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INVESTMENT GROUP

Emerging Markets

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After outperforming for much of the 2000s, emerging market stocks have underperformed US equities since the Global Financial Crisis (GFC), resulting in disappointment on the part of US investors, especially since emerging market GDP growth has outpaced US economic growth.

Moreover, the composition of the emerging market opportunity set has changed meaningfully since most institutions made their initial investments in the asset class. Both the country and sector weightings have undergone radical changes. This begs the question: what role should emerging market equities play in institutional portfolios now?

In this document we examine the changing composition of emerging market equity indices, explore the rationale behind investments in emerging market stocks, discuss what role they should play in the portfolios of institutional investors, and review the approaches to investing in emerging markets. We conclude with a recommendation that emerging market equities should play a meaningful role in most investors' portfolios.

Background

The most commonly used benchmark for measuring the performance of emerging market[1] equities is the MSCI Emerging Markets (EM) Index. MSCI developed its initial emerging markets index in 1988 with stocks from 10 countries that together accounted for less than 1% of the MSCI All Country World Index (ACWI) by market capitalization. MSCI uses a capitalization-weighted approach to constructing its benchmark. Today, emerging markets comprise around 15% of the ACWI, and the EM index includes stocks from 26 countries.

[1] No single definition of an emerging market exists. The International Monetary Fund (IMF) categorizes countries based on national income, such that advanced economies are high income countries and middle and lower-middle income countries tend to align with the Gross National Income (GNI) per capita thresholds designated by the World Bank.

The changing nature of emerging markets

Many US institutions made their first dedicated allocations to emerging markets in the 1990s or 2000s, so it is understandable if they still think about emerging markets from the perspective of that time. However, the composition of the emerging market opportunity set has changed meaningfully since then.

As of 2021, the four largest countries in the benchmark are China, Taiwan, Korea, and India. These four Asian countries together represented 73% of the MSCI EM index. When the other Asian countries are added, Asia accounts for 77% of the index.[2]

[2] Source: Bloomberg and MSCI as of June 2021.

This is a notable change from the late 1990s when Brazil, South Africa, and Mexico were three of the index's four largest countries and Asian countries comprised less than 40% of the index. While the country composition of the MSCI EM Index has long moved in cycles, the growing dominance of Asia appears to be more of a secular trend (see Figure 1).

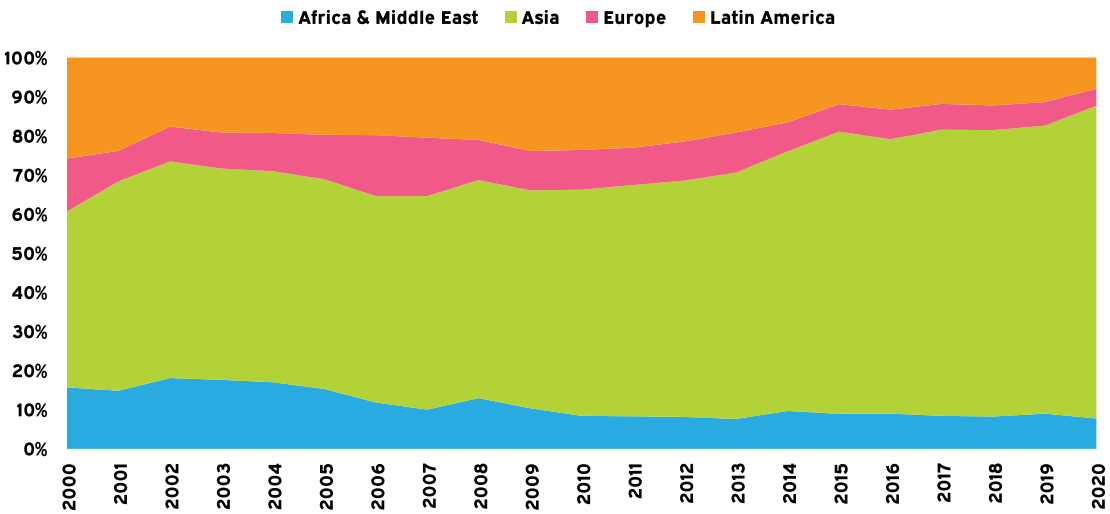


FIGURE 1

MSCI Emerging Markets Index Region Weights

Source: MSCI annual regional allocation by benchmark weight for the period from December 2000 through December 2020.

Asia dominates the index, doubling its weight from ~40% to ~80% over the last 20 years. This is driven mostly by China, whose weight has grown from less than 1% in 1999 to nearly 40% in 2020, before retrenching more recently (see Figure 2).

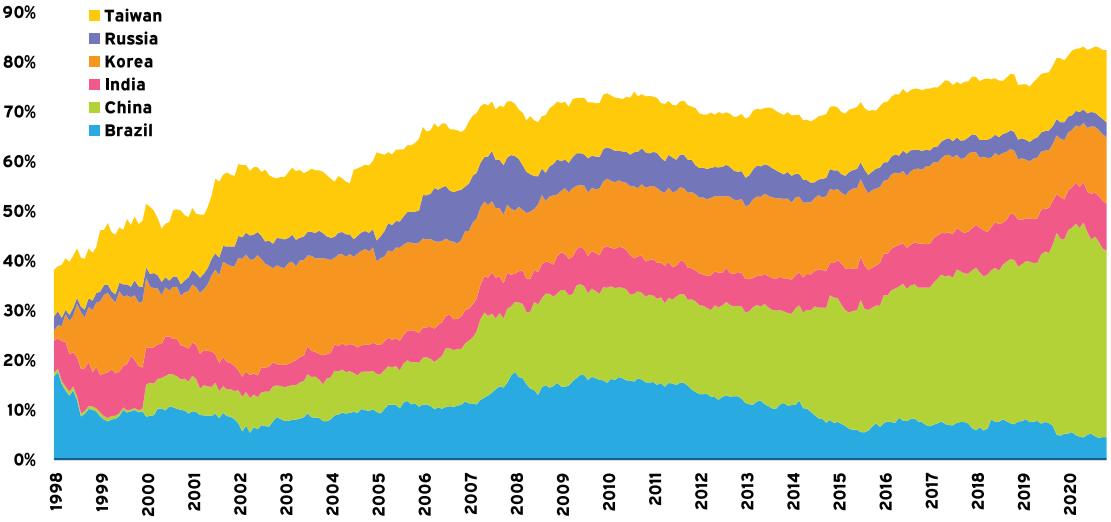


FIGURE 2

MSCI Emerging Markets Index Weights (%)

Source: MSCI. Country weights are for the period December 1998 through September 2021.

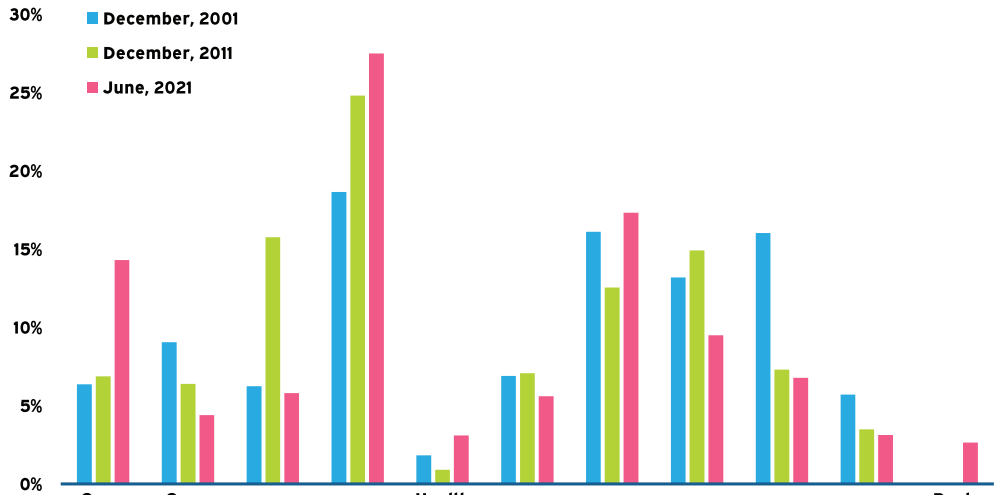
Moreover, it is hard to argue that Korea and Taiwan are "emerging" economies as their economies represent the 11th and 22nd largest economies in the world, and the IMF classifies them as "high income" countries.[3] While China may still technically be a "middle income" country based on GDP per capita, it is continuing to grow wealthier and, as of 2021, it is the second largest economy in the world.

[3] Source: IMF nominal GDP as of December 2019. South Korea's nominal annual GDP was approximately $1.7 trillion dollars and Taiwan's nominal annual GDP was approximately $634 billion dollars.

Hence, the emerging markets index is decreasingly "emerging." Rather, it may now primarily represent a way to gain exposure to a broader growth story that is predominantly focused on Asia. But it also represents a concentrated risk on that region and theme. That is, the MSCI EM Index essentially serves as an Asia ex-Japan index, with its performance primarily tied to the fate of China and other Asian economies.

Figure 2 also illustrates the historical cyclicality of composition of the EM index. Different countries and regions have dominated at different times. For example, Brazil experienced several peaks and troughs. The most recent of these cycles for Brazil was associated with the commodities boom of the 2000s and the subsequent (post-GFC) decrease in demand for raw materials, in large part due to China pivoting away from a debt-infrastructure model of growth.

This leads to a related point that the emerging markets index has also changed dramatically in terms of its sector composition. Commodities-driven sectors like Energy and Materials declined over the past 10 years as other sectors such as Consumer Discretionary and Information Technology have grown (see Figure 3). Hence, while there is still a link between commodity prices and emerging markets, it appears that commodities are no longer the principal factor driving sector composition and performance.



	Cons. Discr.	Cons. Staples	Energy	Finan.	Health Care	Indust.	IT	Mater.	Telecom.	Utilities	Real Estate
December, 2001	6%	9%	6%	19%	2%	7%	16%	13%	16%	6%	0%
December, 2011	7%	6%	16%	25%	1%	7%	13%	15%	7%	3%	0%
June, 2021	14%	4%	6%	27%	3%	6%	17%	9%	7%	3%	3%

FIGURE 3
MSCI Emerging Markets Index Sector Weights
Source: Bloomberg.

Likewise, the largest individual holdings in the MSCI EM Index – that is, the ones typically driving index returns – have also changed dramatically. Similar to developments with the US indices, the EM index is now more concentrated (i.e., "top-heavy") and dominated by technology names (both in IT and Consumer Discretionary). Of approximately 1,400 companies in the MSCI EM Index, the top 10 companies account for 26.6% of the overall market cap.[4] Like the FAANG + Microsoft concentration in the S&P 500 Index, the MSCI EM Index is increasingly dominated by a smaller number of companies.

[4] Source: MSCI Emerging Markets index fact sheet as of June 2021.

June 2021	
Taiwan Semiconductor	6.1%
Tencent	5.0%
Alibaba	5.0%
Samsung Electronics	4.0%
Meituan	1.7%
Naspers	1.1%
Vale	1.0%
Reliance Industries	0.9%
China Construction Bank	0.9%
Infosys	0.8%
Total	**26.6%**

June 2010	
Vale	2.6%
China Mobile	1.7%
Gazprom	1.6%
American Movil	1.6%
Itau Unibanco	1.5%
Taiwan Semiconductor	1.4%
Petrobras	1.4%
Icbc	1.2%
China Construction Bank	1.2%
Banco Bradesco	1.1%
Total	**15.2%**

FIGURE 4
Largest 10 Positions in MSCI Emerging Markets Index
Source: Bloomberg as of June 2021.

Lastly, as emerging markets approach high-middle income economic development and the companies in the index are increasingly integrated in the global supply chain, the structure of the underlying economies have changed.

Very large quasi-sovereign entities have lost market share to consumer discretionary, communication services, and information technology companies. Global investors tend to reward companies that can offer attractive returns on invested capital and respond with agility amid changing economic opportunities. Legacy national champion companies such as Brazil's Petrobras or Russia's Gazprom have lost market capitalization to innovative IT and communications companies like China's Baidu or Alibaba.

The emerging markets thesis

The case for emerging market equities is typically based on three views: growth, appropriate weighting, and valuations. First, emerging market countries are expected to grow faster than their developed markets counterparts. In theory, companies can grow more quickly when operating in high-growth economies thus translating into higher returns for shareholders. Second, emerging markets remain underrepresented from a market capitalization and GDP-weighted standpoint in many institutional portfolios. Third, most emerging market equities trade at discounts relative to US equities, based on most valuation metrics.

As global investors increase allocations to emerging markets, the increased flow of capital should support business investment and higher valuations. We explore these concepts in more detail in the following sections.

Growth

Future growth potential is a key component of the emerging markets thesis. Economists predominantly believe that the most rapid economic growth in the coming decades will occur in less developed nations. This is a logical assumption for several reasons.

First, many of these economies are starting from a lower base and, therefore, even modest improvements result in larger percentage increases in growth. Second, the developed world appears willing to supply significant capital to developing markets. The third reason for emerging markets' growth is urbanization of and technological advancement in the general population. Fourth, the average emerging economy carries a lower sovereign debt burden than the average developed economy. Fifth, productivity has been increasing at a faster rate in emerging economies. Finally, demographics favor emerging economies, as a greater proportion of their populations will be of working age over the next 15 years. (See the appendix for data on each of these measures.)

Emerging markets have grown faster than developed markets on average over the past two decades, and emerging markets are forecast to continue their higher relative growth for the next decade as advanced economies stabilize at a lower growth rate.[5]

[5] As of this writing, many individual countries are expected to deviate from this general trend in the short term due to lack of clarity around their potential recovery from the COVID-19 pandemic.

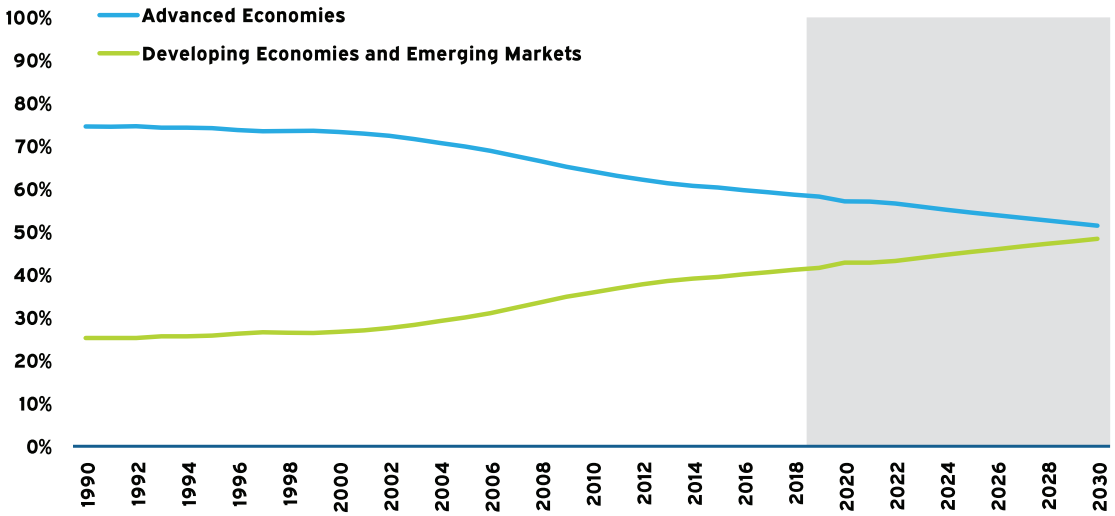


FIGURE 5
Share of Real Global GDP

Source: Oxford Economics as of May 2020. Projections start on 2019. Developing countries include low-income economies that are not yet considered emerging market economies due to very low per capita GDPs.

The disparity in growth is anticipated to continue for the long term. Over the long run, as economies mature, their growth rates tend to moderate. This is more obvious in the cases of Western Europe, Japan, and the United States. At some point China, the exemplar of growth for the past 30 years, will likely face this situation with some forecasters estimating that China's annual GDP growth rate may be as low as 3% to 4% by 2030. Yet even this lower anticipated growth rate is expected to be faster than most of the advanced economies, and relative growth is paramount in this context.

Emerging Markets	
Country	Projected Real GDP Growth
Brazil	2.0%
China	4.9%
India	6.5%
Russia	1.8%
South Korea	2.3%
Taiwan	2.1%

Developed Markets	
Country	Projected Real GDP Growth
European Union	1.6%
Japan	0.5%
United Kingdom	1.5%
United States	2.3%

FIGURE 6
Projected GDP Growth

Source: Oxford Economics as of May, 2020. Figures represent 10-year annualized averages from 2021 through 2030.

Market cap weighting

It can be argued that market cap weighted indices underweight the true importance of emerging markets to the global economy. Specifically, emerging market countries comprise approximately 60% of the world's population and account for roughly 37% of global economic output (i.e., GDP)[6]. In contrast, the publicly traded stocks of these emerging markets represent just 12% of the world's total stock market capitalization as of September 2021.[7] Investors who want their portfolios to reflect emerging markets' collective importance may therefore want to consider an allocation to emerging markets that is greater than their market cap weighting.

[6] Source: MSCI and Oxford Economics.

[7] Source: MSCI.

	Advanced Economies ex US			Emerging Market Economies		
	Percent of Global GDP	Percent of Global Population	Percent of Global Market Capitalization	Percent of Global GDP	Percent of Global Population	Percent of Global Market Capitalization
2000	49%	13%	18%	18%	62%	6%
2010	42%	12%	39%	32%	61%	14%
2020	35%	11%	27%	37%	60%	13%

FIGURE 7
Regional Weights by GDP, Population, and Market Cap
Source: Oxford Economics, Bloomberg, and MSCI as of June 2021. Advanced economies defined by Oxford Economics and MSCI ACWI ex-US Index for market capitalization. Nominal GDP shown in USD.

Investors may want to consider the sizing of their emerging market equity allocation in relation to the sizing of their total non-US equity allocation. Should an investor wish to scale their allocation to emerging markets to reflect the asset class' relative market capitalization, an investor may look to the market capitalization weighting of the MSCI ACWI where emerging markets typically account for less than 15% of non-US public equities. Alternatively, if they wish to maintain an overweight to emerging market equities, they may need a dedicated allocation to the asset class.

Valuations

Another factor that impacts the relative attractiveness of emerging market equities is valuation. The price paid for any asset affects the long-term return an investor earns. For example, cyclically adjusted price-to-earnings ratios have been a good predictor of long-term returns, though they do not provide much insight into near-term returns. These dynamics can, of course, change, but paying lower prices for faster expected growth is generally an attractive proposition.

In the case of emerging market equities, as of this writing, prices are still cheap relative to both their own histories and relative to international developed markets (see Figure 8).

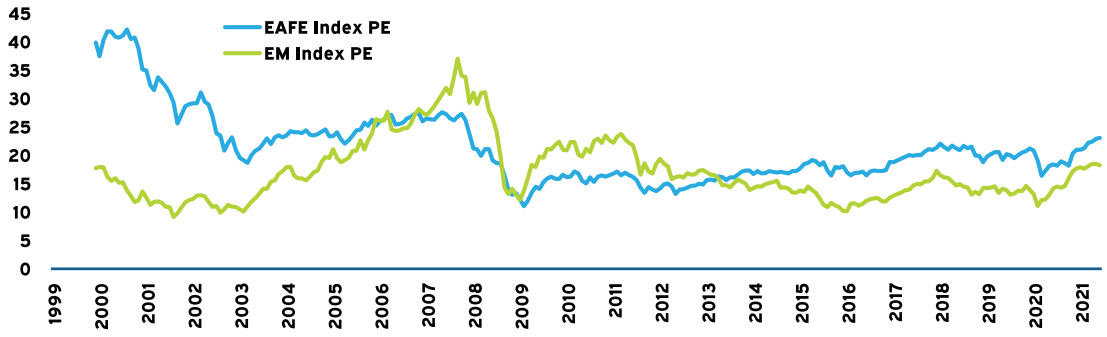


FIGURE 8
Cyclically Adjusted P/E
Source: Bloomberg and MSCI cyclically adjusted Price/Earnings Ratio as of June 2021.

Does higher growth lead to higher returns?

Since the inception of the MSCI EM index in January 1988, emerging market equities have generated solid results. Through June 2021, emerging market equities had lagged US public equities but outperformed the equities of non-US developed economies (see Figure 9). The underperformance relative to US equities is driven by more recent periods. Despite higher economic growth in emerging markets, and particularly in those that dominated the index, the EM index has lagged the US markets since the GFC.

Index	Since EM Inception (1998)	Since 2000	Since 2010
Emerging Market Equities	7.8%	7.4%	5.4%
Developed Market Equities	5.4%	3.9%	6.2%
US Equities	8.8%	7.6%	14.8%

FIGURE 9
Annualized Returns
Total annualized returns through June 2021 for MSCI Emerging Market Equity Index, MSCI EAFE Index and the Russell 3000 Index.

Meketa believes that higher growth in emerging markets should lead to higher equity market returns. This is based in part on a relatively straight-forward building blocks approach to projecting long-term equity market returns.[8]

[8] The equation is an expanded version of the basic dividend discount model. It uses real GDP growth as a proxy for aggregate earnings growth. It allows for changes in the price investors are willing to pay for a dividend (i.e., earnings) stream and also for changes due to currency fluctuations for investments that are not denominated in the investor's own currency. The model is based on the theory that a region's companies will grow at roughly the same rate as its economy, as defined by GDP. E(R) = Dividend Yield + Real GDP Growth + Inflation + Change in P-E + Currency Impact

Higher economic growth does appear to have translated into better Returns on Equity (ROE) for emerging market stocks relative to developed markets for much of the past two decades (see Figure 10). All else equal, a market with an economy projected to grow faster should produce higher returns than slower-growing markets. Evidence suggests that economic growth has resulted in higher ROE for emerging market stocks (see Figure 10).

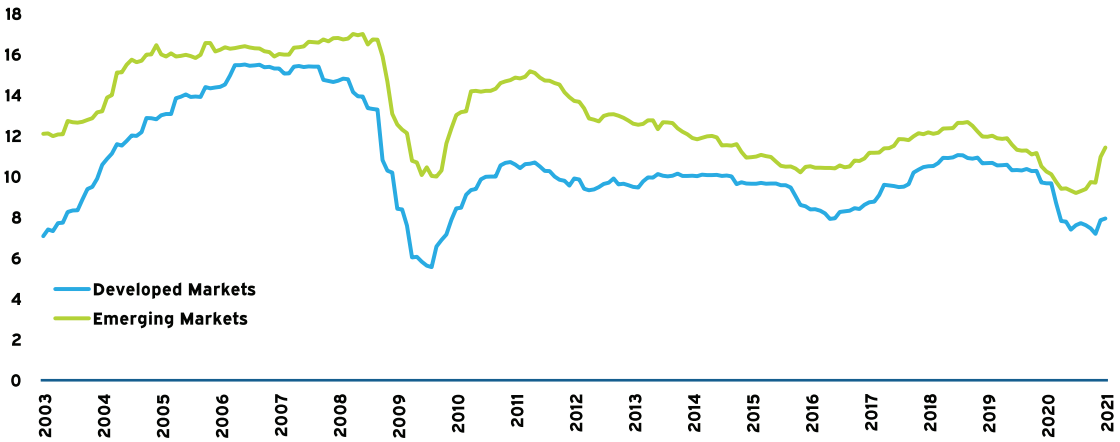


FIGURE 10
Developed vs. Emerging Markets ROE
Source: Bloomberg MSCI EAFE and Emerging Market indices Return on Equity through July 2021.

However, higher economic growth has not translated into significantly higher earnings growth. Emerging markets have exhibited modestly better earnings growth over the last 25 years, approximately, slightly outperforming international developed markets with 4.0% versus 3.8% annualized growth, respectively (see Figure 11). This has lagged the 6.4% average earnings growth for the S&P 500 over that same period.

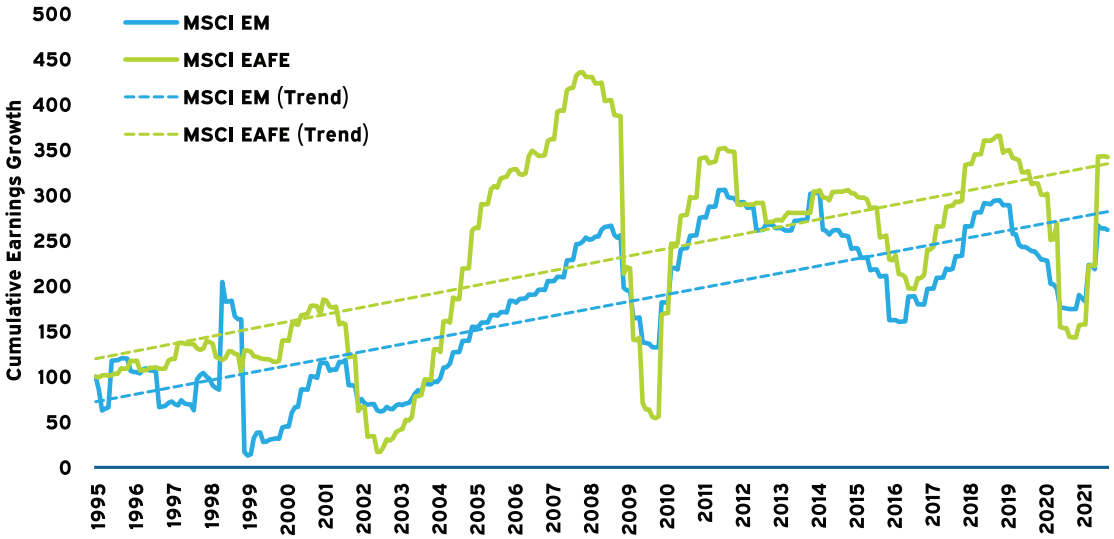


FIGURE 11
Cumulative Earnings Growth

Source: Bloomberg, S&P and MSCI. Trailing earnings per share data is from January 2001 through June 2021.

Several factors may prevent economic growth from translating to higher profitability, and ultimately, gains for shareholders. First, there often is a divergence between growth in earnings and earnings per share, due to net share issuance/dilution. Since the GFC, US-based corporations have, on average, been buying back their shares, which has expanded earnings per share. In contrast, while the data is hard to come by, the evidence strongly suggests that emerging markets have been net issuers of shares, which has diluted earnings per share.

Another factor that may cause a divergence between economic growth and earnings growth is the economic model of a country and hence the incentive of the people who run public companies. State-owned and state-controlled enterprises often focus on stakeholders other than shareholders, often to the detriment of shareholders.

It is also worth noting that it is not only locally-based companies that benefit from the broader economic growth of emerging markets. Companies listed in developed markets also have revenue exposure to emerging markets. For example, companies listed in Europe receive approximately 22% of their revenues from emerging markets, while about 14% of Japanese corporate revenues are derived from emerging markets. Only about 12% of US corporate revenues come from emerging markets. Conversely, companies in the MSCI EM Index derive 18% of their revenues from outside the emerging markets.[9]

[9] Source: MSCI as of June 2021. Revenue exposures are index specific and do not sum to 100. Indices used are the MSCI Europe, MSCI Japan, MSCI US, and MSCI Emerging Market indices.

What could cause this to change? Greater openness to returning capital to shareholders and broader acceptance of financial engineering in emerging markets would likely result in higher returns for shareholders. Further, a shift away from government support for old, state-owned enterprises and toward the free movement of capital would allow for more dynamic growth. Finally, the continued emergence of local champions that can stand on their own and compete with current industry leaders without government interference would be beneficial.

Risks and concerns

Emerging market equities tend to be more volatile than developed market equities (see figure 12). Within emerging market countries, there are unique political and event risks[10] that can lead to higher market volatility. Like most capital markets, emerging markets tend to exhibit cyclicality as they move in and out of favor. With emerging market equities, these cycles can be amplified due to alternating periods of risk-on and risk-off investor behavior. In periods of economic or political stress, investor outflows can exit all emerging markets indiscriminately. In periods of global risk-on trades, the same indiscriminate inflows may be present.

[10] For a fuller discussion of the greater political, social, and economic risks inherent in emerging markets –specifically China – please see our white paper on Understanding China: an economic and investment perspective, part II. https://meketa.com/leadership/understanding-china-an-economic-and-investment-perspective-part-ii/

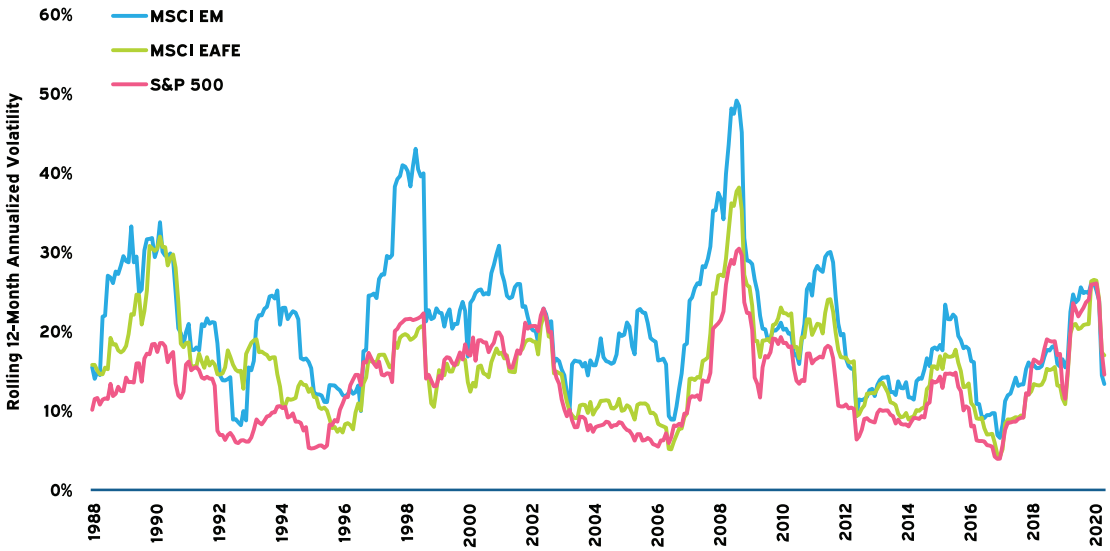


FIGURE 12
MSCI Emerging Markets Volatility
Source: Bloomberg. Data for January 1988 – April 2021.

Currency effects can exacerbate these flows. Emerging market equity returns have been lower in US dollar terms due to a general currency headwind over the past decade. While emerging market equities have experienced periods of volatility independently from US and non-US developed markets, they have also experienced concurrent and interrelated periods of volatility with these markets.

Theoretically, the greater the risk associated with a particular investment opportunity, the greater the reward sought by the investor. Emerging markets have arguably rewarded investors for the numerous risks they present, having outperformed most developed markets outside the US. However, investors should also consider whether an allocation to emerging markets would benefit a portfolio from a diversification perspective. Traditionally, this includes examining the correlation of the asset class with other assets held in the investor's portfolio.

Emerging market equities have a high correlation to US and non-US developed markets (see Figure 13). Their correlations with US bonds have been much lower and even inversely correlated in periods of economic stress. Commodities have had a changeable correlation to emerging market equities, so that correlations appear to be higher when the prices of oil and industrial metals are rising.

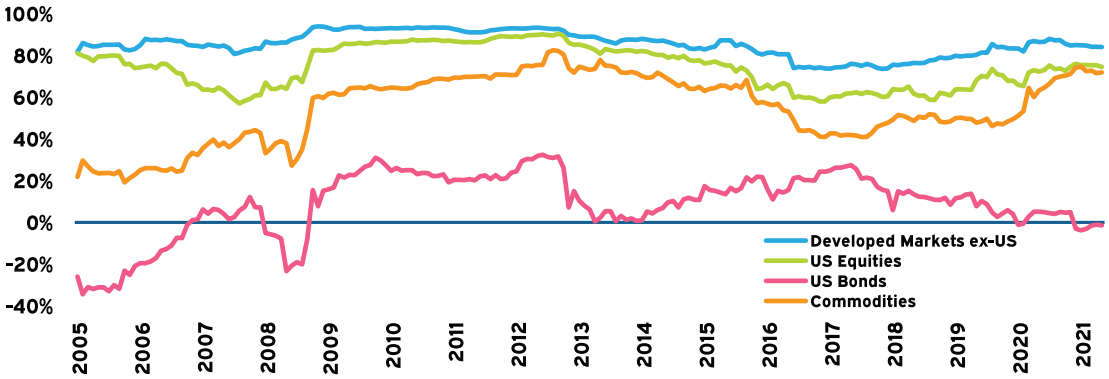


FIGURE 13

Rolling 5-Year Asset Class Correlations with Emerging Market Equities

Source: Bloomberg and MSCI data shown from January 2001 and May 2021. Developed markets ex-US is the MSCI EAFE Index. US Equities is the Russell 3000 Index. US Bonds is the Bloomberg Barclays US Intermediate Aggregate Index. Commodities are the Bloomberg Commodity Index.

The most important question the chart raises is whether the relatively high correlation of the last two decades between emerging market equities and other equity asset classes is permanent, which it appears to be. However, emerging markets are not alone in this phenomenon of rising correlations. Global capital markets are increasingly efficient and interconnected. The rise of China has contributed to a shift in the sector weights within the EM index and accelerated the integration of emerging market economies into the global supply chain. Trade linkages among China, South Korea, Taiwan, Japan, the EU, and the Americas have increasingly linked capital and financial markets as well. During periods of market enthusiasm or distress, global asset prices can trade in sympathy with one another. Assuming the correlation between emerging and developed market equities remains relatively high, there will be few traditional diversification benefits, on average, in many environments. Yet, even with high correlations, investors should expect to see periods when emerging market equities far outpace US equities.

In the past, emerging market equities experienced long periods of outperformance and underperformance relative to international developed markets (see Figure 14). Some of this cyclicality was driven by the commodity super-cycle of 2001 to 2008. However, as the index continues to shift to less volatile sectors like technology and communications, the volatility of the index appears to have moderated. Still, emerging markets continue to be the most volatile of the public equity markets, with global financial flows and investor risk appetite typically driving returns.

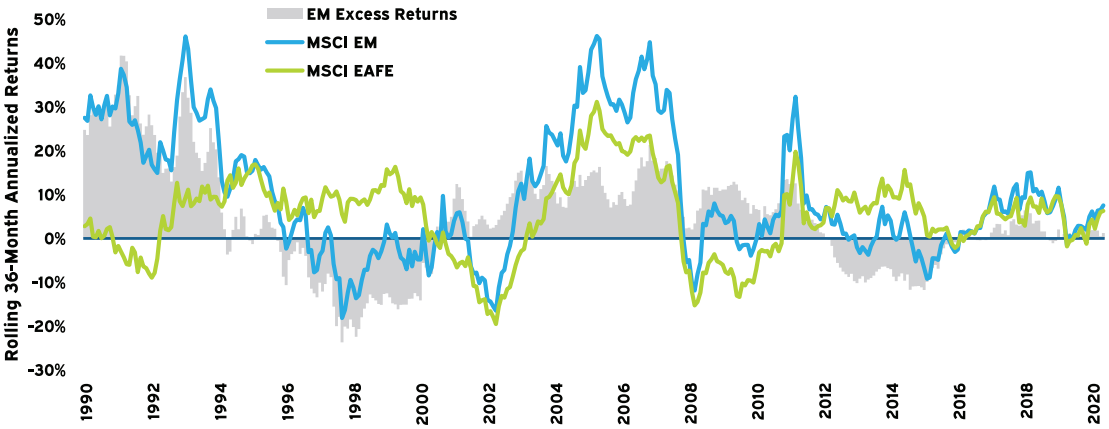


FIGURE 14

Rolling 36-month Annualized Returns

Source: Bloomberg. Data for January 1988 – April 2021.

Emerging markets in a strategic asset allocation

Because emerging market equities have higher growth expectations and lower valuations than their developed market peers, emerging market equities tend to exhibit the highest expected returns among the public securities asset classes in Meketa's capital market expectations. However, Meketa also projects that emerging market equities will have the highest volatility of public market securities.[11]

[11] Based on our 2021 Capital Markets Expectations, Meketa expects that emerging market equities will produce an average annualized return of 8.1% over the next 20 years, with an annualized standard deviation of approximately 24.0%.

The strong performance of risk assets since the GFC has coupled with declining interest rates to lower forward return expectations for most asset classes. And while emerging market equities have undergone a somewhat similar process, we believe they are one of few public market asset classes that can help an investor achieve a return over 6% or 7%. Hence, any investor building a diversified portfolio and hoping for a higher rate of return should consider a dedicated allocation to emerging market equities.

Emerging market equities, like any non-US dollar asset class, introduce currency risk into a portfolio. Investors may want to consider this within a broader framework of non-US dollar (non-USD) risk. That is, they should look at their non-USD exposure across every asset class as part of a currency risk budget, and then choose how best to spend that budget. For example, investors may want to consider their allocation to emerging market equity relative to their developed non-US equity allocation. Putting a greater proportion of that non-USD allocation in emerging markets would not increase an investor's non-USD exposure, but it would increase their expected return with only a modest increase in volatility.

Implementation considerations

Passive and active management

Meketa believes that both active and passive management are appropriate for emerging markets. We believe that truly skilled active managers can add value in emerging markets, but that finding them is a difficult task, especially since some of the best managers may not be open to new investors.

While passive management provides diversification benefits, active management can potentially control risks and improve performance. Skilled investors have opportunities to add value by allocating holdings between markets and within markets. The limited research coverage, intrinsic inefficiencies, and inherent volatility of emerging markets create an opportunity for the skilled manager to produce added value. In addition, while individual stock returns range widely in any market, the range of returns within individual emerging markets is relatively large. Moreover, the difference in returns between top and bottom quartile managers has been greater for emerging market equity managers than for US equity managers (see Figure 15).

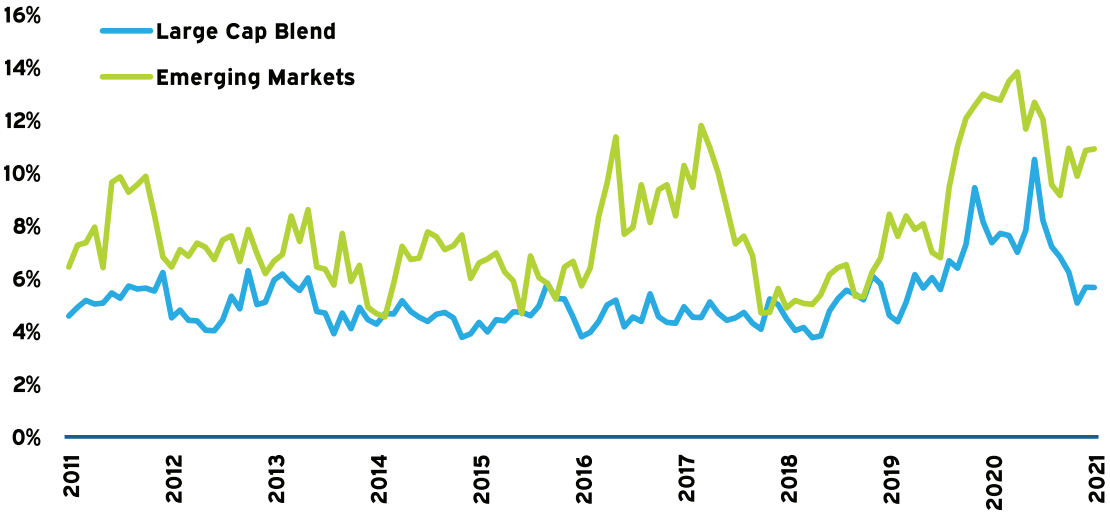


FIGURE 15
Interquartile Spreads

Source: Meketa analysis of Morningstar data as of October 2021. Interquartile Spreads calculated as the dispersion of the rolling 12-month geometric average return of managers in their respective asset class universe.

The historical record is that active emerging market equity managers have, on average, outperformed the passive benchmark. For the 10-year period ended June 30, 2021, the median active manager returned 5.8% per year versus 4.3% for the benchmark.[12] However, this number is before fees, which dramatically reduces that margin. Furthermore, in the sample size of 97 managers, 75% outperformed the MSCI EM Index. However, it is important to note that the sample may have a significant upward bias as poorly performing investment products may have been liquidated or simply stopped reporting. The true effect of this "survivorship bias" is difficult to accurately determine with any asset class, but the relatively small sample size of active emerging market managers warrants additional caution.

[12] Source: eVestment Alliance Emerging Market Equity universe as of June 2021. Data is gross of fees.

As with any public market, it is not easy to identify skilled emerging markets managers in advance. Moreover, many of the most successful active managers have closed their doors to new investors. This tendency to close successful funds may further complicate a search for a suitable emerging market equity manager. However, active emerging market managers may reopen their funds when they deem market conditions are able to absorb new investments.

Further, management fees are generally higher for emerging markets strategies than they are for domestic or EAFE strategies. The average fee for a $10 million actively managed account is 85 basis points, meaning that much of the outperformance shown above is negated by fees. Exchange Traded Funds (ETFs) and index funds are also reasonable options for investors seeking emerging markets exposure with the latter likely to incur lower costs.

Global versus regional

Many investors choose to obtain their equity allocations via regional mandates, for example, by dividing up their allocations among US equities, developed market non-US (e.g., EAFE) equities, and emerging market equities. Alternatively, they may choose to implement their equity exposure via global mandates (e.g., with active and/or passive managers benchmarked to the MSCI ACWI).

We believe that both approaches – global and regional allocations – have merit. The pros and cons often vary based on type of investor, their size, resources, alpha potential, etc. Our opinion is not that investors should necessarily have a dedicated emerging market equity mandate benchmarked specifically to the MSCI EM Index. Rather, what is important is that they have dedicated emerging market equity exposure. Our approach is to work with each client to help them determine the best approach for their program.

An alternative approach is to permit an international or global equity manager to allocate a portion of their portfolio (e.g., 10% to 30%) to emerging market equities. This may, however, result in a sub-optimal amount of overall assets allocated to emerging markets. There is also the risk that the manager has limited expertise in emerging market investing. However, access to emerging market companies may offer opportunities to exploit pricing differentials between similar companies in different countries.

Investment vehicles

Because of the costs (described below) and complexities of managing an emerging markets portfolio, all but perhaps the largest investors benefit from pooling their assets into a commingled vehicle. While mutual funds are a reasonable option, their investment management fees may be higher than institutional commingled funds.

Investment manager and administrative costs

The trading and operational costs of investing in emerging markets are typically higher than investing in developed markets. First, emerging markets are relatively illiquid, which increases the bid/ask spread for any transaction, particularly in periods of elevated volatility. Second, custody and accounting in the various national jurisdictions are more complex and therefore more costly. Third, foreign governments sometimes levy withholding taxes on dividends or other gains, thus increasing costs and reducing returns. Finally, portfolio management fees are relatively high, reflecting the higher cost of gathering useful information. The MSCI EM Investable Market (IMI) Index contains 1,406 companies in 27 countries, and adequate research coverage and analysis requires multi-country expertise, larger teams, and a substantial research budget.

As recently as a decade ago, the costs of investing in emerging markets were significantly higher than for investing in the US. However, as technology has improved (e.g., electronic trading and computerized custody systems) and trading volumes have increased, these costs have come more in-line with those of the developed markets. As with US stocks, larger cap, more liquid names have lower bid-ask spreads.

Finally, management fees are generally higher for emerging markets strategies than they are for domestic or EAFE strategies (see Figure 16 below).

Benchmark	Commingled Funds	Mutual Funds	Index Funds	ETFs
MSCI Emerging Market	85	102	12	12
MSCI EAFE	69	85	6	6.5
MSCI ACWI ex US	74	89	8	9

FIGURE 16
Average Active Management Fees (bp)
Source: eVestment data as of June 2021.

Many of the duties, taxes, and fees imposed by individual countries (e.g., a 10-basis point stamp duty in China) remain in place.[13] While the total costs incurred by investing in emerging markets is still higher than for investing in US stocks, it is relatively small compared to the potential benefits. Furthermore, as markets become more "globalized," these costs should continue to decline.

[13] Source: https://cepr.net/report/financial-transactions-taxes-around-the-world. Stamp duties are not only in emerging markets. Countries like France, Switzerland, the United Kingdom, Taiwan, and France all have stamp duties.

Currency hedging

Currency movements can act as either a headwind or tailwind for US-based investors in emerging markets. Investments in international markets expose US investors to currency risk, generated by the market fluctuations of the US dollar relative to international currencies. The relative strength of the US dollar over the last 10 years, approximately, has generated negative currency effects on average to US investors exposed to emerging market equities. However, when the USD is relatively weak, returns on emerging market securities may benefit from an accounting tailwind as their currencies appreciate versus the US dollar.

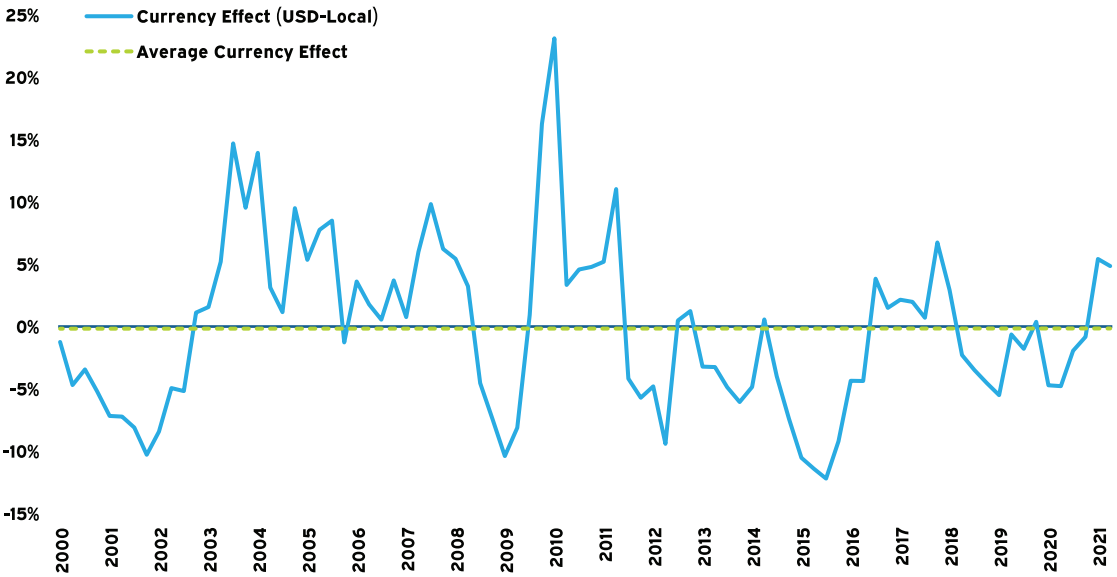


FIGURE 17
Currency Effect: MSCI EM USD – MSCI EM Local Currency Quarterly Returns
Source: Bloomberg and MSCI. Data is for January 2001 through June 2021.

The effect of currency movements can be mitigated or even eliminated by purchasing the appropriate hedging instruments such as futures contracts, forward contracts, swaps, or options. While currency hedges can eliminate the currency portion of a foreign stock's return volatility, the explicit cost of even partially hedging currency exposure can significantly diminish the investment's return, and this is without taking into account the implicit costs of managing an increasingly complex hedging strategy. In addition, hedging eliminates a portion of the diversification benefit of international investing.

Hedging currency exposure can be relatively inexpensive for developed market currencies such as the euro, Japanese yen, and British pound. However, less liquid currencies such as those of emerging market countries incur higher costs, which can detract from performance over the long-term. For US investors, the cost of hedging

currency exposure is related to the short term interest rate[14] differential between the US and the other currency's country or region, known as the cost of carry. The higher the difference between a foreign currency's local interest rate and that of the US, the higher the cost to hedge it for US investors. While the cost of carry has historically been low for developed market currencies, it has been high for emerging market currencies. Because the cost[15] of a full hedge outweighs the short-term benefits, we do not believe that fully hedged portfolios are appropriate for plans with long-term investment horizons.

We do recommend, however, that active managers be allowed to hedge currency exposure opportunistically and in limited circumstances. If a manager believes that a particular stock is attractive but that the underlying currency is weak, then the manager should be allowed to buy the stock and hedge the currency risk.[16] We also do not believe that currency speculation is an appropriate strategy for most funds. We recommend that equity managers be specifically forbidden to speculate in foreign currencies as this is often not their area of expertise, and it could add unwanted volatility.

[14] The 3-month government bond rates are most commonly used.

[15] Fully hedging would have proved highly detrimental in emerging market equities for US-based investors over the last 20 years.

[16] We do not believe that emerging market equity managers should be allowed to invest long or short in currencies beyond the purpose of hedging currency risk.

Summary

The emerging markets hypothesis has evolved over the past two decades. The growth component of the thesis, however, remains. Emerging market economies are continuing to grow as a percentage of the world's population and economic output, and they are expected to grow faster than the developed world over the next decade. However, that realized growth has not translated to higher returns for US-based investors, and the source of that growth is changing.

The MSCI EM Index now represents exposure to a different growth story, one that is primarily focused on Asia. The EM index, and hence opportunity set, has evolved not just in regional terms but also industry and company-specific terms. As an example, the energy and mining companies that once dominated the EM index now comprise a modest 5% of the index. Today the composition of emerging market equity indices reflects the rise of information technology, communication services, and financial services. Not coincidentally, emerging market indices have also become increasingly concentrated and dominated by a few mega-cap companies in these sectors.

There are additional risks to consider when allocating to emerging markets. These include both long-term and near-term risks. Emerging market equities tend to be more volatile than developed markets. Like most capital markets, emerging markets tend to exhibit cyclicality as they move in and out of favor. Currency movements can amplify the level of volatility or act as a headwind for USD-based investors. Our long-term concern is whether strong economic growth will translate into equally strong

investment returns for public equity shareholders. Emerging market stocks may appear to be "cheap" at a given point in time because the market is skeptical of this.

Meketa believes that emerging market investing is appropriate for long term portfolios. We still believe that, as a group, emerging markets present the potential for higher equity returns than from developed markets. We recommend that investors with well-diversified portfolios consider targeting an allocation to emerging markets that is at least in-line with the broader global market capitalization of public stocks and consider overweighting EM equities. This better reflects their level of importance in the global economy and their potential as a driver of long-term performance.

Appendix A: Benchmarking-MSCI EM and MSCI EM (IMI)

Investors in Emerging Markets may want to consider using the IMI version of the MSCI Emerging Markets Index. The primary difference between the MSCI EM and MSCI EM IMI is small cap exposure (see Figure X). Region/Country weights and sector weights are virtually identical (see Figure XII). The overlap is significant, particularly on a risk-weighted basis (as seen in the rolling 3-year tracking error of ~50-100 bp for the EM IMI versus EM.) The overlap by market cap is about 90% or so.

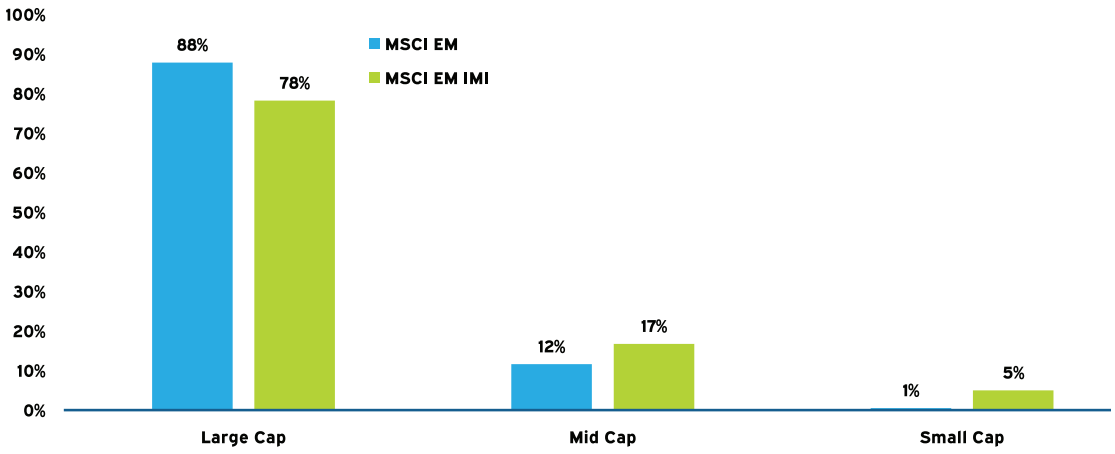


FIGURE 18
Market cap Breakout for EM Indices
Source: MSCI. As of November 2021.

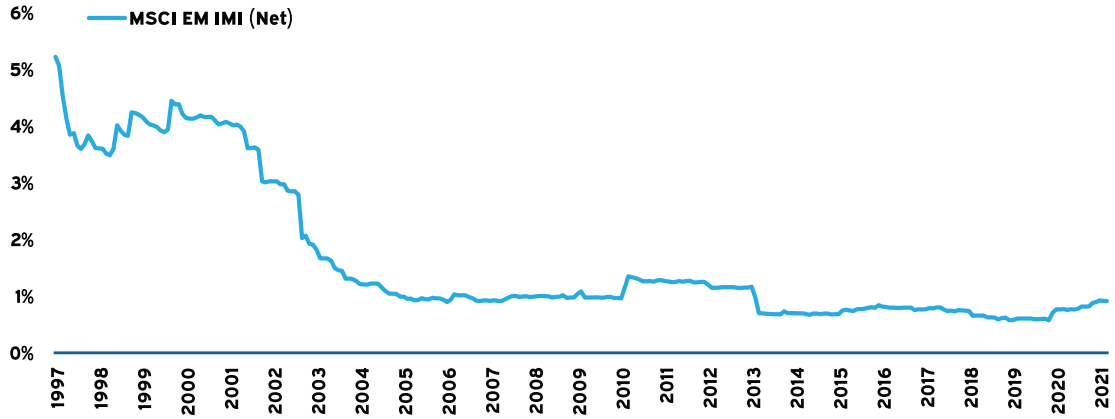


FIGURE 19
Three Year Rolling Tracking Error versus MSCI EM
Source: MSCI. As of October 2021.

Country	MSCI EM IMI (%)	MSCI EM (%)	Difference
Argentina	0.2	0.1	0.0
Brazil	5.4	5.2	0.2
Chile	0.5	0.4	0.0
China	34.3	37.5	-3.2
Colombia	0.2	0.1	0.0
Czech Republic	0.1	0.1	0.0
Egypt	0.1	0.1	0.0
Greece	0.3	0.1	0.1
Hungary	0.2	0.2	0.0
India	10.8	9.9	0.9
Indonesia	1.1	1.1	0.0
Kuwait	0.5	0.5	0.0
Malaysia	1.4	1.2	0.2
Mexico	1.8	1.7	0.0
Pakistan	0.1	0.0	0.0
Peru	0.2	0.2	0.0
Philippines	0.7	0.6	0.0
Poland	0.8	0.7	0.1
Qatar	0.7	0.6	0.0
Russia	3.1	3.3	-0.3
Saudi Arabia	2.8	2.9	-0.1
South Africa	3.6	3.5	0.0
South Korea	13.8	13.2	0.6
Taiwan	14.9	14.0	0.9
Thailand	1.8	1.6	0.2
Turkey	0.4	0.2	0.1
UAE	0.7	0.7	0.0

FIGURE 20
Countries Weightings in the MSCI EM Index and MSCI EM IMI

Source: FactSet and MSCI. As of June 2021. Numbers may not sum to 100 due to rounding.

Sector Name	MSCI EM IMI (%)	MSCI EM (%)	Difference
Energy	4.7	5.0	-0.4
Materials	8.9	8.4	0.5
Industrials	6.1	4.9	1.2
Consumer Discretionary	16.9	17.6	-0.6
Consumer Staples	5.7	5.6	0.1
Health Care	5.6	5.0	0.5
Financials	16.9	17.8	-0.9
Information Technology	20.2	20.4	-0.2
Communication Services	10.4	11.3	-0.9
Utilities	2.2	1.9	0.2
Real Estate	2.5	2.0	0.5

FIGURE 21
Sector Weightings in the MSCI EM Index and MSCI EM IMI

Source: FactSet and MSCI. As of June 2021. Numbers may not sum to 100 due to rounding.

Appendix B: Growth statistics

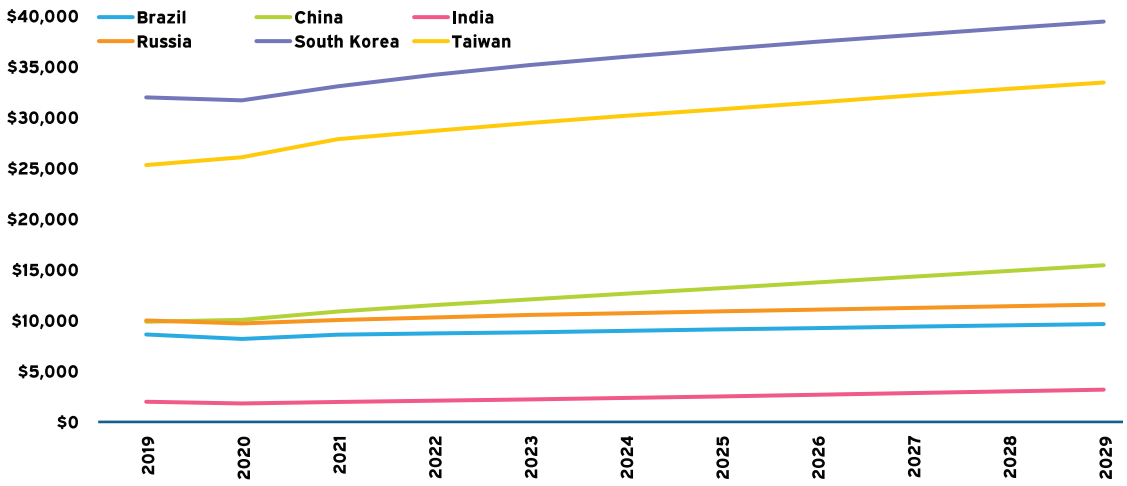


FIGURE 22

Real GDP per Capita of Emerging Economies (2015 USD)

Source: Oxford Economics as of June 2021. Per capita GDP in 2015 USD base.

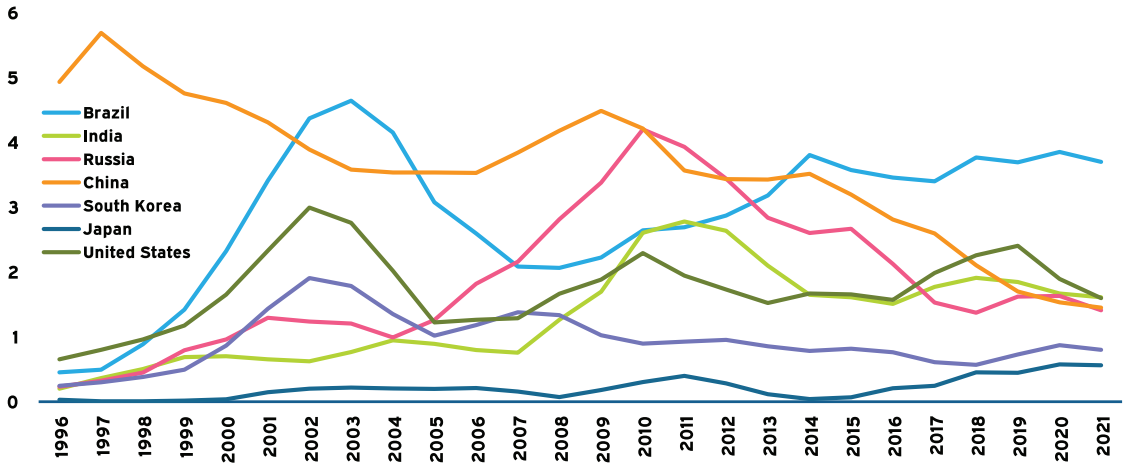


FIGURE 23

Rolling Three - Year Average Net Foreign Direct Investment (% of GDP)

Source: Oxford Economics as of June 2021. Per capita GDP in 2015 USD base.

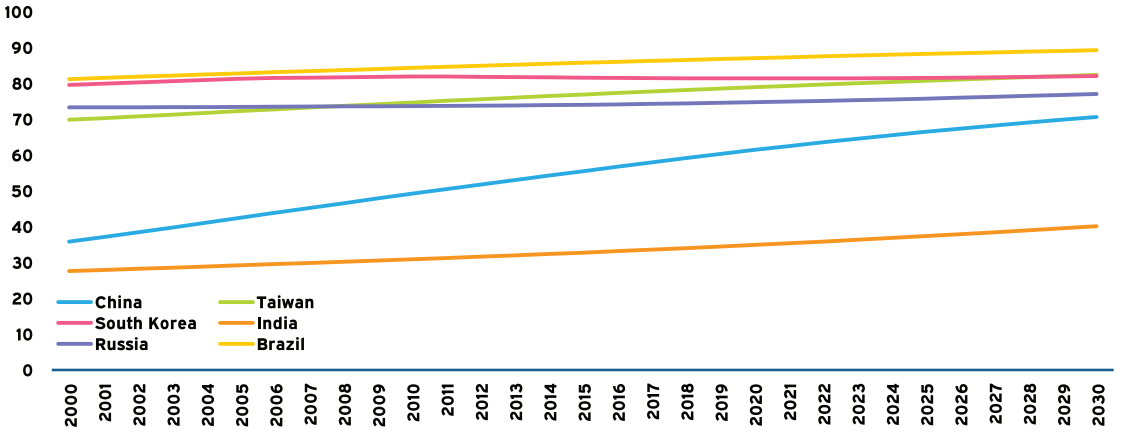


FIGURE 24

Urban Population 2000 - 2020 (%)

Source: United Nations Department of Economic and Social Affairs, Population Division (2018).

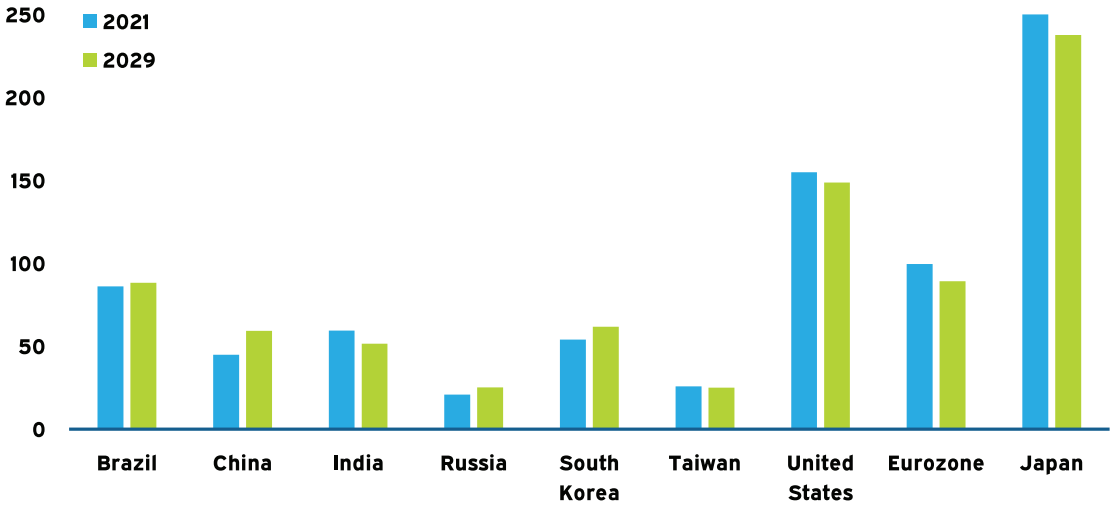


FIGURE 25

Public Debt of the Largest Developed and Emerging Economies (% of GDP)

Source: Oxford Economics June 2021. Country debt statistics do not include private corporate debt or quasi-governmental debt.

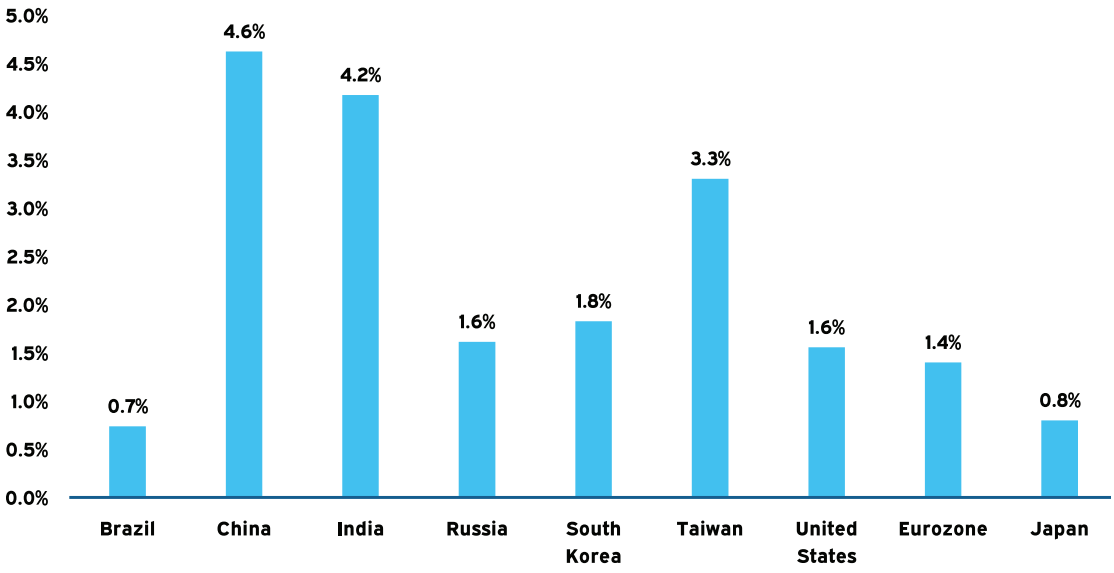


FIGURE 26

Expected Average Annual Productivity Growth (2019-2029)

Source: Oxford Economics. Country productivity growth shown per worker in local currency terms.

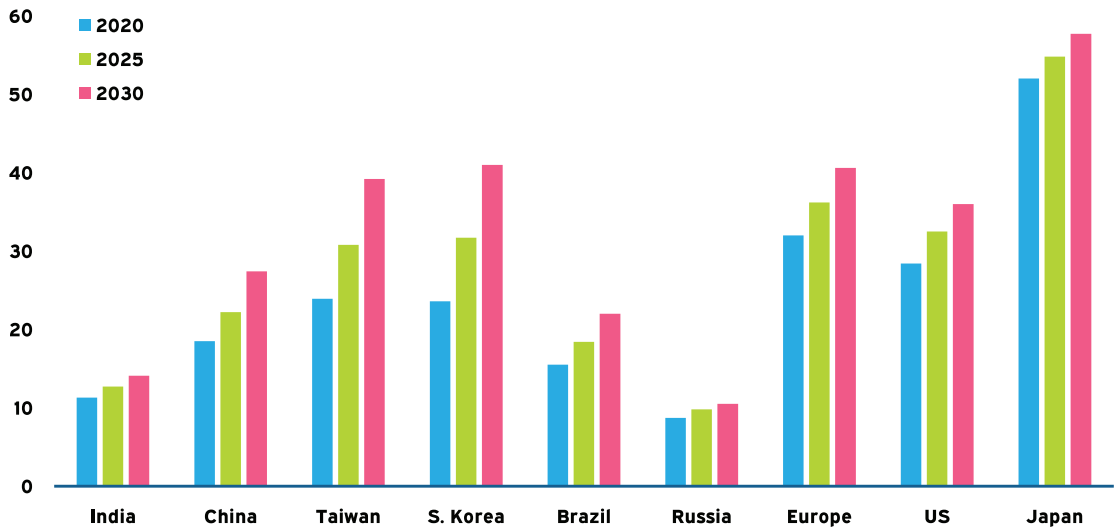


FIGURE 27

Dependency Ratios (Over Age 65 to Working Age Population)

Source: United Nations Population Data; Over age 65 per 100 ages between 20 and 64. Data as of July 2021.

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