
INVESTMENT IDEAS 2022

KEY THEMES

Inflation Uncertainty

Rising Rates and the Policy Unwind

Beta Gives Way to Alpha

Looking Beyond US Equities

Sustainability Revolution

China: Too Big to Ignore

Emerging Opportunities in
Emerging Markets

Using Disruption to Your Advantage

NEW CHALLENGES, NEW OPPORTUNITIES

Investors face a new set of challenges as 2022 begins. Inflation in the US is at its highest level in 40 years. China appears ready to tolerate slower growth today in exchange for a more resilient economy tomorrow. Risk asset valuations remain elevated and, despite a recent increase, interest rates remain near historic lows. Navigating this environment successfully will require skill and close attention to market dynamics. But we believe compelling opportunities exist. We invite you to explore our key themes of 2022 and the potential sources of attractive returns they could create.

This financial promotion is provided by Goldman Sachs Bank Europe SE.

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KEY THEMES WE'RE WATCHING



Inflation Uncertainty

Prices have been rising—but for how long?



Sustainability Revolution

Sustainable strategies have increasingly been able to have a positive impact and generate competitive long-term performance.



Rising Rates and the Policy Unwind

The era of rock-bottom interest rates may finally be ending.



China: Too Big to Ignore

Even as growth slows, investment opportunities abound in the world's second largest economy.



Beta Gives Way to Alpha

At current high valuations, the ability to generate alpha will be more important.



Emerging Opportunities in Emerging Markets

A diversified emerging market strategy may offer attractive return potential.



Looking Beyond US Equities

It may be time to diversify into other regions and global thematic strategies.



Using Disruption to Your Advantage

Investment returns may increasingly be driven by companies that best respond to technological innovation and other disruptive trends.

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INFLATION UNCERTAINTY



Prices rose just about everywhere in 2021. Most of the causes—supply and labor shortages, rising energy prices, pent-up consumer demand, aggressive fiscal stimulus—can be traced directly to the Covid-19 pandemic. And as we’re reminded almost daily, the pandemic isn’t over. With supplies constrained and demand strong, anxiety about inflation is on the rise.

For much of 2021, many of the forces stoking inflation appeared to be transitory. Supply disruptions, including raw material and labor shortages and congestion at ports, severed key links in global supply chains, forcing up prices at a time when demand from goods was strong. Some of the resulting cost pressures may ease as supply chains are repaired and the effects of pent-up demand start to fade.

But transitory may not mean the rate of inflation will fall quickly in 2022. Prices for some goods, including shelter, may continue to rise above their pre-Covid-19 levels for some time. Autos are another wildcard; inflation has been high in this sector and could remain so if semiconductor shortages are not resolved until 2023. Solid wage growth and inflation expectations (Exhibits 1, 2) are also likely to prevent a swift return to the low-inflation environment that has persisted in recent years, though the effects will vary across economies. Wage pressures in particular appeared to be a key factor behind the US Federal Reserve’s late 2021 policy pivot toward tighter monetary policy. If goods prices don’t ease and

price pressures expand due to the demand for services as economies fully reopen, we could see a further increase in inflation above the Fed’s 2% average target. Though it hasn’t happened yet, sustained higher inflation could push up intermediate bond yields and take the 10-year US Treasury yield above 2% for the first time since mid-2019, potentially causing problems for longer-duration fixed income strategies and growth stocks.

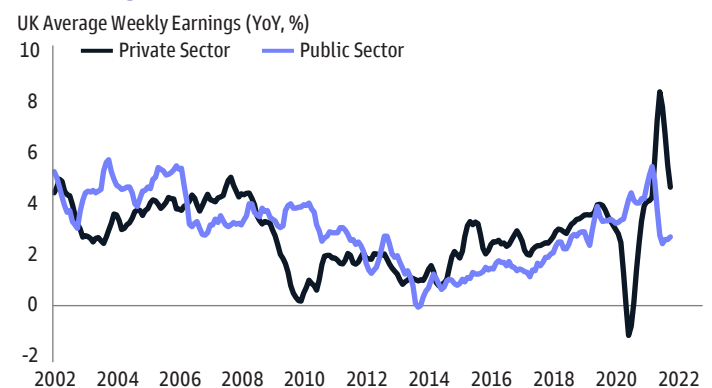
If health concerns fade, we believe an increase in labor force participation may help temper wage growth. A slowdown in commodity price gains may also reduce inflation expectations. Still, in this uncertain environment, investors may want to consider tilting toward strategies that have typically done well when prices rise given the potential for inflation to run warmer than it did during the last cycle, if not quite as a hot as it did in the 1970s.

Exhibit 1: US ECI experienced its strongest annual rise since 2001 in 3Q 2021



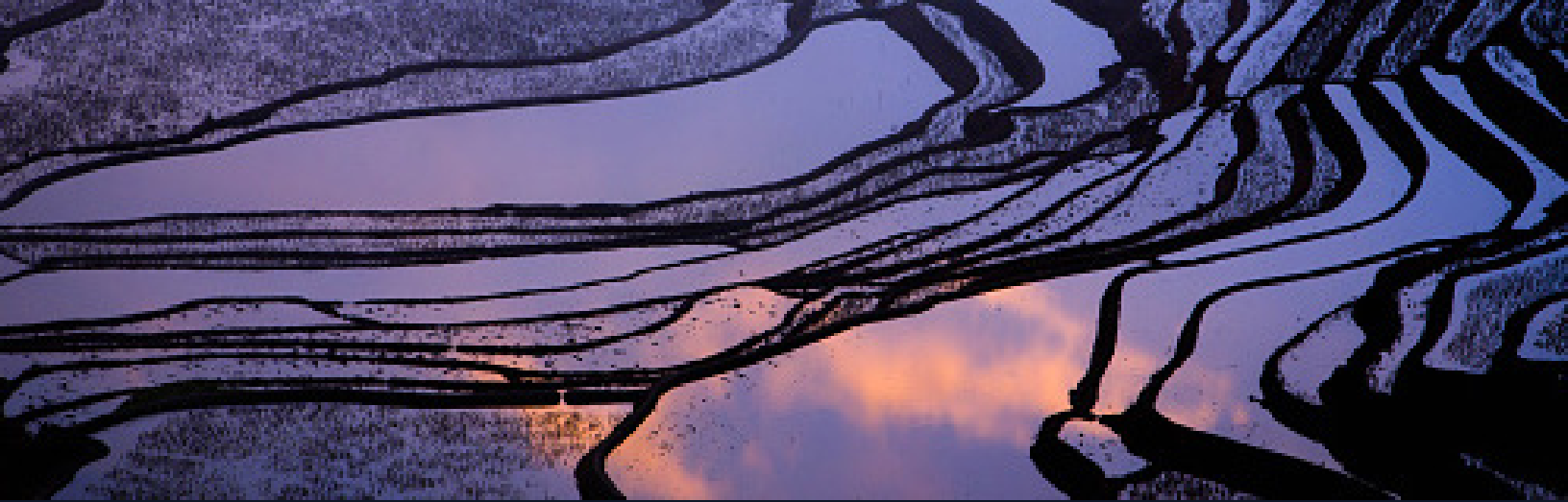
Source: Macrobond, Goldman Sachs Asset Management. As of 3Q 2021.

Exhibit 2: UK private sector wage growth is high but moderating



Source: Macrobond, Goldman Sachs Asset Management. As of September 2021. Three-month moving average.

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Investment Ideas to Consider

- 1 Equities** have historically given investors the best chance of outperforming inflation over the long term. Even so, we believe active management is essential, as inflation will affect different companies in different ways. For example, managers who can tilt toward companies that are somewhat shielded from rising prices or likely to benefit from them, such as energy producers or firms with low labor costs or resilient supply chains, may be able to generate higher returns relative to strategies that track a benchmark. More specifically, **cyclical equities tend to have a higher representation of sectors that stand to gain from inflation, such as financials, energy and basic materials.** Additionally, **real asset equities** (real estate, infrastructure) may prove resilient as prices rise, since many leases and contracts are linked to inflation and incumbent asset values tend to increase when land, labor and material costs rise.
- 2 Multi-sector credit strategies** that can tilt toward floating-rate bank loans and bonds from companies with robust revenue growth and pricing power may do well in an inflationary environment. **Treasury Inflation-Protected Securities (TIPS)** won't offer the same level of diversification but can protect against unanticipated inflation and offer a potential complement as rates rise and inflation regimes shift.

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RISING RATES AND THE POLICY UNWIND

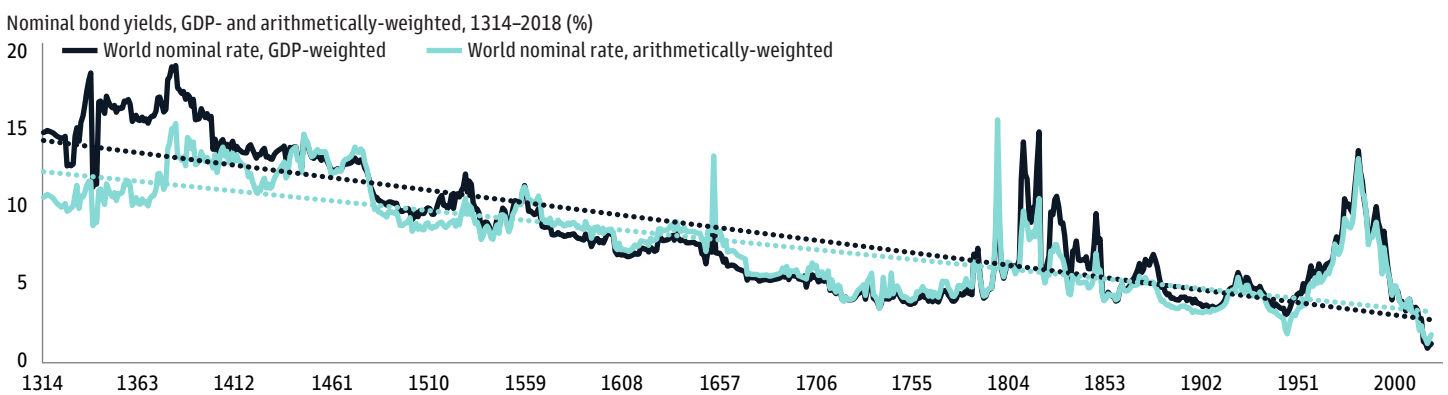
Long-term interest rates were volatile in 2021 as investors grappled with mounting inflation pressures and Covid-19 variants that could slow global growth. US Treasury yields, for instance, rose steadily in the first quarter, fell throughout the spring and summer, then began climbing again as the year wound down. Where we go from here will have important implications for portfolio construction and the broader economy.

Investors should be prepared for tighter monetary policy in 2022. If there was any doubt about the future path of monetary policy, the US Fed removed it late last year when it announced it would speed up the withdrawal of monetary stimulus and signaled three 25-basis-point rate hikes in 2022 as it seeks to counter rising inflation. We think the persistence of high inflation has pulled forward policy normalization. We expect the Fed to deliver the first of four rate hikes in March and we believe the risks are skewed toward more tightening, depending on financial conditions and inflation dynamics. The Bank of England last year became the first major central bank to raise rates since the pandemic began, and central banks in Canada, New Zealand and Norway may also be well into the normalization process by mid-year.

Interest rates and bond yields are likely to rise from current levels in 2022. How high they go may depend heavily on the path of inflation. A sharp move higher could result in negative returns for the most interest rate-sensitive securities. But economic fallout from the continued spread of the Omicron and Delta variants could limit the upside in yields, as could non-US investor demand for higher-yielding Treasuries.

Still, it is important to remember how low interest rates and bond yields are from a historical perspective (Exhibit 3). Even in a somewhat benign inflation environment, we believe interest rates are headed higher and that the risk/reward tradeoff for investors favors alternative income generators and unconstrained strategies that are designed to pursue returns across multiple sectors, asset classes and geographies without adhering to a benchmark.

Exhibit 3: Nominal interest rates are at record low levels



Source: Bank of England, Goldman Sachs Global Investment Research. As of September 20, 2021.

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Investment Ideas to Consider

- 1 Short- and ultra-short-duration fixed income strategies** have exhibited lower risk in a rising rate environment. Compared to longer duration strategies, **multi-sector fixed income, multi-sector credit** and select **high-yield strategies**, meanwhile, may deliver sufficient income to offset price declines in a rising rate environment. Further, diversified exposure across fixed income spread sectors is important as central banks gradually withdraw global liquidity. **Bank loans, securitized credit** and other **floating-rate securities** may offer insulation against rate hikes and should do well if economic growth remains strong. We favor **selective exposure to EM debt**. Rising rates may also provide an opportunity for investors to redeploy cash in higher-yielding assets.
- 2 Private credit** transactions, including flexible and complex financing deals, may also offer floating-rate income while private asset financing can offer diversification, as these loans are securitized against differentiated cash streams, including hard assets and royalties.
- 3 Public equities** have typically been resilient in a rising rate environment, provided that strong growth persists. Investors may want to consider strategies that target stocks with sufficient earnings growth and balance sheets with termed-out debt to offset the potential risk associated with a higher cost of capital. Strategies that can be selective when it comes to growth stocks, which have higher implicit duration risk given their longer-dated cash flows, are also likely to benefit. Cyclical equities, particularly banks, tend to do well when rates rise.

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BETA GIVES WAY TO ALPHA



Nearly all asset classes have benefitted from strong beta returns over the past 18 months, but beta returns are likely to be lower in the coming years. In today's environment, we believe focusing on alpha generation is part of the answer.

Valuations across all asset classes are near record highs, limiting room for further upside and making asset prices more vulnerable to negative news or sentiment (Exhibit 4).

After nearly two years of developed market (DM) policy rates trending lower and currently hovering at all-time lows, interest rates will likely rise in 2022.

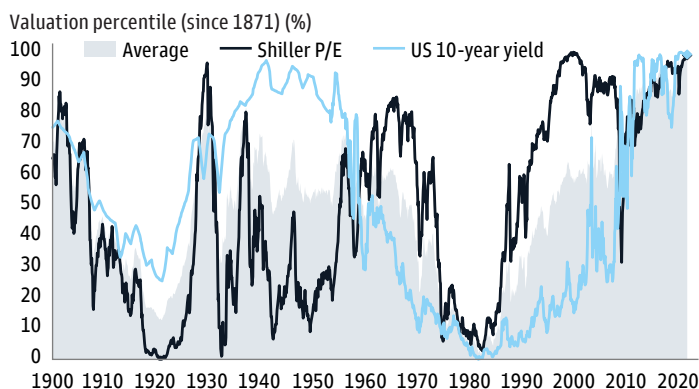
At the same time, bond buying by major central banks is set to fall. Low interest rates have supported higher public and private equity valuations while quantitative easing (QE) has tightened spreads for many fixed income securities. Easy monetary policy has also contributed to strong corporate earnings and margins, which now have less room for improvement. Policy normalization may not immediately reverse these trends, but it leaves less room for asset prices to move higher and potentially chips away at valuation support (Exhibit 5).

Being positioned on the right side of inflation and disruption will be critical to outperformance.

We believe recent trends—such as growth versus value, the US versus the rest of the world and the technology sector versus diversified exposure—are likely to be less pronounced than in the previous cycle as technological innovation spreads across industries and regions. At the same time, low commodity prices, which contributed to lower earnings and valuations for commodity-oriented companies in recent years, have risen significantly. As a result, we expect a modest level of overall earnings growth that is more balanced across regions and sectors. We believe this environment will have a higher dispersion of returns driven by companies that are able to benefit from or withstand an inflationary environment and that have secular growth drivers.

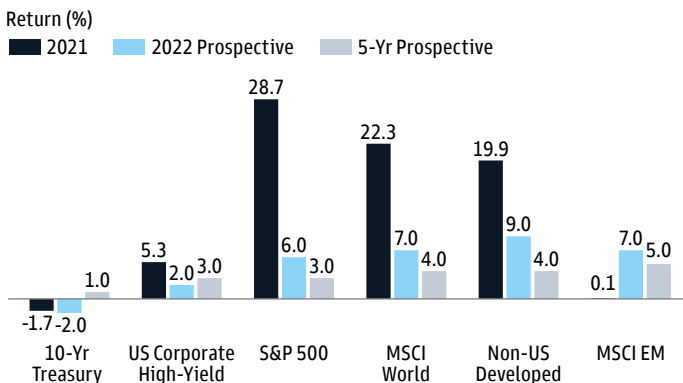
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Exhibit 4: Expensive valuations after the bull market in every major asset class, similar to the Golden 1920s and 1950s



Source: Robert Shiller, Datastream, Goldman Sachs Global Investment Research. As of November 17, 2021.

Exhibit 5: Returns across major asset classes are expected to be lower in 2022 and beyond



Source: Goldman Sachs Investment Strategy Group (ISG), Goldman Sachs Asset Management. As of December 31, 2021. US Corporate High-Yield = Bloomberg Corporate High Yield Index, Non-US Developed = MSCI Developed ex USA. These forecasts have been generated by ISG for informational purposes as of the date of this publication. Total return targets are based on ISG's framework, which incorporates historical valuation, fundamental and technical analysis. They are based on proprietary models and there can be no assurance that the forecasts will be achieved.



Investment Ideas to Consider

1 Weighing risk versus reward favors alpha strategies. The ability to generate alpha becomes even more important in a lower-return environment as alpha will comprise a greater portion of an investor's total returns.

Alpha strategies have the ability to pick securities or assets across an opportunity set that can span all sectors and regions around the world, potentially adding the benefit of diversification to a portfolio.

In addition to these offensive benefits, active security selection also offers defensive benefits by managing risks. For example, we believe market cap-weighted passive indices leave investors overexposed to various risks: five stocks contribute about 23% of the market cap of the S&P 500, state-owned enterprises account for roughly 18% of the MSCI EM Index and about a third of companies in the US small cap universe are unprofitable.

2 Being active across asset classes may be critical in this environment, though it requires focus on manager and strategy selection. For some investors taking a very long-term view and recognizing that beta returns over the past few years have been above average, active strategies with a moderate amount of alpha generation may help them achieve long-term goals, without necessarily adding a high degree of marginal risk.

Investors who need to continue to generate higher levels of return could consider taking more risk, potentially through **long-term, less liquid alternative investments** that are driven by factors less correlated to market beta, such as **private secondary offerings and more complex opportunities in the private markets.**

3 We prefer strategies with a wide opportunity set, such as absolute return strategies in the alternatives universe, unconstrained fixed income strategies, or global and thematic strategies within public equities. These strategies can benefit from security-specific opportunities and regional differences in valuations, as well as changes in broader market conditions such as growth, interest rates or inflation. Pairing private and public investments can take advantage of differentials in valuation, growth opportunities or access.

4 The secular shift toward alternatives is likely to continue as investors look for asset classes and strategies that may offer higher returns than public markets. A combination of skilled managers and fewer constraints allow hedge funds and private market strategies to take advantage of alpha opportunities across many time horizons and transaction types. Hedge funds can further amplify their alpha generation ability with shorting.

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LOOKING BEYOND US EQUITIES

The S&P 500 rose 28% in 2021, once again outperforming non-US markets. In fact, annualized returns for the S&P 500 over the past 10 years are more than double the MSCI Europe Index and three times the MSCI Emerging Markets Index.

We think US equities could still generate strong returns

but the balance of risk and reward points to diversifying into other regions, global thematic strategies and sub-asset classes, such as small caps. We highlight three key reasons: unique risks to US equities, weaker drivers of recent US equity returns and the potential opportunity cost of not investing in other markets.

US equities have two particular vulnerabilities versus other regions: valuations and concentration. Valuations for US stocks are high relative to their own history and relative to other regions—the S&P 500 still trades at a premium even after adjusting for its larger weightings to higher-valued sectors, such as technology (Exhibit 6).

The US equity market is also exceptionally concentrated—which is not the case in most other major equity markets. Roughly 20% of the market capitalization of the S&P 500 is in just five stocks¹, leaving investors overexposed to these companies, some of which may also be subject to increasing regulation and taxes.

Some of the key drivers of recent US equity outperformance may not be as pronounced going forward. The US equity market benefitted from the extraordinary growth and performance of the technology sector over the past decade (Exhibit 7). We believe technological innovation will continue to drive growth in the US tech sector, but we don't expect the same rate of growth and multiple expansion in the coming decade as technological innovation spreads across sectors and around the world. As a result, US earnings forecasts for the next couple of years look more in line with other regions, suggesting more similar equity market performance.

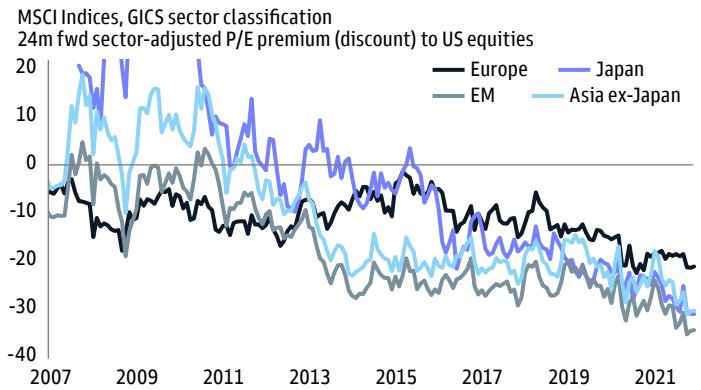
Record-low interest rates over much of the last decade also helped fuel both corporate growth and the equity rally in the US, but rates are now set to rise. For active

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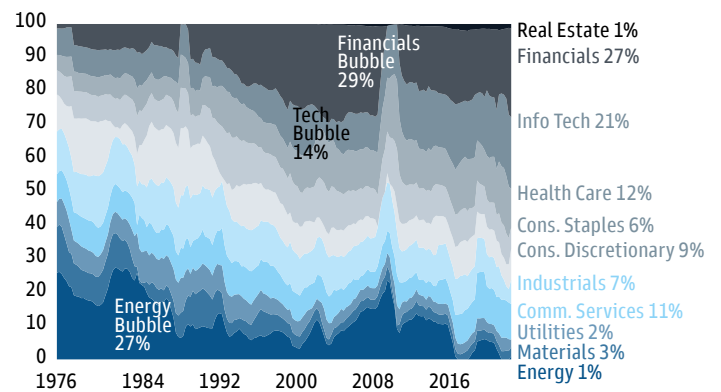
investors, US equities can still offer exposure to secular growth trends and companies that can benefit in an environment of rising inflation and interest rates. But the cost of missing out on strong secular growth opportunities in other regions could be high. As alpha becomes more important in a lower-return environment, investors may benefit from having the widest opportunity set possible and not limiting investments to the US.

Exhibit 6: US equities are at a premium to the rest of the world even when controlling for sector composition



Source: FactSet, Goldman Sachs Global Investment Research. As of December 13, 2021.

Exhibit 7: Net income contribution by sector to S&P 500, 1976–2021



Source: Compustat, FactSet, Goldman Sachs Global Investment Research. As of September 30, 2021.



Investment Ideas to Consider

- 1 **Global thematic strategies** that transcend traditional classifications based on region, market capitalization or sector are more targeted ways to capture secular growth driven by innovation, sustainability or changing consumer trends. These portfolios seek to take advantage of alpha opportunities across all sectors, market caps and regions—including the US—to maximize returns.
- 2 **Non-US equities, such as EMs, Europe and Japan**, may be attractive complements to US equities, and are currently trading at lower valuations for potentially similar levels of earnings growth. EM are highly exposed to secular growth trends such as increased spending from millennials: for example, Chinese millennials are expected to overtake US millennials in aggregate income over the coming decade fueling a consumption boom. EM also have sizeable exposure to commodities, which may be helpful in an inflationary environment. The MSCI Europe Index has more cyclical exposure than the S&P 500, has offered higher dividend yields and is home to leaders in sustainable investing: eight out of the 10² of biggest clean energy companies are in Europe. Valuations and earnings growth for Japanese companies also look compelling in a covid recovery catch-up economy. Within the US, we see potential opportunities in small-cap stocks.

2. As of December 31, 2021.

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SUSTAINABILITY REVOLUTION



We believe we are on the cusp of a sustainability revolution that could have the scale of the industrial revolution and the speed of the digital revolution. Governments, companies and consumers are already making more decisions with sustainability in mind that have real consequences for industries and business models.

Investing that considers environmental, social and governance (ESG) factors is the fastest growing area of asset management (Exhibit 8). Many portfolio managers have long incorporated these considerations as part of risk management and due diligence and have further strengthened their processes as more information becomes available. As markets reflect the growing difference between companies with superior ESG ratings and those with potentially riskier business practices, it will have implications across asset classes. For example, credit ratings that determine access to credit, for both companies and governments, may be impacted. Stocks of ESG leaders are already earning higher multiples, on average, than ESG laggards (Exhibit 9), which may prompt more capital to flow toward companies with better ESG practices and funds incorporating ESG considerations.

Impact investing—investing in a company to both achieve financial returns and have a positive impact toward a specific goal—is increasingly expected by clients as the sector matures. Previously confined to private investing because of the difficulties in finding investments and measuring impact, public solutions are becoming more available as active managers find ways to meet these challenges.

New products are not just at the fund level but at the security level. The green bond market is now over \$1 trillion and we believe blue bonds targeting oceans are the next iteration.

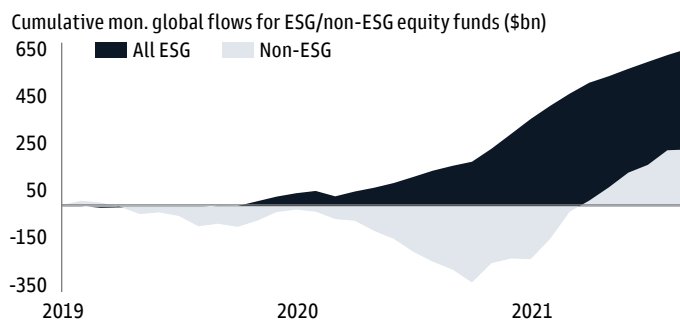
Regulation that addresses greenwashing and considers ESG as part of fiduciary duty may help more capital flow to sustainable investing. In Europe, where interest in sustainability is high, new regulations now focus on standardizing terminology around ESG and sustainability, potentially making investment products more transparent and building confidence with investors.

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In the US, the Department of Labor recently issued a proposed rule to make clear that plan fiduciaries may consider climate change and other ESG factors when making investment decisions and exercising shareholder rights, recognizing that ESG factors can be financially material; when they are, considering them is likely to lead to better long-term risk-adjusted returns.

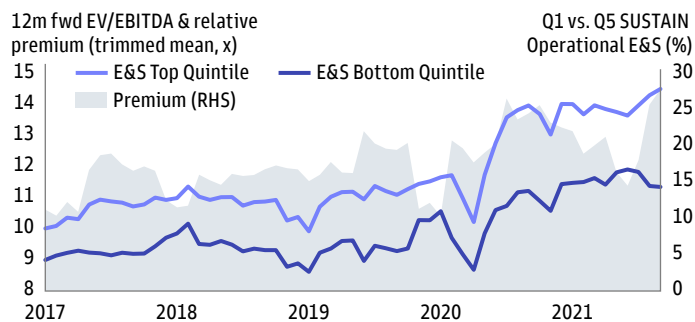
In addition, important steps such as the development of the Sustainable Accounting Standards Board (SASB)'s framework are improving information quality and credibility in sustainable and ESG investing globally.

Exhibit 8: ESG equity inflows have outpaced non-ESG flows

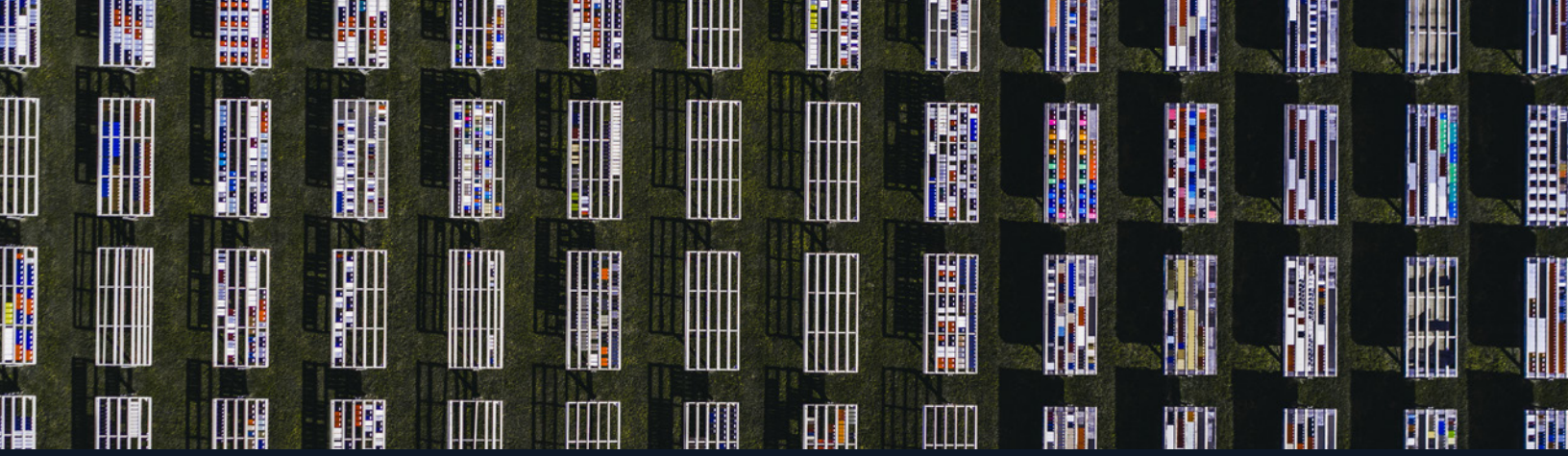


Source: Morningstar, Goldman Sachs Global Investment Research. As of September 2021.

Exhibit 9: The multiple spread between ESG leaders/laggards is growing



Source: FactSet, Goldman Sachs Global Investment Research. Reflects 12m forward multiple of top quintile of companies in the GS SUSTAIN E&S headline rank vs that of the bottom quintile; Q5 is 5th quintile. As of September 2021.



Investment Ideas to Consider

1 We believe ESG considerations will matter more to investment success and alpha generation.

Results continue to support the benefits of ESG for risk management and performance. A proprietary, fundamental active approach to ESG investing is critical because much of the data is still inconsistent and subjective.

We believe engagement is a key part of the process, both for gathering information and influencing change; scale ensures corporate access and a more powerful voice through both engagement and proxy voting.

Investors have a wide variety of options to choose from including **ESG-enhanced strategies**, which seek to outperform both standard indices and peer groups, **thematic strategies** that invest in environmental and social solution providers and **impact strategies** that seek to make an impact on specific goals. In addition, strategies can be customized, for example for the degree of carbon reduction vs. a stated benchmark or with a climate tilt.

Across all asset classes, many portfolios are not just making investments that consider ESG and sustainability but entire portfolios are also earning official classifications as ESG-oriented funds under the European Union Sustainable Finance Disclosure Regulation (SFDR).

2 In addition to active fixed income strategies that are incorporating ESG, there are several unique and relevant applications of ESG in the asset class. Considering ESG across sovereign bonds may be increasingly important, given the impact of ESG risks to economies. The large US mortgage-backed securities (MBS) sector also has potential to be used toward inclusive housing efforts. The development of the green bond and blue bond markets may add new ways for portfolios to directly invest in sustainable efforts. For US investors, municipal bonds tied to green infrastructure investments are an additional option.

3 Infrastructure, real estate and private investment may be critical to sustainability efforts. Beyond solar panels and power stations, battery storage is needed for energy generated from renewable sources, such as solar and wind. Additionally, innovation in agriculture is creating a need to finance new products and machinery that are making food production more efficient.

While much of the public dialogue on climate and the economy has focused on industries like transportation, packaging and food, more recently The World Economic Forum, for example, has called out real estate as the sector with the highest energy usage and most significant CO2 emissions. Therefore, real estate represents another potential opportunity for investors to help address climate change.

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CHINA: TOO BIG TO IGNORE



The world's second largest economy faced challenges in 2021. A housing slump raised solvency concerns in real estate, credit and fiscal policy tightened and companies faced regulatory changes, keeping equity markets volatile and sapping some of the economy's strength. For investors, though, China's growth potential may make it too big—and too important—to ignore. Yet when it comes to capital allocation, many remain underexposed to China, which is expected to overtake the US as the world's largest economy by 2030.

We expect real GDP growth in China to slow to roughly 5% in 2022. But the quality of growth continues to improve (Exhibits 10, 11), with the focus shifting to consumption and away from state-directed investment.

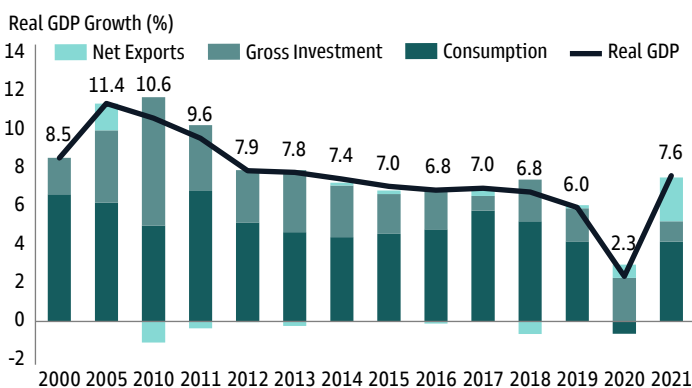
First, China has commitments to large-scale investments to reduce carbon emissions and build a greener economy. Second, China is moving up the value chain and transforming from the world's low-cost manufacturer to an innovator in areas such as technology and healthcare. In short, it appears the government is willing to accept slower growth now for a more resilient economy later.

The odds of a housing-driven financial crisis appear to have eased. The property market may slow further in 2022 as policymakers deleverage the sector. But a coordinated fine-tuning of policy settings by the Politburo, central bank and others is likely to strengthen property sector stability. This has turned us more constructive

on the sector outlook and the potential investment opportunities associated with it, particularly in the high yield debt market.

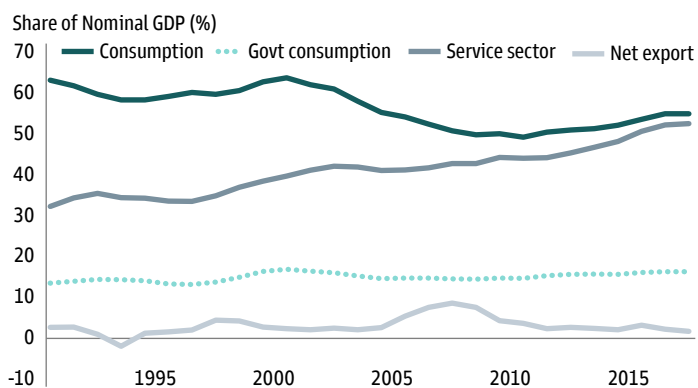
The shifting regulatory landscape may affect corporate margins, but we don't expect it to cause lasting problems for most Chinese businesses. For instance, while new anti-monopoly regulation weighed on Chinese technology companies last year, we still expect ongoing online and offline integration in the country to drive growth for the tech sector. Navigating an ever-changing regulatory environment will require a deliberate and active approach to security selection, but with the government having set a clear direction on regulation we think astute managers should be able to avoid companies that are likely to be impacted.

Exhibit 10: China's pace of growth is slowing but quality of growth is improving



Source: CEIC, Macquarie Research. As of December 31, 2021.

Exhibit 11: Consumption and services are becoming more important



Source: CEIC, UBS estimates. As of November 2020.

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Investment Ideas to Consider

- 1 China A-shares**—the shares of mainland China-based companies that trade on domestic exchanges and are denominated in renminbi—have offered significant alpha generation opportunities across a universe of more than 4,000 stocks. In 2021, one-third of the top 50 performing stocks as measured by total return in the MSCI ACWI Index traded on Chinese domestic exchanges.³ Investors can access the market through a dedicated China A-shares solution or a global EM equity solution. A China all-shares solution, meanwhile, may let managers make relative value calls between A-shares and offshore Chinese equities. China A-shares are still dominated by heavy retail trading and neglected by a large share of sell-side equity analysts, which we believe can create alpha-generating opportunities for active managers.
- 2 Chinese government bonds** have offered attractive yields and low correlation to other major bond markets and index inclusion means increasing passive flows may lead to bond and currency appreciation. Income-oriented investors may also find opportunity in **Chinese credit**. A tilt toward more dovish monetary policy and improving liquidity conditions may present an opportunity to generate attractive risk-adjusted returns in the **property sector of the Chinese high-yield market** without venturing too far down the credit spectrum. Meanwhile, China's road to carbon neutrality may provide **direct lending opportunities tied to corporate de-carbonization efforts**.
- 3 Growth and venture capital investment** remains strong in China and may offer additional alpha opportunities. The regulatory reset may favor a focus on **private investment opportunities** in sectors that will help China transition to its next phase of development, including healthcare, and in companies aligned with the government's sustainability goals.

3. Source: FactSet. As of December 31, 2021.

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EMERGING OPPORTUNITIES IN EMERGING MARKETS

Most emerging market (EM) economies struggled in 2021 as slow vaccine deployment and the spread of the Delta variant tempered their recovery. Risks remain, but we see potential for a rebound—particularly if, as we expect, higher interest rates cause developed-market GDP to revert to trend.

We think EM economies may be poised for stronger growth in 2022, particularly those at earlier stages of reopening. As DM countries start to withdraw aggressive monetary and fiscal stimulus and EM growth picks up, we expect the growth gap between the two, currently at its narrowest point in at least 20 years, to widen.

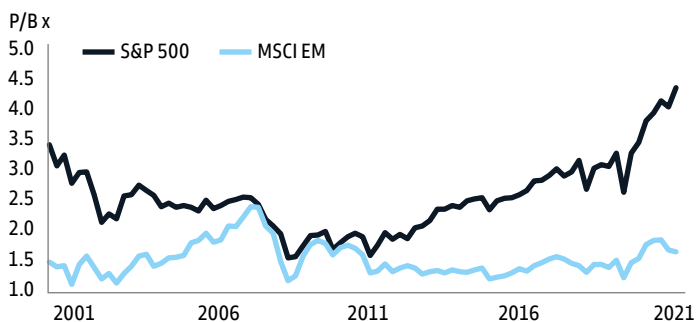
An active EM equity strategy may have the potential to outperform a US one over the next decade as EM populations grow and innovation expands. Equity valuations are attractive on a relative basis (Exhibit 12) and earnings growth is running at a decade high. The region is home to some of the world’s best performing companies (Exhibit 13), though many may not be captured in standard benchmarks, which overweight state-owned enterprises and volatile export-driven industries. An active approach can help investors increase exposure to companies benefitting from secular growth trends.

Treating China separately may help create more efficient EM equity portfolios. China’s weight in the MSCI EM Index has doubled over the past five years

and could exceed 40% five years from now. An EM ex-China equity strategy offers sector and macroeconomic diversification; for example, EM ex-China names tilt toward semiconductors and tech hardware while China leans toward the consumer retail and internet sectors. This can affect performance; the MSCI EM ex-China Index outperformed the MSCI China Index by 32 percentage points in 2021.

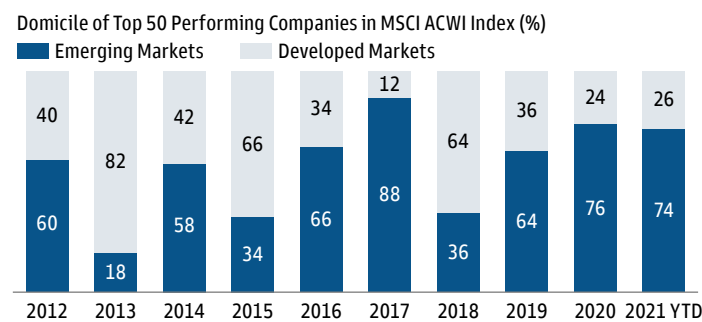
The income potential of EM debt may help to enhance the stability of portfolio returns in a challenging investment environment. EM debt has offered attractive nominal and real yields relative to comparable DM debt. Country selection remains important, as economic and political risks vary. Some assets may struggle if inflation causes the Fed to reduce asset purchases and raise rates more rapidly than expected. But improved EM current account balances mean many EM countries are better prepared to withstand modest capital flight than they were in the past.

Exhibit 12: Current Price to Book (P/B) levels are near 20 year lows vs the US



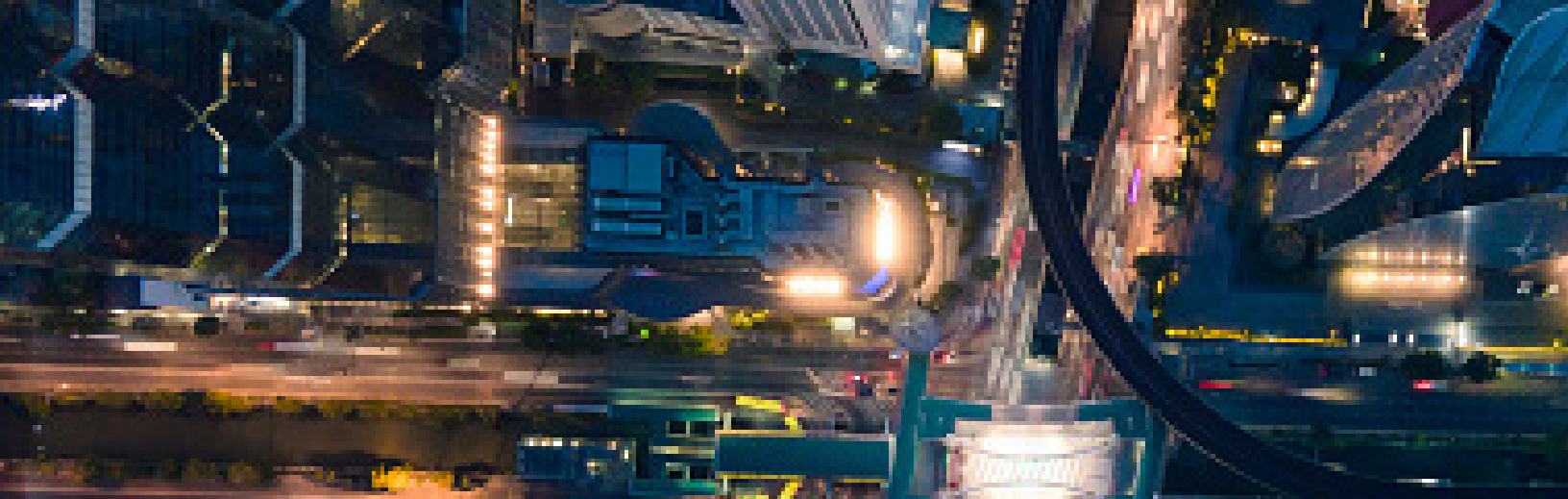
Source: Bloomberg, FactSet, DataStream, Goldman Sachs Asset Management. As of December 31, 2021.

Exhibit 13: EM is home to some of the best performing companies



Source: Bloomberg and Goldman Sachs Asset Management. As of November 30, 2021.

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Investment Ideas to Consider

- 1 Those with a long time horizon might consider coupling an **EM-ex China equity allocation with a China all-shares strategy (onshore A-shares plus offshore shares)** to seek to capture the full opportunity set in both markets. This can provide diversification benefits while potentially enhancing alpha opportunities. An EM ex-China allocation, for example, offers deeper access to smaller EM countries and potential alpha opportunities in small- and mid-cap stocks. It can also allow investors to tilt toward or away from China depending on prevailing market conditions. And carving out China exposure gives investors more control over the size of their allocation to the country.
- 2 Dedicated exposure to **EM corporate bonds** may help boost income potential and strengthen portfolio return stability. They may also make sense for investors looking to enhance their DM credit allocations. Selective exposure to high-income strategies that are less reliant on price appreciation may be a good way to bolster return potential. We see compelling potential opportunities in **Asia high-yield bonds**, which have delivered strong risk-adjusted return relative to comparable DM assets and have lower interest-rate duration. Strong economic fundamentals in the region may temper default risk.

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USING DISRUPTION TO YOUR ADVANTAGE

The spread of technological innovation, the impact of demographic changes and the increasing focus on sustainability may cut across every sector and geography, transforming industries and forcing investors to think differently about the drivers of corporate and asset performance.

Investment returns may now be driven less by differences between sectors, regions and traditional drivers of the economic cycle. In addition to entrepreneurs founding new companies, a merger and acquisition (M&A) supercycle is underway as large corporations reassess, reimagine and reshape their businesses; we expect continued corporate activity including spinouts, divestitures, joint ventures and new listings, with private equity sponsors playing a larger role in the broader M&A landscape, supported by a growing private credit market.

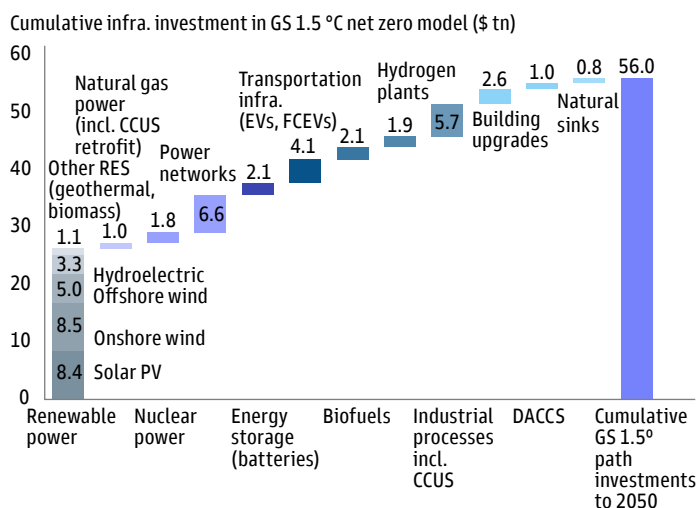
Three investible disruptive trends we are focused on include:

The “techification” of everything, as technological innovation spreads across every sector of the economy. In the financials sector, fintech companies and cryptocurrencies are challenging the traditional business models of banks. Consumer and media industries have been upended by the shift to online shopping, gaming, and social media. The healthcare sector is being transformed by technology while machines are now connected through the internet of things. The metaverse may disrupt the way we interact with the internet itself.

Demographic trends that affect consumption and healthcare spending. Millennials—the majority of whom are located in EMs—are now the largest population group and have the greatest earnings power, both of which will continue to influence global consumption, including investing. Millennials were a big driver of moving consumption and social activity online; they may be equally powerful influencing sustainable consumption and ESG investing.

Decarbonization is one of the most urgent priorities for a sustainable global economy; the process is estimated to require roughly \$56 trillion in investment (Exhibit 14). We expect the impact to be greatest in industries including energy, utilities, alternative energy and electrification. In addition to decarbonization, environmental sustainability also includes waste management, water management, biodiversity and the circular economy. Social factors, such as fair and inclusive business practices, are also considered within sustainable investing. We believe all of these factors will increasingly change corporate business models and could transform entire industries.

Exhibit 14: ~\$56tn of investment needed for global Net Zero carbon



Source: Goldman Sachs Global Investment Research. Represents cumulative total figure for global investment by 2050.

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Investment Ideas to Consider

We believe **active thematic investments across public equities and alternatives** (especially private equity, growth equity, private credit, infrastructure and real estate) provide investors with direct access to these key secular growth trends. Thematic portfolios have the added potential benefit of a wider opportunity set that is not constrained by region, market capitalization or sector. We are particularly focused on the following areas:

- 1 Technological innovation**, which may continue to be a prominent disruptive force as it spreads beyond large cap tech to small cap and outside the US, especially to EMs; as technology is applied to new industries it will create new markets for growth.
- 2 Changing consumer habits** that are being affected dramatically by all of these themes, many of which are playing out in strategies focused on millennials' preference for digital consumption, experiences versus goods and a focus on sustainability.
- 3 Healthcare demand is accelerating** while technology is fueling innovation, bringing down costs and producing better outcomes. We think the greatest potential opportunities are in companies involved in genome sequencing, precision medicine, tech-enabled procedures and digital health care.
- 4 Sustainability**, with a focus on companies providing solutions to environmental issues, such as clean energy, recycling and sustainable consumption, as well as those promoting social considerations, such as diversity and inclusion.
- 5 Infrastructure/real estate** portfolios "house" these secular growth trends in specialized real estate: towers and data storage centers directly enable digitization, warehouses and logistics centers support the shift to ecommerce, biotech innovation requires specialized laboratories, and increased media content requires more studio space. In addition, assets related to renewable energy and sustainable food production will support sustainability, as will incorporating more green technology in buildings and operating assets.

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Glossary

Alpha: Alpha refers to returns in excess of the benchmark return.

Basis Point: One hundredth of one percent.

Beta: Beta is a measure of the volatility of a security in comparison to the market as a whole, as measured by an index or other benchmark.

CCUS: Carbon capture, utilization and storage.

CPI: The Consumer Price Index (CPI) measures the prices of consumer goods and services and is a measure of the pace of U.S. inflation.

Correlation: Correlation is a measure of the relationship between two variables.

DACCS: Direct Air Carbon Capture and Sequestration.

Dovish: Dovish refers to relatively more accommodative monetary policy.

Duration: Duration is the method of determining a bond's price sensitivity given a change in interest rates. The duration for fixed income securities is calculated by determining the price movement due to a 100 basis point change in market interest rates. This calculation incorporates the change in value of any embedded options that exist.

EPS: Earnings Per Share.

EV: Enterprise value (EV) is a measure of a company's total value, often used as a more comprehensive alternative to equity market capitalization. EV includes in its calculation the market capitalization of a company as well as short-term and long-term debt and any cash on the company's balance sheet.

EV/EBITDA: Enterprise value divided by earnings before income, taxes, depreciation, and amortization.

FCEVs: Fuel Cell Electric Vehicles.

GDP: Gross Domestic Product (GDP) is the value of finished goods and services produced within a country's borders over one year.

Greenwashing: Greenwashing is the process of conveying a false impression or providing misleading information about how a company's products are more environmentally sound.

MCAPJ Index: The MSCI AC Asia Pacific ex Japan Index captures large and mid cap representation across 4 of 5 Developed Markets countries and 8 Emerging Markets countries in the Asia Pacific region.

MSCI Emerging Market Index: The MSCI Emerging Markets Equity Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets.

MSCI Europe Index: The MSCI Europe Index is a free-float adjusted market capitalization index that measures the performance of large- and mid-cap equities across 15 developed countries in Europe.

Other RES: Other renewable energy sources.

P/E: The price-to-earnings (P/E) ratio is the ratio for valuing a company that measures its current share price relative to its earnings per share (EPS).

PV: Photovoltaic cells, also known as solar cells.

RPI: The Retail Price Index (RPI) measures the change in the price of goods and services purchased by consumers for the purpose of consumption.

S&P 500 Index: The S&P 500 Index is the Standard & Poor's 500 Composite Stock Prices Index of 500 stocks, an unmanaged index of common stock prices. The index figures do not reflect any deduction for fees, expenses or taxes. It is not possible to invest directly in an unmanaged index.

Stoxx 600 Index: The Euro Stoxx 600 Index represents the performance of 600 publicly-traded companies based in one of 18 EU countries.

US Employment Cost Index: A quarterly economic series published by the Bureau of Labor Statistics that details the growth of total employee compensation.

Risk Considerations

Equity securities are more volatile than bonds and subject to greater risks. Small and mid-sized company stocks involve greater risks than those customarily associated with larger companies.

Bonds are subject to interest rate, price and credit risks. Prices tend to be inversely affected by changes in interest rates. Typically, when interest rates rise, there is a corresponding decline in the market value of bonds.

High-yield, lower-rated securities involve greater price volatility and present greater credit risks than higher-rated fixed income securities.

Investments in foreign securities entail special risks such as currency, political, economic, and market risks. These risks are heightened in emerging markets.

Hedge funds and other private investment funds (collectively, "Alternative Investments") are subject to less regulation than other types of pooled investment vehicles such as mutual funds. Alternative Investments may impose significant fees, including incentive fees that are based upon a percentage of the realized and unrealized gains and an individual's net returns may differ significantly from actual returns. Such fees may offset all or a significant portion of such Alternative Investment's trading profits. Alternative Investments are not required to provide periodic pricing or valuation information. Investors may have limited rights with respect to their investments, including limited voting rights and participation in the management of such Alternative Investments.

Alternative Investments often engage in leverage and other investment practices that are extremely speculative and involve a high degree of risk. Such practices may increase the volatility of performance and the risk of investment loss, including the loss of the entire amount that is invested. There may be conflicts of interest relating to the Alternative Investment and its service providers, including Goldman Sachs and its affiliates. Similarly, interests in an Alternative Investment are highly illiquid and generally are not transferable without the consent of the sponsor, and applicable securities and tax laws will limit transfers.

An investment in real estate securities is subject to greater price volatility and the special risks associated with direct ownership of real estate.

Concentration in infrastructure-related securities involves sector risk and concentration risk, particularly greater exposure to adverse economic, regulatory, political, legal, liquidity, and tax risks associated with MLPs and REITs.

An investment in Private Equity is speculative with a substantial risk of loss. An investment in private equities is not suitable for all investors. Investors should carefully review and consider their potential investments, risks, charges and expenses before investing. Private equity investments are speculative, highly illiquid, involve a high degree of risk, have high fees and expenses that could reduce returns, and subject to the possibility of partial or total loss of capital. They are, therefore, intended for experienced and sophisticated long-term investors who can accept such risks.

Environmental, Social, and Governance ("ESG") strategies may take risks or eliminate exposures found in other strategies or broad market benchmarks that may cause performance to diverge from the performance of these other strategies or market benchmarks. ESG strategies will be subject to the risks associated with their underlying investments' asset classes. Further, the demand within certain markets or sectors that an ESG strategy targets may not develop as forecasted or may develop more slowly than anticipated.

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Date of First Use: January 12, 2022. 264069-OTU-1537009.

