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How to differentiate emerging countries?
New approaches for classification
and typology

Research
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How to differentiate emerging countries? New approaches for classification and typology*/**

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Abstract

Once accepted the idea that the emerging world may behave like a block in period of crises (as the group of advanced countries also does), one must wonder whether one should go beyond that and consider that the emerging world deserves better: the wide divergence between countries, the health of some countries (sometimes better than some advanced countries) simply mean that it does not make sense to view the "emerging world" as a whole, as a block, but as well-defined, specific and homogeneous subsets. The key questions are: how to define these groups and sub-groups? Are these sub-groups, in line with economic reality, also in line with financial reality (outperformance/underperformance)? That is what this Discussion Paper is about.

Our results are not ambiguous: the EM world deserves to be considered as a very heterogeneous group, both in terms of economic criteria (such as vulnerability, capacity to boost growth if needed...), and in terms of performance. We have developed original approaches giving the possibility to play these characteristics. A static approach and a dynamic approach are both presented. One drawback, though: capital flows tend to go in and out at the same time, in line with global economic conditions, risk aversion, volatility... The capacity to escape a market downturn within EM world is therefore rather limited (see the forthcoming Discussion Paper on contagion for in-depth analysis and applied results).

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Executive summary

1. Neither the world of the advanced countries, nor the dollar block, nor the Eurozone, nor the emerging (EM) block can be considered a block. In fact, one of the key rationalisations for the possible "block" vision is simply that for decades, those who decided to diversify into EMs allocated a low (and often very low) part of their portfolios to the "beta" of the EM asset class and had no intention of running on alpha strategies: The lack of knowledge of countries, the lack of internal (and often external) analysis, and the remoteness of these markets led to these choices. It was about passive management (investment in the emerging block represented by the index) rather than active management (country analysis, discrimination, selection, etc.). Things have changed since that time, though.

2. The emerging block is wrongly considered to be more a block than the advanced countries block, the dollar block or the European block. However, a strong factor justifying the existence of an emerging block is that, unlike the advanced countries block (with the US and the dollar, or with Germany in particular), the dollar block (with the US and the dollar), or the European block (with Germany and the euro), there is no "safe haven" country within the emerging block, no secure reserve currency or bond market... In this sense, the emerging block is more a block than the other groups mentioned above. This feature can be found in moments of crisis or periods of sharp rise in risk aversion.

3. The low ability to differentiate has long been aggravated by the fact that diversification did not really exist, especially for debt markets: investing in emerging markets was more likely to take on a high degree of concentration risk. Until the end of the 80's, Latin America was the only area providing size and liquidity. Diversifying was not really possible: as emerging markets' financial markets were not highly developed, the benchmarks were by construction highly unbalanced. For example, the EMBI index comprised only 10 countries at the end of the 90's: Argentina, Brazil, Bulgaria, Ecuador, Mexico, Panama, Peru, Poland, Russia and Venezuela. America accounted for almost 90% of the index (70% for Argentina, Brazil and Mexico), Asia was absent and Europe accounted for only 10%. The same was true for the EMBI + index: nearly 80% for the Americas alone (Poland, Russia, Nigeria and Philippines were topping up the index). The development of debt products in the 2000's and 2010's enabled investors to diversify and differentiate better.

4. It is easy to see that economic divergences, structural characteristics and vulnerability, particularly to capital flows, can vary widely across countries and therefore the EM world is not a block. A BRIC approach

(or other acronyms such as **BRICS, CIVETS, MIST, MINT, BENIVM, BRIICSSAMT, BRICSAM, BRICM, BRICK, BRICS +, BEM, E7, NEST,** EAGLES, PPICS, E7, TIMBI, VISTA, BNP, MANGANESE...), a regional approach or an index based approach (EMG, Next11 or NewFrontier) are not satisfactory if one looks at the specificities of different countries.

5. On the other hand, the emerging world tends to behave like a block when the situation deteriorates sharply and risk aversion becomes high (it is even a reliable indicator of the intensity of a "crisis"). In periods of high volatility, it is pretty simple to point out the correlation between emerging markets, but also between advanced economies, except for safe havens and reserve currencies. As there are no safe havens or reserve currencies and international currencies in the emerging world; any common global factor (e.g. an excessive Fed rate hike, fears of trade war, to recapture recent risk factors) leads to contagion which tends to affect all markets almost uniformly. Note that, as regard EM markets, the correlation of capital flows/funds flows is even stronger than the correlation of FX, Fixed Income and Equity markets.

6. Dispersion among the emerging world is high in economic terms and in terms of vulnerability. Taiwan, Brazil, Thailand, Russia, Peru and China do not seem very vulnerable at present: they are "protected" by their surpluses, their low external debt, or the level of their foreign exchange reserves. By contrast, Turkey, South Africa, Argentina, and Hungary present structural vulnerabilities that, in some cases, have even deteriorated over the past two years. Turkey, Hungary and Argentina have also a large share of their foreign currency denominated debt (primarily USD and EUR), and any sharp depreciation of their currencies is dangerous, as it is driving up their indebtedness.

7. To verify the existence - or not - of an emerging block or several homogeneous blocks, we then looked, for the selected countries, at what happens on the financial markets (in "normal" times and during periods of crisis), both on i) global capital flows (from non-residents), on ii) flows into equity, FX and on fixed income products, and ii) on the correlation of these flows. Indeed, the cross-country correlation provides a good idea of contagion across countries.

8. In terms of flows, there is a strong correlation between countries, with India as an exception (and China to some extent). For the rest of EM countries, the correlation of capital flows from non-residents investors is very strong, whatever the period considered. In that sense, the EM world can be considered as a block. This is certainly due to the amount of passive management and the need to replicate benchmarks. Another explanation might be linked to the specific role (and burden) of China and India in

investments, and to the common view that these two countries have a significant internal capacity to manage a pro-growth and independent economic policy: it is without any doubt the case for China considering the existence of capital controls, the (still low) level of openness of the capital account, the non-convertibility of the currency, the low external vulnerability (debt is mainly an internal debt)...

9. One of the striking conclusions on equities lies on the comparison between EM and advanced countries. The correlation of returns is much higher within the developed countries group, which indicate that this group has to be much more considered as a block than the EM world. Generally speaking, EM European and Latin American equity returns are more correlated than Asian ones. The correlation is stronger in 2018 compared to the whole period: the EM world is more a block when risk aversion rises. The capacity to differentiate seems more important in "normal" periods.

10. As regard Fixed income markets, correlation of EMBI returns are similar should we compare the whole period and 2018. In other words, the discrimination seems limited, especially in Latin America where the correlation of returns is significantly higher than in the other regions.

11. FX markets seem particular: the correlation of returns is systematically and significantly lower than the correlation observed in both equities and fixed income markets. The liquidity of this market and the easiness to build FX positions could be part of the explanation. Note that correlations are higher in EM Europe, though, which is certainly due to the official" and sometimes "non-official" peg to the euro. It might be also due to the desire of European countries to respect European inflation, debt and deficit criteria, which represent predictable constraints to the economic policy.

12. Rejecting BRICS, emerging block or indices is one thing, proposing an alternative approach is another. We have developed several methodologies that provide an alternative typology to traditional approaches and that help orient investment strategies.

- **"Static" approaches** address this problem. What is needed is to define groups that are homogeneous and stable over time, should one consider the structural differences that exist between emerging countries: external debt and vulnerability to capital flows, the ability to deliver autonomous growth, whether commodity producers or consumers, etc.
- More "**dynamic**" approaches are also proposed: these approaches use the structural and cyclical characteristics of emerging countries to define groups of countries. We have opted for a hierarchical bottom up classification method (HCA - Hierarchical Cluster Analysis), an automatic classification method very used in data analysis, and which has two advantages: i) we work on the basis of proximity measurements

(here, scores) between objects (here, emerging countries) that we wish to group together; ii) one of the results is dendrogram, which makes it possible to graphically represent the iterative aggregation of data. We can then get an idea of the number of classes in which emerging countries can be grouped together.

Whatever the approach chosen, the groups thus defined make it possible to propose investment strategies based on specific configurations (economic situation, financial market positioning) or on specific investment factor... and not on regions or benchmarks only.

13. This new typology offers the possibility of avoiding at least part of the contagion effects prevalent in financial markets by moving as far away as possible from the factors that caused this contagion. That is the whole point of these approaches. They are particularly attractive in large market movements, as they allow portfolios to focus on tailwinds. They are useful in moderating drawdowns as they reduce exposure to factors that cause weakness (commodity prices, global growth, etc.). They also allow to focus on the stakes of the different countries and to adapt investment strategies to the market conditions and to the predominant factors. In contrast, however, in cases of strong contagion or even crisis, there is no method to completely avoid the effects of contagion.

Introduction

2018 was a difficult year for emerging countries: fears of a trade war being triggered by the United States, tighter than expected monetary policies in the US, a rise in US Treasury bond yields , the appreciation of the dollar, downward revision of growth prospects and a rise in risk aversion prompted capital flows from these countries and sought refuge largely in the United States, which accentuated the drop in emerging markets (equity, fixed income and currency markets). There was no panic, but the downward movement was substantial.

In 2018, the MSCI world has lost 11%, while the MSCI emerging markets index was down 16.9% (S&P500 at -7%, DAX at -18.3%, CAC40 at -11.9%, MIB at -16.1%, Korean KOSPI at -17.3%, Chinese Hang Seng at -13.6%...). Only Brazil (+15%), Russia (+15.1%) and India (+5.9%) have done well... but their currency has sometimes fallen heavily: -18% for the Brazilian real, -15.8% for the Russian rubble, -16.4% for the South African rand, -12% for the Indian rupee... Same trend in emerging debt markets: The EMBI global spread soared to 330 bp (+120 bp), with significant increases everywhere, in Latin America (550 bp, +145 bp), Africa (550 bp, +200 bp), Europe (330 bp, +110bp) and Asia (215 bp, +60 bp).

In short, it seems that, once again, the emerging world has behaved like a block. It should be acknowledged that the Fed, along with fears of trade wars, but also fears of a sharp slowdown in global economic activity (three systemic factors) have affected all countries and asset classes.

2018 was a year with few precedents on the financial markets: never in the last 40 years had more than 95% of asset classes delivered negative performances. A year far worse than 2008! Similarly, roughly 5% of these asset classes had delivered a negative return in 2017, the best year in a decade. On this criterion alone, 2018 is even, according to some studies, the worst year since the early 20th century (and 2017 the best)!

Put differently, it is no surprise that all countries were impacted (December 2018 was, for US equities, the worst December in 8 decades!), and no wonder that the emerging world was no exception.

The graph below shows that we have just lived through two exceptional, totally opposite years, with no feeling of euphoria in 2017 and no perception of a financial crisis in 2018. 2019 started on the basis of 2017 and, mid-June, around 11% of the asset classes delivered a negative performance.

To be complete, the asset management benchmark, which covers the 14 largest global equity managers, fell by more than 30% over the year in 2018, a good leading indicator of investor nervousness.

Source: Datastream, Amundi Research
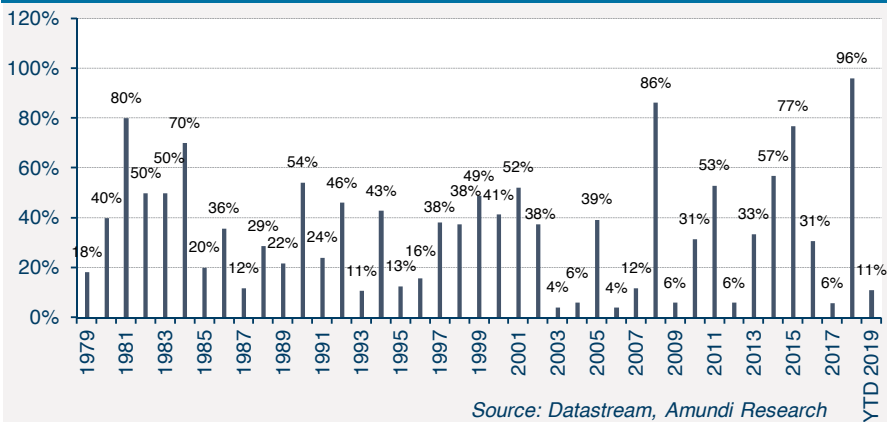
Once accepted the idea that the emerging world could only behave like a block in 2018, one must wonder whether one should go beyond that and consider that the emerging world deserves better: the wide divergence between countries, the health of some countries (better sometimes than many advanced countries) simply mean that it does not make sense to view the "emerging world" as a whole, as a block, but as well-defined, specific and homogeneous subsets. How to define these subsets? Are these sub-groups, in line with economic reality, also in line with financial reality (outperformance/underperformance)? That is what this Discussion Paper is about.

This document is aimed at presenting the economic context and the ways to differentiate countries to avoid contagion as much as possible. The main episodes of emerging market sell offs since the 1980's are analysed: The Latin American debt crisis of the 1980's, the Mexican crisis of 1994-1995, the Asian crisis of 1997, the Russian crisis of 1998, the Brazilian crisis of 1999, the Argentine crisis of 2001-2002, the announcement of the end of Fed QE in 2013, the Chinese stock market's "boom and burst" in 2015-2016, and the combination of restrictive trade policy and restrictive monetary policy in the US in 2018. The aim will be to show that contagion is now less related to banking connections, and more and more to economic factors and risk perceptions. We will also show that the typology between emerging countries can be extremely useful in reducing the impact of contagion.

This document is divided into two parts:
- The first part aims to show that the **reality of emerging economies** supports the idea of segmentation of the emerging world. Neither

indices nor regional approaches (let alone the global approach) capture the divergences and opportunities they generate. In contrast, the **reality of emerging financial markets** is more complex. Even if the countries are sometimes quite different, financial markets do not always manage to differentiate between them, especially in times of high volatility or crisis periods.

- The second part discusses the topic of country classification and **typology.** The objective is to present several approaches that enrich traditional approaches.

A forthcoming Discussion Paper will focus exclusively on the question of contagion, vulnerability, and the capacity to differentiate countries on both FX, fixed income and equity markets.

A recent Discussion Paper (Ithurbide (2019)) presented the issue of leadership, current and future leadership. It focused on the competition and the trends between the US, China and some emerging countries and Europe in terms of hard power, soft power and smart power. It also updated the role of USD, EUR and RMB as international currencies.

I. The classification of emerging countries and markets is an indispensable exercise

The concept of emerging countries is relatively new: It dates from the early 1980's... and as strange as it may seem, there is no real definition for an emerging country. In terms of investment, benchmarks define the universe of investment and countries that are in emerging indices are considered emerging. It appears a priori quite simple, with the exception of countries that were sometimes included in emerging equity indices, but not in emerging debt indices... The investment policies of funds have to solve these shortcomings.

1.1. How to define an emerging economy?

Which country is an EM country? Which country is an advanced country? Let us acknowledge that it is increasingly difficult to answer this simple question a priori. Criteria often discussed in the past to distinguish these two groups sometimes have less significance, such as unemployment, vulnerability (to capital flows), debt levels, size of financial markets... Some emerging market countries have characteristics that are far better than some advanced countries and are much more capable of controlling their debt than most advanced countries. One only has to look at the chart below (on debt to GDP developments since the financial crisis) to make a case for this.

Source : Datastream, Amundi Research, Data 3Q2018, Total debt =Gvt Debt + NFC Debt + HH Debt
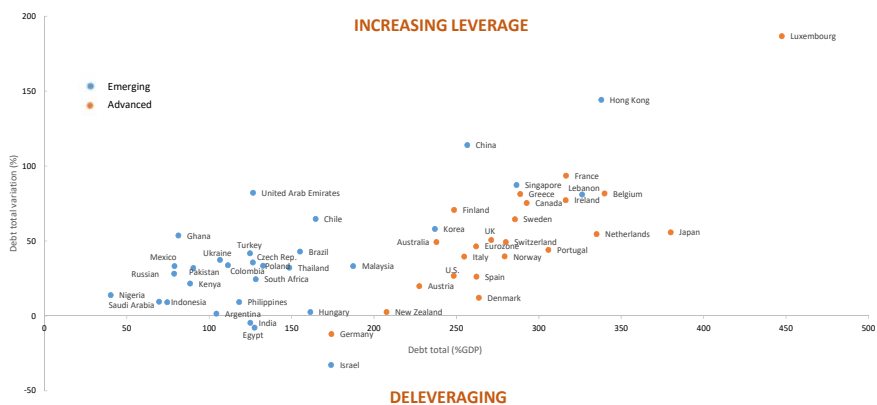
From an economic point of view, however, an emerging country may be considered to be a country with a GDP per capita and a human development index (HDI) that is lower than those of developed countries, but that is experiencing rapid economic growth, and whose standard of living and economic, political and social structures are converging with those of developed countries; it is also a country whose economy is open to the rest of the world, undergoing far reaching structural and institutional transformations and has strong growth potential.

Box 1:
The Human Development Index

HDI is calculated by the United Nations Development Programme (U.N.D.P.). It is between 0 and 1: the closer it is to 1, the higher the country's level of development. The HDI allows for the preparation of an annual country ranking. It is calculated by the average of three indices, respectively (source: UNDP):

- # **Health — longevity** (measured by life expectancy at birth), which indirectly measures the satisfaction of essential material needs such as access to healthy nutrition, safe drinking water, decent housing, hygiene and medical care;
- # **Knowledge or level of education.** It is measured by the average length of schooling for adults over 25 years of age and the expected length of schooling for children of school age. It reflects the satisfaction of immaterial needs such as the ability to participate in decision making in the workplace or in society;

Standard of living. It is measured by the logarithm of gross income per capita in purchasing power parity terms. It covers those elements of the quality of life that are not described by the first two indices such as mobility or access to culture.

HDI makes it possible to classify countries according to the development index:

The **"Advanced countries"**: These countries generally have HDI in excess of 0.8. This group comprises two types of countries: the "developed market economies» of the second half of the 20th century (United States, Western Europe, Japan), and the old "new industrialised countries" in Asia (South Korea, Taiwan, Singapore…).

The **"Economies in transition":** These are the former communist countries of Eastern Europe such as Russia, Ukraine, Poland…; they are sometimes considered as developed countries, and sometimes as emerging countries.

The **"Developing Countries":** In general, they have an HDI of less than 0.8 and bring together several types of countries: New industrialised and emerging countries (China, Brazil, India, Mexico, etc.), oil exporting countries (Saudi Arabia, Qatar, etc.), intermediate countries (North African countries), and LDCs, "least developed countries", i.e. sub Saharan African countries in the majority (according to UNCTAD, 32 of the 48 LDCs are African countries). It should be noted that some 30 developing countries now have HDI in excess of 0.8.

Table 1: The Human Development Index (HDI) in 2018	
Group of countries	**HDI level**
OECD countries	**0.895**
World	**0.728**
Central Europe and Asia	0.771
Latin America and Caribbean countries	0.758
East Asia and Pacific countries	0.733
Arab countries	0.699
South Asia	0.638
Sub-Saharian countries	0.537
Least developed countries	0.524

Source: United Nations Development Programme Data as of 2018

Among the criteria for qualifying an emerging economy (as opposed to advanced countries, but also in relation to the least developed countries), one can mention nine of them:

- **A steady increase in GDP**, and a rate of GDP growth at or above the world average over a long period;
- **A steady increase in GDP per capita**, which is typically between that of developing countries and that of advanced countries: We generally use a level between 10% and 70% of the OECD average (in purchasing power parity terms);
- **An increase in foreign trade exceeding that of international trade**. It is true that emerging countries are pursuing policies of opening up to the world while gradually opening up their territory to competition. But they still have tariff and non-tariff barriers to protect some activities from foreign competitors;
- **The presence of foreign capital invested over the long term**. Emerging market countries often benefit from the presence of multinational corporations from advanced countries…
- … But they are also capable of investing abroad while developing their own firms and actively participating in globalisation, with **global companies based in several countrie**s (capital predominantly or partially owned by private shareholders);
- **A diversified economy,** which does not rely solely on the export of raw materials and commodities;
- **Promising economic prospects** due to a demographic dynamism and/or growing number of consumers (China is perhaps the best example);
- **A political stability** that does not, however, exclude authoritarian, illiberal regimes or "Democratures" (Turkey, Russia and China, for example).
- **Optimism about the future** and the enthusiasm of their young people are also cultural features of these societies.

Even though there is no precise definition for an emerging market, all of the above shows that we have the key to define a group of developed countries, a group of emerging countries or a group of developing countries. And yet it is quickly obvious that the term "emerging markets" is not satisfactory, especially when it comes to investments: the essence of investment is precisely to bet on divergences, relative performances… This term is therefore misleading, since it tends to bring together a large number of countries which admittedly have common characteristics (see above), but which have very different economic realities. Moreover, thinking in terms of group also does not allow to recognise the dramatic advances made by some of them and isolate them. Finally, some of these countries are now far better positioned than the so

called "advanced" countries. In fact, both the term "emerging country" and "advanced country" are misleading. This is particularly regrettable in the current situation, where a relative value analysis outside the benchmarks is required . Hence the creation of a huge number of sub-groups with sometimes well-known acronyms such as BRICs, CIVETS, MIST, BRIICSSAMT, EAGLES, NEST… (see box 2)

Add that **the emerging group is bumpy**. Some countries are moving from the "least developed" group to the "emerging" group. Others — rarely — exit advanced country indices to go to emerging country indices (Greece in June 2013, for example).

Box 2: BRICs, BRICS, CIVETS, MIST, MINT, BENIVM, BRIICSSAMT, BRICSAM, BRICM, BRICK, BRICS +, Next11, NewFrontier, BEM, EAGLES, NEST, PPICS, E7, TIMBI, VISTA, BNP, MANGANESE…
Is there any acronym to choose for investment purposes?

Since the early 2000's, numerous acronyms have emerged, with the desire to present sub groups of emerging countries reflecting a specific reality on each occasion.

The **BRIC** acronym appeared in 2001, proposed by Goldman Sachs (Jim O'Neill). It identified the four countries that were supposed to eventually eclipse the most developed economies, and that would play an increasingly important role in the global economy: Brazil, Russia, India, and China.

Next11 or **N-11** is a group of countries that may be among the largest economies in the 21st century. Created in 2005, it includes Bangladesh, South Korea, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, the Philippines, Turkey, and Vietnam. Micro economic stability, trade openness, the maturity of political institutions, the quality of investment and education are all criteria that Jim O'Neill used for the "N-11" group.

The acronym **VISTA** appeared in 2006 in Japan, where it is used by the Institute of Economic Research to designate Vietnam, Indonesia, South Africa, Turkey and Argentina: this group of countries is supposed to compete economically with the BRICs.

In 2006, Price Waterhouse Coopers (J. Hawksworth and G. Cookson) presented the **E7** group (for "Emerging 7"), which refers to seven countries whose aggregate GDP was expected to exceed G7 GDP by 2020. These are the four BRIC countries (Brazil, Russia, India and China) as well as Mexico, Indonesia and Turkey (or South Korea according to some specialists (P. Marber)). This group represented 35% of global PPP GDP in 2017 (see table below), compared with 28% for G7 members (25% and 43% respectively in nominal GDP).

Table2: E7 vs. G7				
Country	PPA GDP (USD Bln)	In % of the world	Nominal GDP (USD Bln)	In % of the world
China	23.12	17.13	12.01	14.16
India	9.45	7.00	2.61	3.08
Russia	4.00	2.96	1.53	1.80
Indonesia	3.24	2.40	1.02	1.20
Brazil	3.22	2.39	2.05	2.42
Mexico	2.41	1.79	1.15	1.36
Turkey	2.13	1.58	0.85	1.00
TOTAL E7	47.57	35.24	21.22	25.02
United States	19.36	14.34	19.39	22.85
Japan	5.41	4.01	4.87	5.75
Germany	4.15	3.07	3.68	4.34
United Kingdom	2.88	2.13	2.62	3.09
France	2.83	2.10	2.58	3.04
Italy	2.10	1.56	1.94	2.29
Canada	1.76	1.30	1.65	1.94
TOTAL G7	38.49	28.52	36.73	43.29

The so called "**New Frontier**" countries are considered to be the next wave of emerging countries. The "MSCI Barra New Frontier" index has included 26 countries since 2009: Argentina, Bahrain, Bangladesh, Bulgaria, Croatia, Estonia, Jordan, Kazakhstan, Kenya, Kuwait, Lebanon, Lithuania, Mauritius, Nigeria, Oman, Pakistan, Qatar, Romania, Serbia, Slovenia, Sri Lanka, Trinidad and Tobago, Tunisia, Ukraine, United Arab Emirates, Vietnam. The FTSE listed in 2010 25 countries in its new Frontier category: Argentina, Bahrain, Bangladesh, Botswana, Bulgaria, Ivory Coast, Croatia, Cyprus, Estonia, Jordan, Kenya, Lithuania, Northern Macedonia, Malta, Mauritius, Nigeria, Oman, Qatar, Romania, Serbia, Slovakia, Slovenia, Sri Lanka, Tunisia, Vietnam.

CIVETS is an acronym that, like BRICS, represents a subset of emerging countries. These are Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa. The common feature of these countries, highlighted in 2009 by the Economist Intelligence Unit (Robert Ward), is to deliver an expected average annual growth rate of over 5% for the next 20 years.

The acronym **BRICS** appeared in 2011 and includes the BRIC countries and South Africa. Interestingly, these countries are also trying to weigh on the geopolitical side and are now standing for political summits: In particular, the idea is to weigh in with the G20 countries.

After the BRIC and BRICS acronyms, Jim O'Neill proposed a new group, the **MIST (or MIKT):** Mexico, Indonesia, South Korea and Turkey. These are the 4 countries whose share in the world economy is expected to grow the most.

TIMBI is an acronym made of Turkey, India, Mexico, Brazil and Indonesia, five relatively democratic countries with a huge domestic market and high (potential) growth rates. TIMBI was developed in 2011 by US sociologist Jack A. Goldstone. The aim was to replace the BRICs concept: risks to both Chinese growth (demographics problem) and Russia (an economy too commodity-dependent, and not sufficiently diversified) were highlighted, as were the two countries' democratic deficits. The choice of these five countries is justified by (i) the fact that they already have the world's five largest working populations (population between 15 and 59 years old), (ii) their GDP, which, in total, is equivalent to China's, but with better long-term prospects, and (iii) their strategic position, which should enable them to acquire significant global influence.

In response to TIMBI, the acronym **BNP** appeared in 2011. According to Laurent Chalard (geographer), his creator, TIMBI forgets three major countries in demographic terms: Bangladesh, Nigeria and Pakistan. In theory, their demographics guarantees strong potential growth in the long run. If they succeed in overcoming important domestic problems, these countries may well become engines of growth for the global economy.

The acronym **MANGANESE** (created in 2012 by Shekhna Bounajim Cissé, a Malian banker) brings together the most dynamic African economies: Morocco, Angola, Nigeria, Ghana, Algeria, Namibia, Egypt, South Africa and Ethiopia. These countries account for 70% of the GDP of the African continent, and more than half of the African population.

Created in 2013 by Laurence Daziano (Sciences Po Paris), **BENIVM** refers to Bangladesh, Ethiopia, Nigeria, Indonesia, Vietnam and Mexico. Among the selected criteria: a sustained economic growth, a dynamic manufacturing industry and very significant development prospects.

BRIICSSAMT (or **BRICS+**) is also one of many existing acronyms. Established in 2013 by Alexandre Kateb, this group includes Brazil, Russia, India, Indonesia, China, South Africa, Saudi Arabia, Argentina, Mexico and Turkey. Common ground for these countries: their economy crossed the threshold of 1000 billion dollars GDP (apart from Argentina). BRICSAM (**BRIICSAMT** without Indonesia and Turkey), **BRICM** (BRIC with Mexico), **BRICK** (BRIC with South Korea) are further extensions of the original BRICs.

The "Big Emerging Markets" group (**BEM**) includes Brazil, China, Egypt, India, Indonesia, Mexico, the Philippines, Poland, Russia, South Africa, South Korea and Turkey.

The **MINT** group includes Mexico, Indonesia, Nigeria and Turkey.

In 2010, BBVA Research launched the "**EAGLES**" (**E**merging **A**nd **G**rowth **L**eading **E**conomie**S**), which include both BRIC and MIST countries, plus Taiwan. So, it gives a group composed of Brazil, Russia, India, China, Mexico, Indonesia, South Korea, Turkey, and Taiwan.

A group of fifteen countries called "**Nest**" has also been created by BBVA, in order to closely monitor emerging countries whose GDP is likely to rise over the next ten years. These economies could be part of the "EAGLES" in the future if they are able to improve their performance above current expectations. These include Egypt, Thailand, Argentina, Nigeria, Colombia, Poland, Vietnam, Pakistan, Bangladesh, Malaysia, South Africa, the Philippines, Peru, Chile and Ukraine.

In 2014, Coface gives a list of 10 "**New Emerging Countries**". But as these countries are not homogeneous in terms of the business environment, Coface has divided them into 2 groups:

- In group 1 (**PPICS**), at a level similar to that of BRICS, there were Peru, the Philippines, Indonesia, Colombia and Sri Lanka (these countries enjoy an correct business climate);
- In group 2, where business environment is more difficult (and represent a drag on growth), they included Kenya, Tanzania, Zambia, Bangladesh and Ethiopia. Two main criteria were adopted by Coface: Growth (which must be above 4% and be in an acceleration phase) and financing capacity (countries relying too much on external capital, such as Turkey, need to have a minimum savings rate equal to 10% of GDP).

To sum up, what to choose? It is difficult not to be lost with all these different acronyms. What can be said is that they all meet economic criteria for development, but they do not constitute homogeneous groups. Useful for economists, they do not serve much for everyone who wants — like asset managers — to use country characteristics to differentiate countries in investment portfolios...

1.2. Macroeconomic heterogeneity vs. financial market correlation/contagion

To be clear, all blocks are heterogeneous: the dollar block, the European block (including the Eurozone)... and the emerging block does not break the rule, even when it is itself split into groups of acronyms (BRICs, BRICS, CIVETS, MIST, BENIVM, BRIICSSAMT, Next11, NewFrontier...). In fact, can we (should we) speak of an emerging block?

The differences are enormous from one country to another:
- Economic growth,
- Inflation rate,
- External trade,
- Energy dependence,
- Dependence on commodities,
- The level of debt,
- The leeway in terms of monetary policy, fiscal and tax policy,
- External vulnerability,
- Political stability…

A simple Principal Component Analysis (PCA) shows these differences (Graph 3 and Box 3 for some explanations). Emerging Europe is mainly in the East quadrants, while Asia is rather in the North-West quadrant and Latam and Middle East in the South-West… But even if economic proximity is obvious and it is possible to differentiate regions, the differences go far beyond regional reality. Based on the 25 quantitative indicators (on growth, banking sector, balance of payments, external vulnerability, liquidity, inflation, monetary policy, public finances (see table below)), the PCA allows the extraction and interpretation of two main axes. The first will segment countries according to the basic balance (current account and FDIs), while the second axis classifies countries according to their high or low level of growth. The combination of savings/growth factors calculated by the PCA contributes to more than 50% of the explanation for the total information provided by the 25 quantitative variables.

Table 3: Principal Component Analysis: 25 economic indicators	
Growth	Real GDP growth, consumption (in GDP %), Investment GFCF (in GDP %)
Inflation and monetary policy	Inflation (headline CPI), PPI, real key rates
Public finances	Government debt (in GDP %), evolution of government debt (in GDP %), government balance (in GDP %)
Balance of payments	Trade balance (in GDP %), current account (in GDP %), FDI (in GDP %)
Liquidity	FX reserves (in months of imports), M2/FX reserves
External vulnerability	External debt (in GDP %), evolution of external debt (in GDP %), short term external debt as part of total external debt, evolution of short-term external debt as part of total external debt, % of foreign currency in debt (government debt, financial corporate debt, non-financial corporate debt)
Banking	Private sector credit in GDP %), evolution of private sector credit in GDP %), NPL (non-performing loans) ratio, evolution of NPL ratio

To illustrate resemblance / differences in data analysis, there are usually three ways:

1. **Points clouds analysis:** the "PCA - Principal Component Analysis" is the most known approach.
2. **Distances analysis:** one of the methodologies generally used is the "HCA – Hierarchical Cluster Analysis". It is aimed at grouping countries through Euclidian distances ... It is also a good way to illustrate data as regard resemblance.
3. **Gaps analysis:** a typical approach in fixed income via "spread analysis", on FX (current vs equilibrium values...)...

Our PCA analysis starts from a list of 25 quantitative indicators. It is necessary to synthesize the granularity of this information by combining them in order to identify the components with strong explanatory power. Principal Component Analysis (PCA) is the tool for such an approach. With ACP, we define axis as a combination of different characteristics (we qualify the axis using the dominant factor). To simplify the reading of the PCA, we created 7 pillars from the 25 macroeconomic variables. The PCA has made it possible to extract and interpret the first two main axes:

- The first segment countries according to the basic balance as the major driver.
- The second axis classifies countries according mainly to their level of growth and to a lesser extent FX reserves.

This reading was made from the graph below which is called "circle of correlations" in which each axis (abscissa and ordinate) reflects the level of correlation with each pillar. Indeed, the y-axis shows a positive correlation with growth and inversely negative with liquidity (FX reserves).

In summary, the combination of basic balance / growth factors calculated by PCA contributes over 50% of the explanation of the total information provided by the 25 quantitative variables.

Graph 3: PCA: the variables factor map
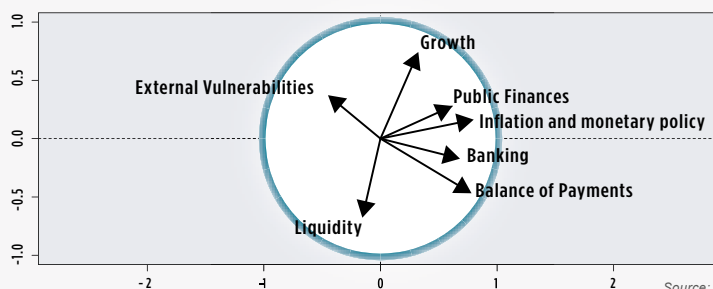
Source: Amundi Research

**Graph 4: Principal Component Analysis and the emerging world
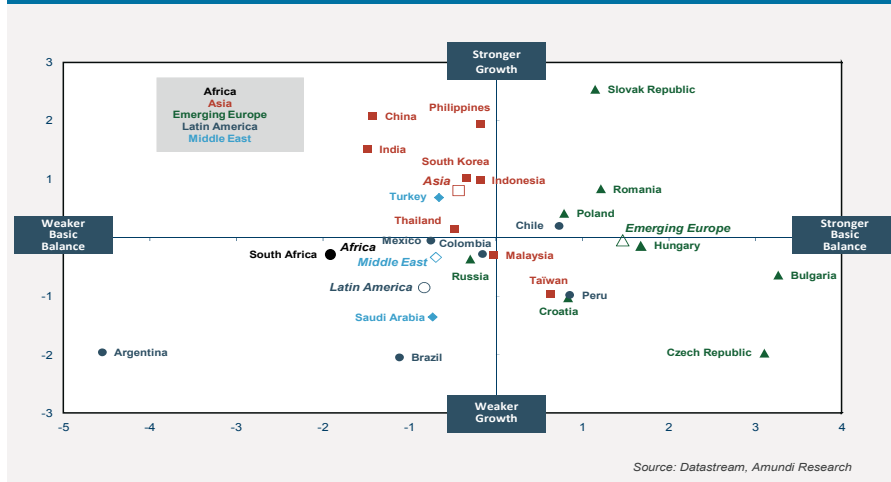A first visualisation of economic heterogeneity**

Source: Datastream, Amundi Research

Assimilating emerging countries into a homogeneous group does not correspond to the economic reality, which is characterised by significant heterogeneity. Will the observation of capital flows and market movements support this heterogeneity? Are capital flows (inflows and outflows), appreciation or depreciation of currencies, rise and fall of equity markets or fixed income markets most often closely correlated, especially in downward movements? In other words does discrimination mean that one must not look at emerging markets as one asset class: countries with economic heterogeneity, and not representing a single asset class?

To answer these questions, it is necessary to analyse the behaviour of major countries in past crises.

We chose sixteen countries from the four main zones (Europe, Latin America, Africa and Asia): **Turkey, Chile, Brazil, Argentina, China, India, Russia, Poland, Romania, Czech Republic, Indonesia, Colombia, Peru, South Africa, Philippines and South Korea** (Korea is not an emerging country, but it is often perceived as a "member of the Asian block"). **In other words, 5 countries from Europe in the broad sense, 5 countries from Latin America, 5 countries from Asia and 1 country from Africa.**

1.2.1 Economic heterogeneity: A palpable reality

To stress economic heterogeneity, and thus to show that the emerging world is not simply a block or cannot be simply represented through regional realities, we have selected eleven criteria for analysing the differentiation: GDP growth, industrial production (in %), inflation rate (in %), current account balance (in %

of GDP), energy trade balance (in % of GDP), agricultural goods trade balance (in % of GDP), public debt (in % of GDP), corporate debt (in % of GDP), total debt (in % of GDP), public deficit (in % of GDP), and trade balance.

			Table 4: Emerging world: A glaring heterogeneity								
Country	GDP growth (%)	Industrial production (%)	Inflation rate CPI (%)	Current account balance (% PIB)	Government debt (%PIB)	Non financial corporates debt (% PIB)	Total debt (% PIB)	Public deficit (% PIB)	Trade balance (% PIB)	Oil trade balance (% PIB)	Agricultural trade balance (% PIB)
Argentina	-6.5	-8.9	47.35	-5.4	79.1	17.4	104.4	-5.2	-2.3	-0.6	0.02
Brazil	1.1	-3.5	3.7	-0.8	87.3	40.6	155.1	-6.8	0.5	-0.2	0.40
Chile	3.3	1.6	2.6	-2.9	25.5	94.8	164.6	-1.5	0.4	-3.2	1.30
China	6.4	-0.5	1.9	0.3	48.5	157.1	256.6	-4.8	0.7	-1.9	-0.50
Czech Republic	2.6	1.0	2.0	0.5	36.4	57.9	126.6	1.5	6.2	-2.6	0.20
India	6.6	2.7	2.1	-2.5	68.4	45.3	125.0	-6.7	-3.6	-3.9	-0.20
Indonesia	5.2	6.6	3.1	-3.0	29.7	23.0	69.7	-1.8	-1.1	0.9	0.40
Philippines	6.2	-8.6	5.1	-2.8	39.8	62.6	118.1	-1.0	-12.6	-3.2	-0.02
Poland	5.1	2.9	1.2	-0.7	51.9	45.9	132.7	-0.6	3.5	-2.1	-0.20
Romania	3.8	-1.1	3.2	-4.6	39.9	N.D.	N.D.	-2.9	-3.6	-1.4	-0.30
Russia	2.3	0.1	4.1	6.9	15.1	47.2	78.8	2.8	10.0	13.1	0.40
South Africa	0.5	0.4	4.5	-3.8	56.8	38.4	128.2	-4.4	0.3	-1.1	0.30
South Korea	2.0	0.9	1.3	4.7	39.2	100.9	237.0	2.8	5.0	-4.8	-0.10
Turkey	1.7	-9.9	20.3	-3.4	32.3	75.3	124.7	-3.6	-1.7	-1.6	-0.70
Colombia	2.9	-0.7	3.3	-3.8	50.9	34.4	111.4	-2.2	-6.7	5.7	0.40
Peru	2.4	12.3	2.2	-1.5	26.0	N.D.	N.D.	-2.1	1.7	-0.7	-0.04

Source: Datastream, Amundi Research, Total Debt = Government Debt + Households debt + Financial Corporates debt + Non-Financial Corporates debt

The table above show clearly the characteristics of EM economies; different but still distinct blocks are discernible:

- Some countries with surpluses and some with deficit;
- Countries that are consumers or producers of commodities;
- Oil-dependent countries;
- Indebted countries;
- ...

This should allow differentiated investments, such as favouring commodity-consuming countries in a downward phase of the commodity price cycle, or leaving countries with external deficits when debt becomes a major concern. The magnitude of external deficits (or, more generally, the **vulnerability of countries to capital flows**) is undoubtedly one of the most interesting factors of discrimination among countries.

The emerging world was more vulnerable in 2018. Rising interest rates by the Fed have made financing conditions less favourable, compounding the growth outlook for these economies while growth continued to slow in China, as economic performance was weak in Russia and Brazil, as well as in some oil exporting countries. The appreciation of the dollar, the rise in US short rates (and US bond yields), trade tensions, the slowdown in growth in the developed countries are all factors that have weakened the emerging economies and their financial markets. At the same time, central banks in many emerging markets were adopting a more "hawkish" tone: the vulnerability to capital flows and the vulnerability of their currencies were, as usual, the main two reasons.

Trade tensions between the US and Mexico, Canada, China, Japan and Europe, among others, raised fears of a stronger than expected global economic slowdown. Concerns about emerging economies have thus returned to the forefront. But have emerging markets returned to the weak link? Not really, for at least two reasons:

- First reason: Barring an accident, the top ten emerging countries (the BRICS (Brazil, Russia, India, China and South Africa), Turkey, Indonesia, Mexico, South Korea, and Poland, which account for around 70% of emerging world GDP, are still expected to reach around 4,5% of GDP in 2019, a relatively satisfactory level (in 2017, GDP was close to 5,5%). In Asia, where growth is the strongest in a long run, trade disputes with the United States could be decisive: according to the Asian Development Bank, if they were to continue, "they could undermine confidence and discourage investment".
- Second reason: The slowdown in emerging markets will also have a limited impact on the world economy, which remains largely driven by the US.

But, beyond this cyclical weakness, many of the currently struggling emerging economies suffer from a lack of savings, leading to chronic current account deficits. Depending on whether their debt is denominated in local currency or in foreign currencies, their exposure to external risk is different. Turkey, Hungary and Argentina (Graph 5) have a large share of their debt denominated in foreign currencies (mainly in USD and in EUR) and the sharp depreciation of their currencies led to an increase in debt. Exchange rate volatility has also increased in India, Chile, Poland, Colombia, the Czech Republic, Indonesia and South Africa, countries whose growth is dependent on external financing.

Graph 5: Turkey, Hungary, Argentina and Chile are the countries most exposed to the foreign exchange market
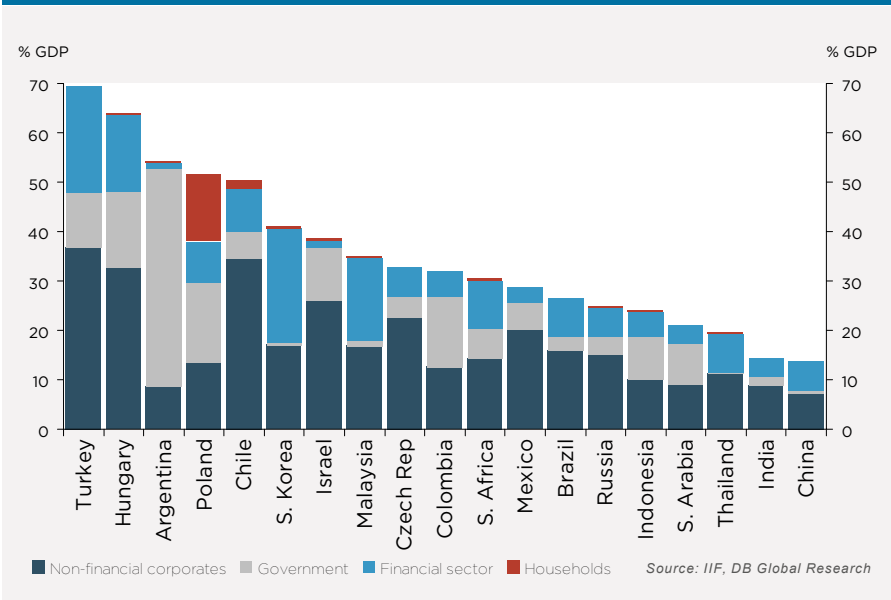
Our vulnerability index (Hervé - Bellaïche (2018)) used in this study (totalling 22 countries) is made of 3 components: balance of payments, "liquidity" and external vulnerability (in practice, 1/3 balance payments + 1/3 "Liquidity" + 1/3 External Vulnerability = 1/3 (25% Portfolio Investment (%GDP) + 50% Current Account (%GDP) + 25% FDI (%GDP)) + 1/3 (50% FX Reserves Months of imports + 50% FX Reserve/Short Term External Debt) + 1/3 (External Debt (% GDP) + Short Term External Debt (% GDP) + Share of Foreign Currency debt in GDP (Government + Financial Corporates + Non-Financial Corporates)).

The results are summarised in the graph 6 below.

**Graph 6: The vulnerability indicator by Amundi Research
External Vulnerabilities 2018 Q4 and 2014 Q1**

Less Vulnerable

Q4 2018
Q1 2014

Most Vulnerable

Saudi Arabia, Brazil, Russia, Peru, Taiwan, China, Thailand, India, Bulgaria, South Korea, Croatia, Philippines, Colombia, Indonesia, Romania, Poland, Mexico, Chile, Hungary, Malaysia, Argentina, Czech Republic, South Africa, Turkey, Slovak Republic
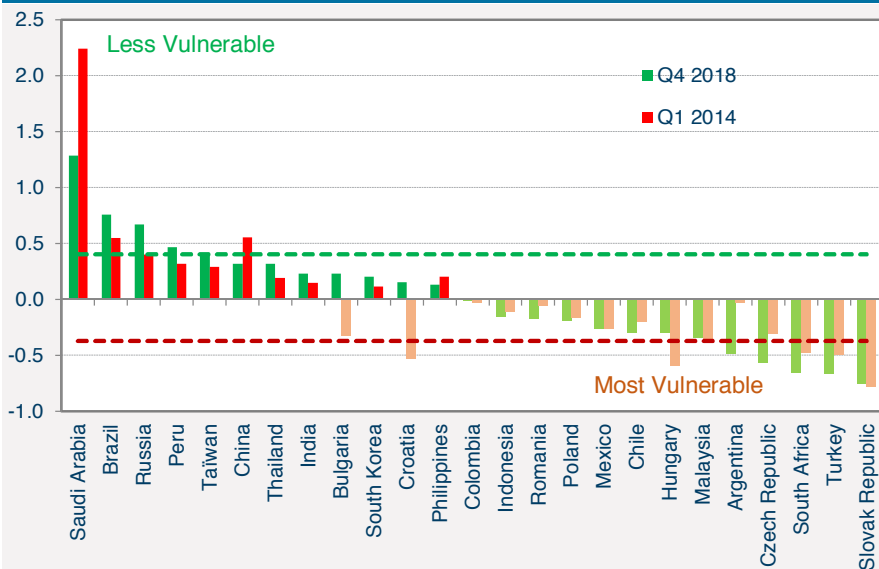
Source: Datastream, Amundi Research

Taiwan, Brazil, Thailand, Russia and China do not seem vulnerable; they are "protected" by trade balance surpluses, low external debt, or the level of their foreign exchange reserves. By contrast, Turkey, South Africa and Argentina present structural vulnerabilities that, in some cases, have even deteriorated over the past two years.

1.2.2. Financial homogeneity: A reality that is still discernible

To verify the existence - or not - of an emerging block or several homogeneous blocks, we then looked, for the selected countries, at what happens on the financial markets (in "normal" times and during periods of crisis), both i) on **global capital flows** (from non-residents), ii) on capital flows to equity markets, FX and on fixed income products, and iii) on **the correlation of these flows**. Indeed, the cross-country correlation provides a good idea of contagion across countries.

The tables below draw to some conclusions:

- **In terms of flows**, there is a strong correlation between countries and markets (see tables 6 and 7), with India as an exception (and China to some extent). For the rest of EM countries, the correlation of capital flows from non-residents investors is very strong, whatever the period considered.

Table 5: The vulnerability indicator by Amundi Research

	Q4 2014	Q4 2015	Q4 2016	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Saudi Arabia	2.04	1.40	1.27	1.37	1.35	1.33	1.28	1.28
Brazil	0.40	0.53	0.71	0.83	0.79	0.78	0.76	0.76
Russia	0.39	0.52	0.45	0.37	0.39	0.44	0.61	0.67
Peru	0.31	0.36	0.30	0.29	0.27	0.28	0.45	0.47
Taïwan	0.33	0.43	0.52	0.54	0.53	0.50	0.45	0.41
China	0.51	0.59	0.49	0.41	0.40	0.35	0.33	0.32
Thailand	0.24	0.48	0.36	0.35	0.34	0.36	0.32	0.32
India	0.11	0.26	0.33	0.22	0.24	0.25	0.23	0.23
Bulgaria	-0.42	-0.23	-0.11	0.28	0.25	0.20	0.20	0.23
South Korea	0.18	0.28	0.35	0.25	0.25	0.22	0.22	0.20
Croatia	0.03	-0.26	-0.08	0.10	0.14	0.07	0.15	0.16
Philippines	0.24	0.27	0.18	0.18	0.18	0.18	0.12	0.13
Colombia	-0.14	-0.20	-0.12	-0.05	-0.03	-0.02	-0.02	-0.01
Indonesia	-0.18	-0.13	-0.09	-0.10	-0.09	-0.12	-0.16	-0.16
Romania	-0.06	0.01	-0.02	-0.13	-0.12	-0.10	-0.14	-0.17
Poland	-0.20	-0.13	-0.31	-0.29	-0.28	-0.22	-0.20	-0.19
Mexico	-0.31	-0.26	-0.28	-0.18	-0.18	-0.22	-0.25	-0.26
Chile	-0.21	-0.27	-0.24	-0.29	-0.18	-0.18	-0.27	-0.30
Hungary	-0.41	-0.32	-0.22	-0.31	-0.34	-0.32	-0.30	-0.30
Malaysia	-0.30	-0.42	-0.43	-0.38	-0.40	-0.29	-0.33	-0.35
Argentina	-0.03	-0.10	-0.40	-0.40	-0.41	-0.44	-0.48	-0.48
Czech Republic	-0.34	-0.64	-0.45	-0.71	-0.62	-0.49	-0.58	-0.56
South Africa	-0.54	-0.59	-0.60	-0.61	-0.67	-0.64	-0.64	-0.65
Turkey	-0.58	-0.37	-0.51	-0.73	-0.76	-0.74	-0.70	-0.67
Slovak Republic	-0.65	-0.75	-0.75	-0.77	-0.77	-0.85	-0.75	-0.75

In that sense, the EM world can be considered as a block. This is certainly due to the amount of passive management and the need to replicate benchmarks. Another explanation might be linked to the specific role (and burden) of China and India in investments, and to the common view that these two countries have a significant internal capacity to manage a pro-growth and independent economic policy: it is without any doubt the case for China considering the existence of capital controls, the (still low) level of openness of the capital account, the non-convertibility of the currency, the low external vulnerability (debt is mainly an internal debt)...

- **As regard equities**, one of the striking conclusions lies on the comparison between EM and advanced countries. The correlation of returns is much higher within the developed countries group, which indicate that this group has to be much more considered as a block than the EM world. Generally speaking, EM European and Latin American equity returns are more correlated than Asian ones. The correlation is stronger in 2018 compared to the whole period: the EM world is more a block when risk aversion rises. The capacity to differentiate seems more important in "normal" periods.

- **Fixed income markets**' tables show clearly that correlation of EMBI returns are similar should we compare the whole period and 2018. In other words, the discrimination seems limited, especially in Latin America where the correlation of returns is significantly higher than in the other regions.

- **FX markets** seem particular: the correlation of returns is systematically and significantly lower than the correlation observed in both equities and fixed income markets. The liquidity of this market and the easiness to build FX positions could be part of the explanation. Note that correlations are higher in EM Europe, though, which is certainly due to the "official" and sometimes "non-official" peg to the euro. It might be also due to the desire of European countries to respect European inflation, debt and deficit criteria, which represent predictable constraints to the economic policy.

Table 6: Correlation of fund flows (2006-2018)

| | Latin America | | | | Asia | | | | Eastern Europe | | | |
	Argentina	Brazil	Chile	Colombia	China	India	Indonesia	Philippines	Poland	Romania	Russia	Turkey
Latin America Argentina	100%											
Brazil	69%	100%										
Chile	76%	82%	100%									
Colombia	76%	59%	79%	100%								
Asia China	48%	66%	65%	47%	100%							
India	49%	44%	49%	47%	33%	100%						
Indonesia	78%	77%	90%	82%	60%	47%	100%					
Philippines	68%	74%	87%	77%	59%	42%	93%	100%				
Eastern Europe Poland	69%	76%	86%	73%	56%	41%	88%	88%	100%			
Romania	68%	59%	81%	72%	47%	45%	79%	79%	74%	100%		
Russia	60%	84%	76%	56%	56%	44%	71%	72%	83%	57%	100%	
Turkey	74%	83%	89%	76%	63%	42%	92%	90%	93%	74%	80%	100%

Source : EPFR, Amundi Research Monthly Data

Table 7: Correlation of fund flows (2013-2018)

| | Latin America | | | | Asia | | | | Eastern Europe | | | |
	Argentina	Brazil	Chile	Colombia	China	India	Indonesia	Philippines	Poland	Romania	Russia	Turkey
Latin America Argentina	100%											
Brazil	80%	100%										
Chile	80%	93%	100%									
Colombia	78%	75%	81%	100%								
Asia China	54%	68%	66%	52%	100%							
India	47%	45%	49%	49%	26%	100%						
Indonesia	80%	86%	93%	85%	60%	48%	100%					
Philippines	65%	83%	89%	77%	61%	45%	95%	100%				
Eastern Europe Poland	68%	84%	91%	76%	57%	42%	91%	92%	100%			
Romania	75%	80%	86%	74%	53%	50%	88%	84%	86%	100%		
Russia	63%	88%	88%	69%	55%	46%	81%	84%	88%	75%	100%	
Turkey	73%	88%	93%	78%	65%	41%	93%	92%	95%	86%	88%	100%

Source : EPFR, Amundi Research Monthly Data

	Argentina	Brazil	Chile	Colombia	Peru	China	India	Indonesia	South Korea	Philippines	Czech Republic	Poland	Romania	Russia	Turkey	South Africa	USA	Eurozone	France	Germany	UK	Japan
Argentina	100%	37%	30%	11%	45%	23%	16%	11%	17%	-3%	1%	19%	9%	12%	16%	29%	35%	21%	19%	19%	15%	8%
Brazil	37%	100%	31%	26%	43%	19%	6%	9%	13%	6%	-2%	20%	8%	30%	12%	26%	37%	19%	17%	16%	13%	6%
Chile	30%	31%	100%	22%	38%	29%	21%	14%	22%	17%	15%	22%	8%	25%	22%	32%	29%	33%	32%	33%	31%	21%
Colombia	11%	26%	22%	100%	40%	27%	18%	21%	26%	21%	22%	25%	17%	26%	9%	29%	36%	31%	29%	29%	29%	23%
Peru	45%	43%	38%	40%	100%	42%	22%	13%	24%	5%	6%	27%	23%	31%	23%	47%	54%	41%	38%	40%	34%	11%
China	23%	19%	29%	27%	42%	100%	40%	42%	56%	22%	21%	41%	26%	30%	29%	61%	41%	47%	47%	45%	41%	44%
India	16%	6%	21%	18%	22%	40%	100%	33%	42%	20%	31%	35%	26%	19%	18%	41%	13%	39%	40%	37%	34%	39%
Indonesia	11%	9%	14%	21%	13%	42%	33%	100%	35%	30%	20%	29%	13%	19%	21%	32%	11%	19%	19%	19%	14%	21%
South Korea	17%	13%	22%	26%	24%	56%	42%	35%	100%	29%	22%	39%	20%	25%	22%	42%	24%	37%	38%	35%	32%	56%
Philippines	-3%	6%	17%	21%	5%	22%	20%	30%	29%	100%	19%	34%	14%	14%	8%	28%	-1%	18%	17%	16%	20%	29%
Czech Republic	1%	-2%	15%	22%	6%	21%	31%	20%	22%	19%	100%	34%	21%	19%	7%	25%	8%	37%	36%	35%	26%	29%
Poland	19%	20%	22%	25%	27%	41%	35%	29%	39%	34%	34%	100%	27%	38%	26%	46%	25%	51%	50%	50%	41%	35%
Romania	9%	8%	8%	17%	23%	26%	26%	13%	20%	14%	21%	27%	100%	17%	16%	26%	15%	29%	26%	27%	21%	26%
Russia	12%	30%	25%	26%	31%	30%	19%	16%	25%	14%	19%	38%	17%	100%	27%	35%	24%	38%	38%	36%	36%	21%
Turkey	16%	12%	22%	9%	23%	29%	18%	21%	22%	8%	7%	26%	16%	27%	100%	36%	23%	25%	24%	26%	27%	16%
South Africa	29%	26%	32%	29%	47%	61%	41%	32%	42%	28%	25%	46%	26%	35%	36%	100%	39%	52%	52%	51%	47%	26%
USA	35%	37%	29%	36%	54%	41%	13%	11%	24%	-1%	8%	25%	15%	24%	23%	39%	100%	45%	43%	43%	31%	16%
Eurozone	21%	19%	33%	31%	41%	47%	39%	19%	37%	18%	37%	51%	29%	38%	25%	52%	45%	100%	100%	91%	77%	40%
France	19%	17%	32%	29%	38%	47%	40%	19%	38%	17%	36%	50%	26%	38%	24%	52%	43%	100%	100%	91%	91%	41%
Germany	19%	16%	33%	29%	40%	45%	37%	19%	35%	16%	35%	50%	27%	36%	26%	51%	43%	91%	91%	100%	91%	35%
UK	15%	13%	31%	29%	34%	41%	34%	14%	32%	20%	26%	41%	21%	36%	27%	47%	31%	77%	91%	91%	100%	35%
Japan	8%	6%	21%	23%	11%	44%	39%	21%	56%	29%	29%	35%	26%	21%	16%	26%	16%	40%	41%	35%	35%	100%
Canada	28%	36%	30%	36%	48%	43%	19%	11%	30%	9%	10%	34%	20%	27%	22%	40%	74%	56%	53%	54%	46%	29%

Source : MSCI, Datastream, Amundi Research Daily Data

	Argentina	Brazil	Chile	Colombia	Peru	China	India	Indonesia	South Korea	Philippines	Czech Republic	Poland	Romania	Russia	Turkey	South Africa	USA	Eurozone	France	Germany	UK	Japan
Argentina	100%	51%	41%	48%	48%	26%	23%	22%	20%	13%	30%	35%	21%	37%	30%	34%	51%	46%	46%	44%	45%	18%
Brazil	51%	100%	55%	42%	60%	34%	31%	24%	26%	14%	37%	40%	22%	46%	35%	40%	63%	52%	52%	51%	53%	17%
Chile	41%	55%	100%	42%	48%	33%	31%	28%	27%	21%	38%	41%	24%	39%	36%	42%	51%	52%	52%	51%	52%	20%
Colombia	48%	42%	42%	100%	40%	30%	30%	28%	28%	23%	36%	39%	23%	40%	37%	42%	51%	43%	43%	40%	46%	24%
Peru	48%	60%	48%	40%	100%	32%	31%	28%	23%	17%	36%	42%	24%	45%	36%	55%	62%	58%	57%	56%	59%	24%
China	26%	34%	33%	30%	32%	100%	54%	54%	64%	42%	39%	41%	38%	44%	34%	47%	40%	41%	40%	39%	43%	54%
India	23%	31%	31%	30%	31%	54%	100%	44%	64%	29%	39%	42%	38%	35%	34%	38%	25%	42%	41%	41%	42%	33%
Indonesia	22%	24%	28%	28%	28%	54%	44%	100%	46%	43%	36%	35%	28%	35%	31%	41%	28%	42%	41%	41%	43%	38%
South Korea	20%	26%	27%	28%	23%	64%	64%	46%	100%	39%	34%	35%	27%	39%	35%	40%	21%	34%	33%	35%	35%	57%
Philippines	13%	14%	21%	23%	17%	42%	29%	43%	39%	100%	31%	24%	24%	24%	24%	31%	3%	19%	19%	17%	20%	41%
Czech Republic	30%	37%	38%	36%	36%	39%	39%	36%	34%	31%	100%	53%	37%	53%	42%	47%	29%	52%	51%	46%	51%	33%
Poland	35%	40%	41%	39%	42%	41%	42%	35%	35%	24%	53%	100%	36%	56%	49%	54%	40%	63%	61%	61%	59%	39%
Romania	21%	22%	24%	23%	24%	38%	38%	28%	27%	24%	37%	36%	100%	35%	28%	32%	22%	39%	37%	37%	37%	24%
Russia	37%	46%	39%	40%	45%	44%	35%	35%	39%	24%	53%	56%	35%	100%	48%	55%	41%	58%	57%	56%	59%	33%
Turkey	30%	35%	36%	37%	36%	34%	34%	31%	35%	24%	42%	49%	28%	48%	100%	46%	34%	51%	49%	49%	51%	23%
South Africa	34%	40%	42%	42%	55%	47%	38%	41%	40%	31%	47%	54%	32%	55%	46%	100%	34%	58%	57%	56%	59%	33%
USA	51%	63%	51%	51%	62%	40%	25%	28%	21%	3%	29%	40%	22%	41%	34%	34%	100%	61%	60%	62%	57%	13%
Eurozone	46%	52%	52%	43%	58%	41%	42%	42%	34%	19%	52%	63%	39%	58%	51%	58%	61%	100%	100%	90%	76%	31%
France	46%	52%	52%	43%	57%	40%	41%	41%	33%	19%	51%	61%	37%	57%	49%	57%	60%	100%	100%	90%	90%	31%
Germany	44%	51%	51%	40%	56%	39%	41%	41%	35%	17%	46%	61%	37%	56%	49%	56%	62%	90%	90%	100%	90%	29%
UK	45%	53%	52%	46%	59%	43%	42%	43%	35%	20%	51%	59%	37%	59%	51%	59%	57%	76%	90%	90%	100%	23%
Japan	18%	17%	20%	24%	24%	54%	33%	38%	57%	41%	33%	39%	24%	33%	23%	33%	13%	31%	31%	29%	23%	100%
Canada	51%	62%	49%	42%	62%	29%	28%	38%	26%	12%	34%	39%	24%	48%	33%	40%	73%	56%	56%	54%	56%	23%

Source : MSCI, Datastream, Amundi Research Daily Data

Table 10: Correlation of EMBI markets (2018)

		Latin America					Asia				Eastern Europe				Africa
		Argentina	Brazil	Chile	Colombia	Peru	China	India	Indonesia	Philippines	Poland	Romania	Russia	Turkey	South Africa
Latin America	Argentina	100%	57%	19%	42%	36%	-7%	-1%	17%	13%	5%	20%	27%	52%	39%
	Brazil	57%	100%	47%	65%	60%	18%	17%	30%	29%	18%	35%	37%	35%	48%
	Chile	19%	47%	100%	70%	71%	64%	46%	44%	46%	47%	52%	36%	28%	40%
	Colombia	42%	65%	70%	100%	83%	35%	27%	42%	44%	37%	50%	49%	39%	54%
	Peru	36%	60%	71%	83%	100%	38%	31%	53%	52%	38%	52%	49%	35%	55%
Asia	China	-7%	18%	64%	35%	38%	100%	79%	42%	49%	39%	33%	16%	8%	14%
	India	-1%	17%	46%	27%	31%	79%	100%	46%	51%	26%	28%	13%	7%	18%
	Indonesia	17%	30%	44%	42%	53%	42%	46%	100%	83%	34%	54%	36%	32%	54%
	Philippines	13%	29%	46%	44%	52%	49%	51%	83%	100%	38%	49%	37%	34%	40%
Eastern Europe	Poland	5%	18%	47%	37%	38%	39%	26%	34%	38%	100%	56%	24%	16%	24%
	Romania	20%	35%	52%	50%	52%	33%	28%	54%	49%	56%	100%	38%	34%	50%
	Russia	27%	37%	36%	49%	49%	16%	13%	36%	37%	24%	38%	100%	39%	54%
	Turkey	52%	35%	28%	39%	35%	8%	7%	32%	25%	16%	34%	39%	100%	61%
Africa	South Africa	39%	48%	40%	54%	55%	14%	18%	54%	40%	24%	50%	54%	61%	100%

Source : Datastream, Amundi Research Daily Data

Table 11: Correlation of EMBI markets (2012-2019)

		Latin America					Asia				Eastern Europe				Africa
		Argentina	Brazil	Chile	Colombia	Peru	China	India	Indonesia	Philippines	Poland	Romania	Russia	Turkey	South Africa
Latin America	Argentina	100%	26%	15%	26%	22%	0%	4%	16%	10%	8%	14%	21%	24%	22%
	Brazil	26%	100%	63%	74%	71%	27%	22%	38%	35%	36%	40%	39%	43%	53%
	Chile	15%	63%	100%	71%	73%	49%	32%	47%	44%	48%	46%	32%	43%	51%
	Colombia	26%	74%	71%	100%	82%	36%	27%	46%	43%	43%	46%	42%	46%	60%
	Peru	22%	71%	73%	82%	100%	43%	33%	53%	52%	51%	55%	41%	50%	59%
Asia	China	0%	27%	49%	36%	43%	100%	70%	53%	58%	50%	48%	17%	32%	37%
	India	4%	22%	32%	27%	33%	70%	100%	52%	54%	42%	44%	21%	31%	36%
	Indonesia	16%	38%	47%	46%	53%	53%	52%	100%	83%	48%	60%	37%	50%	59%
	Philippines	10%	35%	44%	43%	52%	58%	54%	83%	100%	47%	62%	37%	47%	55%
Eastern Europe	Poland	8%	36%	48%	43%	51%	50%	42%	48%	47%	100%	57%	31%	36%	43%
	Romania	14%	40%	46%	46%	55%	48%	44%	60%	62%	57%	100%	46%	54%	60%
	Russia	21%	39%	32%	42%	41%	17%	21%	37%	37%	31%	46%	100%	44%	52%
	Turkey	24%	43%	43%	46%	50%	32%	31%	50%	47%	36%	54%	44%	100%	67%
Africa	South Africa	22%	53%	51%	60%	59%	37%	36%	59%	55%	43%	60%	52%	67%	100%

Source : Datastream, Amundi Research Daily Data

Table 12: Correlation of FX markets (2018)

		Latin America					Asia					Eastern Europe				
		Argentina	Brazil	Chile	Colombia	Peru	China	India	Indonesia	South Korea	Philippines	Czech Republi	Poland	Romania	Russia	Turkey
Latin America	Argentina	100%	35%	31%	23%	22%	5%	12%	8%	2%	1%	13%	19%	17%	14%	23%
	Brazil	35%	100%	38%	32%	26%	14%	13%	14%	17%	8%	17%	23%	16%	38%	16%
	Chile	31%	38%	100%	59%	37%	32%	30%	40%	30%	13%	41%	50%	41%	36%	25%
	Colombia	23%	32%	59%	100%	44%	28%	30%	36%	31%	16%	44%	53%	43%	35%	14%
	Peru	22%	26%	37%	44%	100%	16%	23%	23%	18%	13%	35%	38%	30%	34%	7%
Asia	China	5%	14%	32%	28%	16%	100%	32%	45%	48%	25%	33%	35%	24%	15%	4%
	India	12%	13%	30%	30%	23%	32%	100%	46%	36%	23%	25%	29%	24%	18%	17%
	Indonesia	8%	14%	40%	36%	23%	45%	46%	100%	49%	36%	33%	38%	28%	19%	13%
	South Korea	2%	17%	30%	31%	18%	48%	36%	49%	100%	32%	22%	26%	15%	21%	13%
	Philippines	1%	8%	13%	16%	13%	25%	23%	36%	32%	100%	14%	22%	11%	10%	5%
Eastern Europe	Czech Republi	13%	17%	41%	44%	35%	33%	25%	33%	22%	14%	100%	89%	87%	26%	18%
	Poland	19%	23%	50%	53%	38%	35%	29%	38%	26%	22%	89%	100%	86%	24%	29%
	Romania	17%	16%	41%	43%	30%	24%	23%	28%	15%	11%	87%	86%	100%	24%	18%
	Russia	14%	38%	36%	35%	34%	15%	18%	19%	21%	10%	26%	24%	24%	100%	29%
	Turkey	23%	16%	25%	14%	7%	4%	17%	13%	13%	5%	18%	29%	18%	29%	100%
Africa	South Africa	27%	42%	57%	54%	36%	28%	35%	42%	35%	20%	45%	57%	46%	48%	35%

Source : Datastream, Amundi Research Daily Data

Table 13: Correlation of FX markets (1995-2019)

		Latin America					Asia					Eastern Europe				
		Argentina	Brazil	Chile	Colombia	Peru	China	India	Indonesia	South Korea	Philippines	Czech Republi	Poland	Romania	Russia	Turkey
Latin America	Argentina	100%	5%	7%	5%	3%	4%	2%	0%	2%	1%	2%	3%	3%	1%	3%
	Brazil	5%	100%	45%	37%	28%	8%	21%	10%	19%	16%	25%	34%	26%	12%	24%
	Chile	7%	45%	100%	40%	28%	13%	25%	11%	20%	15%	29%	38%	29%	12%	23%
	Colombia	5%	37%	40%	100%	28%	10%	23%	11%	20%	17%	22%	29%	24%	16%	17%
	Peru	3%	28%	28%	28%	100%	7%	16%	8%	16%	17%	15%	21%	15%	9%	10%
Asia	China	4%	8%	13%	10%	7%	100%	17%	8%	17%	12%	11%	13%	11%	5%	10%
	India	2%	21%	25%	23%	16%	17%	100%	14%	31%	28%	22%	32%	24%	11%	13%
	Indonesia	0%	10%	11%	11%	8%	8%	14%	100%	19%	23%	8%	11%	10%	-1%	3%
	South Korea	2%	19%	20%	20%	16%	17%	31%	19%	100%	36%	17%	25%	19%	4%	8%
	Philippines	1%	16%	15%	17%	17%	12%	28%	23%	36%	100%	15%	21%	15%	5%	8%
Eastern Europe	Czech Republi	2%	25%	29%	22%	15%	11%	22%	8%	17%	15%	100%	75%	63%	11%	21%
	Poland	3%	34%	38%	29%	21%	13%	32%	11%	25%	21%	75%	100%	63%	15%	25%
	Romania	3%	26%	29%	24%	15%	11%	24%	10%	19%	15%	63%	63%	100%	11%	19%
	Russia	1%	12%	12%	16%	9%	5%	11%	-1%	4%	5%	11%	15%	11%	100%	7%
	Turkey	3%	24%	23%	17%	10%	10%	13%	3%	8%	8%	21%	25%	19%	7%	100%
Africa	South Africa	3%	38%	40%	32%	22%	12%	28%	11%	26%	18%	44%	51%	39%	16%	28%

Source : Datastream, Amundi Research Daily Data

All the results show clearly that whilst economic heterogeneity is a very tangible reality, financial homogeneity (the existence of a block) is to some extent tangible too. In other words, even if countries have different intrinsic characteristics and risk factors, financial market reactions fail to detect systematically such a discrimination. It looks like capital flows exiting all EM countries with market events... as if risk were perceived and treated globally, without worrying about whether particular countries represent different levels of risk in nature and magnitude. Note that the picture is not massively different concerning advanced countries, though.

In total, it is not difficult to point out some conclusions:

- The high degree of heterogeneity across countries;
- Strong correlations between capital flows and between asset classes (currencies, equity markets and fixed income markets);
- The difficulty of discriminating, apart from FX markets, to some extent.

There is, however, a need for nuance, that can be extracted from the 2018 experience. All markets experienced strong contagion in 2018 but Brazilian, Russian and Indian equity markets remained in positive territory as though they were not influenced by other emerging markets or the US market. However, this discrimination, which has been possible on the equity markets, was not verifiable on their currencies: the Russian rubble, the Indian rupee and the Brazilian real were all three heavily affected by the general climate.

Another finding of the "2018 crisis" is that the most vulnerable countries were those that have been more affected. This is broadly in line with our vulnerability index. In that sense, there was "some" discrimination between "emerging block" countries in 2018.

Another way to differentiate emerging countries is to dwell on their (current and future) importance on the geopolitical stage. This approach is crucial due to the role of geopolitical risk factors all markets face at present, due to the emergence of new powers (hard power, soft power and smart power) in the "new international order", and due to long-lasting rivalry between China and the US...

1.3. Emerging markets and the geopolitical arena: How can power of emerging countries be measured?

The world's centre of gravity has changed profoundly in recent years — and it is only the beginning! In the early 80's, Europe and the United States accounted for 15% of the world's population and more than 50% of global nominal GDP. Today, the share is 10% and one third, respectively. Twenty years from now, they will be even weaker. The BRICS countries now account for almost 45% of the world's population (3 billion people); they alone account

for almost 25% of global GDP, and they have contributed more than 50% of global GDP growth over the past decade.

If we compare countries according to the PPP criterion (Table 14 below), the share of emerging countries is even higher. China has already overtaken the United States, with the BRICS accounting for one third of global GDP, as has the United States — European Union as a whole, but with a population 4 times larger.

Table 14: PPP GDP and population in the world: new powers						
	PPP GDP 2017	Population 2017	PPP GDP 1980 (% — World)	PPP GDP 2017 (% — World)	Population 1980 (% — World)	Population 2017 (% — World)
United States	19 485	326	21.6%	15.3%	5.1%	4.3%%
China	23 208	1 386	2.3%	18.2%	22.1%	18.4%
EU	21 069	512	29.9%	16.5%	10.5%	6.8%
Germany	4 199	83	6.6%	3.3%	1.8%	1.1%
France	2 856	67	4.3%	2.2%	1.2%	0.9%
Italy	2 317	61	4.6%	1.8%	1.3%	0.8%
Spain	1 778	47	2.2%	1.4%	0.8%	0.6%
UK	2 925	66	3.8%	2.3%	1.3%	0.9%
BRICS	40 713	3 136	NA	31.9%	44.3%	41.6%
Brazil	3 248	209	4.4%	2.5%	2.7%	2.8%
Russia	4 016	144	NA	3.2%	3.1%	1.9%
India	9 474	1 339	2.9%	7.4%	15.7%	17.8%
China	23 208	1 386	2.3%	18.2%	22.1%	18.4%
South Africa	767	57	1.0%	0.6%	0.7%	0.8%
Japan	5 443	127	7.9%	4.3%	2.6%	1.7%
South Korea	2 035	51	0.6%	1.6%	0.9%	0.7%
World	127 489	7 530	100%	100%	100%	100%

Sources: IMF, World Bank, Amundi Research

It is therefore obvious that, in economic terms, emerging countries, including the BRICS, represent an increasingly important power.

What do the global power indicators tell us? (for further detailed information please refer to Ph. Ithurbide (2019a)).

- **The global firepower index (GFP), which highlights the only military force**, ranks the US first, followed by Russia, China, India, France, the United Kingdom, Japan, and Turkey. The GFP ranking is based on each country's potential ability to wage war on land, air and seas with conventional weapons. Results incorporate resource, finance and geography values, with more than 55 different factors that make up the

final ranking. Three of the four BRIC countries are already among the top 4 (Brazil ranks 14th) as regard this hard power indicator.

- **On the economic front alone**, the US is ahead of China, Japan, Germany, the United Kingdom, France, India, and Brazil. Nominal GDP is a useful indicator because it gives resources to the military, research, domination, and influence in the world… the four BRICs are now among the 12 largest economic powers in the world.

- **The smart power indicator (hard power + soft power)** of the French magazine "Conflits," includes many indicators relating to soft power, technology, wealth, cohesion of the country, armed forces, economic power. The United States still ranks first, followed by far by China, then Russia, France, the United Kingdom, Germany, Canada and Japan. Turkey is only ranked 29th, significantly below the fire power index (9th). China and Russia rank among the three largest powers.

Graph 7
Power indicators: US, BRICs and Indonesia

Sources: Conflit (2018), Amundi Research
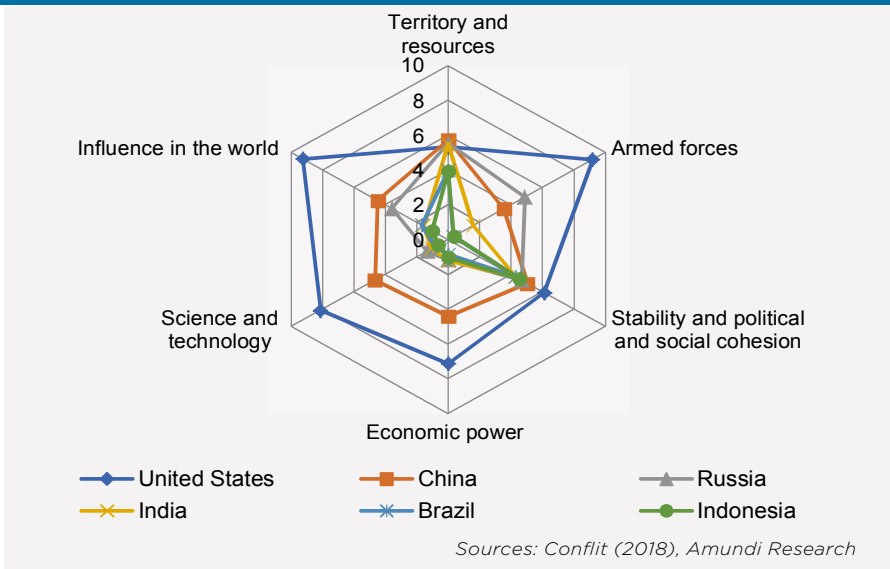
The chart above shows the smart power of six countries, the US, BRICs, and Indonesia, compared to the six main groups of indicators that make up the "*Conflits*" power index: territory and resources, armed forces, stability and political and social cohesion, economic power, science and technology and finally influence the world. It clearly shows the superior power of the United States (whose surface is more than twice as large as that of its two main rivals, China and Russia), and it also shows that this power is complete (superiority over 5 of the 6 axes). It also shows the gap that still exists between

the US and China, for example, but also to what extent Russia remains an "incomplete" power.

Ranking among EMG (+ US for reference)	Territory, population, resources (Note on 15)	Armed forces (Note on 20)	Stability and cohesion (Note on 10)	Economy (Note on 25)	Science and technology (Note on 15)	Influence (Note on 15)	Total (100 = maximum rating)	Rank
Table 15: Emerging economies' power: where do they stand?								
United States	7.9638	18.3687	6.1061	17.8302	12.2061	13.8850	76.3599	1
China	8.5949	7.0774	5.0361	11.0432	6.9992	6.7209	45.4717	2
Russia	8.2854	9.7570	4.6664	2.9198	2.0054	5.3827	33.0167	3
India	8.2276	3.1970	4.3033	3.0421	1.5867	2.3605	22.7172	4
South Korea	4.4874	1.4646	5.0233	3.3119	3.8503	2.6567	20.7942	5
Taiwan	4.5146	0.5152	5.0631	3.3256	2.5117	2.3830	18.3132	6
Israel	4.2779	1.3977	4.8350	2.6049	1.8577	2.6707	17.6439	7
Malaysia	4.5089	0.3568	5.5475	2.4767	1.6514	2.6137	17.1550	8
Saudi Arabia	5.2556	0.7176	4.2721	3.6368	1.3534	1.9032	17.1387	9
Brazil	5.9316	0.6635	4.2776	2.1720	1.2172	2.5060	16.7679	10
Indonesia	5.8694	0.7254	4.5275	2.5600	0.9582	1.5260	16.1665	11
Poland	4.0292	0.4517	6.4911	1.6188	1.4459	2.0653	16.1012	12
Qatar	4.3100	0.1131	6.2223	3.0591	1.2562	1.0702	16.0309	13
Vietnam	4.2850	0.6168	5.1279	2.8140	1.2396	1.2747	15.3574	14
Mexico	5.0680	0.4502	4.1805	2.3038	1.2079	2.1470	15.3574	15
South Africa	5.8688	0.1778	4.2522	2.1025	1.0740	1.8716	15.3469	16
Philippines	4.6075	1.5832	4.3821	2.2766	1.0761	2.1515	15.0910	17
Iran (Islamic Republic of)	5.6626	1.8444	1.8444	1.9339	1.1405	0.9995	14.6287	18
Turkey	4.2300	1.3340	4.3485	1.8689	1.1506	1.6865	14.6185	19
Argentina	5.2416	0.2084	4.5502	1.5424	0.9814	1.8666	14.3906	20
Kazakhstan	4.8927	0.1918	4.7031	1.5971	1.0985	1.5679	14.0520	21
Egypt	4.1658	1.3514	3.4511	1.6005	0.9078	2.4188	13.8954	22
Algeria	4.0363	0.7696	4.5071	2.1759	0.8015	1.1816	13.4717	23
Pakistan	4.1358	1.5832	3.6011	1.4251	0.9083	0.8974	12.5509	24
Morocco	4.0160	0.3442	4.3711	0.4671	1.0286	1.6544	11.8814	25
Ethiopia	3.2104	0.4612	2.3941	2.8797	0.9219	1.7813	11.6486	26
Nigeria	4.3020	0.2010	2.4494	1.9801	0.8688	1.5241	11.3436	27

Source: www.mindthemap.fr

Legend
- *Deep green: 5 most powerful EMG countries*
- *Clear green: Row 5 to 10*
- *Red: 5 least powerful EMG countries*
- *Orange: Rank just above 5 less powerful*

In other words, whatever the method, the US remains the reference power,and China is leading the EM group, which is no great surprise. The table above highlights the characteristics of some emerging countries (with South Korea being added to the list) in relation to several power indicators. China, Russia, India, South Korea, Taiwan, and Israel are the highest rated countries with the highest scores in almost all the categories analysed (territory, population, and resources; armed forces; stability and cohesion; economy; science and technology; global influence). In regional terms, Asia is at the top of the list, and Africa is at the bottom. In terms of power, a regional approach is nor totally useful, but it is not completely useless either.

To sum up, as table 15 shows, there are major differences between countries as regard power indicators. However, even if China, Russia and India are lagging behind the US, the gap is gradually declining, especially for China, which can be considered as a more "complete" power than other EM countries, and, as such, as a rival to the US. Note that few countries (China and Russia to a lesser extent) exert power on more than 2 of the 6 criteria selected.

II. Emerging countries: What is the appropriate typology? How to differentiate?

On the economic front, and in terms of power, the emerging block is not a block, it is a fact. Divergences between countries and specificities are evident. But how should we view the emerging world? If BRICS or regions do not give a good idea of the differences between countries, what typology should be adopted? A number of solutions exist.

The traditional approaches should be borne in mind:
- **Reasoning in terms of block**: on a purely economic level, to set the emerging world against the advanced world… is completely out of date… and for a long time. Some emerging countries are healthier than some advanced countries, and in each of these blocks the divergence can be enormous. This undoubtedly justifies additional in-depth analysis.
- **Reasoning in terms of region**: This opposition is also insufficient, even if common characteristics exist within the different regions: Asia is a commodity-consuming zone, most of the Gulf countries are oil producers, Eastern and Central Europe are very connected to the European Union… going from one region to another in terms of investment is not totally inefficient, but it is undoubtedly sub-optimal.

- **Reasoning in terms of EM sub-indices:** This approach includes the "BRICS", the "Next11", and the "NewFrontier" Index, to name a few. These are not typologies per se, they are merely indices, and they include countries at a different stage of development, bearing totally different risks and characteristics (see a summary of debt and equity indices in the appendix). In other words, benchmarks define a universe for investment, giving opportunities to differentiate by overweighting / underweighting countries. The typology (to be defined) would give the rationale for this discrimination on top of the benchmarks (not representing a typology).

2.1. World Bank: A typology based on growth — poverty

According to the World Bank's typology, a simple and representative differentiation angle lies in the stable growth — poverty level relationship. According to this angle, which reproduces a presentation by John Wolfensohn (2007), the former president of the World Bank, there are three distinct groups of "emerging" countries:

- *Countries able to generate a level of growth that is not only high, but above all stable* **("convergent countries**"). They are rapidly reducing their poverty, generating a middle class, a current account surplus. They are also able to stabilise their growth and avoid any pitfalls that may come from the international context or from a country like the US. We all still remember the good health of China or Brazil (among others) as the United States or the Eurozone slipped into recession in the wake of the 2008 financial crisis. These countries have been converging towards the rich countries that have dominated the world economy for more than half a century. Their leadership in the global economy and international organizations continues to grow.

- *Countries having chaotic growth ("laggards").* Unlike the previous group, they are either unable to preserve their level of growth by the lack of room for manoeuvre in economic policy, or simply cannot deliver sufficient autonomous growth (i.e. driven by domestic demand). Their dependence does not allow them to escape from the specific context of the dominant area. This is the case, for example, for certain "emerging" European countries, which are highly dependent on the euro area.

- *Finally, countries struggling to achieve growth and reduce poverty ("poor countries"),* a struggle made all the more complicated by the fact that these countries do not participate sufficiently in globalisation. This group includes some countries in Africa, particularly sub-Saharan Africa.

This angle of differentiation is interesting, but it makes no reference to the state's financial health, and it does not allow any inference to be drawn from it in terms of investment.

2.2 Amundi's approach: How to bet on differences and discrimination

We have carried out a number of applied research pieces on this subject, and these studies were carried out between 2011 and 2018. Some were static (the aim was to define homogeneous and stable groups), while others were more dynamic (there was a question of establishing homogeneous groups at a given time and depending on some divergent factors).

1. **In 2011,** a first study presented an approach that broke both the BRICS approach and the single block EMG approach. The focus was on economic particularities (Ithurbide (2011)). The angle of differentiation used refers to more specific economic characteristics, such as commodities, the exchange rate, monetary policies, etc.:

    - **Consumption or production of raw materials**: China, the world's largest consumer, against, for example, Brazil (agricultural commodities in particular), Russia (gas and oil), South Africa (gold), Venezuela (oil), etc.;

    - **Whether or not self-sustaining economic growth existed:** internal demand-led growth vs. export-led growth countries, for example;

    - **Independence — or not — of monetary policy:** While Brazil retained a monetary policy independent of the international rates level, China had always been able to maintain the link between the overall rate level and its own monetary policy. As a result, as Brazil raised interest rates, China preferred to act via the banks' reserve rate rather than through the level of interest rates;

    - **Exchange rate management**: Monetary policy (independent or not) will have an impact on exchange rates, and it is therefore easy to distinguish between countries that have overvalued currencies (Brazil at that time) and those whose currencies were notoriously undervalued (China at that time).

    - **The level of inflation and inflationary pressures**;

This distinction is, of course, not trivial. It allows the selection of investments according to specific themes: at the international level of rates, currency over- or undervaluation, autonomous (or not) growth, commodities, etc. Chart representation was (in 2011) as follows:

Graph 8: Commodities, inflation, central bank autonomy and economic divergences: a first typology

Economic divergences between advanced countries and emerging countries?

		Similar	Divergent	
Independence of monetary policies?	**Independent**	EMEA	Latam	**Producers**
	Dependent		China Other Asia	**Consumers**
		Lower inflation	Stronger inflation	

Commodities' producers or consumers?

Countries with inflation?

The graph above presents a stylised view and our grid for analysing and selecting emerging countries according to the specific differentiation criteria mentioned above. It is obvious that not all EMEA countries are in exactly the same situation. Likewise, not all Asian countries are in the box at the bottom of the right. Despite these drawbacks, this makes it possible to detect reading, analysis and selection grids for these economies.

2. A first true typology emerged from a study carried out in **2012** on 22 emerging countries (Ithurbide (2012)). We had defined three filters:
   - **Commodity producers/consumers;**
   - **Autonomous growth: Capable/unable to have autonomous/ independent growth from the global cycle;**
   - **Vulnerability: External debt, public finances in health… or not.**

With the first two filters, we defined four large blocks, which define an "economic identity":
   - **Commodity Producers – Growth dependent**: Commodity producing countries closely linked to the global economic cycle (Venezuela, Indonesia, Poland, Chile, South Africa, Malaysia, Thailand) are the big losers in periods of weak activity.
   - **Commodity Consumers – Growth Autonomous**: Being a consumer of commodities and growing at a pace uncorrelated with the global cycle is

a trump card in a global slump, as commodity prices fall (China, Turkey, Mexico, for example), as long as they are not financially vulnerable.

- **Commodity Producers – Growth Autonomous:** This group included Brazil, India, Russia, Peru and Colombia. The most financially vulnerable were Brazil, India and Russia.
- **Commodity Consumers – Growth Dependent**: Here we had a very strong support group with Czech Republic, Philippines, Taiwan, South Korea, Hungary, Egypt and Morocco... the last three were the most financially fragile.

In each group, vulnerability analysis (third filter) enabled the definition of two sub groups.

The graph below (2012) highlighted the three filters for the 22 countries in our sample (a graduation allows each country to position in relative value in relation to the others, and this for each filter):

Graph 9: Vulnerability — commodities — autonomous growth: A second typology

Producers-Dependent	Producers-Self-sufficient
Vulnerable Venezuela Indonesia South Africa Poland Chili	**Vulnerable** Brazil India Russia
Less vulnerable Malaysia Thailand	**Less vulnerable** Peru Colombia

Consumers-Dependent	Consumers-Self-sufficient
Less vulnerable Czech Republic Philippines Taïwan Korea	**Less vulnerable** China
Vulnerable Hungary Egypt Morocco	**Vulnerable** Turkey Mexico

This typology is relatively stable: 6 years later, South Africa, Egypt, Turkey, Hungary Venezuela are still vulnerable countries, and their "economic identity" has not changed structurally. Same for the least vulnerable countries, while commodity producing countries (consumers respectively) are still commodity producing countries. As for the connection of their business cycle, dependency has not varied significantly. This typology can therefore be used to guide investment strategies. Three factors stand out:

- **Vulnerability**: In times of debt stress or deficits, some (less vulnerable) countries should be favoured);
- **Economic dependency**: Countries whose cycle is strongly linked to that of the US or Europe should be privileged during a phase of overall growth, and vice versa. The connection area will also determine a risk factor: when Europe is in crisis, highly connected countries are strongly affected, at least more so than those linked to the global business cycle or the US, for example;
- **Dependence on commodities**: In the event of strong growth or a sharp rise in raw materials prices, some countries will benefit at the expense of others that will exit the game of falling prices (the importers of raw materials).

We are no longer talking about block, or regions, or indices, but rather about investment factors, or risk factors.

3. The third study has been conducted first in **2014** and is regularly updated (see, for example, 'Typology of *emerging economies: Back to the stress episode of 2013, 'Cross Asset Investment Strategy June 2014; 'Emerging economies typology. Amundi methodology, 'Cross asset Cross Asset Investment Strategy November* 2015*).* It has also been improved in 2016/2017. It may be more interesting for several reasons:
- It includes more indicators, with a scoring;
- It allows a mix of EMG and advanced countries (the best way to "kill" EMG terminology is to show that some EMG countries are much better than many advanced countries);
- The number of groups is ultimately reduced;
- There are some regional configurations, among other configurations;
- The BRICS group does not exist;
- Its graphic representation (dendrogram) is very telling.

1st step: Country scoring data

We propose a scoring approach based on 14 quarterly macroeconomic variables. To mitigate data volatility, we use weighted averages. The weighting system reinforces recent data. A quarter's weight is twice that of the previous quarter. These data are grouped into four axes on a panel of 20 emerging countries China, South Korea, India, Indonesia, Malaysia, Philippines, Taiwan, Thailand, Russia, Turkey, Poland, Hungary, Czech Republic, Romania, South Africa, Brazil, Chile, Colombia, Mexico and Peru.

The scoring is based on seven axes:

- # **Macroeconomic outlook**: Real GDP growth, consumption as part of GDP, investment as part of GDP;
- # **Inflation:** CPI (year on year), PPI (year on year), real interest rate;
- # **Public finances**: public debt/GDP, Public deficit / GDP, evolution of the public debt;
- # **Balance of Payments:** trade balance, current account balance, FDI/GDP;
- # **Liquidity:** Foreign exchange reserves (months of imports) and money supply M2 (% of foreign exchange reserves);
- # **Vulnerability:** gross external debt (% of GDP and evolution) and gross short-term external debt (% of gross external debt and evolution), % of the debt (government, corporates) in foreign currencies;
- # **Banking sector**: Credit to the private sector (% of GDP and evolution), non-performing loans (in % and evolution).

Country scoring can be calculated by criterion (Table 16), block by block (Table 17), or overall (Hervé — Bellaïche (2018)). Here is an example (2018 Q4).

**Graph 10:
Amundi country scoring by pillar**

Legend: Banking, External Vulnerabilities, Liquidity, Balance of Payments, Public Finances, Inflation and monetary policy, Growth, ▲ Scoring Total

Source: Amundi Research
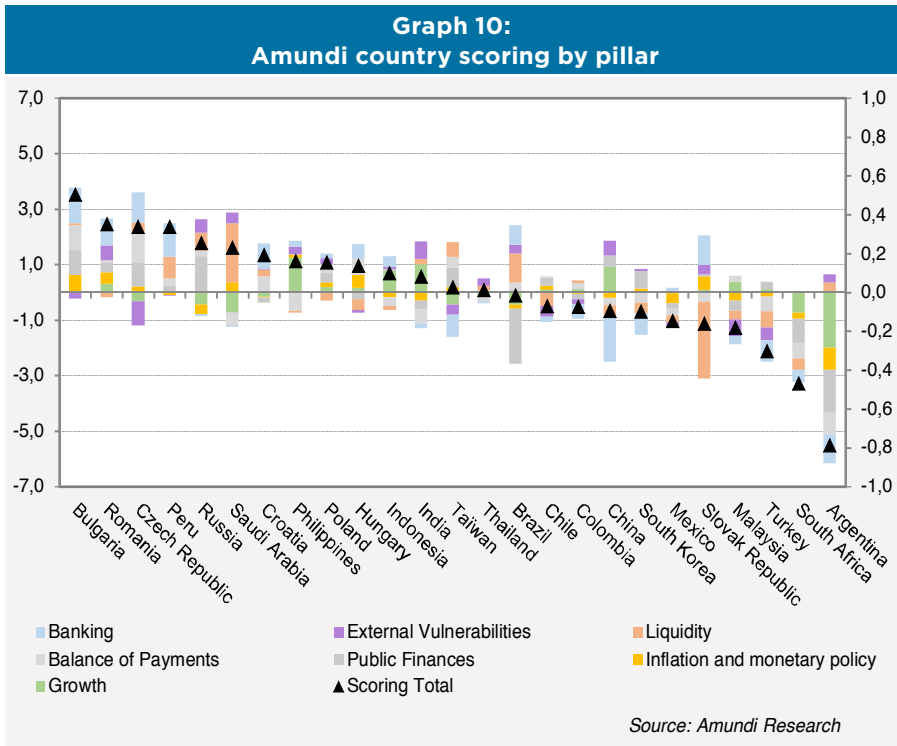
Table 16: Amundi country scoring (25 macro variables)

Q4 2018	Growth			Inflation and monetary policy			Public Finances			Balance of Payments			Liquidity		External Vulnerabilities				Share of Foreign currency in GDP			Banking				Scoring Total
	Real GDP Growth	Cons %GDP	GFCF %GDP	Inflation headline CPI	Inflation PPI	Real Policy Rates	Government Debt %GDP	Delta Government Debt %GDP	Government Balance %GDP	Trade balance % of GDP	Current account %GDP	FDI % GDP	FX Reserves months of imports	M2 /FX reserves	External Debt %GDP	Delta External Debt %GDP	ST External Debt% Total debt	Delta ST External Debt % Total debt	Government	Financial corporation	Non Financial Corporation	Private Sector Credit %GDP	Delta Private Sector Credit %GDP	NPL Ratio	Delta NPL Ratio	
Bulgaria	0.1	0.7	0.8	0.3	-0.3	1.7	1.0	0.4	1.2	-0.3	1.0	1.5	-0.3	0.4	-0.7	1.0	0.1	1.1	1.2	1.2	1.0	0.9	0.5	1.7	2.0	0.50
Romania	0.5	0.6	0.3	1.1	-0.2	1.5	0.3	1.1	-0.3	0.9	1.1	1.3	0.2	0.3	0.0	0.8	0.6	0.0	1.2	2.0	2.0	1.9	0.5	1.5	0.0	0.35
Czech Republic	0.3	1.0	0.4	0.4	-0.5	0.8	0.5	1.4	1.0	0.9	0.0	1.7	0.1	0.6	1.6	1.5	1.7	1.5	0.7	-0.9	1.1	0.8	0.8	2.6	1.7	0.34
Peru	-0.2	0.9	-0.4	0.4	-0.5	-0.2	0.9	-0.8	0.0	-0.3	-0.4	0.9	0.9	0.7	0.7	0.5	0.6	-0.7	-0.1	-0.1	1.2	1.3	0.3	1.2	2.0	0.34
Russia	-0.2	-0.5	-0.5	0.2	0.5	1.8	1.7	0.1	1.8	1.7	1.5	-1.2	3.5	0.5	0.7	1.0	-0.3	-0.6	0.9	0.1	0.2	0.0	1.1	-1.3	0.2	0.25
Saudi Arabia	-0.3	-2.1	-0.3	0.3	0.5	0.2	1.3	-1.2	-1.4	-0.3	0.8	-1.1	0.9	0.7	1.1	-0.4	-0.3	1.0	-2.0	1.2	0.8	0.4	0.6	-1.8	-0.9	0.23
Croatia	0.0	0.1	-0.6	0.4	-0.5	-0.1	1.8	2.0	0.9	0.0	0.7	0.8	-0.2	0.7	1.4	1.7	0.8	0.6	-2.0	1.4	-0.4	0.4	0.6	1.8	0.8	0.19
Philippines	1.2	2.0	0.6	-0.1	-0.6	1.0	0.0	0.6	-0.4	-2.0	-0.7	0.4	-0.3	0.2	1.0	-1.0	0.4	1.4	1.0	-0.7	-0.3	1.0	-0.2	1.1	-2.0	0.16
Poland	0.8	0.2	0.3	0.4	-0.5	0.5	-0.5	1.7	0.6	0.4	-0.3	0.6	-0.7	0.1	-0.9	1.1	0.6	0.7	1.1	0.0	1.7	-0.6	1.5	1.1	-1.0	0.15
Hungary	0.6	0.0	0.3	0.2	-0.2	1.3	-1.5	2.0	0.1	0.9	0.2	0.6	-0.5	0.1	-1.5	2.0	0.8	-0.2	-1.2	-1.1	1.0	-0.7	1.5	1.7	-0.4	0.14
Indonesia	0.8	0.0	1.5	0.2	-0.2	-0.6	0.4	-0.5	0.2	-0.5	-0.8	0.0	-0.4	0.1	0.5	-1.0	0.6	0.3	-0.3	-0.4	-0.1	1.4	-0.3	-0.5	1.0	0.10
India	1.4	0.2	0.9	0.1	-0.3	-0.7	-0.3	-0.1	-0.7	-1.0	-0.6	-0.2	-0.2	0.6	1.2	-0.2	0.3	1.0	2.0	1.0	1.0	0.5	0.0	-1.6	0.4	0.08
Taiwan	-2.1	-0.4	-0.4	0.5	-0.3	0.4	0.6	0.8	0.8	1.8	2.7	-1.5	0.9	0.2	0.5	-1.1	-1.4	-0.6	2.0	0.6	1.8	-2.0	-1.0	0.7	0.0	0.03
Thailand	0.3	-1.0	-0.1	0.5	-0.7	0.2	0.5	-2.0	0.3	1.6	1.6	-2.0	-0.1	0.4	0.7	0.1	-0.8	0.0	2.0	0.6	-0.1	-1.2	1.1	1.3	1.0	0.01
Brazil	-0.7	0.9	-1.3	0.4	0.4	-0.9	-2.0	-1.3	-2.2	-0.2	-0.3	0.9	1.7	0.5	1.3	1.0	0.8	-1.2	0.9	-0.2	0.0	-0.1	1.4	0.2	1.4	-0.02
Chile	0.0	1.3	-0.2	0.3	-0.2	0.3	-1.0	1.0	0.2	-0.2	-0.2	0.6	-0.5	0.4	0.8	0.2	0.8	-1.1	0.1	0.1	-2.0	1.0	0.0	0.7	-0.3	-0.07
Colombia	-0.2	1.3	-0.4	0.2	-0.2	-0.1	-0.4	0.4	-0.4	-0.3	-0.9	1.0	0.0	0.1	0.3	0.0	0.7	-1.0	-0.6	-0.7	-1.0	1.0	-0.1	-2.3	-0.8	-0.07
China	1.3	2.1	3.2	0.4	-0.3	-0.7	1.4	-0.3	-0.8	-0.2	0.0	-0.4	0.4	-1.2	1.4	1.0	-1.5	1.5	2.0	0.6	1.8	-2.0	-2.0	-1.7	-1.0	-0.10
South Korea	0.0	0.9	1.1	0.4	-0.5	0.4	-0.1	1.1	1.6	0.7	-1.6	-1.6	-0.2	-1.0	0.8	-0.8	-0.1	0.9	1.8	-1.4	-1.6	-2.0	1.2	1.0	-1.0	-0.10
Mexico	0.6	0.9	-0.2	-0.1	0.0	1.0	-0.3	-0.2	-0.1	0.7	-0.5	0.1	-0.8	0.3	0.4	-0.3	0.6	-0.4	-0.1	-0.5	-1.8	1.3	1.0	1.1	-0.7	-0.15
Slovak Republic	0.4	-0.3	-0.2	0.3	-0.4	1.6	-0.5	0.8	0.4	0.2	-0.6	-0.5	1.2	-1.3	-2.1	1.4	-0.2	2.0	0.4	2.0	2.0	0.3	-0.1	2.1	2.0	0.16
Malaysia	0.7	0.0	0.2	0.5	-0.4	0.7	-0.6	0.0	-0.3	1.2	0.5	-0.4	-0.5	-0.1	-0.5	0.0	1.0	-1.0	-1.3	-2.0	1.0	-1.5	-2.0	1.0	0.0	0.14
Turkey	-0.3	0.3	1.0	-1.7	-0.2	-0.6	0.7	-0.5	0.1	-0.7	-0.9	-0.3	-0.8	-0.3	-0.5	-1.3	0.0	0.3	-1.0	0.1	0.6	-0.8	-1.3	-0.3	-0.5	-0.30
South Africa	-1.1	0.3	-0.9	0.0	-0.2	-0.5	-0.7	-1.1	-0.9	-0.3	-1.0	-0.5	-0.6	-0.2	-0.1	1.0	0.3	1.1	0.2	0.1	-0.4	-0.3	0.8	-0.3	-2.0	-0.07
Argentina	-1.7	1.0	-1.4	-2.3	-4.0	-2.2	-1.5	-2.0	-1.3	-0.7	-1.3	-0.5	0.1	0.7	-0.2	-2.0	0.3	1.5	0.2	1.7	1.0	2.0	-1.4	2.7	-2.0	-0.73

Country	Growth	Inflation and monetary policy	Public Finances	Balance of Payments	Liquidity	External Vulnerabilities	Banking	Scoring Total
Bulgaria	0.04	0.56	0.91	0.89	0.08	-0.24	1.29	0.50
Romania	0.30	0.41	0.33	0.11	-0.18	0.53	0.97	0.35
Czech Republic	-0.33	0.22	0.86	1.08	0.35	-0.88	1.10	0.34
Peru	-0.02	-0.08	0.23	0.27	0.78	-0.02	1.19	0.34
Russia	-0.45	-0.34	1.31	0.18	0.67	0.48	-0.07	0.25
Saudi Arabia	-0.74	0.36	0.00	-0.44	2.12	0.39	-0.06	0.23
Croatia	-0.16	-0.03	-0.20	0.56	0.25	0.02	0.92	0.19
Philippines	1.24	0.10	0.05	-0.68	-0.07	0.25	0.24	0.16
Poland	0.19	0.15	0.34	0.32	-0.30	0.21	0.17	0.15
Hungary	0.16	0.47	-0.26	0.58	-0.38	-0.10	0.52	0.14
Indonesia	0.77	-0.19	0.05	-0.30	-0.14	0.09	0.39	0.10
India	1.01	-0.30	-0.32	-0.50	0.19	0.63	-0.17	0.08
Taïwan	-0.46	0.18	0.70	0.38	0.54	-0.34	-0.82	0.03
Thailand	-0.11	0.02	0.05	-0.21	0.17	0.25	-0.08	0.01
Brazil	-0.45	-0.14	-1.99	0.34	1.06	0.30	0.72	-0.02
Chile	0.08	0.15	0.29	0.06	-0.49	-0.40	-0.19	-0.07
Colombia	0.11	-0.05	-0.22	0.22	0.09	-0.16	-0.54	-0.07
China	0.91	-0.21	0.41	-0.26	-0.37	0.52	-1.67	-0.10
South Korea	0.04	0.11	0.61	-0.38	-0.38	0.07	-0.77	-0.10
Mexico	-0.03	-0.36	-0.21	-0.23	-0.25	-0.12	0.16	-0.15
Slovak Republic	0.09	0.49	0.07	-0.36	-2.76	0.35	1.07	-0.16
Malaysia	0.39	-0.30	-0.36	0.22	-0.33	-0.61	-0.29	-0.18
Turkey	0.12	-0.16	0.26	-0.53	-0.58	-0.46	-0.77	-0.30
South Africa	-0.73	-0.23	-0.88	-0.54	-0.42	0.02	-0.44	-0.47
Argentina	-1.99	-0.81	-1.54	-0.79	0.36	0.30	-1.04	-0.79

Table 17: Amundi country scoring by pillar

2nd step: From scoring to dendrogram

To analyse the scores, we do not refer to comparison between countries, or to comparison with mid-term trends, as is often the case: it would make very little sense. We have opted for a different approach, the HCA (Hierarchical Cluster Analysis). This automatic classification method is very much used in data analysis and has two advantages:

1. **We work on the basis of proximity measures** (here, scores) between objects (here, emerging countries) that we wish to divide into homogeneous groups ("clusters");
2. **One of the results is the dendrogram**, which provides a graphic representation of the iterative aggregation of data. We can then get an idea of the number of classes in which emerging countries can be grouped together.

The HCA principle is simple. We begin by calculating the proximity between the 20 emerging countries and then group together two emerging countries by minimising the Euclidian distance between the scores, thus creating a class comprising these two emerging countries. We then compute the proximity between this class and the other 18 emerging countries and reunite the emerging countries. We reiterate these steps until all emerging

countries are brought together. These successive groupings produce a binary tree of classification: the dendrogram. Two countries with close indicators are grouped in the lowest sheets of the classification tree. The hierarchical classification algorithm will iteratively calculate the partitioning of countries into less and less homogeneous groups. The height of the tree measures the distance and therefore the level of dissemblance between the different countries and clusters.

With this approach, the scoring then moves to a dendrogram, an extremely visual and useful graphic representation. Some countries have characteristics that are specific to several groups, but they are identified with the factor that best characterises them. For example, Brazil is a producer of raw materials, but what makes it even more distinctive is that it is an economy with a dwindling balance, two weaknesses in the current environment.

In contrast to the previous approach, group stability is not ensured, as the structural criteria are supplemented by more cyclical criteria. The typology defined by this approach has an advantage: both scoring and HCA can be updated regularly, but it has the disadvantage of not being stable. Here are some examples:

1st example: as of mid-2015, the classification represented opposite by a dendrogram led us to consider six different groups of emerging economies: 1) commodity-exporters countries, 2) economies with structural surpluses, 3) economies with structural deficits, 4) countries with deteriorating current account, 5) vulnerable economies, 6) countries with declining savings.

Graph 11:
Typology — country: A view via dendrogram

Dendrogram in Q2 2015

Source: Amundi Research
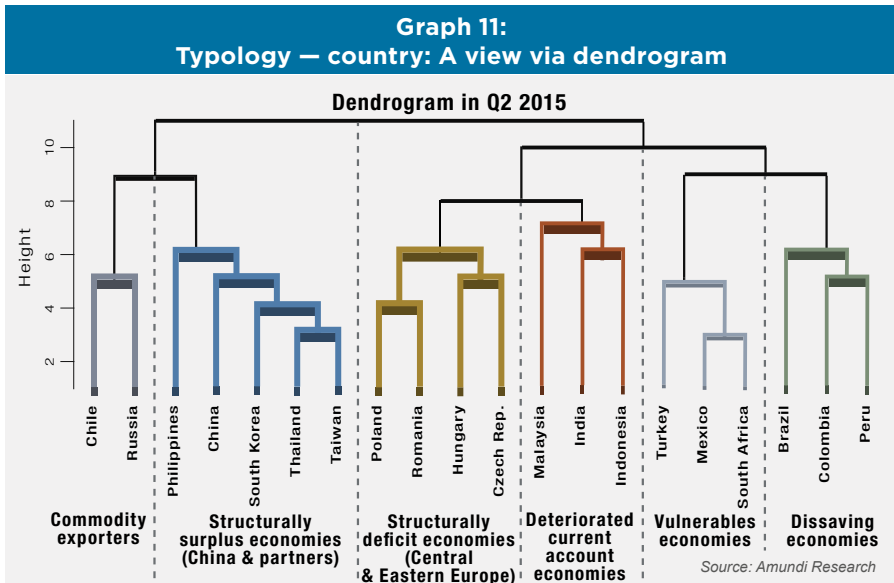
In 2015, regional logic was still evident through this typology.

- The group **of structurally surplus** economies was composed only of emerging Asian economies and more specifically China and its main trading partners.
- The **deteriorating group of current account economies** was, too, composed solely of emerging Asian economies. India and Indonesia were running current account deficits while Malaysia is rapidly deteriorating.
- As **for the group of structurally deficit economies**, it comprised only Central and Eastern European economies, traditionally more indebted than their emerging Asian counterparts, for example.
- The regional logic also operated at that time for the **group of economies with declining savings**, composed only of commodity exporting Latin American countries.
- However, we distinguished it from the **group of commodity-exporting** countries (Chile and Russia) that have seen their economic perspectives deteriorate rapidly but whose levels of investment and savings have remained well oriented.
- Finally, the group of **vulnerable economies** differentiates itself by its relative singularity. Indeed, Turkey, Mexico and South Africa have poor economic prospects, deteriorating current accounts, low savings rates and low leeway in their foreign exchange reserves.

2nd example: in July 2016, the typology changed and three main groups were identified.

- Group 1: Countries with higher structural inflation, which could then be broken down into 5 homogeneous sub groups;
- Group 2: Countries with high external debt and a fragile banking system;
- Group 3: economies with structural surpluses and growth financed by a sharp rise in credit.

Some regional logic persisted, but the BRICS countries were spread among the different groups (China in group 3, Brazil, Russia, India and South Africa in different sub-groups of group 1).

3rd example: the current situation (Q4 2018). At present, we identify 3 large groups. (see graph below):

The first group (on the left) is composed of countries with healthy public finances. Two sub-groups can be identified: some countries have an excess of savings (eg, Saudi Arabia, Russia, China, Taiwan) and some have in common being dependent on external capital flows (eg, Hungary, Czech Republic, Croatia). These two sub-groups have a strong regional component: one of the two is linked to Asia, the other is linked to Europe.

The second group (on the right) is composed of countries presenting vulnerabilities and higher inflation rates. This group is highly diversified: it includes European countries (Romania, Turkey), Asian countries (Philippines, India, Indonesia), Africa (South Africa) and countries from Latin America (Brazil, Peru, Chile, Colombia) and Central America (Mexico). Note that in this group, Argentina needs to be treated separately, as it is not similar to any other country at the moment.

Graph 12:
Typology — country: A view via dendrogram

Source: Amundi Research
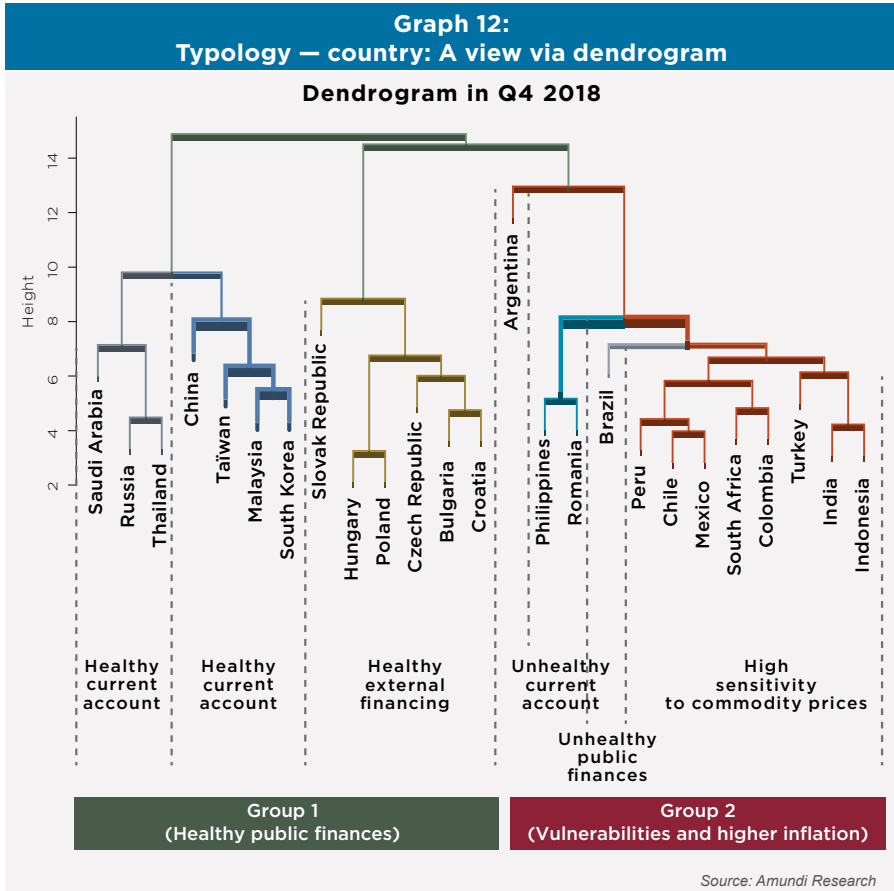
The typology based on our scoring and bottom up hierarchical approach shows several interesting things:
- The indices (benchmarks) do not reflect any economic reality;
- The regional approach cannot be totally suppressed from investment approaches, but it gives a very partial picture of the underlying reality (made up of political, geopolitical, economic and financial factors);

- It shows how close countries are economically and financially, regardless of where they belong, which gives a clear idea of the risks of contagion at all times.

This typology shows several interesting things:

- The indices (benchmarks) do not reflect any economic reality;
- The regional angle cannot be totally suppressed from investment approaches, but it gives a very partial picture of the underlying reality (made up of political, geopolitical, economic and financial factors);
- It shows how close countries are economically and financially, regardless of the region in which they are located, which gives a clear idea of the risks of contagion at all times;
- All BRICS are located in different sub-groups.

Conclusion

Neither the world of advanced countries, nor the dollar block, nor the Eurozone, the world of emerging countries should be regarded as a block. This view simply stems from the fact that for decades, those who decided to diversify into EMs decided to allocate an (often very low) share of their portfolio to the "beta" of the asset class and had no intention of running on alpha strategies: the lack of knowledge of countries, the lack of internal (and often external) analysis, and the remoteness of these markets led to these choices. It was about passive management (investment in the emerging block represented by the index) rather than active management (country analysis, discrimination, selection, etc.) or the perception of a block. Similarly, many invest in corporate bonds on a passive mode, although no one doubts the variety and dispersion between the companies involved.

To some extent, the emerging block is more a block than the advanced countries block, the dollar block or the European block. Unlike the advanced countries bloc (with the US and the dollar, or with Germany in particular), **there is no "safe haven" within the emerging block**. The dollar block (with the US and the dollar) or the European block (with Germany and the euro), have a reserve currency and a secure bond market... This feature is clearly evident in times of crisis or sharp rise in risk aversion.

It should also be remembered that **the weak ability to differentiate has long been made worse by the fact that diversification did not really exist, especially for debt markets: the development of debt products in the 2000's and 2010's enabled investors to diversify and differentiate better.**

This article pointed out that, on a purely economic level, divergences, structural characteristics and vulnerability, particularly to capital flows, can vary widely across countries, so the EMG world is not a block. A BRIC type approach (or other acronyms, a regional approach or an index based approach (EMG, Next11 or NewFrontier) are not satisfactory for capturing these specificities.

On the other hand, we have observed that **the emerging world tends to behave like a block when the situation deteriorates sharply and risk aversion becomes high** (indeed, a reliable indicator of the intensity of a 'crisis'). To be precise, it is simple to show the correlation between emerging markets, but also between advanced economies, except for safe havens and reserve currencies. **There are no safe havens in emerging countries, and it is for this very reason that there are limits to discrimination**. As a result of the emergence of a common global factor (e.g. an excessive Fed rate hike, fears of trade war, to recapture recent risk factors), contagion tends to affect all markets almost uniformly.

Dispersion among the emerging world, however, is high in terms of both economic strength and vulnerability. Some other countries are "protected" by their surpluses, their low external debt, or the level of their foreign exchange reserves. By contrast, other countries present structural vulnerabilities that, in some cases, have even deteriorated over the past two years.

Rejecting the BRICS and other acronym, criticising the existence of a block for emerging countries or benchmarks is one thing... proposing an alternative approach is another. We have developed in the past years several methodologies that provide an alternative typology to traditional approaches and that help orient investment strategies.

- **A "static" approach** which aims to define homogeneous and stable groups over time: this is possible should one consider the structural divergences that exist between emerging countries (external debt and vulnerability to capital flows, ability to deliver autonomous growth, producers or consumers of commodities, etc.).
- **A "dynamic" approach**, which uses the structural and cyclical characteristics of emerging countries to define groups of countries at all times. The bottom up "Hierarchical Cluster Analysis" enables homogeneous sub groups (independent of regional blocks, indices, size...) to be defined. The groups are not frozen: they may change regularly in line with economic and financial conditions.

These new typologies provide the possibility of at least partially avoiding the contagion effects that prevail in financial markets by moving as far as possible away from the factors that caused this contagion. That is the whole point of these approaches:

- They are particularly interesting in market movements, as they allow portfolios to focus on tailwinds;
- They are useful in moderate falls as they reduce exposure to factors that cause weakness (commodity prices, global growth, etc.);
- However, in cases of strong contagion or even crisis, there is no method for completely avoiding the effects of contagion. In the emerging world, there are no safe havens, neither countries, nor securities or asset class.

A Discussion Paper to be released very soon (Ithurbide (2019b) will complete the typology approach, analysing contagion and vulnerability in the EM world. It will present optimised portfolio using discriminatory factors, and present ways to mitigate the contagion effects, especially in times of trouble.

Appendix 1:
Develeraging (government, households, corporates) since 2007 (Debt/GDP in %)

Graph 13:
Government debt to GDP since 2007

Source : Datastream, Amundi Research, Data 3Q2018
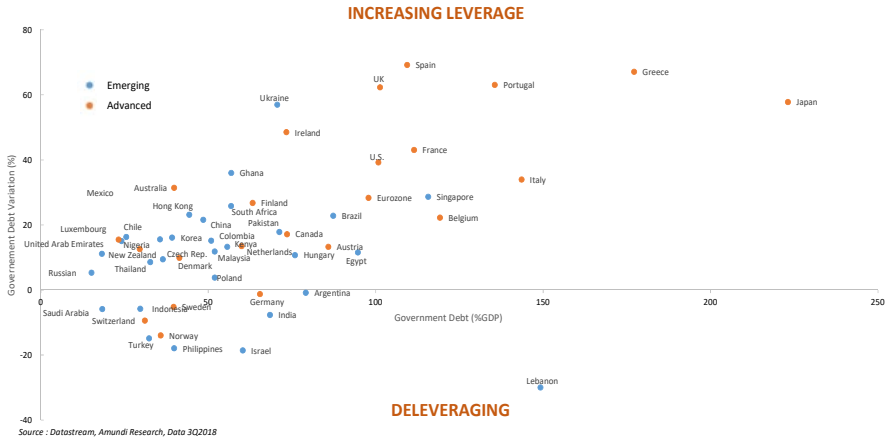
Graph 14:
Household debt to GDP since 2007

Source : Datastream, Amundi Research, Data 3Q2018

Source : Datastream, Amundi Research, Data 3Q2018
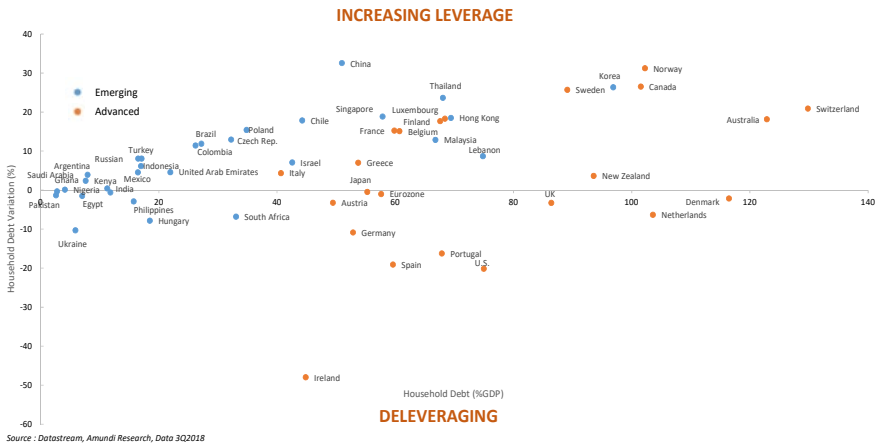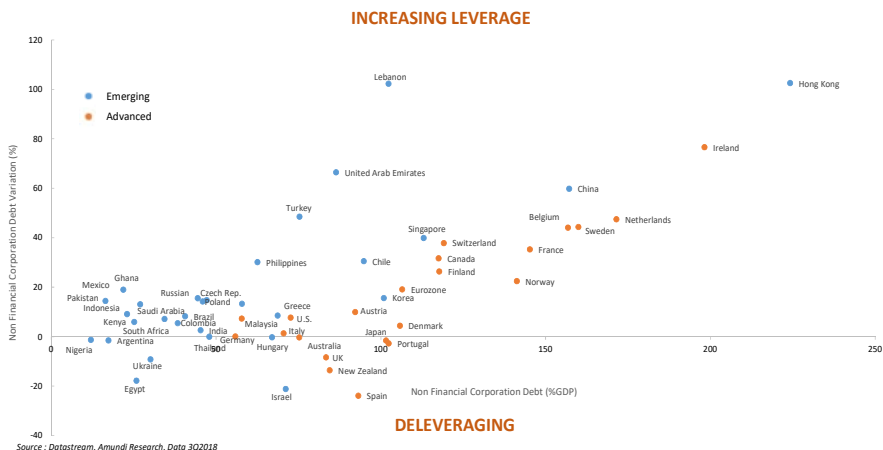
Appendix 2:
Short summary of existing EMG indices

Emerging markets: A stocktaking exercise

- The **"BRICS"**: Brazil, Russia, India, China, South Africa;
- The **"Next11"**: Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, Turkey, South Korea, and Vietnam;
- The so **called "New Frontier"** countries, considered to be the next wave of emerging countries. These are, in general, countries with high rates of economic growth but with little progress in creating capital markets. As a result, they are rarely present in emerging market indices or are very highly underweight. However, there is an "MSCI New Frontier Index", which makes this emerging market group "legitimate". This index comprises 25 countries: Argentina, Bahrain, Bangladesh, Bulgaria, Croatia, Estonia, Jordan, Kazakhstan, Kenya, Kuwait, Lebanon, Lithuania, Mauritius, Nigeria, Oman, Pakistan, Qatar, Romania, Serbia, Slovenia, Sri Lanka, Tunisia, United Arab Emirates, Ukraine, Vietnam.

Emerging Markets: Emerging Market Debt Indices

The most commonly used benchmark for US dollar denominated government debt is the **EMBI** (Emerging Market Bond Index). The EMBI index has historically been one of the first diversified indices in EM sovereign debt. This index was officially introduced in 1999 with a reconstitution of daily historical data up to December 1993. Its weighting is based on market capitalisations. **EMBI +** is a pre EMBI index, created in 1995, whose composition is based on

rather strict liquidity criteria for selected securities such as issue size, bid ask spreads and the number of brokers that can provide a daily quotation. These two indices have an average (market weighted) credit rating of Baa3/ BB +/BBB-, respectively, according to Moody's, Standard & Poor's and Fitch. Thus, the index is, on average, in the investment grade segment for two of the main credit agencies. The baseline is now the **EMBI Global** Diversified, whose capitalisation is over 190 bn and contains issuance from 55 emerging economies. There is also a euro EMBI index (**EURO EMBI**) which was created in March 2001 with a history beginning in December 1998.

In November 2011, JP Morgan created a new index of US dollar denominated sovereign debt, the **NEXGEM** (Next Generation Emerging Markets), whose name sheds light on the purpose of its creation. It covers economies with the least liquid capital markets, such as small economies in Latin America (San Salvador, Jamaica, Guatemala, Ecuador, Bolivia), Asia (Mongolia, Vietnam, Pakistan), African economies (Côte d'Ivoire, Angola, Gabon, Ghana, Nigeria) or the Middle East (Iraq, Egypt). There are 23 issuing countries in the index. The historical data date back to December 2001. The average credit rating places it in high yield category B1/B +/BB by Moody's, Standard & Poor's and Fitch.

In June 2005, a new sovereign debt index class was launched: Indices of sovereign debt denominated in local currencies. These are the GBI EM (Global Bond Index Emerging Markets) indices with a daily data history dating back to December 2002. These indices have also established themselves as benchmarks in their segments. There are three examples: **GBI EM Broad, GBI EM Global, GBI EM** Diversified. The first GBI EM index attempts to hedge the local debt markets as broadly as possible without taking into account the accessibility constraints for non-domestic investors. There is also a very little used small version of the **GBI EM Narrow index.** The GBI EM Global index is in mid-range: It contains countries which have, for the most part, local debt markets that are accessible to non-domestic investors. The most widely used version remains the GBI EM Diversified where the weights of large caps are limited to 10% in the index.

Finally, the corporate universe is covered by **the CEMBI** (Corporate Emerging Bond Index), created in December 2007 with a track record beginning in December 2001. The corporate debt market expanded strongly to 960 bn in 2012. As with the GBI EM indices there is a narrow version (Narrow) and a broad version (Broad). In terms of sector allocation, the **CEMBI Broad** Diversified Index comprises more than one third of financials (36%). The weight of the financial sector is therefore very important there.

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