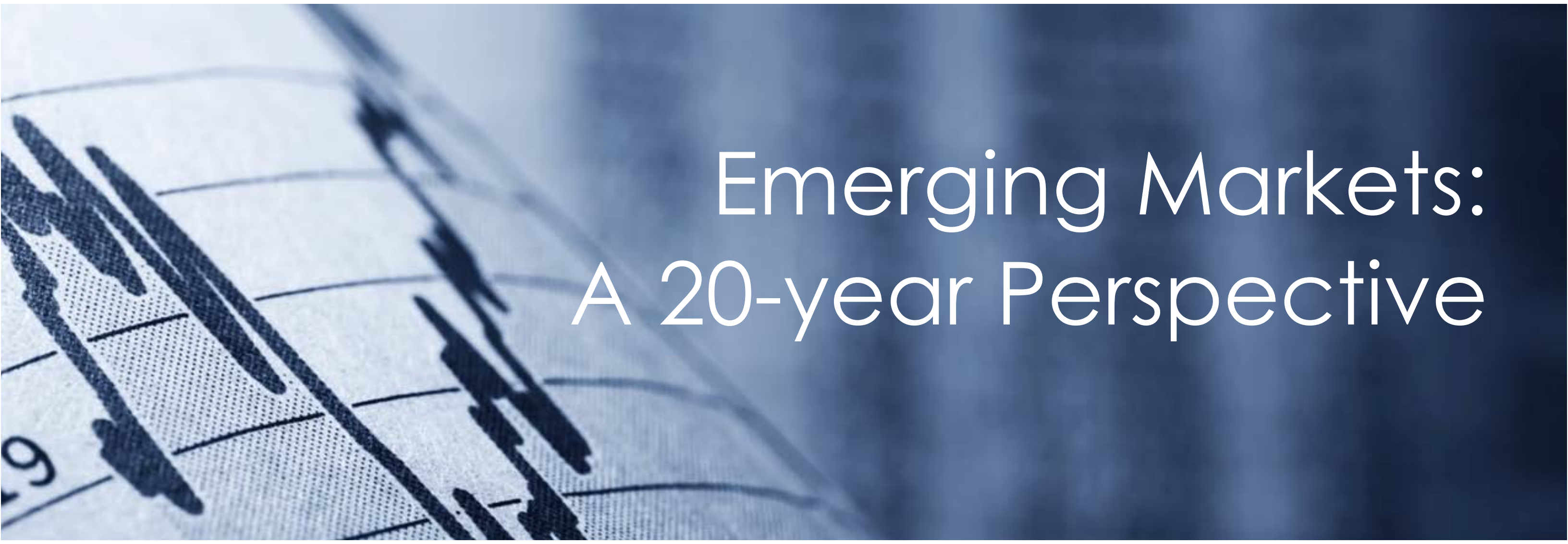
MSCI Barra



Emerging Markets: A 20-year Perspective

20 YEAR ANNIVERSARY 1988–2008

MSCI Emerging Markets Index

Dear Sir or Madam,

MSCI Barra is proud to celebrate the 20 year anniversary of the MSCI Emerging Markets Index. When the index was launched in 1988 it was the first comprehensive and consistent investable benchmark index for this component of the global equity markets. As such, it has been an important input in the geographic expansion of the opportunity set of many institutional investors. Throughout the years it has kept its essential role in the investment process of many organizations.

To celebrate this important anniversary, we are pleased to bring you this publication which attempts to illustrate how investing in the emerging markets has evolved over the last 20 years.

We start with interviews with some of the key players who were at the forefront of emerging markets investing back in 1988. These pioneers not only remind us of what it was like to venture into this new arena and of the considerable changes that have occurred since then, but they also give us their sometimes provocative views of what lies ahead.

We then look at the evolution of the emerging markets since 1988 through a series of variables, which illustrate not only the dramatic changes in terms of country coverage, but also the transformation of the underlying economies and the evolution of their financial markets and valuations.

The book concludes with an analysis of the sources of risk and return in the emerging markets.

We hope this publication will be a useful reference for understanding the factors that have shaped the emerging markets over the past 20 years. It is an opportunity to see how much the arena has changed. For us, as index providers, these changes have translated into a constant evolution of the indices, such as the addition of new countries, the introduction of float market capitalization weighting, and the creation of Emerging Markets Small Cap Indices. More recently, MSCI Barra launched new indices covering the frontier markets, markets which arguably present many similarities with the emerging markets 20 years ago.

But the road does not stop here. MSCI Barra has recently amended its country classification framework after a thorough consultation with the investment community, and continues to hold consultations regarding the most appropriate classifications of those countries announced as part of that consultation.

As the leading index provider for emerging markets, MSCI Barra will continue to renew and expand its offering with the objective of providing emerging markets investors with the best tools to support their investment process.

Sincerely,

Remy Briand
Managing Director,
Global Head of Index Research

Giacomo Fachinotti
Executive Director,
Chairman of the Index Policy Committee

Contents

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Q&A INTERVIEWS

As part of the 20 year anniversary of the MSCI Emerging Markets Index, MSCI Barra has interviewed some of the market participants who were at the forefront of emerging markets. These experts have shared with us their memories as to what it was like to invest in those markets 20 years ago, a time when this was very much a new venture. They also tell us how investing in emerging markets has evolved and contrast the investment challenges that exist today with those of 20 years ago.

Barclays Global Investors

Barclays Global Investors (BGI) is one of the world's largest asset managers. BGI pioneered the first index strategies in the 1970s and launched its first index funds for emerging markets in 1991.

Amy Schioldager

Amy Schioldager is a Managing Director at Barclays Global Investors and heads its US Equity Index Product including portfolio management, research and strategy. Her team has 44 members, including 28 portfolio managers and five researchers. She is responsible for USD700 billion in Equity Index funds managed out of BGI's headquarters in San Francisco. Prior to Amy's current responsibilities, she managed the Transition Management team for two years and the International Equity Portfolio Management Group for six years.

MSCI Barra: For you, what were the main driving factors for the emergence of emerging markets investing twenty years ago and what were the expected benefits?

Amy Schioldager: Back in the late 80s/early 90s emerging markets were an esoteric investment similar to frontier markets today. Most institutional clients were just beginning to embrace international investing on a broader scale with investments in developed markets (predominantly against the MSCI EAFE Index). In the late 80s, roughly 35% of public pension plans had an allocation to international assets compared to 90%+ today.[1]

Early adopters of emerging markets in the 90s were ahead of the curve, looking for true diversification, uncorrelated returns and low intra market correlation between emerging markets constituent countries. In hindsight they have benefited immensely from the first mover advantage as emerging markets now represent almost 20% of the MSCI ACWI ex US Index.[2]

MSCI Barra: When did your organization start investing in the emerging markets and where did the demand come from?

AS: BGI was one of the earliest index providers to offer institutional clients access to emerging markets beginning in 1991 with an index offering. Demand was mainly driven by institutional investors.

[1] Source: Greenwich Associates, 2005. [2] Source: MSCI Barra, March 2008.

MSCI Barra: Could you describe what the investment process was?

AS: When BGI started managing assets in emerging markets, access to local markets was a major obstacle. We therefore only invested in a subset of countries that satisfied our investment criteria. Our selection process focused on operational efficiency, sufficient liquidity, absence of repatriation and foreign investment constraints. At the outset we invested in Argentina, Brazil, Mexico, Thailand and Indonesia. As emerging markets matured and liquidity improved we expanded our investments to further countries and today invest locally in all 25 emerging markets.

Initially, BGI did not offer active strategies, therefore eliminating the need to dedicate resources to country or stock selection. Investments and allocations were based on the market cap of each country. Today BGI offers an active emerging market strategy that employs a quantitative country selection model highlighting the improvement of data availability and quality in these markets. We also offer custom strategies based upon equal or GDP weights across all emerging markets.

MSCI Barra: How was the emerging markets investment organized operationally?

AS: In the early 90s no dedicated team existed for emerging markets investing. Within our broader international portfolio management team two members managed our initial emerging markets country funds. Today our dedicated emerging markets indexing team manages assets in excess of USD55 billion. We employ five researchers supporting our active emerging markets country strategies and created an Emerging Markets Oversight Board that monitors macro risks not captured by our quantitative models. Emerging markets assets have grown tremendously and now represent a meaningful part of BGI's Indexing revenues.

MSCI Barra: What investment support tools were available (company research, benchmarks, data...)?

AS: Early on, not much data besides index information was needed to manage our index funds. Over time, as we started to manage active strategies, the need to access quality data increased exponentially. Today we subscribe to data from major vendors including Worldscope, Bloomberg, IBES, MSCI Barra, Economist Intelligence Unit, ICRG, etc. We employ data spanning from company financials to country and political risk indices.

MSCI Barra: Operationally, what would you say were the main challenges?

AS: Local market access and difficulties obtaining company and country specific data were the main challenges when we started managing assets in emerging markets. We therefore started managing assets only in a subset of countries, restricted client purchase/sell orders to once a month and imposed a maximum net aggregate order flow of USD100 million. Today most of the initial constraints have become obsolete and we invest locally in all 25 emerging market countries within the MSCI Emerging Markets Index. Our clients can transact within our fund on a bi-weekly basis without a maximum aggregate order flow. This really highlights the maturing of emerging market economies and their financial systems.

MSCI Barra: Could you share with us a striking memory or anecdote in the context of the early days of emerging markets investing?

AS: There has not been a single memory or anecdote that comes to mind but more the overall stage of the markets themselves. It's been interesting as we've researched frontier markets because in many ways, it's a trip back down memory lane. I'm seeing the same themes in frontier markets as I saw in emerging markets 14 years ago. The similarities include lack of liquidity, lack of data and overall support for foreign ownership and involvement in the local stock exchanges.

With that being said, the frontier markets of today are much more advanced from a technological perspective than emerging markets were in the mid-90s. The one story I remember was in Indonesia where the stock exchange consisted of several people and a chalk board which recorded all trades for the day. Pretty scary to think a simple brush across the chalk board could wipe out all record of any trades done for the day.

MSCI Barra: Has the rationale for investing in the emerging markets changed today?

> "Today, emerging markets represent a sizable portion of the international equity market and a dedicated allocation is increasingly necessary to have representative exposure to international markets."

AS: 20 years ago investors in emerging markets looked for exposure to an untapped segment of the equity universe with low correlation to traditional asset classes. Today, emerging markets represent a sizable portion of the international equity market and a dedicated allocation is increasingly necessary to have representative exposure to international markets. While diversification is still an important reason for emerging market investing, broader and deeper exposure to international equities has become a more important driver in emerging markets investing.

MSCI Barra: When and how has the emerging markets arena changed the most in the last 20 years?

AS: We have seen the number of emerging markets increase dramatically in the last 20 years. The increase in accessibility has been dramatic as investing overseas has become easier. The expansion of the European Union eastwards has encouraged many former communist bloc countries to embrace market reforms, allowing institutional capital to seek out new opportunities. This trend continues today with frontier markets such as Bulgaria, Romania and the Baltic States opening their doors to foreign investment.

From a macro perspective we see three distinct periods of development:

- Period one (1988-1994): Emerging markets arrives as an asset class. At the end of the 1980s, the introduction of Brady bonds that restructured Latin American debt paved the way for several healthy years of growth in emerging markets assets. A dedicated investor base developed.
- Period two (1995-1999): Emerging markets in crisis. In 1994, a surprise interest rate hike by the US Federal Reserve ushered in a series of emerging markets currency crises. At the time, most emerging markets had rigid currency regimes and fragile financial health. Mexico devalued the Peso at the end of 1994; Thailand devalued the Baht in 1997, setting off the Asian crisis; and Brazil let go of its grip of the Real in 1999.
- Period three (2000-present): Stabilization and growth. After this period of upheaval from 1994 through 1999, Brazil set the tone for recovery with an inflation targeting regime. This successful approach to monetary policy helped Brazil and many countries across the globe provide a key ingredient to the "great moderation" in which both inflation and interest rates have followed a convergent path to lower and more stable levels. Although there were currency crises in Turkey and Argentina in 2001 and 2002, respectively, contagion to the rest of the emerging world was notably absent. This period in emerging markets history has been one of strengthening and consolidation.

MSCI Barra: How has the correlation of emerging markets to developed markets evolved? Is investing in emerging markets small caps a better option for diversification today?

AS: Correlations have increased over time. Today, the correlation of emerging markets to the S&P 500 is roughly 80%

compared to around 40% in the early 90s. Today's correlations are only insignificantly lower than the correlation of developed markets to US equities which is now about 85%. However early adopters of emerging market investing have benefited enormously from the economic and stock market convergence of these countries to the developed world. Investing in emerging markets small cap stocks has only recently become a topic of discussion mainly due to the creation of the MSCI Emerging Markets Small Cap Index. The academic literature has paid scant attention to emerging markets small cap investing although it is generally accepted that smaller capitalization stocks have historically carried a risk premium over large cap stocks. We believe investors will ultimately seek broader and deeper exposure to emerging markets similar to the embrace of broad capitalization exposure to US equities.

MSCI Barra: Would you say that the emerging markets are still a distinct and homogenous asset class?

AS: Emerging markets now represent a sizable portion of the global equity universe. Their economies are well integrated within the global economic arena and have made gigantic leaps in respect to economic convergence to developed markets. Therefore not surprisingly correlations of their equity markets to the developed world have increased, making it harder to argue that emerging markets is a distinct asset class. However as they increasingly represent the engine of world economic growth and continue to display different economic growth patterns than developed countries, making an allocation to these markets is increasingly important.

While emerging markets are often referred to as a homogenous block, there is still considerable diversity within the 25 country line up of the MSCI Emerging Markets Index. The index combines Israel with a GDP per capita of USD24,000 per capita alongside the Philippines with a GDP per capita of approximately USD5,000. The index includes countries that are driven by the production of commodities like Brazil, Chile and Russia, with major consumers of raw materials like China. These substantial country differences in our view make emerging markets an ideal area for an active country allocation strategy.

MSCI Barra: Is the frontier markets story (Gulf Cooperation Council (GCC) countries, Eastern Europe, Africa...) today comparable to the emerging markets story 20 years ago? What are the similarities and the differences?

AS: There are definitely similarities between today's frontier markets and the emerging markets of fifteen or twenty years ago. Average economic growth of frontier markets is substantially higher than for more developed or even emerging countries. Many frontier economies' capital investments are focused on domestic infrastructure and economic growth is predominantly driven by the local economies rather than international trade, which is precisely where emerging markets of today have evolved from. Both frontier markets (and emerging markets of 20 years ago) display low correlation to developed market assets and are a relatively untapped segment of the global equity market. Just like emerging markets 20 years ago many frontier markets are difficult to access, display low liquidity, restrict foreign ownership or impose barriers to repatriation of assets.

Frontier markets today however, especially the GCC and Eastern European states are much more developed than many of the emerging markets were 20 years ago. For example the UAE has a GDP per capita of USD42,000, in line with the GDP per capita of the US. Eastern Europe frontier markets have access to 320 million consumers of the European Union and many of them are actually already members of the EU (Slovenia, Romania, Estonia, Bulgaria). Therefore it is possible that frontier markets will follow a faster path of convergence to developed markets than emerging markets have followed over the last 20 years.

Capital Group International

The Capital Group companies comprise one the world's largest investment management organizations. In 1986, Capital International launched the Emerging Markets Growth Fund under the initiative of the International Finance Corporation (IFC), a member of the World's Bank Group.

David Fisher

Victor D Kohn

David Fisher is chairman of the board of The Capital Group Companies, Inc., Capital Group International, Inc. and Capital Guardian Trust Company, as well as an officer and director of numerou affiliated companies. He is a portfolio manager for US, non-US, global and emerging markets assets and has been involved in Capital's international investing activities since 1982. He joined the Capital organization in 1969 as a financial analyst and was director of research for 10 years.

Victor D Kohn is president and a director of Capital International, Inc., a senior vice president of Capital International Research, Inc., a director of Capital Guardian Trust Company, chairman of the CII Emerging Markets Investment Subcommittee and an emerging markets equity portfolio manager. He is also an executive vice president of Capital International's Emerging Markets Growth Fund. Mr Kohn earned bachelor's and master's equivalent degrees (summa cum laude) in industrial engineering from the Universidad de Chile, and an MBA from Stanford Graduate School of Business. He holds the Chartered Financial Analyst® designation.

MSCI Barra: For you, what were the main driving factors for the emergence of emerging markets investing 20 years ago and what were the expected benefits?

David Fisher: The drivers were similar to what they are today. This was a part of the world that was going to grow faster than the rest of the world. That was pretty clear to us.

Victor Kohn: The clear goals for us getting into the emerging markets investments were the possibility to invest in economies that were growing fast and expanding the opportunity set – things that we had not looked at before, economies that affected either a lot or a little the companies from the developed world in which we had interest and in which we had investments.

So it was a combination of tapping into growth economies and into an expanded set. It was not, at any point, for the sake of diversification or risk reduction.

David Fisher: The benefits were first that we would make a decent amount of money for clients. Number two we would learn some things about the world in doing research in emerging markets that would make us better investors in the rest of the world. And third we would probably get an edge on our competition because our competition was going to have to spend money to do research on that part of the world in the future while we would have assets to manage where we would collect fees to help us to pay for doing that research.

It was with a lot of trepidation, because there was really a reputation risk that everybody worried about a great deal. We had been around as an organization for 50-plus years. Did we really want to see our reputation go down the drain in some countries – Brazil, Indonesia, or somewhere else?

MSCI Barra: When did your organization start investing in the emerging markets? Where did the demand come from?

> "The benefits were first that we would make a decent amount of money for clients. Number two we would learn some things about the world in doing research in emerging markets that would make us better investors in the rest of the world."

DF: We had some investments before that, but we started with a dedicated fund when the Emerging Markets Growth Fund was started in the spring of 1986. It was a USD50 million closed-end fund with a dozen investors.

VK: The fund was an initiative of the IFC which ended up selecting us to manage it. It was an extremely modest beginning with a dozen investors who did it almost as a venture though. They were all institutional investors, with a mix of corporate and others, with the likes of the IFC, the General Motors pension fund, the Aga Khan Foundation and Deutsche Bank. Before that, there had been some investments in specific companies. Occasionally in the 70s there had been research trips to Brazil, to Mexico, but there had really never been a concerted effort to invest in emerging companies or emerging countries per se until the mid 80s.

DF: The IFC was the prime organization putting this together but there weren't a lot of people that were lined up to invest in emerging markets. So it was persuading that first group of clients to do it rather than just gathering the money that people wanted to invest. I would say there was not a lot of enthusiasm at the time.

I don't think we realized it at the time, but what we were doing initially was identifying countries that had above-average growth prospects and investing in the infrastructure of those countries. So, for example, in the first couple of years our largest country exposure was Thailand. We owned the telecom companies, the utilities, the cement companies, etc. That's a great contrast with what we do now, which in many cases is more investing in world-class companies that just happen to be domiciled in emerging markets countries.

MSCI Barra: Could you describe what the investment process was?

VK: First there was no allocation per se to emerging markets. All we did, as I said, is start out with this USD 50 million fund. Within those areas, we looked at the universe of countries that had markets that were more or less open to foreign investors, which was initially not much more than about a dozen countries. Those were countries like Mexico, Brazil, Argentina, Malaysia, Thailand, the Philippines, Jordan... It was a fairly reduced set consisting of what was available to foreign investors.

After we determined that opportunity set, we started learning about it, with dedicated investors for each country. The end result of the portfolio was not very dissimilar to what we would do today in a multi-country portfolio, with a mostly bottom-up approach combined with discussions of the attractiveness of the macro elements.

DF: I don't think it was very different to the way we do it in the developed world. We had analysts go out, call on companies and come back and say what they found attractive. It was exciting because in many cases this was literally the first time a company ever saw an analyst. They wondered why these people were asking them all these strange questions about dividend policy, capital spending or earnings.

That, together with some macro work, helped us shape a country view. We brought together a macro-view and a micro-view of individual companies, talked about it a lot and made the investment decisions. But it was pretty straightforward; we didn't bring a unique approach to the investment process in emerging markets compared to what we had in the rest of the world.

MSCI Barra: How was the emerging markets investment organized? Were there dedicated teams? What size were those teams?

DF: We did have a dedicated team. We brought in a number of people that either had experience or came from part of the emerging markets world. The Patricia Artigas', the Victor Kohn's, the Claire Cui's of this world joined us. There were a couple of us, principally Hartmut Giesecke and myself initially, who were portfolio managers. And then Shaw Wagener and Mark Denning got together as a global emerging markets team with Shaw doing Latin America and Mark doing Asia. We were probably initially a dozen people or something like that.

There has been an incredible camaraderie within that group – we called it the jungle research group initially. We have stayed very close through the years - when the numbers are good and when the numbers are poor. We just stayed very close. We do retreats in strange places and do strange things at our retreats. So it's a good group all in all.

MSCI Barra: What investment support tools were available (company research, benchmarks, data...)?

DF: There wasn't much brokerage research. There weren't many people who cared at that time. As you have pointed out the MSCI Emerging Markets Index started almost two years after we started the fund, which tells you something about the availability of data. We were really breaking new ground in every sense. When you called up a company and said that you would like to come see them and talk about what they are doing, the company would wonder why we were doing this.

VK: The only benchmark at the time was the IFC Index in the middle of 1986. Data was quite difficult to come by. You would typically contact the local stock exchanges. The availability of even corporate data was better in some countries, very difficult in others. Sell-side was more developed in Asia, much less so in Latin America.

DF: The other thing that was particularly different is that there wasn't an awareness of what good practices are. For example, in those days it was not unusual for a company to go from a family-owned business to a publicly traded business. But in the process of doing that they kept certain parts of the company as privately owned by the family and did business with each other. So you never knew who the management were working for: were they working for public shareholders or for the family? Over time that has gone away because people realize that is not best practice and there were enough questions about it that they corrected it. But in those early days there were a lot of things where you just didn't know.

MSCI Barra: Operationally, what would you say were the main challenges?

VK: The main issues were the restrictions or the array of regulations governing the flow of money in and out of countries that at times were quite complex. There were sometimes complex legal investment vehicles that you had to set up, for example for investments in Chile. There were very lengthy, both time-wise and effort-wise, applications to be set up as a qualified foreign investor, for example in Taiwan. So the main issues had to do with the flow of money, capital gains, taxes, etc., in and out of countries.

DF: There were incredible limitations. I remember that before we could invest in Jordan we had to get approval from the King of Jordan on the names we wanted to own. In Brazil you had to set up a separate entity that represented the money that you were going to invest in Brazil. You had to have a minimum of ten names that you were going to own, and no name in that fund could account for more than 10% of the assets. You had to keep track of this on a daily basis and sell securities if they went up so that they didn't become more than 10% of the total.

> "There were incredible limitations. I remember that before we could invest in Jordan we had to get approval from the King of Jordan on the names we wanted to own."

A lot of markets – Korea, Taiwan...– weren't really open in those days. Obviously, the Chinese market didn't exist. In October 1989, three years after the fund was started, I went to China to talk about establishing a stock market in Shanghai. At the time I thought I'd never see it in my lifetime but I wouldn't have missed the opportunity to go on a bet. Now China has one of the largest emerging market stock markets in the world and some of the companies listed in Shanghai are among the largest market caps in the world in their particular fields. So a lot has changed!

MSCI Barra: Could you share with us a striking memory or anecdote in the context of the early days of emerging markets investing?

DF: Certainly going to China stands out. And going to Thailand in the mid 80s – I think I went to Thailand in 1985, before the fund was started – and finding out that there were real companies there. Those were experiences that changed the way you viewed the world.

I've come across this thing that says that if the world had a hundred people, from memory, 55 of them would be people of color, 22 would be Christian, 53 would live below the poverty line, one would be a college graduate. If you asked most people that question, you would get numbers that are nowhere close to those. I think that for most of us, the involvement in emerging markets has made us aware, made us sensitive to those numbers in ways that most people are not sensitive.

There are all these casinos being built in Macao. What most people don't realize is that there are just under three billion people that live closer to Macao than New York City is to Las Vegas. And for the most part those three billion people like to gamble. And so when you think of the potential market versus Las Vegas, you say wow, this is really something. Just under half the population of the world lives closer to Macao than New York is to Las Vegas!

VK: I still remember quite vividly those years. I joined Capital in March of 1986. A few months earlier we had started the fund, which we launched officially in June of 1986. At the time I was the analyst covering Argentina, Brazil and Chile. In June or July of 1986, I did my first research trip down to those countries.

I visited about eight companies in Argentina. It took me two, three months of intensive effort to prepare for that trip as I didn't have any way of getting any data on the companies. I got a broker in Argentina to photocopy for me the annual reports that had been submitted by those companies so I could start learning about them. I set up appointments, and with each one of those eight companies, I was the first analyst to visit them. They were not even quite sure why I was asking all those questions. This was way, way before Argentina developed institutional investments and pension funds.

It was less so in Chile, which had started to have an institutional market in the early 80s. Brazil had a more developed equity market and there was much more developed sell-side information. But that first trip to Argentina was interesting, to say the least.

MSCI Barra: Has the rationale for investing in the emerging markets changed today? What is that rationale today?

"I think 70% of the total growth of the world over the next 20 years will come from the developing world."

DF: I think it's the same. It is going to grow significantly faster than the rest of the world – I think 70% of the total growth of the world over the next 20 years will come from the developing world. The one thing that is probably different is that technology has come along even faster than we could have imagined and speeds up the pace at which the developing world could be incorporated in the rest of the world.

VK: It is pretty much the same, but today there is a much, much stronger conviction that the vast majority of the things we hoped for 23 years ago have indeed developed and evolved in the direction we hoped for. Actually we would have never dreamt 23 years ago that things would go as well as we have them today. When we started, as I said, the portion of the universe that we tackled was relatively modest and limited. We would have never thought that the Soviet bloc would be a market economy. China was really not an open market; it was starting to be an interesting economic player, but very modest and very unknown.

So we went from x percent of the population of the world being covered by what we did on the investment side to 3x, 4x being covered. We would have never been able to predict this.

MSCI Barra: When and how has the emerging markets arena changed the most in the last 20 years?

DF: It has changed in many ways. First of all, there are countries and companies that weren't available to invest in 20 years ago that are available today – Taiwan, Korea, Russia, China... There were restrictions in Brazil, in India... and in the Middle East there are now companies you can invest in that just weren't there. That is dramatically different.

The second thing that is different is the notion that you have world-class companies that happen to be domiciled in the developing world and that are competing with companies in the developed world – companies like Infosys or Wipro in India, Samsung in Korea, Hon Hai in Taiwan, AmBev (now InBev) in Brazil, South African Breweries (now SABMiller)...

VK: What is, I think, the most striking change is that what we would call reasonable macro-economic and corporate policies are now the norm in emerging markets.

When we started, this was a very heterogeneous and to a degree unorthodox group. There was high inflation in Latin America. In Southeast Asia, there was high growth but lots of distortions, including pegged exchange rates and protectionist policies. There were a lot of issues that brought vulnerability.

Today, I would say that the menu of policies, the accepted policies, is almost indistinguishable between what we would discuss in the US, in Europe or anywhere else. On the contrary, I think that the average emerging economy has advanced and has instituted policies that are quite conservative and very promising.

MSCI Barra: How has the correlation of emerging markets to developed markets evolved? Is investing in emerging markets small caps a better option for diversification today?

DF: You will notice that I never used diversification as a reason to invest in emerging markets. My reason was that it was going to grow faster and it was more attractive. And that still is my reason.

Although I haven't actually looked at the number, I suspect that today it correlates more with the developed world than it did 20 years ago. It has to do with a lot of people that are investing money looking across the developed and developing worlds, and so the correlation would logically be higher.

VK: To us, the issue of diversification is not an important issue at all. In that sense, small caps as a way of achieving higher diversification is not something that we pay much attention to. We like to look at all the opportunity set to look for the best alternatives. If those happen to be clustered at some point around the higher caps or the lower caps, so be it. It's not a big issue for us.

DF: But the comparison you should make is not, I think, correlation. Look rather at valuation, see how companies in the developing world are valued relative to valuation in the developed world. That's something you should keep your eye on all the time, but I sure wouldn't get caught up with diversification as a reason.

MSCI Barra: Would you say that the emerging markets are still a distinct and homogenous asset class?

VK: I would say distinct, yes, very much so. Homogenous, no, very much not so.

I think distinct, yes, because you would still characterize them by rapid growth and rapid pace of change. The pace of change I think is dictated both by exogenous factors, but mostly by endogenous factors. The type of transformations that these economies and these companies have gone through is phenomenal. And again, those have been mostly motivated by a desire to implement internal reforms. At times they have benefited from a good external environment and at times they have been hindered by a more hostile external environment, but I would say, almost overwhelmingly, the degree of internal transformation that has happened in terms of the organization of those economies, those countries, those companies, is striking. In that sense, I think it's a very distinct asset class.

Is it homogenous? No, not at all. It always strikes me that in any particular geographic neighborhood, the difference among the emerging market countries is so sharp, much sharper than the differences that you would see in the developed world. If you look at Europe, or Europe plus UK, the differences would not be a fraction as sharp as what you see in Asia – China, Taiwan, Korea, India are very different. Similarly, in Latin America – Mexico, Brazil, Chile are very different. Russia and Central Europe are very different. Of course, African countries are very different. I think that the degree of heterogeneity is remarkable.

DF: I think it's an asset class that will go away someday. I think that at some point we are going to look at the world as a whole, including emerging markets, and we will have some countries that grow faster than others, which has always been true and will continue to be true.

I think there was something magical about emerging markets and I feel very strongly that those countries that we call emerging markets today will continue to grow faster than the world as a whole or than the developed world. But you are going through the issue of whether countries should graduate from being emerging markets to being part of the developed world and if ten years from now they have all graduated it certainly does away with the concept.

It's true that there are some other countries that come along. It is clear that we are going to have the opportunity to invest in the Middle East and Africa. But I can't imagine that you are going to have an emerging markets index ten years from now that consists of the Middle East, Africa and maybe some Eastern European countries, with everything else graduated to be part of the developed world. I think that at that point we forget the concept of emerging markets.

MSCI Barra: Is the frontier markets story (Gulf Cooperation Council (GCC) countries, Eastern Europe, Africa...) today comparable to the emerging markets story 20 years ago? What are the similarities and the differences?

“The bigger differences though, in my mind, are that, as I said before, the emerging markets have succeeded over the last 20 years to the largest degree due to their own doing, to the changes and reforms that they have implemented in their economic systems.”

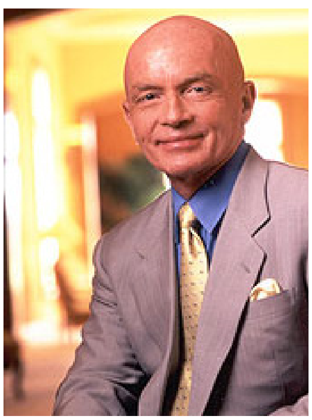
VK: I think that there are some differences and some similarities. The similarities are that there is a group of typically smaller economies, smaller countries, that are, I think, going onto the radar screen of global investors because they are enjoying some of the benefits of a good external environment, because they are starting to implement some changes and because they are starting to do well as economies. And there is a lot of hope that they will go the positive way that their neighbors that are now solidly in the camp of emerging markets have gone

So, I guess that some of the same hopes of 20-odd years ago are comparable.

The bigger differences though, in my mind, are that, as I said before, the emerging markets have succeeded over the last 20 years to the largest degree due to their own doing, to the changes and reforms that they have implemented in their economic systems. Many of the frontier markets today are doing very well, but undoubtedly to a large degree due to an extremely favorable external juncture, particularly related to the booming commodities—energy and others. There remains a question mark over whether they will implement the same internal changes and make their economies flexible in a way that will take advantage of the current bonanza and make them sustainable players over different economic environments. Only then will you be able to say with a lot more confidence that these are emerging markets in the true sense in which you can invest for a long time.

Franklin Templeton Investments

Franklin Templeton Investments is a global investment management organization.
In 1987 Templeton launched the first closed-end mutual fund dedicated to emerging markets.



Mark Mobius

Mark Mobius, PhD, managing director, joined Templeton in 1987 as president of the Templeton Emerging Markets Fund, Inc. In this capacity, he directs the Templeton Global Emerging Markets Equity Group based in Templeton's 14 emerging markets offices and manages the emerging markets portfolios. Dr Mobius has spent more than 40 years working in emerging markets all over the world.

MSCI Barra: For you, what were the main driving factors for the emergence of emerging markets investing 20 years ago and what were the expected benefits?

Mark Mobius: We ventured into emerging markets in search of new investment opportunities that would allow our investors to achieve extraordinary returns as well as diversify their portfolio and lower their overall investment risk. We were attracted to this asset class as emerging markets represented a fast growing part of the world economy. They also had the ability to deliver higher gains, contribute to the diversification of a truly global portfolio with attractively valued companies and were underweighted in global portfolios at the time.

MSCI Barra: When did your organization start investing in the emerging markets and where did the demand come from?

MM: Templeton launched the first listed emerging markets fund in 1987 with just USD100 million. We now manage more than USD40 billion. We've seen demand for emerging market funds from investors globally – Europe, US, Canada, Asia, Latin America, Africa and the Middle East.

MSCI Barra: Could you describe what the investment process was?

MM: The team used, and still uses, the same ground-up, long-term value approach to investing instituted by Sir John Templeton over 60 years ago. The group employs a bottom-up, value approach to emerging markets investing. The investment methodology is highly disciplined with the single objective of achieving superior returns entirely through stock selection. By concentrating on this objective, other elements of the investment process such as top-down market forecasting, economic projections, currency forecasting and asset allocation do not drive investment decisions but are used to support the ground up process.

Also key to the team's success has been the practice of making on-site visits to companies. Being on the ground is an integral part of Templeton's investment philosophy. This direct first-hand approach provides the benefit of a timely understanding (both of the opportunities as well as the pitfalls) of emerging markets stocks.

"One of the most striking things was the incredibly cheap valuations of many emerging markets companies. Many of them were just selling at a small fraction of their asset values."

MSCI Barra: How was the emerging markets investment organized operationally?

MM: In 1987, emerging markets investment was undertaken by a dedicated emerging markets team which had three members including myself (all of whom are still part of the team). This team has since grown to more than 30 members.

MSCI Barra: What investment support tools were available (company research, benchmarks, data...)?

MM: In the early days, emerging markets companies were generally under-researched so I traveled extensively with my analysts to visit companies and work with local researchers in order to identify investment opportunities. There was no Internet in 1987 and if we wanted to get an annual report of a company quickly, we had to depend on the fax machine. Today things have changed dramatically.

MSCI Barra: Operationally, what would you say were the main challenges?

MM: It was a difficult time because in those days although there were many emerging market countries in Asia, Africa, Latin America and Europe, very few of them were open for investment. There were strict foreign exchange controls, and limitations on foreign investment in addition to the plethora of problems of safekeeping of securities and market liquidity.

MSCI Barra: Could you share with us a striking memory or anecdote in the context of the early days of emerging markets investing?

MM: One of the most striking things was the incredibly cheap valuations of many emerging markets companies. Many of them were just selling at a small fraction of their asset values.

MSCI Barra: Has the rationale for investing in the emerging markets changed today?

MM: No, the reasons remain the same. Investors invest in emerging markets to benefit from the higher growth and rapid economic developments in these markets. Emerging market investments also allow investors to diversify their portfolios.

MSCI Barra: When and how has the emerging markets arena changed the most in the last 20 years?

MM: Accessibility to emerging markets has changed significantly in the last 20 years or so. At the time, investment was only possible in a handful of countries. Since then however, major developments such as the opening of Brazil in the late 80s, Korea and Taiwan in the early 90s, South Africa with the end of apartheid, easier access to Eastern European economies, and Russia, the opening of India and then, of course, China provided investors with greater accessibility to markets around the world.

There are also a lot more investors in the asset class, with substantial growth in domestic and international investors, fund managers, hedge funds and so forth. Information is more easily available today than it was then with much greater coverage by investment banks / brokers and custodian banks – making investing in this asset class much simpler and easier than 20 years ago.

MSCI Barra: How has the correlation of emerging markets to developed markets evolved? Is investing in emerging markets small caps a better option for diversification today?

MM: As a group, the correlation of emerging markets to developed markets may have grown in comparison to 20 years ago, but individually, we still see some emerging markets which are not strongly correlated to developed markets. I wouldn't say that emerging markets small caps are a better option for diversification but that they are also a good way to gain exposure to the emerging markets asset class.

MSCI Barra: Would you say that the emerging markets are still a distinct and homogenous asset class?

MM: Yes, emerging markets are still a distinct asset class due to their characteristics.

MSCI Barra: Is the frontier markets story (Gulf Cooperation Council (GCC) countries, Eastern Europe, Africa...) today comparable to the emerging markets story 20 years ago? What are the similarities and the differences?

MM: Yes, almost definitely. We are seeing the same characteristics in frontier markets that we saw when we first started investing in emerging markets in 1987. Similarities include, but are not limited to, positive economic trends such as high growth, high potential for capital market development and growth, low correlation to world markets and each other due to their diversity, attractively valued companies, typically under-researched markets and limited accessibility to investors.

Schroders

Schroders is a global asset management company.

Allan Conway

Allan Conway is Head of Emerging Market Equities at Schroders. He has been an employee of Schroders since 2004. He was formerly Head of Global Emerging Markets, West LB Asset Management and Chief Executive Officer of WestAM (UK) Ltd.

MSCI Barra: For you, what were the main driving factors for the emergence of emerging markets investing 20 years ago and what were the expected benefits?

Allan Conway: My involvement with emerging markets began in the early 1980s. At that time I was in the investment department of Provident Mutual, a large UK Life Assurance company. I remember the head of international equities returning from a trip to Hong Kong full of excitement about its economic growth and the prospects for high returns from the market. It was a market that no one at the company knew anything about so I volunteered to investigate it. Over the next few years I expanded my horizon to a number of other Asian markets. This was typical of how other institutions during the 1980s began their interest in emerging markets. The strong economic expansion underway in Asia and the consequent rapid growth in corporate profits attracted more and more investors as the decade progressed. During this time investors also began to look at emerging markets in other parts of the world.

MSCI Barra: Could you describe what the investment process was?

AC: From the beginning it was clear that country selection was going to be very important. In the early days I expected to get 75% of value added from country allocation and 25% from stock selection. Over the last 25 years this split has changed to 50/50, but country decisions remain a key source of return. Back then I didn't have sophisticated quantitative models to help guide my country allocation. In fact we didn't even have computers or reliable data, so allocation was very much a question of judgment. Stock selection, on the other hand, was and still is a matter of undertaking detailed fundamental research. I have always believed that visiting companies regularly and producing detailed company reports and financial models is the best way to select stocks.

MSCI Barra: How was the emerging markets investment organized?

AC: I did not have a team working with me, I was on my own. As interest in emerging markets began to grow teams began to form. But in the early days it was fairly typical for the international investment departments of the major UK institutions to have only one or two fund managers focused on this area.

> "I didn't have access to Reuters so my first job each morning was to spend an hour on the phone with a broker taking down prices. The only thing missing was a quill pen! My prime research tools were a telephone, hard copy broker research and a lot of shoe leather for carrying out my own research trips."

MSCI Barra: What investment support tools were available (company research, benchmarks, data...)?

AC: The available technology was pretty basic, as mentioned above I didn't even have a PC. Michael Bloomberg had only just left Salomon Bros. to sell his terminals to Wall Street firms and I didn't have access to Reuters so my first job each morning was to spend an hour on the phone with a broker taking down prices. The only thing missing was a quill pen! My prime research tools were a telephone, hard copy broker research and a lot of shoe leather for carrying out my own research trips.

MSCI Barra: Operationally, what would you say were the main challenges?

AC: The main challenge was simply getting access to data. Because there were no computers working out orders was a time consuming and manual process. When the first PC arrived there was only one person who was expert in its use. I clearly remember having to ask a big favour so that he would produce what today would be considered a most basic spreadsheet for automating orders.

MSCI Barra: Could you share with us a striking memory or anecdote in the context of the early days of emerging markets investing?

AC: The arrival of the first spreadsheet certainly made an impact as it made life so much easier and freed up a lot of time. But one early memory that stands out was a visit I made to South Africa. I was one of the first investors to undertake a research trip to the country after the election of Nelson Mandela as President. At that time companies in the emerging markets were under-researched and under-owned and gaining access to management was crucial. As an early visitor I had great access. I remember not only meeting the senior management teams of companies I was interested in, but their entire boards.

MSCI Barra: Has the rationale for investing in the emerging markets changed today?

AC: The rationale has not really changed much over time. It is still based on the attractiveness of strongly growing economies which can be expected to generate premium returns for investors in their stock markets.

MSCI Barra: When and how has the emerging markets arena changed the most in the last 20 years?

AC: The biggest change has been the increase in the availability and quality of data. This has allowed us to develop sophisticated and reliable models to help with both country allocation and fundamental company research. Additionally the improvement in accounting standards has been an important change which has led to a significant improvement in the quality of and confidence in company analysis.

MSCI Barra: How has the correlation of emerging markets to developed markets evolved? Is investing in emerging markets small caps a better option for diversification today?

AC: Emerging markets continue to provide very strong diversification benefits and improve the risk return profile for investors. For example, looking at a 10-year efficient frontier analysis to end February 2008 an investor with 100% exposure to the MSCI USA Index would have had an annualized return of 2.3% and risk of 17%. But a portfolio of 70% MSCI USA Index and 30% MSCI Emerging Markets Index would have produced a much higher 5.1% annualized return without taking any more risk. Moreover, despite globalization the divergence of performance between the emerging and developed markets has been huge. Between end December 1998 and end March 2008 emerging markets are up almost 400% whereas the developed markets are up only around 44%. Therefore it is not necessary to venture into the small cap arena to gain the benefits of diversification.

> "The frontier markets of today are the emerging markets of tomorrow so building an exposure now makes perfect sense for long term investors."

MSCI Barra: Would you say that the emerging markets are still a distinct and homogenous asset class?

AC: The answer is categorically yes. Even though emerging markets as an asset class encompasses a diverse group of countries at different stages of their economic development they are linked by key common factors. In particular it is their strong economic growth and the fact that even today they tend to be under-owned relative to developed markets which binds them together.

MSCI Barra: Is the frontier markets story (Gulf Cooperation Council (GCC) countries, Eastern Europe, Africa...) today comparable to the emerging markets story 20 years ago? What are the similarities and the differences?

AC: Frontier markets are an extremely attractive theme. Indeed they always have been. The frontier markets of today are the emerging markets of tomorrow so building an exposure now makes perfect sense for long term investors. Having followed emerging markets for many years it is clear to me that a knowledgeable investor can reap significant returns, particularly in the early years when markets are evolving rapidly. The progress from frontier, to emerging, to developed status can be bumpy from time to time but is usually extremely rewarding. It is interesting to note that the companies of the "frontier" Hong Kong market in the 1980s have matured to become familiar names to international investors and have delivered significant returns along the way.

Contents

Section II: Statistical Review

20 YEAR ANNIVERSARY 1988–2008

MSCI Emerging Markets Index

Statistical Review

Introduction

In this section we illustrate the evolution of emerging markets over the past 20 years.

We start by looking at the evolution of the emerging markets universe. A progressive opening up of more countries to foreign investors has accompanied the major structural transformations that have characterized the last 20 years in many parts of the world. Political change in the former Communist Bloc, the opening up of China, dramatic growth in some Asian economies, and the integration of financial markets has led to the expansion of investment opportunities in emerging markets and has reshaped the universe. This is illustrated by the changes in the composition of the MSCI Emerging Markets Index and the evolution of its country and sector weights.

We then look at some of the aspects that are commonly thought to be characteristic of these markets when compared to developed markets.

One premise that led investors to enter these markets was that the economies of these countries would grow faster than average. We illustrate how these economies have evolved by looking at GDP growth rates, GDP per capita as well as sovereign credit ratings and current account balances. While on average emerging markets have grown faster than developed markets, the evolution has not been linear and the situation has been quite different for specific countries.

Another characteristic of emerging markets often mentioned is the different risk/return trade-off compared to developed markets and the low correlation with developed markets. As an illustration and to see whether this is still the case, we look at the relative performance of emerging markets to developed markets, at the evolution of the risk and return characteristics and of the correlations.

The third aspect that we analyze is how valuations have evolved, as historically emerging markets stocks were considered to be cheaper relative to those from developed markets. While based on pure valuation emerging and developed markets have converged, the risk premium appears to still be reflected when looking at expected growth rates.

Statistical Review

Universe Evolution

Evolution of the Country Coverage of the MSCI Emerging Markets Index

- The MSCI Emerging Markets (EM) Index has evolved since 1988 with the progressive inclusion of countries as they have opened up their capital markets to international investors. While the index initially consisted of eight countries (Mexico, Argentina, Brazil, Chile, Jordan, Malaysia, Thailand and the Philippines), it now comprises 25.
- The size of new markets additions varied significantly. Most markets were included at once, like India in early 1994 (7.8% of MSCI Emerging Markets), South Africa in early 1995 (14.8% of MSCI Emerging Markets) or Russia in late 1997 (5.7%).
- Reflecting the gradual opening and improvements in accessibility, Korea and Taiwan were included progressively. This happened in three steps for Korea from 1992 to 1998, as foreign ownership limits were progressively raised. In the case of Taiwan the inclusion was spread over as many as five steps, between 1996 and 2005, reflecting the particularly difficult constraints imposed by the QFII and quota system.
- While China was added as early as 1996 with Shanghai and Shenzhen listed B shares, the major change occurred in 2000 with the recognition in the MSCI Emerging Markets Index of Hong Kong listed shares, such as the Red Chips, in the China universe (5.6%).
- Following the introduction of drastic repatriation restrictions Malaysia was excluded from the index at the end of 1998 and was reinstated 18 months later after the restrictions had been lifted.
- Portugal and Greece have been migrated to developed markets, while Sri Lanka is now included in the MSCI Frontier Markets Index. The MSCI Venezuela Index has been discontinued.
- In 2007, MSCI Barra introduced the new MSCI Emerging Markets Small Cap Indices, which target companies in the top 99% of the investable universe below the MSCI Standard (Large + Mid Cap) Indices, highlighting the increased interest by international investors in deeper coverage of the emerging markets.

Furthermore, we have seen the emergence of investor interest for fast growing economies in the Gulf Cooperation Council (GCC) region and other frontier markets recently. This led MSCI Barra to launch the MSCI Frontier Markets Indices in December 2007. The MSCI Frontier Markets Indices include countries from Central and Eastern Europe and the CIS (CEEC), the Middle East, Africa and Asia.

Statistical Review

Universe Evolution

Main Changes in the MSCI Emerging Markets Index since Inception (January 1, 1988)

Date	Country	Weight at time of addition	Weight at time of deletion
Jan 1, 1988	Argentina	1.81%	
	Brazil	18.91%	
	Chile	8.93%	
	Greece	5.29%	
	Jordan	2.93%	
	Malaysia	33.78%	
	Mexico	7.65%	
	Philippines	3.12%	
	Portugal	8.52%	
	Thailand	9.06%	
Sep 1, 1989	Indonesia	0.97%	
	Turkey	2.11%	
Jan 7, 1992	Korea at 20% of its weight	4.58%	
Feb 2, 1994	Colombia	1.20%	
	India	7.82%	
	Pakistan	1.23%	
	Peru	0.67%	
	Sri Lanka	0.19%	
	Venezuela	0.62%	
Mar 2, 1995	Israel	2.35%	
	Poland	0.29%	
	South Africa	14.81%	
Sep 3, 1996	China	0.46%	
	Czech Republic	1.43%	
	Hungary	0.35%	
	Korea from 20 to 50% of its weight	3.40%	
	Taiwan at 50% of its weight	8.46%	
Dec 1, 1997	Russia	5.70%	
	Portugal		4.00%
Sep 1, 1998	Korea at full weight	2.98%	
Dec 1, 1998	Malaysia		4.25%
Jun 1, 2000	Malaysia	7.24%	
	Taiwan from 50 to 65% weight	3.05%	
	New China Free Universe	5.59%	
Dec 1, 2000	Taiwan from 65 to 80% weight	2.88%	
Jun 1, 2001	Egypt	0.28%	
	Morocco	0.21%	
	Greece		4.60%
Dec 1, 2001	Sri Lanka		0.04%
Dec 1, 2004	Taiwan LIF from 0.55 to 0.75	3.44%	
Jun 1, 2005	Taiwan LIF from 0.75 to 1	4.41%	
Jan 23, 2006	Launch of the MSCI GCC Countries Indices		
Jun 1, 2006	Venezuela		0.10%
Jun 1, 2007	Launch of the MSCI Emerging Markets Small Cap Indices		
Dec 3, 2007	Launch of the MSCI Frontier Markets Indices		

Note: dates correspond to addition / deletion in the official MSCI Emerging Markets Index history.

Statistical Review

Universe Evolution

Country Weights for Emerging and Developed Markets in MSCI ACWI

- The weight of emerging markets in the MSCI All Country World Index (ACWI) has increased significantly over the last two decades, from nearly 1% in 1987 to 6% in 1997 and 11% in 2007.
- China, Korea, Brazil, Russia and Taiwan are the largest emerging markets in 2007 as compared to Mexico and Malaysia in 1992.

	1987	1992	1997	2002	2007
EM ASIA					
China	_	_	0.03%	0.26%	1.80%
Korea	_	0.73%	0.19%	0.86%	1.62%
Taiwan	_	0.80%	1.16%	0.51%	1.12%
India	_	_	0.40%	0.20%	0.94%
Malaysia	0.29%	0.83%	0.37%	0.22%	0.28%
Indonesia	_	0.09%	0.11%	0.04%	0.19%
Thailand	0.08%	0.42%	0.10%	0.07%	0.15%
Philippines	0.03%	0.09%	0.09%	0.02%	0.06%
Pakistan	_	_	0.05%	0.01%	0.02%
Sri Lanka	_	_	0.01%	0.00%	_
EM Asia (Total)	0.39%	2.95%	2.51%	2.20%	6.18%
EM LATAM					
Brazil	0.16%	0.48%	1.03%	0.27%	1.51%
Mexico	0.06%	1.21%	0.82%	0.31%	0.51%
Chile	0.08%	0.35%	0.25%	0.06%	0.13%
Peru	_	_	0.08%	0.02%	0.07%
Argentina	0.02%	0.19%	0.29%	0.02%	0.05%
Colombia	_	_	0.06%	0.00%	0.03%
Venezuela	_	_	0.10%	0.01%	_
EM Latam (Total)	0.32%	2.23%	2.63%	0.70%	2.31%
EM EMEA					
Russia	_	_	0.37%	0.19%	1.15%
South Africa	_	_	0.68%	0.56%	0.76%
Israel	_	_	0.17%	0.13%	0.24%
Turkey	_	0.07%	0.20%	0.05%	0.19%
Poland	_	_	0.03%	0.05%	0.19%
Egypt	_	_	0.05%	0.01%	0.09%
Hungary	_	_	0.08%	0.05%	0.09%
Czech Republic	_	_	0.06%	0.02%	0.09%
Morocco	_	_	0.04%	0.01%	0.03%
Jordan	0.02%	0.02%	0.01%	0.01%	0.01%
EM EMEA (Total)	0.02%	0.09%	1.69%	1.07%	2.83%
EM (Total)	0.73%	5.27%	6.83%	3.98%	11.32%
DM					
USA	32.14%	40.11%	46.28%	53.99%	41.80%
Europe	22.47%	26.02%	30.20%	28.47%	30.23%
Japan	39.40%	22.32%	11.32%	8.44%	8.60%
Canada	2.52%	2.33%	2.31%	2.20%	3.67%
Australia	1.33%	1.42%	1.24%	1.88%	2.79%
Hong Kong	0.75%	1.60%	1.26%	0.64%	1.05%
Singapore	0.47%	0.76%	0.41%	0.33%	0.48%
New Zealand	0.20%	0.17%	0.14%	0.07%	0.06%
DM (Total)	99.27%	94.73%	93.17%	96.03%	88.68%
ACWI (Total)	100.00%	100.00%	100.00%	100.00%	100.00%

Source: MSCI Standard Indices

Statistical Review

Universe Evolution

Sector Weights in MSCI World Index and MSCI Emerging Markets Index

The sectoral distribution in the MSCI Emerging Markets Index is dominated by:

- Cyclical sectors, namely Energy and Materials, which contribute nearly 31% of the index in 2007. In contrast, in the MSCI World Index, cyclical sectors only represent 15% of the index.
- Domestic sectors, such as Financials and Information Technology, are other dominant sectors, as they are in the MSCI World Index.

	1997	2002	2007
MSCI EM			
Energy	6.2%	10.7%	16.7%
Materials	16.5%	12.5%	14.3%
Industrials	8.0%	5.4%	8.4%
Consumer Discretionary	8.0%	6.7%	5.1%
Consumer Staples	7.6%	6.9%	4.8%
Health	0.7%	1.2%	1.6%
Financials	25.8%	19.3%	22.8%
Information Technology	5.5%	17.4%	13.2%
Telecommunication	11.2%	15.2%	9.7%
Utilities	10.5%	4.8%	3.3%
MSCI World			
Energy	6.5%	6.7%	9.5%
Materials	6.7%	4.0%	6.2%
Industrials	12.2%	10.3%	10.2%
Consumer Discretionary	13.5%	14.3%	10.7%
Consumer Staples	8.8%	8.6%	8.4%
Health	8.9%	11.2%	9.0%
Financials	22.8%	23.8%	26.5%
Information Technology	9.6%	10.8%	10.1%
Telecommunication	6.4%	6.3%	4.7%
Utilities	4.6%	4.0%	4.6%

Source: MSCI Standard Indices. Data as of end of each year.

Statistical Review

Economic Characteristics

Nominal GDP per Capita (USD) for Emerging Market and Developed Market Countries

- Emerging markets have on an average witnessed 6% growth in GDP per capita over the last 20 years, while developed markets have been growing at a slower rate of 5% in the same period.
- China, Russia, Brazil, Chile, Korea and Poland have witnessed the fastest growth in GDP per capita. However, China and India continue to have low GDP per capita given their large populations.
- Israel, Korea, Taiwan and Czech Republic have seen per capita GDP rise to levels closer to developed markets' averages in 2007.

	1987	1992	1997	2002	2007	CAGR*
EM ASIA						
China	294	412	771	1,132	2,460	11.2%
Korea	3,366	7,542	11,474	11,504	19,624	9.2%
Sri Lanka	422	583	852	870	1,558	6.7%
Thailand	938	1,899	2,496	1,999	3,400	6.6%
Indonesia	511	822	1,184	928	1,824	6.6%
Malaysia	1,947	3,153	4,623	3,884	6,146	5.9%
Taiwan	5,276	10,513	13,835	13,221	16,274	5.8%
India	346	326	434	474	965	5.3%
Philippines	578	823	1,170	966	1,590	5.2%
Pakistan	389	521	591	508	909	4.3%
EM Asia (Average)	1,407	2,659	3,743	3,549	5,475	7.0%
EM LATAM						
Chile	1,679	3,283	5,663	4,314	9,698	9.2%
Mexico	1,890	4,211	4,268	6,434	8,426	7.8%
Venezuela	2,673	2,955	3,768	3,729	8,252	5.8%
Brazil	2,306	2,814	5,321	2,867	6,842	5.6%
Colombia	1,285	1,576	2,662	1,851	3,614	5.3%
Argentina	3,497	6,845	8,225	2,605	6,310	3.0%
Peru	2,089	1,588	2,455	2,184	3,616	2.8%
EM Latam (Average)	2,203	3,325	4,623	3,426	6,680	5.7%
EM EMEA						
Poland	1,687	2,310	4,064	5,185	10,858	9.8%
Hungary	2,484	3,591	4,439	6,548	13,560	8.9%
Turkey	1,593	2,715	3,008	2,675	6,548	7.3%
Czech Republic	5,791	3,091	5,545	7,401	16,372	5.3%
Morocco	915	1,266	1,369	1,387	2,368	4.9%
Israel	8,844	14,636	18,640	17,268	22,073	4.7%
South Africa	2,485	3,390	3,495	2,440	5,724	4.3%
Jordan	2,317	1,397	1,575	1,880	2,741	0.8%
Egypt	1,508	777	1,263	1,313	1,739	0.7%
Russia	n/a	576	2,736	2,379	8,612	n/a
EM EMEA (Average)	3,069	3,375	4,613	4,848	9,059	5.6%
EM (Average)	2,226	3,120	4,327	3,941	7,071	5.9%
DM						
Ireland	9,410	15,319	22,223	31,396	58,883	9.6%
Portugal	4,573	10,513	11,123	12,350	20,665	7.8%
Greece	7,090	12,162	14,140	15,487	32,009	7.8%
Singapore	7,414	15,382	25,270	21,113	32,506	7.7%
Spain	8,003	15,695	14,426	16,693	31,472	7.1%
United Kingdom	12,163	18,849	22,913	26,719	45,301	6.8%
Norway	22,082	29,968	35,952	42,521	79,154	6.6%
Hong Kong	9,016	17,666	27,055	24,341	28,982	6.0%
Australia	12,907	17,893	22,546	20,989	39,320	5.7%
Netherlands	15,441	22,120	24,861	27,206	45,428	5.5%
Belgium	14,552	22,425	24,495	24,397	41,606	5.4%
Austria	15,933	24,883	26,230	25,800	44,306	5.2%
Denmark	20,973	29,163	32,349	32,493	57,036	5.1%
Germany	14,912	25,523	26,363	24,523	39,650	5.0%
Italy	13,729	22,403	20,985	21,317	35,386	4.8%
New Zealand	10,899	11,367	17,664	15,195	27,285	4.7%
France	16,539	24,010	24,496	24,450	40,782	4.6%
Finland	18,351	21,977	24,013	26,143	44,908	4.6%
Canada	15,968	20,480	21,349	23,458	38,382	4.5%
USA	19,524	24,682	30,439	36,311	45,594	4.3%
Sweden	20,241	30,629	28,219	27,325	47,067	4.3%
Switzerland	27,264	36,449	37,303	38,660	56,709	3.7%
Japan	19,884	30,316	33,837	30,809	34,023	2.7%
Europe (Average)	13,872	22,084	23,035	23,840	40,266	5.5%
DM (Average)	13,685	19,983	25,149	24,507	35,795	4.9%

Source: IMF World Economic Outlook and MSCI Barra. Regional Averages are the sum of total nominal GDP of all relevant countries divided by their total population (Russia excluded from averages)

* Compound Annual Growth Rate (CAGR) has been calculated over the period of 1987 – 2007

Statistical Review

Economic Characteristics

Real GDP Growth Rates (5 Years Rolling Average) for Emerging Market and Developed Market Countries

- China, India and Argentina have seen the fastest growth in Real GDP among emerging market countries over the 5 years ending in 2007.

	1987	1992	1997	2002	2007
EM ASIA					
China	12.0%	8.4%	11.4%	8.2%	10.6%
India	5.1%	5.5%	6.4%	5.3%	8.5%
Pakistan	6.3%	6.1%	3.1%	3.2%	6.6%
Sri Lanka	4.2%	4.0%	5.6%	3.5%	6.3%
Malaysia	3.9%	9.3%	9.2%	2.3%	5.9%
Philippines	-1.1%	3.1%	4.4%	3.0%	5.6%
Indonesia	4.9%	6.8%	7.0%	0.0%	5.4%
Thailand	6.2%	10.6%	6.1%	1.1%	5.4%
Taiwan	9.6%	7.5%	6.7%	3.6%	4.5%
Korea	9.5%	8.3%	7.1%	4.2%	4.4%
EM Asia (Average)	6.1%	7.0%	6.7%	3.4%	6.3%
EM LATAM					
Argentina	1.5%	1.9%	4.5%	-3.2%	8.6%
Venezuela	1.1%	3.7%	1.6%	-1.6%	7.5%
Peru	3.0%	-5.4%	7.1%	1.7%	6.1%
Colombia	3.8%	3.7%	4.3%	0.5%	5.4%
Chile	3.4%	8.3%	7.5%	2.6%	5.1%
Brazil	4.1%	-0.1%	4.1%	1.7%	3.5%
Mexico	0.1%	3.7%	2.3%	3.2%	3.2%
EM Latam (Average)	2.4%	2.3%	4.5%	0.7%	5.6%
EM EMEA					
Russia	n/a	n/a	-5.7%	4.1%	6.9%
Turkey	6.5%	3.7%	4.7%	1.0%	6.6%
Jordan	1.4%	1.0%	4.2%	4.4%	6.4%
Czech Republic	2.4%	-2.1%	2.7%	1.7%	5.3%
Egypt	6.7%	2.3%	4.5%	5.1%	5.1%
Poland	3.0%	-1.1%	5.9%	3.3%	5.1%
Morocco	3.1%	3.8%	2.3%	4.1%	4.8%
Israel	4.1%	4.7%	5.3%	2.9%	4.6%
South Africa	0.8%	0.6%	2.9%	2.7%	4.5%
Hungary	1.7%	-3.7%	2.3%	4.6%	3.8%
EM EMEA (Average)	3.3%	1.0%	2.9%	3.4%	5.3%
EM (Average)	4.1%	3.6%	4.7%	2.7%	5.8%
DM					
Singapore	5.4%	8.7%	9.5%	3.4%	6.8%
Hong Kong	8.3%	5.4%	5.0%	2.1%	6.4%
Ireland	1.7%	4.3%	7.5%	8.1%	5.0%
Greece	0.3%	2.4%	1.7%	3.9%	4.3%
Finland	3.1%	0.0%	3.3%	3.7%	3.5%
Spain	3.0%	3.5%	2.3%	4.1%	3.5%
Australia	3.6%	2.2%	4.2%	3.8%	3.3%
Sweden	2.9%	0.8%	1.8%	3.1%	3.3%
New Zealand	2.1%	0.0%	4.3%	3.2%	3.0%
USA	4.5%	2.5%	3.5%	2.9%	2.8%
Norway	4.2%	1.9%	4.5%	2.3%	2.8%
United Kingdom	3.6%	1.3%	3.1%	2.9%	2.8%
Canada	4.0%	1.3%	3.1%	3.9%	2.7%
Austria	1.9%	3.2%	1.9%	2.4%	2.4%
Denmark	3.2%	1.1%	2.9%	1.9%	2.2%
Belgium	1.7%	2.9%	2.3%	2.2%	2.2%
Switzerland	2.0%	2.2%	0.8%	1.8%	2.1%
Japan	3.3%	4.3%	1.5%	0.2%	2.0%
Netherlands	2.5%	3.2%	2.9%	2.9%	1.9%
France	1.8%	2.7%	1.3%	2.7%	1.8%
Germany	2.1%	4.1%	1.3%	1.6%	1.4%
Italy	2.6%	2.4%	1.3%	1.8%	1.0%
Portugal	2.5%	5.2%	2.2%	3.1%	0.9%
Europe (Average)	2.4%	2.6%	2.6%	3.0%	2.6%
DM (Average)	3.1%	2.8%	3.1%	3.0%	3.0%

Source: IMF World Economic Outlook and MSCI Barra

Rolling Growth Rate figure reported uses prior 5 year data e.g. 2003 to 2007. Data is reported as GDP growth rate at 2007. Regional averages are simple averages of the growth rates of the relevant countries.

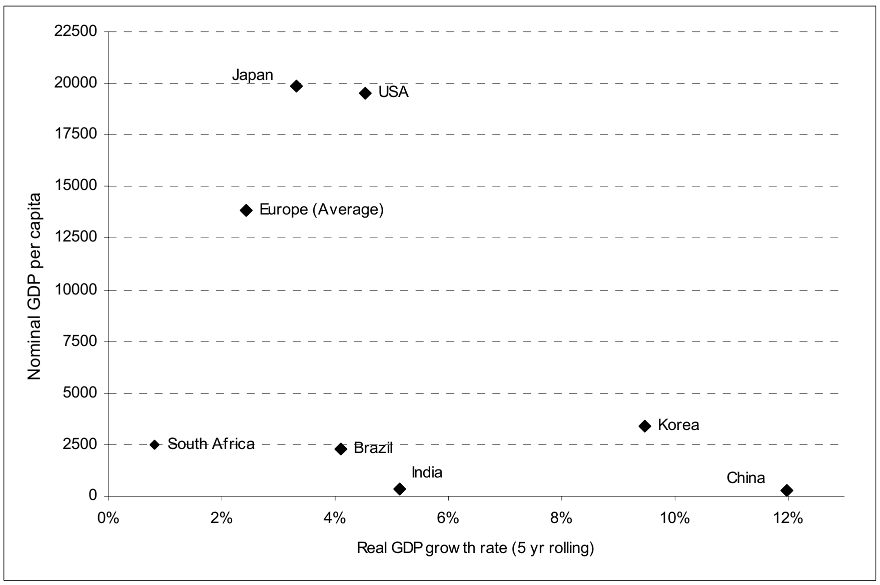
Statistical Review

Economic Characteristics

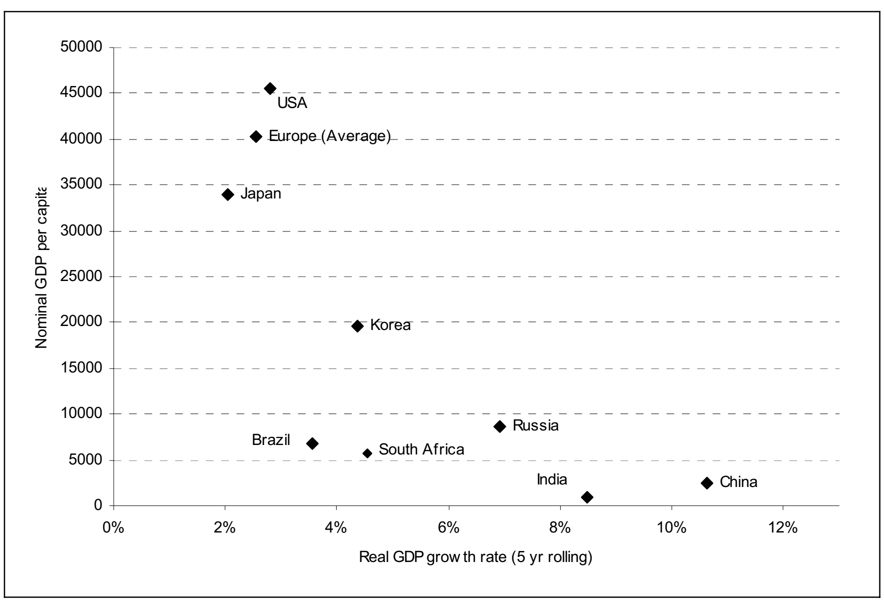
Nominal GDP per Capita vs Real GDP Growth Rates (Rolling 5 Years)

- While for Korea we observe a decline in GDP growth rates coupled with a significant increase in GDP per capita, growth rates in other emerging markets remain high (for example in China) or have even increased (for example in India) when compared to the period 1987-1992.

1987 – 1992



2002 – 2007



Source: IMF World Economic Outlook

Statistical Review

Economic Characteristics

Current Account Balance to GDP Ratio for Emerging Market and Developed Market Countries

- Current account deficits of emerging market countries have gradually come down over the last 10 years after the Mexican Peso crisis in 1994 and the Asian Crisis in 1997.
- India, Poland and Hungary continue to have low current account deficits.
- Some countries, such as China, Malaysia, Taiwan and Russia, exhibit large current account surpluses. On the other hand, the current account surplus of Korea has decreased significantly.

	1987	1992	1997	2002	2007
EM ASIA					
Malaysia	8.2%	-3.7%	-5.9%	8.4%	14.4%
China	0.1%	1.3%	3.9%	2.4%	11.7%
Taiwan	17.3%	3.9%	2.3%	8.6%	6.8%
Philippines	0.6%	-1.9%	-5.2%	-0.5%	3.8%
Thailand	-0.7%	-5.5%	-2.1%	3.7%	3.7%
Indonesia	-2.7%	-2.0%	-1.6%	4.0%	1.6%
Korea	7.2%	-1.2%	-1.6%	1.0%	0.1%
India	-1.9%	-1.2%	-0.7%	1.4%	-2.1%
Pakistan	-2.5%	-1.8%	-4.7%	3.9%	-4.9%
Sri Lanka	-7.4%	-5.7%	-2.6%	-1.4%	-5.1%
EM LATAM					
Venezuela	-6.1%	-6.2%	4.3%	8.2%	7.8%
Chile	-3.5%	-2.2%	-4.4%	-0.9%	3.7%
Peru	-5.3%	-5.3%	-5.1%	-1.9%	1.3%
Argentina	-3.9%	-2.8%	-4.1%	8.9%	0.9%
Brazil	-0.4%	1.4%	-3.5%	-1.5%	0.8%
Mexico	2.9%	-6.7%	-1.9%	-2.2%	-0.7%
Colombia	0.0%	1.5%	-5.4%	-1.7%	-3.9%
EM EMEA					
Russia	n/a	-1.4%	0.0%	8.4%	5.9%
Israel	0.6%	0.3%	-3.3%	-0.9%	3.7%
Egypt	-1.4%	8.7%	0.2%	0.7%	1.4%
Morocco	-7.3%	-1.9%	-0.2%	3.6%	0.7%
Czech Republic	0.7%	-0.2%	-6.3%	-5.7%	-3.4%
Poland	-10.5%	1.0%	-3.7%	-2.5%	-3.7%
Hungary	-2.6%	0.9%	-4.5%	-7.0%	-5.6%
South Africa	6.0%	1.5%	-1.5%	0.8%	-6.7%
Turkey	-0.9%	0.1%	-1.1%	-0.8%	-7.5%
Jordan	-5.3%	-14.4%	0.4%	5.6%	-12.6%
DM					
Singapore	-0.5%	11.9%	15.5%	13.7%	27.0%
Switzerland	3.6%	6.0%	9.6%	8.3%	15.8%
Norway	-3.6%	3.5%	6.3%	12.6%	14.6%
Hong Kong	7.7%	3.0%	-4.4%	7.6%	11.2%
Netherlands	1.8%	2.1%	6.5%	2.5%	7.4%
Sweden	0.0%	-2.8%	4.1%	5.1%	6.0%
Germany	3.9%	-1.1%	-0.5%	2.0%	5.4%
Finland	-1.9%	-4.6%	5.6%	10.1%	5.0%
Japan	3.5%	3.0%	2.3%	2.9%	4.5%
Austria	0.0%	-0.4%	-3.1%	0.3%	3.7%
Belgium	1.9%	3.0%	5.5%	4.6%	2.5%
Canada	-3.2%	-3.6%	-1.3%	1.7%	1.8%
Denmark	-3.1%	2.1%	0.6%	2.5%	1.3%
Europe (Average)	0.6%	-0.9%	1.6%	0.9%	0.2%
France	-0.5%	0.3%	2.7%	1.4%	-1.6%
Italy	-0.4%	-2.7%	2.8%	-0.8%	-2.3%
United Kingdom	-1.8%	-2.1%	-0.1%	-1.6%	-3.5%
Ireland	-0.3%	0.6%	3.2%	-1.0%	-4.4%
USA	-3.4%	-0.8%	-1.7%	-4.4%	-5.7%
Australia	-3.8%	-3.5%	-2.9%	-3.8%	-5.7%
New Zealand	-4.9%	-4.2%	-6.4%	-3.9%	-8.5%
Portugal	1.0%	-0.2%	-5.8%	-8.1%	-9.2%
Greece	-0.9%	-1.5%	-2.1%	-5.6%	-9.7%
Spain	0.0%	-3.5%	-0.1%	-3.3%	-9.8%

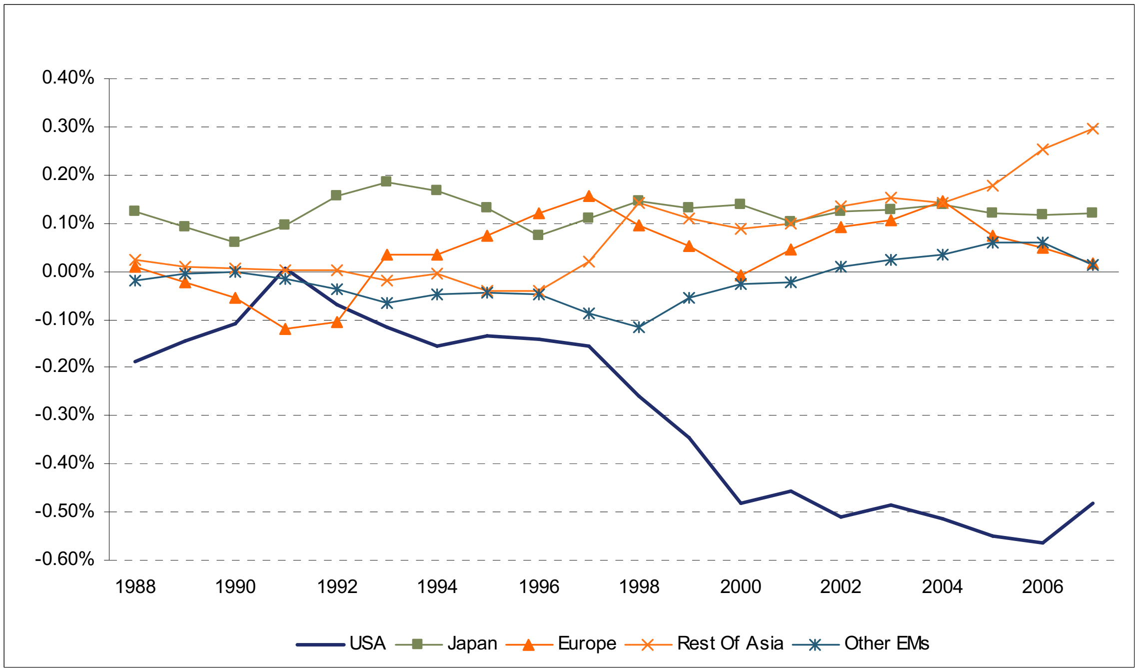
Source: IMF World Economic Outlook

Statistical Review

Economic Characteristics

- While the US current account balance has regularly deteriorated since the beginning of the 1990s until 2006, the aggregate current account balance of emerging markets has turned into a surplus, in particular in Asia.

Current Account Balance as a Percent of MSCI ACWI GDP



Source: IMF World Economic Outlook
Rest of Asia Includes Emerging Markets Asia, Hong Kong and Singapore. Other emerging markets include EM EMEA and EM LATAM

Statistical Review

Risk and Return Characteristics

Relative Performance of MSCI Emerging Markets Index

- The MSCI Emerging Markets Index reached historic highs in 1994 after outperforming the MSCI World Index in the period 1989–1994. However, it underperformed during the emerging markets crises in 1994, 1995, 1997 and 1998. It then systematically outperformed the MSCI World Index from 2003 to 2007.

Relative Performance: MSCI Emerging Markets vs MSCI World Indices

Source: MSCI Standard Indices

- Due to the increasing weight of emerging markets in MSCI ACWI, the impact of the outperformance of the MSCI Emerging Markets Index over the MSCI World Index since 2002 is more significant than in the period from 1988 to 1994, as shown by the strong outperformance of the MSCI ACWI over the MSCI World Index.

Relative Performance: MSCI ACWI vs MSCI World Indices

Source: MSCI Standard Indices

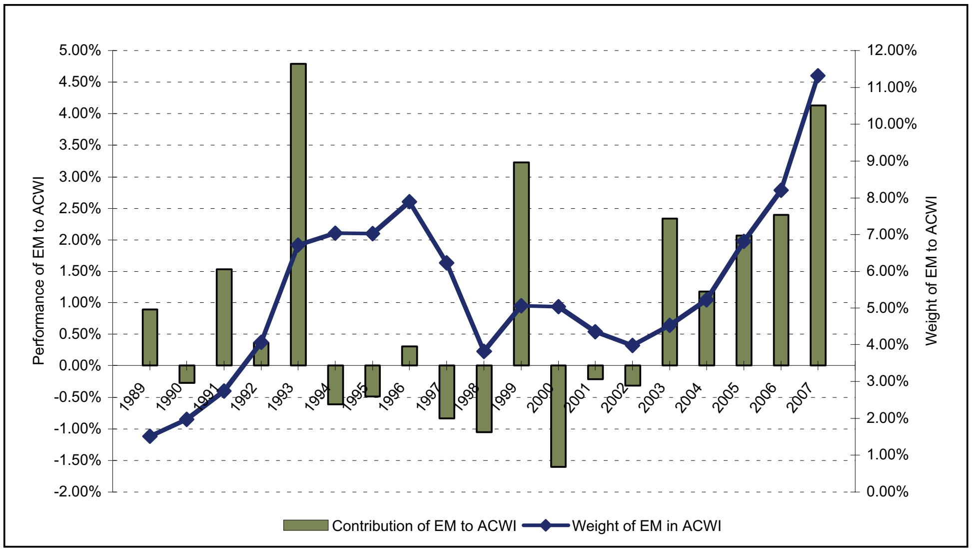
Statistical Review

Risk and Return Characteristics

Contribution of Emerging Markets to the Performance of MSCI ACWI

- The positive contribution of MSCI Emerging Markets to MSCI ACWI performance has grown significantly in the period post 2002.

Contribution of the MSCI Emerging Markets Index to the Performance of MSCI ACWI



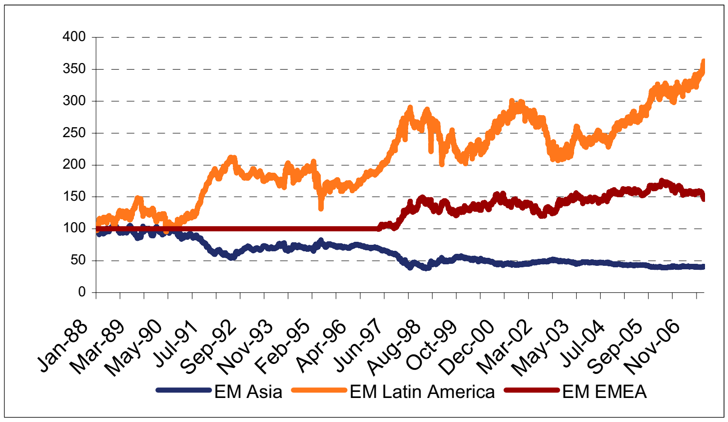
Source: MSCI Standard Indices
Contribution of Emerging Markets to MSCI ACWI is computed as the weighted annual performance of the MSCI Emerging Markets countries in MSCI ACWI

Statistical Review

Risk and Return Characteristics

Relative Performance of MSCI Emerging Markets Regional Indices

Relative Performance: MSCI Emerging Markets Regional Indices vs MSCI Emerging Markets Index



Source: MSCI Standard Indices

Volatility Trends in Emerging Markets and Developed Markets (36 Month Rolling)

- The MSCI Emerging Markets Index has been more volatile than the MSCI World Index with an average volatility of 25% while the MSCI World Index had an average volatility of 10%.
- The MSCI Emerging Markets Index was most volatile at the time of the Russian and LTCM crisis in 1998, reaching levels of 33% in 1999.

36 Month Rolling Volatility

Source: MSCI Standard Indices
Rolling volatility figure reported uses prior 36 month period monthly returns data (logarithmic) e.g. January 2004 to December 2006 data is reported as volatility in January 2007.

Statistical Review

Risk and Return Characteristics

Absolute Volatilities for all Emerging Market and Developed Market Countries (Based on 5-Year Monthly Returns)

- Over the most recent period developed markets have volatilities ranging from 8.5% for the USA to levels of nearly 22% for small concentrated markets like Finland and Norway, and an average around 15%.
- Emerging markets have volatilities ranging from 15% for Malaysia to nearly 51% for Venezuela, with an average volatility around 25% in the period 2002-2007.

	1992 *	1997	2002	2007
EM ASIA				
Sri Lanka	n/a	28.4%	40.9%	30.8%
Indonesia	51.5%	42.4%	63.0%	25.4%
Pakistan	n/a	32.2%	52.3%	24.9%
India	n/a	27.9%	31.5%	24.3%
China	n/a	34.2%	45.9%	24.0%
Thailand	30.3%	40.6%	54.2%	23.6%
Korea	29.8%	34.7%	47.9%	22.0%
Philippines	30.5%	33.9%	40.1%	20.6%
Taiwan	52.1%	34.4%	36.7%	19.7%
Malaysia	21.8%	33.5%	43.3%	14.9%
EM Asia (Average)	36.0%	34.2%	45.6%	23.0%
EM LATAM				
Venezuela	n/a	52.8%	49.1%	50.4%
Argentina	78.7%	30.8%	48.0%	30.7%
Colombia	n/a	23.2%	40.1%	29.2%
Peru	n/a	32.3%	30.2%	27.5%
Brazil	88.9%	36.4%	52.3%	27.4%
Chile	25.4%	21.8%	28.2%	17.9%
Mexico	32.6%	38.3%	35.2%	17.5%
EM Latam (Average)	56.4%	33.6%	40.4%	28.7%
EM EMEA				
Turkey	62.1%	54.5%	71.9%	39.9%
Egypt	n/a	25.0%	27.9%	31.6%
Russia	n/a	65.8%	77.7%	26.8%
Poland	n/a	62.3%	42.2%	26.2%
Hungary	n/a	39.7%	39.0%	26.1%
Jordan	17.5%	15.2%	13.7%	23.2%
South Africa	n/a	21.4%	35.4%	23.1%
Czech Republic	n/a	23.2%	35.2%	20.3%
Morocco	n/a	14.9%	16.7%	20.3%
Israel	n/a	23.7%	32.4%	16.7%
EM EMEA (Average)	39.8%	34.6%	39.2%	25.4%
EM (Average)	43.4%	34.2%	41.9%	25.4%
DM				
Finland	24.5%	27.5%	45.9%	22.4%
Norway	26.1%	17.7%	26.2%	20.1%
Greece	45.5%	21.2%	36.3%	19.3%
Sweden	24.0%	20.9%	33.4%	16.8%
Germany	23.5%	14.8%	27.4%	16.6%
New Zealand	25.4%	19.0%	27.5%	16.5%
Belgium	19.3%	10.3%	21.9%	15.5%
Netherlands	16.3%	13.9%	26.7%	15.4%
Hong Kong	23.3%	30.5%	30.9%	15.2%
Austria	31.4%	14.6%	21.9%	15.0%
Ireland	23.4%	13.7%	22.8%	15.0%
Canada	13.4%	13.8%	25.1%	15.0%
Portugal	24.6%	19.3%	24.9%	14.9%
Australia	20.2%	17.3%	20.1%	14.6%
Japan	28.0%	22.5%	21.4%	14.1%
Italy	23.9%	24.8%	23.7%	13.8%
Spain	22.2%	19.7%	25.7%	13.5%
Denmark	20.9%	13.5%	20.7%	13.2%
Singapore	18.7%	21.4%	35.1%	13.2%
France	21.2%	15.3%	22.2%	12.8%
Europe	17.3%	11.2%	18.7%	11.4%
Switzerland	19.2%	14.3%	19.1%	11.1%
United Kingdom	20.3%	12.1%	15.0%	10.5%
USA	13.2%	10.8%	19.4%	8.5%
Europe (Average)	24.1%	17.1%	25.9%	15.4%
DM (Average)	22.8%	17.5%	25.5%	14.8%

Source: MSCI Standard Indices
Regional averages are simple averages of the volatilities of the relevant countries.
* Data for some countries not available for the period

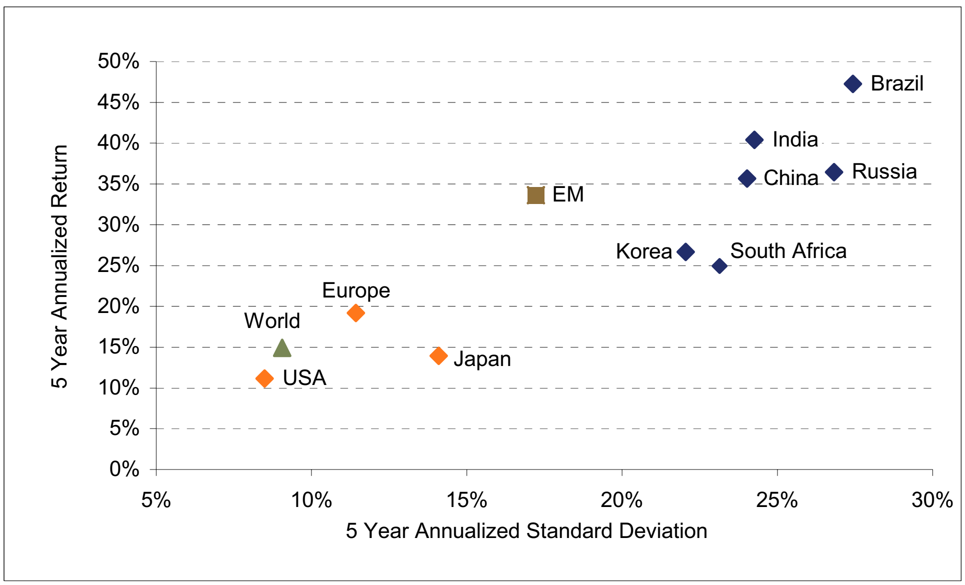
Statistical Review

Risk and Return Characteristics

Scatter Plot of 5-Year Risk vs Return for Select Emerging Market and Developed Market Countries (2002-2007)

- The MSCI Emerging Markets Index had a 30% annualized return with 18% volatility for the period 2002–2007. Individual countries like Brazil, Russia, India, China and Korea had returns closer to 35% with volatility ranging from 22% to 28%.
- Within the emerging markets cluster, Brazil reported the highest return of more than 45% in this period.
- The MSCI World Index had a return of 17% with a volatility of 8% for the same period.

5-Year Risk vs Return (Ending December 2007)



Source: MSCI Standard Indices

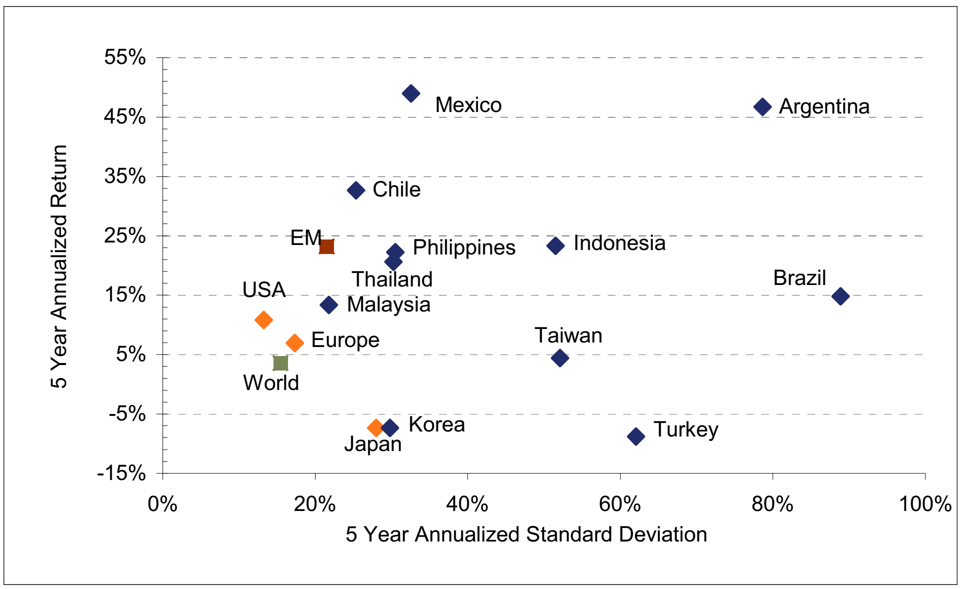
Statistical Review

Risk and Return Characteristics

Scatter Plot of 5-Year Risk vs Return for Select Emerging Market and Developed Market Countries (1988-1992)

- By contrast, 15 years ago, emerging markets were showing average annualized returns of 20% with average volatility of 35% for the period 1987 to 1992. Brazil and Argentina were the most volatile countries in this period, while Mexico had experienced the highest compound return of more than 45%.

5-Year Risk vs Return (Ending December 1992)



Source: MSCI Standard Indices

Statistical Review

Risk and Return Characteristics

5-Year Risk-Return Profiles (2002-2007)

- Sharpe ratios in emerging markets have ranged from 2.3 for Czech Republic to 0.4 for Venezuela and 0.6 for Taiwan for the period 2002-2007.
- While returns were generally less spectacular, Sharpe ratios were higher in some developed markets, such as Denmark, at 2.7, and Austria at 2.4.

	Risk	Return	Sharpe Ratio
EM ASIA			
Indonesia	25.4%	42.5%	1.9
India	24.3%	40.4%	1.8
China	24.0%	35.7%	1.7
Philippines	20.6%	29.5%	1.6
Malaysia	14.9%	18.3%	1.5
Korea	22.0%	26.7%	1.4
Thailand	23.6%	24.3%	1.1
Pakistan	24.9%	23.5%	1.0
Sri Lanka	30.8%	18.5%	0.7
Taiwan	19.7%	10.6%	0.6
EM Asia (Average)	23.0%	27.0%	1.3
EM LATAM			
Mexico	17.5%	30.1%	2.0
Brazil	27.4%	47.2%	1.9
Chile	17.9%	28.9%	1.9
Colombia	29.2%	45.5%	1.7
Peru	27.5%	37.9%	1.5
Argentina	30.7%	35.5%	1.3
Venezuela	50.4%	20.0%	0.4
EM Latam (Average)	27.4%	30.1%	1.2
EM EMEA			
Czech Republic	20.3%	40.9%	2.3
Egypt	31.6%	57.4%	2.0
Morocco	20.3%	28.6%	1.6
Israel	16.7%	21.9%	1.5
Russia	26.8%	36.4%	1.5
Poland	26.2%	30.4%	1.3
Hungary	26.1%	30.1%	1.3
South Africa	23.1%	25.0%	1.2
Jordan	23.2%	24.7%	1.2
Turkey	39.9%	38.7%	1.0
EM EMEA (Average)	25.4%	33.4%	1.5
EM Average	25.4%	31.4%	1.4
DM			
Denmark	13.2%	28.8%	2.7
Austria	15.0%	29.6%	2.4
Spain	13.5%	25.0%	2.2
Europe	11.4%	19.2%	2.1
Switzerland	11.1%	17.3%	2.0
United Kingdom	10.5%	15.7%	1.9
France	12.8%	19.5%	1.9
Australia	14.0%	21.8%	1.9
Norway	20.1%	32.6%	1.8
USA	8.5%	11.2%	1.8
Germany	16.6%	25.9%	1.8
Greece	19.3%	30.4%	1.8
Portugal	14.9%	21.4%	1.7
Sweden	16.8%	24.1%	1.7
Canada	15.1%	19.9%	1.6
New Zealand	17.6%	22.6%	1.5
Italy	13.8%	16.8%	1.5
Belgium	15.5%	19.2%	1.5
Netherlands	15.4%	17.9%	1.4
Singapore	15.0%	16.0%	1.3
Japan	14.1%	13.9%	1.2
Ireland	15.0%	14.3%	1.1
Hong Kong	15.5%	14.1%	1.1
Finland	22.4%	21.2%	1.1
DM Average	14.9%	20.8%	1.7

Source: MSCI Standard Indices
* Geometric mean of monthly 120 Day T bills from 2002-2007 has been used as the Risk free rate for calculating Sharpe ratio

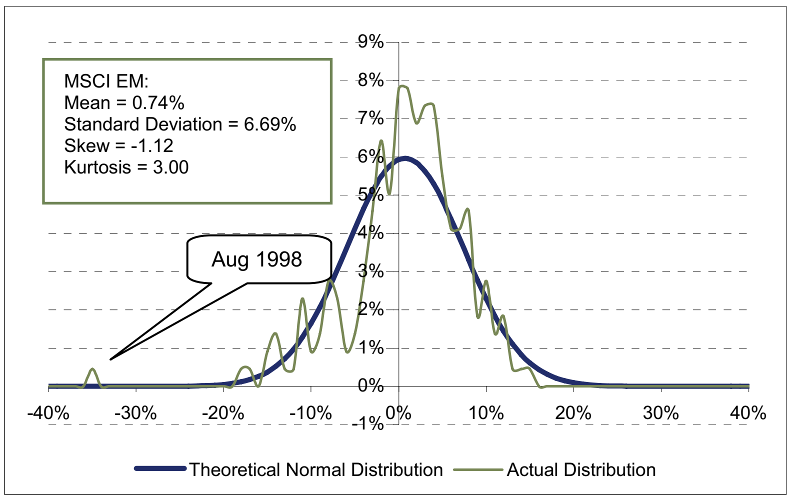
Statistical Review

Risk and Return Characteristics

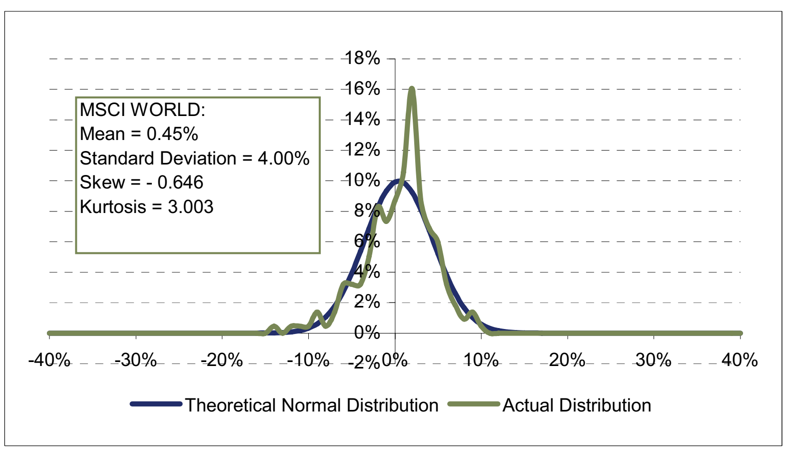
Return Distribution for Emerging Markets and Developed Markets with Normal Distribution Overlay

- The return distributions of the MSCI World Index and the MSCI Emerging Markets Index for the period 1988–2007 show departures from normality.
- The MSCI Emerging Markets Index shows greater (nearly twice) negative skew than the MSCI World Index in this period, reflecting greater downside risk. This is evident with extreme negative returns during the emerging markets crisis in 1998.

Returns Distribution: MSCI Emerging Markets Index



Returns Distribution: MSCI World Index



Source: MSCI Standard Indices

Statistical Review

Risk and Return Characteristics

Correlation of all Emerging Market and Developed Market Countries with the MSCI World Index (Based on 5-Year Monthly Returns)

- The MSCI Emerging Markets Index correlation with the MSCI World Index has increased from 0.48 to 0.8 in the 20 year period from 1988–2007, with the progressive integration of financial markets across the world.
- The correlations of all large emerging markets, except Russia, are higher than the correlations of Japan and Hong Kong over the most recent period.

	1992 *	1997	2002	2007
EM ASIA				
Korea	0.37	0.28	0.60	0.66
China	n/a	0.15	0.48	0.62
Taiwan	0.14	0.32	0.54	0.57
India	n/a	0.12	0.33	0.53
Thailand	0.42	0.45	0.50	0.53
Indonesia	-0.05	0.44	0.37	0.51
Malaysia	0.55	0.45	0.38	0.46
Philippines	0.36	0.31	0.49	0.31
Pakistan	n/a	0.22	0.02	0.29
Sri Lanka	n/a	0.16	0.16	0.03
EM Asia	0.55	0.49	0.67	0.74
EM LATAM				
Mexico	0.26	0.41	0.71	0.72
Chile	-0.02	0.33	0.66	0.71
Brazil	0.23	0.31	0.67	0.67
Argentina	-0.07	0.56	0.34	0.59
Peru	n/a	0.36	0.34	0.50
Colombia	n/a	-0.03	0.17	0.43
Venezuela	n/a	0.09	0.35	0.18
EM Latam	0.27	0.48	0.75	0.76
EM EMEA				
South Africa	n/a	0.34	0.59	0.69
Poland	n/a	0.29	0.61	0.69
Czech Republic	n/a	-0.17	0.39	0.60
Turkey	-0.05	0.15	0.57	0.59
Israel	n/a	0.46	0.58	0.59
Hungary	n/a	0.35	0.60	0.53
Morocco	n/a	-0.29	0.05	0.39
Russia	n/a	0.26	0.56	0.39
Egypt	n/a	-0.09	0.28	0.22
Jordan	0.07	0.23	0.02	0.05
EM EMEA	n/a	0.55	0.74	0.73
EM	0.48	0.58	0.79	0.81
DM				
USA	0.67	0.75	0.97	0.94
France	0.69	0.66	0.86	0.91
Germany	0.64	0.55	0.84	0.89
United Kingdom	0.80	0.71	0.88	0.86
Sweden	0.71	0.68	0.80	0.85
Netherlands	0.71	0.77	0.79	0.84
Switzerland	0.75	0.54	0.70	0.81
Belgium	0.66	0.62	0.59	0.80
Spain	0.73	0.62	0.80	0.79
Australia	0.34	0.72	0.74	0.79
Norway	0.49	0.57	0.74	0.76
Canada	0.54	0.70	0.86	0.76
Denmark	0.60	0.48	0.71	0.75
Greece	0.19	0.36	0.42	0.74
Italy	0.57	0.42	0.68	0.74
Austria	0.36	0.45	0.44	0.72
Ireland	0.69	0.59	0.72	0.71
Finland	0.41	0.58	0.69	0.66
Singapore	0.70	0.58	0.64	0.64
Portugal	0.46	0.46	0.57	0.56
New Zealand	0.29	0.62	0.56	0.56
Hong Kong	0.51	0.64	0.64	0.52
Japan	0.86	0.72	0.65	0.46
Europe	0.86	0.82	0.91	0.94

Source: MSCI Standard Indices
* Data for some countries not available for 1988-1992 period

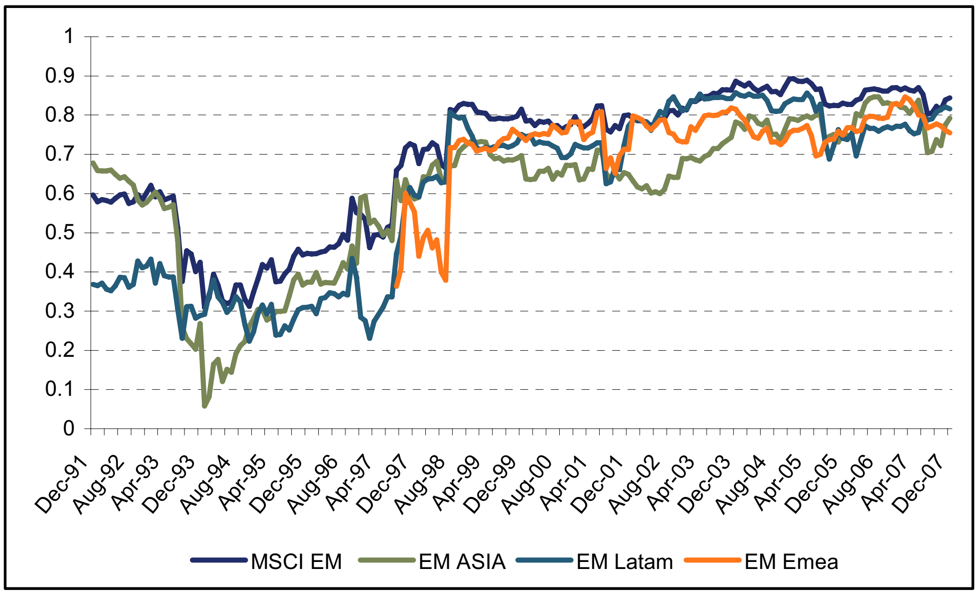
Statistical Review

Risk and Return Characteristics

36-Month Rolling Correlation of MSCI Emerging Markets, MSCI Emerging Markets Asia, MSCI Emerging Markets Latam and MSCI Emerging Markets EMEA Indices with MSCI World Index

- During the mid 90s correlations of the MSCI Emerging Markets Index and the MSCI Emerging Markets regional indices with the MSCI World Index were very low. They then increased to reach relatively high levels by the end of 1998. They remained around the same levels afterwards, reflecting the strong integration of international equity markets.

36-Month Rolling Correlation with MSCI World Index



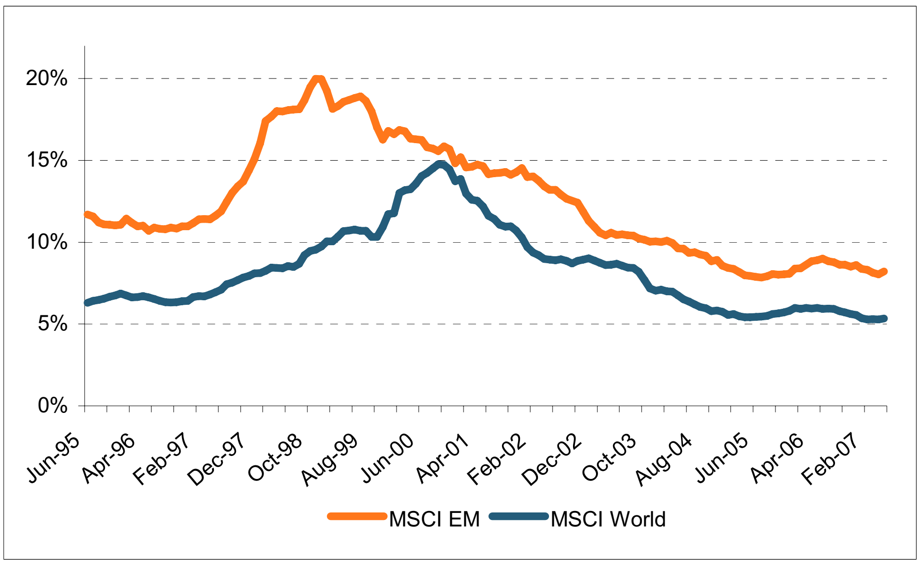
Source: MSCI Standard Indices

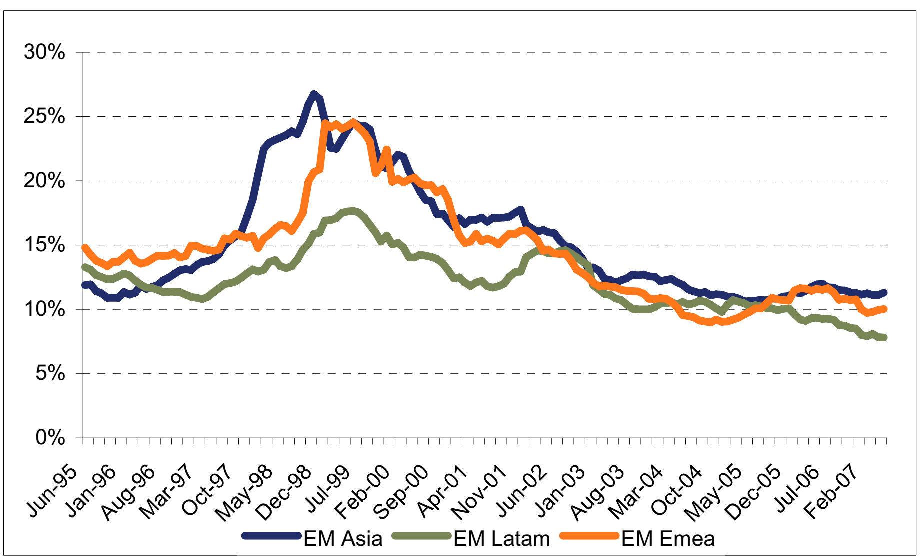
Statistical Review

Risk and Return Characteristics

Cross-sectional Volatility for MSCI World, MSCI Emerging Markets and MSCI Regional Emerging Markets Indices (1994-2007)

- The cross-sectional volatilities of the MSCI Emerging Markets Index (average of 11%) and the MSCI Emerging Markets Regional Indices have been nearly twice as high as that of the MSCI World Index (average of 7%) for the period 1995-2007.
- The cross-sectional volatility of the MSCI World Index has trended lower post 2002. This downward trend started earlier in the MSCI Emerging Markets Indices.





Source: MSCI Standard Indices
* Cross sectional volatility is 12 month rolling average based on logarithmic monthly returns
**CSVs for the MSCI Emerging Markets and MSCI Regional Emerging Markets Indices are based on Equal Weighting

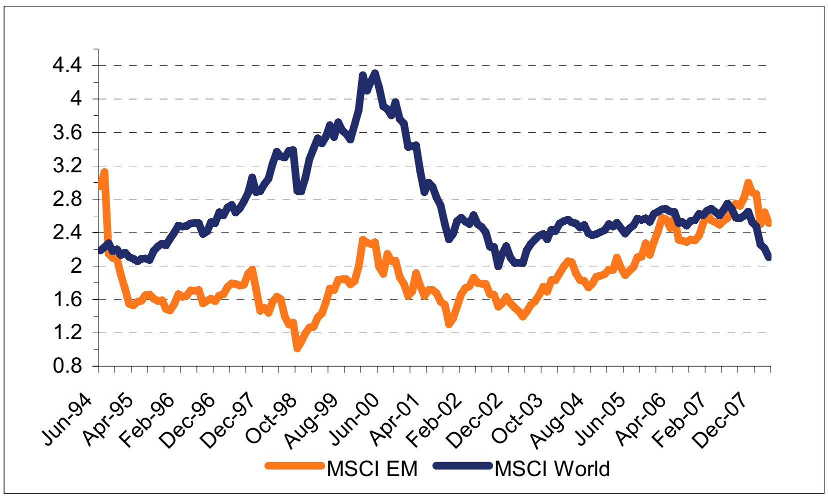
Statistical Review

Valuation Comparisons

Trends in PB, ROE, Trailing PE, Trailing EPS, PE Fwd and PE/G for the MSCI Emerging Markets Index compared to the MSCI World Index (1994-2007)

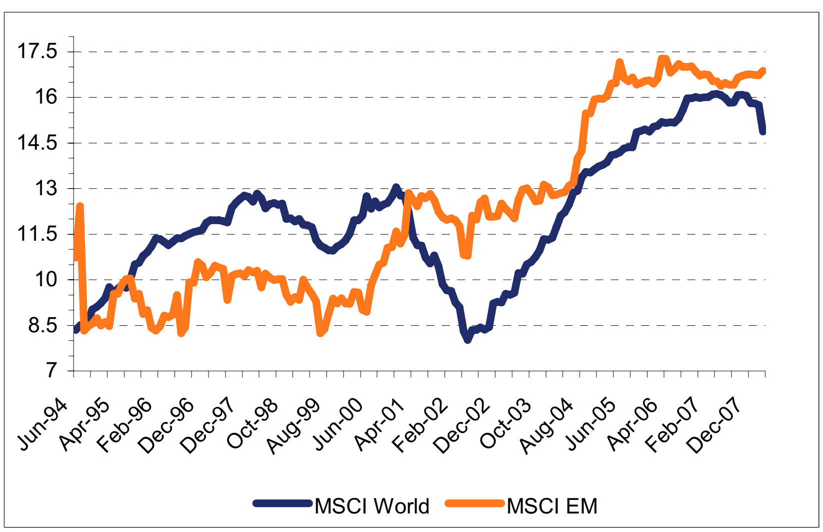
- Valuations of the MSCI Emerging Markets Index have been lower than the MSCI World Index as seen in the trend of Price to Book Value for the period 1994-2008.
- However, MSCI Emerging Markets Index valuations have progressively risen since 2002 and have caught up with the MSCI World Index in 2007.
- This can be attributed to higher ROE of the MSCI Emerging Markets Index compared to that of the MSCI World Index post 2002.

Price to Book Value



Source: MSCI Standard Indices

ROE



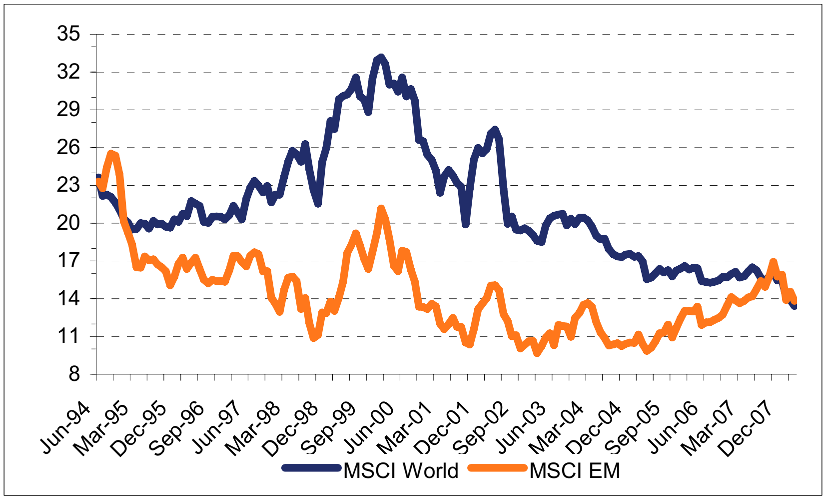
Source: MSCI Standard Indices

Statistical Review

Valuation Comparisons

- The trends in the PE ratios of the MSCI Emerging Markets and MSCI World Indices are similar to those seen for the Price to Book Value ratios.

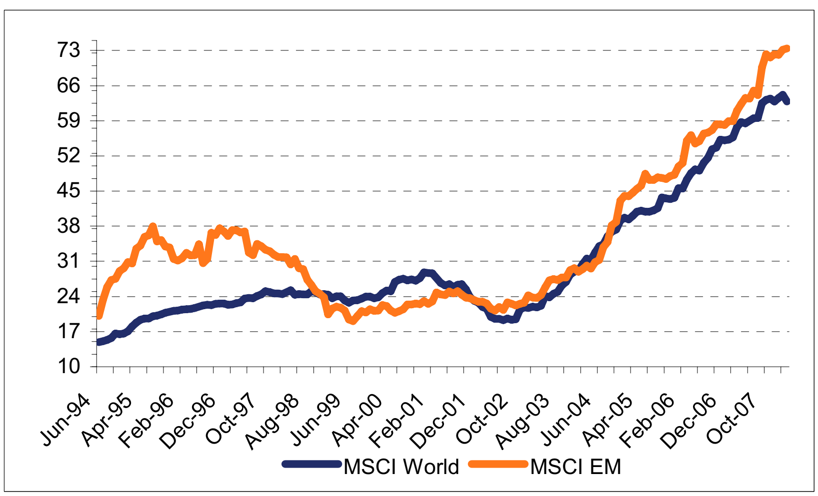
Trailing PE



Source: MSCI Standard Indices

- Trailing EPS of the MSCI Emerging Markets Index has progressively grown faster and risen more than that of the MSCI World Index, reflecting the superior corporate performance in emerging markets as these economies have grown at faster rates.

Trailing EPS



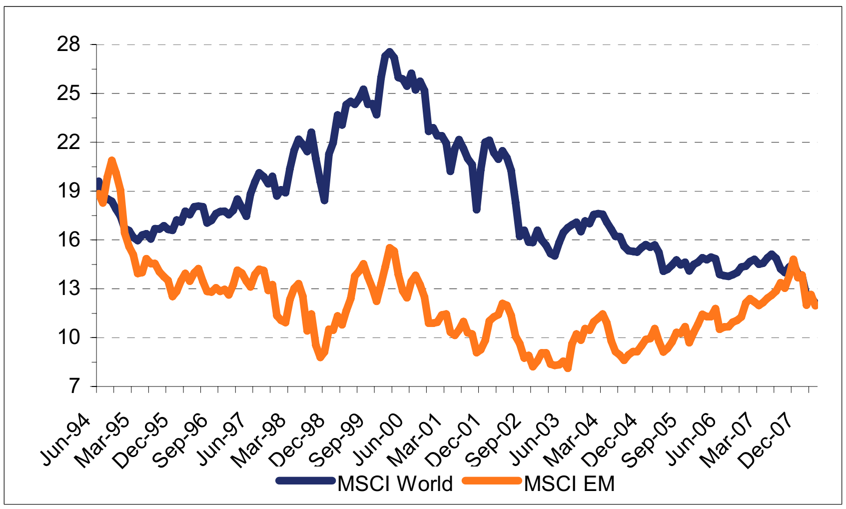
Source: MSCI Standard Indices

Statistical Review

Valuation Comparisons

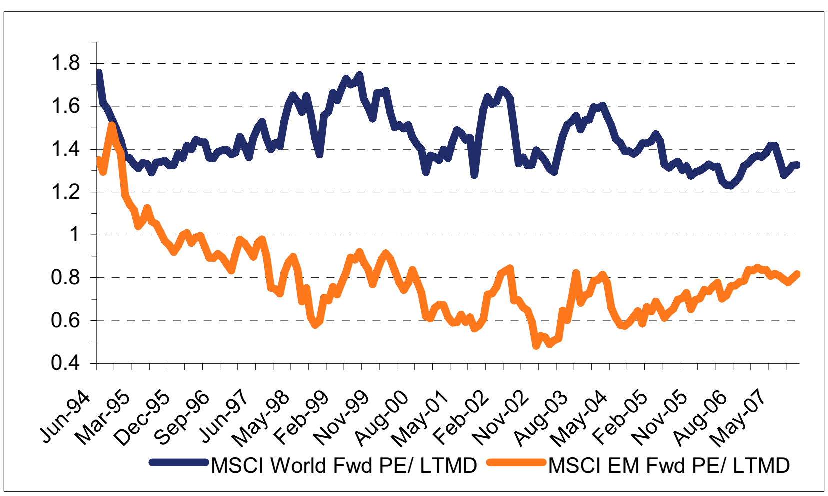
- The trends in the PE forward are similar to those seen in the trailing PE.
- However, based on PE/G ratios, relative valuation of the MSCI Emerging Markets Index has been lower than that of the MSCI World Index over the period 1994-2007, reaching a historic high in 1994 at PE/G ratio of 1.5; decreasing to a historic low in 1998 and 2002 at 0.6 and then progressively increasing to a PE/G of 0.8 from 2003–2007.
- While pure valuation measures for emerging markets have caught up with developed markets, valuations based on PE/G ratios still show significant differences. Hence emerging markets stocks still appear to be cheaper based on expected growth rates, reflecting a persistent risk premium.

PE Forward



Source: MSCI Standard Indices

PE/G Ratio



Source: MSCI Standard Indices

Statistical Review

Valuation Comparisons

Valuation Ratios used in Style Indices for Developed Markets and Emerging Markets

- The MSCI Emerging Markets Index has shown faster growth in Long Term EPS growth rates and Historic EPS growth rates than the MSCI World Index over 1994–2007
- Valuations of the MSCI Emerging Markets Index have been lower than those of the MSCI World Index as seen in the trend of Forward PE and Price to Book for the period 1994-2008. However, Forward PE for the MSCI Emerging Markets Index is closer to that of the MSCI World Index at the end of 2007.

Emerging Markets

	1994	1997	2002	2007
ST Forward EPSG	25.1	24.1	20.6	15.3
5YHist EPS G	20.9	15.1	20.3	25.8
5YHist SPS G	13.5	14.8	15.3	20.0
LT EPSG	13.8	15.1	17.8	17.9
Sust Growth Rate	6.6	7.1	8.5	10.8
Price to Book	2.2	3.0	2.2	2.8
Dividend Yield	2.4	1.8	2.1	2.0
PE Forward	19.1	11.4	8.6	13.8

Developed Markets

	1994	1997	2002	2007
ST Forward EPSG	20.7	15.7	18.1	10.9
5YHist EPS G	-5.2	15.3	5.5	20.7
5YHist SPS G	4.7	8.3	7.7	9.7
LT EPSG	12.1	13.4	11.9	10.9
Sust Growth Rate	4.4	7.7	4.6	10.3
Price to Book	2.1	1.5	1.5	2.5
Dividend Yield	2.2	2.3	2.3	2.3
PE Forward	17.5	18.7	16.6	13.9

Source: MSCI Standard Indices (simulated enhanced Standard Indices prior to 2007)

Contents

Section III: Emerging Markets: A 20-year Perspective

20 YEAR ANNIVERSARY 1988–2008

MSCI Emerging Markets Index

Emerging Markets: A 20-year Perspective

"Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism but peace, easy taxes, and a tolerable administration of justice: all the rest being brought about by the natural course of things." – Adam Smith

Abstract

In the context of the 20-year anniversary of the MSCI Emerging Markets Index, we review the evolution of equity markets over the last two decades and examine the various drivers of risk and returns for emerging markets. Over this period, strong economic growth combined with the development of financial markets has dramatically increased the opportunity set available to international investors. Early emerging markets investors that identified this growth potential have benefited tremendously from these developments, albeit at the expense of higher volatility. The road to emerging riches has been bumpy, featuring regular and meaningful crises. This prominence of the country factor, which has driven most of common stock volatility in emerging markets, explains the higher volatility compared to developed markets. With that background, we revisit the concept of GDP-weighted indices as an alternative to capture the country factor.

Introduction

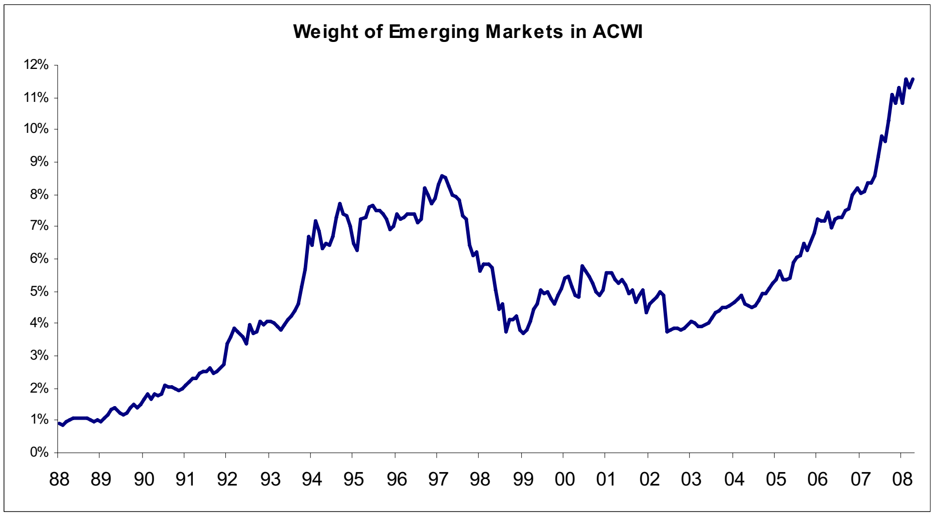
In the late 80s, a small group of institutional investors started to look beyond traditional equity markets to invest in emerging markets. These early investors had a very simple yet powerful rationale for investing in these markets. They postulated that they would benefit from rapid economic growth if they invested in markets that were at an early stage of development and had considerable potential for further development. They anticipated that developing countries would progressively adopt market-oriented policies in a globalizing world and that they could invest in companies at low valuation, as these markets were under researched and undiscovered.

Indeed, the last twenty years have seen a continuously expanding universe due to the opening of previously closed markets or markets reaching sufficient size and liquidity to become investable.

For example, since the MSCI Emerging Markets Index was introduced in 1988, the weight of emerging markets in the MSCI All Country World Index (ACWI) has grown from less than 1% to 12% as depicted in Exhibit 1. This has lead to a radical change in the opportunity set available to international investors.

Emerging Markets: A 20-year Perspective

Exhibit 1: Weight of Emerging Markets in the MSCI All Country World Index



Source: MSCI Barra

In the last two decades, several major geopolitical events have triggered the process of adoption of free market reforms resulting in the opening up of many markets. For example, the demise of the Soviet Union, the collapse of apartheid in South Africa, and the adoption of more liberal economic policies in China and India have contributed to the development of freer markets and the emergence of companies with sound businesses.

These developments have been recognized by the inclusion of these markets in international equity indices. The timeline in Exhibit 2 illustrates the growth of the opportunity set with new countries being added to the MSCI International Equity Indices every few years. Along the way, some of these countries have become classified as developed markets (Greece and Portugal) while others, such as Venezuela, have reversed course and have exited the MSCI International Equity Indices.

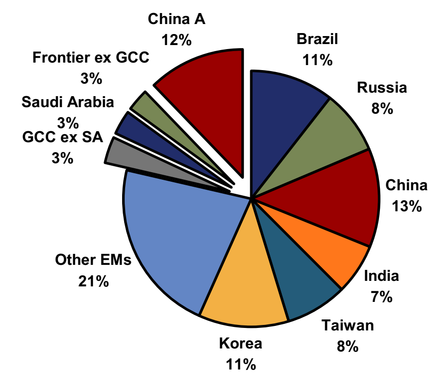
Exhibit 2: Historical Timeline of the creation of new MSCI Country Indices

1988	1989	1990	1993	1995	1996	2001	2006	2007	2008
Argentina	Greece	Indonesia	Colombia	China	Russia	Egypt	Bahrain	Bulgaria	Serbia
Brazil	Korea	Turkey	India	Israel	Czech Rep.	Morocco	Kuwait	Croatia	Lithuania
Chile	Portugal		Pakistan	Poland	Hungary		Oman	Estonia	
Jordan	Taiwan		Peru	South Africa			Qatar	Kazakhstan	
Malaysia			Sri Lanka				Saudi Arabia	Romania	
Philippines			Venezuela				U.A.E.	Slovenia	
Thailand								Ukraine	
Mexico								Kenya	
								Mauritius	
								Nigeria	
								Tunisia	
								Lebanon	

Source: MSCI Barra

The combination of the desire for and achievement of economic growth, and the willingness to open the investment opportunities to non-locals to attract capital has led to more markets joining the international investment opportunity set. The latest entrants are markets from countries in the Persian Gulf, the Balkans, and sub-Saharan Africa, among others. On the demand side, investors continue to seek new investment opportunities and show interest in investing in these 'frontier' markets, which are typically smaller, and have fewer and smaller companies that are less liquid. This has led to the creation of the MSCI Frontier Market Indices in 2007.

Exhibit 3: Relative Weights of Markets for Emerging, Frontier and Large Closed Markets



Source: MSCI Barra

As depicted in Exhibit 3, these new potential investment opportunities are sizeable, representing as much as 20% of the current emerging and frontier markets universe. These new segments can be broken down into closed markets that might potentially open such as Saudi Arabia and the China domestic market (A shares), and frontier markets that are open but still relatively difficult to access. Reinforcing the constantly evolving nature of financial markets, MSCI Barra recently announced that it would reclassify Jordan as Frontier Market and would be consulting on proposals to reclassify Israel and Korea as developed markets, and on proposals to reclassify Kuwait, Qatar, and the UAE as emerging markets.

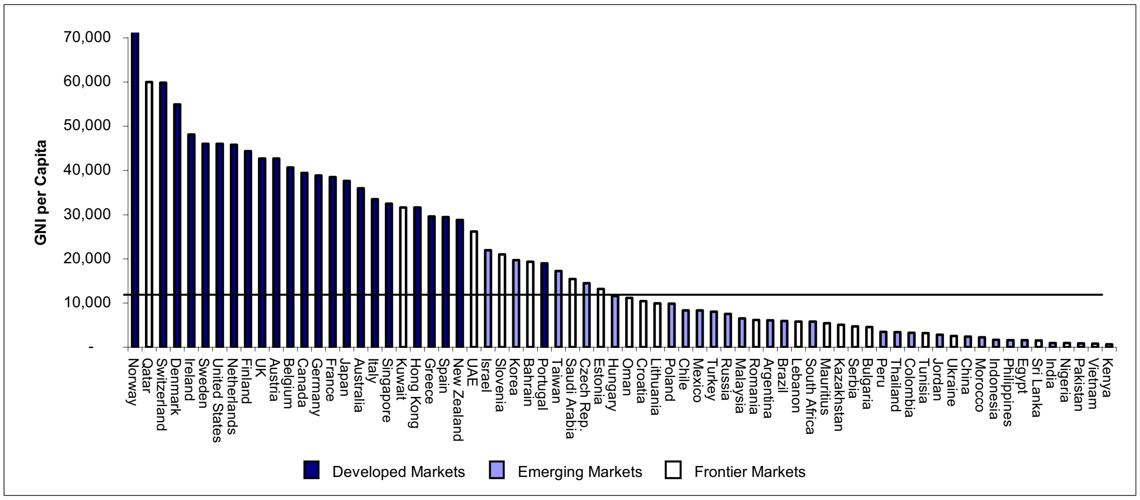
The rest of this section is organized as follows:

- In the next part, we review the role of economic development in the classification of markets and how economic growth has altered the relative importance of countries over time.
- We then focus on understanding the relationship between the economic size and financial market size of emerging and developed markets.
- The next part analyzes the differences in the risk and return characteristics of emerging markets compared to developed markets, and highlights the differences in relative importance of factors that drive risk and return in these markets.
- Finally, we explore the use of the existing MSCI GDP-weighted indices as alternatives to capture the country factor by emphasizing economic rather than market size.

Economic Development as a Key Driver

Underlying the growth of the investment universe is the economic development of the countries. One marker to identify countries as “developing”–as opposed to “developed”–has been low GDP or GNI per capita. Exhibit 4 depicts the investment universe covering the 70 countries for which MSCI Barra calculates an index ranked by GNI per capita. In this group, 37 countries have a GNI per capita below the World Bank threshold of high/middle income country. These countries represent 15% of world GDP and 80% of the world population.

Exhibit 4: MSCI Country Universe Ranked by GNI Per Capita (Atlas Method, World Bank) High Income Threshold



Source: World Bank. Data as of 2007 except for Bahrain, Kuwait, Oman, United Arab Emirates and Taiwan (2006). No data available for Qatar, estimated to be high income; ranking is approximate.

Obviously, economic growth potential does not necessarily translate into realized growth. However, in the aggregate, emerging markets have indeed experienced higher economic growth rates than developed markets. The average economic growth rate has been a full percentage point higher for emerging markets – 5.9% annually over the last 20 years compared to 4.9% for developed markets.

However, the aggregate number alone does not provide the full picture. Growth has not been uniform across all emerging markets. Exhibit 5 highlights the highest and lowest growing countries over the last 20 years as measured by GDP per capita. In 1987, Argentina and Korea had similar GDP per capita at around USD3,000. At the end of 2007, Korea's GDP per capita was three times that of Argentina.

It is also interesting to note that the divide between high growth and low growth is not exclusively along the lines of emerging and developed countries. Singapore is among the fastest growing countries while Hungary and Czech Republic are among the slowest ones.

Exhibit 5: Highest and Lowest Real GDP Per Growth Countries

Real GDP Growth Rate

Country	1987	1992	1997	2002	2007	CAGR
Highest Growth						
China	11.98%	8.44%	11.45%	8.24%	10.62%	10.13%
Singapore	5.37%	8.70%	9.51%	3.43%	6.76%	6.73%
Korea	9.47%	8.35%	7.09%	4.20%	4.36%	6.67%
Taiwan	9.61%	7.52%	6.74%	3.64%	4.52%	6.38%
India	5.14%	5.50%	6.35%	5.31%	8.48%	6.15%
Lowest Growth						
France	1.80%	2.65%	1.33%	2.71%	1.84%	2.07%
Czech Republic	2.41%	-2.06%	2.71%	1.69%	5.33%	1.99%
Italy	2.60%	2.39%	1.33%	1.79%	0.98%	1.82%
Switzerland	2.01%	2.16%	0.82%	1.81%	2.05%	1.77%
Hungary	1.73%	-3.69%	2.30%	4.56%	3.84%	1.71%

Source : IMF, MSCI Barra

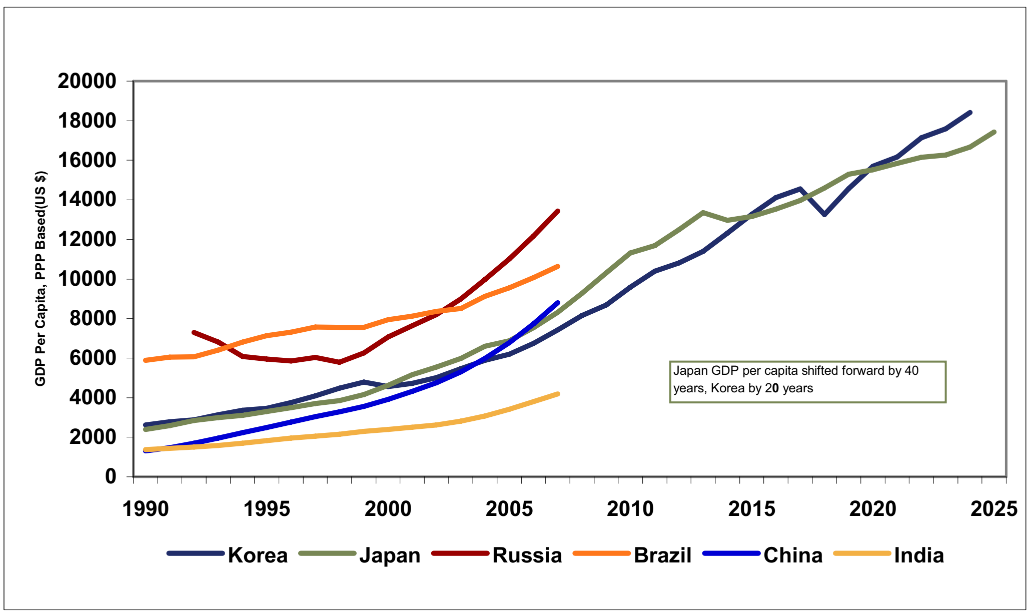
Not only are growth rates not uniform across emerging markets, the growth is subject to violent disruptions. For example, during the 1998 crisis, the weight of emerging markets in the MSCI All Country World Index dropped from 8% to 4%.

How do Economies Grow?

It is not clear that there is a beaten path to achieving economic growth. One model that appears to have produced sustainable levels of development is based on manufacturing. Most of the current developed economies of the world grew through industrialization and manufacturing growth. The development of Japan post WWII was based on manufacturing excellence. Korea applied a similar model roughly 20 years later. China's recent growth has been based on the same roadmap. As highlighted by Spence and El Erian [2008], these countries have policies explicitly targeting growth and have built strong political and social consensus around the necessity to support growth. Very often, high levels of investments needed to support this growth are funded by large domestic savings and complemented by select Foreign Direct Investments.

Exhibit 6 shows the growth trajectories of the BRIC (Brazil, Russia, India, China) countries over the last 15 years along with those of Korea and Japan to illustrate this observation. Japan's GDP per capita series has been moved forward by 40 years and Korea's by 20 years in this chart. It is striking to see how closely Korea has been tracking the time-shifted growth path of Japan and how China may be able to achieve similar or stronger rates of growth.

Exhibit 6: GDP Per Capita Growth Trajectories for Selected Emerging Market and Developed Market Countries



Source: IMF World Outlook, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, Morgan Stanley Research

The development model of the other BRIC countries seems to have different drivers, much more influenced by natural resources in the case of Russia and Brazil, while India is testing its own version of economic development with a strong component of outsourced services. This new dimension of growth in services rather than manufacturing has been made possible by the advent of the internet and the huge reduction in communication costs linked to it. These new models for growth have been untested over long periods but may prove to be other pathways for achieving growth.

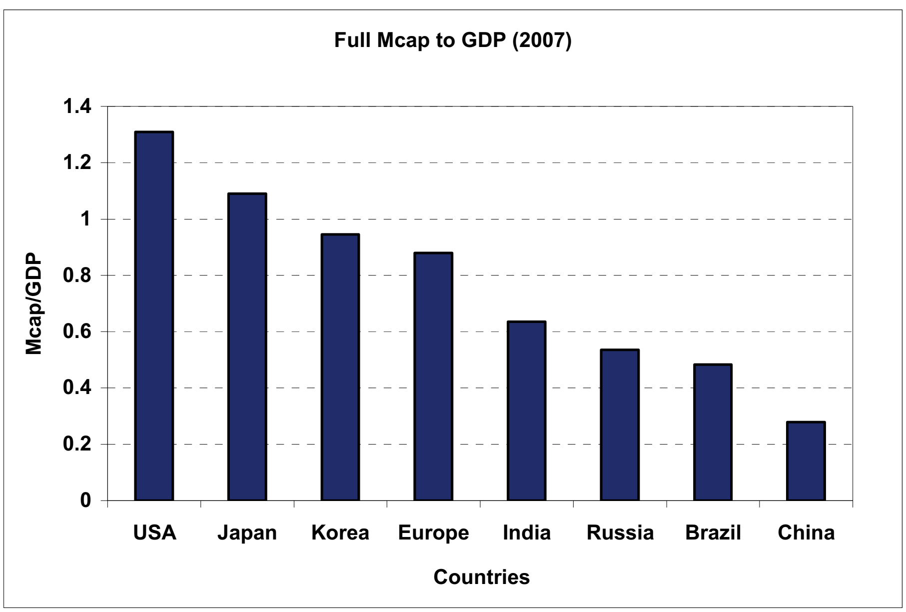
While economic development and models of growth are important elements of the road map for countries to join the international equity opportunity set, those developments can be reversed by other factors such as political disruption. Venezuela has been gradually exiting the international equity opportunity set. In the late 1970s, Iran isolated itself from the free market world, similar to Russia and other countries earlier in the 20th century (although for different reasons).

Economic Size vs Market Size

While economic development and the opening of markets are important drivers of the inclusion of the new markets in the global opportunity set, the proportion of the economy that is reflected in the stock market determines the size of the market. One simple measure that reflects this dimension is the ratio of country market capitalization to GDP. Empirically, as shown in Exhibit 7, advanced financial markets tend to have market capitalization/GDP ratios that are closer to 100%. In contrast, stock markets in China, India, and Russia capture only a small portion of the economy. Over time, market size has typically increased with economic development as families and entrepreneurs float their holdings on the stock market to raise capital, or as state companies are privatized.

Sometimes, the influence of state ownership has resulted in surprising equity market biases. For example, economies in the Persian Gulf region, such as those of Kuwait, UAE or Saudi Arabia, are obviously heavily dependent on energy. However, their stock markets fail to capture this directly, as all energy companies are nationalized.

Exhibit 7: Ratio of Full Market Capitalization to GDP for Select Emerging Markets and Developed Markets Countries



Source: IMF, MSCI Barra. Data as of December 31, 2007.

Overall, we can distinguish a common pattern of a multi stage model of economic and financial development.

- Stage 1: Emergence. In this category, countries typically would have low levels of GDP per capita. Their economies are heavily influenced by government or are dominated by family controlled conglomerates that benefit from political connections. The stock market is narrow, composed typically of banks, conglomerates and local utilities, mostly telecommunications. Many of the small countries in the Emerging and Frontier Markets are still at this stage

- Stage 2: Expansion. The economy has specialized along its natural competencies; companies are starting to address markets outside their country of domicile. The export drivers can be natural resource and manufacturing. To finance their expansion, companies need capital, want to diversify their investor base and seek international investors. The stock market starts to broaden and newly listed companies reshape the profile of the market. India, Mexico, Korea, Taiwan currently fit into this category.

  At this stage, countries have also improved their legal and regulatory framework and incorporated laws that seek to protect the common interests of domestic and international investors, facilitating access to foreign capital.

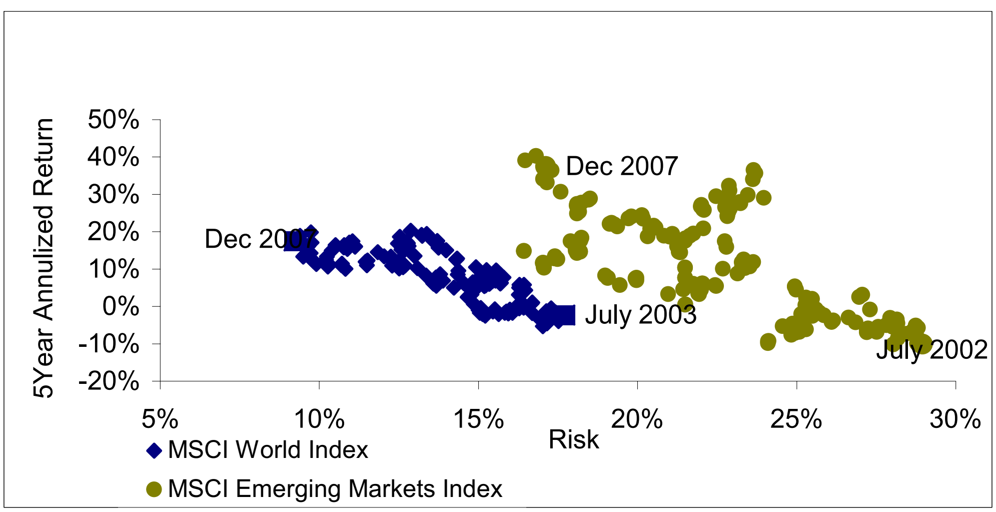
- Stage 3: Maturity. The country enjoys high GDP per capita and is completely integrated in the global economy. Global stocks dominate the stock market, which captures more than the domestic economy. The stock markets of Switzerland, dominated by global stocks in the food, pharmaceuticals or banking sectors, or the United Kingdom with its global resources companies and banks are good examples of markets that extend beyond the local economy. Most developed markets are in this category.

Higher Risk for Higher Return

We have thus far examined the differences in economic growth, market openness and their consequences in terms of countries entering the international investment opportunity set. Such distinctions would be moot if they did not translate into different risk and return characteristics. We will therefore now review some of those differences between emerging and developed markets.

When looking at risk and return over rolling 5-year periods in Exhibit 8, it is clear that, collectively, emerging markets have shown a consistent pattern of higher volatility compared to developed markets.

Exhibit 8: Rolling 5-Year Risk and Returns for the MSCI World Index and the MSCI Emerging Markets Index for the Period 1992 to 2007



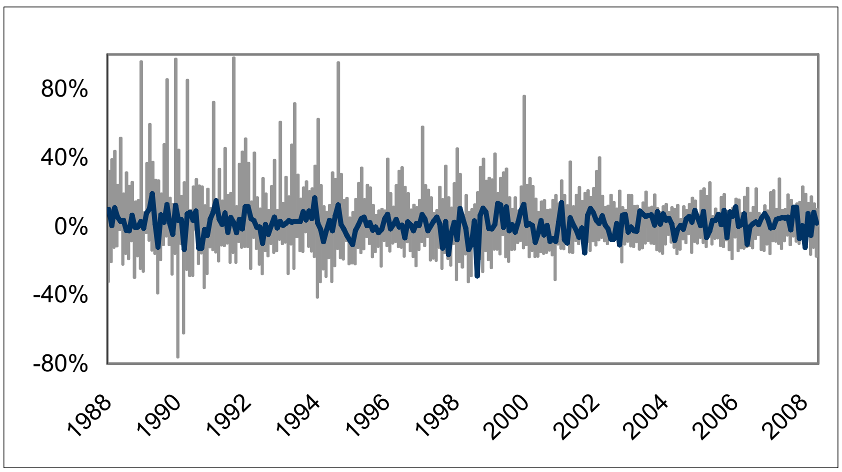
Source: MSCI Barra

Emerging Markets: A 20-year Perspective

The emergence of developing economies has been punctuated with economic crises, as seen with the Tequila Crisis in 1995, the Asian Crisis in 1997, the Russian Debt Default in 1998 and the Argentina Currency Crisis in 2002. Most of these crises were accompanied by currency devaluations and were often triggered by macroeconomic instabilities coupled with an excessive burden of short-term foreign debt. Even though the trigger of a crisis may be limited to an event within a single country, as in the case of Argentina, it may also spread across its region and impact other emerging and developed markets, as seen in August 1998.

Nevertheless, during the late 1980s and 1990s, returns varied significantly across emerging markets and the monthly return range of the best and worst performing country indices exceeded 80% on a regular basis, as shown in Exhibit 9. Even in August 1998, not all countries went into negative; Morocco and Pakistan posted positive monthly returns of 7% and 5%, respectively.

Exhibit 9: Range of MSCI Emerging Country Index Returns and the MSCI Emerging Markets Index Return



Source: MSCI Barra

Blue = MSCI Emerging Markets Index monthly returns
Grey = Range of MSCI Emerging Country Index monthly returns

Emerging Markets: A 20-year Perspective

During the 2000s, the range of index returns has come down, confirming the relative absence of major economic or political crises within emerging markets in recent years. Country specific extreme events may have happened less frequently in the recent past but the market as a whole has continued to experience monthly returns above/below +/- 10%.

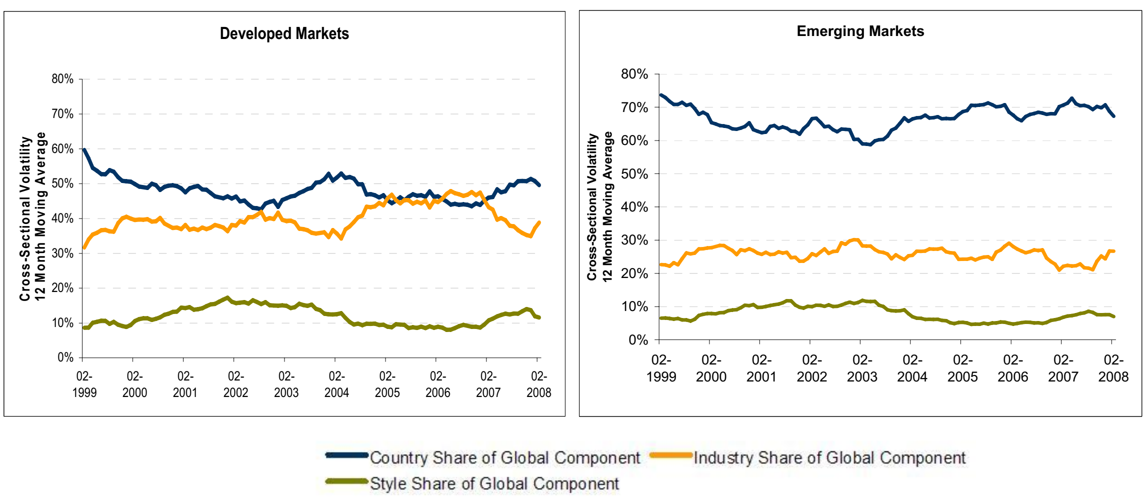
In addition, average country correlations across emerging markets have increased over the last 20 years from a low of 5% to more than 46% in the most recent 60 month period. The average correlation across the BRIC countries has moved even higher to 55% in the recent period. These results indicate that emerging countries have recently become more interdependent, potentially leading to fewer diversification benefits at the country level.

Measuring the Country Factor

Most aspects of our analysis so far highlight the importance of the economic and political environment in emerging markets. Is it possible to quantify the relative importance of the country return relative to global sector and style factors? Has there been a trend towards sector diversification and importance within emerging markets similar to developed markets, and in particular Western Europe? Or is the country still the main driver of equity risk and returns?

Due to the pioneering work of Barr Rosenberg in the late 1970s, we know that equity returns are influenced by systematic or fundamental factors. These factors are typically grouped into countries, sectors and styles, such as the market capitalization of a company, the value characteristics or recent price momentum. We can measure the relative importance of these fundamental factors by looking at the cross sectional volatility of stocks across markets through time and by looking at how much of the return dispersion as explained by the fundamental factors comes from country, sector or style factors.[1]

Exhibit 10: Relative Importance of Common Factors in Cross Sectional Volatility



Source: MSCI Barra

Whilst of equal importance to sectors in developed markets, the country factor has been a dominant factor in explaining the cross sectional volatility in emerging markets, as seen in Exhibit 10.

[1] Cross-sectional volatility ("CSV") measures the dispersion of returns across assets at a single point in time. CSV can be used to gauge the opportunities in a given market to under or outperform relative to the market. It can also be used to understand the overall level of cross-sectional volatility in a particular market as well as the sources of return from which that cross-sectional volatility arises. A factor model, for instance, can allow one to decompose the returns of a set of assets, and therefore the cross-sectional volatility, into various components. Here, we decompose cross-sectional volatility along the lines of the Barra Integrated Model.

An Alternative Approach to Capture the Country Factor

The importance of the country factor as a driver of stock returns, and the divergence between economic size and market size of countries that are also potentially the faster growing economies, explains the potential interest for an alternative weighting approach – based on the economic weight of countries rather than market capitalization. Recently there has been increased interest in alternative weighting schemes designed to bias portfolios towards a desired factor. For example, equal weighting is one way to tilt a portfolio towards smaller stocks and capture the size factor. Similarly, fundamental weighting tilts portfolios towards value stocks.

It is, therefore, interesting to look back at one of the first alternative weighting schemes, the GDP-weighted index. MSCI GDP-weighted Indices were introduced in 1988 to address the issue of the large weight of Japan in the MSCI World Index. The GDP weighting scheme was extended to cover emerging markets and MSCI ACWI in 2005. GDP-weighted indices use the country's GDP as the weighting factor instead of market capitalization. Consequently, the weights of countries in the GDP-weighted index will represent the relative importance of a country's economy as opposed to the size of its equity market.

Exhibit 11: Largest Absolute Weight Difference between the Standard Market Capitalization-weighted MSCI ACWI and its GDP-weighted Equivalent

Country	Weight Difference (GDP - Market Cap)
USA	-13.9%
China	4.7%
United Kingdom	-3.5%
Germany	2.8%
Italy	2.6%
Switzerland	-2.1%
India	1.5%
Russia	1.3%
Canada	-1.3%
Mexico	1.2%

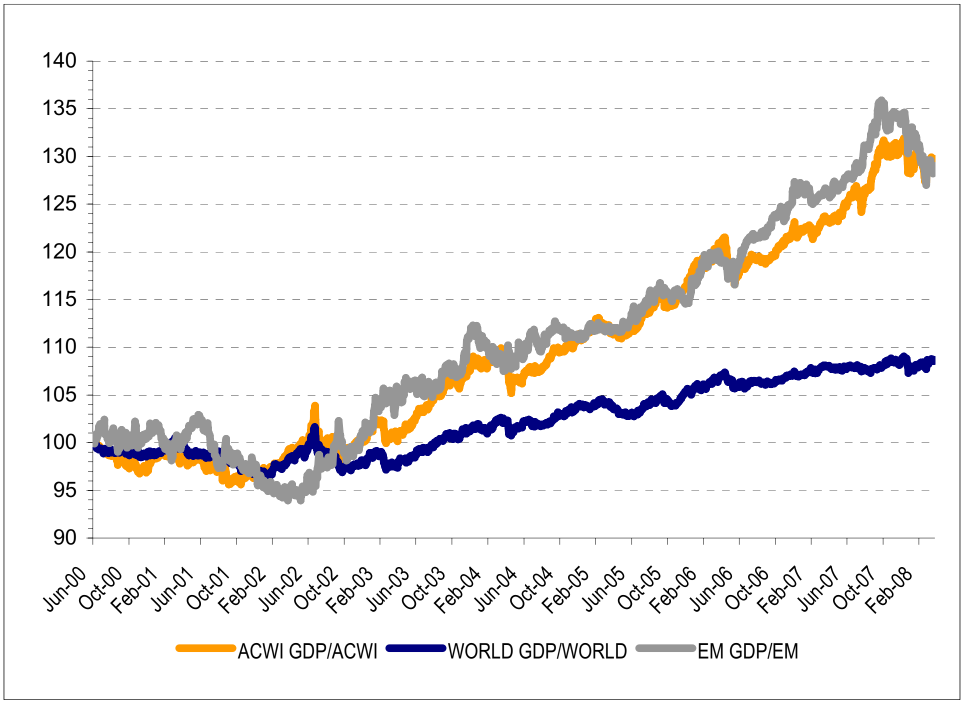
Data as of June 2, 2008

Source: MSCI Barra

As seen in Exhibit 11, the largest current over-weights in the MSCI GDP-weighted ACWI Index are for emerging markets, such as China, India and Russia, which are some of the fastest growing economies but have market capitalization weights that are relatively smaller than their economic weights. While the overweight list includes some developed markets, such as Germany and Italy, the countries with the largest disparities in terms of their market capitalization weights being larger than their economic weight are the US and the UK.

These built-in differences in country weights produce an interesting risk return profile, as shown in Exhibit 12. It is striking to see that a simple concept such as GDP-weighting has been so effective at capturing the two major shifts in asset allocation over the last 20 years: underweighting Japan in the 1990s and overweighting emerging markets since 2005.

Exhibit 12: Performance of GDP-weighted Indices Relative to their Market Capitalization Weighted Equivalents



Source: MSCI Barra

There has been little study on why a GDP-weighting scheme may be a more effective way to allocate across countries. As always, one possible explanation is that its apparent effectiveness is purely accidental. Another one is that the GDP weight would serve as a better proxy of the natural country weight–including unlisted equities–in the global portfolio. Another more tactical explanation is that GDP-weighting is a way to anticipate other investors' asset allocation decisions, therefore buying before everybody else buys and selling before the others sell.

Conclusion

Our review of 20 years of emerging markets history shows that economic development and market openness play a significant role in the entrance of and growth of markets into the international investment opportunity set. Just as long-term economic growth reshapes the relative importance of nations, rapid and unsustainable economic expansion can also lead to macroeconomic imbalances and create periods of disruption as was seen in the crises in the 1990s. This historical perspective highlights the importance of the country factor in emerging markets investing.

In that context, index providers have also evolved in their role of supporting international investors accessing these markets, by reflecting the expanded opportunity set on a timely basis, by managing the evolution of markets in the context of their country classification as frontier, emerging and developed and also by providing alternative views and tools to capture the country factor such as GDP-weighted indices.

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clientservice@mscibarra.com

www.mscibarra.com

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