

## Counterpoint Global Insights

# Myth Busting, Popular Delusions, and the Variant Perception

CONSILIENT OBSERVER | May 20, 2020

### Excerpts from a talk given by Michael Mauboussin to the Greenwich Roundtable on January 30, 2020

#### AUTHORS

Michael J. Mauboussin  
michael.mauboussin@morganstanley.com

Dan Callahan, CFA  
dan.callahan1@morganstanley.com

Good morning. It's a real pleasure for me to join you today, as these roundtable sessions always prompt me to organize my thoughts on important topics. This morning's theme is a particularly interesting one because it provides an opportunity to critically examine some issues that are often understood superficially.

I should mention that I first participated in a session with the Roundtable 15 years ago, and was on a panel with the great economist, historian, and author, Peter Bernstein. I said then that I wanted to grow up to be like Peter Bernstein. Fifteen years later, I have aged but I have not grown up!

I will address four myths or popular delusions:

- The first one relates to short-termism. You hear a lot of fretting about the deleterious impact of short-termism, without a lot of concrete evidence for its existence. We'll critically examine some of the arguments to see if they hold water;
- The second is the idea that dividends play a large role in equity returns over time. I will demonstrate that price appreciation is the only source of investment return that increases accumulated capital;
- Third is the notion that investing in money-losing companies is a bad idea. It can be a bad idea, but much more nuance is necessary; and
- The final one relates to the idea that the rise of indexing has made it easier to be an active manager.

I. Let's start with the first topic, that of short-termism. We'll define it as the tendency to make decisions that appear beneficial in the short term at the expense of decisions that have a higher payoff in the long term. This tends to come in two flavors, investor short-termism and managerial short-termism.<sup>1</sup>

It is easy to find concerns about short-termism throughout history—I have examples that go back decades. But a quote from a *Harvard Business Review* article captures the current mood:

“. . . the shadow of short-termism has continued to advance—and the situation may actually be getting worse. As a result, companies are less able to invest and build value for the long term, undermining broad economic growth and lowering returns on investment for savers.”<sup>2</sup>

Let's look at three aspects of this. The first is why some shortening of time horizon may be fully justified by the economic facts. For example, consider the rate of diffusion of new technologies: it took 71 years for one-half of the U.S. population to get a telephone, 18 years for a color television, and 10 years for internet access. As these diffusions speed up, so does change.<sup>3</sup>

Another is asset lives. The asset lives for technology companies are generally 6-7 years, whereas asset lives for energy and materials companies are roughly 17-18 years. As the composition of the economy and the stock market have shifted away from asset-heavy to asset-light industries over the past 30 years, the average asset life has shrunk. Further, it turns out that governance scores, as calculated by Credit Suisse HOLT, are highest for industries with the longest asset lives and lowest for businesses with the shortest asset lives.

The most fundamental way to assess the market's short-termism is to look at asset prices themselves. It is easy to find pundits who suggest the stock market is overvalued, and this notion is backed by evidence such as the CAPE ratio.<sup>4</sup>

That alone should give some pause to those arguing for short-termism: high valuations mean the market is recognizing and paying for cash flows many years into the future. It's the very opposite of short-termism.

Here's a simple exercise I do with my students at Columbia Business School to make this point. I take five stocks from the Dow Jones Industrial Average and calculate the present value of the dividends they are expected to pay over the next 5 years, according to estimates by *Value Line* (see exhibit 1). That value represents only 11 percent of the prevailing equity value, which means that more than 90 percent is for cash flows beyond 5 years. Assume buybacks that are as large as dividends and you still only get to about 20 percent. In other words, most of the value is reflected in long-term cash flows.

### Exhibit 1: Percentage of Value Attributable to Dividends beyond the Next Five Years

Company	Price, 12/31/2019	Cumulative Present Value, Next 5 Years of Dividends	Percentage of Share Value Beyond 5 Years
American Express	\$124.49	\$9.01	92.8%
Coca-Cola	55.35	7.89	85.7
Merck	90.95	12.72	86.0
Microsoft	157.70	11.37	92.8
Procter & Gamble	124.90	14.49	88.4
<b>Average</b>			<b>89.1</b>

Source: *Value Line Investment Survey*.

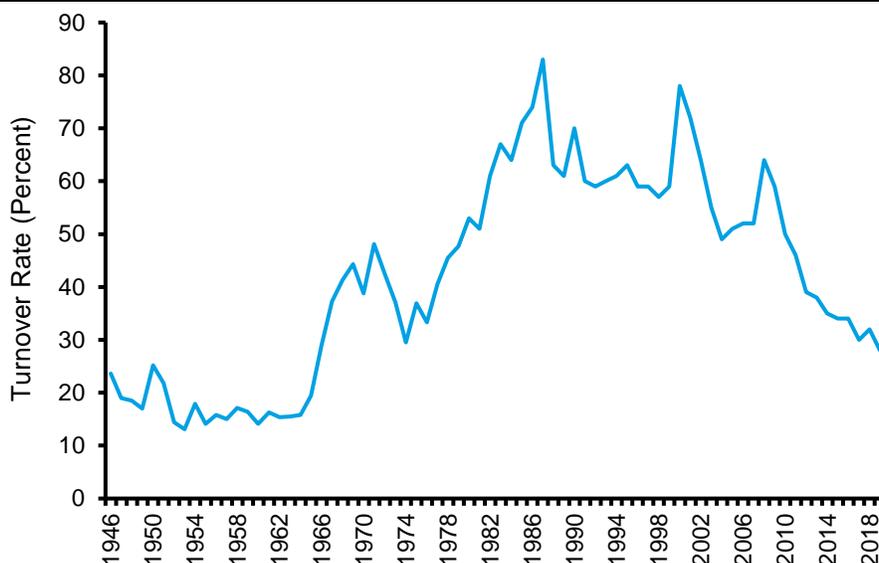
These opinions and forecasts are those of its author and may not actually come to pass. The data used has been obtained from sources generally believed to be reliable. No representation is made as to its accuracy.

Perhaps the most popular argument for short-termism is the holding period of money managers. For example, Michael Porter, a professor known for his work on competitive strategy, noted that “the average holding period of stocks has declined from over seven years in 1960 to about two years today . . . it is perhaps the most telling evidence of shortening investor horizons.”<sup>5</sup>

Porter is indeed correct: portfolio turnover was much lower in the 1950s and 1960s than in recent times.<sup>6</sup> But you might ask why that is.

A long-term chart of portfolio turnover shows a spike starting on May 1, 1975 (see exhibit 2). That was the day commissions on stock trading were deregulated. To give you some sense of the situation, the cost of trading 10,000 shares of a \$40 stock was \$0.43 *per share*. And, of course, bid-offer spreads were expressed in eighths. So the cost of trading was vastly higher, hence limiting activity.<sup>7</sup>

### Exhibit 2: Portfolio Turnover, 1946-2019



Source: Bogle Financial Markets Research Center and Investment Company Institute.

Note: U.S.-based mutual funds; Annual turnover rate is weighted by assets.

Portfolio turnover is a measure of how frequently assets within a fund are bought and sold by the managers. Portfolio turnover is calculated by taking either the total amount of new securities purchased or the amount of securities sold - whichever is less - over a particular period, divided by the total net asset value of the fund.

Further, turnover is actually *down* in the last 20 years. The latest reading of asset-weighted turnover is 25-30 percent, the lowest since the 1970s.<sup>8</sup> Now there are entities that trade frequently, but they are only around because the cost to trade has come down so much. For example, index funds weren't viable prior to 1975 because of cost.

It's also worth noting companies such as Amazon.com have taken a long-term view and have been rewarded by the market. The idea that a company that has been public for 23 years is loved only because it trained its shareholders doesn't really fit the narrative of short-termism.<sup>9</sup>

Let me finish this point with a couple of thoughts. I recognize that managers and investors feel pressure to deliver short-term results. All of us who seek to have successful long-term careers also feel short-term pressure—and that's because the long term is an aggregation of short terms. The key is to do the right thing.

Second, the reason investor holding periods are shorter than the number of years of cash flows reflected in stock prices is that *investors make short-term bets on long-term outcomes*.<sup>10</sup> If you want to understand the market's time horizon, do not look at, or talk to, the investors. Look at the market, which is a product of all investors.<sup>11</sup>

II. The second myth is about the role of dividends in capital accumulation. In a paper he co-authored, Peter Bernstein wrote, "These data put the lie to the conventional view that equities derive most of their returns from capital appreciation, that income is far less important, if not irrelevant."<sup>12</sup> A large investment management firm put out research that was ever more emphatic, stating, "Some may be surprised to learn that 90 percent of U.S. equity returns over the last century have been delivered by dividends and dividend growth."<sup>13</sup> Yes, that would be surprising—especially if it were true.

Let's take a step back. The reason we save, or defer current consumption, is to accumulate capital to satisfy future liabilities, whether it's paying for a child's college education or retiring comfortably.

When we discuss the stock market in general or specific stocks, we often refer to "total shareholder return" (TSR), which assumes that dividends are reinvested with no friction. Here is the equation to calculate TSR:

$$\text{TSR} = g + (1 + g) * d$$

In this equation, *g* stands for the stock price appreciation rate and *d* stands for the dividend yield.

The focus on TSR can lead to a couple of points of confusion.<sup>14</sup>

The first is that almost no one earns the TSR for a stock that pays a dividend. In order to do so, you must have an automatic dividend reinvestment plan with zero taxes. The number of people who fall into this camp are de minimis. Most people spend the dividends they receive, and most funds allow the sum simply to go to cash. So one should be very careful relying on past TSRs to plan for the future.

The second is the belief that dividends are the main driver of investment performance. In reality, *price appreciation is the only source of investment returns that increases accumulated capital*.

To understand this, let's slow down the process. Say you have a \$100 stock that pays a \$3 dividend. The day that dividend is paid, you have a stock worth \$97 and a dividend worth \$3 (the stock is actually marked down on the ex-dividend date). You earn the TSR only if you reinvest the full \$3 into the stock to restore your investment to \$100. From there, it is clear that *price appreciation* is the driver of accumulated wealth.

Your capital accumulation is a function of how much you invest, how long you invest, and price appreciation. By the way, there is also massive confusion about share buybacks, which I won't go into now.

I will add that there is very robust evidence about the relationship between asset growth and TSRs. Companies that have grown assets rapidly have tended to deliver poor returns, whereas those that have grown modestly, or even contracted, have done well. So returning capital to shareholders is important.<sup>15</sup>

One last note: much of what I've just discussed about dividends is summarized in a paper that was published in the *Journal of Portfolio Management* in 2006 by my mentor, collaborator, and friend, Al Rappaport. Peter Bernstein read the paper and called it "masterful" and wondered out loud why no one had pointed out this analysis to him before. Bernstein was still open to learning at the age of 86!

III. The third myth is about companies that lose money. Jay Ritter, a professor of finance and a leading authority on initial public offerings (IPO's), reports that 74 percent of companies that did an IPO in 2019 lost money, which is about where the level was in 1999, near the peak of the dot-com bubble.<sup>16</sup> Further, about 40 percent of listed

companies in the U.S. lose money—all this against a backdrop of a solid economy.<sup>17</sup> The implication is that things have returned to a frothy state—and certainly the saga of WeWork fanned the flames of that narrative.

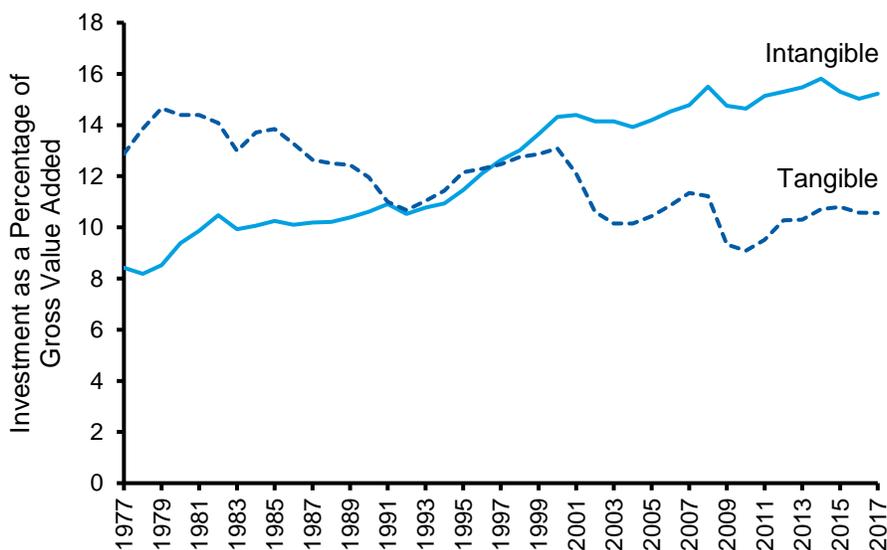
Here's a short quiz for you: what if I offered you shares of a company just listed on the New York Stock Exchange and told you with absolute certainty it would have negative free cash flow for each of the next 15 years. Would you buy it?

Well, there was a little company like that and it was called Wal-Mart Stores, Inc. From the beginning of 1972 through the end of 1986, Walmart generated TSRs of 33 percent versus the S&P 500's 11 percent. Investors in Walmart would have ended the period with almost 16 times more capital than investors in the broader market.

Walmart was such a good stock because it earned a very high return on its investments. In those cases, you want a company to invest as much as it possibly can—even if the investment is larger than earnings and the company has to access external sources of capital to do so.

So what does that have to do with what's going on now? There has been a watershed change in the form in which companies invest. In 1977, tangible investment was 2 times that of intangible investment. Today, intangible investment is 1.5 times tangible investment (see exhibit 3). Tangible investments appear on the balance sheet; intangible assets tend to appear on the income statement as an expense.<sup>18</sup>

### Exhibit 3: The Rise of Intangible Investments, 1977-2017



Source: Unpublished update to Corrado and Hulten (2010) using methods and sources developed in Corrado and Hao (2013) and in Corrado et al. (2016) and Corrado et al. (2017) for INTAN-Invest© and the SPINTAN project, respectively. The SPINTAN project was funded by the European Commission FP-7 grant agreement 612774.

Note: Nonresidential business investment relative to business sector gross value added.

So what's the solution? If you want apples-to-apples comparisons, you must capitalize the investments that are now on the income statement. In other words, put them on the balance sheet as we used to. The immediate impact is that earnings and book value both go up.<sup>19</sup>

This relates to the challenging time for value investors, who tend to build portfolios that rely on statistical factors such as price-to-book and price-to-earnings multiples. Baruch Lev and Anup Srivastava, professors of accounting, made these adjustments and found that 40-60 percent of stocks that had been classified as "value"

or “glamour” shift categories. Further, they found that the adjustments lead to factors with much better signals for building portfolios.<sup>20</sup>

This also addresses the concern that companies are underinvesting and returning too much money to shareholders. If investments on the income statement are properly categorized, firms have actually been increasing their operating investments over time.

I believe this myth has created opportunity for investors who are willing to roll up their sleeves to really understand unit economics.<sup>21</sup> If you knew how good Walmart’s store economics were, you would have stood behind them applauding as they spent more on investments than they earned in income. Likewise, some companies today are losing money but have extremely attractive economics, and others are losing money the old-fashioned way—with bad business models.

**IV.** I hear a lot of successful investors say that the rise of indexing has made it easier to be an active manager. Seth Klarman, the founder and CEO of the Baupost Group whom I admire deeply, echoed this refrain when he said, “[Indexing] should give long-term value investors a distinct advantage. The inherent irony of the efficient market theory is that the more people believe in it and correspondingly shun active management, the more inefficient the market is likely to become.”<sup>22</sup>

On the surface, this sounds like a plausible case: fewer people are competing and less information is finding its way into markets, hence it’s easier to express your skill by finding mispriced assets. But I think the opposite may be true, and here’s why.

A good starting point is “The Arithmetic of Active Management” by professor of finance and Nobel-Prize winner, Bill Sharpe.<sup>23</sup> The idea is simple: Before costs, the return on the average actively managed dollar will equal the return on the average passively managed dollar. And after costs, the return on the average actively-managed dollar will be less than the return on the average passively-managed dollar.

Now this isn’t by itself any revelation for active managers. Alpha before fees is zero by definition. What is important is that for you to earn positive alpha, someone on the other side of your trades has to earn negative alpha.

To make this more vivid, imagine that I invite you to my house Friday night to play poker, and let’s assume that you want to make some money. Upon receiving the invitation, your first question should be, “Who else will be there?”

If I tell you there will be some rich people who are much worse players than you are, you’ll immediately make plans to join me. There’s no guarantee you’ll win, but over time your skill will allow you to take money from those patsies.

On the other hand, if I tell you that the players who are coming over are all better players than you are, you should arrange some alternative plans. In this case, it should be clear that *you* are the patsy—which is not good if you like to keep your money.<sup>24</sup>

I think the poker story carries over well to the investment management industry. My conjecture is that the investors who have turned to indexing are on average the weaker players.

To stretch this analogy, the weak players are sitting at your poker table drinking your beer but are not playing—so they can’t win or lose. And the reason I mention that they are drinking your beer is because they really are

free riding: indexers rely on active management for price discovery and liquidity. So active management fees subsidize the index management industry.

So if my argument is reasonably accurate, you are left playing the stronger players, making it harder, not easier, to generate risk-adjusted excess returns, or alpha. And while there's little doubt that indexing has and will create distortions in markets, there remain a substantial number of active managers at the ready to arbitrage those opportunities.

In summary, I want to encourage you to always go back to first principles when considering what the pundits say or assert. The motto of the Royal Society, "Nullius in verba," is a useful way to think. It is meant to mean "take nobody's word for it." The investment industry is, and has always been, replete with myths and delusions. Our job is to bust them whenever appropriate.

*The Greenwich Roundtable is a non-profit organization providing independent education for investors on the frontier of investing.*

**Please see Important Disclosures on pages 9-11**

## Endnotes

<sup>1</sup> Michael J. Mauboussin and Dan Callahan, "A Long Look at Short-Termism: Questioning the Premise," *Journal of Applied Corporate Finance*, Vol. 27, No. 3, Summer 2015, 70-82.

<sup>2</sup> Dominic Barton and Mark Wiseman, "Focusing Capital on the Long Term," *Harvard Business Review*, January-February 2014.

<sup>3</sup> Adam Thierer and Grant Eskelsen, "Media Metrics: The True State of the Modern Media Marketplace," *The Progress & Freedom Foundation*, Summer 2008, 18.

<sup>4</sup> Ben Carlson, "Yes Stocks Are Overvalued. But by How Much? Here's What History Tells Us," *Fortune*, July 31, 2019.

<sup>5</sup> Michael E. Porter, "Capital Choices: Changing the Way America Invests in Industry," *Journal of Applied Corporate Finance*, Vol. 5, No. 2, Summer 1992, 4-16.

<sup>6</sup> John C. Bogle, "The Mutual Fund Industry 60 Years Later: For Better or Worse?" *Financial Analysts Journal*, Vol. 61, No. 1, January/February 2005, 15-24.

<sup>7</sup> Charles M. Jones, "A Century of Stock Market Liquidity and Trading Costs," *Working Paper*, May 22, 2002.

<sup>8</sup> "2020 Investment Company Fact Book," *Investment Company Institute*, 65.

<sup>9</sup> For example, see Matthew Yglesias, "The Prophet of No Profit," *Slate.com*, January 30, 2014 and Justin Fox, "How Amazon Trained Its Investors to Behave," *Harvard Business Review*, January 30, 2013.

<sup>10</sup> Michael J. Mauboussin, "What Shareholder Value is Really About," *Harvard Business Review*, October 3, 2011.

<sup>11</sup> Michael J. Mauboussin, *More Than You Know: Finding Financial Wisdom in Unconventional Places* (New York: Columbia Business School Publishing, 2008), 216-220.

<sup>12</sup> Robert D. Arnott and Peter L. Bernstein, "What Risk Premium Is 'Normal'?" *Financial Analysts Journal*, Vol. 58, No. 2, March/April 2002, 64-85.

<sup>13</sup> John Melloy, "At Stake: Dividends Make Up 90% of Total Return," *CNBC*, December 6, 2010.

<sup>14</sup> Alfred Rappaport, "Dividend Reinvestment, Price Appreciation and Capital Accumulation," *Journal of Portfolio Management*, Vol. 32, No. 3, Spring 2006, 119-123.

<sup>15</sup> Michael J. Cooper, Huseyin Gulen, and Michael J. Schill, "Asset Growth and the Cross-Section of Stock Returns," *Journal of Finance*, Vol. 63, No. 4, August 2008, 1609-1651 and Akiko Watanabe, Yan Xu, Tong Yao, and Tong Yu, "The Asset Growth Effect: Insights for International Equity Markets," *Journal of Financial Economics*, Vol. 108, No. 2, May 2013, 259-263.

<sup>16</sup> See table 9, [https://site.warrington.ufl.edu/ritter/files/2020/01/IPOs2019Statistics\\_Jan14\\_2020-1.pdf](https://site.warrington.ufl.edu/ritter/files/2020/01/IPOs2019Statistics_Jan14_2020-1.pdf).

<sup>17</sup> James Mackintosh, "Money-Losing Companies Mushroom Even as Stocks Hit New Highs," *Wall Street Journal*, January 9, 2020. The economy did look solid in January 2020!

<sup>18</sup> Baruch Lev and Anup Srivastava, "Explaining the Recent Failure of Value Investing," *NYU Stern School of Business Working Paper*, March 31, 2020.

<sup>19</sup> Luminita Enache and Anup Srivastava, "Should Intangible Investments Be Reported Separately or Commingled with Operating Expenses? New Evidence," *Management Science*, Vol. 64, No. 7, July 2018, 3446-3468.

<sup>20</sup> Lev and Srivastava.

<sup>21</sup> For example, see Daniel M. McCarthy, Peter S. Fader, and Bruce G.S. Hardie, "Valuing Subscription-Based Businesses Using Publicly Disclosed Customer Data," *Journal of Marketing*, Vol. 81, No. 7, January 2017, 17-35.

<sup>22</sup> DealBook, "A Quiet Giant of Investing Weighs In on Trump," *New York Times*, February 6, 2017.

<sup>23</sup> William F. Sharpe, "The Arithmetic of Active Management," *Financial Analysts Journal*, Vol. 47, No. 1, January/February 1991, 7-9.

<sup>24</sup> Michael J. Mauboussin, Dan Callahan, and Darius Majd, "Looking for Easy Games: How Passive Investing Shapes Active Management," *Credit Suisse Global Financial Strategies*, January 4, 2017.

## Risk Considerations

Predictions are based on current market conditions, subject to change, and may not necessarily come to pass. There is no assurance that the techniques mentioned in this article will be successful in helping improve the accuracy of predictions.

There is no assurance that a Portfolio will achieve its investment objective. Portfolios are subject to **market risk**, which is the possibility that the market values of securities owned by the Portfolio will decline and that the value of Portfolio shares may therefore be less than what you paid for them. Accordingly, you can lose money investing in this Portfolio. Please be aware that this Portfolio may be subject to certain additional risks. In general, **equities securities**' values also fluctuate in response to activities specific to a company. Investments in **foreign markets** entail special risks such as currency, political, economic, market and liquidity risks. The risks of investing in **emerging market countries** are greater than risks associated with investments in foreign developed countries. **Privately placed and restricted securities** may be subject to resale restrictions as well as a lack of publicly available information, which will increase their illiquidity and could adversely affect the ability to value and sell them (liquidity risk). **Derivative instruments** may disproportionately increase losses and have a significant impact on performance. They also may be subject to counterparty, liquidity, valuation, correlation and market risks. **Illiquid securities** may be more difficult to sell and value than public traded securities (liquidity risk).

## DISTRIBUTION

This communication is only intended for and will only be distributed to persons resident in jurisdictions where such distribution or availability would not be contrary to local laws or regulations.

**Ireland:** Morgan Stanley Investment Management (Ireland) Limited. Registered Office: The Observatory, 7-11 Sir John Rogerson's, Quay, Dublin 2, Ireland. Registered in Ireland under company number 616662. Regulated by the Central Bank of Ireland. **United Kingdom:** Morgan Stanley Investment Management Limited is authorised and regulated by the Financial Conduct Authority. Registered in England. Registered No. 1981121. Registered Office: 25 Cabot Square, Canary Wharf, London E14 4QA. **Dubai:** Morgan Stanley Investment Management Limited (Representative Office, Unit Precinct 3-7th Floor-Unit 701 and 702, Level 7, Gate Precinct Building 3, Dubai International Financial Centre, Dubai, 506501, United Arab Emirates. Telephone: +97 (0)14 709 7158).

**Germany:** Morgan Stanley Investment Management Limited Niederlassung Deutschland, Grosse Gallusstrasse 18, 60312 Frankfurt am Main, Germany (Gattung: Zweigniederlassung (FDI) gem. § 53b KWG). **Italy:** Morgan Stanley Investment Management Limited, Milan Branch (Sede Secondaria di Milano) is a branch of Morgan Stanley Investment Management Limited, a company registered in the UK, authorised and regulated by the Financial Conduct Authority (FCA), and whose registered office is at 25 Cabot Square, Canary Wharf, London, E14 4QA. Morgan Stanley Investment Management Limited Milan Branch (Sede Secondaria di Milano) with seat in Palazzo Serbelloni Corso Venezia, 16 20121 Milano, Italy, is registered in Italy with company number and VAT number 08829360968. **The Netherlands:** Morgan Stanley Investment Management, Rembrandt Tower, 11th Floor Amstelplein 1 1096HA, Netherlands. Telephone: 31 2-0462-1300. Morgan Stanley Investment Management is a branch office of Morgan Stanley Investment Management Limited. Morgan Stanley Investment Management Limited is authorised and regulated by the Financial Conduct Authority in the United Kingdom. **Switzerland:** Morgan Stanley & Co. International plc, London, Zurich Branch Authorised and regulated by the Eidgenössische Finanzmarktaufsicht ("FINMA"). Registered with the Register of Commerce Zurich CHE-115.415.770. Registered Office: Beethovenstrasse 33, 8002 Zurich, Switzerland, Telephone +41 (0) 44 588 1000. Facsimile Fax: +41(0)44 588 1074.

**U.S.:** A separately managed account may not be suitable for all investors. Separate accounts managed according to the Strategy include a number of securities and will not necessarily track the performance of any index. Please consider the investment objectives, risks and fees of the Strategy carefully before investing. A minimum asset level is required. For important information about the investment manager, please refer to Form ADV Part 2.

**Please consider the investment objectives, risks, charges and expenses of the funds carefully before investing. The prospectuses contain this and other information about the funds. To obtain a prospectus please download one at [morganstanley.com/im](http://morganstanley.com/im) or call 1-800-548-7786. Please read the prospectus carefully before investing.**

Morgan Stanley Distribution, Inc. serves as the distributor for Morgan Stanley Funds.

**NOT FDIC INSURED | OFFER NO BANK GUARANTEE | MAY LOSE VALUE | NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY | NOT A BANK DEPOSIT**

**Hong Kong:** This document has been issued by Morgan Stanley Asia Limited for use in Hong Kong and shall only be made available to “professional investors” as defined under the Securities and Futures Ordinance of Hong Kong (Cap 571). The contents of this document have not been reviewed nor approved by any regulatory authority including the Securities and Futures Commission in Hong Kong. Accordingly, save where an exemption is available under the relevant law, this document shall not be issued, circulated, distributed, directed at, or made available to, the public in Hong Kong. **Singapore:** This document should not be considered to be the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (i) to an institutional investor under section 304 of the Securities and Futures Act, Chapter 289 of Singapore (“SFA”), (ii) to a “relevant person” (which includes an accredited investor) pursuant to section 305 of the SFA, and such distribution is in accordance with the conditions specified in section 305 of the SFA; or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA. This publication has not been reviewed by the Monetary Authority of Singapore. **Australia:** This publication is disseminated in Australia by Morgan Stanley Investment Management (Australia) Pty Limited ACN: 122040037, AFSL No. 314182, which accepts responsibility for its contents. This publication, and any access to it, is intended only for “wholesale clients” within the meaning of the Australian Corporations Act.

**Japan:** For professional investors, this document is circulated or distributed for informational purposes only. For those who are not professional investors, this document is provided in relation to Morgan Stanley Investment Management (Japan) Co., Ltd. (“MSIMJ”)’s business with respect to discretionary investment management agreements (“IMA”) and investment advisory agreements (“IAA”). This is not for the purpose of a recommendation or solicitation of transactions or offers any particular financial instruments. Under an IMA, with respect to management of assets of a client, the client prescribes basic management policies in advance and commissions MSIMJ to make all investment decisions based on an analysis of the value, etc. of the securities, and MSIMJ accepts such commission. The client shall delegate to MSIMJ the authorities necessary for making investment. MSIMJ exercises the delegated authorities based on investment decisions of MSIMJ, and the client shall not make individual instructions. All investment profits and losses belong to the clients; principal is not guaranteed. Please consider the investment objectives and nature of risks before investing. As an investment advisory fee for an IAA or an IMA, the amount of assets subject to the contract multiplied by a certain rate (the upper limit is 2.20% per annum (including tax)) shall be incurred in proportion to the contract period. For some strategies, a contingency fee may be incurred in addition to the fee mentioned above. Indirect charges also may be incurred, such as brokerage commissions for incorporated securities. Since these charges and expenses are different depending on a contract and other factors, MSIMJ cannot present the rates, upper limits, etc. in advance. All clients should read the Documents Provided Prior to the Conclusion of a Contract carefully before executing an agreement. This document is disseminated in Japan by MSIMJ, Registered No. 410 (Director of Kanto Local Finance Bureau (Financial Instruments Firms)), Membership: the Japan Securities Dealers Association, The Investment Trusts Association, Japan, the Japan Investment Advisers Association and the Type II Financial Instruments Firms Association.

**IMPORTANT INFORMATION**

**EMEA:** This marketing communication has been issued by Morgan Stanley Investment Management Limited (“MSIM”). Authorised and regulated by the Financial Conduct Authority. Registered in England No. 1981121. Registered Office: 25 Cabot Square, Canary Wharf, London E14 4QA.

There is no guarantee that any investment strategy will work under all market conditions, and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market. Prior to investing, investors should carefully review the strategy’s / product’s relevant offering document. There are important differences in how the strategy is carried out in each of the investment vehicles.

**A separately managed account may not be suitable for all investors. Separate accounts managed according to the Strategy include a number of securities and will not necessarily track the performance of any index. Please consider the investment objectives, risks and fees of the Strategy carefully before investing.**

The views and opinions are those of the author or the investment team as of the date of preparation of this material and are subject to change at any time due to market or economic conditions and may not necessarily come to pass. Furthermore, the views will not be updated or otherwise revised to reflect information that subsequently becomes available or circumstances existing, or changes occurring, after the date of publication.

The views expressed do not reflect the opinions of all investment teams at Morgan Stanley Investment Management (MSIM) or the views of the firm as a whole, and may not be reflected in all the strategies and products that the Firm offers.

Forecasts and/or estimates provided herein are subject to change and may not actually come to pass. Information regarding expected market returns and market outlooks is based on the research, analysis and opinions of the authors. These conclusions are speculative in nature, may not come to pass and are not intended to predict the future performance of any specific Morgan Stanley Investment Management product. Certain information herein is based on data obtained from third party sources believed to be reliable. However, we have not verified this information, and we make no representations whatsoever as to its accuracy or completeness.

The information herein is a general communications which is not impartial and has been prepared solely for information and educational purposes and does not constitute an offer or a recommendation to buy or sell any particular security or to adopt any specific investment strategy. The material contained herein has not been based on a consideration of any individual client circumstances and is not investment advice, nor should it be construed in any way as tax, accounting, legal or regulatory advice. To that end, investors should seek independent legal and financial advice, including advice as to tax consequences, before making any investment decision.

**Past performance is no guarantee of future results.**

Charts and graphs provided herein are for illustrative purposes only.

This communication is not a product of Morgan Stanley's Research Department and should not be regarded as a research recommendation. The information contained herein has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

The information contained in this communication is not a research recommendation or 'investment research' and is classified as a 'Marketing Communication' in accordance with the applicable European regulation or Swiss regulation. This means that this marketing communication (a) has not been prepared in accordance with legal requirements designed to promote the independence of investment research (b) is not subject to any prohibition on dealing ahead of the dissemination of investment research.

MSIM has not authorized financial intermediaries to use and to distribute this document, unless such use and distribution is made in accordance with applicable law and regulation. MSIM shall not be liable for, and accepts no liability for, the use or misuse of this document by any such financial intermediary. If you are a distributor of the Morgan Stanley Investment Funds, some or all of the funds or shares in individual funds may be available for distribution. Please refer to your sub-distribution agreement for these details before forwarding fund information to your clients.

The whole or any part of this work may not be reproduced, copied or transmitted or any of its contents disclosed to third parties without MSIM's express written consent.

All information contained herein is proprietary and is protected under copyright law.  
Morgan Stanley Investment Management is the asset management division of Morgan Stanley.

This document may be translated into other languages. Where such a translation is made this English version remains definitive. If there are any discrepancies between the English version and any version of this document in another language, the English version shall prevail.