S&P Dow Jones Indices

A Division of S&P Global

Indexology®

Magazine

SPRING 2021

A Matter of Degrees: Aligning ESG Strategies with the Paris Agreement

Having already witnessed some of the consequences of climate change around the world, more and more investors are now factoring ESG into their investment decisions. Enter the S&P PACT™ Indices (S&P Paris-Aligned & Climate Transition Indices), created to give market participants access to strategies designed to be compatible with limiting global warming to 1.5°C.

Jaspreet Duhra
Senior Director
Head of EMEA ESG Indices
S&P Dow Jones Indices

Francois Millet
Managing Director
Head of Strategy, ESG, and Innovation
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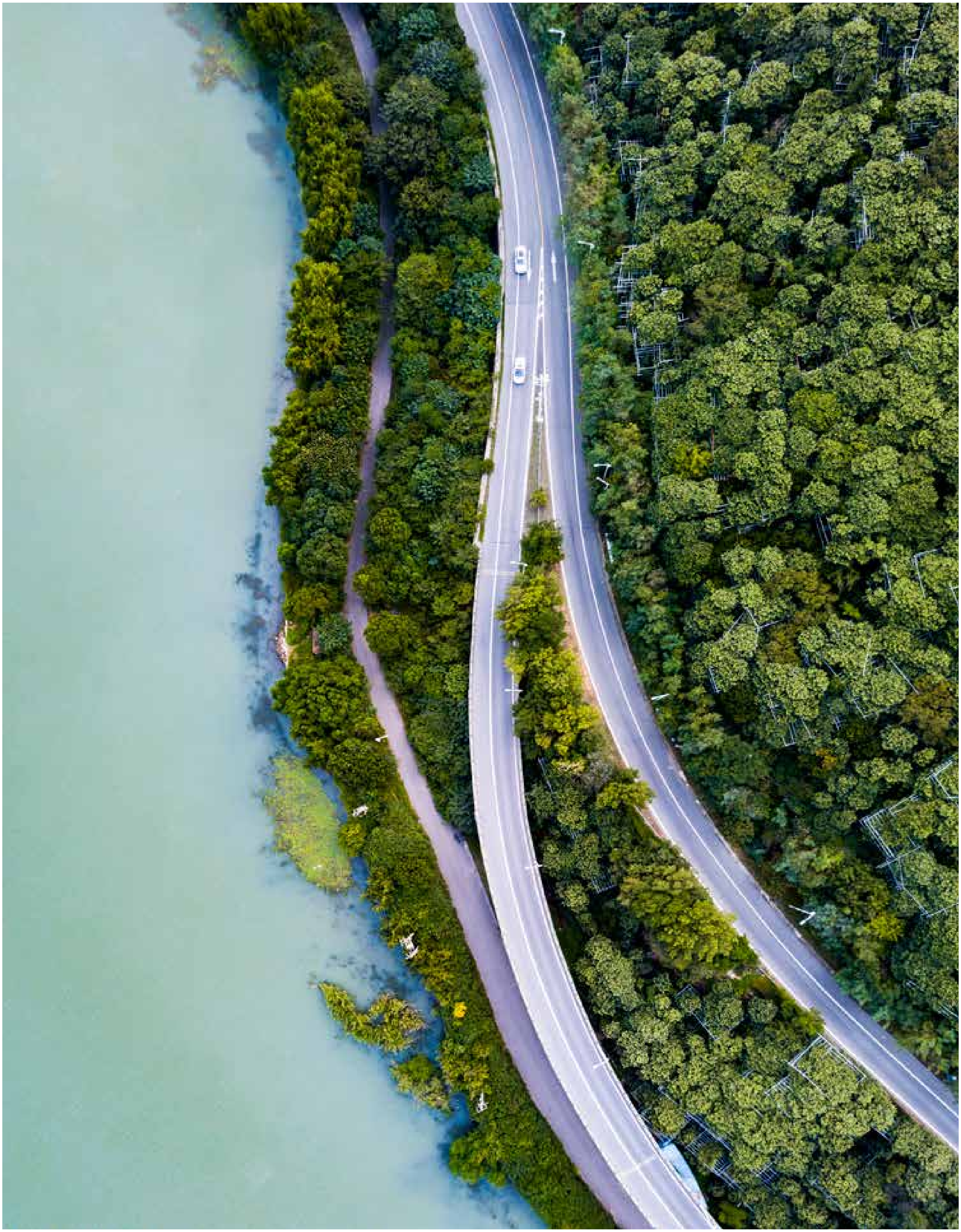
We talked with Francois Millet, Managing Director and Head of Strategy, ESG, and Innovation at Lyxor ETF, and Jaspreet Duhra, Senior Director and Head of EMEA ESG Indices at S&P DJI, about the evolving role of ESG in mainstream investing and how these indices may help market participants envision a less fraught future.

Indexology Magazine: Why do you think ESG investing is becoming more important to investors around the world, and do you think the recommitment to climate initiatives in the U.S. adds to the momentum?

Francois: The pandemic triggered a realization that humans are extremely dependent on natural systems. Many investors now work on the widespread conviction that climate and exponential inequalities are major risks—and that mitigating these risks and building a more inclusive and resilient world with long-term focus is a precondition for financial stability.

ESG investments captured more than 50% of net inflows to ETFs in Europe last year.[1] This more than offset the negative influence of the official U.S. position on the Paris Agreement at the time. But it's great to see the U.S., which produces around 15% of the world's greenhouse gas emissions,[2] rejoining the Agreement. This recommitment to climate initiatives should bolster the ESG transformation that's already underway and make the Paris Agreement stronger than ever.

[1]Source: Bloomberg, Lyxor International Asset Management. Data as at Jan. 8, 2021.
[2]Source: Global Carbon Atlas, http://www.globalcarbonatlas.org/en/CO2-emissions.



Indexology Magazine: Why were the S&P PACT Indices created, and what specific climate goals do they seek to achieve?

Jas: The world is on a dangerous trajectory of warming that is already impacting society and the economy. Regulators are taking action and as investors increasingly take stock of the climate risks in their holdings, more and more are looking to align their investments with a scenario in which warming increases by no more than 1.5°C. The S&P PACT Indices were created with this goal in mind.

The indices are designed to meet the minimum standards for EU Paris-aligned Benchmarks and EU Climate Transition Benchmarks, which means that in addition to lowering carbon emissions relative to their underlying benchmarks, the indices also seek to decarbonize on an absolute basis at a rate of 7% year-on-year. This is the rate of decarbonization required to achieve net-zero emissions by 2050 and limit warming to 1.5°C according to the Intergovernmental Panel on Climate Change. Interestingly, these indices are also designed to maintain the same exposure to high-climate-impact sectors as their benchmarks, which means the decarbonization can't be achieved by just tipping all the weight into low-climate-impact sectors.

We have also gone beyond the EU Low Carbon Benchmark requirements by aligning with the recommendations of the TCFD (Taskforce on Climate-related Financial Disclosures). We believe that the TCFD approach of breaking climate issues into transition risks, physical risks, and opportunities provides a holistic assessment. It's particularly important that our index takes climate change's physical risks into account, as we already see these risks playing out today.

Indexology Magazine: What types of companies are excluded from the index and what types of companies are given extra weight?

Jas: We have two index series under this umbrella: the S&P Paris-Aligned Climate Indices and the S&P Climate

Transition Indices. The Paris-aligned indices are stricter and include a range of fossil fuel exclusions. Both sets of indices exclude companies involved in ESG controversies and problematic activities such as controversial weapons and tobacco, as well as companies with low UN Global Compact scores.

Broadly speaking, companies that perform well against the climate change constraints will be more heavily weighted in the indices. Factors that are particularly important include the companies' environmental score, their predicted alignment with a 1.5°C scenario, and their exposure to physical risks.

You can find the complete methodology and more information about the indices here.

Indexology Magazine: How would you respond to someone who might be a bit wary of deviating too far from the market by investing in ESG?

Francois: Our investors are often surprised that the "cost" of aligning their portfolio to the 1.5°C scenario is relatively moderate, in terms of deviation from the market. Based on back-tested data, we see a tracking error of less than 2% (over three years) for U.S. or developed world equities with the S&P Paris-Aligned Climate Indices, and a bit more for Europe. This tracking error turned out to produce positive tracking difference over the last three years.[3]

There are also portfolio construction techniques that are designed to achieve the lowest-possible deviation vis-à- vis the benchmark index. The index methodology adopted by S&P DJI relies on an optimization concept, which we feel is the best way to accommodate the multiple constraints required for portfolio temperature alignment when tracking this type of index.

Indexology Magazine: What impact, if any, do you think promoting the 1.5°C alignment could have on corporate culture and our ability to ultimately achieve net-zero emissions by 2050?

Francois: We see no other option but to set our portfolios on an absolute decarbonization pathway. By significantly reallocating capital in favor of companies that are the most successful in reducing their emissions, while penalizing laggards and incentivizing them to catch up, investors in climate-aligned strategies send clear signals to corporates. We believe that

adoption of climate-aligned strategies at scale will have a strong leverage on the listed economy, which is responsible for close to 50% of global greenhouses gas emissions—and more through their supply chain.

Indexology Magazine: What do you think the ESG investing landscape may look like 10 years from now?

Francois: It will likely take less than 10 years for ESG investing to become the new normal. Better corporate disclosure combined with enhanced standards and data will make ESG ratings as important as credit ratings in a global corporate assessment. We could potentially see the implied temperature rise of companies or portfolios becoming a new standard market data point, just like P/E or EPS. There may be a tipping point where staying on the wrong side of the market—in terms of ESG rating, exposure to climate transition risks, physical risks, and under-exposure to opportunities—would be more costly. Some asset owners in Europe are starting to switch their whole "policy benchmark" to ESG or climate-aligned benchmarks. This could be a window into the future landscape of investing. ■

[3]Source: S&P Dow Jones Indices, MSCI, Bloomberg LP, Lyxor International Asset Management. Data as of Dec. 31, 2020. Past performance is not a reliable indicator of future performance.

Catching Rising Stars with the S&P Kensho Moonshots Index

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Maybe surprisingly, the recently launched S&P Kensho Moonshots Index doesn't include SpaceX or Amazon. Instead it's designed to discover innovative companies before they're household names. We talked with John van Moyland, Managing Director, Global Head of S&P Kensho Indices at S&P DJI, and Adam Gould, Senior Director, Research and Quantitative Strategist, S&P Kensho Indices at S&P DJI, to learn about how the index measures innovation and the patterns revealed in its historical data.

Indexology Magazine: How is accelerating technology changing the economic landscape?

John: Innovation risk ranks as one of the most significant existential threats faced by companies today. The Fourth Industrial Revolution, and the widespread disruption to the global economy that comes with it, has significantly amplified two trends that are already well-established: accelerating change and the ever-decreasing lifespans of companies. This is what the economist Joseph Schumpeter aptly described as "creative destruction." According to Innosight, the average tenure of a company in the S&P 500® is forecast to be just 12 years in 2027, down from 24 years in 2016[1]—many companies are simply unable, or unwilling, to adapt quickly enough to stay ahead of the curve.

Indexology Magazine: How can investors distinguish the companies that are adapting from the ones that aren't?

John: It has become more essential than ever to adopt a quantifiable framework for thinking about innovation—not just in terms of identifying next-generation products and services and the companies producing them (for these, please see the S&P Kensho New Economies Indices), but also in terms of assessing companies' capacity for innovation. We think this boils down to:

1. How "innovation-oriented" the company's mission and culture are;

2. How many resources the company is allocating to innovation; and

3. How successful the company is in executing its innovation strategy.

[1] https://www.innosight.com/wp-content/uploads/2017/11/Innosight-Corporate-Longevity-2018.pdf

Indexology Magazine: How does the S&P Kensho Moonshots Index quantify these concepts and synthesize the data?

John: Using a rules-based, proprietary framework, we have developed innovation factors that quantify each of the previously mentioned elements, providing market participants with a unique and critical tool for navigating the rapidly changing corporate and technological landscape.

The S&P Kensho Moonshots Index is the first in a series of indices to leverage these novel innovation factors. This index seeks to capture the most innovative companies that are still relatively early in their gestation. It consists of the 50 U.S.-listed companies with the highest Early-Stage Innovation Score that produce next-generation products and services. The Early-Stage Innovation Score[2] is the product of innovation factors 1 and 2 mentioned earlier, and provides a quantitative measure of a company's commitment to innovation, notwithstanding that it may be early in its lifecycle and still in the process of developing its product portfolio.

Indexology Magazine: Beyond their capacity for innovation, what types of companies tend to be included in the index?

John: All the companies included in the index are involved in producing next-generation products and services across many areas of the New Economy, such as genetic engineering, cybersecurity, cleantech, autonomous vehicles, and 3D printing. By construction, the S&P Kensho Moonshots Index excludes the mega-cap tech names, instead focusing on the next generation of innovators (90% of constituents have a market capitalization of less than USD 10 billion). The index is also equal-weighted, limiting concentration risk. A major goal of the index is to identify innovative companies early in their gestation, when the opportunities for rapid growth may be higher.

Indexology Magazine: How has the performance of the S&P Kensho Moonshots Index stacked up to the broader market and tech indices?

Adam: The performance characteristics of the S&P Kensho Moonshots Index (see Exhibit 1), and its relative outperformance, reflect the dynamic nature of its constituents. It's consistent with the higher risk/return profile typically expected, but rarely seen, in private equity or hedge funds.

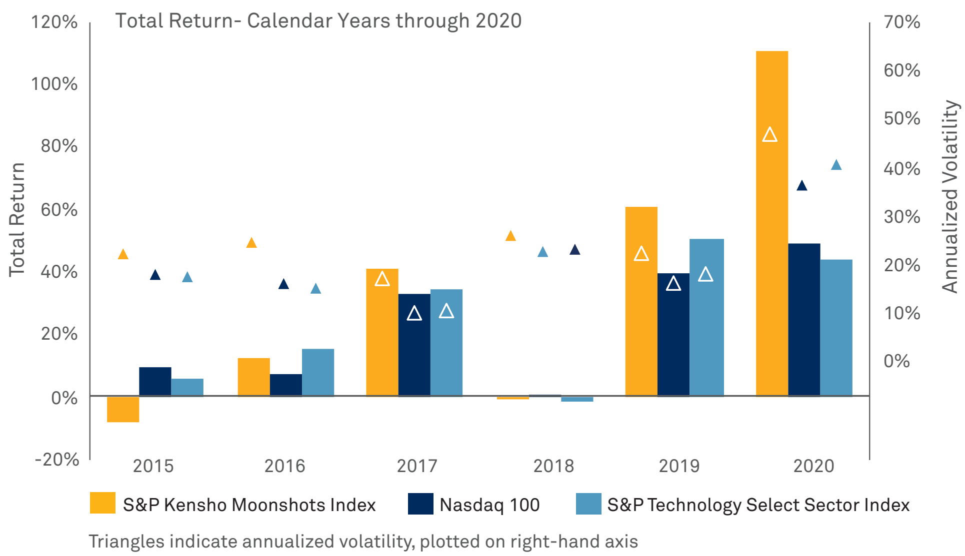
Exhibit 2 illustrates the consistency of outperformance over the past five years, another quality rarely found in either active or private equity or hedge funds.

Exhibit 1: S&P Kensho Moonshots Index Performance

Index	2020 (%)	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)
S&P Kensho Moonshots Index	110.35	110.35	49.72	39.68
Nasdaq 100	48.88	48.88	27.59	24.27
S&P Technology Select Sector Index	43.89	43.89	28.70	26.96
S&P 500	18.40	18.40	14.18	15.22

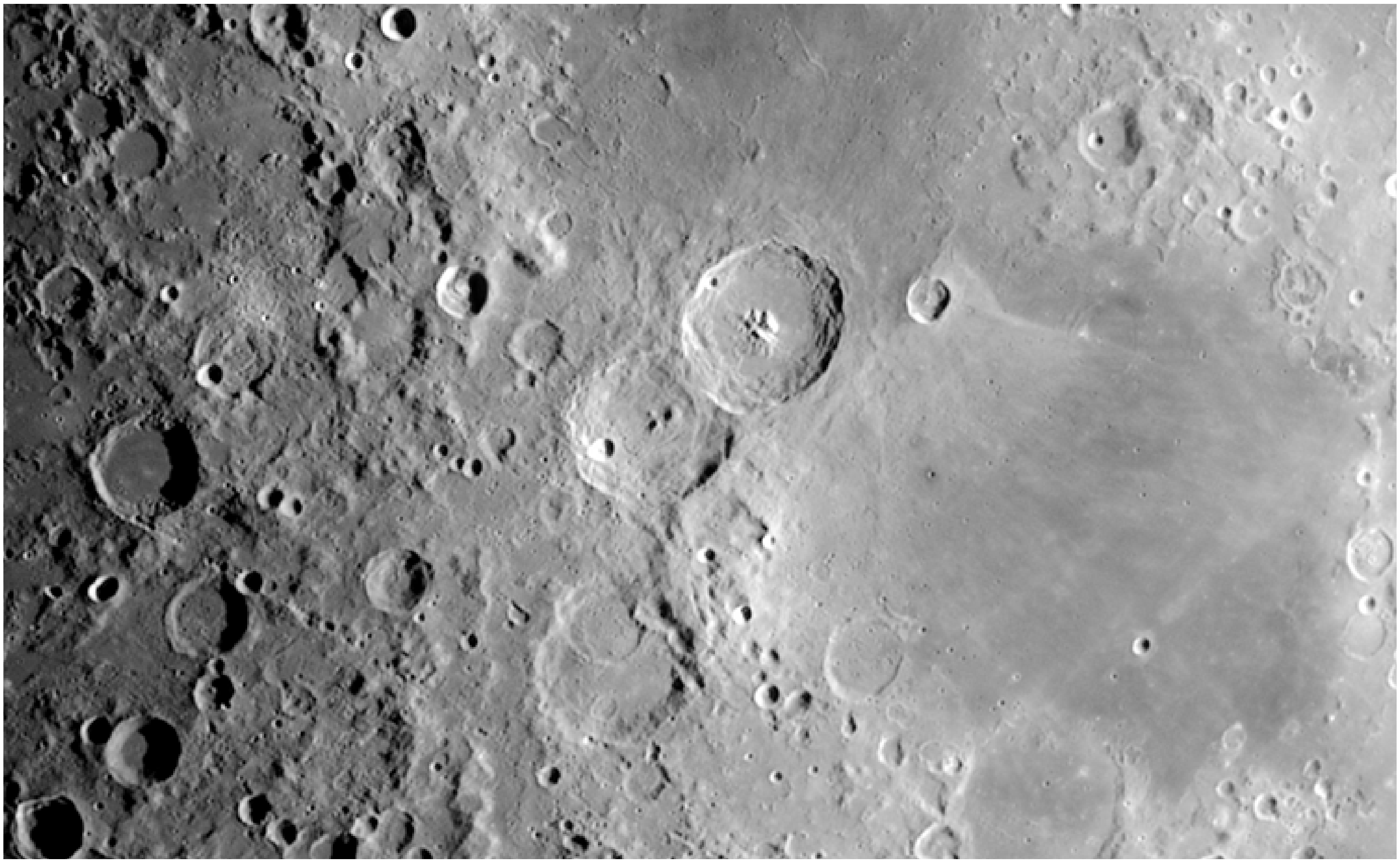
Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2020. Index performance is based on total returns in USD. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance..

Exhibit 2: S&P Kensho Moonshots Index Relative Performance and Volatility



Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2020. Index performance is based on total returns in USD. 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 this document for more information regarding the inherent limitations associated with back-tested performance.

[2]To learn more about the Early-Stage Innovation Score, please visit the S&P Kensho Moonshots Index Methodology.

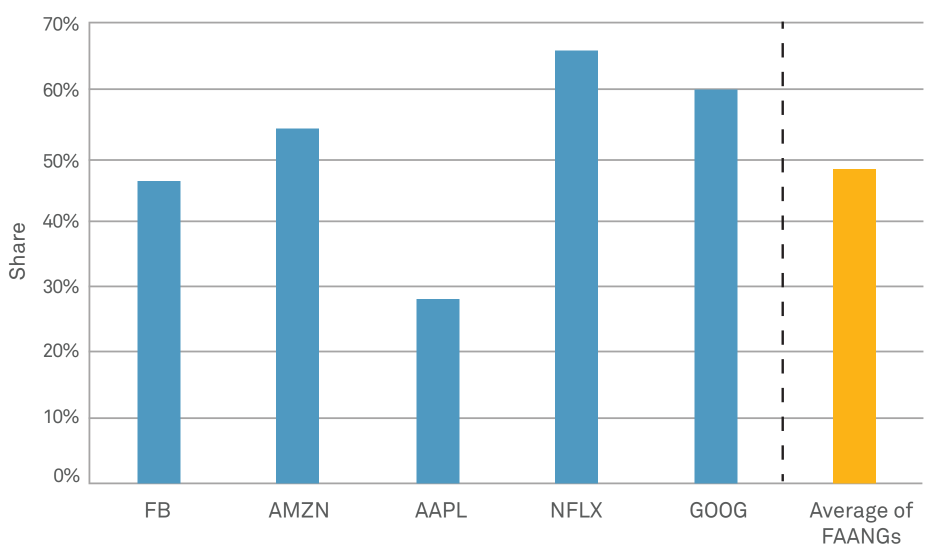


Indexology Magazine: Given that the index focuses on smaller companies, how does it stack up to indices measuring more established and well-known innovative companies?

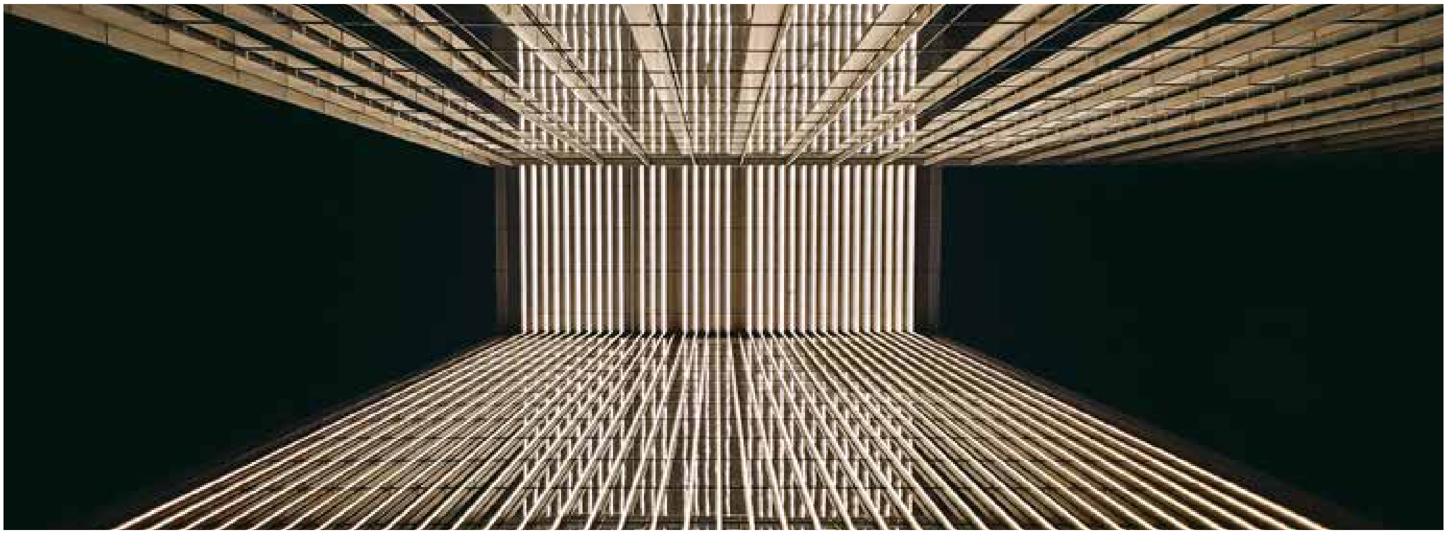
Adam: While the mega-cap tech companies are often considered the bellwethers of innovation, it is instructive to note that 36% of constituents of the S&P Kensho Moonshots Index outperformed the average returns of the FAANGs since the market bottom on March 23, 2020 (see Exhibit 3).

But we can also compare to a broader swathe of established innovators. To do that, we constructed a comparative hypothetical portfolio called the Established Innovators index, made up of companies drawn from the selection universe

Exhibit 3: Share of S&P Kensho Moonshots Index Constituents Outperforming Each FAANG Stock



Source: S&P Dow Jones Indices LLC. Data from Mar. 23, 2020 to Dec. 31, 2020. 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 this document for more information regarding the inherent limitations associated with back-tested performance.



used by the Moonshots index, whose market capitalization exceeded the maximum threshold at each rebalance but whose Early-Stage Innovation Score would have qualified for inclusion.

The market consistently rewarded the Moonshots index over the Established Innovators index on an annualized return basis over one-, three-, and five-year periods (see Exhibit 4). These findings suggest that the market may attach a premium to the early-stage innovators identified by the Moonshots strategy.

We did also account for the fact that annualized returns can often mask periods of underperformance, but the Moonshots index consistently outperformed on a calendar-year basis, with the only exceptions being 2015 and 2018, when the Established Innovators index edged ahead (see Exhibit 5).

Indexology Magazine: How does volatility compare between the two indices?

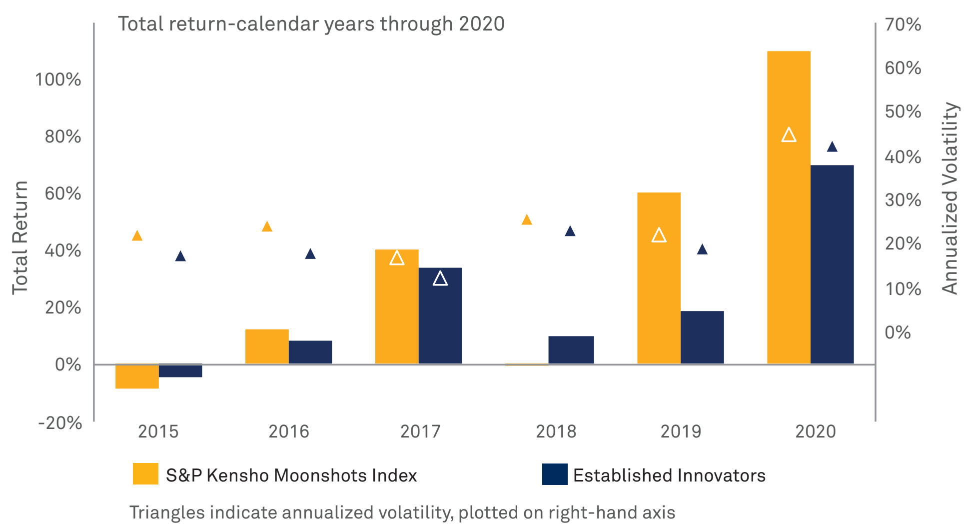
Adam: The Moonshots index and the Established Innovators index exhibited similar levels of volatility,

Exhibit 4: S&P Kensho Moonshots Index Performance versus Established Innovators

Index	2020 (%)	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)
S&P Kensho Moonshots Index	110.35	110.35	49.72	39.68
Established Innovators	70.28	70.28	30.38	26.29

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes only 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: S&P Kensho Moonshots Index Relative Performance and Volatility versus Established Innovators



Established Innovators is a hypothetical portfolio.
Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2020. Index performance is based on total returns per calendar year. Past performance is no guarantee of future results. Chart is provided for illustrative purposes only 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.

despite the Moonshots index focusing on smaller companies. It's clear then that the outperformance of the Moonshots index relative to the Established Innovators index is not a function of higher risk.

Indexology Magazine: How does the index compare to small- and mid-cap indices that aren't specifically focused on innovation?

Adam: The magnitude of the Moonshots index's historical outperformance relative to small- and mid-cap benchmarks on an annualized basis (see Exhibit 6) emphasizes how differentiated the index is from its similarly sized peers. In fact, during a time when small- and mid-cap companies generally underperformed their larger counterparts, the Moonshots index was able to outpace small- and mid-cap indices.

But calendar-year relative performance (see Exhibit 7) suggests a more nuanced picture and highlights an important characteristic of the Moonshots index: outperformance has accelerated as emerging exponential innovation has gained traction in the real world.

Indexology Magazine: How might innovation impact the economy in years to come?

Adam: Rapid developments in artificial intelligence, robotics and automation, ubiquitous connectivity (Internet of Things), and exponential processing power—and their application in innovations across the global economy—have greatly accelerated over the past few years. The pivot in the Moonshots index's track record in 2017 from one of moderate underperformance to consistent and significant outperformance is aligned with increasing investor awareness about these macro-dynamics and accelerating adoption of these underlying transformative technologies.

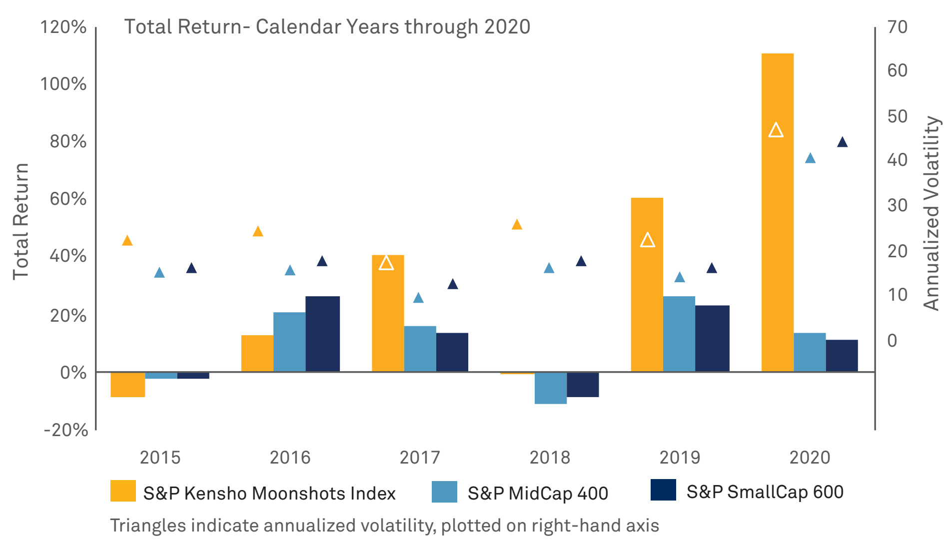
Today's rapid pace of technological advancement may mean that companies must commit to innovation in order to survive and thrive. The outperformance of the S&P Kensho Moonshots Index versus both established innovators and similarly sized but less innovative peers reflects the index's goal of tracking the growth potential of emerging, next-generation innovators. ■

Exhibit 6: S&P Kensho Moonshots Index Performance versus Mid-and Small-Cap Indices

Index	2020 (%)	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)
S&P Kensho Moonshots Index	110.35	110.35	49.72	39.68
S&P MidCap 400®	13.66	13.66	8.45	12.35
S&P SmallCap 600®	11.29	11.29	7.74	12.37

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2020. Index performance is based on total returns in USD. Past performance is no guarantee of future results. Table is provided for illustrative purposes only 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 7: S&P Kensho Moonshots Index Relative Performance and Volatility versus Mid- and Small-Cap Indices



Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2020. Index performance is based on total returns in USD per calendar year. Past performance is no guarantee of future results. Chart is provided for illustrative purposes only 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.

What Drives Style Rotation?

Hamish Preston
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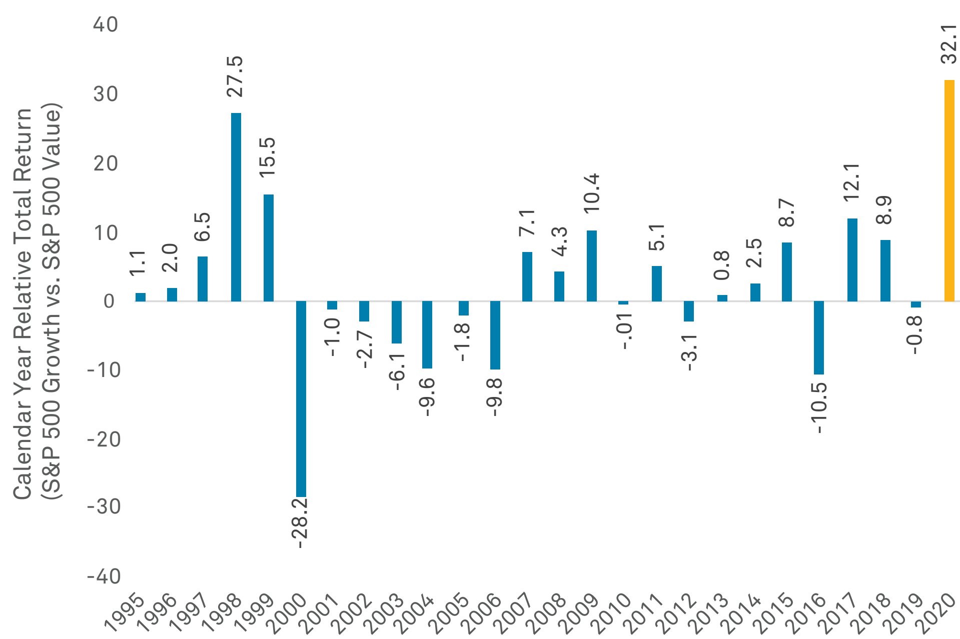
One of the major trends in the last few years has been the outperformance of large, growth-oriented stocks and, at first glance, 2020 represented a continuation of this trend. For example, the S&P 500 Growth (33.5%) outperformed the S&P 500 Value (1.4%) by 32.1% last year, the largest difference in calendar-year total returns between the two indices, ever.

However, focusing on the overall picture for 2020 ignores a more recent reversal in fortunes—Value outperformed Growth by 3.8% in Q4 2020. More recently in Q1 2021, Value beat Growth by 8.6%, its largest quarterly outperformance since 2001.

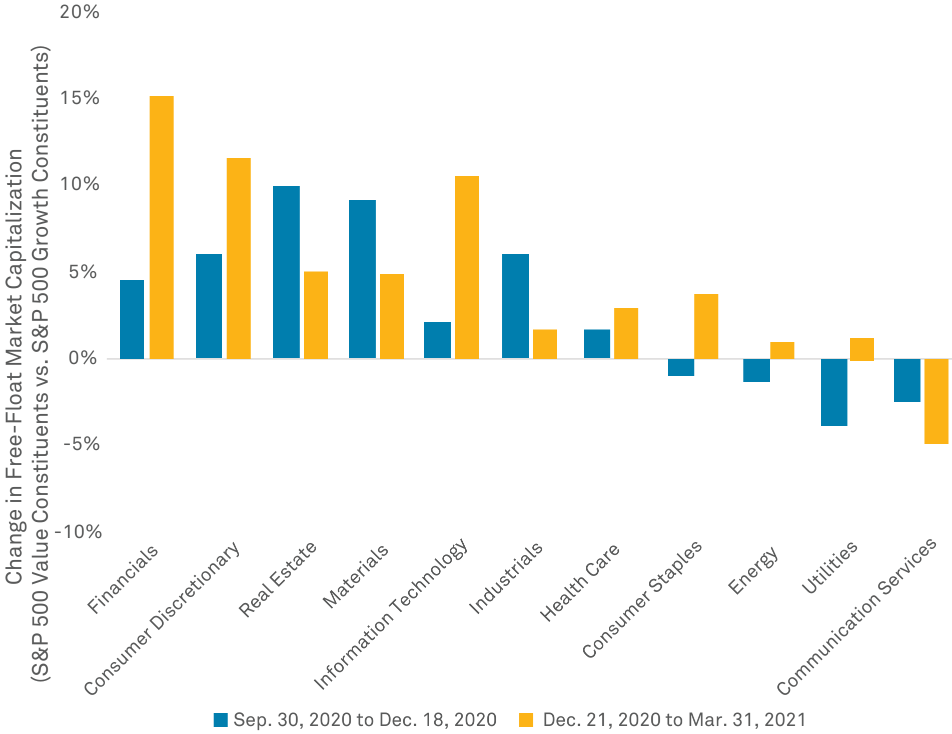
Much of the recent outperformance can be attributed to the beginning of the COVID-19 vaccine rollout, which fueled expectations of an economic recovery and lifted many value-oriented stocks that were particularly impacted by the COVID-19 correction. For example, S&P 500 Value constituents posted higher returns than their Growth

Exhibit 1: Growth Outperformed Value by a Record Amount in 2020



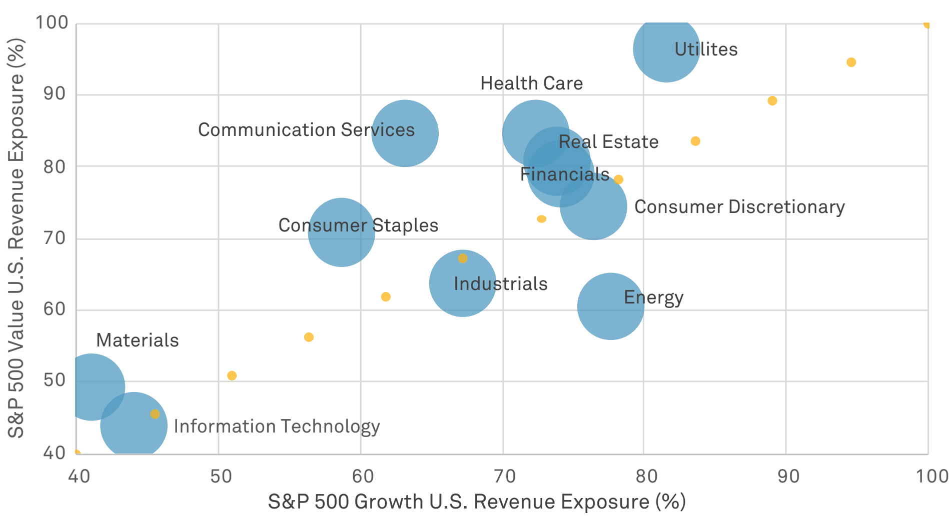
Source: S&P Dow Jones Indices LLC. Chart based on calendar year total returns between Dec. 30, 1994, and Dec. 31, 2020. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Exhibit 2: Value Stocks Outperformed in Many GICS Sectors in Q4 2020 and Q1 2021



Source: S&P Dow Jones Indices LLC. Chart shows changes in free-float market capitalizations of S&P 500 Value and S&P 500 Growth constituents across various sectors from Sept. 30, 2020 to Dec. 18, 2020 and from Dec. 21, 2020 to Mar. 31, 2021. Dec. 21, 2020 data as of the open, otherwise as of the close. Past performance is no guarantee of future results. Chart provided for illustrative purposes.

Exhibit 3: S&P 500 Value Constituents Are Typically More Domestically Focused



Note: This chart shows the sales-weighted average U.S. revenue exposure across GICS sectors in the S&P 500 Value and S&P 500 Growth indices. If the center of a blue bubble falls above the yellow dots, this indicates that S&P 500 Value index constituents within that GICS sector had higher sales-weighted average U.S. revenue exposure than their sector counterparts in the S&P 500 Growth index. Most sectors fall above the dotted yellow line, indicating that S&P 500 Value constituents have tended to be more domestically focused.

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2020. Chart shows sales-weighted average U.S. revenue exposure for each GICS sector in the S&P 500 Value and S&P 500 Growth indices. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

counterparts in 7 of the 11 GICS® sectors leading up to the December 2020 style reconstitution (Dec. 18, 2020) and in all but one sector since.

So why exactly did the vaccine rollout give Value a boost over Growth? Georevenue exposure may offer some insight. Exhibit 3 shows that value-oriented companies are typically more domestically focused than their growth counterparts: the sales-weighted average U.S. revenue exposure is greater for many sectors in the Value index compared to the Growth index. This suggests that news that causes investors to change their U.S. economic outlook and/or expectations for domestic consumers' spending may have an outsized impact on Value's returns. Similarly, Growth's fortunes may be more sensitive to global narratives, especially as they relate to some of the largest market constituents.

As a result, the recent reversal in Value's fortunes has led some investors and commentators to suggest that we may be witnessing a long-anticipated rotation away from Growth and into Value. We'll see whether there is growth in value or value in growth, but differences in georevenue exposure may be a useful way to understand movements across style indices. ■

The Distribution of Alpha

Craig Lazzara
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Investment management is a zero-sum game. The source of outperformance for a market's outperformers is the underperformance of the same market's underperformers. Properly measured, the weighted average sum of the winners' gains is exactly equal (before costs) to the weighted average sum of the losers' losses.

This fact, along with the professionalization of the investment management business globally, helps explain why our SPIVA® reports consistently show that most active managers underperform most of the time.

Wins and losses need not be distributed symmetrically. If half the assets in a market underperform by 3%, then the other half (on average) will outperform by 3%. But if 70% of assets underperform by the same 3%, the average outperformance of the winners will be a much more impressive 7%. Below, we'll illustrate an important principle: if stock returns are skewed and portfolios are concentrated, most assets will underperform.

If the average value in a distribution is greater than the median value, the distribution is said to be positively skewed. This happens when some large values pull the average up, and is typical of stock market returns—after all, a stock can only go down by 100%, but can increase by much more than that. Exhibit 1 illustrates a skewed distribution, assuming a market with five stocks, one of which outperforms the others. Assuming each stock has the same capitalization, the market's overall return is 6.0%, with a narrow dispersion.[1]

Exhibit 1: Return Assumptions (Low Dispersion)

Stock	Return (%)	"Alpha" (%)
A	5.0	-1.0
B	5.0	-1.0
C	5.0	-1.0
D	5.0	-1.0
E	10.0	4.0
Median Return	5.0	
Average Return	6.0	
Dispersion	2.0	

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

[1] Dispersion, the index-weighted standard deviation of returns, measures the range of performance of individual assets.

Exhibit 2: Return Distribution for Different Portfolio Sizes (Low Dispersion)

Number of Stocks	Average Return (%)	Probability of Outperformance (%)	Winners' Alpha (%)	Losers' Alpha (%)
1	6.00	20	4.00	-1.00
2	6.00	40	1.50	-1.00
3	6.00	60	0.67	-1.00
4	6.00	80	0.25	-1.00

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

Exhibit 3: Return Assumptions (High Dispersion)

Stock	Return (%)	"Alpha" (%)
A	2.5	-3.5
B	2.5	-3.5
C	2.5	-3.5
D	2.5	-3.5
E	20.0	14.0
Median Return	2.5	
Average Return	6.0	
Dispersion	7.0	

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

Exhibit 4: Return Distribution for Different Portfolio Sizes (High Dispersion)

Number of Stocks	Average Return (%)	Probability of Outperformance (%)	Winners' Alpha (%)	Losers' Alpha (%)
1	6.00	20	14.00	-3.50
2	6.00	40	5.25	-3.50
3	6.00	60	2.33	-3.50
4	6.00	80	0.87	-3.50

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

In Exhibit 2, we use these five stocks to build hypothetical portfolios of different sizes. There are, for example, five possible one-stock portfolios, four of which underperform the market. Alternatively, there are five possible four-stock portfolios, four of which outperform. Since the market, in this example, is up 6%, the average return of the hypothetical portfolios is also 6%—if the market gives us 6%, it doesn't matter how we slice it up. What changes is the distribution of returns across portfolios.

Exhibit 2 suggests that two things happen as portfolios become more concentrated:

- The probability of outperformance falls.
- The gap between the winners and losers grows; the winners' alpha rises, albeit for a smaller number of winners.

These differences become more pronounced as the dispersion of returns grows. Exhibit 3 shows a hypothetical market with the same average return, similar skewness, and wider dispersion than in Exhibit 1.

If we repeat our hypothetical portfolio construction exercise,

Exhibit 4 shows identical probabilities of success, but with much wider gaps between winners and losers.

As before, concentration lowers the odds of success, but dramatically raises the payoff for the relatively small number of winners.

In 2020, 60% of active U.S. large-cap funds underperformed the S&P 500. In the 20-year history of our SPIVA reports, a majority of active funds have outperformed the S&P 500 only three times.[2] Our simplistic exercise helps explain why:

- As is the case in most years, returns for 2020 were positively skewed, as the median stock in the S&P 500 underperformed the average.
- Most active portfolios are relatively concentrated. Coupled with skewness, higher concentration implies that the majority of assets are likely to underperform.
- Dispersion is well above historical average for every equity market we cover. This implies big gaps between winners and losers.

Unsurprisingly , we've begun to hear reports of some managers' spectacular successes.[3] Don't let the well-advertised big wins obscure the more dismal landscape of active underperformance. ■

[2] Liu, Berlinda and Gaurav Sinha, "SPIVA U.S. Scorecard," S&P Dow Jones Indices, Year-End 2020.
[3] Ptak, Jeffrey, "What to Expect From Funds After They Gain 100% or More in a Year? Trouble, Mostly," Morningstar, January 13, 2021.

What's Next in Commodities Index Innovation?

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Associate Director
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S&P Dow Jones Indices

This year, we're celebrating the 30th anniversary of the S&P GSCI, the world's most widely recognized commodities benchmark. With its broad base and production-weighted approach, the index has a reputation for truly representing global commodity market beta.

It also remains both replicable and investable by including only the most liquid commodity futures and by adapting to changing market dynamics via a rules-based, transparent annual reconstitution. The S&P GSCI has offered a clear view of the commodities market while fueling index innovation for the last 30 years, and to celebrate that, we're taking stock of the potential challenges and opportunities that may lie ahead for commodities investing over the next 30.

It's Not Easy Being Green (When Investing in Commodities)

Commodities form a broad, diverse asset class, with wildly different financial, environmental, and social implications. In other words, investing in commodities poses enormous challenges for investors looking to incorporate ESG metrics into their investment criteria.

Unlike what we see in equity- and bond-based investing, commodity derivatives markets do not give investors a way to influence a particular company's actions, or even, arguably, the underlying spot commodity price. This makes applying ESG principles difficult. There is also the more fundamental question of whether commodity prices should be forced higher or lower to encourage production and consumption changes that are considered desirable from an ESG perspective. All of this means that at the moment, commodity investors are relatively passive participants in the ESG ecosystem—albeit ones who, depending on their particular mandate, have the ability to funnel their investments among different individual commodities and sectors.

But as we look ahead, new approaches may help facilitate ESG-friendly commodities investments.

Taking environmental issues as the most pressing of the three ESG pillars (environmental, social, and governance), lifecycle analysis is a relatively straightforward way to compute carbon footprints of individual commodities, and these metrics can be used to create indices. While it is not yet clear that the result would be a suitably diversified commodity index nor one with superior performance, this is a promising development that proves it is theoretically possible to create a commodity index that incorporates ESG principles.

Keeping Calm and "Carrying" on with Alternative Risk Premia

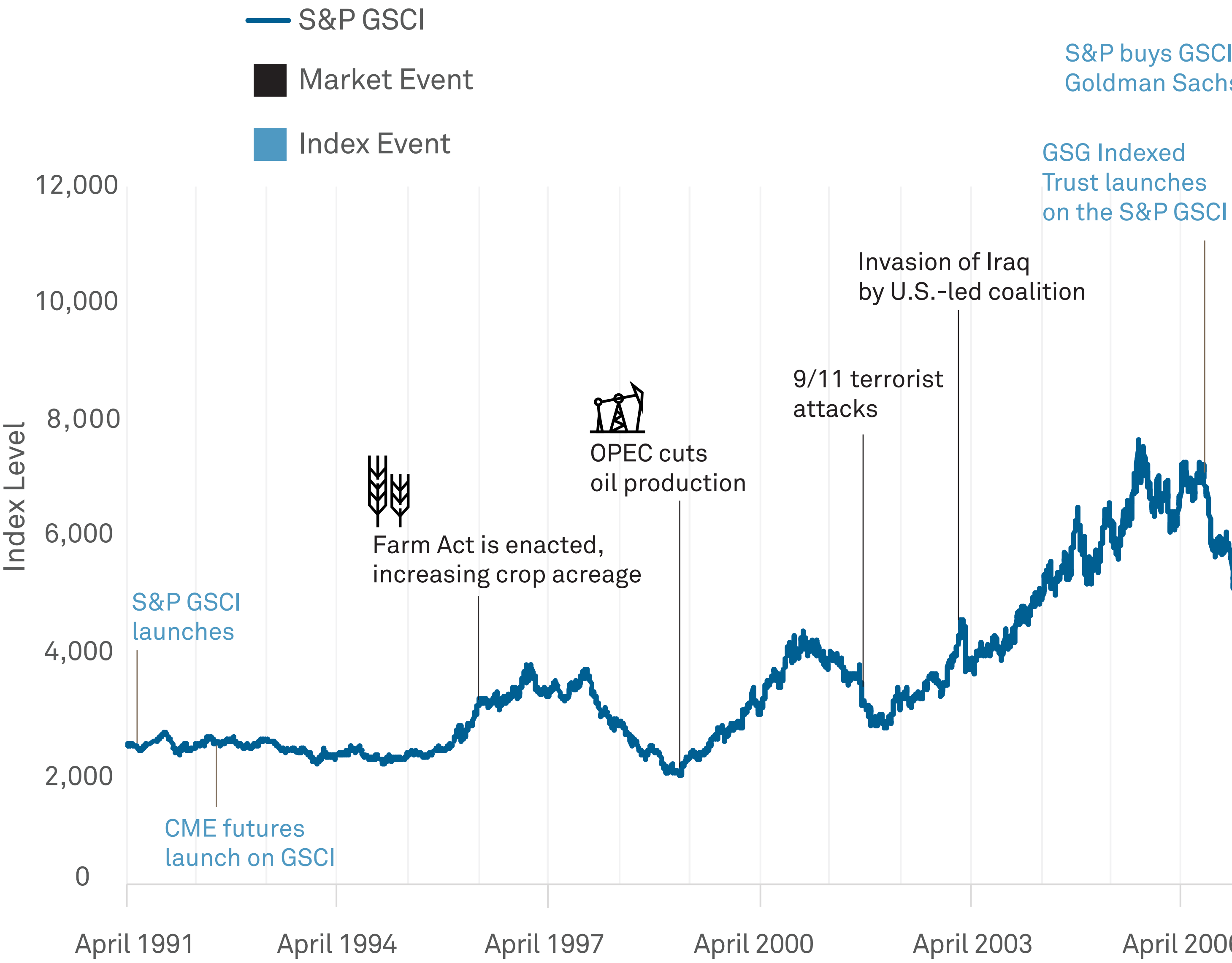
Investors are becoming better acquainted with using alternative risk premia strategies to efficiently target alternative sources of return via rigorous, liquid, and transparent rules-based indices. Many market participants are drawn to risk premia that are economically intuitive, persistent over time, and executed in highly liquid markets. In commodity markets, concepts such as carry have a strong economic rationale, while the underlying commodities themselves exhibit low correlation to traditional portfolio investments and are traded in highly liquid derivatives markets. The prevalence of non-profit-seeking participants in commodity markets may also add to their appeal.

Investing in commodities poses enormous challenges for investors looking to incorporate ESG metrics into their investment criteria.

The Long and Short of Democratizing Tactical Allocation

Tactically allocating to individual commodities when conditions are ripe has historically been

S&P GSCI: A 30-Year History



Data based on TR version of S&P GSCI

Source: S&P Dow Jones Indices LLC. Data from April 1991 to January 2021. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

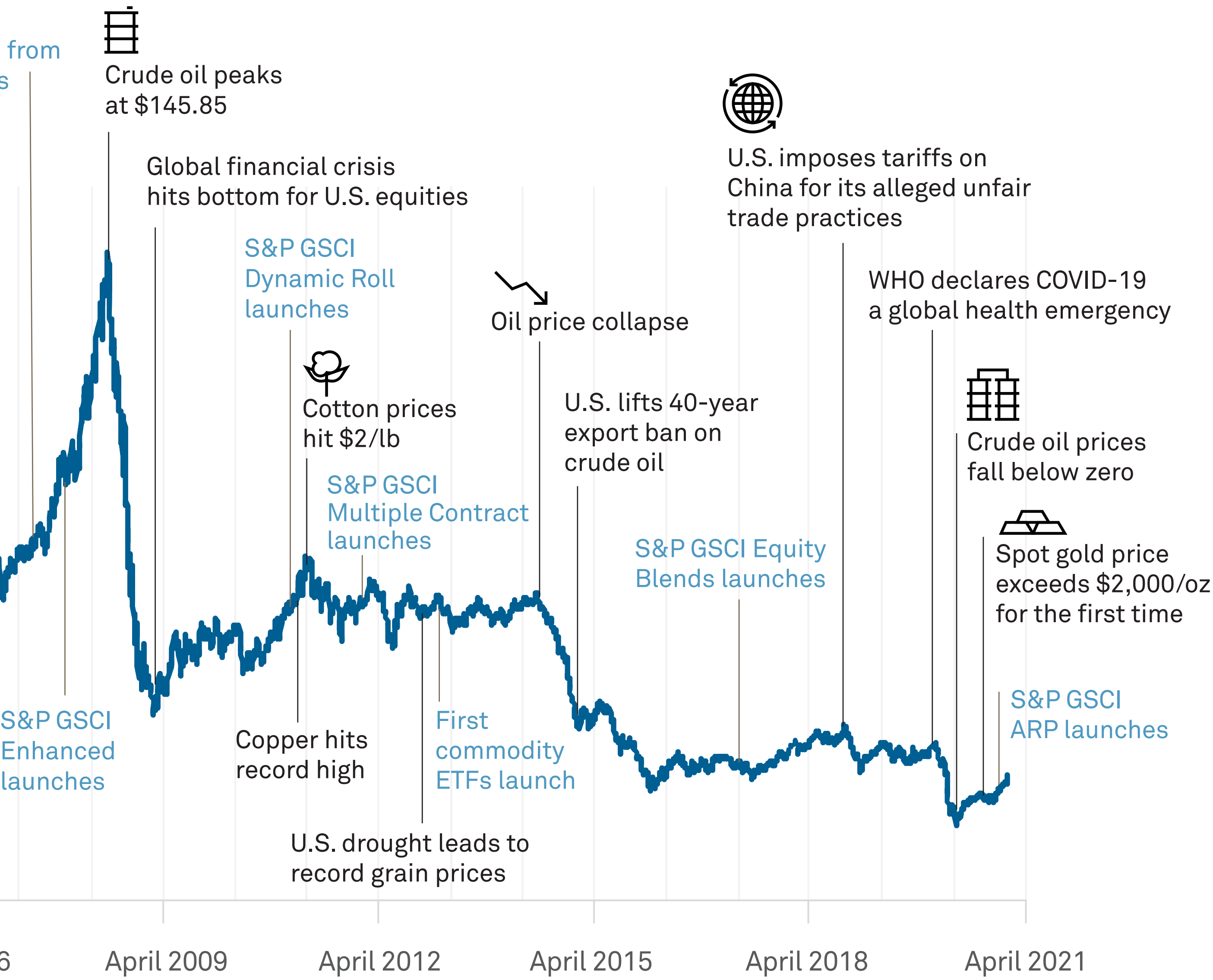
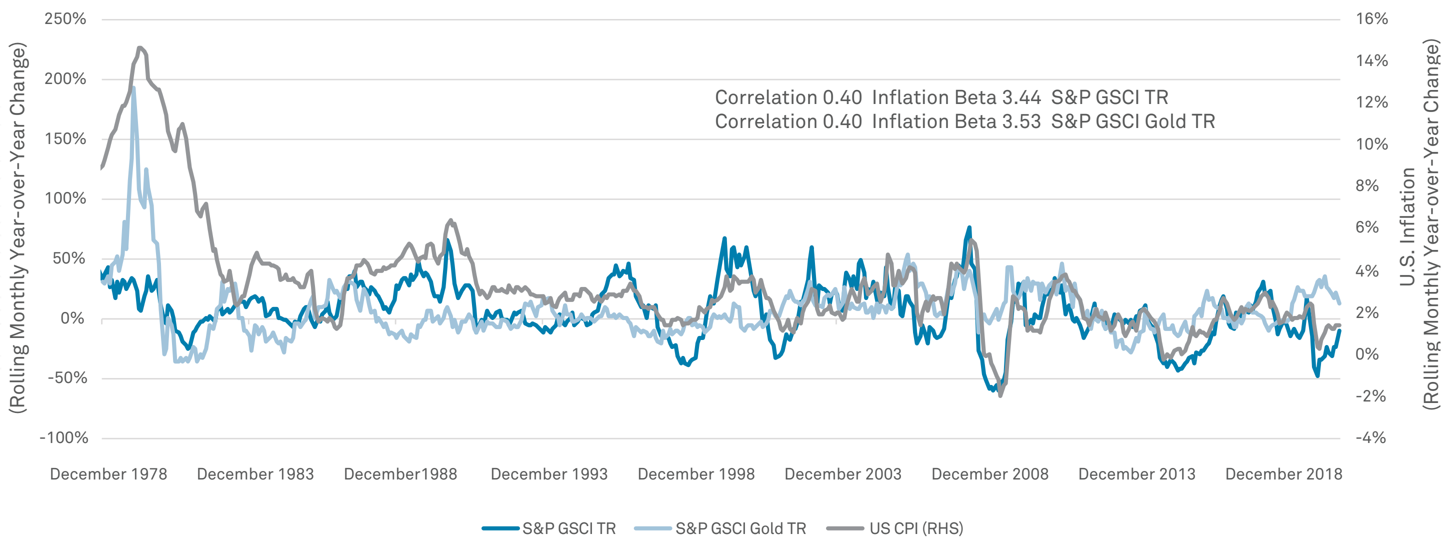

from
s
Crude oil peaks at $145.85
Global financial crisis hits bottom for U.S. equities
S&P GSCI Dynamic Roll launches
Oil price collapse
U.S. imposes tariffs on China for its alleged unfair trade practices
WHO declares COVID-19 a global health emergency
Cotton prices hit $2/lb
U.S. lifts 40-year export ban on crude oil
Crude oil prices fall below zero
S&P GSCI Multiple Contract launches
S&P GSCI Equity Blends launches
Spot gold price exceeds $2,000/oz for the first time
S&P GSCI Enhanced launches
Copper hits record high
First commodity ETFs launch
S&P GSCI ARP launches
U.S. drought leads to record grain prices
6
April 2009
April 2012
April 2015
April 2018
April 2021

Exhibit 1: S&P GSCI and S&P GSCI Gold Inflation Protection



Source: S&P Dow Jones Indices LLC, Federal Reserve Bank of St. Louis. Data from December 1978 to January 2021. 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 this document for more information regarding the inherent limitations associated with back-tested performance. Inflation is defined as the year-over-year percentage change in the monthly U.S. CPI. Average year-over-year S&P GSCI and S&P GSCI Gold returns since index inception.

the domain of a small group of expert commodity traders. But as the broad cohort of market participants becomes more sophisticated and access to alternative asset classes improves, it's possible that more investors will seek out tactical allocations to commodities. Commodities can be used as building blocks to express thematic macro plays and can be traded easily due to highly liquid and robust markets. They're also versatile—single-commodity indices tracking front-month futures contacts can help facilitate market participants' access to the long or short side.

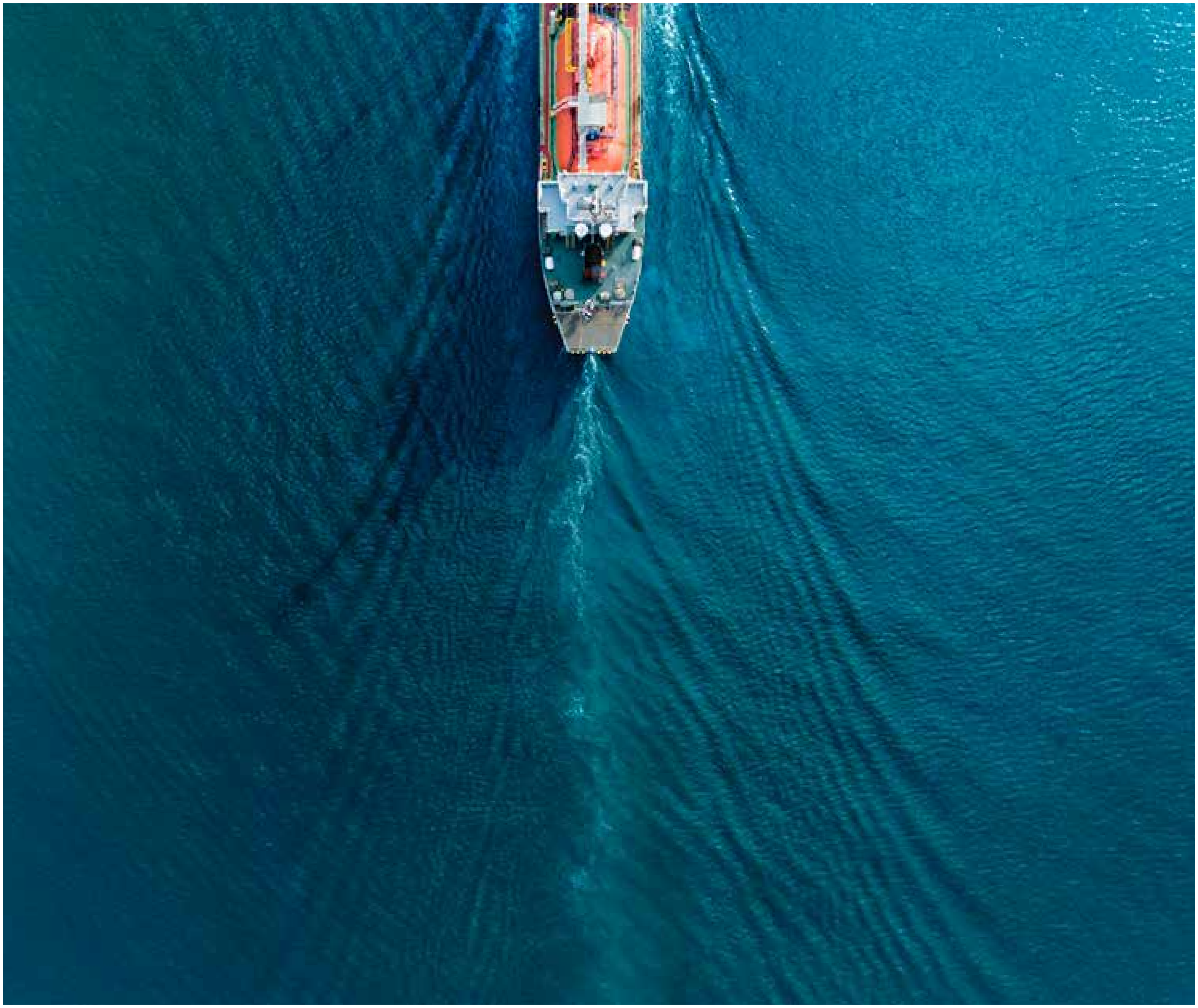
Commodities can be used as building blocks to express thematic macro plays and can be traded easily due to highly liquid and robust markets.

Commodities may be helpful to investors wishing to express views on a number of current market trends, including the growth in green technology, the post-pandemic recovery, and inflationary pressures. For many market participants, unprecedented and coordinated fiscal stimulus over the last year justifies concerns over inflation. Historically, commodities and in particular gold have demonstrated a high inflation beta and may offer an inflation hedge (see Exhibit 1).

Green technologies may continue to play a vital role in combating climate change. Besides rare earth metals, the building blocks for many of these technologies are industrial commodities such as copper, aluminum, nickel, and silver.

The Price is Not Always Right: Elevating Non-Price Factors

The commodities market is ripe with data, be it the traditional supply and demand metrics that are reported by government agencies on a regular, albeit delayed, basis or real-time data such as port inventory that can be computed using satellite imagery.



For those seeking to utilize this largely non-price (or non-financial) data, rules-based, investable indices may offer solutions.

While processing and modelling this data to produce investable signals with attractive risk/return profiles on a large scale has proven difficult, a new generation of commodity indices may be on the horizon. These indices would generate investable signals using supervised machine learning to compute large, non-linear datasets—an approach that might also offer a way to incorporate ESG data into commodity indices.

Looking Ahead

The first 30 years of commodity index investing focused on offering increasingly more sophisticated alternatives to broad commodity beta, facilitating access to the performance of individual commodities, and taking steps to apply alternative risk premia strategies to the asset class.

Looking ahead, ESG considerations, an expansion of risk premia, the tactical use of commodities, and incorporating non-price data could be key themes to watch. ■

ESG Spotlight on Latin America

Is ESG Going Mainstream in Latin America?

Silvia Kitchener
Director
Global Equity Indices, Latin America
S&P Dow Jones Indices

While many investors are interested in ESG in Latin America, demand for these strategies may be driven primarily by pension fund managers and regulators in the region. Pension fund managers in Latin America manage billions of dollars from the millions of workers saving for their retirements.

Not surprisingly, pension fund regulators recognize the importance of implementing ESG norms and policies to safeguard these investments. In several countries, they are now looking to enact regulations that would require pension fund managers to include ESG criteria in their investment decisions.

Regulatory Activities in the Region

– Mexico's CONSAR (Comisión Nacional del Sistema de Ahorro para el Retiro) established that starting January 2022, the AFORES (pension fund managers) must implement some type of ESG criteria in their investment decision. Many of them have already complied.[1]

– Peru's SBS (Superintendencia de Banca, Seguros y AFP) is in consultation with the local market to include ESG criteria possibly in July 2021.[2]

– Chile's Superintendence of Pensions is requiring that the AFPs (pension fund managers) add ESG criteria as well as consider climate risk issues in their investment decisions by May 2021.[3]

[1] https://www.gob.mx/consar/documentos/normativa-normatividad-emitida-por-la-consar-circulares-consar-23509
[2] https://intranet2.sbs.gob.pe/Preproyectos/6208REQYWRRUBZ8EEIITQVRKGHW0ATV9S9A.PDF
[3] https://www.spensiones.cl/portal/institucional/594/w3-article-14248.html
[4] https://www.superfinanciera.gov.co/inicio/industrias-supervisadas/finanzas-sostenibles-10104520
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– Colombia's SFC (Superintendencia Financiera de Colombia) is evaluating whether to mandate inclusion of ESG criteria, though with no definitive date. The SFC's working group recently published their two main objectives: promote green finance and mitigate ESG and climate risk in the pension fund system.[4]

– Brazil's PREVIC (the National Superintendence of Pension Funds) has been in consultation with the local pension funds on what ESG criteria should be part of their investment decisions.[5]

All these initiatives are creating a demand for benchmarks and for indices that can serve as the basis for ESG financial products. This demand is also incentivizing companies to implement or enhance their corporate ESG programs, so as not be left out of these new benchmarks.

S&P Global tracks corporate adherence to ESG principles using a comprehensive, renowned survey called the Corporate Sustainability Assessment (CSA), which elicits 600 to 1000 datapoints from each company, giving each one a sense of where they stand on ESG relative to their peers. On a voluntary basis, more companies now participate in the CSA than ever before, and more data means more targeted indices.

Using this data, we now have the capacity to construct indices that are designed to meet investors' ESG goals while remaining sensitive to unique dynamics in each local market in Latin America. Recently, S&P DJI launched new ESG indices for Mexico, Brazil, and Chile.

Recently Launched Latin American ESG Indices

– The S&P/BMV Total Mexico ESG Index is broad in scope, and includes both equities and real estate investment trusts, or FIBRAS. The index applies exclusions based on business activities (related to tobacco, controversial weapons, and coal) and noncompliance with UN Global Compact principles, and is weighted by S&P DJI ESG Scores.

– The S&P/B3 Brazil ESG Index is also a broad index that applies the same exclusions based on business activities and noncompliance with UNGC principles. The stocks, however, are weighted by a combination of S&P DJI ESG Scores and liquidity in an effort to make the index replicable and able to support a financial product.

– The S&P IPSA ESG Tilted Index measures the performance of eligible securities in the S&P IPSA that meet sustainability criteria, while attempting to improve the overall S&P DJI ESG Score with respect to the S&P IPSA by overweighting or underweighting ("tilting") companies based on their individual S&P DJI ESG Scores. Again, the basic exclusions are also applied.

There is still work ahead for companies, regulators, asset owners, asset managers, and individual investors seeking to invest sustainably, but the good news is that a path is rapidly developing in Latin America and many are already on it. ■

A Shot in the Arm for Dividends?

Howard Silverblatt
Senior Index Analyst
S&P Dow Jones Indices

At the end of 2019, the 2020 outlook called for the 2020 dividend payment to return to a double-digit gain—last seen in 2015 at 10.0011% (by a tick)—and to set its ninth consecutive annual record for cash payments. By month-end February 2020, S&P 500 issues were easily on that track, as 113 issues, 22% of the index, had increased their dividend, with no cuts and certainly no suspensions. Estimates of 2020 dividend gains moved above double-digits, as the actual Q1 2020 payments set a record; things were good.

Then Corona transformed from a beer into a virus. By the end of June, four months later, the index had posted only 49 additional increases (with lower increases), but it also posted 62 decreases, with 41 of the 62 being suspensions (the last prior suspension came from Pacific Gas and Electric in 2017). Still, the Q2 2020 payment held up, as companies fulfilled their prior declarations, a tick over Q2 2019 (+0.3%), but 6.2% lower than the record Q1 payment. From there payments declined, with Q3 2020 5.6% down from Q3 2019 and Q4 2020 3.8% down from Q4 2019. However, there were increases, though they were smaller, as companies with cash flow and a history of dividend increases continued on. By year-end, the record Q1 and respectable Q2 payment made up for the downfalls of Q3 and Q4, resulting in a tick up for dividends in 2020 over 2019, literally halfway between the 10% expected gain at the start and the 10% expected decline near mid-year.

Q1 2021 continued the pattern of Q4 2020, as more companies increased (120 in Q1 2021 compared to 91 in Q4 2020, but down from 126 in Q1 2020), with their increases also larger than before (average 11.13% for Q1 2020, 9.81% for Q4 2020, and 9.01% for Q1 2019). More relevant was that decreases fell significantly to two, compared to 13 last year, when 10 of the 13 were suspensions. The bottom line for Q1 2020 was the net change as the S&P 500 indicated dividend rate fell by USD 4.2 billion, with USD 9.5 billion in increases and USD 13.7 billion in cuts (Q2 2020 posted a net decline of USD 23.6 billion). For Q1 2021 the net change is a gain of USD 15.4 billion, with USD 15.9 billion in increases and USD 0.5 billion in cuts.

Exhibit 1: S&P 500 Dividends Per Share and in USD Millions

Regular Cash Dividends, $ per share	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Q1	5.96	5.46	6.16	7.09	7.95	9.19	10.55	11.09	11.72	12.79	13.98	15.32	14.68
Q2	5.44	5.58	6.49	7.45	8.61	9.76	10.69	11.28	12.12	13.10	14.24	14.35	–
Q3	5.35	5.66	6.50	7.77	8.91	10.02	10.79	11.36	12.31	13.66	14.80	13.97	–
Q4	5.66	6.03	7.28	8.93	9.52	10.47	11.35	12.02	12.78	14.19	15.21	14.64	–
YEAR	22.41	22.73	26.43	31.25	34.99	39.44	43.39	45.75	48.93	53.75	58.24	58.28	–
% CHG	**-21.07**	**1.45**	**16.27**	**18.23**	**11.99**	**12.72**	**10.0011**	**5.44**	**6.96**	**9.84**	**8.36**	**0.07**	**–**
Regular Cash Dividends, $ Millions													
Q1	51,870	48,938	56,051	64,150	71,052	82,082	93,551	96,666	100,862	109,183	117,328	126,978	123,907
Q2	47,443	50,395	59,105	67,337	76,766	87,023	94,698	98,305	104,010	111,603	118,680	119,043	–
Q3	46,972	51,265	59,025	70,208	79,276	89,033	95,247	98,427	105,426	115,718	123,117	115,539	–
Q4	49,937	54,748	66,198	79,927	84,745	93,062	99,962	103,816	109,456	119,811	126,353	121,623	–
YEAR	196,222	205,347	240,379	281,622	311,839	351,200	383,458	397,213	419,754	456,314	485,478	483,182	–
% CHG	**-20.84%**	**4.65%**	**17.06%**	**17.16%**	**10.73%**	**12.62%**	**9.19%**	**3.59%**	**5.67%**	**8.71%**	**6.39%**	**-0.47%**	**–**

Source: S&P Dow Jones Indices LLC. Data as of March 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

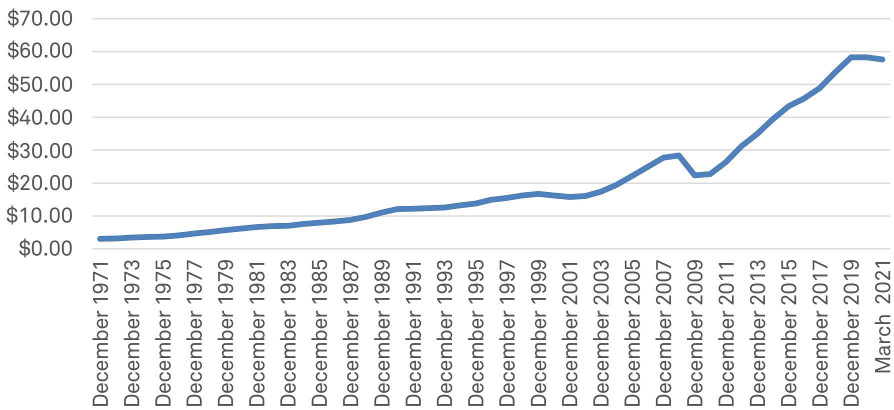
Exhibit 2: S&P 500 Indicated Dividend Changes

U.S. Domestic Common Market Change, $ Millions	Increases	Initials	Decreases	Suspensions
Q1 2017	13,029	10,851	11,940	-1,089
Q1 2018	20,891	18,842	19,867	-1,024
Q1 2019	21,256	11,755	16,506	-4,750
Q1 2020	30,384	-5,536	12,424	-17,960
Q1 2021	22,719	17,965	20,342	-2,377
2017	62,150	37,092	49,621	-12,529
2018	74,604	58,379	66,492	-8,113
2019	67,732	45,447	56,590	-11,142
2020	128,169	-32,369	47,900	-80,269
12-Month March 2020	76,860	28,156	52,508	-24,352
12-Month March 2021	115,967	-17,314	49,326	-66,640

Source: S&P Dow Jones Indices LLC. Data as of March 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

The working consensus around S&P 500 dividends has continued to improve, with shots in the arm prevailing over spread and restrictions in some mindsets. Based on broader vaccine distribution in Q2 2021 and a broader herd immunity approach for Q3, dividend payments are expected to increase a conservative 5.0% for 2021, which would be sufficient to set a new annual record payment (a potential 10th consecutive year of record payments). To date, 11 of the 42 issues that suspended dividends in 2020 have initiated a dividend (three at a higher dividend rate than their 2020 suspended one, three at the same rate, and five at a lower rate), including Ross Stores (which now pays at the same rate as before their suspension), the only S&P 500 Dividend Aristocrat to be removed because of their suspension

Exhibit 3: S&P 500 Annual Dividend Payments Over 50 Years, Interrupted by the Financial Crisis and Slowed by COVID-19



Source: S&P Dow Jones Indices LLC. Data as of Mar. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

(note: under current methodology they are not eligible to be added back). We could see additional initiations from issues that previously suspended and increases from some that reduced their rate are expected depending on how the economy reacts to vaccine progress, any new developments with respect to the virus, and any consumer spending reactions.

If an investor thinks of dividends as their paycheck, their 50-year wage growth (actual cash payments), has been 6.0% annualized, which includes the market's shift from income to capital appreciation, the financial crisis, as well as the 2.1% decline from the pre-COVID February 2020 point. ■

Did you know?

Past Performance (on Broadway)

On February 27, 1957, Standard & Poor's (which was picked up by McGraw Hill in 1966 and is now called S&P Global) held a press luncheon in the Lawyer's Club at 115 Broadway in downtown Manhattan.

Thirty-five financial reporters gathered there to hear about a new index—the S&P 500. At the event, S&P explained how it worked, along with the rationale behind it. The goal was to create a comprehensive market yardstick and answer the intraday question of "what is the market doing?" by reporting hourly index levels. While there were no Excel spreadsheets in 1957, the index used new technology called Melpar and was heralded as "the marriage of electronics and finance." Brokerages soon installed the hourly prices on their boards and within a couple months, the New York Times, Herald, and World Telegram began picking up the index values each night.

At the time, the 500 stocks included 425 industrials, 25 rails, and 50 utilities, which all together, accounted for 90% of the NYSE common market value. They based the new index at 10, which was the average (rounded) price of stocks from 1941 to 1943.

"We have just begun to tap the electronic age at Standard & Poor's," they said 64 years ago.

10 years after this press luncheon, the Beatles sang, "Will you still need me, will you still feed me when I'm 64?" When it comes to the S&P 500, the answer, apparently, is yes.

Dow Jones Industrial Average

Celebrating 125 Years

May 26, 2021 marks the 125-year anniversary of a financial and cultural icon—an index that has weathered recessions, depressions, bubbles, expansions, 23 U.S. presidencies, two world wars, and two global pandemics. Through it all, The Dow has tracked the ups and downs of the U.S. market and served as a leading indicator of U.S. and global economic health. Quoted far and wide from Wall Street to Main Street, The Dow is still the number that most investors cite when asked how the market is doing.

Learn more

S&P Dow Jones Indices

A Division of S&P Global

Investor Education: Complimentary On-Demand Forums & Webinars

Paving a Path Forward to the “Next Normal”

As we dive into the next normal, how can investors and advisors alike adapt to permanent changes in the way we work, live, and learn? Speakers from S&P DJI, S&P Global Ratings, BetaShares, BlackRock, ETF Securities Australia, State Street Global Advisors, and VanEck help answer this question.

The Power of Diversification in the New Normal

Find out how notions of diversification are evolving to account for newly prominent risks, and learn how innovations in passive investing are helping to create more resilient portfolios. Hear from speakers at S&P DJI, Stern School of Business, NYU, HKEX, and Edelweiss Asset Management.

ESG Masterclass: How Deeper Data Impacts ESG Investing

What’s the material impact of the ESG data and scores on index construction and risk/return? Speakers from S&P DJI, UBS Asset Management, and S&P Global discuss the increasingly important role of market-leading ESG assessments.

ESG Masterclass: Accessing the Expanding S&P 500 ESG Index Ecosystem

The S&P 500 ESG Index has redefined mainstream access to ESG, providing global investors with new tools designed to help them align objectives with ESG values. Explore how this expanding ESG ecosystem is defining the sustainable core with speakers from S&P DJI, Horizon Investments, Axio Financial, and Sage Advisory.

Divesting, Decarbonizing, De-risking, and Aligning with 1.5C: Climate Change Investing in 2020

Investors recognize that climate change is one of the most pressing threats to society, and that alignment offers potential opportunities for capital appreciation. However, choice paralysis can creep in when investors face the ever-growing number of climate change products. Speakers from S&P DJI, Lyxor ETF, State Street Global Advisors, and Trucost, part of S&P Global explore the differences among climate change products, go beyond the rhetoric, and tackle the key questions confronting investors.

A New Era for ESG in Brazil

In response to growing demand, many Brazilian companies are now demonstrating their dedication to ESG-focused business practices. But how can investors identify these companies and integrate them into a core portfolio strategy? Speakers from S&P DJI, B3, SAM, BRAM, BTG Pactual, and JGP weigh in on how investors can use index-based strategies to incorporate ESG while maintaining broad-market exposure.

A Fresh Investment Perspective on REITs

COVID-19 has highlighted potential investment pitfalls of REITs, but it has also shed light on opportunity in the space. Speakers from S&P DJI, Cambria Investment Management, and Charles Schwab & Co. discuss how investors can use new index-based solutions in the REITs sector to meet targeted goals while navigating risk.

Eyes on Asia: Is Opportunity Still Knocking on China's Open Door?

The global pandemic, volatile financial markets, and regulatory measures may have cast shadows over some investments in China, but growth forecasts, increased foreign access, and new benchmarks could signal opportunities. Speakers from S&P DJI, CSOP Asset Management, S&P Global Ratings, and Premia Partners tackle the outlook for China's economy and how that outlook could affect world markets.

Canadian ETF Masterclass: Building a More Resilient Core

2020's mix of volatility and prolonged uncertainty underscores the importance of building a resilient core. How could more strategic building blocks offer protection from the unforeseen without sacrificing access to opportunity? Speakers from S&P DJI and CFRA explore the range of innovative, low-cost strategies designed to meet clients' specific investment goals—from ESG to factors, sectors, and beyond.

Register for an upcoming event, or watch a replay or video on-demand.

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Tune in to find out why S&P DJI is the destination for ESG on Asset TV at
www.assettv.com/channel/sp-dow-jones-indices-esg

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Tim Edwards
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Berlinda Liu
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Fei Mei Chan
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Craig Lazzara
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A Change in Fortune

Anu Ganti
Concentration levels in the cap-weighted S&P 500 exceed those of 1999, implying that an equal-weight alternative could potentially offer above-average diversification benefits. **Read on...**

The Shift to Passive in India

Tyler Carter
The Indian ETF market continued to expand in 2020, finishing the year with ~USD 37 billion, representing a year-over-year increase of 171% and making India's ETF market the highest-growth ETF market in the Asia-Pacific region on a percentage basis for that period. **Read on...**

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Pop Quiz

1. The railroad-centric predecessor of the DJIA was intermittently published in ____, the precursor to The Wall Street Journal.

- A “Investor’s Afternoon Memo”
- B “Customer’s Afternoon Letter”
- C “The Wall Street Afternoon Review”

2. Which of the following companies was not part of the original DJIA?

- A Tennessee Coal, Iron and Railroad
- B Chicago Gas
- C Western Union
- D U.S. Leather

3. What caused the market to skyrocket 15.34% on March 15, 1933?

- A Hope Diamond was discovered
- B Trading resumed after shutdown
- C World War I came to an end
- D F.D. Roosevelt gave his State of the Union speech

4. When was Black Monday, the largest single-day percentage loss in the history of The Dow?

- A December 10, 1940
- B February 14, 1929
- C December 18, 1899
- D October 19, 1987

5. Who was president when The Dow reached 10,000?

- A Bill Clinton
- B George W. Bush
- C Barack Obama
- D Donald Trump

6. How many commodities are part of the S&P GSCI today?

- A 10
- B 17
- C 24
- D 32

7. Diamonds have never been included in the S&P GSCI because there is no liquid futures market for them.

- A True
- B False

8. Which of the following commodities has been the top performer in the S&P GSCI over the last 30 years?

- A Copper
- B Brent crude oil
- C Unleaded gasoline
- D Soybeans

9. More than 50% of silver demand comes from industrial uses such as solar panels, automotive components, and medical devices. What percentage of gold demand comes from industrial uses?

- A 4%
- B 8%
- C 16%
- D 24%

10. If every single ounce of gold that has been mined throughout history were placed next to each other, how many meters would the resulting cube measure on each side?

- A 22
- B 56
- C 85
- D 117

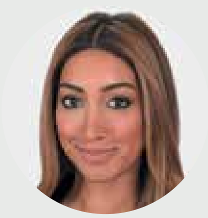
---

1. B. “Customer’s Afternoon Letter”
2. C. Western Union
3. B. Trading resumed after shutdown
4. D. October 19, 1987
5. A. Bill Clinton
6. C. 24
7. A. True
8. A. Copper
9. B. 8%
10. A. 22

Soundbites

It's not big tech....It is a much more cyclical, much more domestically focused recovery as the equity markets price in not just the impact of stimulus but the prospect of strong domestic economic growth in the U.S. Historically, those conditions have been more favorable for smaller companies, for cyclical sectors, for value stocks."

Tim Edwards, Managing Director, Index Investment Strategy at S&P DJI, in the video "Exploring Equal Weight's Impact on Risk/Return"



Intangibles are what's really driving corporate value – things like reputation, brand loyalty, consumer preferences, and good will. It's ESG that's precisely speaking to those topics as things that we all care quite dearly about.

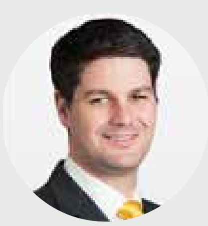
Mona Naqvi, Head of ESG Indices, North America at S&P DJI, in the Masterclass "Accessing the Expanding S&P 500 ESG Index Ecosystem"

Many investors take back-tested history with an understandable grain of salt. But even live history can be deceptive if it doesn't encompass market environments that reflect the full spectrum of reality.

Fei Mei Chan, Director, Index Investment Strategy at S&P DJI, in the blog post "Happy Birthday to Low Vol and High Beta!"

The misalignment between the promising prospects for active management in 2020 and their subsequent performance remind us that true skill is rare and larger active opportunities do not automatically translate into actual outperformance.

Anu Ganti, Senior Director, Index Investment Strategy at S&P DJI, in the blog post "Opportunity Does Not Equal Attainment"



Senior loans don't have nearly the same degree of sensitivity to rising rates as corporate bonds. Because loan rates reset quarterly or semiannually, yields keep pace with changes in prevailing interest rates.

Brian Luke, Global Head, Fixed Income Indices at S&P DJI, in the blog post "Preferred Stock and Senior Loan Solutions for Yield-Starved Investors"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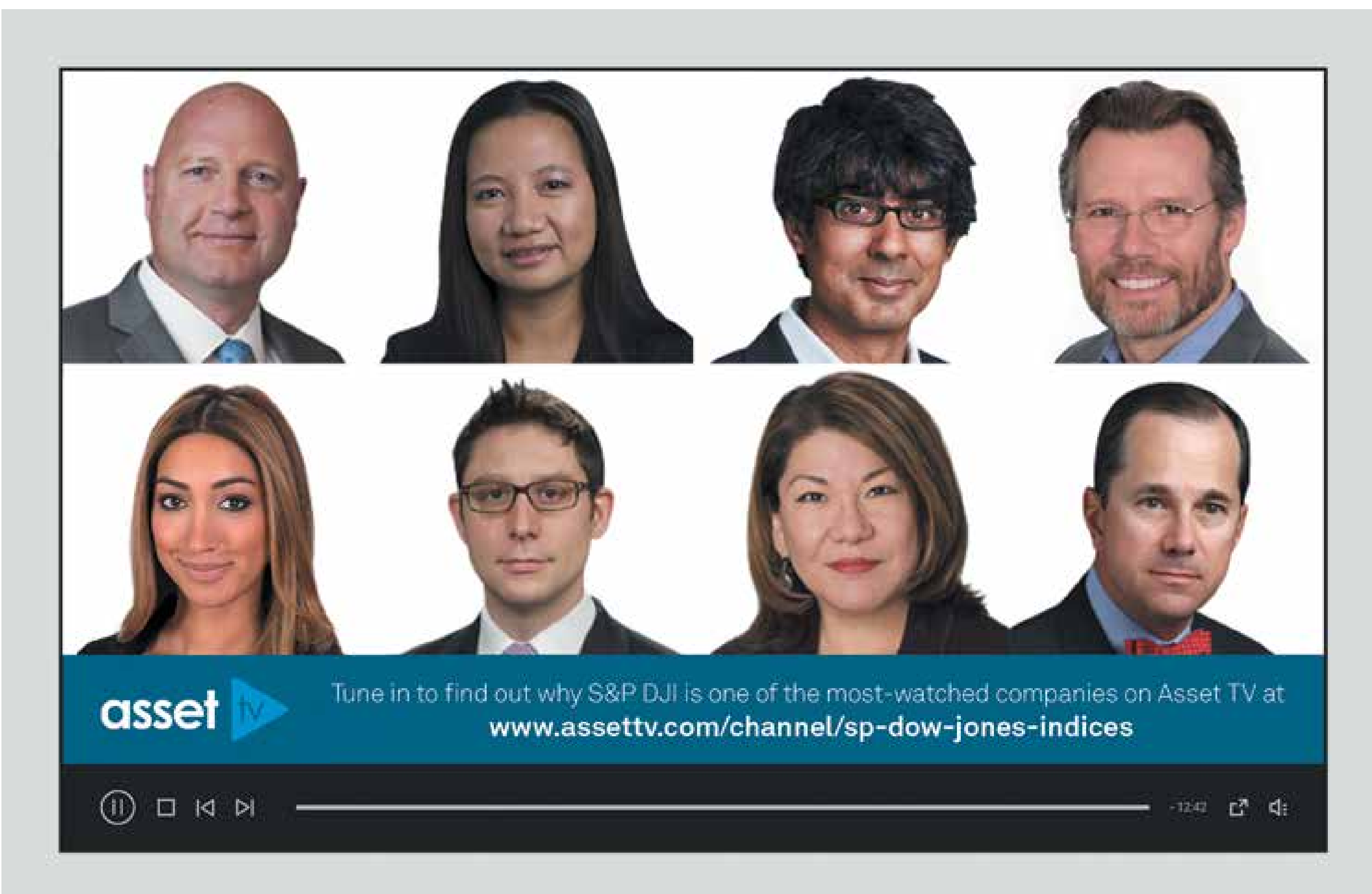
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