S&P Dow Jones Indices

A Division of S&P Global

# Sector Showdown - Equities Versus Bonds

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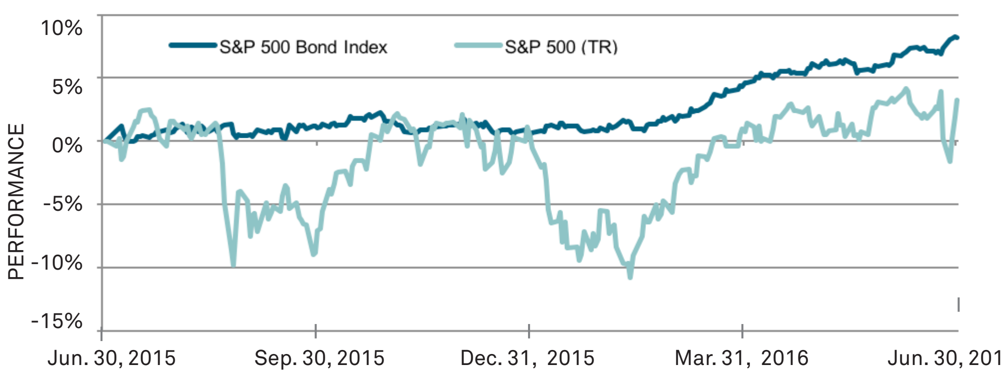
Measuring sector performance in both equities and bonds can give market participants different viewpoints when navigating through market cycles. By looking at the S&P 500® Bond Index, which is designed to track the performance of all eligible debt securities issued by the companies that make up the iconic S&P 500, you can compare the performance of fixed income securities within the sectors that are typically analyzed in the large-cap equity space.

Let's start with a simple performance comparison: Over a one-year period, the S&P 500 Bond Index nearly doubled the performance of the S&P 500, returning 7.7% versus 4.0%. Removing the coupon return of 3.8% from the bond index, and removing the dividend yield of 2.3% from the equity index reveals a price outperformance of 3.9% versus 1.7%, respectively. Not surprisingly, the S&P 500 experienced greater volatility over the period, with a standard deviation of 3.63% versus 2.30% for the S&P 500 Bond Index. On a risk-adjusted basis, the bond index had a Sharpe ratio of 3.36; over three times greater than the 1.10 Sharpe ratio of the S&P 500.[1]

**EXHIBIT 1: ONE-YEAR PERFORMANCE COMPARISON OF THE S&P 500 BOND INDEX AND THE S&P 500**

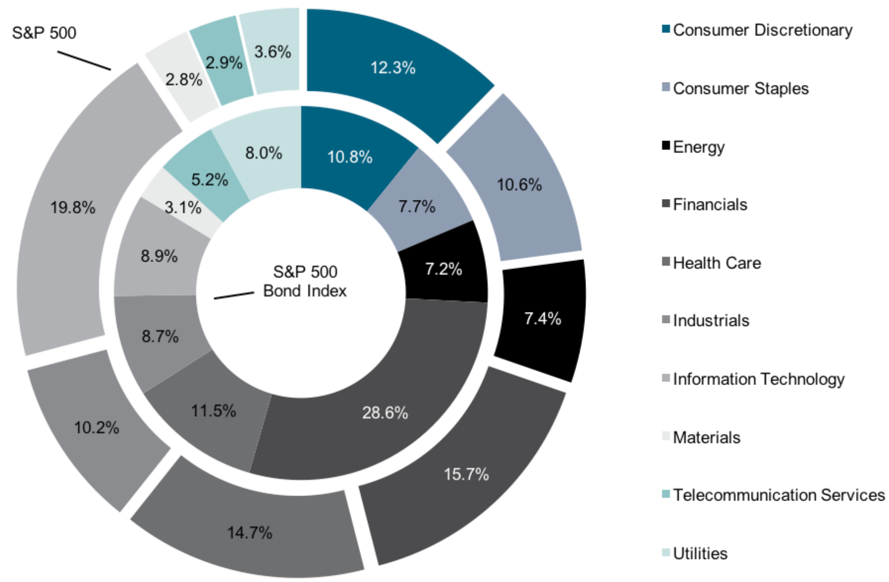



Source: S&P Dow Jones Indices LLC. Data from June 30, 2015, to June 30, 2016. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performatnce. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance. The S&P 500 Bond Index was launched on July 8, 2015. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was in effect on the index Launch Date. Complete index methodology details are available at www.spdji.com.

[1] Sharpe ratio is a measure of return per unit of risk.

Digging deeper into the sector weights of the indices reveals variations in the composition of each. The largest differences lie within the financials and information technology sectors. As of June 30, 2016, the S&P 500 had a 19.8% weight in information technology versus only 8.9% for the S&P 500 Bond Index. Meanwhile, the financials sector comprised 28.6% of the bond index compared with 15.7% for the equity index. Utilities represented 8.0% of the S&P 500 Bond Index as opposed to 3.6% of the S&P 500. These divergences are not surprising, as they are representative of the capital structures of companies within the respective sectors. The remaining seven sectors all have differences of representation within 3% in each index.

**EXHIBIT 2: ONE-YEAR PERFORMANCE COMPARISON OF THE S&P 500 BOND INDEX AND THE S&P 500**



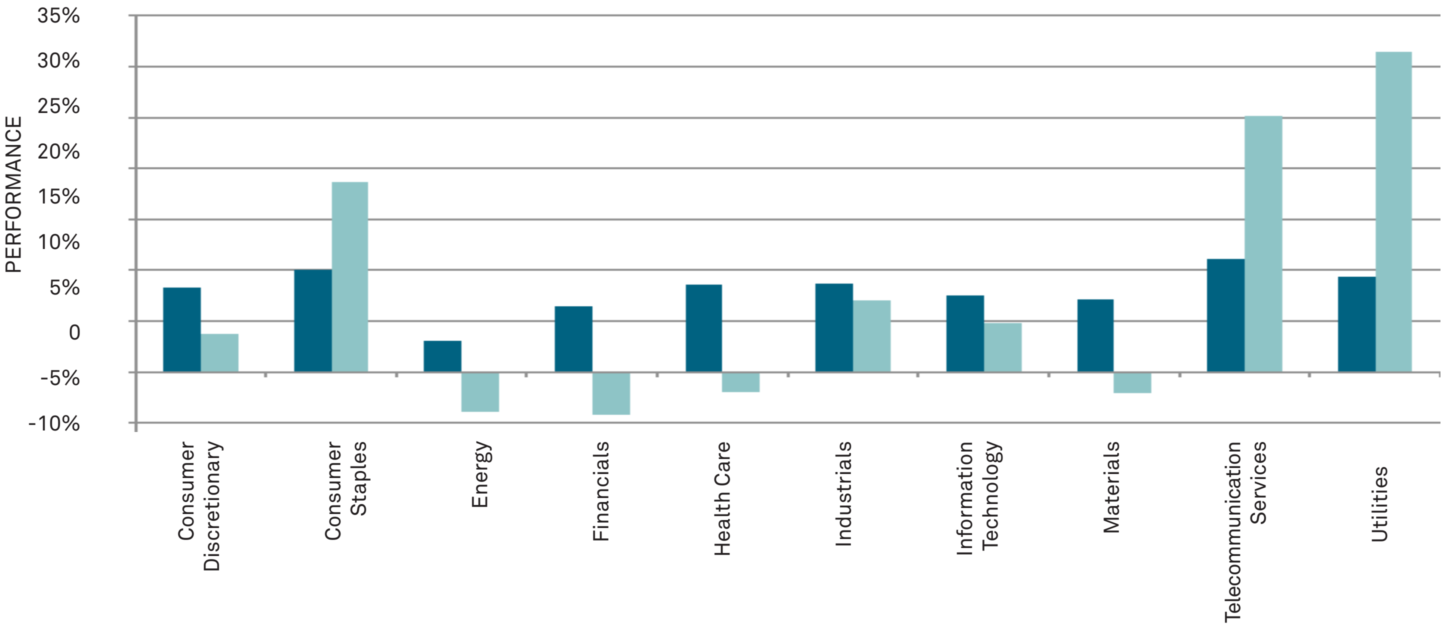

Source: S&P Dow Jones Indices LLC. Data as of June 30, 2016. Chart is provided for illustrative purposes.

**EXHIBIT 3: TYPICAL PERFORMANCE OF SECTORS IN EACH STAGE OF BUSINESS CYCLE**

| Sector | Early | Mid | Late | Recession |
|---|---|---|---|---|
| Financials | + | o | o | - |
| Consumer Discretionary | + | o | - | o |
| Technology | + | + | - | - |
| Industrials | + | + | o | - |
| Materials | o | - | + | - |
| Consumer Staples | - | o | + | + |
| Health Care | - | o | + | + |
| Energy | - | o | + | o |
| Telecommunication Services | - | o | o | + |
| Utilities | - | - | + | + |

Source: S&P Dow Jones Indices LLC. Past performance is no guarantee of future results. Table is provided for illustrative purposes. "+" means a sector typically outperforms in that business cycle, "-" means it underperforms, and "o" means the sector typically has market-neutral performance.

**EXHIBIT 4: SECTOR PERFORMANCE COMPARISON**




Source: S&P Dow Jones Indices LLC. Data from June 30, 2015, to June 30, 2016. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Generally speaking, the performance of equity market sectors has been correlated to economic stages of the business cycle. The business cycle is broken into four phases: early, mid, late, and recession. As the economy shifts from one stage of the business cycle to the next, different sectors tend to outperform or underperform others. The early phase of the cycle has historically benefitted interest-rate-sensitive sectors such as consumer discretionary, industrials, and financials. Meanwhile, telecommunication services, utilities, and energy have tended to underperform during the early phase due to inflationary pressures. The mid phase has boosted information technology, as corporations typically expand based on confidence of the economic recovery. Industrials, utilities, and materials have tended to lag more than other sectors in the mid phase of the cycle. During the late phase, when the business cycle matures, the energy and materials sectors have tended to outperform, as inflationary pressures build. Conversely, the information technology and consumer discretionary sectors have tended to suffer as consumers spend less. In the recession phase, less economically sensitive sectors such as consumer staples, utilities, telecommunication services, and health care have offered more stable returns; while interest-rate-sensitive sectors such as industrials, information technology, materials, and financials have underperformed.

Applying the sector performance trends of the business cycle to the corporate bond market requires factoring in the credit cycle, its respective stage, and its impact on fixed income securities. As opposed to the business cycle, the credit cycle is the expansion and contraction of access to credit over time. The key measure by which the credit cycle can be assessed is credit spreads: the extra compensation that a market participant receives from holding a corporate bond with default risk relative to a risk-free Treasury bond of similar maturity.

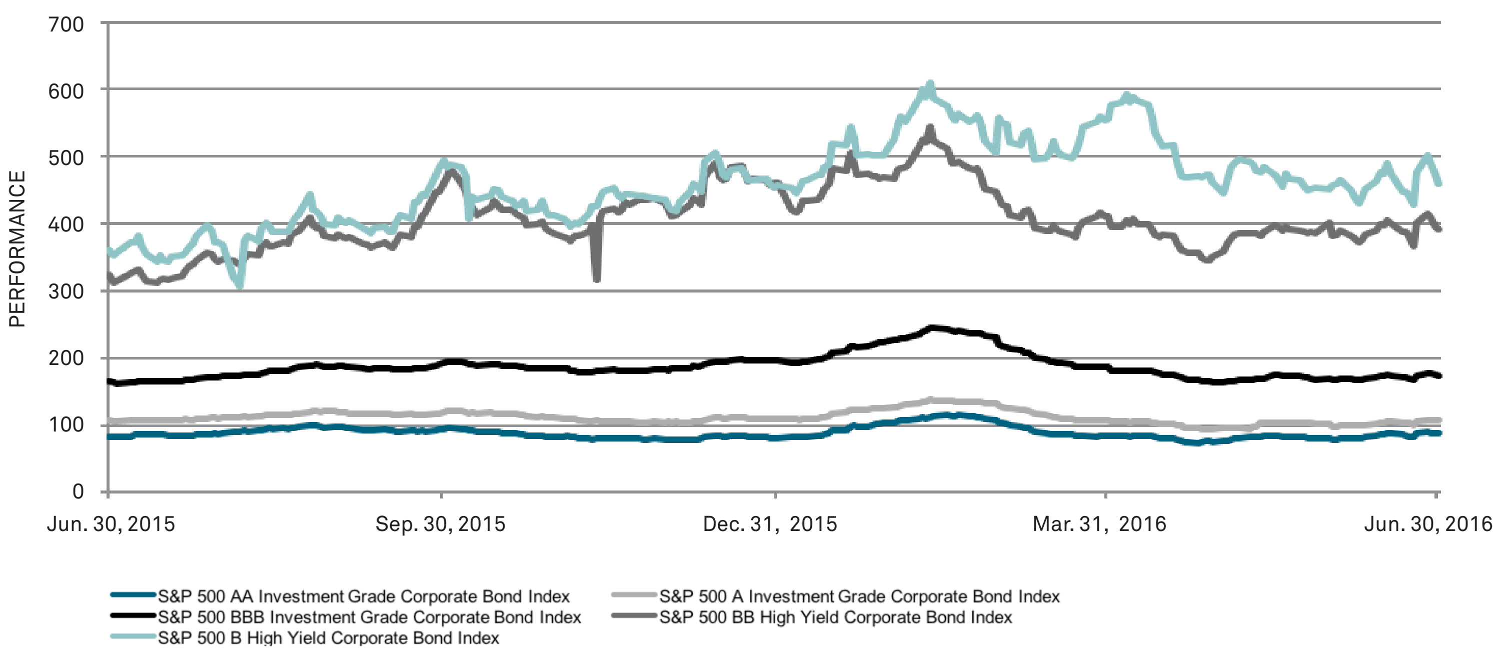
Using the credit rating subindices of the S&P 500 Corporate Bond Index, an analysis on credit spreads shows that for the majority of the one-year period, spreads gradually widened through April, with increased volatility in the high-yield market through June. Most market participants view the credit cycle as being a leading indicator of the business cycle. A widening of spreads would be indicative of an end to the current stage of the credit cycle and a predictor of a late phase or early recession stage of the business cycle.

Comparing sector performance of the two indices over the one-year period, all but three sectors (consumer staples, telecommunication services, and utilities) had better total return in the S&P 500 Bond Index than their respective counterparts in the S&P 500. Further, all 10 sectors of the S&P 500 Bond Index were positive for the period versus the six positive and four negative sector performance outcomes for the S&P 500. In both indices, consumer staples, telecommunication services, and utilities were the leading sectors.

Given the outperformance of these sectors in both indices, one could interpret this as a signal of late phase or early recessionary stage of the business cycle. Additionally, credit spreads in the high-yield space continue to exhibit volatility.

While each business cycle is unique and consists of different durations for each phase, it is equally important to know what sectors to avoid as it is to know which to favor.

**EXHIBIT 5: SECTOR PERFORMANCE COMPARISON**

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PERFORMANCE DISCLOSURE
S&P Dow Jones Indices defines various dates to assist our clients in providing transparency on their products. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live; index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public Web site or its datafeed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of Introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown. The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at www.spdji.com for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Backtested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities (or fixed income, or commodities) markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

Additionally, it is not possible to invest directly in an Index. The Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices maintains the Index and calculates the Index levels and performance shown or discussed, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. For example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US$ 10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US$ 1,650), the net return would be 8.35% (or US$ 8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US$ 5,375, and a cumulative net return of 27.2% (or US$ 27,200).