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NEUBERGER BERMAN

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From Commodities to Computers

The investible emerging markets equity universe has experienced a seismic shift over the last decade: major markets have moved from being very globally exposed and cyclical to more of a mix of global information technology and local consumer-driven stocks, which has affected both sector and country allocations in the MSCI Emerging Market Index. This has clear implications for the changing risks that drive emerging markets investors' returns, of course. But it should also encourage us to think again about how emerging markets are valued—relative to developed markets, but also relative to their own history. Emerging markets may not be as expensive, or as cyclical, as one might think.

From Commodities to Computers

The shift in the investable markets has resulted in a shift in the MSCI Emerging Markets Index. As figure 1 shows, some sectors, such as information technology, have experienced significant earnings growth that was rewarded in the market through share price appreciation and, subsequently, reflected in their respective index allocations.

Commodity-driven sectors, by contrast, have experienced declining earnings and a loss in index allocation. At the end of 2007, energy (18%) and materials (15%) accounted for fully one-third of the index. Fast-forward to 2017, and those two sectors account for only 14%. Information technology has risen from 10% of the index to 28%.

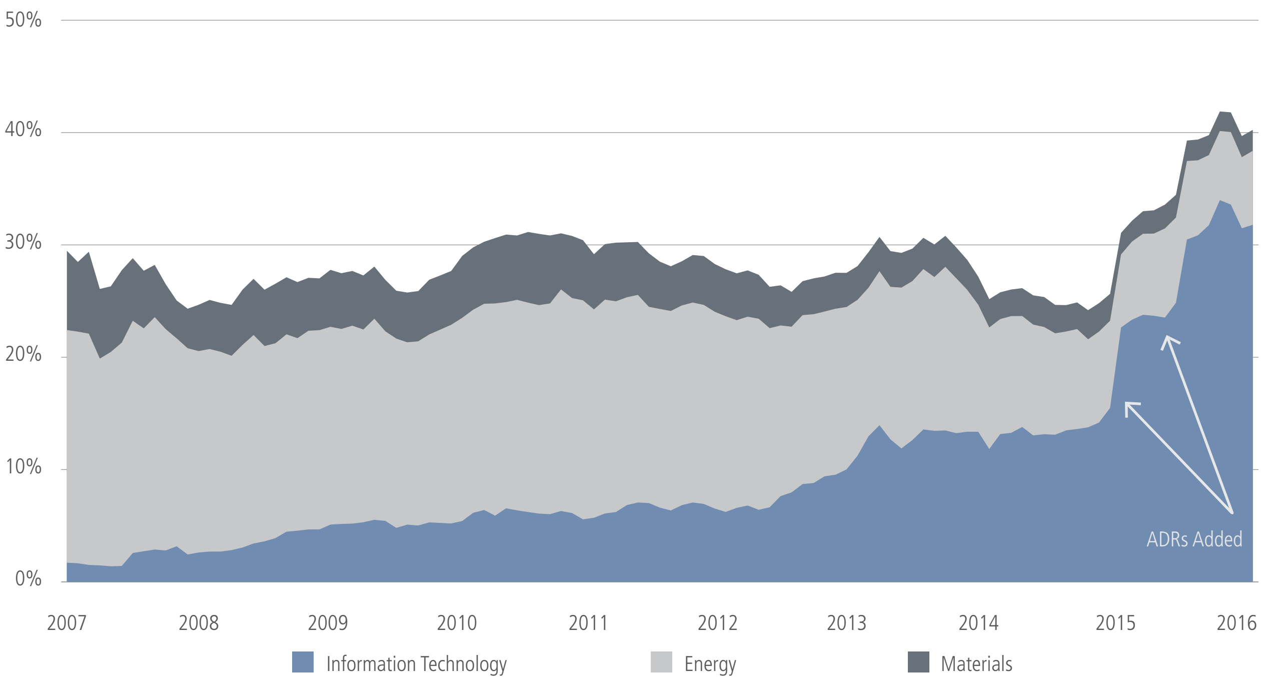
Information technology received another substantial boost in the index when MSCI recognized the evolution of the economic drivers in the emerging world by including China's predominantly technology focused American Depositary Receipts (ADRs) in the MSCI Emerging Markets Index.

FIGURE 1. FROM COMMODITIES TO TECHNOLOGY

Technology's significant earnings growth led to strong price appreciation…

	10-YEAR CAGR	
SECTOR	EARNINGS GROWTH	PRICE APPRECIATION
IT	13%	9%
Materials	-2%	-5%
Energy	-5%	-7%

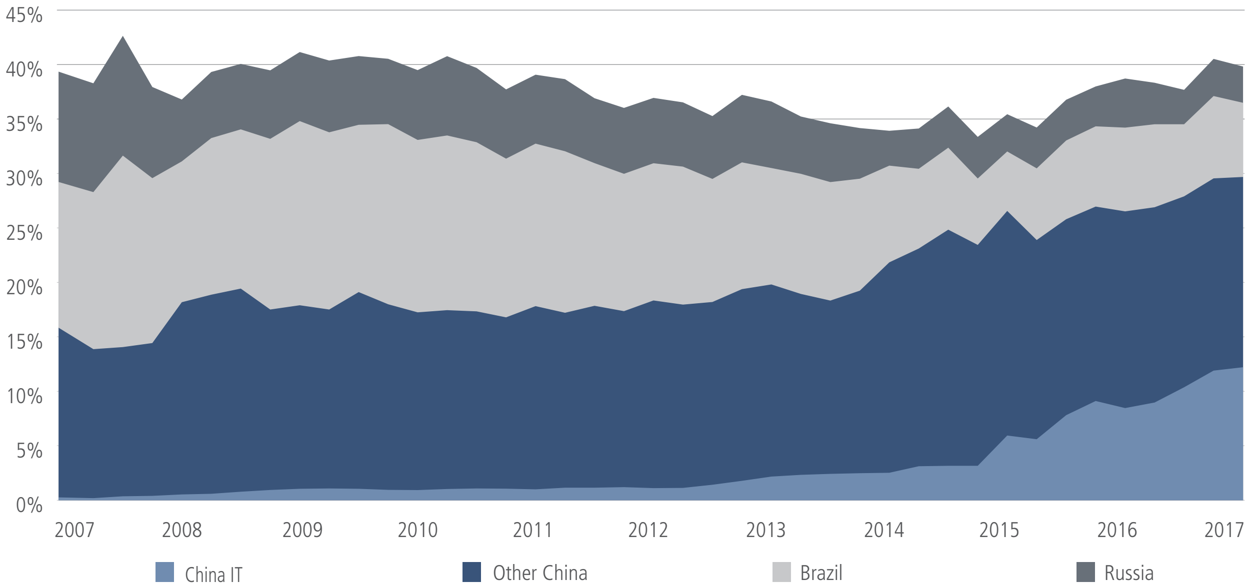
…and an increased index weight



Source: MSCI, JPMorgan. The top table shows MSCI Emerging Markets Index sector earnings growth and price appreciation (in USD), 2007 – 2017. Earnings growth was rebased to 100 to calculate CAGR. The bottom chart shows sector weights in the MSCI Emerging Markets Index, 2007 – 2016.

Not surprisingly, we see the same trend reflected at the country level. Commodity-driven markets such as Russia and Brazil have declined as a proportion of the index at a similar rate to the energy and materials sectors, while China, increasingly represented by internet software and services stocks, has grown. At the end of 2007, China accounted for 16% of the index, and Chinese tech companies 0.3%; by 2017 China had a 30% allocation and China tech accounted for 12.3% of the index. This has come at the expense of State Owned Enterprises (SOEs) in China: a decade ago, SOE sectors accounted for 85% of China's allocation in the MSCI Emerging Markets Index, but by 2017 that had declined to just 38%.

FIGURE 2. AS INFORMATION TECHNOLOGY HAS GROWN IN THE INDEX, SO HAS CHINA

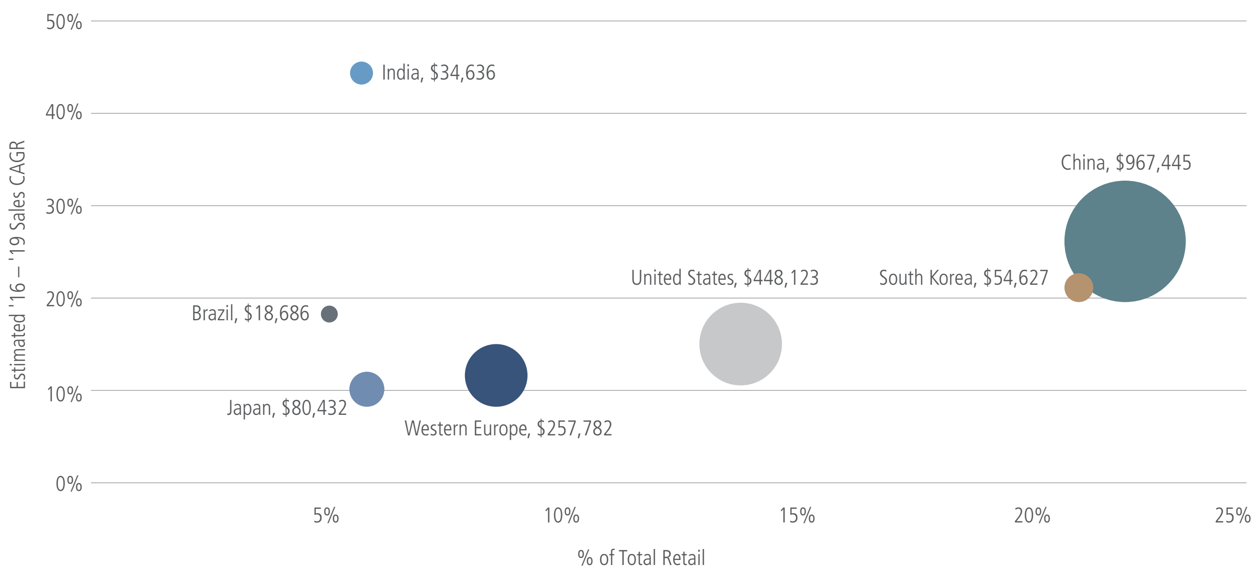


Source: MSCI. Data as of December 31, 2017.

This evolution in the investable market reflects the fact that e-commerce has grown from just 7.4% of global retail sales in 2014 to more than 10% today, and is expected to reach 16.3% by 2020, according to Goldman Sachs. This trend has been the main driver of the global technology boom of the past decade. The shift to information technology in the investable markets better reflects the "real" economy and consumer behavior within it, both now and especially in the future.

Moreover, the growth in e-commerce is not limited to the U.S. and China. China stands out with its huge market and the number of large, listed companies in which investors can participate, but other emerging countries are home to significant markets and the highest growth rates. Moreover, this is incremental demand and not the bricks-and-mortar substitution we are seeing in developed markets.

FIGURE 3. TOTAL E-COMMERCE SALES (EX-TAX) AND ASSOCIATED PROJECTED SALES CAGR



Source: Goldman Sachs. The bubble sizes correspond to the estimated 2017 amount of e-commerce sales, ex-sales tax, in $mm (using fixed 2016 foreign exchange rates).

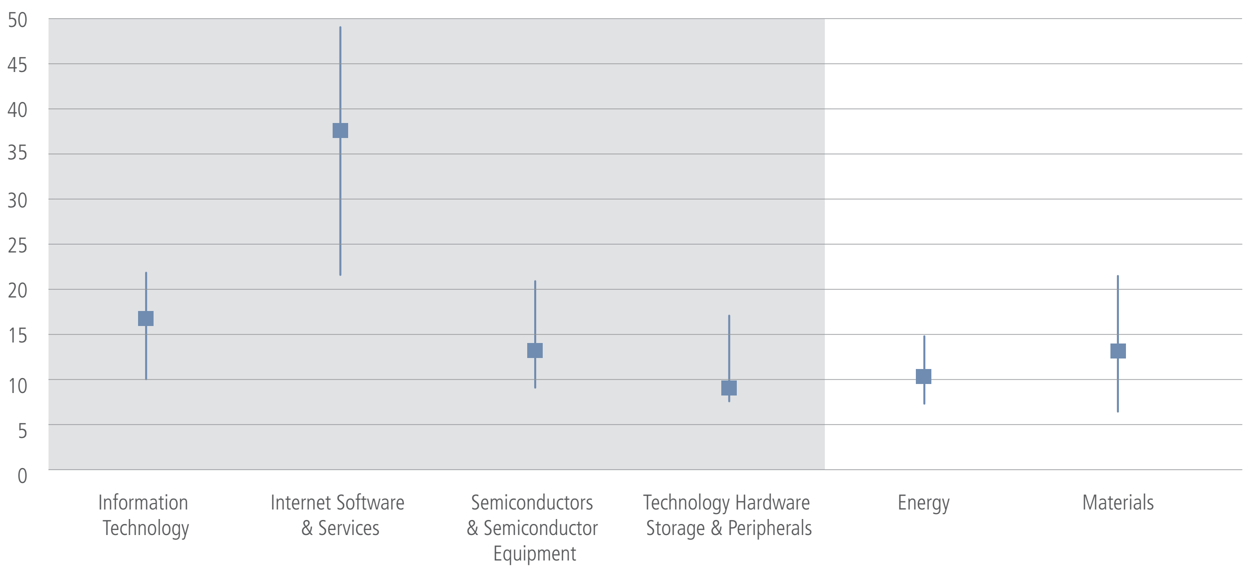
A Changing Profile Implies Changing Views on Valuation

How should one determine the attractiveness or otherwise of valuations in emerging markets given this radical change in the underlying profile of the investable universe?

First off, although technology-sector valuations are in the middle of their own 10-year historical range, when we look under the hood at the industry level, we find that valuations in internet stocks are richer than others given their domination by larger Chinese names that are benefitting from a secular growth story and lower capital intensity.

The hardware and semiconductor industries, however, are trading cheaper, even relative to their own range of historical valuations, probably due to concerns that it could revert to the boom-and-bust cycles that have characterized it in the past. We would argue that these companies should not all be painted with a broad brush, as certain sub-segments are benefitting from the tailwind of the expanding use of niche components across a variety of growth areas, with the proliferation of technology and semiconductors in autos, appliances and throughout our lives.

FIGURE 4. EMERGING MARKETS TECH, EVEN WITH AN INCREASED INTERNET SOFTWARE AND SERVICES ALLOCATION, REMAINS AT THE MIDPOINT OF ITS VALUATION RANGE

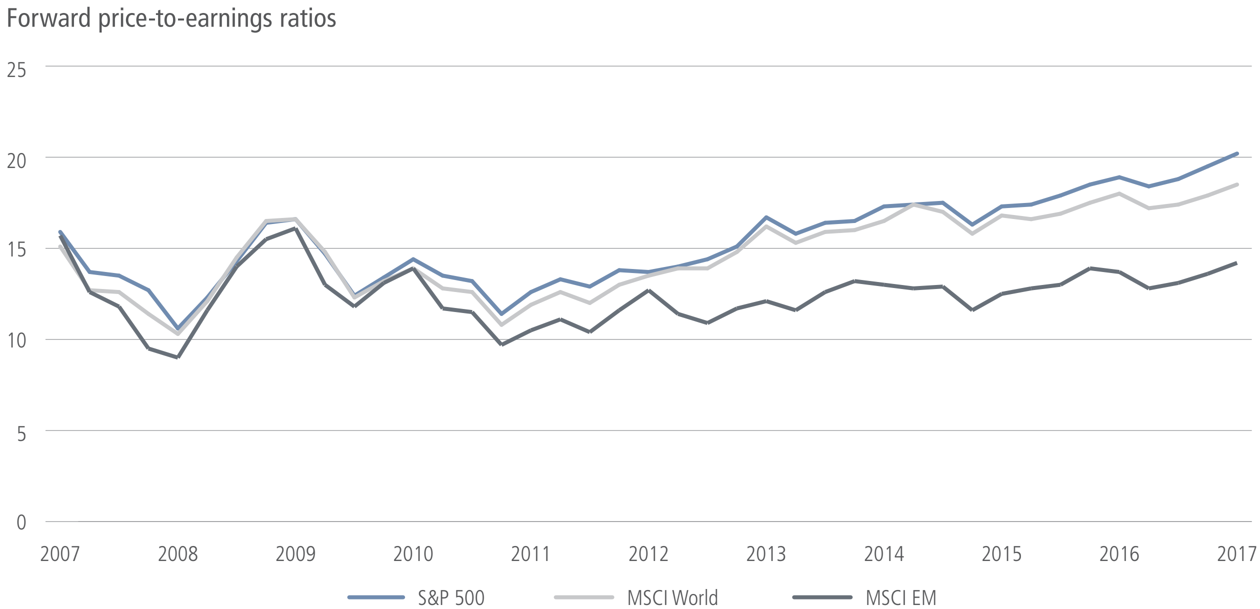


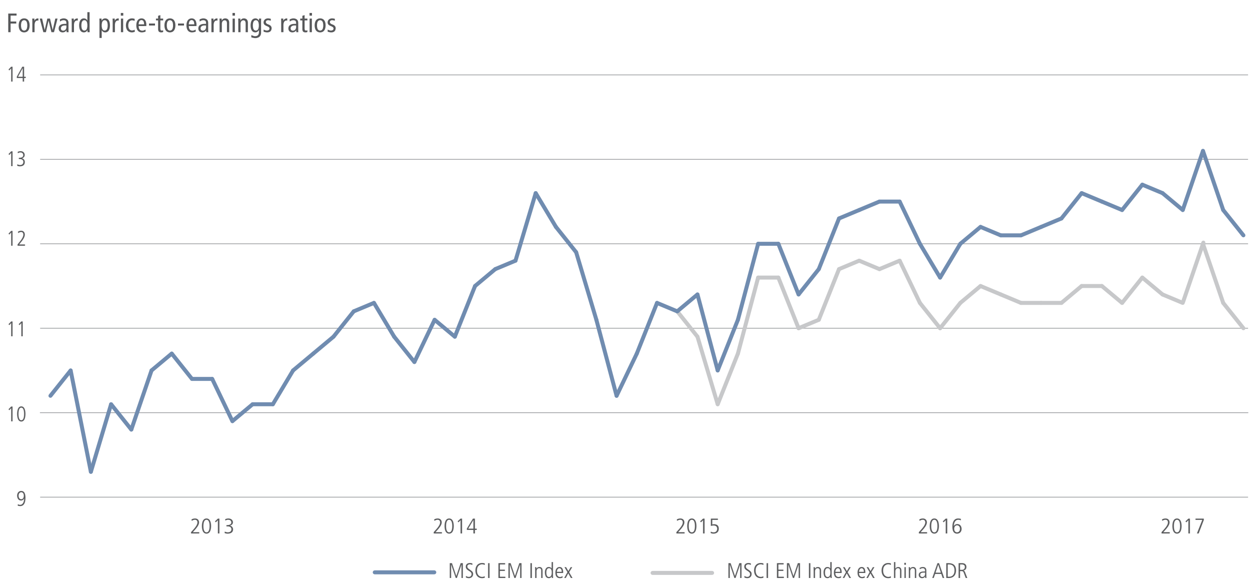
Source: MSCI. The chart shows MSCI Emerging Markets Index sectors, and the ranges show price-to-earnings ratios for the period 2008 to 2017.

Given the much larger allocation to the technology sectors in the MSCI Emerging Markets Index, as previously outlined, we might therefore expect this index to have become less attractive on a valuation basis, both historically and relative to the developed markets, than it used to be.

When we look at the index-level forward price-to-equity ratio, however, we not only find that the MSCI Emerging Market Index seems cheap relative to the MSCI World and S&P 500 Indices, but also that it has been getting relatively cheaper for the past six years, even as its exposure to the technology sector has grown (figure 5). In fact, when we look at the EM Index excluding the recently added China ADRs, it is cheaper by at least one multiple point.

FIGURE 5. EMERGING MARKETS ARE STILL VALUED ATTRACTIVELY RELATIVE TO DEVELOPED MARKETS





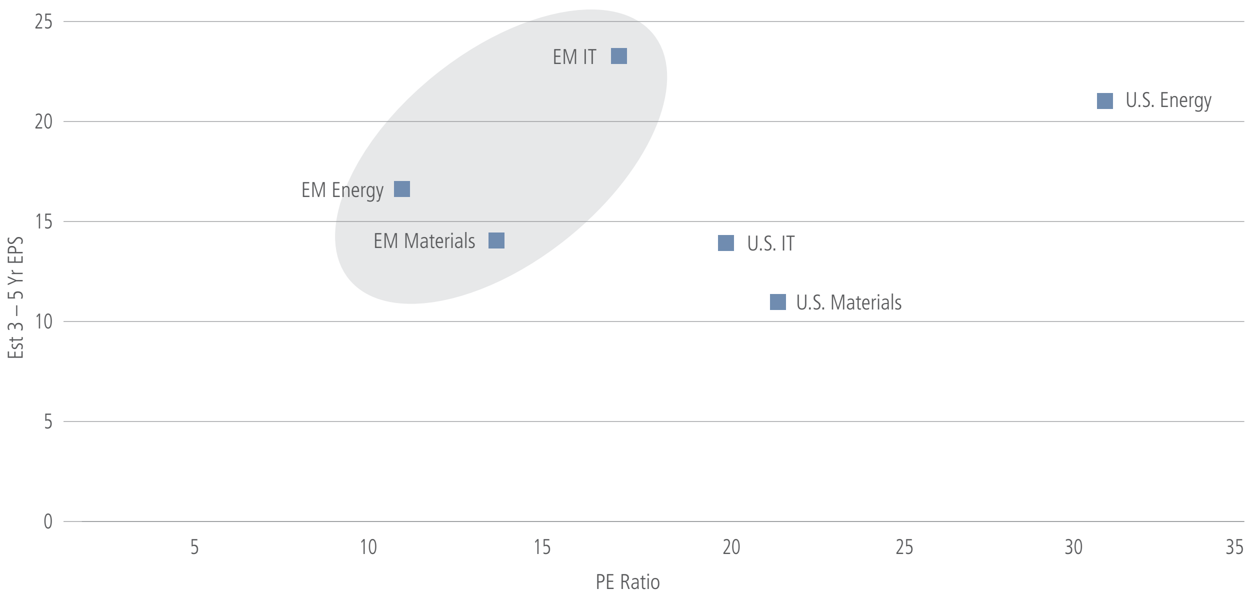
Source: MSCI, FactSet, Goldman Sachs.

This strongly suggests that emerging markets share prices on the whole, and even those of the technology sector, are in line with fundamental earnings growth, and therefore attractively priced.

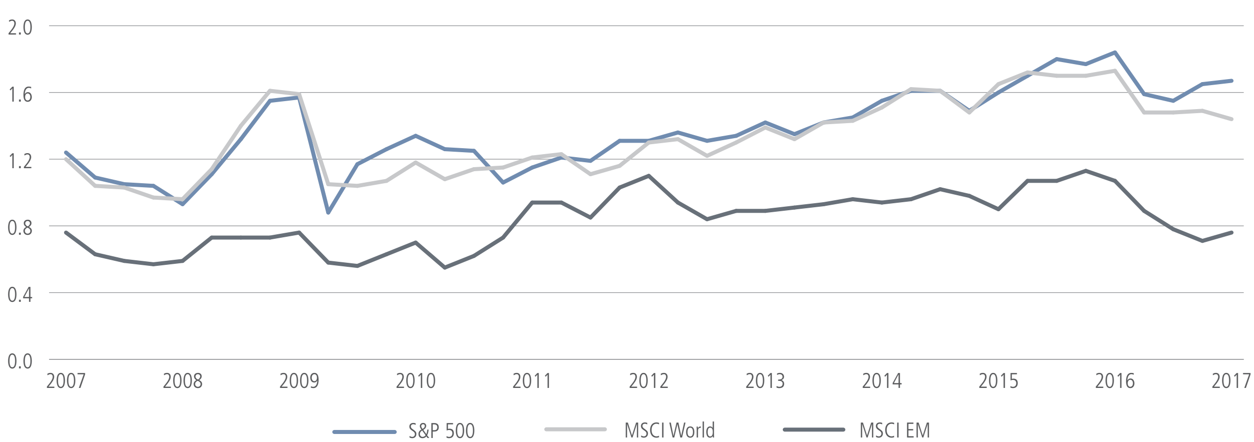
When we compare the U.S. and emerging markets energy, material and technology sectors using price-to-earnings ratios and estimated five-year earnings-per-share growth, the picture becomes clear. The three emerging markets sectors trade more cheaply relative to their U.S. counterparts and, outside of U.S. energy—which is coming off a lower earnings base and thus reflects higher multiples—they also have stronger earnings growth. When we go back up to the index level again, we can see this dynamic playing out in a much more attractive price-to-earnings growth ratio in emerging relative to developed markets.

FIGURE 6. VALUATIONS: EMERGING VERSUS DEVELOPED MARKETS

Earnings-per-share ratios versus price-to-equity ratios



Price-to-earnings growth (PEG) ratios



Source: FactSet. Data as of December 31, 2017.

Strong Growth Is Not Without Risk

While the growth of technology on the back of the aforementioned explosive earnings has been positive for emerging markets as a whole, it has also created concentration risks that require diligent risk management and investment discipline.

The top holdings of the MSCI EM Index look very different now than they did 10 years ago, when Gazprom and America Movil were the biggest firms. Samsung, the third largest company in the index in 2007, has since doubled its market capitalization and is larger than the biggest company was 10 years ago—and yet it is still only the second-largest stock in the index today. With this change has come a concentration of risk: the top four holdings are now all in the technology sector—and the fifth has a 30% stake in the first. Together, they account for nearly 20% of the index. The top five stocks in the S&P 500 Index are also dominated by technology today, but by contrast they account for only 12% of the index, which has 340 fewer securities than the emerging markets benchmark.

That said, perhaps surprisingly, the presence of technology companies in the investable emerging equity market now makes it more like the U.S. market than Europe's; the sector accounts for 28% of the MSCI Emerging Markets Index, versus 26% of the S&P 500 and 5% of the MSCI EAFGE Index. So while the concentration risk has certainly increased compared to historical allocations, we believe it is not out of sync with other markets.

FIGURE 7. THE TOP STOCKS IN THE EMERGING MARKETS INDEX ARE VERY DIFFERENT NOW THAN 10 YEARS AGO

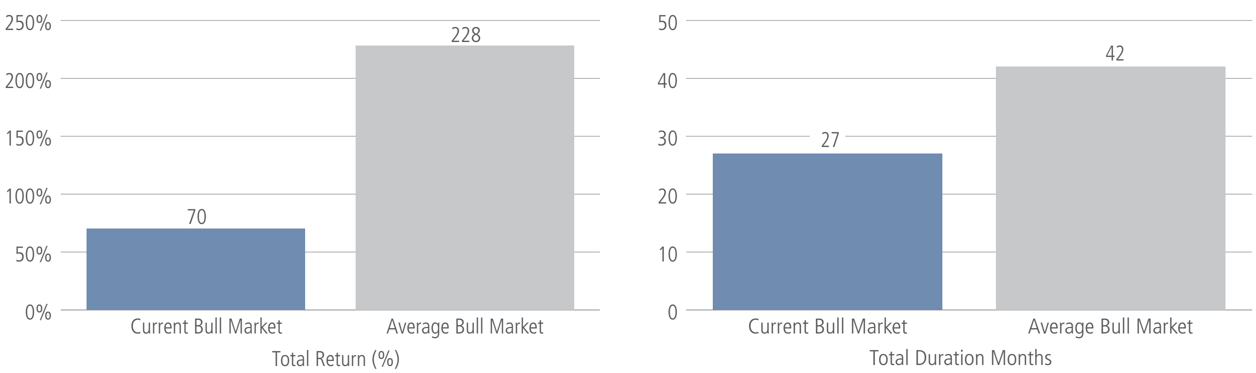
	% OF INDEX	MARKET CAPITALIZATION USD	TTM P/E RATIO
Tencent Holdings Ltd.	5.45	493,322	54.51
Samsung Electronics Co., Ltd.	4.27	326,089	9.96
Alibaba Group Holding Ltd. Sponsored ADR	3.66	440,712	48.62
Taiwan Semiconductor Manufacturing Co., Ltd.	3.50	199,977	17.29
Naspers Limited Class N	2.25	120,386	32.00

Source: MSCI.

Not only are Valuations Attractive, But There is Room to Run

Another factor supporting our positive outlook for emerging markets is that, typically, bull markets have had a long track record and have experienced substantial gains before they ended. While the current market has been on a strong run since the start of 2016, it is still well short of the average bull market in terms of both duration and return. The last six bull markets in the emerging markets have lasted 42 months, on average, with a cumulative return of 228%. The current run, through March 31, 2018, is 15 months short of that and nearly 160 percentage points behind.

FIGURE 8. THE CURRENT RALLY STILL LAGS THE AVERAGE BULL MARKET IN BOTH TOTAL RETURN AND DURATION



Source: MSCI. Data as of March 31, 2018.

All things considered, even with the expressed risks, we view emerging markets to be an attractive investment opportunity, especially on a relative basis. While we like the superior growth characteristics of IT, we believe that stock picking and valuations will be rewarded in the long term.

It is understandable that investors should worry that emerging markets equities may be close to the end of their current cycle after the recent run-up they have enjoyed and some evidence they see of Purchasing Managers Indices plateauing. We would argue that they are more likely to be mid-cycle, due to earnings growth potential that is led by information technology sectors that are not solely dependent on the global economic cycle and global trade dynamics. This gives them a very different profile now than they have had in the latter stages of previous global cycles. Furthermore, an active manager with the flexibility to invest across countries, sectors and market capitalizations can find opportunities that balance the variety of risks against potential long-term rewards, including the relative cyclicality of certain stocks, sectors and countries, as well as applying a more disciplined approach on the valuations of individual names.

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