

Secular outlook for global growth: The next 20 years

Slower economic growth is expected to result in a lower-than-historical-average interest rate climate and to offer less of a tailwind to equities.

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Key takeaways

- Our secular gross domestic product (GDP) growth forecasts are the foundation for developing long-term capital market assumptions for asset returns and bond yields.
- Our forward-looking, global approach emphasizes the key components of GDP growth—population and productivity—and calculates the critical drivers that have been most predictive.
- Over the next 20 years, we expect global growth to be somewhat slower, due primarily to deteriorating demographics in most countries, with developing economies likely to register the highest growth rates.
- Peaking globalization trends and rising anti-globalization political pressures could affect the outlook, with potentially negative effects on growth via more-restricted trade flows.
- Slower world growth could deliver lower-than-historical-average interest rates and less of a boost to equity returns than in recent decades.

GDP forecasts: foundation for long-term capital market assumptions

Economic growth provides the backdrop for asset markets, influencing corporate earnings, interest rates, inflation, and many other factors. We believe, therefore, that long-term GDP growth forecasts form the foundation for long-term capital market assumptions.

Modern financial markets have a relatively short history, particularly outside the United States and a handful of other developed countries, limiting the availability of data for growth and asset assumptions. Most approaches use a framework centered on the U.S. and other advanced economies, and many are backward-looking and rely on mean reversion to historical averages.

We think the global economic landscape is likely to look quite different over the next 20 years than the past 20 years, and that a forward-looking approach to developing capital market assumptions may provide a better chance for success in this dynamic environment. Generating long-term global GDP forecasts is the first step in that process. At a high level, economic growth can be separated into two components: population growth—or the increase in the number of people—and productivity growth—or the increase in output per person (Exhibit 1). This paper summarizes highlights from the sixth annual update of our secular GDP forecasts.

Post-Industrial Revolution growth: blip or new baseline?

During much of the world’s history, productivity growth was extremely slow. Economies generally expanded in line with their population growth. As of 1820, the largest economies were essentially a ranking of the largest populations, with China and India topping the list.¹

Since the onset of the Industrial Revolution in Great Britain more than 200 years ago, bursts of technological transformation have powered rapid productivity gains. Throughout the world, innovation brought fundamental change—from steamships, railroads, indoor plumbing, electricity, and telephones in the 19th century to automobiles, airlines, antibiotics, radio, and television in the 20th century. Starting in the late 1800s—and for the first time in history—income per capita rose

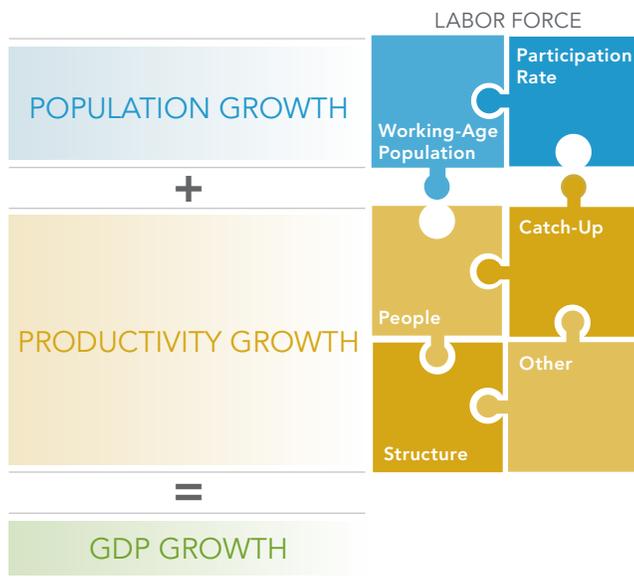
exponentially, especially in the U.S. and the more advanced European economies (Exhibit 2). By 1900, the U.S. had become the world’s largest economy, despite having a population only one-fifth the size of China’s.

Extrapolating history

Among forecasters attempting to project global growth rates into the 21st century, two schools of thought prevail. One group assumes the U.S. possesses an inherent dynamism that will perpetuate the high U.S. average productivity experienced over the past 100 years, perhaps boosted by artificial intelligence, robotics, and other cutting edge technologies. Data limitations prevent large developing economies from being incorporated into the historical average productivity rate, but the general presumption is that their rapid expansion may keep global growth solid for years to come.

EXHIBIT 1: Labor force growth and productivity growth are key determinants of economic growth.

Key Drivers of GDP Growth

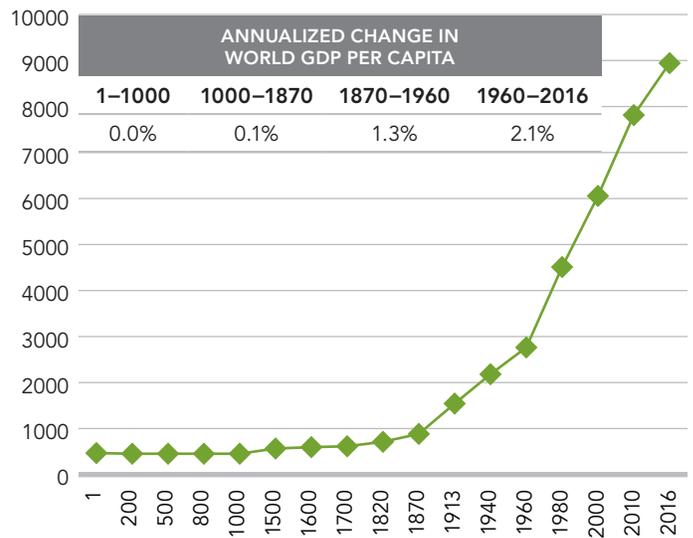


Source: Fidelity Investments (AART), as of Aug. 1, 2018.

EXHIBIT 2: The technological transformations of the 19th and 20th centuries led to major expansion in per capita income.

Average World GDP per capita

Real GDP per capita (U.S. dollars)



Sources: Angus Maddison, Groningen Growth and Development Centre, Fidelity Investments (AART), as of Dec. 31, 2017.

Another perspective is that the two-century burst of productivity growth may be ending.² As evidence, income per capita in the U.S. and many other developed economies has stagnated, and technological breakthroughs seem less transformative than before. For instance, recent advances—such as mobile connectivity—have resulted disproportionately in consumer luxuries—such as new smartphone apps—rather than revolutionary innovations. Implicit in this view is the decline of the U.S. and other Western economies, including a subset of work asserting that high government debt burdens will weigh on future growth.³

Our view is that both analytical frameworks fall short. Extrapolating productivity trends based on only a brief period of world history may optimistically assume that such rapid expansion can continue, even though the global economy is now growing from a much higher base. Conversely, extrapolating slowing productivity growth by comparing inventions from different eras may pessimistically assume a trend from a small sample of technological revolutions, which are by nature largely unpredictable. In our view, both perspectives suffer from a narrow focus on the U.S., whose current outlook may not fully reflect a global economy in which emerging countries account for more than one-third of output.

Our forward-looking, global approach to growth forecasts

The objective of our forecasting framework is to address these shortcomings by emphasizing a forward-looking approach that is not dependent on historical averages. Our methodology also has a global focus that we think is more reflective of the worldwide opportunity set for growth, enabling us to model long-run potential based on fundamental drivers.

We use historical data not as static assumptions but, rather, to understand the underlying determinants of

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growth and to find measurable factors that have been predictive of economic growth in the past. We employ a multi-dimensional panel data model that compares common data sets across economies within a common framework.⁴ This approach helps us to make direct comparisons, while capturing the different characteristics that make an economy unique.

Together, these traits root our analysis in historical realities and measurable drivers of economic growth, while providing a dynamic framework that is determined by model-driven predictions of growth, rather than by historical averages or overly qualitative hypotheses about the nature of technological progress.

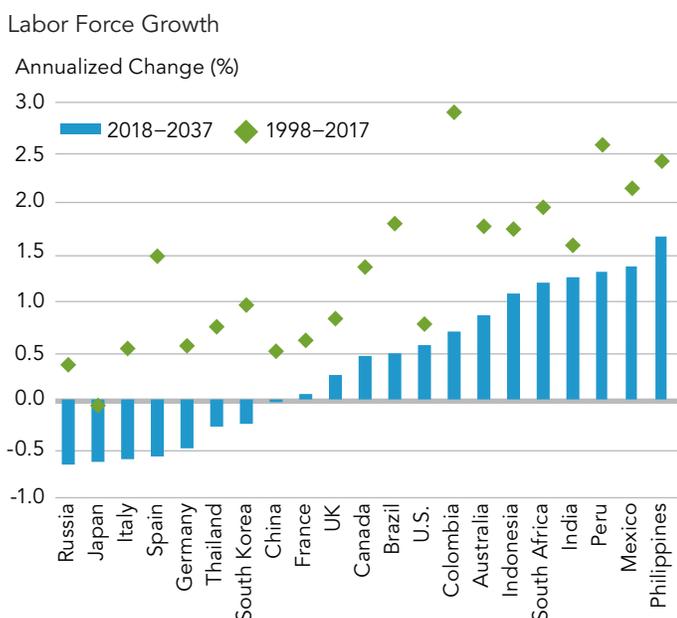
Population growth: less positive than in the past

Of the two primary determinants of GDP growth, we find population growth easier to forecast, as demographic trends tend to vary less over time than other economic data. The growth in a country’s labor force has the most direct impact on GDP growth. A country’s labor force is determined by a combination of the overall size of its working-age population, as well as the percentage of people within that cohort who are either working or seeking employment (the labor force participation rate). In advanced economies, aging populations tend to lead

to lower labor force participation rates over time, adding to the demographic challenge of weaker growth in working-age populations.

Labor force growth has risen rapidly for several decades, but almost all countries will experience slower growth and receive less of a direct demographic benefit over the next 20 years (Exhibit 3). Several mature countries, such as Japan and parts of Europe—with the U.S. as a notable exception—likely will experience outright labor force declines. It’s important to note that any changes to immigration policies could have an important impact on these forecasts, particularly in Europe, where inflows of working-age migrants have been higher than expected in recent years due to turmoil in the Middle East and Africa. This migration could help mollify the region’s demographic challenges, although the opposite effect would occur if more-restrictive policies were enacted in response to migration pressures.

EXHIBIT 3: The contribution of labor force growth to economic growth will be much lower over the next 20 years.



Sources: World Bank, OECD, Country Statistical Organizations, Haver Analytics, Fidelity Investments (AART), as of Dec. 31, 2017.

In general, growth should be faster in the developing world—Latin America, parts of Emerging Asia, the Middle East, and Africa. However, labor force growth is flattening or declining in several economies in Emerging Asia, including China, South Korea, and Thailand.

Productivity growth: still positive

Productivity growth is often more difficult to predict, with multiple drivers whose relative importance varies according to the characteristics of different economies. While many factors influence rates of productivity growth, we focus our analysis on three main categories of economic conditions that we have found empirically to be key drivers of productivity:

- 1. People.** The characteristics of a country’s inhabitants affect productivity in several ways—the greater the human capital, the more productive the economy. According to our Human Capital Index, which incorporates measures of educational and scientific achievement as key drivers of future innovation and adoption of new technologies, human capital accumulation over the past two decades should boost global growth in the next 20 years. Human capital tends to be greater in the world’s wealthiest regions, such as the U.S., Japan, and northern Europe. South Korea also has a high human capital ranking, and several emerging economies—including China, Indonesia, and Malaysia—have made great strides over the past 20 years.
- 2. Structure.** Complex economies tend to be more competitive, use technology more effectively, and have better business climates and more nurturing institutions.⁵ As a result, greater complexity typically means greater productivity. Greater variety and more-sophisticated products in a country’s output signal a

more complex economic structure. For example, Japan has the highest complexity ranking, while a number of African countries rank very low. We think complexity should contribute slightly to higher global growth over the next 20 years, primarily due to complexity gains registered by emerging economies such as South Korea, Malaysia, and China.

3. Catch-up potential. In theory, less advanced economies should grow faster than their more mature counterparts, thanks to their ability to grow off a lower base, adopt existing technologies, and catch up to the higher income levels of developed countries. In practice, however, this convergence does not occur automatically; it depends on other factors, such as the people and structure of an economy.

Once we account for these other growth determinants, catch-up potential has been—and will continue to be—a positive contributor to global GDP growth on an absolute basis. Many poorer economies in Asia, Latin America, and Africa may still benefit from sizable potential development gains. However, catch-up potential generally will contribute much less to global growth going forward than it did over the past two decades. After the rapid growth in recent decades of many larger developing economies, such as China, India, and South Korea, higher per capita incomes now leave less catch-up potential for the next 20 years.

Shifting sources of productivity growth

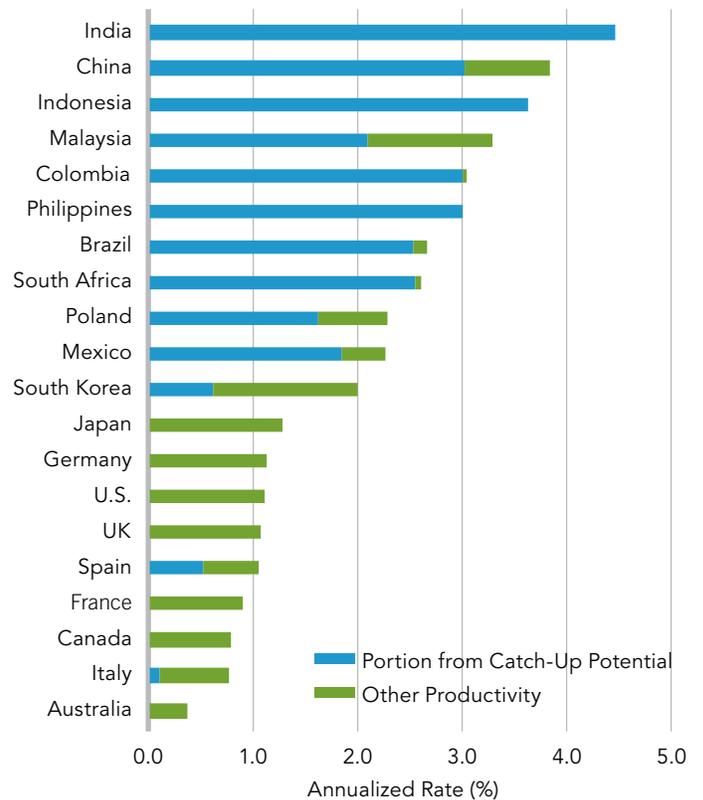
The fast pace in some developing economies during the past 20 years has changed the mix of sources of future productivity growth. On the negative side, the fast pace of industrialization and growth in per capita incomes in recent decades has left less catch-up potential for the years ahead, a maturation process that tends to reduce

the rate of productivity growth. However, the silver lining is that the dramatic improvement in structural complexity and human capital realized over the past 20 years provides some counterbalance by boosting potential productivity.

Significant regional differentiation remains, with Emerging Asia serving as a vivid illustration. South Korea has advanced to a developed-country standard of living, implying its future productivity could come almost exclusively via its high levels of human capital and complexity (Exhibit 4). Poorer areas, such as India, Indonesia, and the Philippines have made fewer advances and retain considerable catch-up potential.

EXHIBIT 4: Emerging markets have a more favorable productivity backdrop due to catch-up potential.

Productivity Growth Forecasts (2018–2037)



Source: Fidelity Investments (AART), as of Dec. 31, 2017.

In between, China and Malaysia will confront the challenges of middle-income countries but will do so with more sophisticated human capital and structural complexity.

Other factors

Peaking globalization. Two decades of rapid integration—spurred by technological advances and more countries joining the rules-based multilateral system—helped foster a global boom through the mid-2000s. Globalization has engendered greater mobility of goods, services, capital, and workers around the world. Over the last several years, globalization trends have tapered off—a result of lower potential for incremental improvement from global integration along with a rise in nationalistic political pressures.

The impact of globalization on secular growth is complex, but we find that increased immigration and trade have a generally positive effect on productivity in the aggregate. High-skilled immigrants in computer, mathematical, and scientific occupations could raise productivity directly, while immigrants in cleaning, construction, maintenance, and transportation could help indirectly by allowing existing workers to move into more productive jobs. Trade facilitates international diffusion of knowledge and technology transfer, raising productivity potential everywhere. Trade also allows local companies to access global markets and benefit from economies of scale, at the same time exposing them to more-intense competition and forcing greater specialization. Most countries, including the vast

majority of the world’s major economies, experienced an increase in trade openness over the past few decades. Export-oriented, manufacturing-based countries have proportionally benefited from these secular trends.

Going forward, we see less upside from further globalization. In China and Mexico, manufacturing growth has significantly outpaced overall GDP growth, a trend unlikely to continue. Furthermore, countries with a large concentration in manufacturing exports, such as Germany and South Korea, are especially exposed to a reduction in globalization. Generally, greater dependence on global trade (higher ratio of trade to GDP) means a stronger headwind in an environment of deglobalization. If the share of manufacturing exports as a percentage of GDP begins to fall, we expect GDP growth to decline in the most open, trade-intensive economies such as Thailand and Malaysia, with global growth declining by an average of around 0.1% per year (Exhibit 5). If secular deglobalization trends intensify, the effect on global growth could be even greater.

Financial crises. Although economies sometimes regain or even surpass their trend growth rates after a financial crisis, the magnitude and duration of the crisis-induced downturn often leaves a lasting dent in long-term economic performance.⁶ Predicting the exact timing of a financial crisis is exceptionally difficult, but the conditions that have preceded these events throughout history are typically spurred by a protracted buildup of financial imbalances in credit and housing-price bubbles. Our model is designed as an early warning system to help

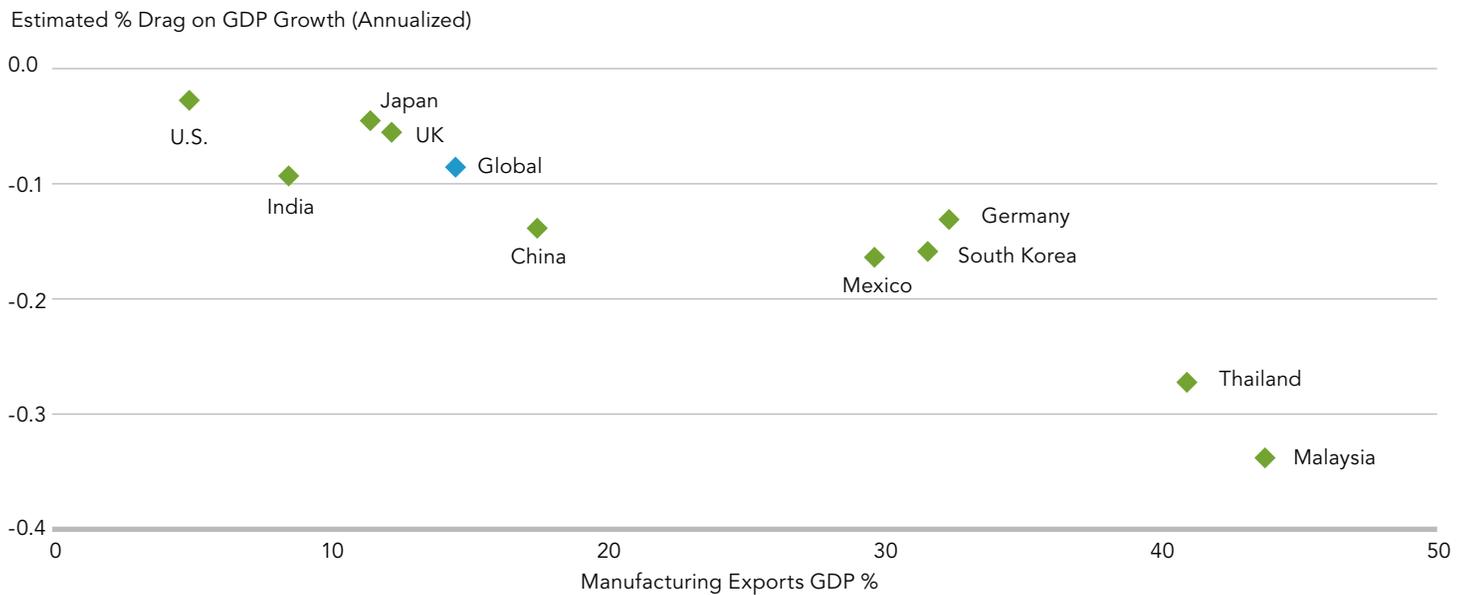
identify mounting financial imbalances as a rising threat of future crises. In our view, the greatest risk remains centered in China, where we expect the rapid expansion of credit and housing prices in recent years will exert downward pressure on long-term growth.

Commodity booms. Commodity booms can greatly affect the long-term growth trajectory of resource-dependent economies. In general, we do not foresee a continuation of the commodity-price boom that boosted growth in many commodity producers during the first decade of the 2000s. We include long-term estimates of commodity exports in those economies, although the results do not have material effects on most countries.

Model results. The methodology detailed above has been successful at explaining about 70% of GDP growth in our sample of about 80 countries looking back over the past 40 years. As with any attempt to make projections, there is uncertainty in our forecasts. We acknowledge the possibility that government debt levels could have an impact on financial stability and economic growth, but we were not able to identify them as statistically significant drivers of future growth for economies in general. We continue to search for additional factors to further refine our forecasts and improve the robustness of the results.

EXHIBIT 5: Manufacturing-based, export-oriented countries are at greater risk from effects of deglobalization.

Trade Impact on Growth



Sources: International Monetary Fund, Haver Analytics, Fidelity Investments (AART), as of May 31, 2018.

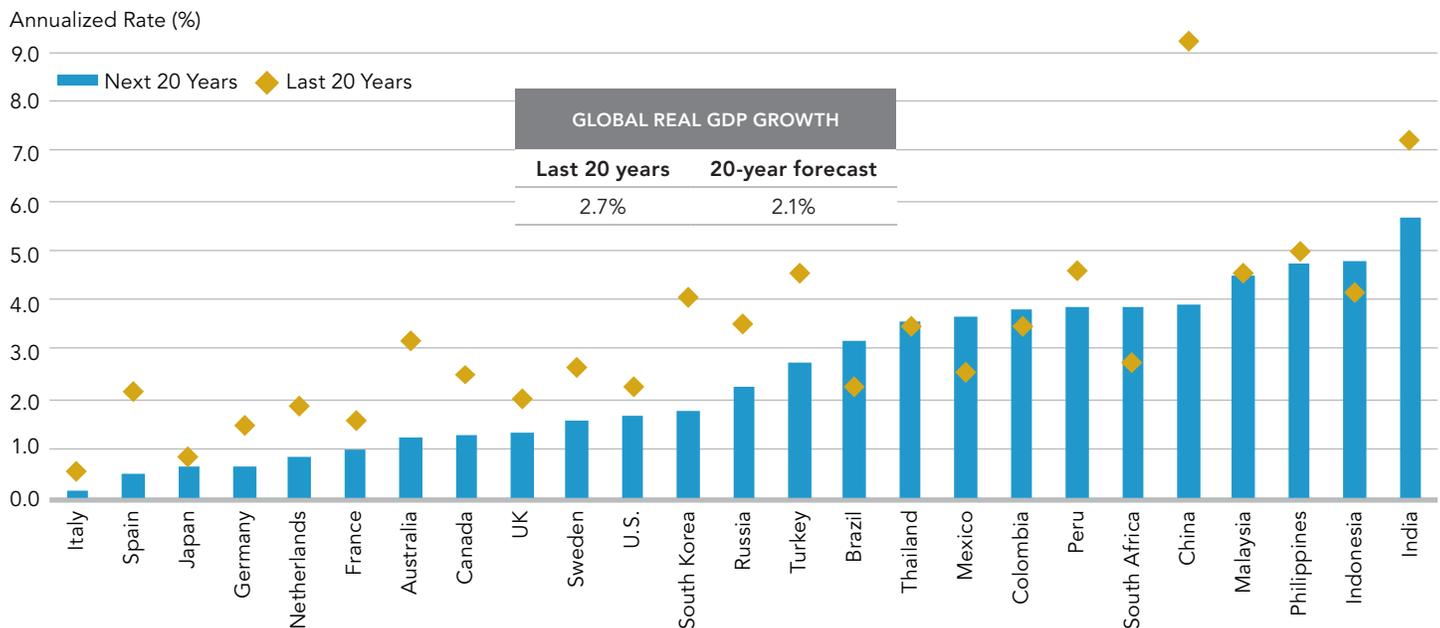
Conclusion: GDP forecasts

Using projections for 40 countries within the MSCI All Country World Index (ACWI), we forecast global GDP growth of 2.1% annually over the next 20 years, compared with the 2.7% averaged during the past two decades. About four-fifths of these countries could experience slower growth, including all the developed economies (Exhibit 6). In general, we expect worsening global demographics to take the largest toll on the global forecast relative to past history, as almost all economies confront an inferior demographic outlook than the one they faced two decades ago. In addition, rapid gains in Emerging Asia in recent decades may leave less room for industrialization and catch-up potential from low income levels than before, as discussed above.

Nevertheless, our forecasts indicate that global growth will still be positive. The U.S. should average roughly 1.6% annualized growth and narrowly remain the world's largest economy. Improved human capital and increased economic structural complexity could benefit productivity growth in many developing economies. Emerging economies with higher growth rates likely will account for a greater portion of global growth moving forward—developing countries are projected to comprise about half of global GDP in 20 years, compared with about 40% now and one-quarter 20 years ago. This should help offset the weaker outlooks for Japan and many European countries.

EXHIBIT 6: The world economy will grow more slowly, with the highest growth rates found in developing economies.

Real GDP Growth Forecast, 2018–2037



Source: Fidelity Investments (AART), as of May 31, 2018.

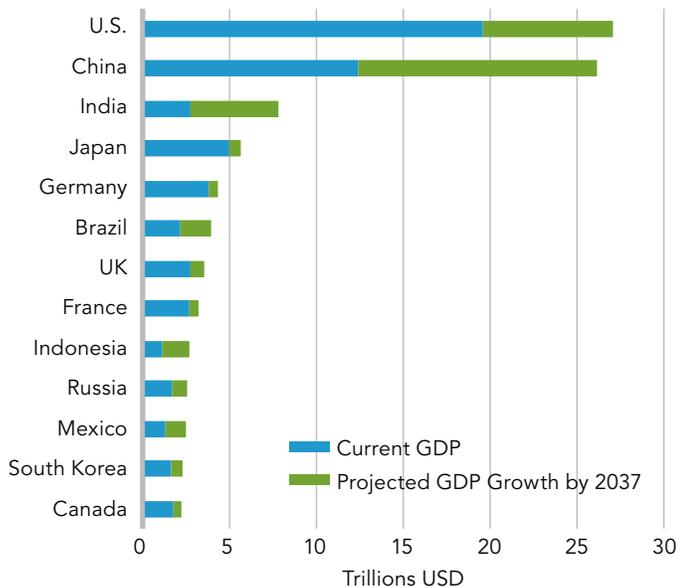
We estimate that, by 2037, five of the world’s top ten economies are likely to be emerging countries, compared with just three today (Exhibit 7). Our forecasts indicate that India will grow from the sixth-largest economy today to the third-largest by 2037, with Indonesia and Russia moving into the top ten.

Investment implications

Within our multi-time-horizon asset allocation framework, our 20-year secular forecasts serve as the foundation for developing long-term asset return assumptions. The long-term expectations on which these forecasts are based may deviate substantially in the short term. For more near-term observations, please see our “Business Cycle Update” series, which focuses primarily on cyclical fluctuations in the intermediate term.

EXHIBIT 7: We estimate several emerging markets will be among the largest global economies by 2037.

World’s Largest Economies by 2037



GDP is in constant dollars. Sources: Haver Analytics, Fidelity Investments (AART), as of Dec. 31, 2017.

GDP forecasts are merely the starting point for asset-return assumptions. Economic growth has a positive relationship with corporate earnings growth, but equity-return assumptions must be adjusted for differences relative to the broader economy in stock market leverage, industry composition, and productivity rates, among other factors. Valuation dynamics also need to be taken into account. For fixed income assets, GDP growth has a tight, positive relationship with interest rates, yet bond returns must be modified for starting yields and other considerations.

At a high level, our long-term GDP forecasts suggest a few overarching conclusions. First, all else equal, slower global growth should provide less of a tailwind to equity returns over the next 20 years than during the post-World War II period. Second, geographic opportunities for growth tend to favor emerging economies, though with significant dispersion of expected growth around the world. Third, we expect interest rates to rise over time from their current levels but to remain lower than their historical averages. In general, asset allocation strategies that can be selective across a broad, global opportunity set may have the best potential to take advantage of future growth prospects.

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The Asset Allocation Research Team (AART) conducts economic, fundamental, and quantitative research to develop asset allocation recommendations for Fidelity's portfolio managers and investment teams. AART is responsible for analyzing and synthesizing investment perspectives across Fidelity's Asset Management unit to generate insights on macroeconomic and financial market trends and their implications for asset allocation.

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Past performance is no guarantee of future results.

Diversification and asset allocation do not ensure a profit or guarantee against loss.

All indices are unmanaged. You cannot invest directly in an index.

Index definitions

The Human Capital Index is a proprietary indicator incorporating measures of educational and scientific achievement as key drivers of future innovation and adoption of new technologies.

The Demographic Index is a proprietary indicator incorporating detailed demographic measures that capture the mixed indirect effects of aging on productivity rates.

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Endnotes

¹ Angus Maddison (Groningen Growth and Development Centre). • ² See especially Gordon, also Cowen and Jones. • ³ See Reinhart and Rogoff. • ⁴ See Barro, and Barro and Sala-i-Martin. • ⁵ See Hausmann, Hidalgo, et al. • ⁶ For example, see Kannan.

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