

CONTRIBUTORS

Phillip Brzenk, CFA
Director
Global Research & Design
phillip.brzenk@spglobal.com

Rachel Du
Senior Analyst
Global Research & Design
rachel.du@spglobal.com

Aye M. Soe, CFA
Managing Director
Global Research & Design
aye.soe@spglobal.com

Hong Xie, CFA
Director
Global Research & Design
hong.xie@spglobal.com

Introducing the S&P U.S. Preferred Stock Low Volatility High Dividend Index

INTRODUCTION TO PREFERRED STOCKS

What Are Preferred Stocks?

Preferred stocks are hybrid securities, blending characteristics of stocks and bonds. They sit between common stocks and bonds in a company's capital structure, thus having a higher claim on a company's assets and earnings than common stocks, while having a lower claim than bonds (see Exhibit 1).

Exhibit 1: Preferred Stocks in Corporate Capital Structure

ASSET TYPE	CLASS	SENIORITY
Debt	Secured Debt	↓
	Unsecured Senior Debt	
	Unsecured Subordinate Debt	
Hybrid	Preferred Stocks	
Equity	Common Stocks	

Source: S&P Dow Jones Indices LLC. Table is provided for illustrative purposes.

Like common stocks, preferred stocks represent ownership in a company and are listed as equity in a company's balance sheet. However, certain characteristics differentiate preferred stocks from common stocks. First, preferred stocks provide income to investors in the form of dividend payments, typically providing higher yields than common stocks. Second, preferred shareholders lack voting rights, resulting in less influence on corporate policy. While common stock shares offer investors the potential for share price and dividend increases, investors generally look to preferred stocks for their high-yielding, stable dividend payments.

Preferred stocks are issued at a fixed par value, similar to bonds, with most paying a scheduled fixed dividend. Preferred stocks are rated by independent credit rating agencies. The rating is generally lower than bonds since preferred stocks offer fewer guarantees and have a lower claim on assets. While a company risks defaulting if it misses a bond

coupon payment, it can withhold a preferred dividend payment without facing default risk.¹

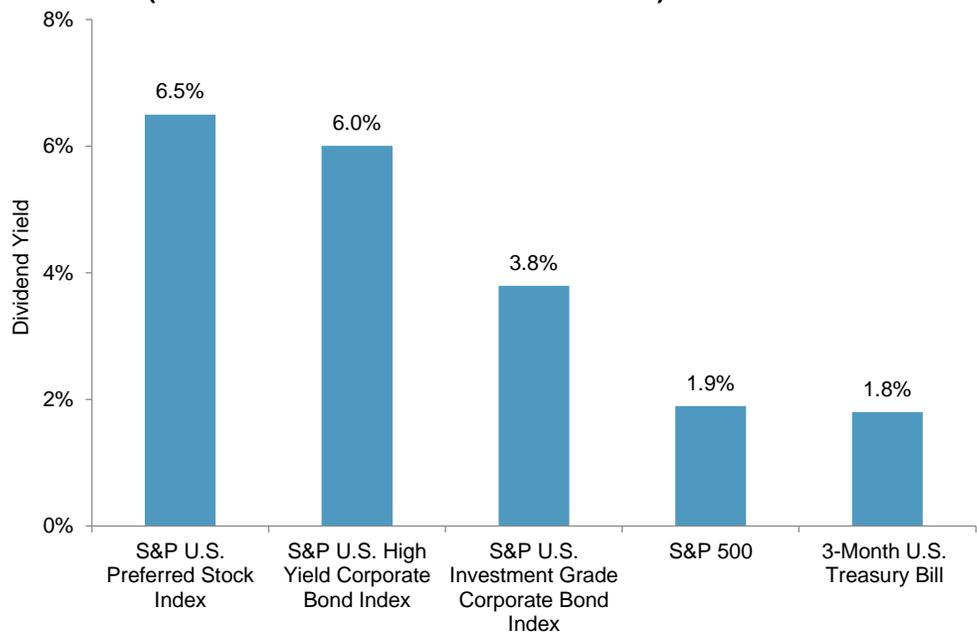
Benefits Offered by Preferred Securities

Preferred stocks offer investors visibility in dividend payments, high yield with a tax advantage, and diversification benefits compared with common stocks.

Visibility in Dividend Payments: Preferred stocks offer investors greater assurance than common shares in terms of knowing the dividend amount on a fixed schedule. Since preferred securities are higher in seniority than common equities, dividends must be paid to preferred shareholders before common shareholders. In times of poor performance, a company will be more likely to either cut or omit common dividends before preferred dividends.

Higher Yield With Tax Advantage: Historically, preferred stocks have offered higher yields than other asset classes, including money market accounts, common stocks, and corporate bonds (see Exhibit 2). Preferreds also have a tax advantage over bonds in the U.S., as many preferred dividends are qualified to be taxed as capital gains as opposed to ordinary income for bond coupon payments.

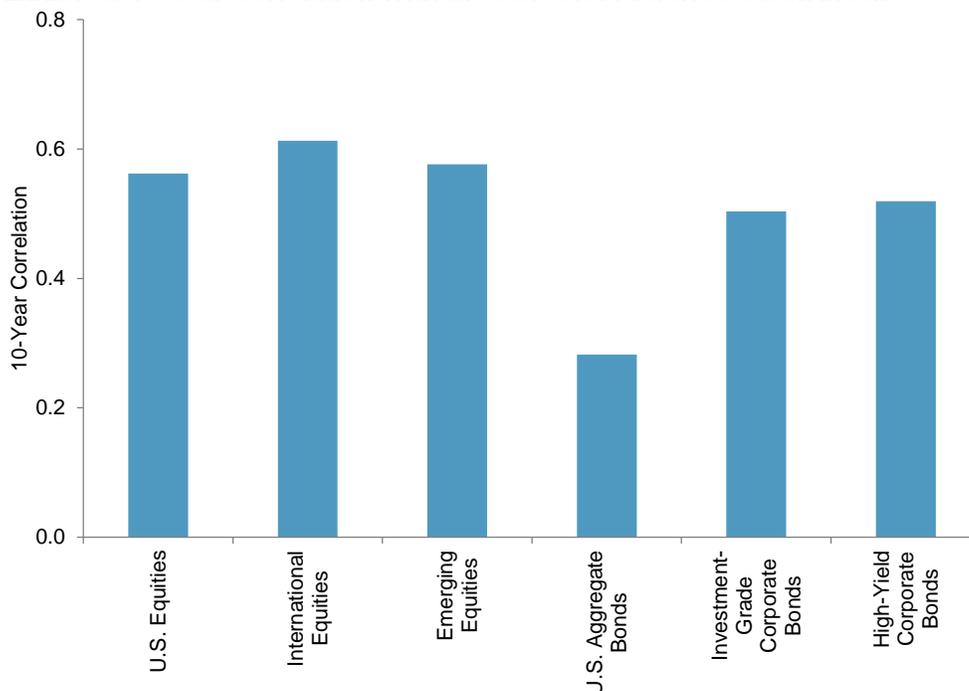
Exhibit 2: Preferred Stocks Have Offered Higher Yields Than Common Stocks and Bonds (Dividend Yield and Bond Yield-to-Worst)



Source: S&P Dow Jones Indices LLC and Bloomberg. Data as of April 30, 2018. Chart is provided for illustrative purposes.

Diversification: Preferred stocks tend to have low correlations with other asset classes (see Exhibit 3), thus providing potential portfolio-diversification and risk-reduction benefits.

¹ For more information on preferred stocks and the S&P U.S. Preferred Stock Index, please see Horan, Kevin, "The ABCs of U.S. Preferreds," S&P Dow Jones Indices LLC, August 2017, and Brzenk, Phillip, and Aye M. Soe, "Digging Deeper Into the U.S. Preferred Market," S&P Dow Jones Indices LLC, October 2015.

Exhibit 3: 10-Year Correlation With the S&P U.S. Preferred Stock Index

Source: S&P Dow Jones Indices LLC. Data from April 30, 2008, to April 30, 2018. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance. Returns for U.S. equities, international equities, and emerging equities are represented by the total returns of the S&P 500, S&P Developed Ex U.S. LargeMidCap, and S&P Emerging LargeMidCap, respectively, in USD. Returns for U.S. aggregate bonds, high-yield corporate bonds, and investment-grade corporate bonds are represented by the total returns of the S&P U.S. Aggregate Bond Index, S&P U.S. High Yield Corporate Bond Index, and S&P U.S. Investment Grade Corporate Bond Index, respectively.

Unique Characteristics of Preferred Stocks

Historically, dividend income has contributed significantly to preferred stock total return.

Historically, dividend income has contributed significantly to preferred stock total return. From its inception in 2003 until April 30, 2018, the [S&P U.S. Preferred Stock Index](#) generated a cumulative total return of 113%, while its price return was -23%. This is in contrast with the [S&P 500®](#), for which the price return contributed 64% of the total return (259%) for the same time period.

On the other hand, preferred stocks generally exhibit higher volatility than common stocks. Since its inception, the annualized return volatility of the S&P U.S. Preferred Stock Index was 16.2%, compared with 13.3% for the S&P 500. Given this, a strategy built to enhance dividend yield while mitigating downside risk could result in a favorable risk/return profile.

The [S&P 500 Low Volatility High Dividend Index](#) incorporates a low volatility screen to a high-dividend-yield common stock portfolio as a quality measure and has achieved higher dividend yield and risk-adjusted returns historically. In this study, we applied a similar methodology to the U.S. preferred stock universe which results in the [S&P U.S. Preferred Stock Low Volatility High Dividend Index](#), as introduced in the next section.

S&P U.S. PREFERRED STOCK LOW VOLATILITY HIGH DIVIDEND INDEX

Index Strategy

The S&P U.S. Preferred Stock Low Volatility High Dividend Index implements the strategy that combines high-dividend investing with a low volatility approach in preferred stocks to achieve high income with mitigated downside risk.

The [S&P U.S. Preferred Stock Low Volatility High Dividend Index](#) implements the strategy that combines high-dividend investing with a low volatility approach in preferred stocks in an effort to achieve high income with mitigated downside risk. It is designed to measure the performance of high-dividend-yielding preferred stocks among the historically least volatile constituents of the [S&P U.S. Preferred Stock Index](#).

From the S&P U.S. Preferred Stock Index, the selection of index constituents is a two-step process.

1. Preferred stocks in the universe are ranked by realized volatility. The 75% of the securities with the lowest volatility form the low volatility universe.
2. In the low volatility universe, preferred stocks are ranked by indicated yield. The 50% of securities with the highest indicated yield are selected to form the S&P U.S. Preferred Stock Low Volatility High Dividend Index.

The index constituents are weighted by indicated yield, with issuer weight capped at 5% at each rebalancing.²

Index Performance

Exhibit 4 presents performance statistics of the index alongside comparative indices. Compared with the S&P U.S. Preferred Stock Index, the S&P U.S. Preferred Stock Low Volatility High Dividend Index showed improved return and consistent volatility reduction across mid- and long-term investment horizons (three years out).

² For the complete methodology, please refer to the [S&P U.S. Preferred Stock Low Volatility High Dividend Index Methodology](#).

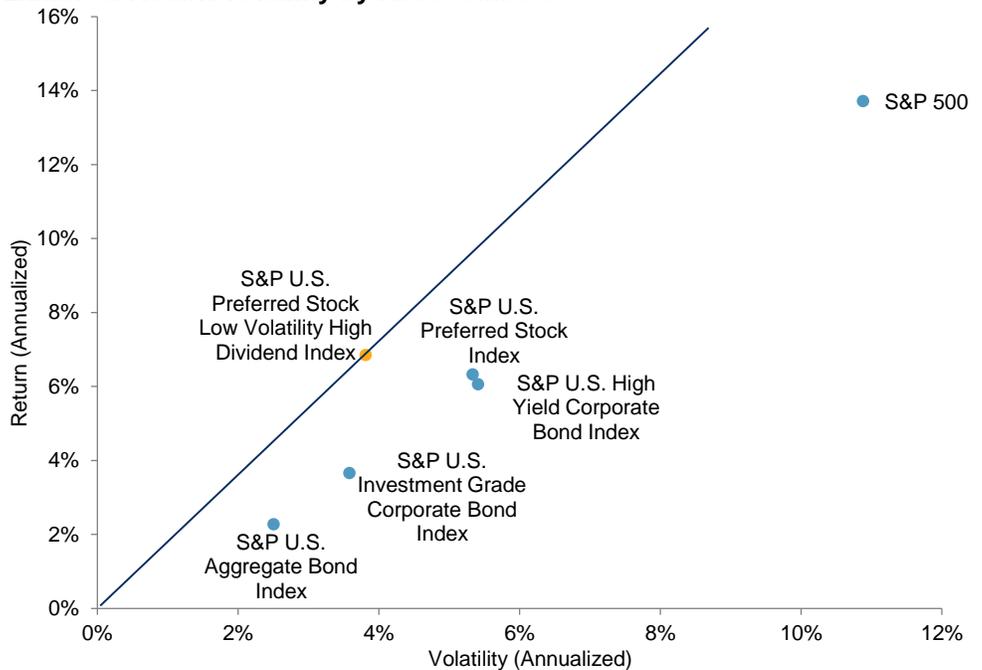
Compared with the S&P U.S. Preferred Stock Index, the S&P U.S. Preferred Stock Low Volatility High Dividend Index showed improved return and consistent volatility reduction across mid- and long-term investment horizons

Exhibit 4: Risk/Return Profiles						
PERIOD	S&P U.S. PREFERRED STOCK LOW VOLATILITY HIGH DIVIDEND INDEX	S&P U.S. PREFERRED STOCK INDEX	S&P 500	S&P U.S. HIGH YIELD CORPORATE BOND INDEX	S&P U.S. INVESTMENT GRADE CORPORATE BOND INDEX	S&P U.S. AGGREGATE BOND INDEX
ANNUALIZED RETURN (%)						
One Year	3.5	1.3	13.3	3.2	0.6	-0.1
Three Years	4.8	4.1	10.6	4.7	2.0	1.0
Five Years	5.8	4.8	13.0	4.5	2.3	1.3
Since Inception	6.8	6.1	13.7	6.3	3.7	2.3
ANNUALIZED VOLATILITY (%)						
One Year	2.9	2.3	8.5	2.2	2.7	2.0
Three Years	3.2	4.2	10.3	5.5	3.3	2.4
Five Years	3.4	4.2	9.9	5.1	3.6	2.6
Since Inception	3.8	5.4	10.9	5.3	3.6	2.5
RETURN/VOLATILITY						
One Year	1.2	0.5	1.6	1.4	0.2	-0.1
Three Years	1.5	1.0	1.0	0.9	0.6	0.4
Five Years	1.7	1.1	1.3	0.9	0.6	0.5
Since Inception	1.8	1.1	1.3	1.2	1.0	0.9
MAXIMUM DRAWDOWN (%)						
Since Inception	-2.8	-8.0	-16.3	-9.3	-4.5	-3.3

Source: S&P Dow Jones Indices LLC. Data as of April 30, 2018. Since inception calculation uses Oct 29, 2010, which is the first month-end date of the S&P U.S. Preferred Stock Low Volatility High Dividend Index since its base date. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Exhibit 5 charts the return and volatility across asset classes since index inception. The slope of data points represents the ratio of return/volatility. The [S&P U.S. Preferred Stock Low Volatility High Dividend Index](#) exhibited the highest return/volatility ratio—i.e., the highest return for each unit of volatility.

Exhibit 5: Return/Volatility by Asset Classes

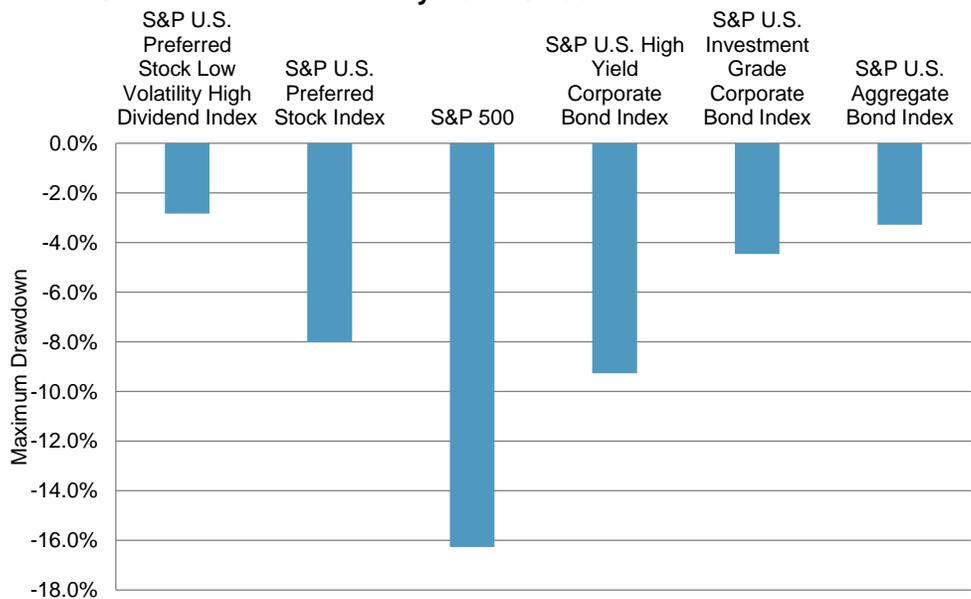


Source: S&P Dow Jones Indices LLC. Data from Oct. 29, 2010, to April 30, 2018. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Historically, the [S&P U.S. Preferred Stock Low Volatility High Dividend Index](#) has also mitigated downside risk. It exhibited the least maximum drawdown across all indices in the comparison (see Exhibit 6).

The S&P U.S. Preferred Stock Low Volatility High Dividend Index exhibited the highest ratio of return to volatility and the least maximum drawdown across all indices in the comparison.

Exhibit 6: Maximum Drawdown by Asset Class



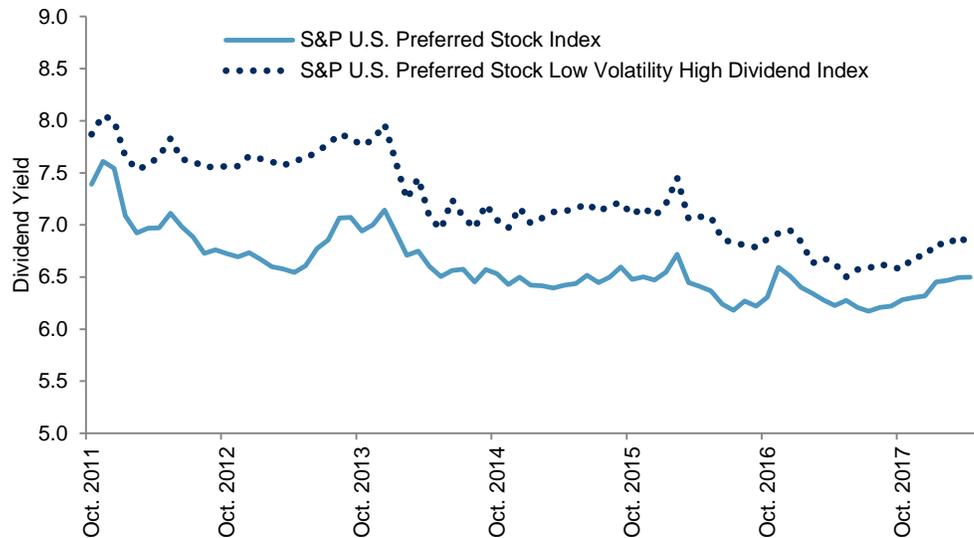
Source: S&P Dow Jones Indices LLC. Data from Oct. 29, 2010, to April 30, 2018. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Index Dividend Yield

The S&P U.S. Preferred Stock Low Volatility High Dividend Index has offered higher dividend yield than the S&P U.S. Preferred Stock Index since its inception.

The [S&P U.S. Preferred Stock Low Volatility High Dividend Index](#) has offered higher dividend yield than the [S&P U.S. Preferred Stock Index](#) since its inception. The index had a median dividend yield of 7.15%, while the benchmark had a median dividend yield of 6.52% for the period. Historically, the yield differential between the two indices ranged from 0.22% to 1.08%, with a median difference of 0.62%.

Exhibit 7: Dividend Yield



Source: S&P Dow Jones Indices LLC. Data from Oct. 30, 2011, to April 30, 2018. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

CONCLUSION

Since the majority of total return in preferred stocks is sourced from dividend payments and not price appreciation, a strategy that incorporates high dividend yield and low volatility to construct a preferred stock portfolio can improve returns while mitigating downside risk, and therefore result in a favorable risk/return profile. The S&P U.S. Preferred Stock Low Volatility High Dividend Index implements such a strategy and is designed to measure the performance of high-dividend-yielding preferred stocks among the historically least-volatile constituents of the S&P U.S. Preferred Stock Index. Back-tested results show that the incorporation of low volatility and yield screening of a universe of preferred stocks can result in both 1) lower volatility and 2) higher dividend yield.

S&P DJI RESEARCH CONTRIBUTORS		
Charles Mounts	Global Head	charles.mounts@spglobal.com
Jake Vukelic	Business Manager	jake.vukelic@spglobal.com
GLOBAL RESEARCH & DESIGN		
AMERICAS		
Aye M. Soe, CFA	Americas Head	aye.soe@spglobal.com
Phillip Brzenk, CFA	Director	phillip.brzenk@spglobal.com
Smita Chirputkar	Director	smita.chirputkar@spglobal.com
Rachel Du	Senior Analyst	rachel.du@spglobal.com
Bill Hao	Director	wenli.hao@spglobal.com
Qing Li	Director	qing.li@spglobal.com
Berlinda Liu, CFA	Director	berlinda.liu@spglobal.com
Maria Sanchez	Associate Director	maria.sanchez@spglobal.com
Kelly Tang, CFA	Director	kelly.tang@spglobal.com
Hong Xie, CFA	Director	hong.xie@spglobal.com
APAC		
Priscilla Luk	APAC Head	priscilla.luk@spglobal.com
Utkarsh Agrawal, CFA	Associate Director	utkarsh.agrawal@spglobal.com
Liyu Zeng, CFA	Director	liyu.zeng@spglobal.com
Akash Jain	Associate Director	akash.jain@spglobal.com
EMEA		
Sunjiv Mainie, CFA, CQF	EMEA Head	sunjiv.mainie@spglobal.com
Leonardo Cabrer, PhD	Senior Analyst	leonardo.cabrer@spglobal.com
Andrew Innes	Associate Director	andrew.innes@spglobal.com
INDEX INVESTMENT STRATEGY		
Craig J. Lazzara, CFA	Global Head	craig.lazzara@spglobal.com
Fei Mei Chan	Director	feimei.chan@spglobal.com
Tim Edwards, PhD	Managing Director	tim.edwards@spglobal.com
Anu R. Ganti, CFA	Director	anu.ganti@spglobal.com
Hamish Preston	Senior Associate	hamish.preston@spglobal.com
Howard Silverblatt	Senior Index Analyst	howard.silverblatt@spglobal.com

PERFORMANCE DISCLOSURE

The S&P U.S. Preferred Stock Low Volatility High Dividend Index was launched on April 16, 2018. The S&P U.S. High Yield Corporate Bond Index was launched on December 15, 2016. The S&P U.S. Investment Grade Corporate Bond Index was launched on July 31, 2017. The S&P U.S. Aggregate Bond Index was launched on July 15, 2014. 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.

The Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices LLC 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. As a simple 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).

GENERAL DISCLAIMER

Copyright © 2018 by S&P Dow Jones Indices LLC, a part of S&P Global. All rights reserved. Standard & Poor's®, S&P 500® and S&P® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"), a subsidiary of S&P Global. Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"). Trademarks have been licensed to S&P Dow Jones Indices LLC. Redistribution, reproduction and/or photocopying in whole or in part are prohibited without written permission. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, Dow Jones, S&P or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. All information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties. Past performance of an index is not a guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other vehicle. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Dow Jones Indices keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P Dow Jones Indices may have information that is not available to other business units. S&P Dow Jones Indices has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.