S&P Kensho New Economies Quarterly Commentary

The S&P Kensho New Economy Indices seek to track the industries and innovation of the Fourth Industrial Revolution

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The global equity markets continued their rally in Q1 2024, with the S&P Global BMI posting 7.8% quarterly gains and reaching a new record high. The performance breadth was healthy, with 38 of the 47 countries represented contributing positively to the quarterly gains. Among the major economies, Japan (S&P/TOPIX 150, 20.4%) was a notable outperformer, while China (S&P China 500, 1.1%) stabilized after reaching a five-year low in the previous quarter. The U.S. equities-focused S&P Composite1500® had a strong start to the year, up 10.3%, with healthy contributions from large caps (up 10.6%) and mid caps (up 10%), but notable weakness from the small caps (up 2.5%).

Within the S&P 500®, the rate-sensitive Real Estate sector, the top performer in Q4 2023, was the only negatively performing sector (down 0.6%). Financials (up 12.5%) was a strong sector performer of this quarter, slightly lower than the top performing Energy sector (up 13.6%). More importantly, 86% of the index constituents moved above their 200-day moving average, signaling an improvement in the performance breadth. Overall equity fund flows were robust this quarter, accompanied by pickup in Energy sector inflows. Most S&P 500 factors posted positive quarterly returns, with momentum (up 22.6% for the quarter) taking the top spot (five of the Magnificent Seven stocks make up 44% of the index weight), significantly outperforming the S&P 500 over the past 12 months (up 49%). The low volatility factor (up 5.8%) was at the bottom of the first quarter factors league table. Positive quarterly returns were posted by 17 of the 25 New Economies subsectors, led by Smart Borders (up 15.7%)

and Nanotechnology (up 10.5%), which outperformed the S&P Composite 1500. The Financials-related New Economies sector of Democratized Banking (up 5%) was among the top-performing sectors. In contrast, buffeted by higher rates and weaker sentiment, the renewables-focused Clean Power sector (-9.6%) was the biggest underperformer. Outside of the New Economies, artificial intelligence-themed indices—S&P Kensho Artificial Intelligence Enablers Index (up 14.2%), S&P Kensho Global Artificial Intelligence Enablers Index (up 12.2%), S&P Kensho Artificial Intelligence Enablers & Adopters Index (up 17%)—were strong performers, boosted from sustained investor optimism around these technologies.

Backward-looking macro data indicators confirmed the market's steady optimism on the U.S. economy. Q4 2023 U.S. corporate earnings materially beat expectations, though they were set lower going into the earnings season. The U.S. economy grew by 3.3%, versus the 2% projected for Q4 2023, with The Conference Board's Leading Economic Indicator inching higher in February. Consumer spending underpinned a robust U.S. economy, buoyed by strong jobs data and wages. Nonetheless, consumer sentiment has been stagnant in the past six months. Inflation prints continued to dictate the Fed and market's expectations of rate cuts, which were pushed further back this quarter. Higher than expected CPI prints in January and February quickly prompted the market to reprice the expected Fed rate cuts in 2024 from six to about three. The Fed, which also dealt with sticky inflation in the 1970s, has maintained a cautiously optimistic stance for rate cuts this year. Outside of the U.S., inflation has also risen across the globe so far this year.

Persistent inflation drove the rise of U.S. Treasury yields over the quarter, reversing the previous quarter's course. The 2-10 Year U.S. Treasury curve spread moved sideways, extending its stay in the negative territory to more than 18 months. The iBoxx USD Treasuries Index's recovery from the previous quarter was short lived, as it fell in Q1 2024 (by 1.00%), as did the S&P Eurozone Sovereign Bond Index (-0.42%). Expectations shifted in the past three months, with the European Central Bank (ECB) indicating that it's open to rate cuts in the summer, even as the market's Fed rate cut expectations in June have been scaled back. The S&P U.S. Treasury Bill Index (1.28%) managed to eke out a positive performance, while relatively lower duration and easing financial conditions aided the iBoxx USD Liquid Leveraged Loans (2.18%) and iBoxx USD Liquid High Yield (1.30%) outperformances versus the iBoxx USD Liquid Investment Grade (-0.72%).

The commodities (S&P GSCI) space was a spirited partner to equities, gaining 10.4% during the quarter. Crude oil was the primary driver as it steadily retraced nearly all its Q4 2023 losses in its march toward USD 90. Natural gas (down 21.3%) was a notable underperformer within the Energy sector, touching a decade-low from oversupply and seasonally low available storage capacity. Despite rising U.S. real yields, increasing central bank purchases bolstered gold (7.0%) to new record highs, with silver prices (3.8%) also moving higher. Industrial Metals (0.3%), along with Agriculture commodities (0.9%), barely moved. Global manufacturing PMI rose for two consecutive months in February and turned positive this quarter for the first time since August 2022.

Top Three from across the New Economies

Smart Borders (15.7%): Following the return of 19% in the final quarter of 2023, KDMZ continued its positive momentum into the new year, adding another 16%. The increasing geopolitical tensions and the ongoing need for advanced technologies to protect critical infrastructure acted as a tailwind for the index. The positive performance of the index may have been bolstered by additional government spending on security measures and infrastructure improvements in border areas. Among the top performers, Embraer (44%) experienced solid growth across all its business divisions. In particular, Embraer's Defense & Security segment marked significant revenue growth, propelled by higher volumes of the C-390, a military aircraft. Embraer Defense & Security is the leading aerospace and defense industry in Latin America, engaging in activities including integrated systems for information, communications, border monitoring and surveillance. Another significant contributor was Leidos Holdings (21%), whose civil segment revenues growth was driven primarily by infrastructure spending by the Federal Aviation Industry.

Nanotechnology (10.5%): KNANO delivered its strongest quarterly performance in three years, maintaining its positive trajectory from Q4 2023 and being at its highest levels since August of last year. The Health Care sector played a pivotal role in the index's performance, with Bruker BioSciences Corp (up 28%) and Liquidia Corporation holding the top spots. Bruker presented its full-year 2023 results, confirming a double-digit organic revenue growth for the third consecutive year. Moreover, the company continued its expansion strategy, completing or announcing a series of acquisitions. These include Chemspeed Technologies, a Swiss company focused on automated laboratory R&D and QC workflow solution; Nanophoton, a Japanese company leader in Raman microscopy system; EliTechGroup, a French in-vitro diagnostic company; and Spectral Instruments Imaging, the performance leader in preclinical in-vivo optical imaging systems. On the downside, Vuzik Corp was the notable underperformer (-42%) within KNANO, as it slid to its lowest level since April 2020. The company, which specializes in augmented reality devices, recently delayed its 10-K due to the time required to complete some audit procedures and has been on a downward trend since reaching its peak in early 2021.

Distributed Ledger (**10.4%**): KLEDGER continued its upward trend from the previous quarter, when it almost doubled. The index benefitted from the positive momentum of Bitcoin. In January, the SEC approved the launch of 11 bitcoin ETFs from various sponsors, including Fidelity, Invesco, Grayscale and Ark Invest. Among those, BlackRock's iShares Bitcoin Trust (IBIT) became the fastest ETF to reach USD 10 billion in AUM, achieving this milestone in just two months. Unsurprisingly, among the largest contributors over the last quarter were CleanSpark (92%), a Bitcoin mining technology company, and Cipher Mining (25%), a Bitcoin miner. Crypto trading platform Coinbase (52%) also experienced growth thanks to the positive sentiment around Bitcoin, reaching its highest level in two years. Notable underperformers were SOS Limited (-63%), Canaan (-34%) and Bit Digital (-32%).

Exhibit 1: S&P Kensho New Economies Performance Dashboard

Composite Index	QTD	YTD	12-Month
New Economies Composite (KNEX)	2.94%	2.9%	13.6%
New Economies Select (KNESLX)	3.56%	3.6%	8.3%
S&P Composite 1500®	10.31%	10.3%	29.2%
Sector Index	**QTD**	**YTD**	**12-Month**
Human Evolution (KEVOLVE)	8.39%	8.4%	8.1%
Democratized Banking (KFIN)	5.02%	5.0%	40.1%
Future Security (KSECURE)	4.02%	4.0%	23.3%
Advanced Manufacturing (KMAKE)	3.21%	3.2%	7.6%
Final Frontiers (KEXPLORE)	0.50%	0.5%	11.0%
Intelligent Infrastructure (KINFRA)	0.35%	0.4%	1.1%
Future Communication (KCONNECT)	-1.04%	-1.0%	6.7%
Sustainable Staples (KSTAPLE)	-2.41%	-2.4%	-4.0%
Smart Transportation (KMOVE)	-5.09%	-5.1%	-5.0%
Clean Power (KPOWER)	-9.60%	-9.6%	-24.2%
Subsector Index	**QTD**	**YTD**	**12-Month**
Smart Borders (KDMZ)	15.75%	15.7%	28.1%
Nanotechnology (KNANO)	10.46%	10.5%	-6.2%
Distributed Ledger (KLEDGER)	10.44%	10.4%	117.4%
Genetic Engineering (KDNA)	9.76%	9.8%	11.7%
Wearables (KBORG)	8.64%	8.6%	8.0%
Future Payments (KPAY)	7.02%	7.0%	26.1%
Alternative Finance (KALTFIN)	6.86%	6.9%	48.6%
Drones (KDRONE)	4.72%	4.7%	17.8%
Advanced Transport Systems (KATS)	4.32%	4.3%	18.5%
Smart Buildings (KHOME)	3.78%	3.8%	15.6%
Cyber Security (KCYBER)	2.73%	2.7%	26.6%
Robotics (KBOTS)	2.30%	2.3%	13.1%
Digital Health (KDOC)	1.95%	2.0%	-6.3%
Digital Communities (KSOCIAL)	0.82%	0.8%	1.5%
Smart Factories (KFACT)	0.77%	0.8%	7.0%
3D Printing (KDDDP)	0.18%	0.2%	-0.9%
Sustainable Farming (KFARM)	-0.15%	-0.1%	-8.4%
Space (KMARS)	-0.24%	-0.2%	10.0%
Virtual Reality (KVR)	-0.72%	-0.7%	28.2%
Electric Vehicles (KEV)	-3.88%	-3.9%	-11.1%
Smart Grids (KGRIDS)	-3.93%	-3.9%	-9.8%
Enterprise Collaboration (KTEAM)	-5.36%	-5.4%	3.1%
Clean Energy (KENERGY)	-5.42%	-5.4%	-5.4%
Autonomous Vehicles (KCARS)	-12.41%	-12.4%	-10.3%
Cleantech (KCLEAN)	-13.50%	-13.5%	-30.4%

Source: S&P Dow Jones Indices LLC. Data as of March 31, 2024. Index performance based on total return in USD. Index tickers shown in parentheses. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

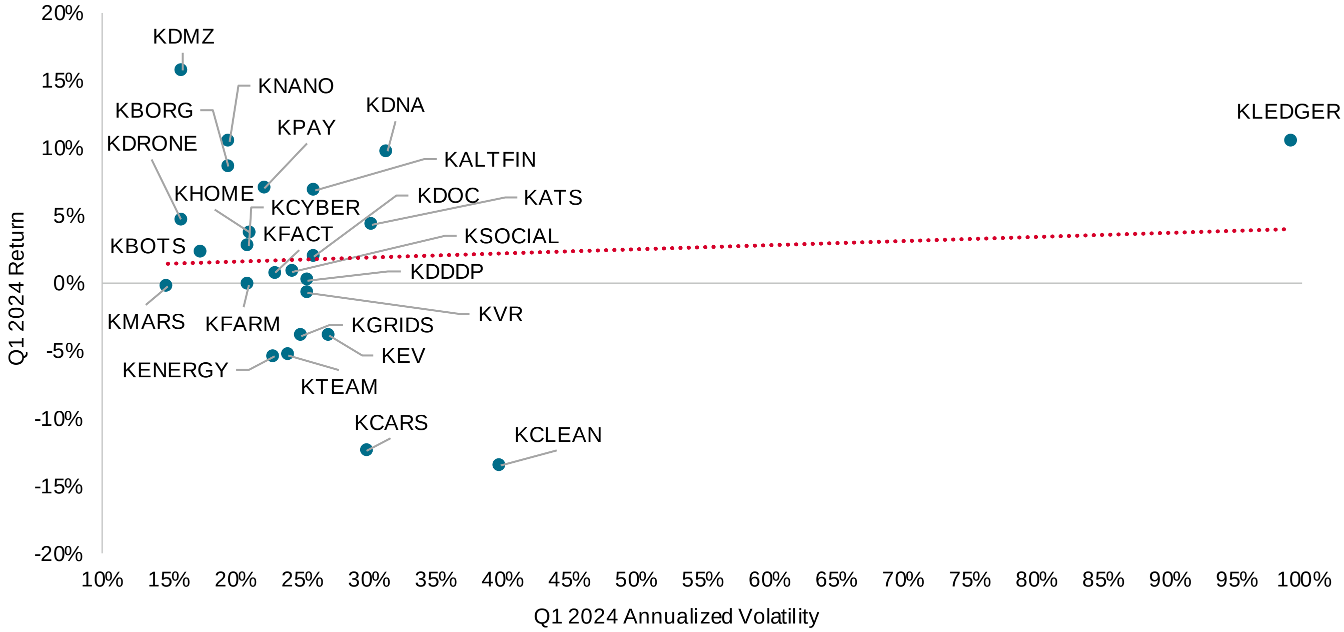
Bottom Three from across the New Economies

Cleantech (-13.5%): KCLEAN felt the impact of the underperformance in both the solar and fuel cell sectors during the past quarter, attributed to various challenges such as rising interest rates, higher labor costs and regulatory changes. Additionally, the NIMBY (not in my backyard) movement in the U.S. presents a significant obstacle, impeding the development of renewable energy projects despite ambitious governmental goals (link). Despite these challenges, the solar market experienced remarkable growth in 2023, installing 32.4 gigawatts-direct current (GWdc) of capacity, a 51% increase from the previous year, marking its largest year yet and surpassing 30 GWdc for the first time. Solar energy, among others, remains pivotal in our transition to cleaner and more sustainable energy sources. Notably, Sunnova Energy International Inc. (-59%) and Maxeon Solar Technologies Ltd (-53%) were the top contributors to negative performance in Q1 2024. Nextracker Inc. (20%) was among the top positive contributors for the quarter, backed by 2023 results, when they beat expectations (link).

Autonomous Vehicles (-12.4%): KCARS performance this past quarter was affected by the demand for electric vehicles (EVs). Challenges in charging infrastructure and affordability persist, hampering widespread EV adoption. Interest in autonomous vehicle stocks remains high, but their performance has been influenced by several factors. Firstly, regulatory hurdles pose a challenge, with government approvals necessary for full autonomy. Additionally, technical complexities, market competition, economic fluctuations, supply chain disruptions and consumer trust issues have all been noteworthy this past quarter. Electric-only manufacturers and autonomous vehicle software manufacturers were among the underperformers of the index. Rivian (-53%) and NIO, Inc ADR (-50%) were the largest underperformers, while NVIDIA (82%) was the top contributor. The NVIDIA DRIVE platform encompasses a range of technologies and platforms, from operating systems for autonomous vehicles to infrastructure for developing and testing autonomous driving solutions.

Enterprise Collaboration (-5.4%): KTEAM had a negative performance for Q1 2024, as the industry saw increased competition across the spectrum of enterprise collaboration. The underperformance was influenced by various challenges faced by industry leaders. In the contact center as a service sector, stiff competition and user retention have affected performance. Similarly, companies in communication platform as a service struggle with pricing and understanding user needs. Providers of project management solutions and software development tools face fierce competition, requiring constant improvements to stay relevant. 8x8, Inc (-28%) and Twillo Inc. (-19%) had a tough quarter in terms of performance, as these companies adjusted to increased competition. Bandwidth Inc (26%) was the top performer this quarter. Bandwidth's performance was based on its strong 2023 results and expected 2024 revenue growth (link).

Exhibit 2: S&P Kensho New Economies Subsectors Performance Profiles



Source: S&P Dow Jones Indices LLC. Data as of March 31, 2024. Index performance based on total return in USD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Commentary from across the New Economies

Genetic Engineering

The global cell and gene therapy market is projected to reach approximately USD 82.24 billion by 2032, up from USD 15.54 billion in 2022, driven by advances in technology and an expectation of increasing numbers of approved therapies. The sector presents several opportunities, including the potential for earlier prescription of approved therapies, the development of chimeric antigen receptor T-cell therapies for solid tumor cancers, and the creation of allogeneic off-the-shelf therapies—treatments made from donor cells and more speedily available for use (link).

Researchers from the Massachusetts Institute of Technology have created a method using CRISPR prime editing for quickly and efficiently screening for cancer-associated genetic mutations, focusing on mutations in the p53 gene, which is mutated in over half of all cancer patients. This method holds promise for precision medicine, enabling the identification of how individual patients' tumors may respond to specific treatments. It represents a step forward in tailoring cancer therapies to the genetic makeup of a patient's tumor (link).

The FDA has approved the first CRISPR/Cas9-based therapy, Casgevy, for treating sickle cell disease, marking a significant milestone in the application of gene-editing technologies for treating genetic disorders (link). The treatment developed by Vertex Pharmaceuticals has shown promising results in clinical trials, with nearly all participating patients experiencing significant pain relief (link).

Distributed Ledger

R3 has launched a new product suite, R3 Digital Markets, leveraging its Corda distributed ledger technology (DLT) platform to innovate in capital markets. This coincides with initiatives in Europe such as the U.K.'s Digital Securities Sandbox and the European Central Bank's call for participants for DLT network settlement trials. Corda underpins various digital currency and capital market infrastructures, including SDX, Euroclear and Japan's Progmat tokenization network (link).

The Royal Canadian Mint, in partnership with blockchain startup aXedras, has implemented a DLT solution for tracking the origin and transactions of gold bars, enhancing transparency for both suppliers and clients. This initiative aims to provide end-to-end sourcing transparency and secure data against tampering (link).

The Hedera Council and food company Mondelēz International, owner of brands including Oreo and Cadbury, are collaborating to enhance the latter's business operations, including supply chain management. The Hedera Council is behind the Hedera Hashgraph, a public network that uses hashgraph consensus (link). Quant has been granted a U.S. patent for a unique method enabling chronological transaction ordering across different blockchains. This development, coupled with a previously secured Japanese patent, marks a significant advancement in the company's efforts to make distributed ledger technology "simple, trusted and future-proof" (link).

Electric Vehicles

According to historical data, market share has increased over the past decade and is projected to continue rising in 2024, reaching a global share of 25%. Europe and China are expected to have higher EV market shares, at 45% and 42%, respectively, compared to North America's forecasted 11% in 2024. The EV market size was GBP 388.1 billion in 2023 and is projected to reach GBP 951.9 billion by 2030, with a compound annual growth rate (CAGR) of 13.7%. Plug-in hybrid EVs (which can be recharged from an external power source and operate on electric power alone for some distances) and fuel cell EVs (which convert hydrogen gas into electricity and do not need to be recharged from an external source) are expected to grow significantly between 2023 and 2031 (link).

In the first quarter of 2024, the U.S. Department of Energy (DOE) finalized EV mileage rating rules, easing its initial proposal to lower EV mileage ratings to meet 2027 fuel economy requirements. While the U.S. Environmental Protection Agency's initial proposal aimed for automakers to produce 60% EVs by 2030 and 67% by 2032, the final rules anticipate fewer

EVs. Additionally, automakers can now produce plug-in hybrid vehicles to comply with the final greenhouse gas (GHG) vehicle rules (link). Recently, there's growing innovation in EV power sources, with ammonia emerging as a topic of interest. When combusted correctly, liquid ammonia can be emission-free, including carbon, hydrocarbons, CO2 and particulates. Some EV manufacturers are exploring ammonia engines as a potential solution (link).

Clean Tech

The size of the global green technology and sustainability market is expected to increase from USD 19.83 billion in 2024 to USD 83.59 billion by 2032, showing a CAGR of 19.7% between 2024 and 2032. This market's potential is anticipated to expand quickly, especially in developing nations and emerging markets in the upcoming years (link).

As mentioned in the Electric Vehicles section, ammonia is emerging as a novel energy source and could serve as a GHG-free solution. Singapore has successfully loaded the world's first ammonia-fueled ships (link), and there's a groundbreaking ammonia co-firing demonstration taking place at a thermal plant in Japan. This test marks the initial large-scale application of substituting fuel ammonia, signifying notable progress. Such improvements could potentially provide a technological pathway for countries with substantial coal-fired power generation to cut emissions from their existing plants without necessitating the replacement of these coal-fired facilities (link).

Virtual Reality

The global virtual reality market reached a value of USD 25.11 billion in 2023 and it is expected to grow at a CAGR of 28.5% during the forecast period from 2024 to 2032. This would translate into an anticipated growth from USD 32.64 billion in 2024 to USD 244.84 billion by 2032. North America is leading the market growth, whereas Asia Pacific and Europe also show rapid growth during the forecast period (link).

Virtual Reality (VR) is transcending its conventional boundaries and expanding applications in a wide array of domains. Notably, it is being employed in areas such as healthcare and factory operations. Osso VR, an immersive training platform for surgical professionals, recently broadened its medical training library to encompass orthopedic surgery specialties including supracondylar humerus fracture and carpal tunnel release (link). Also, the utilization of VR within RoboTwin's factory highlights the remarkable versatility of the technology. RoboTwin, created by the ITRI (Industrial Technology Research Institute), leverages cutting-edge AI and Sim2Real technologies to construct an authentic factory simulation. Within this simulated environment, engineers and operators can engage in lifelike manipulations and interactions through specially tailored user interfaces (link).

Drones

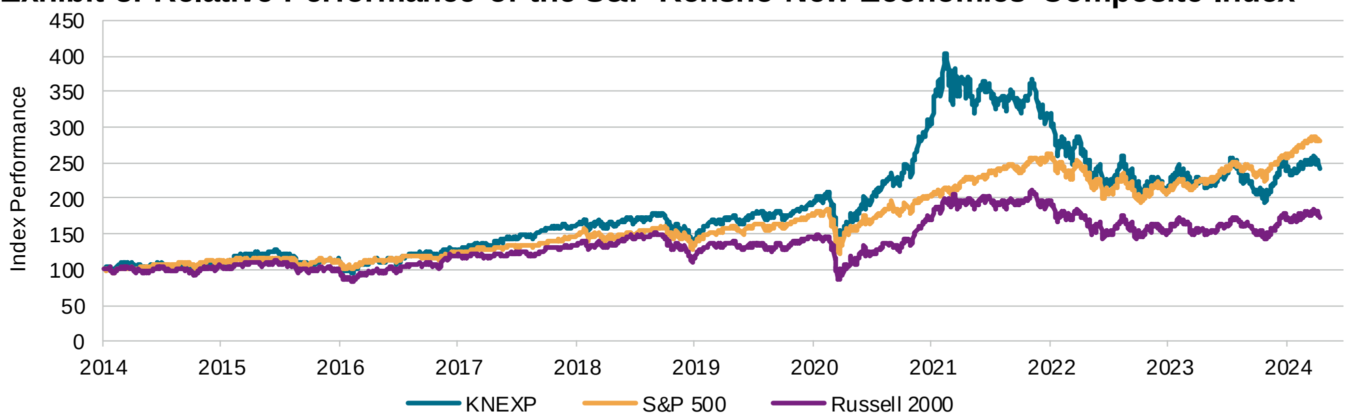
The drone market is anticipated to experience substantial growth in the coming years and reach USD 101.1 billion by 2032, with a projected CAGR of 12.7% from 2023 to 2032. Technological advances are the main driver for the rapid growth of the drone market, as well as the expanding application scope. Apart from military drones, which take 48.6% of the market share, agriculture, construction and logistics are also contributing to the market growth (link).

The commercial drone is an important part of the drone market and has emerged as a catalyst for transformation, reshaping various industries. It is anticipated to expand rapidly (link). The surge in e-commerce and online shopping has driven the need for cost-effective and efficient delivery solutions. The drone package delivery market size was USD 1,639.2 million in 2023 and is expected to be USD 33,288.5 million by 2033, with a CAGR of 35.13%. Drone package delivery enables logistics and e-commerce firms to enhance customer satisfaction, cut costs and accelerate delivery times (link). In January 2024, DJI, the leading drone manufacturer, unveiled its first delivery drone DJI FlyCart 30 in the U.S., bringing competition to existing players such as Amazon, Walmart and start-up Zipline (link).

Relative Performance of the S&P Kensho New Economies Composite Index

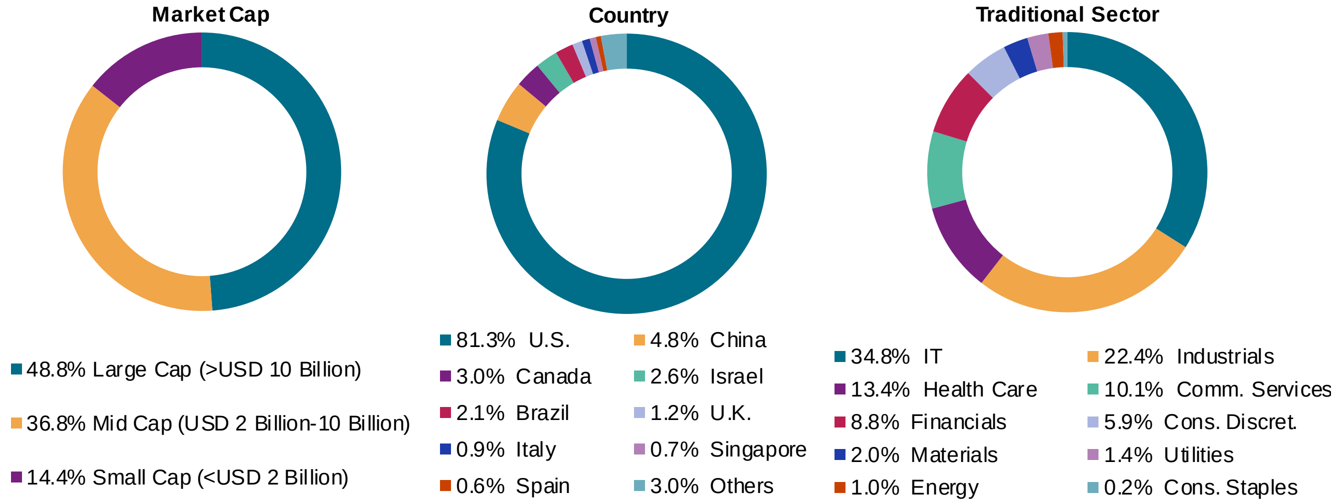
The S&P Kensho New Economies Composite Index (KNEX) is made up of all qualifying New Economy subsectors, the industries driving the Fourth Industrial Revolution, with each weighted according to an algorithmic proxy for industry maturity.

Exhibit 3: Relative Performance of the S&P Kensho New Economies Composite Index



Source: S&P Dow Jones Indices LLC, FactSet. Data from Jan. 2, 2014, to March 31, 2024. Index performance based on price return in USD. The S&P Kensho New Economies Composite Index was launched Feb. 6, 2017. All data prior to index launch date is back-tested hypothetical data. 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.

Exhibit 4: Breakdown of the S&P Kensho New Economies Composite Index



Source: S&P Dow Jones Indices LLC. Data as of March 31, 2024. Charts are provided for illustrative purposes.

Exhibit 5a: Style, Fundamentals and Differentiation

Fundamentals	KNEX	S&P 500
Trailing 12-Month Price to Earnings	24.0	25.9
Forward 12-Month Price to Earnings	20.7	22.0
Price to Book Ratio	2.8	4.5
Price / Cash Flow	13.3	16.7
Estimated 3-5 Year Earnings Per Share Growth (%)	16.6	13.8
Historical 3-Year Sales Growth (%)	20.2	15.4

Source: S&P Dow Jones Indices LLC, FactSet. Data as of March 31, 2024. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Exhibit 5b: Style, Fundamentals and Differentiation

Index	Active Share versus KNEX
S&P 500	81.8
Russell 2000	88.9
Nasdaq 100	86.4
Morningstar Exp. Tech.	84.3
S&P Composite 1500	81.6
S&P 500 Growth	87.3

Source: S&P Dow Jones Indices LLC, FactSet. Data as of March 31, 2024. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Performance Disclosure/Back-Tested Data

The S&P Kensho New Economies Composite Index was launched February 6, 2017. The S&P Kensho Digital Health Index was launched June 21, 2021. The S&P Kensho Smart Factories Index and S&P Kensho Advanced Manufacturing Index were launched September 16, 2021. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance, and is based on the index methodology in effect on the index launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Also, the treatment of corporate actions in back-tested performance may differ from treatment for live indices due to limitations in replicating index management decisions. Complete index methodology details are available at www.spglobal.com/spdji. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations. Back-tested performance is for use with institutions only; not for use with retail investors.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate S&P DJI's ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back-tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used.

Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices maintains the index and calculates the index levels and performance shown or discussed but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US $10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US $1,650), the net return would be 8.35% (or US $8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US $5,375, and a cumulative net return of 27.2% (or US $27,200).

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