: MarketDesk Quant Pack

### Figure 7: Portfolio Drawdowns – U.S. Sector Rotation Model




Source: MarketDesk Quant Pack

# U.S. Credit Rotation Model

Sample Model

**Indicator Signal Overview – U.S. Credit Rotation Model**

When U.S. Lending Standards Indicator's 12-month forecast shows the year-over-year change will rise above zero, own 100% Risk-Off Exposure. When U.S. Lending Standards Indicator's 12-month forecast shows the year-over-year change will fall below zero, own 100% Risk-On Exposure. The sample model is rebalanced monthly to equal weight. Refer to page 2 to see when the model held Risk-On or Risk-Off exposure for each month since January 2000.

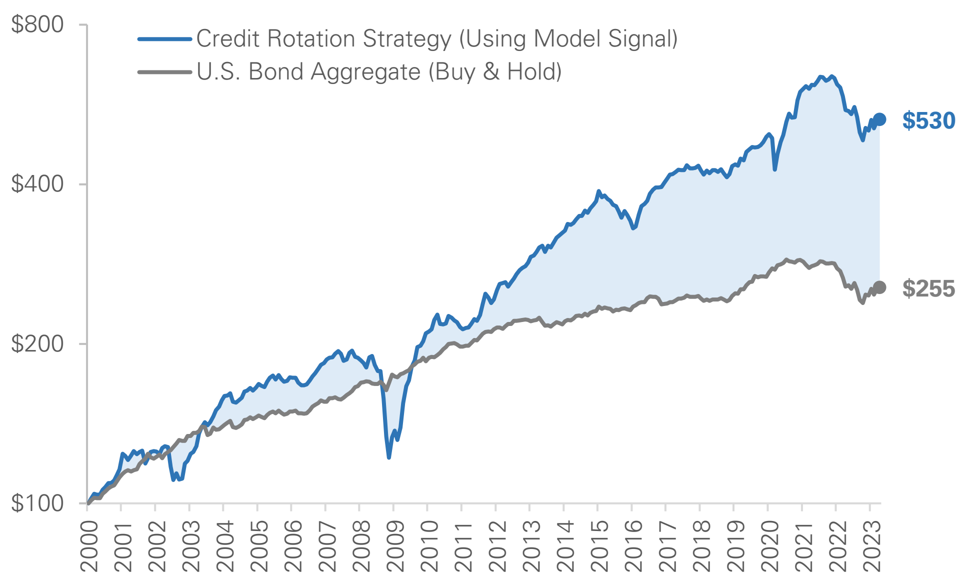
- **Risk-On** = Low-Quality Credit (High Yield, Fallen Angels, Convertibles)
- **Risk-Off** = High-Quality Credit (U.S. Treasuries & MBS)

**Figure 8: Performance Statistics – U.S. Credit Rotation Model**

| Annual Statistics of Returns & Risks | US Bond Aggregate (Benchmark) | Credit Sector Rotation Model |
|---|---|---|
| Average Return | 4.1% | 8.6% |
| **Strategy CAGR** | **4.1%** | **7.4%** |
| Maximum Drawdown | -17% | -37% |
| **% of Positive Years** | **87%** | **78%** |
| Upside Capture | 100% | 177% |
| Downside Capture | 100% | 3% |
| **Net Capture** | **0%** | **+174%** |
| Max Positive Year | 12% | 57% |
| Max Negative Year | -13% | -29% |
| **Max Risk / Reward Ratio** | **0.92** | **1.95** |

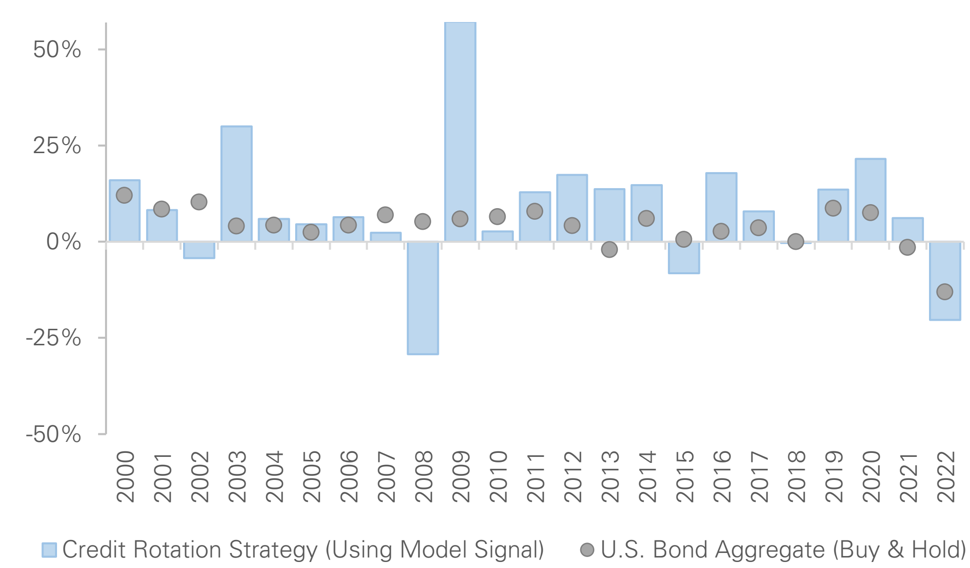
Source: MarketDesk Quant Pack. Based on annual calendar year returns since 2000.

**Figure 9: Total Returns – U.S. Credit Rotation Model**



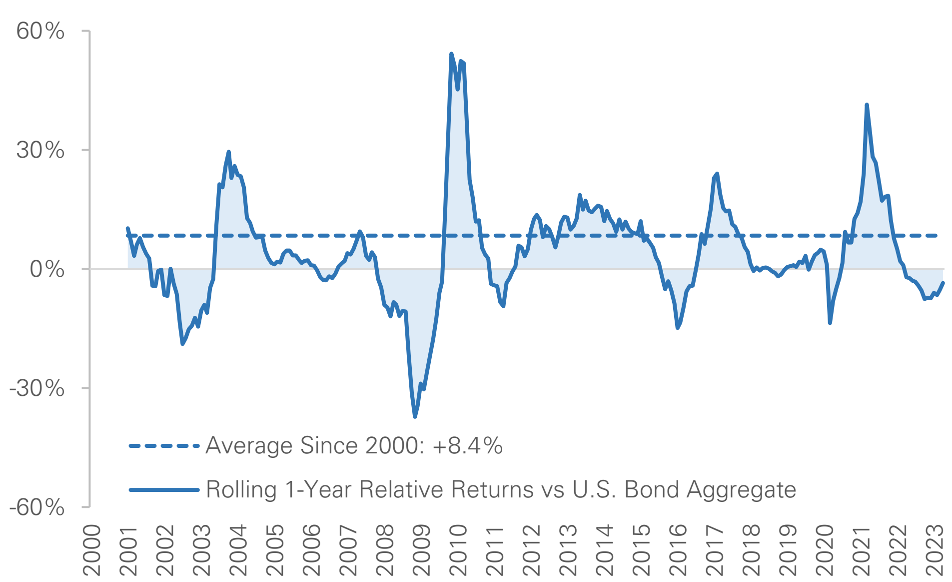

Source: MarketDesk Quant Pack. The portfolio is rebalanced monthly.

**Figure 10: Historical Annual Returns – U.S. Credit Rotation Model**



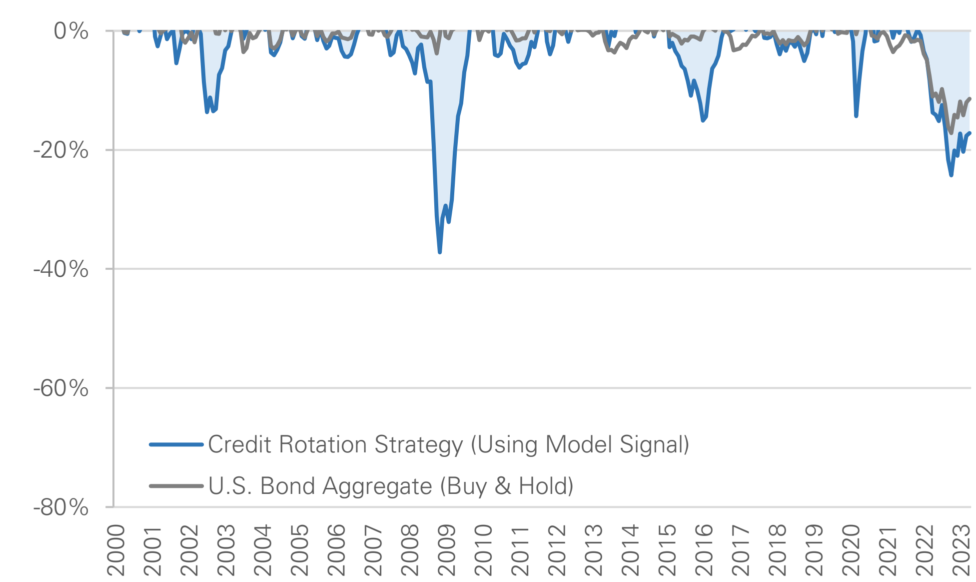

Source: MarketDesk Quant Pack

**Figure 11: 1-Year Relative Returns – U.S. Credit Rotation Model**




Source: MarketDesk Quant Pack

**Figure 12: Portfolio Drawdowns – U.S. Credit Rotation Model**




Source: MarketDesk Quant Pack

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