

Conviction, Confidence, and Courage An Allegory

Contributors

Anu R. Ganti, CFA

Senior Director

Index Investment Strategy

anu.ganti@spglobal.com

Craig J. Lazzara, CFA

Managing Director

Global Head

Index Investment Strategy

craig.lazzara@spglobal.com

“Courage is reckoned the greatest of all virtues; because, unless a man has that virtue, he has no security for preserving any other.”

– Samuel Johnson¹

EXECUTIVE SUMMARY

Never wish to show courage, a wise man once counseled; courage can be displayed only in circumstances where one’s natural instinct is to be afraid, and fear is an unpleasant emotion. This principle, with obvious qualifications, applies to investment management. **Successful portfolio management can require holding positions when one’s natural instinct is to sell.**

ONCE UPON A TIME

It is Dec. 31, 1999. You are a professional portfolio manager pondering long-term stock selections for your clients. You share Warren Buffet’s view that “Our favorite holding period is forever,”² and you decide to ask each of your four favorite Wall Street forecasters to recommend a stock to hold indefinitely. They obligingly recommend four different names, denoted for now as Stocks A through D, which you carefully consider.

You’re well aware that some recommendations work out better than others. What might cause you to lose confidence in any of these four stocks? Since you will be buying the stocks in the expectation that they will go up, and in fact will outperform the market, a period of disappointing returns might weaken your determination to hold forever.

While contemplating all this, you have been holding a very old bottle of wine that a friend gave you for your last birthday. You open the bottle, thinking that a taste might help resolve your perplexity. As you remove the cork, suddenly vapor spews out and a genie emerges. In gratitude for your having released him, he offers you a wish.

Of course, what you wish is to know which of the four stocks will be the best performer for the next 20 years. Unfortunately, our genie has been corked up with the wine for a bit too long. He knows a good bit about volatility but very little about the returns of individual stocks. The genie

¹ See Boswell’s *Life*, April 5, 1775.

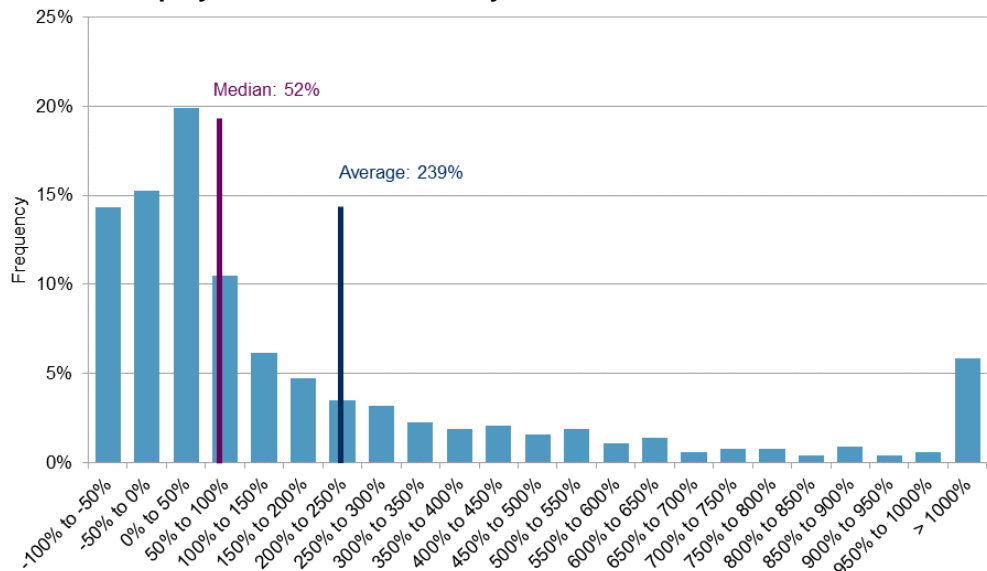
² See, *inter alia*, https://www.brainyquote.com/quotes/warren_buffett_129835.

does know that the market will go up in the next 20 years, and that individual stock returns will be highly skewed, as Exhibit 1 illustrates. The median stock in the [S&P 500®](#) will appreciate by 52%, well below the average appreciation of 239%. Only 267 of the 1,010 stocks that will appear in the S&P 500 for the next 20 years will beat the average.³

The genie does know that the market will go up in the next 20 years, and that individual stock returns will be highly skewed.

Having been made aware that a relatively small number of stocks will determine your success or failure, you're happy to have whatever specific information you can get, and ask the genie to tell you what he knows about the four recommendations.

Exhibit 1: Equity Returns Are Positively Skewed



The median stock in the S&P 500 will appreciate by 52%, well below the average appreciation of 239%.

Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1999, through Dec. 31, 2019. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

IN VINO VERITAS

Although our genie can't tell us which stock will be the best performer, nor indeed whether any of them will outperform the market averages, he does know something about the frequency of outperformance. Suppose we buy each stock at Dec. 31, 1999's closing price and hold for the next 20 years. Those 20 years will encompass 5,031 trading days. On how many of those days will the cumulative return of each position exceed the cumulative return of the S&P 500? Exhibit 2 tells us the answer.

Although our genie can't tell us which stock will be the best performer, he does know something about the frequency of outperformance.

³ See also Bessembinder, Hendrik, "Do Stocks Outperform Treasury Bills?" May 2018. Yes, this article hadn't been written in December 1999. You accepted the genie; why are you quibbling about a date?

Exhibit 2: Cumulative Returns Will Beat the Market Most of the Time

	STOCK A	STOCK B	STOCK C	STOCK D
Days Outperforming (%)	79%	62%	67%	95%

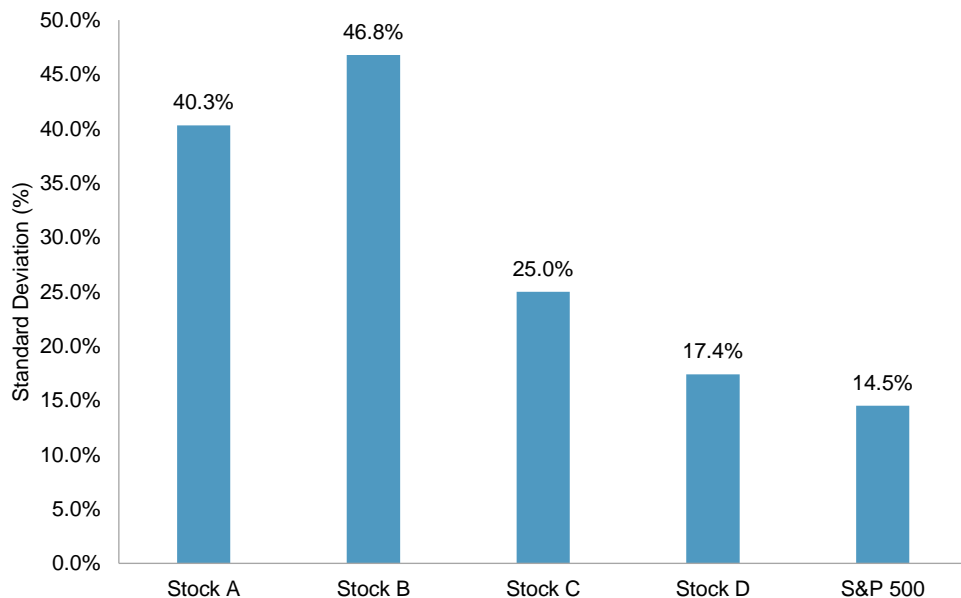
Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1999, through Dec. 31, 2019. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

The genie next reveals the future volatility of each stock, measured simply by the standard deviation of monthly returns.

This is a great comfort to you, of course, since you realize that regardless of which stock you buy, when your clients look at their since-inception returns, they will usually see outperformance. Stock D is particularly impressive, and A also stands out.

The genie next reveals the future volatility of each stock, measured simply by the standard deviation of monthly returns. This revelation is pictured in Exhibit 3. All four will be more volatile than the S&P 500, with standard deviations ranging from 17.4% (stock D) to 46.8% (stock B).

Exhibit 3: Each Stock Is More Volatile than the S&P 500



Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1999, through Dec. 31, 2019. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

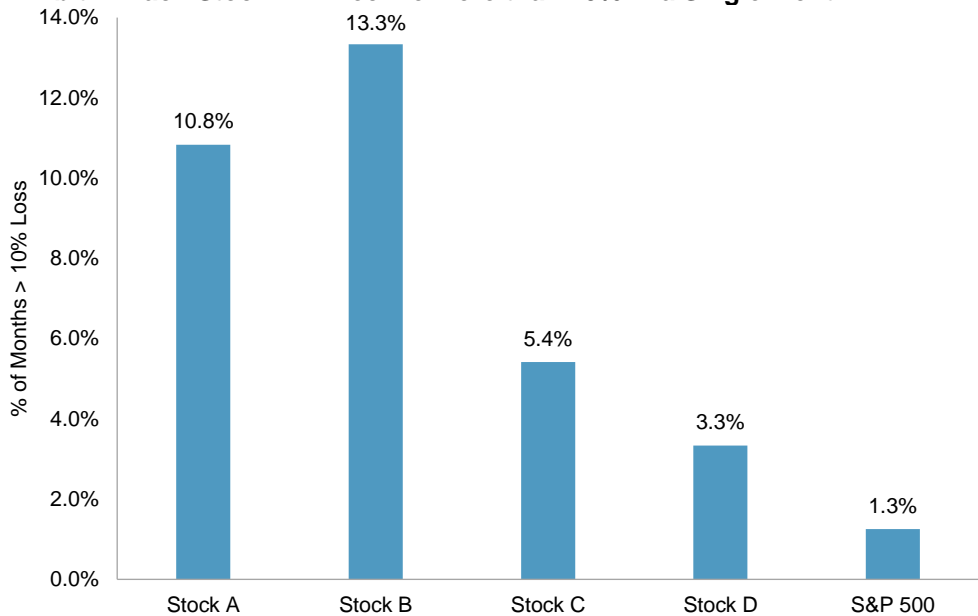
All four stocks will be more volatile than the S&P 500.

You're a bit nervous about the high volatility level of A and B, but of course you know that most stocks are more volatile than the market as a whole; these data don't cause you to lose confidence in any of the forecasters.

The genie next tells you about the frequency of large losses. Will any of the four stocks decline more than 10% in a single month? Exhibit 4 shows that they all will.

Exhibit 4: Each Stock Will Decline More than 10% in a Single Month

Stocks A and B are substantially more likely to have large one-month losses than are stocks C and D.



The genie reminds you that some loss periods don't correspond neatly to a single calendar month.

Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1999, through Dec. 31, 2019. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Stocks A and B are substantially more likely to have large one-month losses than are stocks C and D, as we might have predicted from Exhibit 3's standard deviation data. You remain confident in the four stocks, although perhaps a little less about stocks A and (especially) B.

CUMULATIVE LOSSES

The S&P 500 will, at some point in the next 20 years, decline by just over 50%.

The genie reminds you that some loss periods don't correspond neatly to a single calendar month. He then presents Exhibit 5, which shows the maximum peak-to-trough loss each of the stocks will endure.

Exhibit 5: Maximum Drawdowns Can Be Substantial

	STOCK A	STOCK B	STOCK C	STOCK D	S&P 500
Worst Peak-to-Trough Loss	-74.6%	-73.5%	-51.5%	-25.6%	-50.9%

Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1999, through Dec. 31, 2019. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

The S&P 500 will, at some point in the next 20 years, decline by just over 50%. Stock D will be more stable than the market, while stocks A and B will experience even larger drawdowns.

Stock D will be more stable than the market, while stocks A and B will experience even larger drawdowns.

And, the genie reminds you, the drawdown story might feel even more harrowing than Exhibit 5 reveals. Suppose your clients invest \$1,000 in each stock. What's the minimum value they'll have in each position?

Exhibit 6: Each Stock Incurs Substantial Declines

	STOCK A	STOCK B	STOCK C	STOCK D	S&P 500
Minimum Value of \$1,000 Investment at Dec. 31, 1999	\$275	\$78	\$549	\$842	\$575

Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1999, through Dec. 31, 2019. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Even if you're still confident that each stock will be worth more than \$1,000 over the long run, before you get to the long run there may be some difficult client meetings.

The \$1,000 your clients might invest in Stock A, in other words, will one day be worth only \$275, as Exhibit 6 illustrates. \$1,000 invested in Stock B will one day be worth only \$78. Stocks C and D also experience declines, but of much less severity, which is also true for the market as a whole. Even if you're still confident that each stock will be worth more than \$1,000 over the long run, **before you get to the long run there may be some difficult client meetings.**

THE COURAGE OF YOUR FORECASTERS' CONVICTIONS

Stocks A and B, by every measure, seem substantially more volatile than Stocks C and D. Knowing this, are you still willing to buy A and B for your clients? You know that stocks fluctuate, but you also remember that most stocks underperform the market over time.⁴ When the \$1,000 you invested in Stock A is worth only \$275, will you still have faith in the forecaster who recommended it? **More importantly, will your clients still have faith in you?** It would be entirely understandable if, at some point between \$1,000 and \$275, you decided that the forecaster was, if not wrong, at least no longer worth the trouble of defending.⁵

Knowing what you now know about the risk of the recommendations, would you be willing to buy and hold all four names?

Knowing what you now know about the risk of the four recommendations, would you be willing to buy and hold all four names? If not, which ones would you eliminate?

⁴ See Ganti, Anu R. and Craig J. Lazzara, "[Shooting the Messenger](#)," S&P Dow Jones Indices, December 2017, pp. 9-10.

⁵ Stock market forecasting is notoriously difficult, as any reader of our [SPIVA®](#) reports will recognize.

[This page intentionally left blank.]

20 YEARS LATER – THE NAMES REVEALED

It's now Dec. 31, 2019, 20 years after your interactions with the forecasters and the genie.

It's now Dec. 31, 2019, 20 years after your interactions with the forecasters and the genie. It's time to evaluate how well each of the forecasters did, and how well you would have done to have taken their advice. Exhibit 7 tells us the actual identity of the four stocks and their total return for the 20 years ended Dec. 31, 2019.

Exhibit 7: Actual Names and Actual Performance

STOCKS	ACTUAL NAME	TOTAL RETURN (CAGR)
Stock A	Apple Inc.	25.4%
Stock B	Amazon	17.3%
Stock C	IBM	3.1%
Stock D	Exxon	5.6%
Benchmark	S&P 500	6.1%

Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1999, through Dec. 31, 2019. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

On every risk dimension, the two best performers were the more volatile holdings.

Stock A, Apple Inc., was the best performer in the S&P 500 for the 20 years in our study, and Amazon (stock B) wasn't far behind. Stocks C and D, better known as IBM and Exxon, both underperformed the market. On every risk dimension, **the two best performers were the more volatile holdings**. This is important, because **volatility tests an investor's conviction**—if every stock you bought always went up, you'd never wonder whether you'd made a mistake. When you're losing money on what you thought would be a winner, doubts inevitably creep in. What Exhibit 7 and the earlier volatility evidence suggest is that **sometimes the stocks you will have most wanted to own are the hardest to hold**.

This psychological difficulty is compounded for professional asset managers.

This psychological difficulty is compounded for professional asset managers. You might well be willing to take a flutter on A and B with your own money, but you're also a fiduciary for your clients, and of course your firm's compliance and risk managers will be looking over your shoulder. Even if you remain confident in A's and B's long-term prospects, you may also believe that convincing your clients to share that confidence is an insurmountable task. **"Sometimes you sell your duds so you don't have to talk about them anymore**—to the firm's risk manager or to your clients."⁶ This is why "professional investors tend to move the fastest when a market suddenly turns...The biggest risk they face is being so out-of-step with the market that their clients fire them."⁷

⁶ ["The agonies of stock-picking in a falling market,"](#) *The Economist*, March 21, 2020. Emphasis added.

⁷ Zwig, Jason, ["The Pros Have to Sell Stocks Now. You Don't,"](#) *Wall Street Journal*, Feb. 26, 2020.

THE MORAL OF THE STORY

The difficulties faced by active managers are not coincidental—they arise for good reasons, and are therefore likely to persist.

The challenge for an active manager is not limited to identifying the relatively small number of long-term winners.

Stock selection is difficult. Data from many sources over many years have demonstrated that successful active management is rare. A number of reasons—the professionalization of investment management, high costs, etc.—help to explain the persistent failure of active management to produce positive relative returns.⁸ The difficulties faced by active managers, in other words, are not coincidental—they arise for good reasons, and are therefore likely to persist.

This paper's simple example adds to our understanding of the challenges of active management. Over long horizons, most stocks underperform the market as a whole. The challenge for an active manager is not limited to identifying the relatively small number of long-term winners. **Success also depends on holding on to them when they go through painful periods of underperformance.** Conviction and confidence are not enough to win the day—**courage is also needed, and most needed precisely when it's hardest to muster.**

⁸ See, e.g., Ganti and Lazzara, *op. cit.*

S&P DJI RESEARCH CONTRIBUTORS		
Sunjiv Mainie, CFA, CQF	Global Head	sunjiv.mainie@spglobal.com
Jake Vukelic	Business Manager	jake.vukelic@spglobal.com
GLOBAL RESEARCH & DESIGN		
AMERICAS		
Gaurav Sinha	Americas Head	gaurav.sinha@spglobal.com
Laura Assis	Analyst	laura.assis@spglobal.com
Cristopher Anguiano, FRM	Analyst	cristopher.anguiano@spglobal.com
Nazerke Bakytzhan, PhD	Analyst	nazerke.bakytzhan@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
Lalit Ponnala, PhD	Director	lalit.ponnala@spglobal.com
Maria Sanchez, CIPM	Associate Director	maria.sanchez@spglobal.com
Hong Xie, CFA	Senior Director	hong.xie@spglobal.com
APAC		
Priscilla Luk	APAC Head	priscilla.luk@spglobal.com
Arpit Gupta	Senior Analyst	arpit.gupta1@spglobal.com
Akash Jain	Associate Director	akash.jain@spglobal.com
Anurag Kumar	Senior Analyst	anurag.kumar@spglobal.com
Xiaoya Qu	Senior Analyst	xiaoya.qu@spglobal.com
Yan Sun	Senior Analyst	yan.sun@spglobal.com
Tim Wang	Senior Analyst	tim.wang@spglobal.com
Liyu Zeng, CFA	Director	liyu.zeng@spglobal.com
EMEA		
Andrew Innes	EMEA Head	andrew.innes@spglobal.com
Alberto Allegrucci	Senior Analyst	alberto.allegrucci@spglobal.com
Leonardo Cabrer, PhD	Associate Director	leonardo.cabrer@spglobal.com
Andrew Cairns, CFA	Associate Director	andrew.cairns@spglobal.com
Jingwen Shi	Senior Analyst	jingwen.shi@spglobal.com
INDEX INVESTMENT STRATEGY		
Craig J. Lazzara, CFA	Global Head	craig.lazzara@spglobal.com
Chris Bennett, CFA	Director	chris.bennett@spglobal.com
Fei Mei Chan	Director	feimei.chan@spglobal.com
Tim Edwards, PhD	Managing Director	tim.edwards@spglobal.com
Anu R. Ganti, CFA	Senior Director	anu.ganti@spglobal.com
Sherifa Issifu	Analyst	sherifa.issifu@spglobal.com

GENERAL DISCLAIMER

Copyright © 2020 S&P Dow Jones Indices LLC. All rights reserved. STANDARD & POOR'S, S&P, S&P 500, S&P 500 LOW VOLATILITY INDEX, S&P 100, S&P COMPOSITE 1500, S&P MIDCAP 400, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, S&P TARGET DATE INDICES, GICS, SPIVA, SPDR and INDEXOLOGY are registered trademarks of Standard & Poor's Financial Services LLC, a division of S&P Global ("S&P"). DOW JONES, DJ, DJIA and DOW JONES INDUSTRIAL AVERAGE are registered trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, S&P, Dow Jones or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. Except for certain custom index calculation services, 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 and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be 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 investment product or vehicle. S&P Dow Jones Indices LLC is not a tax advisor. A tax advisor should be consulted to evaluate the impact of any tax-exempt securities on portfolios and the tax consequences of making any particular investment decision. 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. Closing prices for S&P Dow Jones Indices' US benchmark indices are calculated by S&P Dow Jones Indices based on the closing price of the individual constituents of the index as set by their primary exchange. Closing prices are received by S&P Dow Jones Indices from one of its third party vendors and verified by comparing them with prices from an alternative vendor. The vendors receive the closing price from the primary exchanges. Real-time intraday prices are calculated similarly without a second verification.

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 Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global 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.