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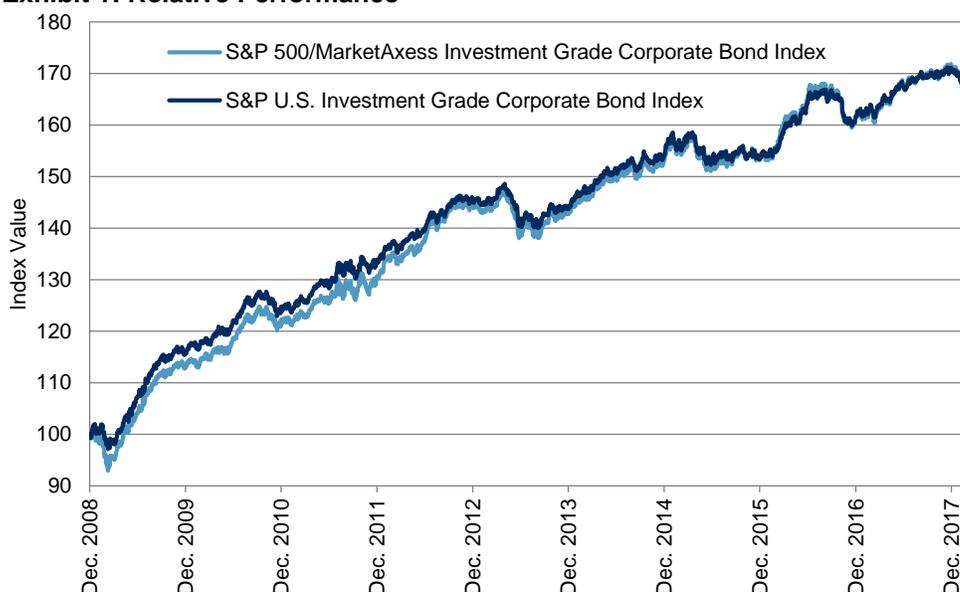
Rethinking the U.S. Investment-Grade Corporate Bond Market

Designed to track the largest and most frequently traded high-quality bonds issued by the well-known companies in the iconic [S&P 500®](#), the [S&P 500/MarketAxess Investment Grade Corporate Bond Index](#) provides a new way to look at the U.S. investment-grade corporate bond market.

EXECUTIVE SUMMARY

- The S&P 500/MarketAxess Investment Grade Corporate Bond Index consists of high-quality issuers from the S&P 500; companies with global revenue streams, strong balance sheets, and a demonstrated capacity to service debt payments.
- It seeks to track the largest-issued bonds by size—these issues tend to trade in larger volume and with higher frequency, hence offering greater depth of liquidity.
- The index offers a more efficient way to view the broader U.S. investment-grade corporate bond market by tracking fewer bonds while achieving similar or better performance than the benchmark.

Exhibit 1: Relative Performance



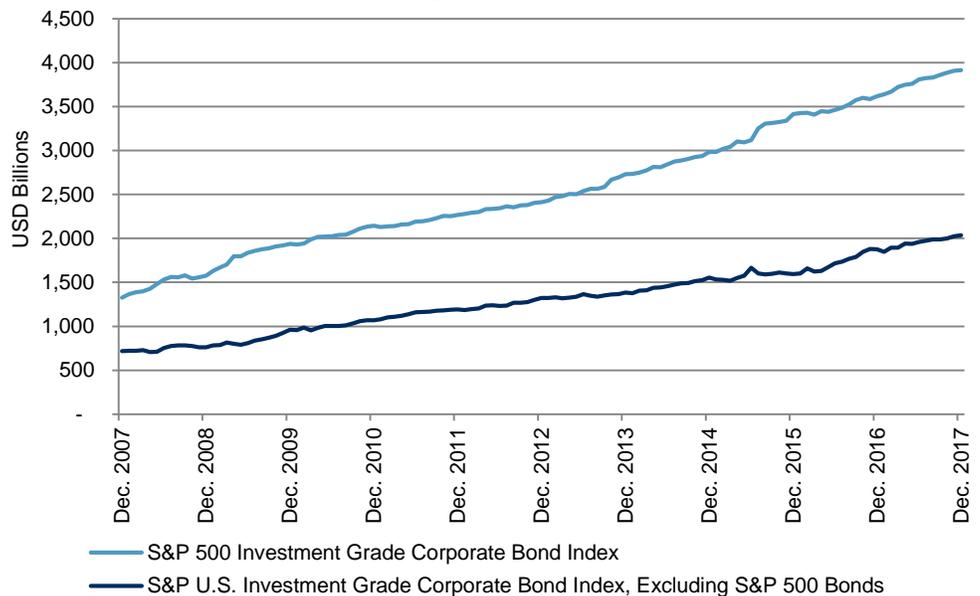
Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2017. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of the document for more information regarding the inherent limitations associated with back-tested performance.

EXPANSION OF U.S. CORPORATE CREDIT

S&P 500 companies have been at the forefront of the bond expansion and were responsible for approximately 70% of the increase in outstanding corporate debt.

The accommodative conditions created by low interest rates and strong investor demand have resulted in an explosive expansion of corporate credit since the financial crisis. Over the 10-year period beginning Dec. 31, 2007, the amount of U.S. corporate debt outstanding increased by over USD 4 trillion.¹ U.S. companies have tapped the bond markets for a number of purposes: efficient capital management (e.g., refinancings, share buybacks, dividends, etc.), increased capital expenditure (R&D, fixed assets, etc.), and to fund merger and acquisition activity. [S&P 500](#) companies have been at the forefront of this expansion and were responsible for approximately 70% of the increase in outstanding corporate debt over the period studied (see Exhibit 3).

Exhibit 2: Par Amount Outstanding – Investment-Grade Corporate Bond



Source: S&P Dow Jones Indices LLC and the Financial Industry Regulatory Authority (FINRA). Data as of Dec. 31, 2017. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of the document for more information regarding the inherent limitations associated with back-tested performance.

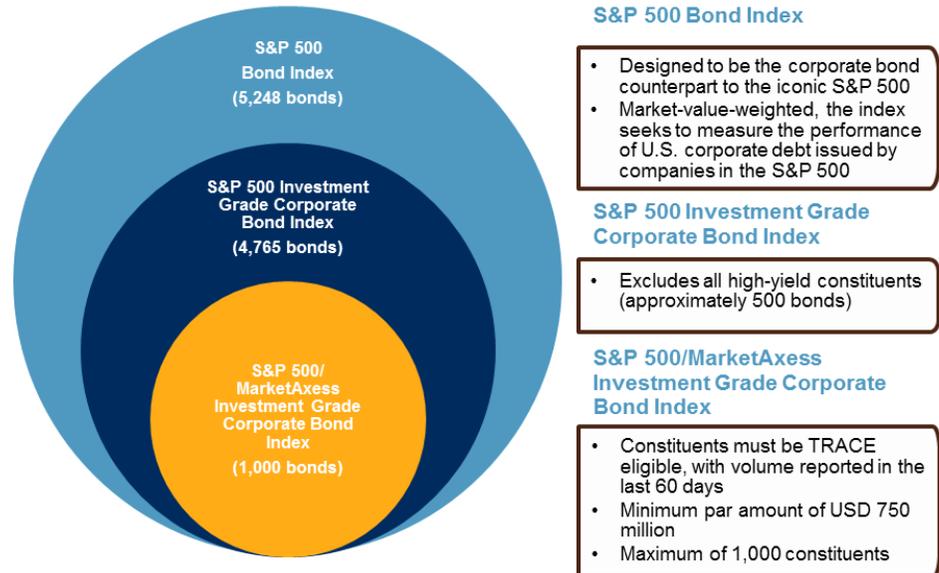
INDEX DESIGN

The [S&P 500/MarketAxess Investment Grade Corporate Bond Index](#) is a subindex of the larger [S&P 500 Investment Grade Corporate Bond Index](#). The index was created in an effort to identify the largest, most frequently traded, high-quality bonds issued by members of the S&P 500. The first step was to isolate only high-quality issuers. Then, additional criteria were applied, such as increasing the minimum par amount and requiring

¹ Based on data from Securities Industry and Financial Markets Association.

evidence of recent trade data.² The result is an index that is designed to track the largest, high-quality issues with improved relative liquidity versus issues in the broader U.S. investment-grade corporate bond market (see Exhibit 3).

Exhibit 3: Evolution of the S&P 500/MarketAxess Investment Grade Corporate Bond Index



Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

As U.S. corporations have taken on additional leverage, the significance of identifying companies with strong balance sheets, improving fundamentals, and financial flexibility has increased when looking for high-quality bond issuers.

HIGH-QUALITY REPRESENTATION

As U.S. corporations have taken on additional leverage, the significance of identifying companies with strong balance sheets, improving fundamentals, and financial flexibility has increased when looking for high-quality bond issuers. The [S&P 500/MarketAxess Investment Grade Corporate Bond Index](#) is composed of the same U.S. companies that qualify for the [S&P 500](#)—companies with large market capitalization and continued evidence of corporate profitability. In many respects, these are the companies driving the global economy (see Exhibit 4).

² Based on data from the Trade Reporting and Compliance Engine, which is a FINRA-developed vehicle that facilitates the mandatory reporting of over-the-counter secondary market transactions in eligible fixed income securities.

Exhibit 4: Top 20 Issuers in the S&P 500/MarketAxess Investment Grade Corporate Bond Index

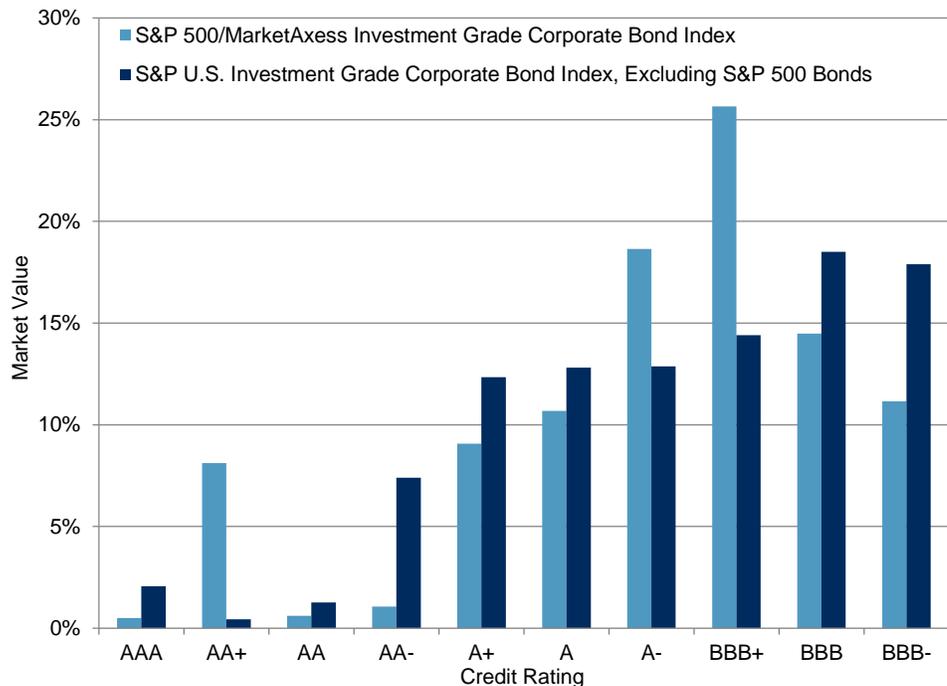
ISSUER	SECTOR	MARKET VALUE WEIGHT (%)	CREDIT RATING
JPMorgan Chase & Co.	Financials	4.52	A-
AT&T Inc.	Telecommunication Services	4.42	BBB+
Wells Fargo & Co	Financials	4.40	A-
Goldman Sachs Group Inc	Financials	4.27	BBB+
Verizon Communications Inc	Telecommunication Services	4.25	BBB+
Morgan Stanley	Financials	3.95	BBB
Apple Inc.	Information Technology	3.87	AA+
Microsoft Corporation	Information Technology	3.31	AAA
Bank of America Corp	Financials	3.31	A-
Citigroup Inc	Financials	3.11	BBB+
General Electric Company	Industrials	2.93	A
Oracle Corporation	Information Technology	2.41	AA-
Comcast Corporation	Consumer Discretionary	1.85	A-
General Motors Company	Consumer Discretionary	1.71	BBB
Ford Motor Company	Consumer Discretionary	1.68	BBB
AbbVie Inc	Health Care	1.64	A-
American Express Company	Financials	1.27	BBB+
Gilead Sciences, Inc.	Health Care	1.14	A
Allergan plc	Health Care	1.10	BBB
Cisco Systems, Inc.	Information Technology	1.04	AA-

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2017. Table is provided for illustrative purposes. Ratings have been presented in accordance with the S&P Global Ratings rating scale. S&P Dow Jones Indices incorporates ratings from Moody's, S&P Global Ratings, and Fitch in its indices where available; the lowest rating in each category is used to determine the ratings distribution.

The constituents in the [S&P 500/MarketAxess Investment Grade Corporate Bond Index](#) are some of the most well-capitalized bond issuers in the world. The result is an index that is heavily skewed toward higher-rated corporate creditors and offers a stronger credit profile than the broader U.S. investment-grade market (see Exhibit 5).

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Exhibit 5: Credit Rating Distribution – Most Conservative



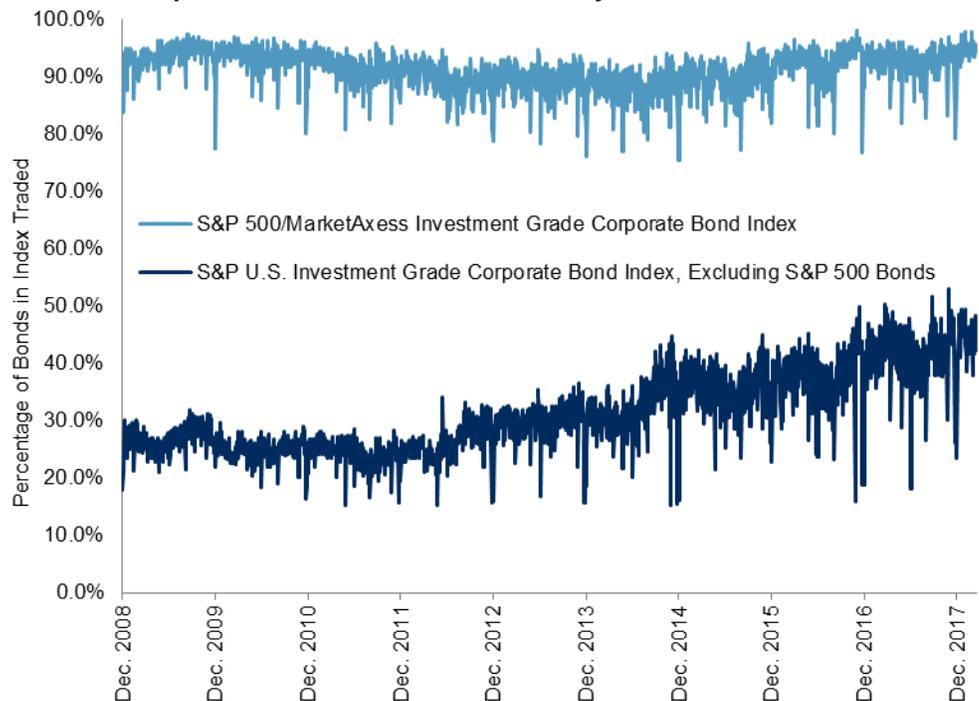
Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes. Ratings have been presented in accordance with the S&P Global Ratings rating scale. S&P Dow Jones Indices incorporates ratings from Moody’s, S&P Global Ratings, and Fitch in its indices where available; the lowest rating in each category is used to determine the ratings distribution.

DEEP LIQUIDITY AS EVIDENCED BY TRADE DATA

When analyzing daily activity over the past nine-year period, on average, 92% of the S&P 500/MarketAxess Investment Grade Corporate Bond Index constituents traded each day.

As previously discussed, the design of the [S&P 500/MarketAxess Investment Grade Corporate Bond Index](#) incorporates bond size and trade volume as additional eligibility criteria. Issues with high minimum par amounts are integral to the index construction, as larger-sized bonds tend to trade in relatively larger volume and with greater frequency. The rationale for trade volume criteria is fairly straightforward: the more frequently a bond trades, the deeper the liquidity. Additionally, bonds that show current evidence of high volume tend to continue to trade with high volume. When analyzing daily activity over the past nine-year period, on average, 92% of the S&P 500/MarketAxess Investment Grade Corporate Bond Index constituents traded each day (see Exhibit 6). Comparatively, only 34% of U.S. investment-grade corporate bonds issued by non-S&P 500 companies traded each day over the same time period.

Exhibit 6: Proportion of Bonds Traded Each Day



Source: S&P Dow Jones Indices LLC and FINRA. Data as of Dec. 31, 2017. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of the document for more information regarding the inherent limitations associated with back-tested performance.

CONCLUSION

By tracking the bonds issued by the household names of the S&P 500, the index offers high-quality exposure to the most widely followed corporations in the world.

The [S&P 500/MarketAxess Investment Grade Corporate Bond Index](#) seeks to provide efficient representation of the broad-based U.S. investment-grade corporate bond market. By tracking the bonds issued by the household names of the [S&P 500](#), the index offers high-quality exposure to the most widely followed corporations in the world. Additionally, the index constituents have large issue sizes and high degrees of reported trading activity—both of which are empirical characteristics of bonds offering greater relative liquidity.

PERFORMANCE DISCLOSURE

The S&P 500 Investment Grade Corporate Bond Index was launched on July 8, 2015. The S&P U.S. Investment Grade Corporate Bond Index was launched on July 31, 2017. The S&P 500/MarketAxess Investment Grade Corporate Bond Index was launched on Jan. 9, 2017. 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.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. 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 website 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. Back-tested 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, 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.

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