MSCI

RESEARCH INSIGHT

Reimagining Country Investing

A guide to capturing opportunities, managing risks and integrating sustainable-investment objectives

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Executive summary

Global diversification can help investors achieve a more balanced long-term risk-return profile for their portfolios. In constructing a diversified portfolio, global equity investors have long considered individual-market allocations alongside allocations to sectors, style factors and regions.

The current global landscape, distinguished by a dynamic geopolitical map and the rewiring of economies' supply chains, is giving rise to new opportunities for growth investments. Investors are also increasingly seeking to integrate sustainable-investment objectives in their portfolios. This goal could encompass managing financially relevant risks and opportunities, reducing negative impacts or making a positive contribution via portfolio holdings.

To facilitate the multiple dimensions of portfolio construction, growing numbers of global investors are using comprehensive approaches to strategic allocation. These approaches incorporate decision-making criteria that range from macroeconomic indicators, such as economic growth, inflation and currency strength, to bottom-up analysis, such as valuations, and top-down analysis, such as diversification across country, sectors, themes and geographic revenues.

This paper is intended as a guide to investing in individual country and regional markets. We review these markets' macroeconomic risks, analyze their burgeoning growth opportunities and consider the role of sustainable investments in a globally diversified portfolio.

We analyze the risk, performance and return decompositions of these individual equity markets. Using cluster analysis, we identify country- and regional-market blocks based on active-return correlations, benchmarked to the MSCI ACWI Index, to help visualize the key trends in global markets. We compare GDP growth for developed and emerging economies and discuss the relationship with equity-market returns. Our research shows that analysis based on the sector composition and geographic revenue exposures of the MSCI ACWI Index's constituent markets can aid portfolio-construction decisions.

Geographic revenue exposures, based on MSCI Economic Exposure data, show that stocks listed in one country or regional market may be impacted by developments in other countries and markets in which they earn revenues. Innovation and thematic exposures can be a valuable avenue for investors who wish to gain exposure to structural changes in the global economy. Based on MSCI's thematic-investing framework, we identify country and regional markets that have had greater exposure to innovation and transformational-technology themes relative to those more aligned with traditional industry classifications.

We compare developed and emerging economies on macroeconomic risk indicators and highlight structural differences in inflation, fiscal discipline and trade balances. We discuss how a country or regional market's exposures to emerging sustainable-finance issues, such as low-carbon transition, may affect companies and economies, perhaps reshaping global supply chains and shifting investment flows over the medium to long term.

Introduction

Global investing allocates across countries and regions to capitalize on a broad array of opportunities and to mitigate portfolio risk. The purpose is to achieve a balanced risk-return profile consistent with the investor's long-term financial goals. The core principle underlying global diversification is that economic cycles, geopolitics and market-specific events affect country and regional markets in different ways and at different times, with the exception of rare occurrences such as a global pandemic or worldwide climate catastrophe. A well-diversified portfolio can help minimize the instances and severity of drawdowns over time.

A substantial body of research, spanning several decades, supports the importance of country and regional diversification in a global equity portfolio, starting with Lessard (1974). Subsequent studies, including Grinold, Rudd and Stefak (1989), Griffin and Karolyi (1998), Baca, Garbe and Weiss (2000), Gerard, Hillion and de Roon (2002), L'Her, Sy and Tnani (2002), and Carrieri, Errunza and Sarkissian (2004), consistently highlighted the statistical significance and explanatory power of country factors. Cavaglia, Brightman and Aked (2000) investigated a broader universe, composed of 21 developed markets (DM) and 36 industries, and concluded that industry effects had overtaken country effects in the late 1990s.

Puchkov, Stefek and Davis (2005) used a two-tiered factor model to study the relative importance of countries, global industries, global styles and purely local factors. They found that country allocations nearly always dominated industry allocations in developed markets over the 1992-2004 period, except for the years 1999 through 2002. Menchero and Morozov (2011) studied the contributions to cross-sectional volatility from styles, industries and countries and found that countries dominated industries from 1994 to 1999, while the situation reversed from 1999 to 2003. After 2003 (through the study's conclusion in 2011), the two effects were roughly comparable. They also found that during periods of market turmoil, style factors made the greatest contribution to cross-sectional volatility.

In emerging markets (EM), Morck, Yeung and Yu (2000) found that stock prices tended to move together, making country selection a primary contributor to return. Estrada, Kritzman and Page (2006) also found that country effects dominated industry effects in emerging markets, supported by the observation of wider return dispersion among country returns. Recent data over the past decade has shown the significance of the dispersion in country returns. Collectively, these studies have made a strong case that country allocation, especially in emerging markets, has exerted a stronger influence than industry allocation on the performance of global equity portfolios.

Additionally, global investors may want their portfolio to align with net-zero targets and to have high exposure to innovative industries and companies, creating opportunities for long-term growth. In this paper we discuss an integrated framework for assessing growth opportunities, incorporating risk-management considerations and fulfilling sustainable-investment objectives in country- and regional-market allocations.

Building a globally diversified portfolio

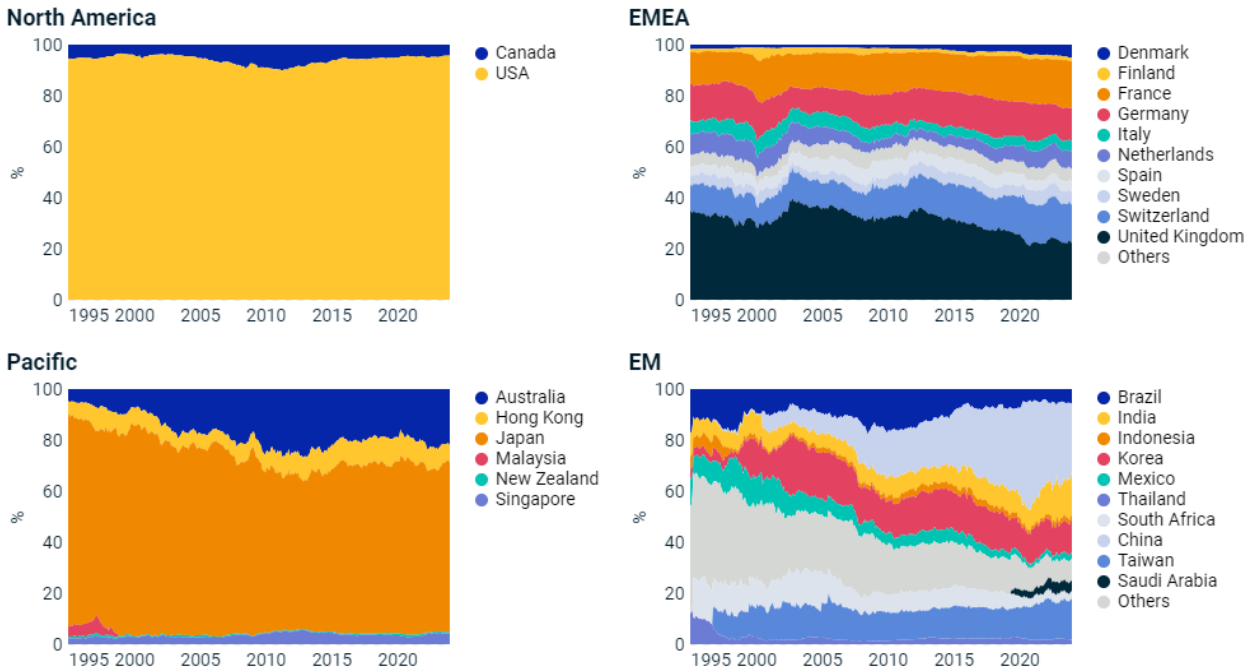
A globally diversified portfolio holds investments across different countries and regions. Because the performance and characteristics of individual country and regional markets may vary widely, diversification should act to mitigate portfolio risk, while also offering access to the unique opportunities of each market. In this section we analyze the composition of broad regional markets

and cross-sectional market volatility related to style, country and industry. We also review the historical performance and return drivers of individual countries and regional markets over roughly the past two decades. We end with a visualization of global diversification by clustering countries and regional markets based on their active-return correlations.

Broad regional markets' composition

The composition of broad regional markets can vary significantly, as Exhibit 1 illustrates. Since 1995, the performance of the North America and Pacific regions has been driven by a single country (U.S. and Japan, respectively), while the source of EMEA's performance has been more diversified. Since 2018, the composition of the EM region was increasingly dominated by China, after the inclusion of China A shares in MSCI indexes.

Exhibit 1: Composition of broad regional markets



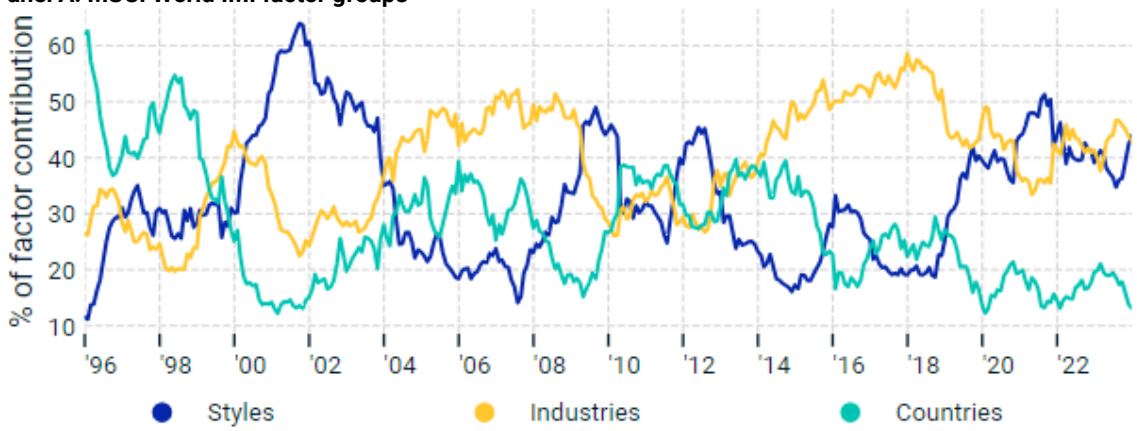
Data period is from January 1995 through December 2023.

Factor group's cross-sectional-volatility contribution

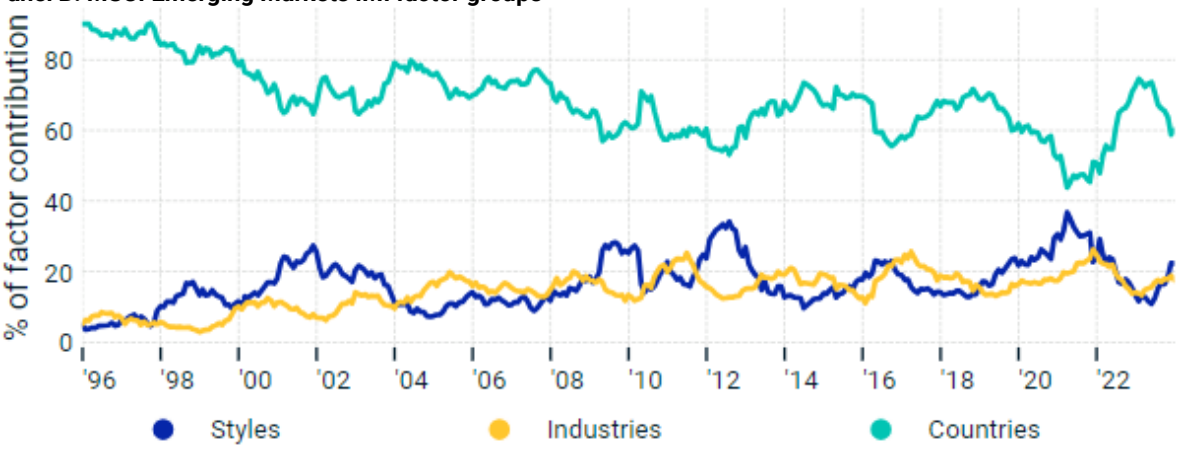
A broad region's exposure to a factor group — style, individual market and industry — varies strongly over time. We quantify the changes that occurred in the developed and emerging markets from January 1995 through December 2023 using cross-sectional volatility (CSV) of returns, a measure of return dispersion that indicates how much of the variation in individual stocks' returns is driven by a particular factor group (see Exhibit 2). In developed markets, represented by the MSCI ACWI Investable Market Index (IMI), style factors and industries have made a higher contribution to CSV over the past decade, whereas in emerging markets, represented by the MSCI Emerging Markets IMI, individual markets have dominated.

Exhibit 2: Contributions to cross-sectional variance in DM and EM

Panel A: MSCI World IMI factor groups



Panel B: MSCI Emerging Markets IMI factor groups



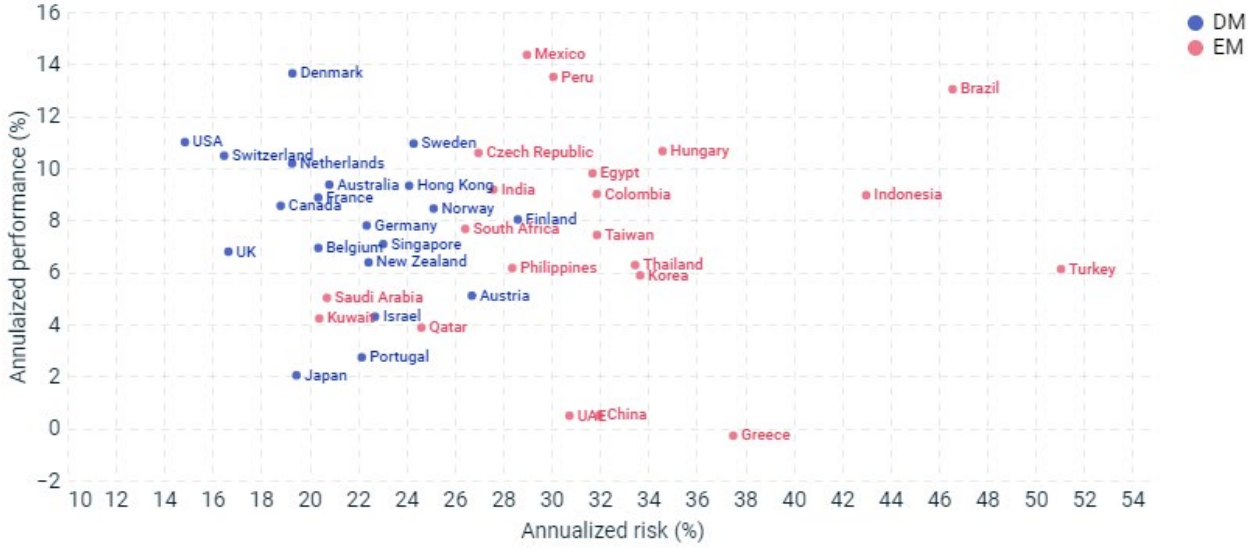
Data period is from January 1996 through December 2023.

Individual markets' risk and performance

Individual country and regional-market risk-adjusted returns have varied widely over time. From January 1988 through December 2023, all constituent markets in the MSCI ACWI Index, with the exception of Greece, posted a positive risk-adjusted return, albeit widely dispersed, across both DM and EM (Exhibit 3). Over the recent shorter-term period from January 2018 through December 2023, the dispersion of country returns in EM was wider compared to those in DM (Exhibit 4).

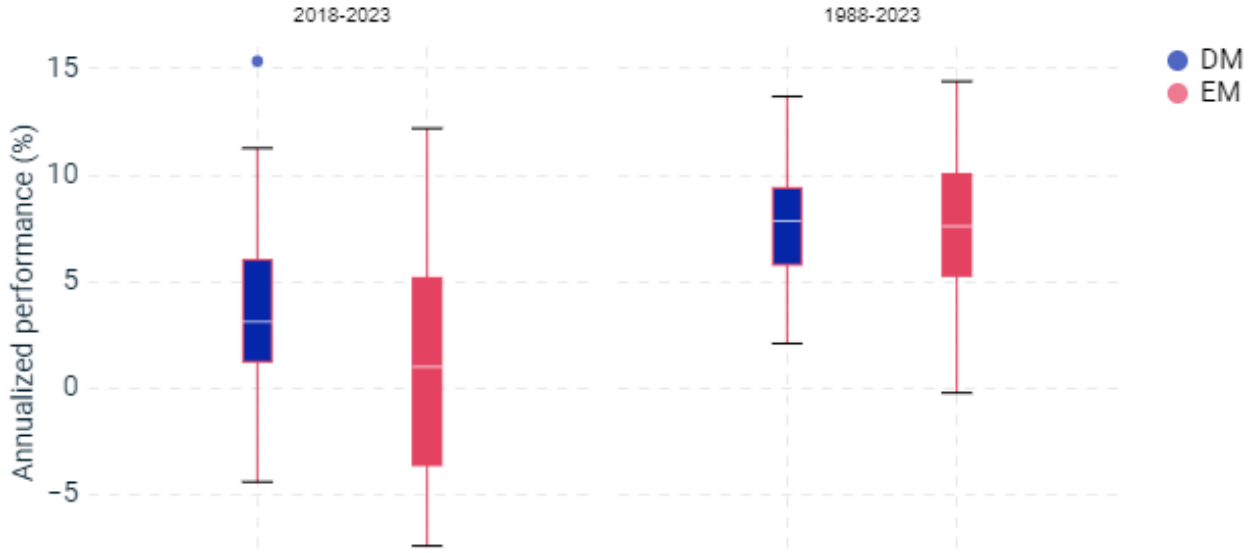
Emerging markets have historically provided higher absolute returns than developed markets but, on average, EM returns adjusted for risk have typically been lower. As Exhibit 4 illustrates, EM returns have been volatile, driven by fluctuations in monetary policy, frequent political uncertainty and dynamic international-trade conditions.

Exhibit 3: Annualized risk and return of the MSCI ACWI Index's constituent markets



Data is for the period from January 1988 through December 2023. Based on monthly returns. Gross returns are annualized in USD. The index inception date is considered the start date for indexes launched after 1988. We have excluded several constituent markets to simplify the visualization.

Exhibit 4: Dispersion in performance of DM and EM

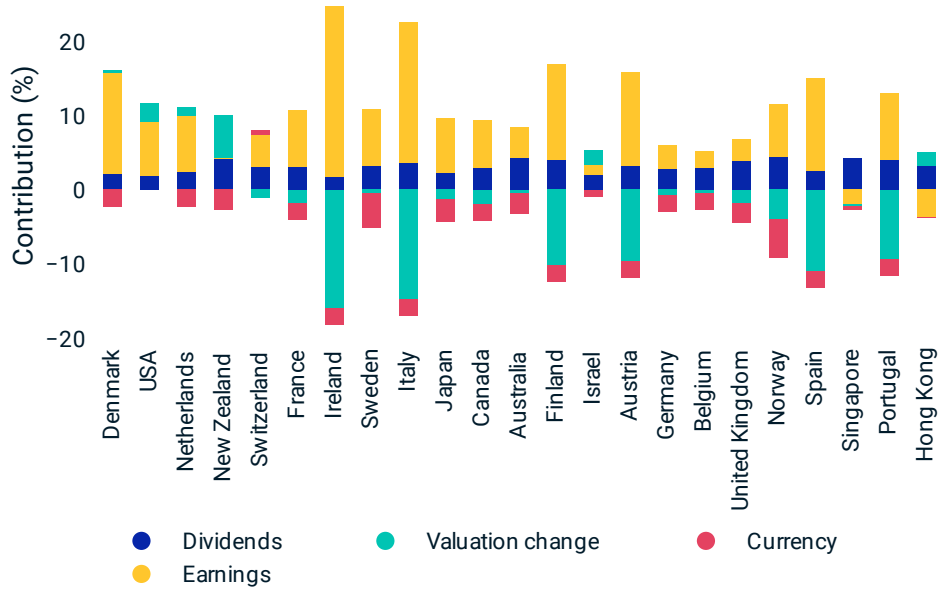


Data is for the period from January 1988 through December 2023. Based on monthly returns. Gross returns are annualized in USD. Performance and risk are reported for each index since its inception.

Individual markets' return decomposition

Previous MSCI research (Gupta et al. 2016) highlighted that, over long horizons, growth in corporate earnings and dividends tended to drive equity-market returns. Valuation compression or expansion, however, can have a sizable influence on returns over shorter horizons. Gupta et al.'s findings largely held true in developed markets over the past decade, as Exhibit 5 shows. Earnings growth was the principal return driver and was positive for almost all countries in the MSCI ACWI IMI from December 2013 through December 2023.

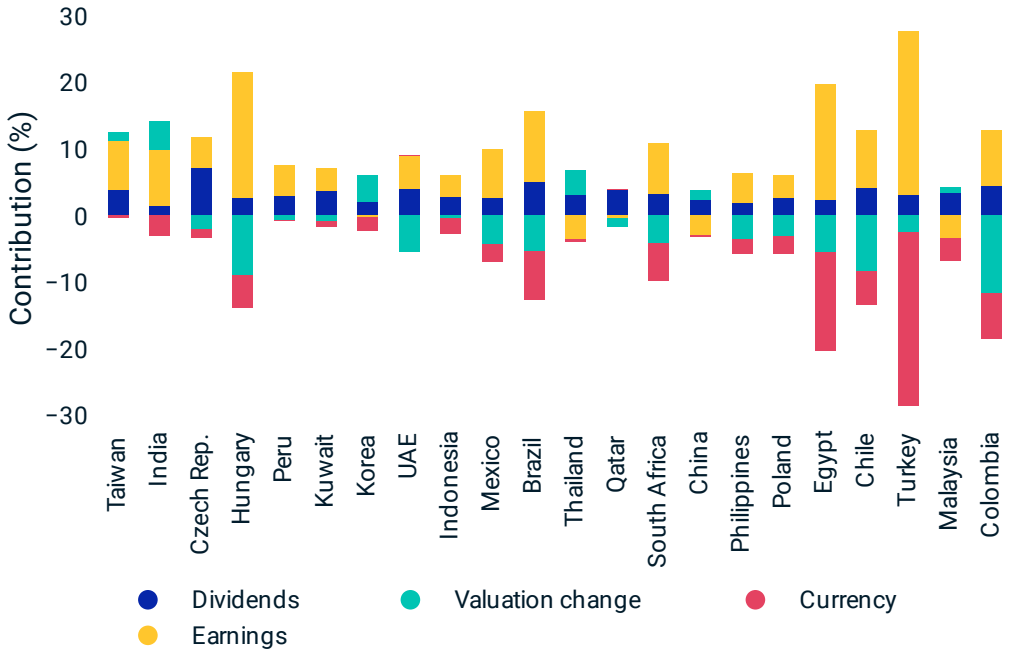
Exhibit 5: Return decomposition of DM over the past decade



Data period is from December 2013 through December 2023. Return contributions are annualized in gross USD and are based on the investable market index for each equity market. Markets are ordered based on total return.

The impact of currency depreciation for investments in USD and changes in valuation played a bigger role in the return decomposition of EM, as illustrated in Exhibit 6. Although some equity markets, such as Brazil, Turkey and Egypt, enjoyed a positive impact from nominal earnings growth, their currency's depreciation against the USD contributed negatively to their returns.

Exhibit 6: Return decomposition of EM over the past decade



Data period is from December 2013 through December 2023. Return contributions are annualized in gross USD and are based on the IMI for each equity market. Markets are ordered based on total return.

Dynamics in international diversification

Each country or regional market has unique economic, geopolitical and equity-market characteristics that may influence investment outcomes. For instance, the equity returns of Canada, a nation heavily reliant on commodity exports, may be influenced by global commodity-price fluctuations, whereas a technology-driven economy, such as that of the U.S., may be more sensitive to innovation trends and global technology-sector performance.

We can visualize the degree of diversification offered by individual markets through a clustering analysis[1] of the constituents in the MSCI ACWI Index based on their weekly active-return correlations.[2] We display the results in Exhibit 7 as dendrograms for both historical (January 2000 through December 2017) and recent (January 2018 through December 2023) time periods; vertical height represents the distance between clusters.

The traditional regional blocks still exist (note the distinct EU, U.S. and EM clusters) despite the increasing trend toward deglobalization. A few changes have occurred over the last five years, such as stronger alignment of the commodity-driven block within the EM cluster. Another change is the apparent greater diversification within the EM Asia manufacturing cluster. Our analysis uses equally

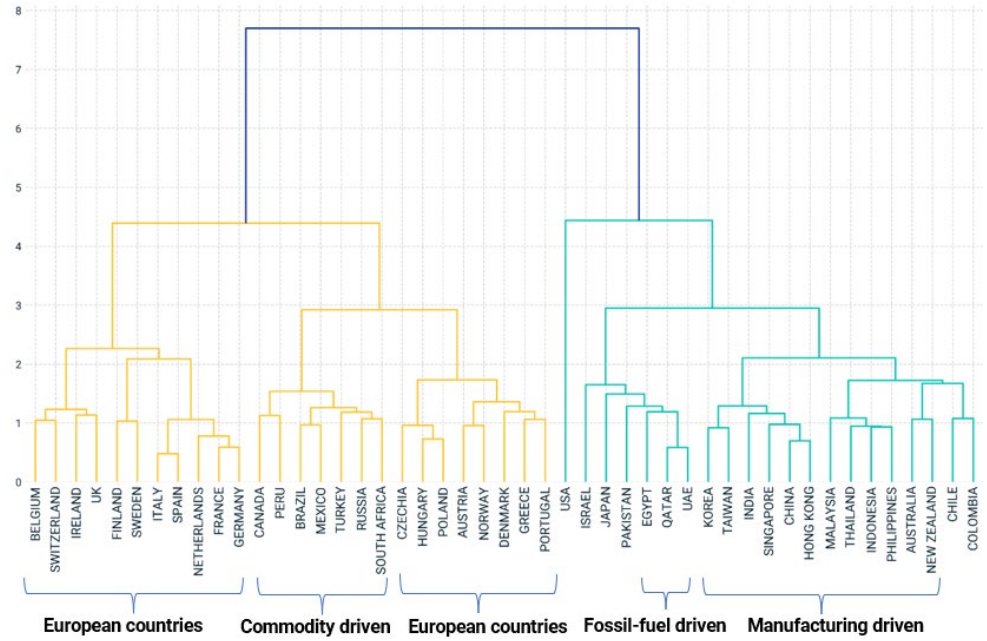
[1] We use hierarchical clustering. This so-called unsupervised algorithm clusters data points into successive groupings of similar characteristics. The algorithm starts with each data point as a separate cluster and then groups the two closest data points into a new cluster, one level up. This process continues until we reach a single final cluster. We cluster using active-return correlations (versus the MSCI ACWI Index as the benchmark). If the active-return correlation between two markets is high, they would be grouped together sooner than two uncorrelated markets.

[2] The benchmark is the MSCI ACWI Index in USD.

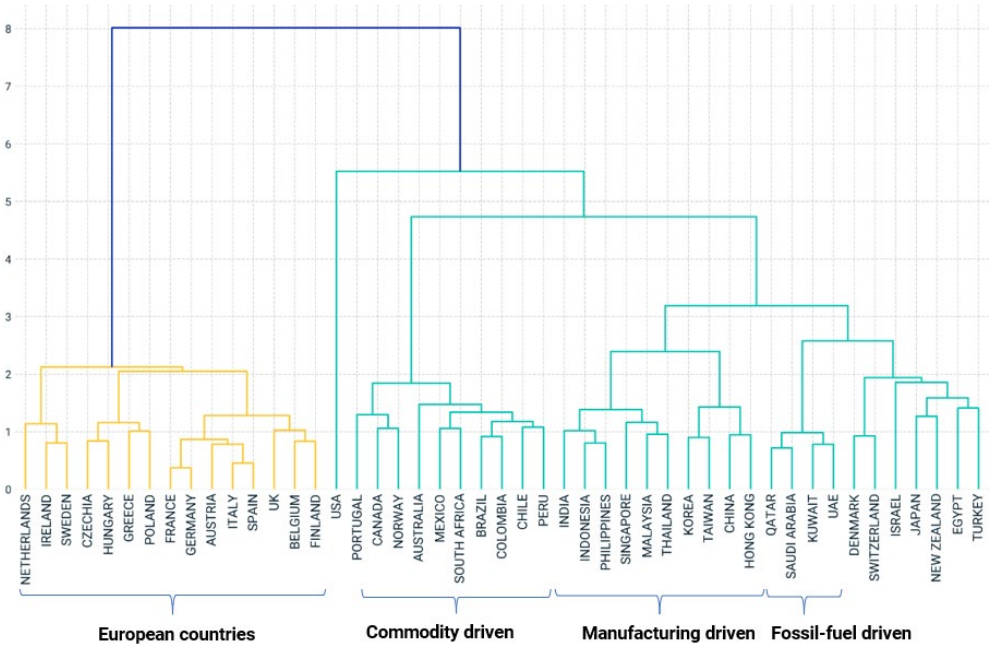
weighted individual-market returns. If we had used a market-cap-weighted lens, however, much of the diversification would disappear because of China's large weight in EM. Some investors may choose to view China as a separate opportunity set, such as the U.S. and Japan.

Exhibit 7: Hierarchical clustering based on active-return correlations

Panel A: January 2000 to December 2017



Panel B: January 2018 to December 2023



The benchmark is the MSCI ACWI Index in USD.

Growth opportunities

Some investors may seek to invest in individual markets with robust prospects for economic growth. Markets experiencing rapid economic expansion often offer fertile ground in which companies can flourish, leading to potential higher equity returns. To uncover the possibility of stronger growth prospects, investors could also assess market factors beyond economic growth, such as innovation, market stability and technological advancement. For example, although over the last two decades the U.S. may have exhibited lower gross-domestic-product (GDP) growth compared to EM, its outsized and resilient economy continued to offer companies opportunities for growth.

GDP growth need not be the only factor that global investors consider in making allocations to individual markets. Investors may also position themselves to benefit from market momentum, technological advancements and shifting consumer behaviors to leverage the strengths of both established and emerging economies, aiming to not only enhance portfolio performance but be on the cutting edge of global investing opportunities. In this section, we analyze major drivers of growth opportunities: GDP growth, structural megatrends, geographical revenue distribution and sector-based investing.

GDP growth

The macroeconomic indicator of GDP growth is an important guide for active investors who seek to tilt allocations toward equity markets with higher growth prospects.

The annual percentage change in real GDP, according to the International Monetary Fund (IMF), shows that GDP growth rates have stabilized in emerging economies while sliding lower in advanced economies as the global economy continues to recover from the shocks related to the COVID-19 pandemic. The IMF's forecast indicates stabilizing GDP growth in both advanced (1-2%) and emerging (4-5%) economies over the next five years.

Historically, emerging economies have had higher economic growth than developed economies. Although the EM growth premium over developed economies has recently moderated, the IMF expects it to continue over the coming years, supported by broad adoption across the emerging economies of policies that seek to promote fiscal discipline and price stability.

Exhibit 8: Real GDP growth

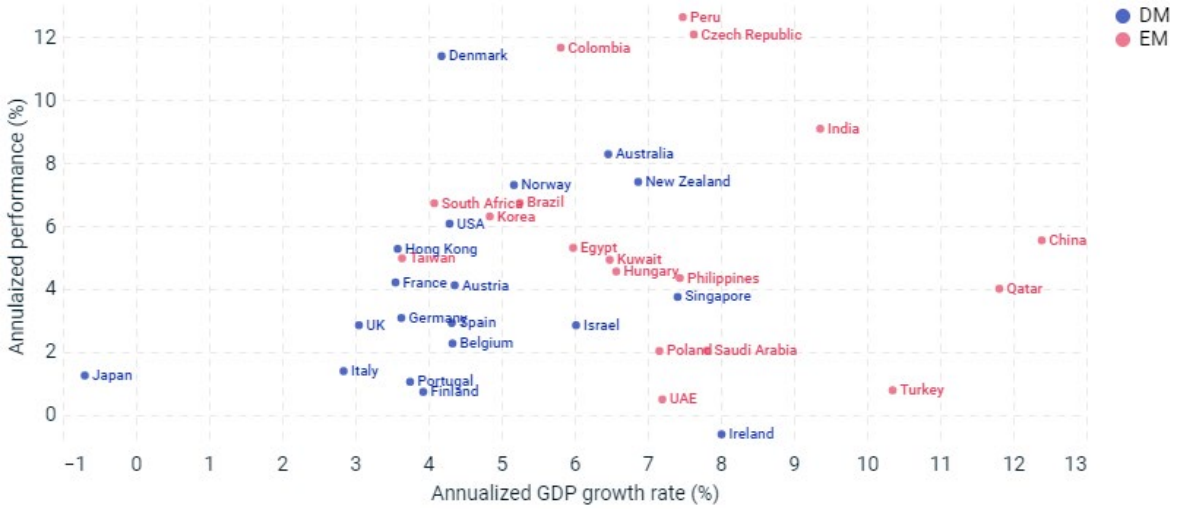
Data period is from 1980 through 2028. Forecasts are from Q4 2023 to Q4 2028. Growth is reported as the annual percentage change. Source: International Monetary Fund

According to the IMF (2022, 2023), India and China were projected to grow at a higher near-term pace than other emerging economies. With an average projected growth rate of 6.3% over the next five years, India is expected to be one of the world's fastest-growing major markets.[3] After ending its zero-COVID-19 policies in early 2023, the Chinese economy is expected to grow by 3.9% over the same period. Taiwan and Korea, with a significant portion of their economic revenues linked to the U.S. and China, are expected to grow at slightly higher than 2% as their export prospects weaken.

The transmission of economic growth to equity-market returns is an important factor in selecting individual markets for asset-allocation purposes. Some studies (e.g., Hsu et al. 2022), however, have shown that the GDP/equity-return relationship is tenuous over long horizons. Exhibit 9 plots the relationship of GDP growth rates and equity-market returns of selected MSCI ACWI Index constituents since 2000.

[3] China, India, Korea and Taiwan formed more than 90% of the MSCI EM Asia Index as of Dec. 31, 2023.

Exhibit 9: Equity-market returns and GDP growth



Data period is from January 2000 through December 2023. The inception date of the country or regional market is considered to be the start date for those indexes launched after 2000.

The relative performance of certain individual markets, such as the U.S., Japan, Germany, Brazil, South Korea, India and South Africa, largely aligned with their respective real GDP growth rates. Others, such as Colombia, Peru and the Czech Republic, provided better performance relative to their GDP growth rate. With few exceptions, realized equity-market returns were often greater than nominal GDP growth rates during the 23-year study period.

Innovation and thematic exposure

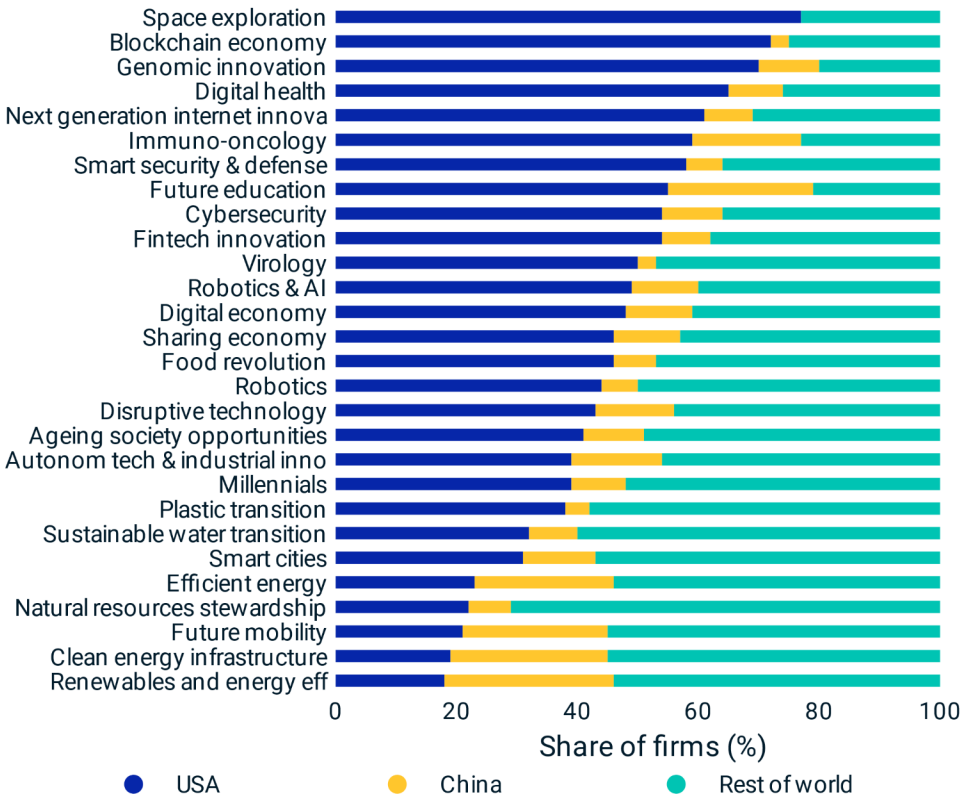
Investors can gain exposure to structural changes in businesses and economies through thematic investing. MSCI has created a thematic-investing framework that links firms and quantifies their connections to such investment themes. We have identified four megatrend categories: environment and resources, transformative technologies, health and health care and society and lifestyle.

The framework can be viewed as complementary to more-traditional sector and industrial schemes, such as the Global Industry Classification Standard (GICS®).[4] A theme, such as digital health, can span multiple industries, geographic regions and GICS sectors. Thematic classifications can assist in index construction and in highlighting differences as well as opportunities among market segments.

Exhibit 10 shows the regional distribution of companies in 28 MSCI thematic indexes. Each index aims to represent the performance of a set of companies strongly associated with a specific investment idea by means of a thematic-exposure score.

[4] GICS is the global industry classification standard jointly developed by MSCI and S&P Global Market Intelligence.

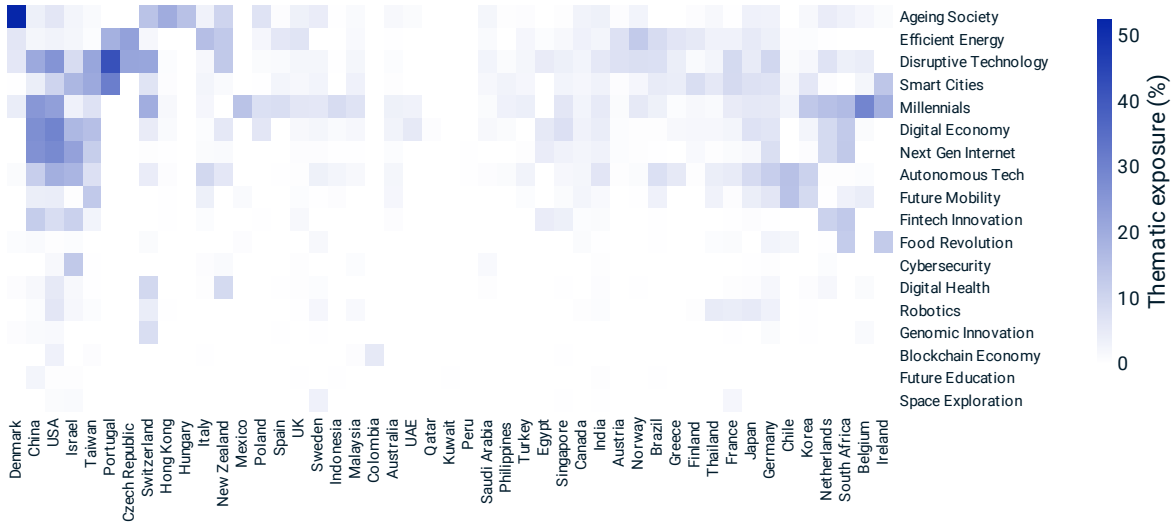
Exhibit 10: Regional distribution of firms in the MSCI thematic indexes



Index constituents as of Dec. 31, 2023. "Rest of world" denotes individual markets outside of China and the U.S. that are part of the MSCI ACWI IMI. Values represent the fraction of firms by count in each region.

Many of the themes shown in the preceding exhibit are most strongly represented by U.S. and Chinese firms, although some themes, such as sustainable-water transition and natural-resources stewardship, break this pattern. The high number of U.S. and Chinese firms in these innovation- and technology-oriented themes likely arises from their strong technology ecosystems: the U.S.'s Silicon Valley, home to Apple Inc. and NVIDIA Corp., and China's regions of Shenzhen and Hangzhou, which have produced companies such as Tencent and BYD Company, Ltd.

Exhibit 11: Thematic exposures of the MSCI ACWI Index's constituent markets



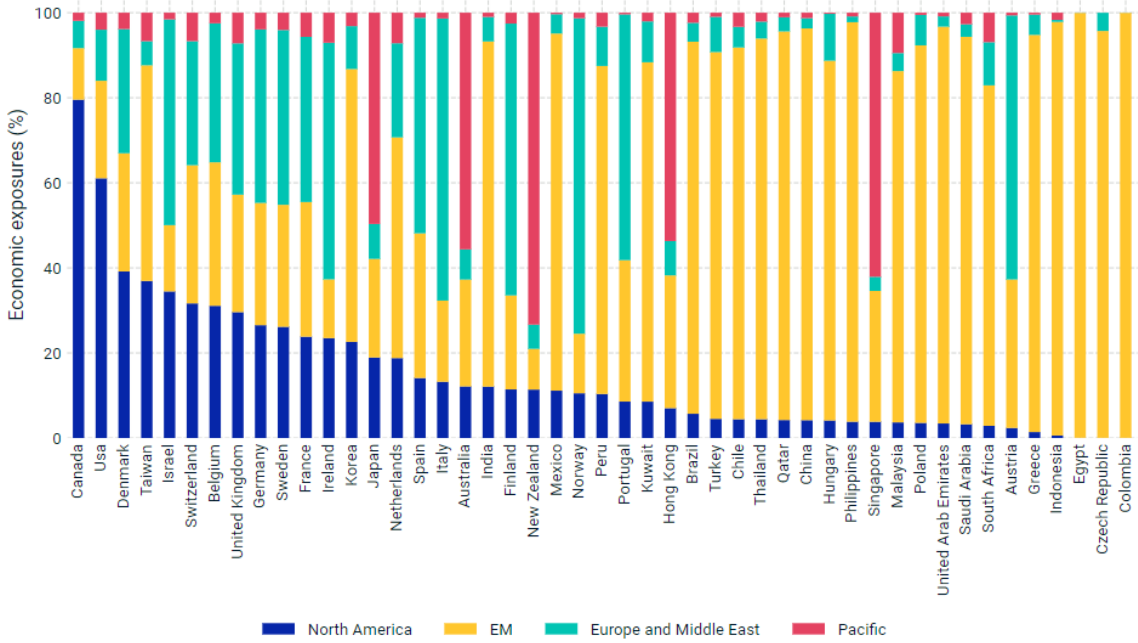
Data as of Dec. 31, 2023. Exposures are capitalization-weighted by country and use the MSCI Thematic Exposure Standard. Darker shading indicates higher exposure to the theme.

A deeper dive reveals that investment opportunities are, of course, broader than these two equity markets, as Exhibit 11 illustrates. The exhibit shows the capitalization-weighted thematic exposures of the MSCI country and regional-market indexes, for which we can highlight similarities and differences based on their exposures. The data reveal that beyond the dominance of the U.S. and China, some — including Israel, Korea, Switzerland and Taiwan — are considered broad innovators, displaying diverse exposure to multiple themes.

Geographic-revenue exposure

The geographic-revenue exposure of a country or regional market can influence asset-allocation decisions. To understand how globally integrated (i.e., the geographic location where the companies domiciled in a market generate their revenues) a country or market is, we can refer to the MSCI Economic Exposure dataset. Whereas a company may be domiciled in one country or market, it may be affected by developments in other countries or markets. Exhibit 12 shows, for example, that the U.S. has more than a 20% revenue exposure to EM, while nearly 40% of Taiwan's revenues are linked to the North America region. Analysis of a market's geographic distribution of revenues and its related growth prospects can aid an investor in strategically constructing and managing a global portfolio.

Exhibit 12: Economic exposures of the MSCI ACWI Index's constituent markets

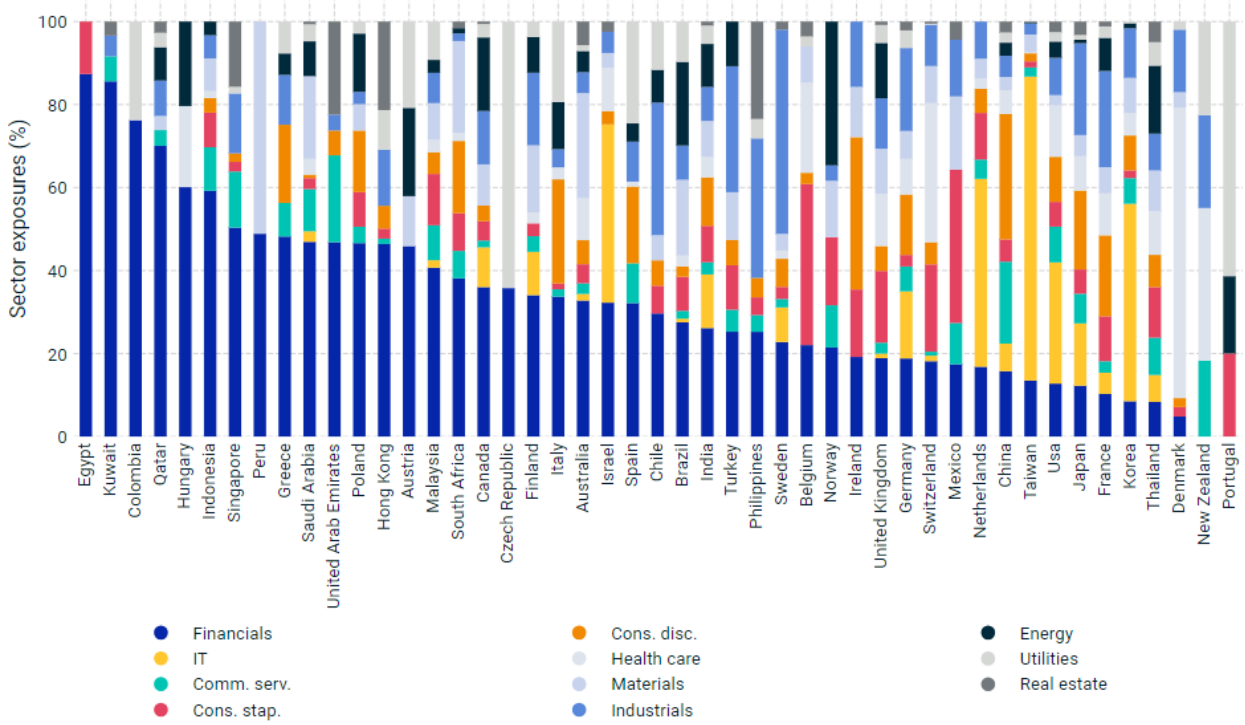


Data as of Dec. 31, 2023. The MSCI Economic Exposure Indexes Methodology used to determine the economic exposures of each index to the broad regions of North America, Europe and the Middle East, the Pacific and emerging markets.

Sector exposure

A country or regional market index may have a strong sector bias relative to the global equity universe. This bias could be an important input in an investor's individual-market allocations. For example, as Exhibit 13 illustrates, companies in the information-technology sector dominate the free-float market cap of the Netherlands, U.S., Israel, Taiwan and Korea, whereas Hong Kong, the United Arab Emirates and the Philippines have sizable exposures to the real estate sector. By identifying the relationships of markets and sectors, an investor can select those that align with their portfolio objectives.

Exhibit 13: Sector-exposure decomposition of the MSCI ACWI Index's constituent markets



Data as of Dec. 31, 2023.

Macroeconomic risks

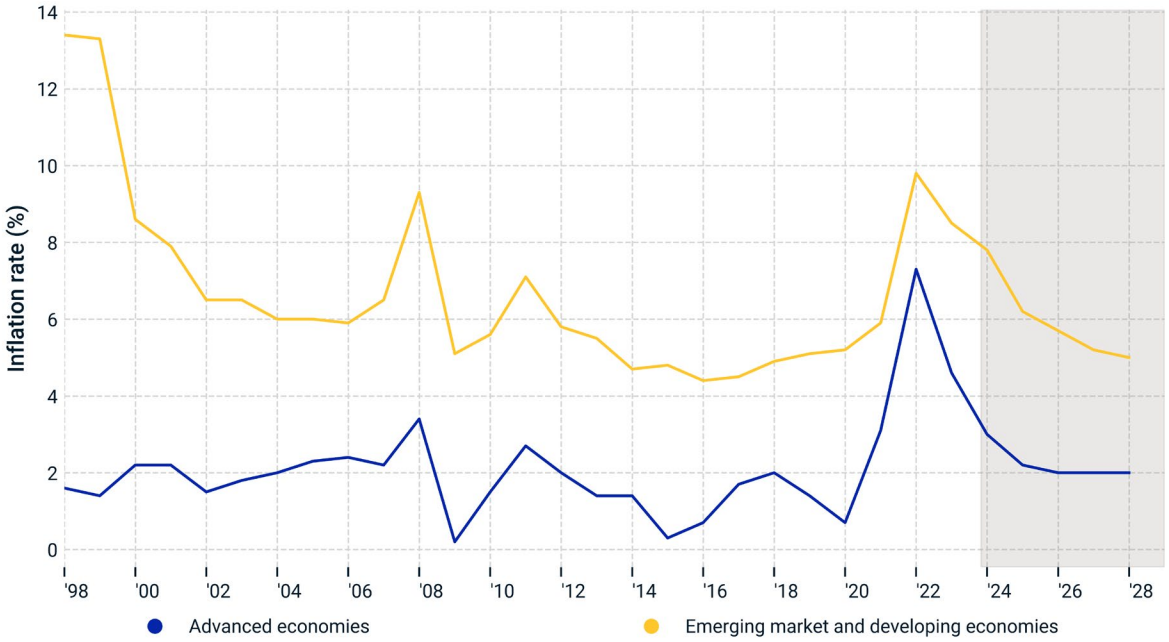
We have already discussed the role of GDP growth in shaping country and regional-market allocations as one of the central factors in identifying investment growth opportunities. Additionally, other macroeconomic indicators can add value in assessing investment risk. Using IMF data and forecasts, we analyze the historical evolution and future estimated paths of three macroeconomic indicators: 1) monetary policy and price stability, 2) fiscal discipline and outstanding debt and 3) trade and account balance.

Monetary policy and price stability

At the beginning of our data period in 1998, the emerging and developing markets had substantially higher inflation than the developed markets. Gradually, the former worked to reform their monetary policy, enhance central-bank independence and introduce structural reforms in trade, product and labor markets, thereby gaining improved access to global capital markets (Domaç and Yücel 2005). As a result, EM inflation began to decline and has closed the gap with developed markets over the last 20 years.

Over the last 25 years, inflation has remained structurally higher for emerging economies than for developed economies. In Q4 2023, the IMF forecasted this trend to continue for the next five years, albeit, at a lower level. Thus, global investors may wish to monitor interest-rate regimes within emerging markets as they make country-allocation decisions in constructing their portfolios. Exhibit 14 shows annual inflation rates for EM and DM since 1998.

Exhibit 14: Inflation rates in advanced and emerging/developing economies



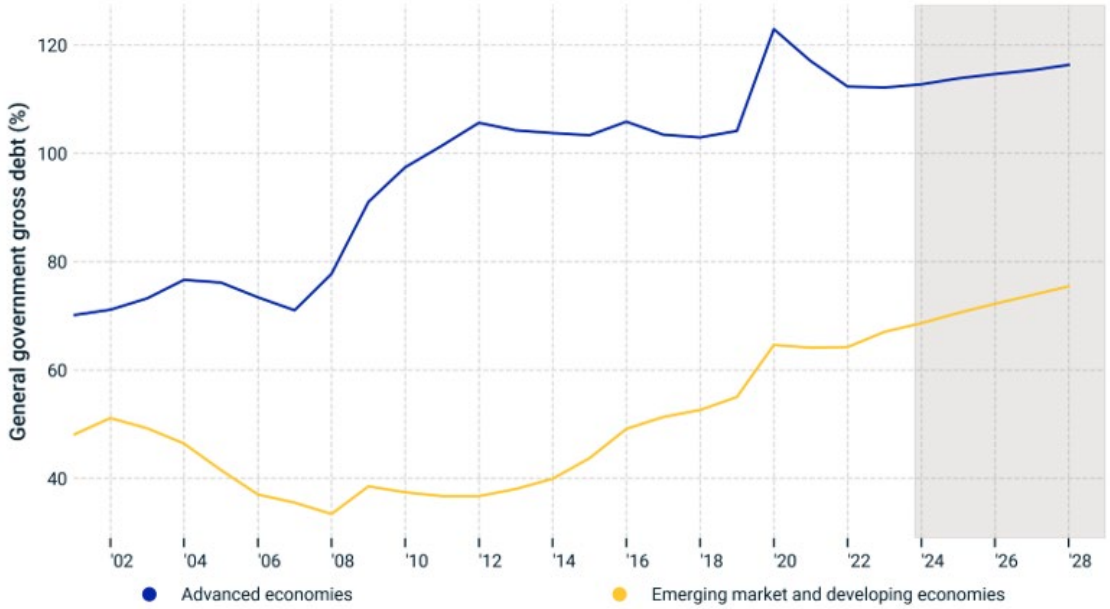
Data period is from 1998 through 2028. Forecasts are from Q4 2023 to Q4 2028. Inflation rate is reported as the annual percentage change. Source: International Monetary Fund

Fiscal discipline and outstanding debt

From 2002, when the gap was at its smallest, the outstanding debt of developed economies grew much faster than that of emerging economies. The disparity escalated after 2008 in the aftermath of the global financial crisis and jumped again when the COVID-19 pandemic struck in 2020. The IMF's Q4 2023 five-year forecast estimated that debt, as a percentage of GDP, would remain high, at more than 100%, in the developed economies.

In contrast, the emerging economies' fiscal paths resulted in declining debt levels during much of the first decade of this century. Although not immune to economic shocks, such as the global financial crisis and COVID-19, which raised debt levels, the IMF expects EM to maintain significantly lower debt levels than DM over the next five years. Exhibit 15 shows gross debt, as a percentage of GDP, for developed and emerging economies over the last 25 years.

Exhibit 15: Gross debt in advanced and emerging/developing economies



Data period is from 1998 through 2028. Forecasts are from Q4 2023 to Q4 2028. Gross debt is reported as a percentage of GDP. Source: International Monetary Fund

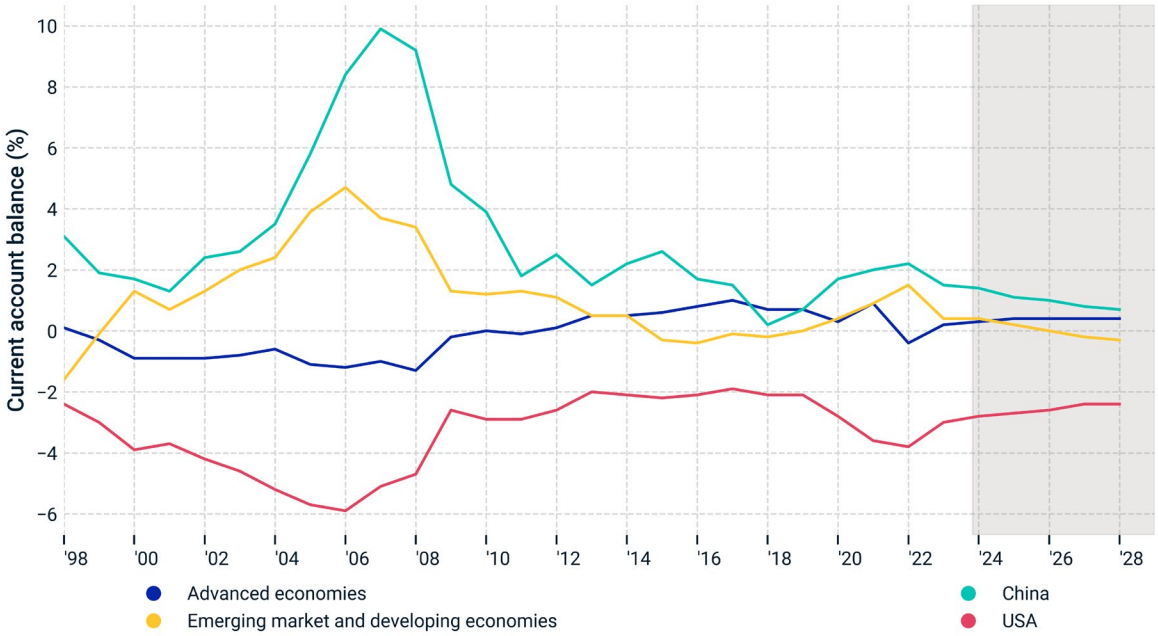
Trade and current-account balance

In the early 2000s, driven by China's expanding economy, the emerging and developing markets established a large trade surplus. The developed economies, a good example being the U.S., experienced an increase in their current-account deficits over the same period. Globalization and foreign-capital inflows into EM, motivated by lower labor costs and other comparative advantages, were largely responsible for the diverging trade circumstances. Today, the U.S. still has a current-account deficit, which the IMF expects to persist until at least 2028.

Over the last decade, the trade gap between EM and DM has narrowed, largely a result of an increasing focus on higher domestic consumption in the emerging economies coupled with the strengthening deglobalization trend. The IMF forecast for the next five years indicates that the narrowing will continue.

Current-account imbalances have historically had a destabilizing effect on the global economy, making capital markets more susceptible to external economic shocks, especially for countries that had accumulated external debt in foreign currency and were vulnerable to shocks to their currency's value and withdrawals of foreign capital. Exhibit 16 illustrates how trade between the developed and emerging economies has evolved over the last two decades, reflected in their current-account balances as a percentage their respective GDPs.

Exhibit 16: Current-account balance in advanced and emerging/developing economies



Data period is from 1998 through 2028. Forecasts are from Q4 2023 to Q4 2028. Current-account balance is reported as a percentage of GDP. Source: International Monetary Fund

Reshaping globalization: The role of sustainable finance

Over the last decade, the recognition by asset owners of the importance of sustainable finance has grown significantly (PRI 2021, 2022; Simon, Singlemann and Wenthold 2023). Stakeholders are raising their expectations around the sustainability of a company's operations and business models, leading to greater scrutiny of the company's practices and supply chains.

Heightened scrutiny may force companies to review their trade and investment relationships with other companies that may have poorer sustainability practices and climate-risk-mitigation track records. Meanwhile, the progressing transition to a low-carbon world is creating opportunities for those companies and markets with greater or developing exposure to low-carbon solutions. These trends could affect global trade channels and investment flows causing new winners and losers to emerge.

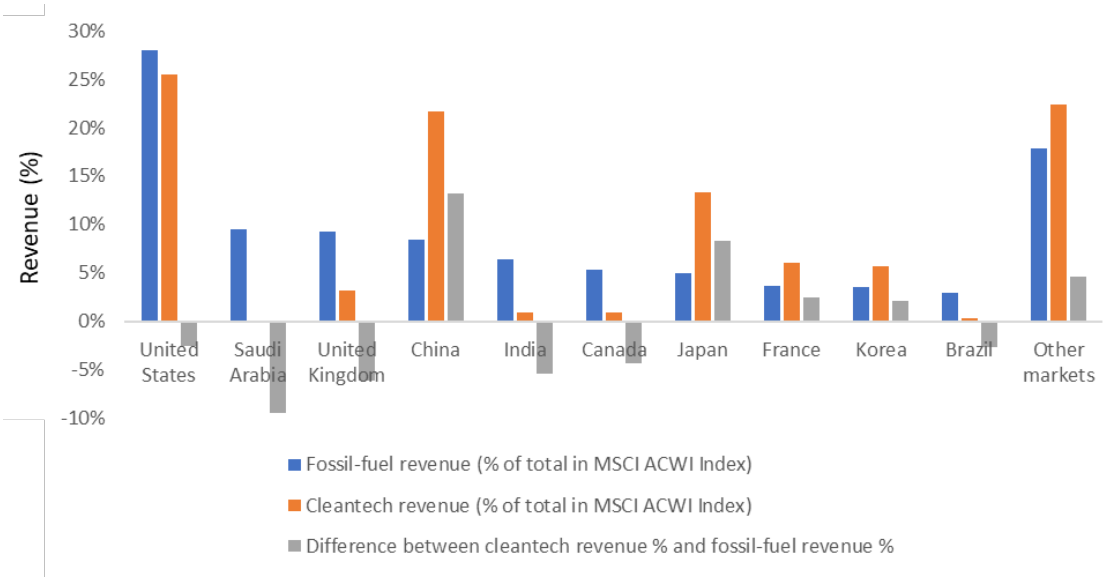
Sustainable finance can touch many aspects of a company, from its commitment to environmental sustainability, labor-relations issues and links in its global supply chain to the effectiveness of its governance structures. We focus on low-carbon transition as a timely example due to its potential to impact portfolio allocations.

Global investors are beginning to shift capital from carbon-intensive assets to low- or zero-carbon assets to reduce their portfolios' exposure to climate-transition risk while capitalizing on low-carbon-transition opportunities. This capital reallocation could reshape global supply chains and affect the performance of individual countries and regional markets.

Low-carbon transition: Risks and opportunities

With rapid growth and investment in low-carbon technologies, global investors may shift their capital from carbon-intensive assets to low- or zero-carbon assets to reduce their exposure to climate-transition risk and capitalize on low-carbon-transition opportunities (IPCC 2022, Zanon 2022 and Bland, Granskog and Nauclér 2022). This anticipated capital reallocation may affect the performance of individual markets. The key point, however, is that any impact will likely not be uniform across markets because markets differ substantially in their climate characteristics. For instance, in the MSCI ACWI Index, the top five fossil-fuel energy producers are the U.S., Saudi Arabia, U.K., China and India, but not all are leaders in the production of cleantech (Exhibit 17).

Exhibit 17: Fossil-fuel and cleantech exposure of top 10 markets in the MSCI ACWI Index

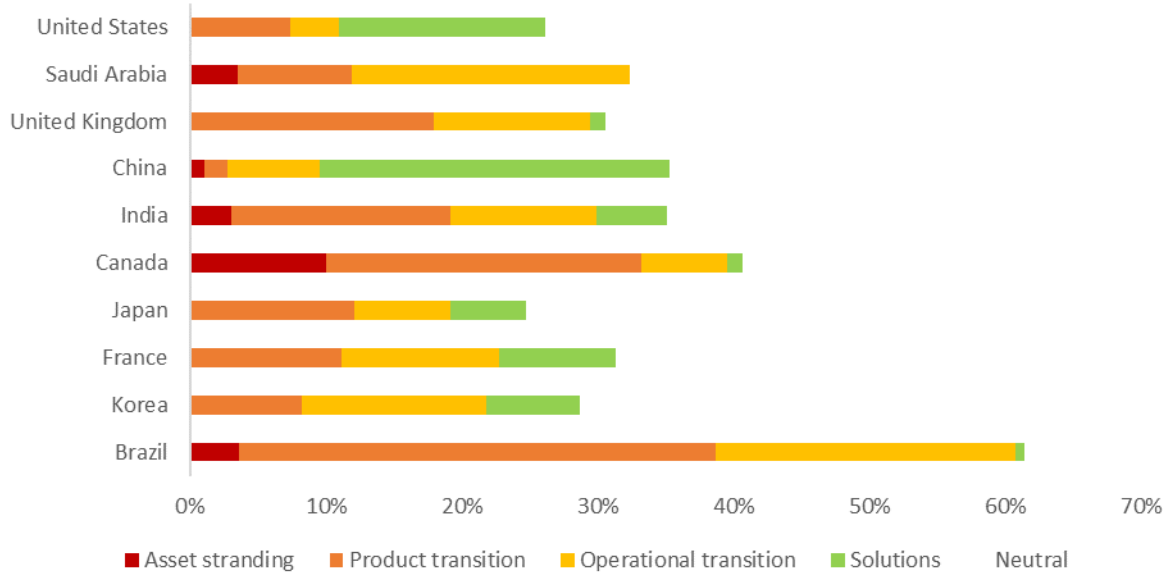


Data as of Jan. 12, 2024. Fossil-fuel revenue is computed as the sum of revenues derived from thermal-coal-mining activities and from oil- and-gas-related activities, including distribution/retail, equipment and services, extraction and production, petrochemicals, pipelines and transportation and refining, but excluding biofuel production and sales and trading activities. Cleantech revenue is derived as the sum of revenues from alternative-energy and energy-efficiency activities under ESG Sustainable Impact Metrics. The top 10 markets are based on their share of aggregated fossil-fuel revenue in the MSCI ACWI Index. Source: MSCI ESG Research

In earlier research (Giese, Nagy and Rauis 2021), we analyzed the stock performance of companies with different low-carbon-transition risk profiles using MSCI Low Carbon Transition (LCT) Categories and Scores, a quantitative assessment of a company's exposure to and management of climate-transition risks and opportunities. We observed that higher-risk LCT categories, such as asset stranding and product transition, which includes fossil-fuel companies and some automobile companies, underperformed other LCT categories. The solutions category, which includes cleantech companies, demonstrated the best performance over the study period from Oct. 31, 2013, to Jan. 31, 2021.[5] Exhibit 18 shows the exposure of selected markets in the MSCI ACWI Index to different LCT categories.

[5] The MSCI Low Carbon Transition Category scale has five categories: asset stranding, product transition, operational transition, neutral and solutions. Issuers in the asset stranding LCT category have exposure to climate-transition risks through potential stranding of physical or natural-resource assets due to regulatory, market or technology forces. Issuers in the product-transition LCT

Exhibit 18: Exposure of selected markets to different LCT categories



Data as of Jan. 12, 2024. "LCT" is low-carbon transition. Neutral-category constituents account for the remaining weight in each market. Source: MSCI ESG Research

Should capital shift from carbon-intensive companies to providers of low-carbon-transition solutions, markets with riskier transition assets could be laggards in the medium to long term compared to markets with more exposure to climate solutions and neutral companies. The preceding analysis indicates that the positions of country and regional markets to emerging sustainable-finance issues may act as either headwind or tailwind to their investment and growth in the medium to long term.

An integrated framework for global investing

We reimagine country investing within a framework that reflects the current global landscape, distinguished by a dynamic geopolitical map and deglobalization, to help investors successfully navigate the ever-evolving landscape of global equities. Our analyses are intended as a guide to identifying countries and regional markets that offer investment opportunities with promising growth trajectories and transformative potential. Our framework also considers the risks and opportunities arising from a country's or individual market's macroeconomic path and from an investor's desire to introduce sustainable-finance objectives in their portfolios.

category have exposure to climate-transition risks through potential reduced demand for carbon-intensive products and services. Issuers in the solutions LCT category have a low total-carbon-emissions footprint and have the potential to benefit from the growth in demand for low-carbon products and services.

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