STOCK MARKET DEVELOPMENT AND PERFORMANCE IN THE EMERGING ECONOMIES

SIEMS MONTHLY BRIEFING

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I. INTRODUCTION

Over the past decade the rapidity of stock market capitalization in the emerging economies has been unprecedented and has fundamentally advanced the financial development in many of these countries. A key indicator of stock market development, *the capitalization ratio* (stock market capitalization as a share of GDP), has risen enormously over the past decade. Brazil has been a typical example, having seen its capitalization ratio rise from 35 percent at the beginning of the century to 100 percent before the onset of the global economic crisis.

The purpose of this paper is two-fold. First, a broad but comprehensive overview is given of the rapid stock market development throughout the emerging world over the past decade. Secondly, we explore the proposition of whether faster economic growth leads to higher equity performance and whether today's investors should more seriously consider emerging market equities as a consequence.

II. EQUITY MARKETS AND ECONOMIC GROWTH

In the economics literature, a causal relationship between financial development and economic growth has been argued along three lines. First, financial deepening promotes economic growth. Second, economic growth stimulates financial development. Third, financial development and economic growth influence each other.[1]

In principle, a well developed stock market should increase savings and efficiently allocate capital to productive investments, which leads to an increase in the rate of economic growth. Stock markets contribute to the mobilization of domestic savings by enhancing the set of financial instruments available to savers to diversify their portfolios. Thus, they provide an important source of investment capital at relatively low cost.

In a well developed stock market, share ownership provides individuals with a relatively liquid means of sharing risk when investing in promising projects. Stock markets help investors to cope with liquidity risk by allowing those who are hit by a liquidity shock to sell their shares to other investors who do not suffer from a short-term liquidity shock. The result is that capital is not prematurely removed from firms to meet short-term liquidity needs. Moreover, stock markets play a key role in allocating capital to the corporate sector, which has significant effects on the economy in aggregate. Debt finance is likely to be unavailable in many countries, particularly in developing countries, where bank loans may be limited to a selected group of companies and individual investors. In addition, well developed and active stock markets alter the pattern of demand for money, and booming stock markets create liquidity, and hence spur economic growth.

Stock markets also ensure through the takeover mechanism that past investments are also used most efficiently. A free market in corporate control, by providing financial discipline, provides the best guarantee of efficiency in the use of assets.[2]

[1] The relationship between economic growth and financial development is well documented in the literature; see, for example, Shan et al. (2001), and Khan and Senhadji (2003) for overviews, as well as Levine (2005) for a comprehensive review. McKinnon (1973), Shaw (1973), and King and Levine (1993) argue the link from financial deepening to growth, Gurley and Shaw (1967), and Goldsmith (1969) support the opposite direction. On the two-way causality between financial development and economic growth, see Luintel and Khan (1999) and Shan et al. (2001). Provided by Billmeier and Massa (2008).

[2] Parts of this analysis provided by Caporale et al. (2004), pp. 34-35.

III. RECENT STOCK MARKET DEVELOPMENT IN THE EMERGING MARKETS – AN OVERVIEW

The speed at which the equity markets in the emerging economies have surged over the past decade is nothing short of breathtaking. After hovering around 20-25% during the better part of the 1990s, emerging market stock market capitalization, as a share of their collective GDPs, almost *tripled* from the beginning of the century until 2007 (Figure 1). The Great Recession that started late in 2007 caused a very sharp correction in emerging market share prices during 2008, but since that time many of the larger bourses have either surpassed or regained their pre-recession highs by the end of 2010, with their collective capitalization ratio hovering around 50 percent.

The total market capitalization of emerging market countries has increased approximately *ten-fold* over the past fifteen years, from less than $2 trillion in 1995 to about $5 trillion in 2005 to approximately $19 trillion by year-end 2010. This compares to a roughly doubling in total market capitalization for the developed markets over the same period. Since the turn of the century, emerging market's share of global stock market capitalization has risen from 7 percent to a current figure of approximately 30 percent (figure 2).

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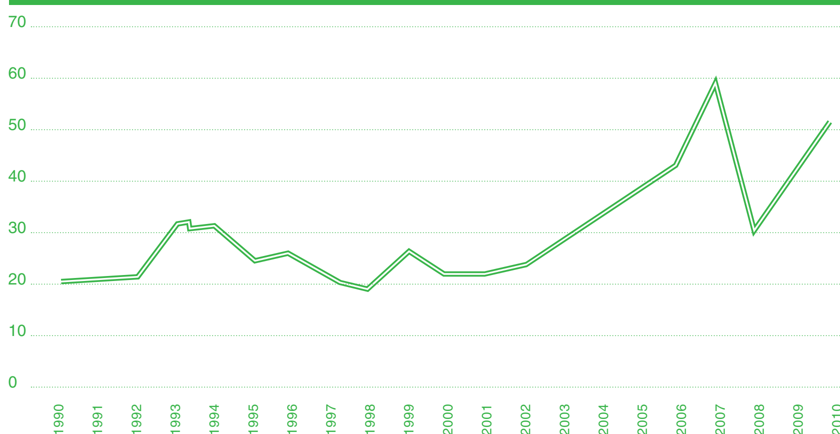
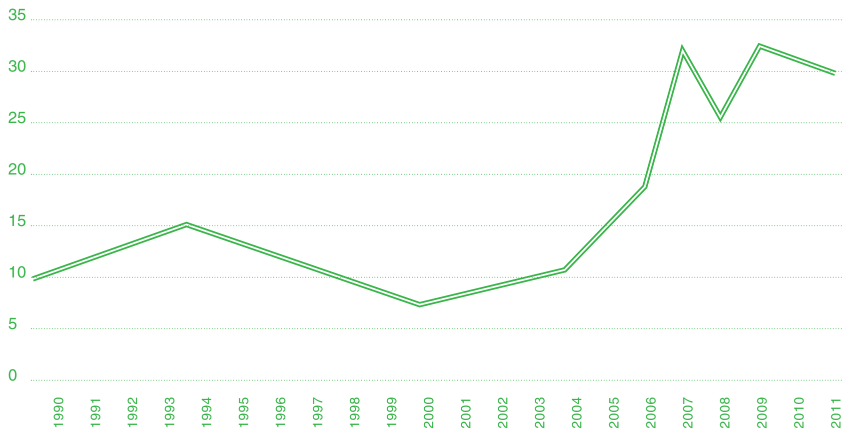
FIGURE 1/ Stock Market Development in Emerging Markets, 1990–2010 (Emerging Market capitalization ratio)



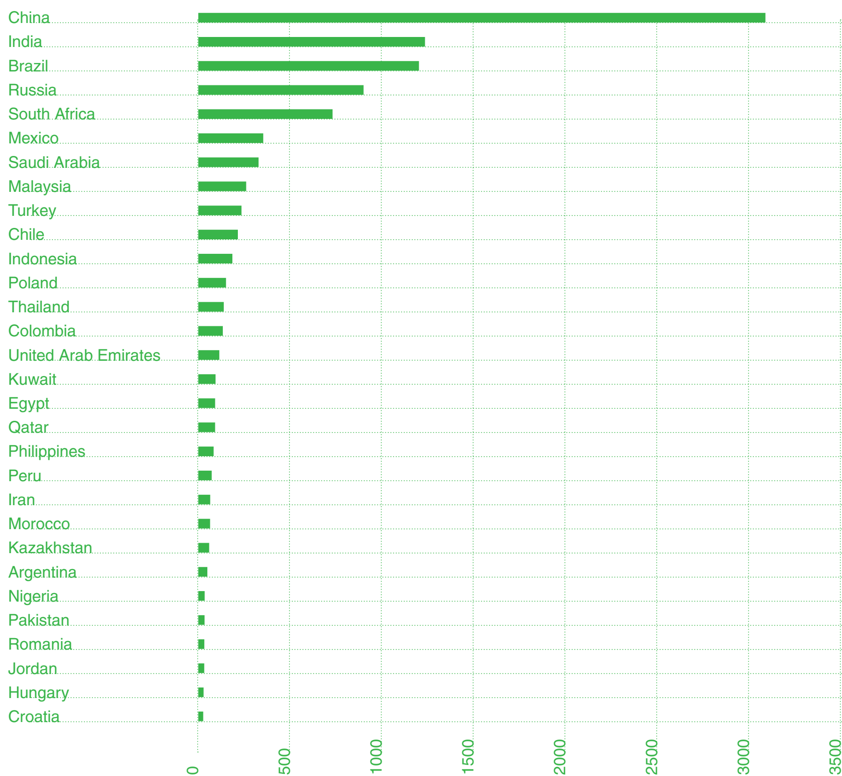
Source: World Development Indicators, World Bank. SIEMS'calculation.
Note: Based on averages of a sample of 69 emerging market countries. See the appendix for the full list of countries.

FIGURE 2/ EM Stock Market Capitalization
(Percent of global stock market capitalization, end of year)



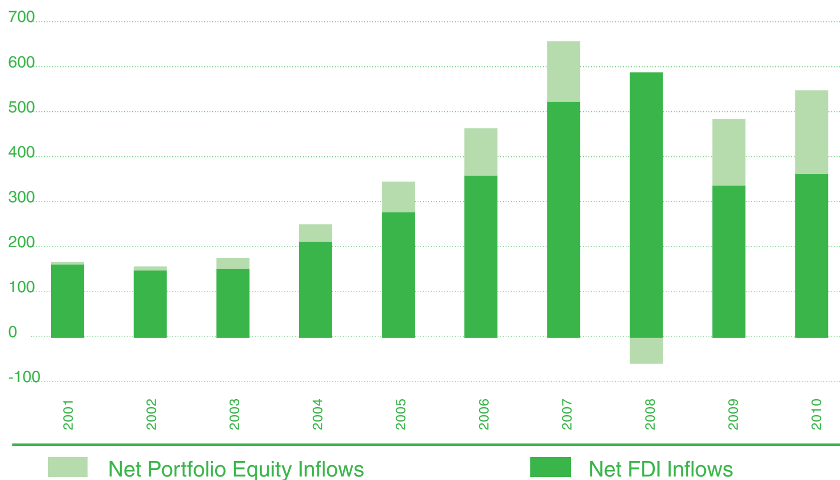
Source: World Development Indicators, World Bank. SIEMS'calculation.

FIGURE 3/ Stock Market Capitalization
(End of December 2010, Billions of Dollars)



Source: World Development Indicators, World Bank.

FIGURE 4/ Net equity flows to developing countries, 2001-10



Source: Global Development Finance, 2010. World Bank.

Even if emerging market capitalization grew only in line with GDP, it could account for as much as one-half of the world total by 2030. However, the ratio of a country's capitalization to GDP tends to rise as markets develop due to increased equity issuance and IPOs. As a consequence, today's emerging markets could account for almost one-half of total world equity capitalization by as early as 2020.

Figure 3 lists the top 30 emerging markets by their total market capitalization at year-end 2010. The Chinese stock market may have finished 2010 approximately one-half below its 2007 peak, but it was ranked first with a total market capitalization of $3.1 trillion (at the end of 2004 it was worth less than $1 trillion). The distribution of equity capital in the emerging world is uneven, with the BRICs plus South Africa accounting for about two-thirds of the emerging markets' total equity capitalization. To provide some scale, the United States and France had a stock market capitalization of $15.4 trillion and $2 trillion, respectively, by year-end 2010.

Net equity inflows have become a very important source of funds for the emerging market economies in recent years. Before the recent recession net equity flows to the emerging economies grew four-fold from 2001 through 2007. The share of net portfolio equity inflows has gained in prominence (relative to FDI net inflows) in recent years, having reached roughly $200 billion in 2010, a historic high.[3]

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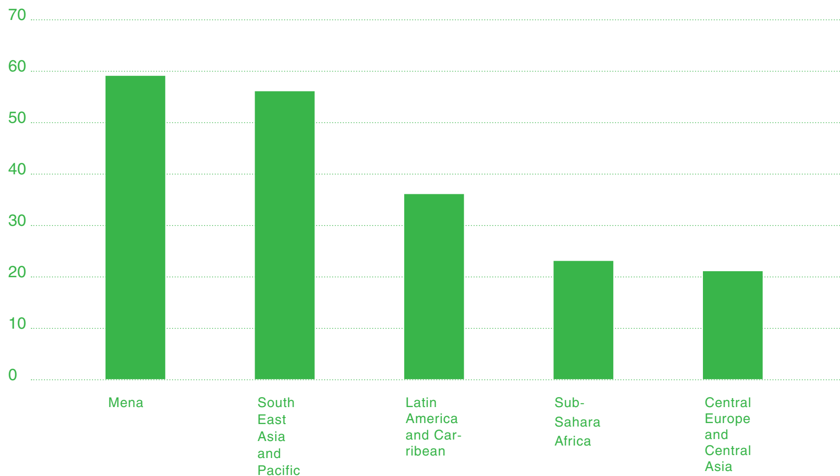
[3] FDI inflows refer to the net inflows in investment to acquire a lasting management interest in the company.

FIGURE 5/ Average Stock Market Capitalization by Region
(As a share of GDP, 2010 year-end values)



Source: World Development Indicators, World Bank. SIEMS'calculation.
Note: Simple average of market capitalization for each region.

MENA (Middle East & North Africa)[4] and the Southeast Asia & Pacific regions currently lead the emerging markets in average stock market capitalization as a share of their GDPs. Within Asia, China, India and Malaysia all have market capitalizations that exceed the size of their economies; while Bangladesh, Mongolia, Nepal and Pakistan possess low capitalization ratios. Interestingly, Sub-Sahara Africa exceeds Eastern Europe & Central Asia slightly in average capitalization, but this is largely omission bias given that a number of countries in the region do not possess an active stock market. South Africa (300% of GDP) is the only stand out in the region. Latin America & the Caribbean, the only region to regain its 2007 peak after the financial crisis, is led by Chile (138%) and Brazil (104%). Eastern Europe's & Central Asia's average capitalization ratio has only doubled since the turn of the century, a consequence of the dominance of its banking sector in allocating capital and also having been hit particularly hard by the financial crisis. Poland (53%), Kazakhstan (50%), Croatia (46%), Turkey (44%) and Russia (41%) have the most developed stock markets in this region.

[4] The MENA region data set only consists of 6 countries and may not be a good representation of market capitalization for the entire region. These were the only six countries with data available from 1990 through 2010.

IV. STOCK MARKET CHARACTERISTICS OF THE BRICS

We conclude this overview section with a more detailed examination of each of the BRICs' stock markets.[5]

CHINA

While China's economy is now the second largest in the world and its current total equity market capitalization ($3.1 trillion) is the second highest in Asia (after Japan), an examination of the world's largest companies by equity market capitalization across eight major business sectors[6] finds that China is punching below its economic weight. Moreover, its stock market, which opened just two decades ago, is largely dominated by state owned companies.

While China's economy is now the second largest in the world and its current total equity market capitalization ($3.1 trillion) is the second highest in Asia (after Japan), an examination of the world's largest companies by equity market capitalization across eight major business sectors finds that China is punching below its economic weight.

China is now the largest consumer of raw resources, but in the basic resources sector, China has just four companies ranked in the top fifty (in that sector) by equity capitalization. Coal giant Shenhua Energy is ranked sixth but the other three, China Coal (no. 32), Baoshan Iron (no. 34) and Zijin Mining (no. 49), are much smaller.

In the healthcare, consumer staples and industrial sector, China is almost completely absent (China State is ranked 43rd in the industrial sector and Tingyi is ranked 50th in consumer staples).

Even in the utility sector (China surpassed the United States in 2009 as the largest consumer of energy) China only has one mainland company in the top 50 – China Yangtze (no. 22).

Energy is an obvious exception. Over the past five years China has been very aggressive in acquiring energy resources abroad. Petrochina (China's largest company by equity capitalization overall, comprising 10% of the Shanghai Composite) is now almost the same size as top ranked Exxon Mobil while China Shenhua, China Petroleum and CNOOC (listed in Hong Kong) are all ranked in the top 20 within the energy market.

Enormous state support (via massive bailouts and state directed lending) and some recent large IPOs have given Chinese banks and security firms a huge footprint in the financial arena. China accounts for 8 of the top 50 global financials (4 are in the top 10) with ICBC and China Construction Bank currently ranked first and second. Insurer, China Life, is ranked tenth.

[5] All market capitalization figures in this sub-section are from the end of the 1st quarter, 2011. Sourced from Bloomberg. All figures in the section are from public or listed companies, and do not include private equity capital.
[6] The eight sectors are basic materials, energy, industry, consumer staples, financial, utilities, telecommunication and technology.

China now has a significant presence in the telecom sector, with China Mobile having the largest market capitalization in the industry and two more (China Telecom and China Unicom) placing in the top 15.

Only in media and technology, are China's private companies showing some size and influence. Baidu (listed on the NASDAQ) and Tencent (listed in Hong Kong) are ranked 18th and 15th within their respective sectors.[7]

Financial have by far the largest weight in the Shanghai Composite (which tracks both A and B shares), comprising almost 40% of the index's total market capitalization, followed by energy with a 20% share, followed by materials with a 10% share.

All said and done, China has just 27 listed companies ranked in the top 50 in each of the eight major sectors by market capitalization (i.e. – out of a possible universe of 400 companies).

RUSSIA

Accounting for only 10 listed firms, Russia has the smallest number of public companies among the BRICs in the top 50 across the eight sectors. Not surprisingly, the energy sector accounts for half of these 10 giants. The gas export monopoly Gazprom has the largest equity market capitalization in Russia followed by oil giant Rosneft.

Almost two-third of Russia's stock market (RTS index) capitalization comes from the energy sector. As a

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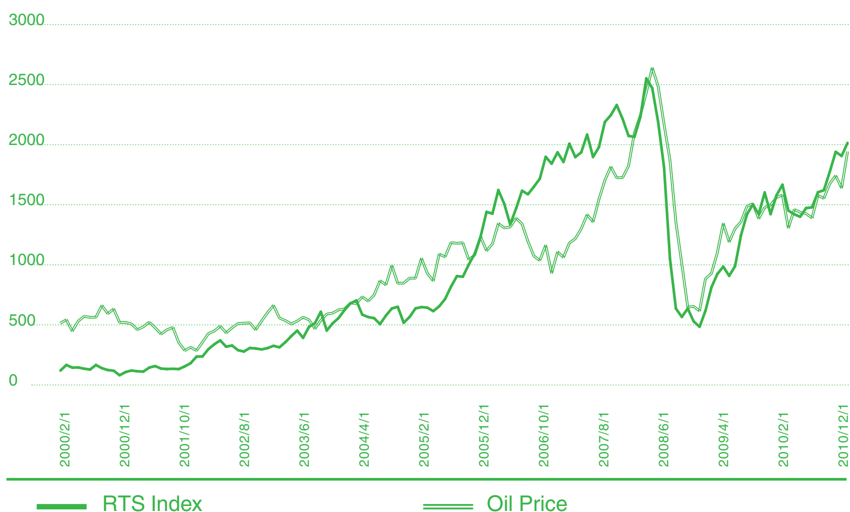
FIGURE 6/ Russian Stocks and Energy Prices – Moving in Lockstep



Source: Bloomberg

[7] Note that China's large state-run media companies are not listed.

consequence, there is almost perfect correlation between energy prices and movements in the Russian stock exchange.

Surprisingly, Russia only has one listed company ranked in the top 50 under "basic minerals" (Norilsk Nickel is no. 38) but has four under the "minerals" sector because it includes their aluminium (Rusal) and steel makers (Severstal and Novolipetsk). Despite a country endowed with a good deal of human capital and a reasonably tech savvy workforce, Russia has no listed companies in the top 50 in the technology sector.

BRAZIL

Brazil has a total of 16 listed companies in the top 50 across the eight sectors. It has 4 banks among the world's 50 largest banks (it only had one five years ago) although none are in the top 10. In basic materials it has two steel and iron makers in the top 50 and mining giant, Vale, Brazil's second largest company by market capitalization, is approximately equal in size to number one ranked Australian miner BHP Billiton.

Government owned Petrobras is Brazil's largest company by market capitalization and only Petro China and Exxon Mobil are bigger within the energy sector. While Brazil has 3 firms in the top 50 for energy the discovery of massive oil deposits off Brazil's coast promises that this sector will only get bigger and more dominant in the future.[8]

Brazil has 3 telecom companies within the top 50 telecom sector although none in the top 30. Brazil has no top 50 companies in the industrial and technology sectors. At approximately 33%, energy comprises the largest share of stock market capitalization, followed by basic materials at 25%.

INDIA

India's benchmark stock index is the Sensex but the largest exchange is the NSE (National Stock Exchange). It currently has 1,500 listed companies with a market capitalization of $1.4 trillion. Of the BRIC countries, India has the most equal division between the eight major sectors. India has 13 companies ranked in the top 50 (within their respective sectors) with basic materials, industry and technology accounting for most of these. All are relatively small, however, with only two appearing in the top 25. Energy, materials and industrials currently account for 17%, 14% and 13% of total market capitalization, respectively.

Unlike China, India's energy sector is not capitalizing at the rate it should. India's relatively small and inefficient energy sector has placed only 2 companies in energy's top 50 (Reliance no. 17 and ONGC India, no. 22). India has only one utility (Gail India, no. 47) in the top 50. Despite the growth

[8] The new field is estimated to contain 50 billion barrels of oil, which is the world's largest known offshore deposit.

in financial intermediation the last decade, India has no top 50 financial institutions. Where India's expectedly shines is in the technology sector, with relative newcomers Wipro (no. 33) and Infosys (no. 21). Tata consultancy is India's largest IT company, roughly the same size (in market capitalization) as China's Baidu and Tencent Holdings. On the plus side, of India's 14 top companies, only 5 are state-owned.

All-in-all, the BRIC countries currently account for 66 listed companies ranked within the top 50 largest across eight business sectors. While this is a doubling in their numbers since 2005, 36 of these companies are state owned and comprise two-thirds of total market capitalization. It's telling that the BRICs only have 3 firms ranked in the top 50 consumer staples industry but given the growth in their middle classes, this number is likely to increase rapidly.

The world's top 100 companies, ranked by market capitalization, are listed in the appendix. There are several noteworthy aspects about the rankings. The first is the continued domination of American companies, that comprise 37 of the top 100 (24 of the top 50). Second, despite its relatively small size, the UK has a disproportionate number of firms in the top 100 (11) compared to other larger developed nations (Japan only has 6 and Germany 4). The developing nations, with a total of 13, are somewhat underweight given their relative economic size (although they account for proportionately more in the top 500 companies). China accounts for 9 (2 of these are listed in Hong Kong) and also has 3 in the top 10.

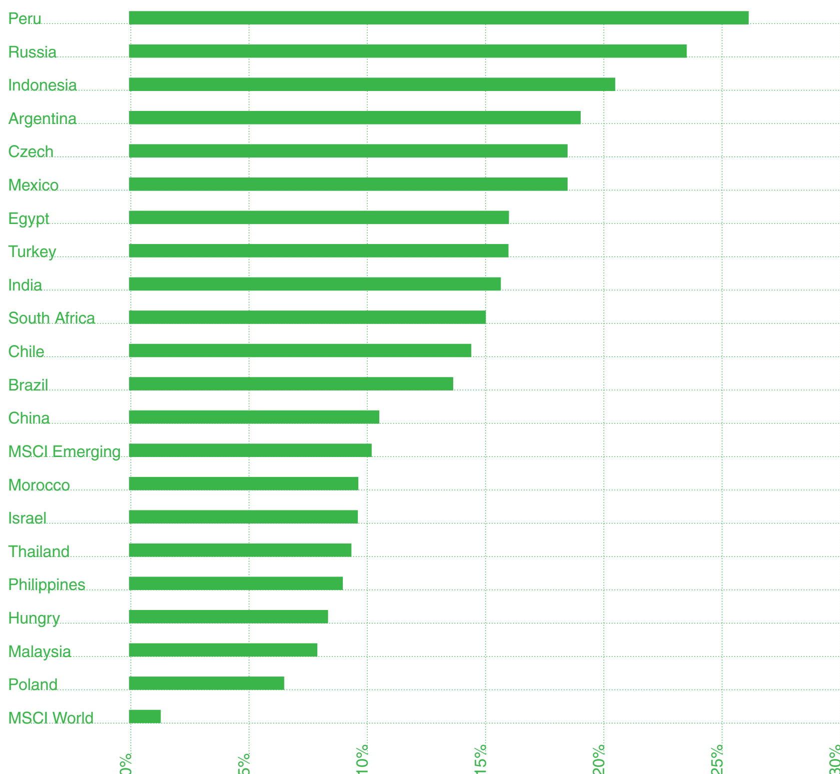
V. EQUITY PERFORMANCE IN THE EMERGING MARKETS

DOES FASTER ECONOMIC GROWTH IMPLY HIGHER STOCK RETURNS?

In orthodox financial theory, corporate earnings are expected to account for a roughly constant share of national income over the long-run (i.e., — a full business cycle), implying that dividends should grow at a similar pace to the overall economy. As a consequence, fast-growing economies are expected to experience faster growth in real dividends, and in turn, higher stock returns.

It's no secret that the emerging market economies had a breakout period — in terms of both economic growth and equity returns — last decade. Figure 7 lists the average annualized stock returns for 20 emerging market countries during the past decade (January 2000 through and including December 2010). The MSCI Emerging Market Index (a free float-adjusted[9] market capitalization index that is designed to measure equity market per-

FIGURE 7/ Average Annualized Equity Returns (2000-2010)



Source: Bloomberg

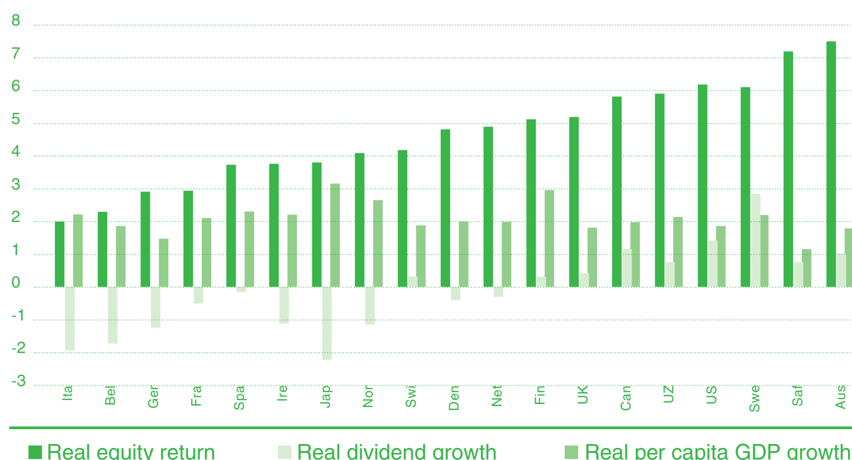
[9] Free float-adjusted implies the actual return foreign investors would receive given the numerous restrictions on foreign ownership.

formance in the global emerging markets) beat the annualized return of the MSCI World Index (a market-weighted index composed of companies representative of the market structure of 22 developed market countries in North America, Europe, and the Asia/Pacific region) by almost 9% over the past 11 years (10.2% versus 3.3%).

This one-sided performance by emerging market equities reinforced the belief among many that although emerging market stocks could be volatile, holding them over sufficiently long periods would yield superior returns as long as the emerging market economies were growing faster than their developed counterparts. These results seem straight forward and intuitive *but does history really bear this out?* In fact, a growing amount of academic research has thrown cold water on this belief recently, supposedly showing there has been no correlation between economic growth and equity returns over long periods of time.[10]

Figure 8 ranks the real equity returns of 19 countries over the period (1900-2009), from lowest to highest, while comparing them with real dividend and real per capita GDP growth[11]. There are three salient patterns of interest observable over the past century. First, there is clearly a high correlation (0.87) between real equity returns and real dividend growth across the 19 countries. Second, the claim that real dividends grow at the same rate as real GDP clearly does not hold (at least for this sample set over this period). In fact, real dividend growth (adjusted for

FIGURE 8/ Returns, dividends and GDP growth, 1900-2009 (Annualized real rate %)



Real equity return   Real dividend growth   Real per capita GDP growth

Source: Credit Suisse Global Investment Returns Yearbook 2010

[10] See Jay R. Ritter (2005).
[11] Growth in real GDP per capita, as opposed to growth in real GDP is used here because it controls for population growth and provides a more direct accurate measure of growth in prosperity.

inflation) has lagged behind real per capita GDP and the correlation between the two is actually negative (-0.3). Thirdly, and most importantly, the supposed strong positive correlation between long-run real growth in per capita GDP and real equity returns is completely nonexistent (the correlation is -0.23).[12]

As Table 1 shows, even among the largest emerging market countries last decade, when they were all experiencing historically unprecedented growth spurts, there was actually negative correlation between per capita GDP growth and average annualized returns (the correlation coefficient was -25 percent!). The Russia stock market returned more than twice those of China's but it only generated half the per capita GDP growth (Russia's outsized return can largely be explained by both the bounce back from its lost decade of the 1990s and the precipitous rise in energy prices.) In fact, China's economic growth was considerably faster than anyone yet its equity returns were the lowest among the BRICs last decade. South Africa and Brazil grew at one-half the rate of India last decade but offered approximately equal equity returns. Indonesia also provided vastly disproportionate returns (4% versus 20%). Again, all six of these nations (accounting for approximately two-thirds of emerging stock market capitalization) had handsome equity returns last decade but there was negative statistical correlation between these returns and their respective rates of economic growth.[13]

The supposed strong positive correlation between long-run real growth in per capita GDP and real equity returns is completely nonexistent.

TABLE 1 – REAL PER CAPITA GDP GROWTH AND ANNUALIZED EQUITY RETURNS (2000-2010)

Country	GDP Growth per Capita	Annualized Equity Return
China	9.6	10.5
India	5.6	15.6
Russia	5.6	23.4
Indonesia	3.8	20.4
South Africa	2.6	15
Brazil	2	13.6

Source: Bloomberg
Note: Correlation coefficient = -25%

[12] Credit Suisse Global Investment Returns Yearbook 2010, p. 15.
[13] The correlation is even more negative when comparing just real GDP growth to equity returns (-40%).

REASONS WHY ECONOMIC GROWTH MAY NOT TRANSLATE INTO BETTER EQUITY PERFORMANCE

There are a large number of reasons why faster economic growth may not translate into higher stock returns. Below, we briefly discuss six possible explanations.

First and most fundamentally, growth in a country's real economy is not the same as growth in its stock market capitalization. GDP growth reflects the level of real activity in the economy and it can grow in the absence of a stock market. For example, two decades ago, Japan was often cited as how rapidly GDP can grow through primarily bank financing.[14]

> First and most fundamentally, growth in a country's real economy is not the same as growth in its stock market capitalization.

Second, even growth in market capitalization may not provide returns to investors. Market capitalization can grow through privatization, deleveraging, acquisitions, initial public offerings, equity issuance by listed companies and listings by companies that might otherwise by traded elsewhere. None of these factors is necessarily a source of added value for stockholders of listed companies.[15]

Third, global investors are often unable to share in emerging market returns because emerging market companies may be largely offset to foreign investors. While government, family or domestic investors may enjoy value increases, global investors are unable to share fully in these companies' performances.[16] For example, the weighting of emerging markets in the global indexes such as Global MSCI is only approximately 10%. In many emerging markets, there are still significant restrictions on which shares foreigners can own. For example, in China, foreigner investors are excluded from owning "A" shares (they can purchase "B" shares, which is a more restricted universe). This is why investors cannot invest in global markets in proportion to each country's GDP. Investors, at best, can only hold each market in proportion to its free-float capitalization.

Fourth, there may be no clear correspondence between a company's place of origin and its economic exposure. Emerging market companies that trade internationally may be dependent on growth in the developed world. Similarly, multinationals in developed economies increasingly are relying upon growth in emerging countries.[17] The largest firms quoted on most national markets are multinationals whose profits depend on worldwide, rather than domestic economic growth.

[14] Credit Suisse Global Investment Returns Yearbook 2010, p. 9.
[15] Ibid. p. 9.
[16] Ibid. p. 9.
[17] Ibid. p. 9.

Fifth, in line with the efficient market hypothesis, if there is a consensus that emerging market growth will be higher, then this should already be reflected in stock prices. The emerging market story of the past decade is not exactly a new one and it seems highly unlikely that investors' expectations have not already been fully reflected in emerging market stock prices.

Lastly, the growth of listed companies contributes only a portion of a nation's increase in GDP. In entrepreneurial-oriented countries, new private enterprises contribute to GDP growth but not to the dividends of public companies. As a consequence, there is a gap between long-term economic growth and dividend and earnings growth.[18]

AFTER ALLOWING FOR ALL THE TURBULENCE, HOWEVER, A DIFFERENT PICTURE EMERGES

It would seem then, that the supposed link between economic growth and stock market performance is nonexistent. But is this conclusion too simplistic? Emerging market economies' economic performance varied enormously over the past three decades, alternating between stable growth and severe crises. Can we observe a different pattern or some peculiarities by examining different time periods and assessing how the emerging economies were performing over these periods?

Figure 9 charts the performance of the MSCI Emerging Index versus the MSCI Global Index over the past quarter century (1987-2011)[19]. One

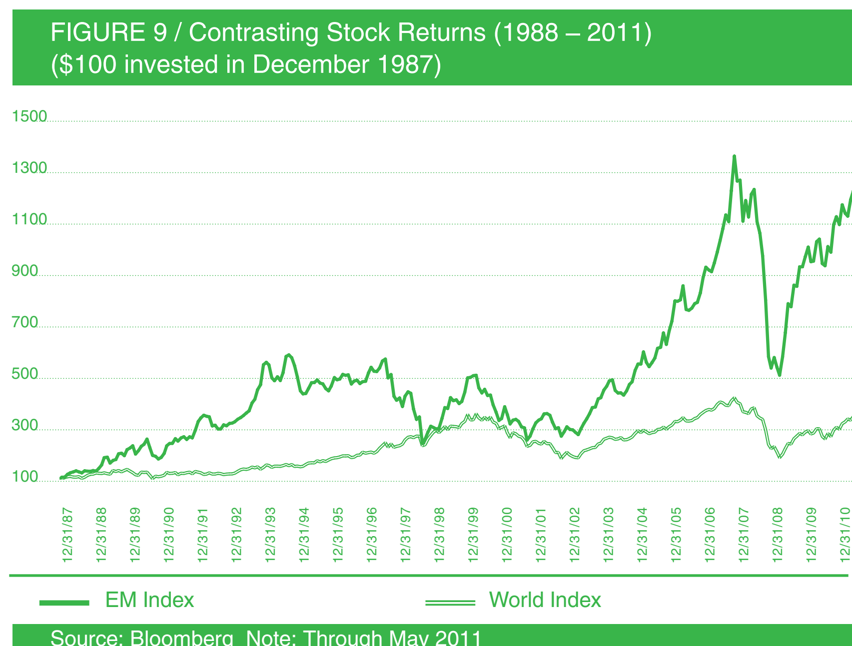


FIGURE 9 / Contrasting Stock Returns (1988 – 2011) ($100 invested in December 1987)

Source: Bloomberg Note: Through May 2011

[18] Ibid. p. 15.
[19] The MSCI Emerging Market Index data is not available before 1987.

hundred US dollars invested in the Emerging Index on December 1987 would have been worth $1,160 in late May 2011, realizing an annualized return of 11%. An equivalent investment over the same period in the developed markets, as proxied by the MSCI Global Index, would give a terminal value of $333, representing an annualized return of 5.3%. Interestingly, over the last quarter century, a diversified portfolio of emerging market stocks had twice the return of a diversified portfolio of stocks from the developed world.

Interestingly, over the last quarter century, a diversified portfolio of emerging market stocks had twice the return of a diversified portfolio of stocks from the developed world.

But here again the devil truly lies in the details. What is clear from figure 9 is that emerging markets exhibited enormous variations in returns over the last quarter century (volatility is addressed separately in the final section). We know that emerging economies generally performed well in the 1960s and 1970s, with high and stable growth. Most of the 1980s, however, was a difficult time for them. The Latin American debt crisis started at the beginning of the decade and cast a shadow over the rest of it.

Starting in the late 1980s, however, emerging market equities really began to surge (rising almost six-fold in just six years) till about the mid-1990s (economic growth for the emerging economies had also returned during this period). Then all was lost during the rest of the decade, starting with the 1994 Mexican crisis, followed by the very significant 1997 Asian crisis, then followed by the Russian and Brazilian crises of 1998 (it actually didn't finish until Argentina's default in 2001, the largest sovereign default in history).

After a strong but short recovery around the turn of the century, emerging market stocks had fallen again during the bursting of the Internet bubble and by September 2001 (the period coinciding with the 9/11 attack), both benchmarks had achieved approximately the same rates of return.

But then the last decade changed everything. Economic growth surged in emerging economies at the turn of the century and until the Great Recession and financial crisis of 2008, emerging market equities went on one of the greatest bull markets in modern history. From late 2001 until late 2007, it rose 532%, amounting to average annualized gains of 32%.

After falling violently during the recession (from peak to trough the MSCI Emerging and MSCI World indexes fell 63% and 53%, respectively), the MSCI Emerging has since recovered close to recent highs. Developed market equities, while also staging a strong

Over the last 25 years, emerging market equities have always outperformed developed market equities when emerging economies were growing faster than the developed economies and they underperformed when the reverse was true.

recovery since the recession, are no higher today (June 2011) than where they stood in early 2000, before the busting of the Internet bubble. It was very simply a "lost decade" for developed stock market investors.

Is there one salient thing we can take from this complex picture about performance? Yes. *Over the last 25 years, emerging market equities have always outperformed developed market equities when emerging economies were growing faster than the developed economies and they underperformed when the reverse was true.*

WHAT ABOUT RISK?

Evaluating equity returns is meaningless unless it is accompanied with a discussion of risk, or the underlying volatility of stock prices. A casual observation of Figure 9 illustrates how enormously volatile emerging market stocks have been over the past quarter century, particularly relative to developed market equities. With the origins of the recent financial crisis centered in the developed world, however, relative risk perceptions have been rapidly changing. Some analysts believe that with many of the developed economies coming out of the crisis with significant private and public debt levels, emerging markets might now be relatively less risky (for the first time, all BRIC countries currently possess investment-grade sovereign debt ratings). We know the atmospheric returns the emerging stock markets exhibited last decade were big enough to change average annual returns in favor of emerging markets going back at least one-quarter of a century. *But what about emerging market risk?*

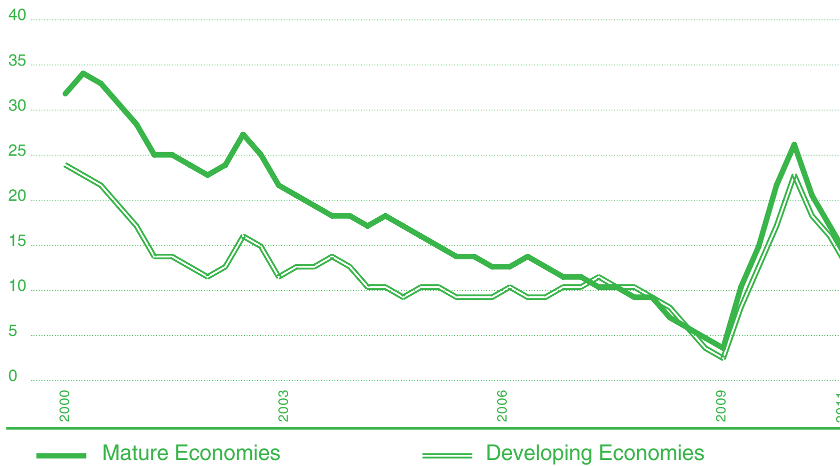
Emerging market equities have always sold at a discount relative to developed market equities. That is, global investors have generally demanded a lower relative price in relation to a dollar of earnings because emerging market securities were viewed as more risky, or volatile. During the past decade, however, the price-earnings ratio gap between the two has all but dissipated, implying that the equity risk premium associated with emerging market economies has declined dramatically (along with the risk free real discount rate).[20]

But did underlying volatility fall in emerging stocks recently? Figure 11 shows the annualized standard deviation of returns over the past three decades. It comes as no surprise that emerging market equity returns have been unambiguously more volatile

During the past decade, however, the price-earnings ratio gap between the two has all but dissipated, implying that the equity risk premium associated with emerging market economies has declined dramatically.

[20] Orthodox financial theory postulates that it is plausible that emerging market stocks should actually trade at a *higher* P/E multiple than mature market stocks since the former somewhat resemble growth stocks and the later value stocks, based on relative expected nominal GDP growth.

FIGURE 10/ Equity Market Valuations
Trailing price-to-earnings (P/E) ratios



Source: Bloomberg

than equity returns in the developed world. What might come as a surprise, however, is that the standard deviation of returns has increased in recent years, both absolutely and relative to mature stocks. Last decade emerging market returns had an annualized standard deviation of almost twice that of developed market stocks (47% versus 24%). Holding a diversified portfolio of emerging market stocks may have paid handsomely last decade but the investor paid a heavy price in terms of sheer volatility.

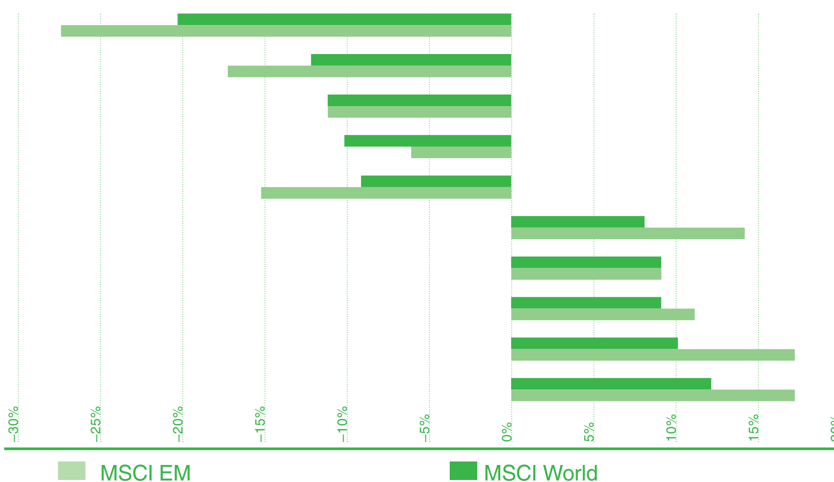
FIGURE 11/ Still More Risky
(Annualized standard deviation of stock returns, percent)

Source: Bloomberg * SIEMS' estimate
Note: Standard Deviation of the MSCI World and MSCI Emerging Indexes.

While the emerging market economies seemed to have decoupled from the developed economies (in terms of economic growth) in the most recent business cycle, the fact remains that they remain hypersensitive to global financial and economic conditions. As a further illustration of this volatility, figure 12 displays the months over 2000-2009 in which the MSCI World Index expanded or contracted by the largest percentage. The upper panel shows the five worst percentage declines while the lower panel the five best performing months. In the bullish months the emerging markets tended to outperform while in the bearish months they underperformed. Their market beta over this period was 1.3 (i.e. - emerging market returns were approximately 30% more volatile than the MSCI World Index). This above-average volatility was a consequence of emerging markets' poor relative performance during the dot-com-crash (early in the decade) and Great Recession, and superior recoveries after the lows of March 2003 and March 2009.[21]

According to CAPM theory [22], a higher beta implies a higher expected return for stocks. As a consequence, we should witness modestly higher relative returns from emerging markets. This higher return arises not from the superior growth argument discussed early in the paper, but from a financial argument as old as time, that investors require higher returns for higher risk.[23]

FIGURE 12/ Returns in Extreme Months, 2000-2009
(Index returns in the most extreme months for the World Index using data from MSCI)



Source: Credit Suisse Global Investment Returns Yearbook 2010.

[21] Credit Suisse Global Investment Returns Yearbook 2010, p. 10.
[22] The CAPM model, or Capital Asset Pricing Model, describes the relationship between risk and the expected return of a security. Note, that after adjusting for the "risk-adjusted" returns, the annualized returns in the developed market do not look so bad.
[23] Credit Suisse Global Investment Returns Yearbook 2010, p. 11.

CONCLUSION

In the course of just one decade, equity markets in the emerging world have flourished and have become critical sources of finance for emerging market businesses. It is arguably the most important development in international finance during the past decade. Emerging stock markets are increasingly becoming mainstream investments for global investors and their importance will only increase as their size increases and their financial markets become more integrated with those in the developed world.

In this paper we did find evidence that average annualized returns were indeed significantly higher for emerging market stocks over the past quarter century. Most importantly, we found that emerging equity markets tended to outperform when their economies were performing well. We also found, however, that emerging markets as an asset class remain significantly riskier than developed markets although they probably offer diversification benefits through exposure to different economic sectors and being at different stages of the business cycle.

That said, is the case for investing in emerging equity markets currently oversold? On the one hand, emerging equities no longer appear to be the "bargain" they were a decade ago. The emerging market story is most likely largely reflected in share prices which is why price-earnings multiples are close to parity with developed stocks. As a consequence, the exceptional performance of the past decade may not be replicated anytime soon. On the other hand, economic growth could remain much stronger in the emerging market economies relative to the developed world for many years and decades to come. This was never the case in the past. Emerging markets rarely soared for very long before imploding in some manner. If emerging economies, like Brazil and India, have finally "got it right", is it not unreasonable to expect higher equity returns over a protracted period like we witnessed over the past decade? Regardless of the scenario, however, investors should still keep in mind that they are not buying into economic growth but purchasing real companies whose return may or may not correlate with that nation's rate of economic growth.

If emerging economies, like Brazil and India, have finally "got it right", is it not unreasonable to expect higher equity returns over a protracted period like we witnessed over the past decade?

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APPENDIX

TABLE 1 CAPITALIZATION RATIOS BY COUNTRY – 2010

MENA		Sub-Sahara Africa		Latin America & Caribbean	
Egypt	47	Botswa	36	Argentina	14
Iran	14	Cote d'Ivoire	22	Bolivia	16
Jordan	130	Ghana	24	Brazil	104
Lebanon	43	Kenya	30	Chile	138
Morocco	92	Malawi	74	Colombia	74
Tunisia	28	Namibia	14	Costa Rica	6
		Nigeria	7	Ecuador	7
		South Africa	299	El Salvador	24
		Tanzania	6	Guatemala	1
		Uganda	0	Jamaica	40
		Zambia	7	Mexico	55
		Zimbabwe	37	Panama	38
				Paraguay	1
				Peru	61
				Uruguay	1
				Venezuela	2
Asia & Pacific		**Eastern Europe & Central Asia**			
Bangladesh	7	Armenia	3		
China	142	Bulgaria	13		
India	120	Croatia	46		
Indonesia	40	Estonia	1		
Malaysia	135	Georgia	0		
Mongolia	5	Hungary	23		
Nepal	21	Kazakhstan	50		
Pakistan	26	Kyrgyz Republic	2		
Papua New Guinea	42	Latvia	8		
Philippines	73	Lithuania	16		
Sri Lanka	29	Macedonia, FYR	19		
Thailand	51	Poland	53		
Vietnam	35	Romania	27		
		Russia	41		
		Serbia	11		
		Turkey	44		
		Ukraine	14		
		Uzbekistan	1		

TABLE 2 – THE TOP 100 GLOBAL COMPANIES BY MARKET CAPITALIZATION (2011)
(EMERGING MARKET COMPANIES LISTED IN BOLD)

Global rank 2011	Company	Country	Sector	Market value($b)
1	**PetroChina**	**China**	**Oil & gas producers**	**329**
2	Mobil	US	Oil & gas producers	316
3	Microsoft	US	Software & computer services	257
4	**Industrial & Commercial Bank of China**	**China**	**Banks**	**246**
5	Apple	US	Technology hardware & equipment	213
6	BHP Billiton	Australia/UK	Mining	210
7	WalMart Stores	US	General retailers	209
8	Berkshire Hathaway	US	Nonlife insurance	201
9	General Electric	US	General industrials	194
10	**China Mobile**	**China Hong Kong - listed**	**Mobile telecommunications**	193
11	**China Construction Bank**	**China**	**Banks**	**192**
12	Nestle	Switzerland	Food producers	187
13	**Petrobra**	**Brazil**	**Oil & gas producers**	**186**
14	Procter & Gamble	US	Household goods & home construction	184
15	Johnson & Johnson	US	Pharmaceuticals & biotechnology	180
16	Bank of America	US	Banks	179
17	JP Morgan Chase	US	Banks	178
18	BP	UK	Oil & gas producers	178
19	Royal Dutch Shell	UK	Oil & gas producers	177
20	HSBC	UK	Banks	177
21	IBM	US	Software & computer services	167
22	**Vale**	**Brazil**	**Industrial metals & mining**	**163**
23	Wells Fargo & Co	US	Banks	161
24	AT&T	US	Fixed line telecommunications	153
25	Chevron	US	Oil & gas producers	152
26	**Bank of China**	**China**	**Banks**	**152**
27	Cisco Systems	US	Technology hardware & equipment	149
28	Novartis	Switzerland	Pharmaceuticals & biotechnology	143
29	Roche	Switzerland	Pharmaceuticals & biotechnology	141
30	Google	US	Software & computer services	139
31	Pfizer	US	Pharmaceuticals & biotechnology	138
32	Toyota Motor	Japan	Automobiles & parts	138
33	**Gazprom**	**Russia**	**Oil & gas producers**	**138**
34	Total	France	Oil & gas producers	137
35	Rio Tinto	Australia/UK	Mining	134
36	**Sinopec**	**China**	**Oil & gas producers**	**134**
37	Oracle	US	Software & computer services	129
38	CocaCola	US	Beverages	127

39	HewlettPackard	US	Technology hardware & equipment	125
40	Intel	US	Technology hardware & equipment	123
41	**China Life Insurance**	**China**	**Life insurance**	**123**
42	Vodafone Group	UK	Mobile telecommunications	121
43	Samsung Electronics	South Kore	Technology hardware & equipment	117
44	Merck	US	Pharmaceuticals & biotechnology	116
45	Citigroup	US	Banks	116
46	Banco Santander	Spain	Banks	110
47	PepsiCo	US	Beverages	109
48	Telefonica	Spain	Fixed line telecommunications	108
49	EDF	France	Electricity	101
50	GlaxoSmithKline	UK	Pharmaceuticals & biotechnology	100
51	SanofiAventis	France	Pharmaceuticals & biotechnology	98
52	Philip Morris International	US	Tobacco	98
53	Eni	Italy	Oil & gas producers	94
54	Siemens	Germany	General industrials	92
55	BNP Paribas	France	Banks	91
56	Goldman Sachs	US	Financial services	90
57	**Itau Unibanco**	**Brazil**	**Banks**	**89**
58	Verizon Communications	US	Fixed line telecommunications	88
59	GDF Suez	France	Gas, water & multiutilities	87
60	**China Shenhua Energy**	**China**	**Mining**	**85**
61	Unilever	Netherlands/UK	Food producers	84
62	**Rosneft**	**Russia**	**Oil & gas producers**	**84**
63	Royal Bank Canada	Canada	Banks	83
64	Abbott Laboratories	US	Pharmaceuticals & biotechnology	82
65	AnheuserBusch InBev	Belgium	Beverages	81
66	**Saudi Basic Industries**	**Saudi Arabia**	**Chemicals**	**80**
67	Commonwealth Bank of Australia	Australia	Banks	79
68	**Reliance Industries**	**India**	**Oil & gas producers**	**79**
69	ConocoPhillips	US	Oil & gas producers	76
70	Westpac Banking	Australia	Banks	76
71	Schlumberger	US	Oil & gas producers	76
72	Mitsubishi UFJ Financial	Japan	Banks	74
73	E On	Germany	Gas, water & multiutilities	74
74	Statoil	Norway	Oil & gas producers	74
75	**CNOOC**	**China Hong Kong - listed**	**Oil & gas producers**	**74**
76	McDonald's	US	Travel & leisure	72
77	Qualcomm	US	Technology hardware & equipment	71
78	United Technologies	US	Aerospace & defence	69
79	British American Tobacco	UK	Tobacco	69

80	Occidental Petroleum	US	Oil & gas producers	69
81	ArcelorMittal	Netherlands	Industrial metals & mining	69
82	Walt Disney	US	Media	68
83	NTT DoCoMo	Japan	Mobile telecommunications	67
84	Nippon Telegraph & Telephone	Japan	Fixed line telecommunications	66
85	Barclays	UK	Banks	66
86	**Sberbank of Russia**	**Russia**	**Banks**	**65**
87	Honda Motor	Japan	Automobiles & parts	65
88	AstraZeneca	UK	Pharmaceuticals & biotechnology	65
89	TorontoDominion Bank	Canada	Banks	64
90	Lloyds Banking Group	UK	Banks	64
91	France Telecom	France	Fixed line telecommunications	63
92	L'Oreal	France	Personal goods	63
93	Canon	Japan	Technology hardware & equipment	62
94	Credit Suisse Group	Switzerland	Banks	61
95	Amazon.com	US	General retailers	60
96	3M	US	General industrials	59
97	SAP	Germany	Software & computer services	59
98	Teva Pharmaceutical	Israel	Pharmaceuticals & biotechnology	59
99	Deutsche Telekom	Germany	Mobile telecommunications	59
100	ANZ Banking	Australia	Banks	59

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