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Investing in the Changing Shape of Emerging Markets

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CIO Letter

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The emerging markets (EM) universe has experienced significant changes in the last decade with the further addition of investible countries (ie China A shares in 2018), the surge in the size of EM bond markets and the further development of the local currency bond markets.

This world in transformation remains highly heterogeneous as differences between EMs exceed similarities and that's why extensive research is key to identify the variables that at each point in time are the main drivers of each economy, the investment factors that can be most remunerative and the portfolio allocation that can deliver the best risk/return payoff.

Despite having been around for more than 30 years, emerging markets investing still accounts for a marginal part of institutional investors' portfolios. However, looking ahead, we expect to see an acceleration towards EM investing. The ongoing development of domestic markets becoming more open to international investors and increasingly diversified should be a major catalyst.

The need to search for new sources of returns will be an additional key supporting element for further embracing EM investing. In fact, global investors will face a more subdued return environment over the next five years and further out. Given a developed world where adverse demographic dynamics will weigh on future potential growth and interest rates look set to stay low for longer.

In a world of diminished return potential, the ability to tackle market opportunities and the search for sustainable alpha will be even more relevant. This is key in particular in the EM world, where our research shows that EM discrimination on the basis of the vulnerability factor can be rewarding, especially in times of crisis.

In our view, to capture the next wave of returns in EM, investors will have to embrace what we call an EM-MOVES (Multi-Opportunity Vulnerability-Enhanced Selective) approach based on an assessment of the vulnerability of each economy and an analysis of the five key drivers of EM opportunities (Debt, Dynamism, Diplomacy, Dependency, Domestic demand). The ability to look at the full capital structure and bring together varied expertise (loans, debt, equity, distressed situations) will help with moving beyond traditional investing in EM and foster new innovative solutions across the full EM spectrum.

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How to discriminate emerging countries? "Fragile" vs. "anti-fragile" countries[1]

The essentials

Neither the world of the advanced countries, nor the dollar block, nor the Eurozone, nor the emerging (EM) block should be considered a block. The role of EM countries (economically, but also in terms of power – both 'hard' and 'soft' power – and leadership) is now indisputable, *and this role is growing, especially for some countries, specifically China.* ***Better knowledge and integration of these countries into investment processes is therefore inevitable.***

It is easy to point out that economic divergences, structural characteristics and vulnerability, particularly to capital flows, can vary widely across countries. *The magnitude of external deficits (or, more generally, the* ***vulnerability of countries to foreign capital flows)*** *is undoubtedly one of the key differentiating factors among countries.* ***Even if countries have different intrinsic characteristics and risk factors, financial market reactions have systematically failed to detect such divergences.***

It looks like capital flows are exiting all EM countries at the same time... as if risks were perceived and treated globally, without worrying about whether particular countries offer different risk profiles in nature and magnitude. ***The picture is not so different concerning advanced countries****, though ... except that* ***in advanced countries, safe haven assets and currencies do exist which allow for the mitigation of down-cycles experienced by financial assets. So far, unfortunately, this has not been the case for EM markets.***

Discriminating through a risk factor is possible, though ... and external vulnerability is a good basis for doing this. *Solid countries tend to outperform systematically vulnerable countries – on FX, equity and fixed income markets – especially in times of crisis, contagion or risk aversion.*

It seems judicious during tough times to overweight solid countries which we refer to as 'anti-fragile': *they do not constitute, strictly speaking, macro-hedging instruments (they evolve in the same direction), but they make it possible to weather shocks and protect against the weaknesses of the vulnerable countries which, at times, may seem overblown. This approach can also be part of an overlay strategy.*

Advanced countries, the dollar block, the Eurozone and the emerging (EM) block really should not be considered 'blocks'. In fact, one of the key factors behind the 'block' label regarding EM is simply that for decades many investors allocated a low (and often very low) part of their portfolios to the "beta" of the EM asset class, without specific discrimination.

This was the case for several reasons:

- **Lack of investor knowledge about EM countries;**
- **Lack of internal (and often external) analysis;**
- **The remoteness of these markets;**
- **Political instability, lack of transparency and lack of data, and, in some cases, the high frequency of crises did not help;**

[1]This article is an introduction to some of the issues developed in two Amundi Discussion Papers: Ithurbide - Bellaïche (2019b) "How to discriminate Emerging Countries: "New Approaches for Classification and Typology" and Ithurbide - Bellaïche (2019c) "Emerging Markets: Vulnerability and contagion risks... where do we stand? Fragile vs. anti-fragile countries". Documents to be available in our website: http://research-center.amundi.com.
The terminology "fragile" and "anti-fragile" is inspired by Nassim Taleb, even if it was developed in a totally different context and for specific purposes, though (Taleb N. (2012) "Anti-fragile: things that gain from disorder", Random House, New York).

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- Another key factor justifying the existence of an emerging 'block' is that, unlike the advanced countries, such as the US (with US Treasuries and the dollar), or unlike the European 'block' (with German Bunds and the euro), **there is no 'safe haven' country within the emerging 'block', no secure reserve currency, or liquid and secure bond market.** In this sense, the emerging 'block' is more a block than the other groups mentioned above. This feature can be seen in periods of crisis or of sharp rises in risk aversion;
- **The inability to discriminate is exacerbated by the fact that diversification has never really existed, especially for debt markets:** investing in EM was more likely to take on a high degree of concentration risk. Until the end of the 1980s, Latin America was the only area that offered decent size and some liquidity. Diversification was not possible: as EM's financial markets were not highly developed, the benchmarks were in general highly unbalanced. For example, the EMBI index was comprised of only 10 countries at the end of the 1990s: Argentina, Brazil, Bulgaria, Ecuador, Mexico, Panama, Peru, Poland, Russia and Venezuela. Latin America accounted for almost 90% of the index (70% for Argentina, Brazil and Mexico), Asia was absent, and European countries accounted for only 10%. The same was true for the EMBI + index: nearly 80% for the Americas alone (Poland, Russia, Nigeria and Philippines simply topped up the index).

All these factors led to underinvestment in EM countries and EM markets. It was at best about passive management (investment in the emerging 'block' represented by the index) rather than active management (country analysis, discrimination, selection, etc). When active management was promoted, it was concentrated on few countries (presumed to represent the group) and for small amounts. The development of debt products in this century enabled investors to better diversify and differentiate.

"From an investment perspective, treating the EM world as a 'block' (or sub-groups) does not really reflect the opportunity set made up of very distinctive country stories".

However, it is obvious that the term 'emerging markets' is not satisfactory, especially when it comes to investments: the essence of (active) investment is precisely to bet on divergences, relative performances, etc. This term is therefore misleading, as it tends to bring together a large number of countries, admittedly with common characteristics, but which have very different economic realities. Moreover, thinking in terms of a group also does not allow investors to recognise the dramatic advances made by some of the countries and focus on them. Finally, some of these countries are actually better positioned than some so-called 'advanced' countries. Add in that the performance of the 'emerging' group is uneven. Some countries are moving from 'least developed' to "'merging'; others (though rarely) exit 'advanced' country indices to move into 'emerging' country indices (Greece in June 2013, for example). In fact, both the terms 'emerging country' and 'advanced country' are misleading. This is particularly regrettable in the current situation, when the need for a relative value analysis outside the benchmarks is imperative. Hence, the creation of a huge number of sub-groups with sometimes well-known acronyms, such as BRICs, CIVETS, MIST, BRIICSSAMT, EAGLES, NEST, MANGANESE, or benchmarks, such as Next11, NewFrontier, which are all aimed at comparing 'advanced' countries and EM countries, at present and in the future.

Macroeconomic heterogeneity vs financial market correlation/ contagion

It is easy to point out that economic divergences, structural characteristics and vulnerability, particularly to capital flows, can vary widely across countries and therefore that the EM world is not homogeneous. A BRIC-, regional- or benchmark-only based approach is not satisfactory if one looks at the specificities of different countries. While useful for economists, the acronyms are not much use to anyone else who wants like asset managers – to use country characteristics to discriminate within investment portfolios.

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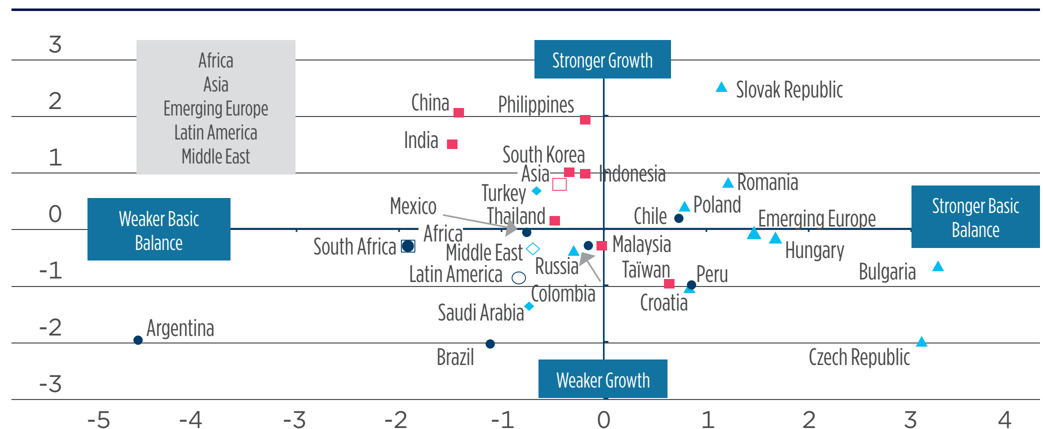
The differences from one country to another can be extraordinarily large based on:
- Economic growth,
- Inflation rate,
- External trade,
- Energy dependence,
- Dependence on commodities,
- The level of debt,
- The leeway in terms of monetary, fiscal and tax policy,
- External vulnerability (external debt, dependence on foreign capital flows, among others), and
- Political stability.

A simple Principal Component Analysis (PCA) shows these differences (see graph below). Based on the 25 quantitative indicators (eg, growth, banking sector, balance of payments, external vulnerability, liquidity, inflation, monetary policy, public finances), the PCA allows the extraction and interpretation of two main axes. The first axis segments countries according to the basic balance (current account and FDIs); the second classifies countries according to their high or low level of growth.

"The 'emerging markets' aggregate concept does not reflect the great divergence among EM economies".

Emerging Europe is mainly - but not uniquely - in the East quadrants, while Asia is mostly - but not uniquely - in the North-West quadrant; Latam and Middle East countries are mainly in the South-West. However, even if economic proximity is obvious and it is possible to discriminate between regions, the differences go far beyond regional realities.

Figure 1: Emerging block: A first visualisation of economic heterogeneity



Source: Datastream, Amundi Research. Data as at May 2019.

The characteristics of EM economies are different, but distinct 'blocks' are still discernible:
- Some countries have surpluses and some deficits;
- Some countries are consumers or producers of commodities;
- Some countries are oil-dependent, some are oil producers;
- Some countries are more indebted than others;
- ...

This should allow differentiated investments according to factors, 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, and investing in countries that have the capacity for internal demand-led growth or to boost growth in a period of downturn in global GDP.

The magnitude of external deficits (or, more generally, the **vulnerability of countries to foreign capital flows**) is undoubtedly one of the most interesting factors of discrimination among countries.

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Figure 2: 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: Amundi Research, analysis on monthly data.

To verify the existence - or not - of an emerging block or several homogeneous blocks, we therefore looked at what happens in the financial markets (in 'normal' times and during periods of crisis) regarding i) **global capital flows** (from non-residents) into equity markets, FX and fixed income products, and ii) **the correlation of these flows**. Indeed, the cross-country correlation provides a good idea of contagion across countries. Below, we note some conclusions with regard to 2018 and the 2006-2018 period.

- **In terms of flows, there is a strong correlation between countries, with India as an exception (and China to some extent).** An explanation might be linked to the specific roles (and burdens) of China and India in investments, and to the common view that these two countries have significant internal capacity to manage pro-growth and independent economic policy: this is without a 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, and the low external vulnerability (debt is mainly internal). For the other 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'.

"In EM equities investors can benefit from lower correlation compared to the developed countries group."

- **One of the striking conclusions on equities relates to the comparison between EM and advanced countries.** The correlation of returns is much higher within the developed countries group, which indicates why this group is more easily viewed as a block than the EM world. Generally speaking, EM European and Latin American equity returns are more correlated than Asian ones. The correlation was stronger in 2018 compared to the whole period: the EM world is more a 'block' when risk aversion rises, while the capacity to discriminate seems more important in 'normal' periods.
- **With regard to fixed income markets, correlation of EMBI returns are similar if we compare the whole period and 2018.** In other words, discrimination among countries seems limited, especially in Latin America, where the correlation of returns is significantly higher than in the other regions.
- **FX markets seem more singular: the correlation of returns (all EM currencies vs USD) is systematically and significantly lower than the correlation observed in both equity and fixed income markets.** The liquidity of this market and the ease of building 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 also be due to the desire of European countries to respect European inflation, debt and deficit criteria, which represent predictable constraints to economic policy.

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"When a risk-off mood prevails, EM tend to move in the same direction as investors pull out money from these assets".

The emerging world tends to behave like a block when the situation deteriorates sharply and risk aversion rises significantly (it is even a reliable indicator of the intensity of a 'crisis'). In periods of high volatility, it is pretty simple to pinpoint 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 (eg, an excessive Fed rate hike, fears about trade wars to note recent risk factors) leads to contagion that tends to affect all markets almost uniformly.

All the results clearly show that **while 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 in phases of market stress, capital flows are exiting all EM countries at the same time… as if risks were perceived and treated globally, without taking into account that different countries offer different risk profiles (in terms of the nature of risks and magnitude). We note that the picture is not massively different concerning advanced countries, though.

There is, however, a need for nuance, which can be gleaned from the 2018 experience. All markets experienced strong contagion in 2018, but the Brazilian, Russian and Indian equity markets remained in positive territory as though they were not influenced by other emerging markets or the US market (the US equity market had its worst December in 80 years!). However, this discrimination, which has been possible regarding equity markets, was not verifiable regarding currencies: the Russian ruble, the Indian rupee, and the Brazilian real all were significantly affected by the general climate.

"The EM turmoil in 2018 was particularly severe for the most vulnerable countries while the most solid ones proved to be more resilient".

Another finding from the '2018 crisis' is that the most vulnerable countries were those that were more affected. This is broadly in line with our vulnerability index. In that sense, there was 'some' discrimination between 'emerging block' countries in 2018. Taiwan, Brazil, Thailand, Russia, Peru and China do not seem very vulnerable at present: they are 'protected' by their surpluses, their low external debt levels, or the levels of their foreign exchange reserves.

In contrast, Turkey, South Africa, Argentina and Hungary present structural vulnerabilities that, in some cases, have continued to deteriorate over the past two years. Turkey, Hungary and Argentina also have a large share of their debt denominated in foreign currency (primarily USD and EUR), and any sharp depreciation of their currencies is dangerous, as it drives up their indebtedness.

Overall, it is not difficult to point out some conclusions:

- The high degree of economic heterogeneity across countries, and the conclusion that the EM world is not a 'block' on a purely economic basis;
- Strong correlations between capital flows and between asset classes (currencies, equity markets and fixed income markets), and the conclusion that EM financial markets tend to react as a 'block', especially in times of trouble;
- The difficulty of discriminating a *priori*, apart from FX markets, to some extent;
- Divergences between countries are evident, and dispersion within the emerging world is high in economic terms and in terms of vulnerability. This needs to be taken into account regarding any investment process related to EM countries;
- The necessity to investigate further in order to define groups, classification and typology to be used in investment processes.

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"Aggregating emerging markets on the basis of some proximity in terms of key characteristics/ factors can help investors in their dynamic allocation process".

Emerging countries: What is the appropriate typology? How to discriminate?

Rejecting BRICS, emerging 'blocks' 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. Whatever the approach chosen, with the groups defined, it is possible to propose investment strategies based on specific configurations (economic situation, financial market positioning) and on specific investment factors.

We have developed **two methodologies:**

1. **In-house "dynamic" approaches**: 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 used in data analysis, and which has two advantages:
   - We work based on proximity measurements (here, scoring) between objects (here, emerging countries) that we wish to group together;
   - One result is a 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.

With this approach, the scoring then moves to a dendrogram, an extremely visual and useful graphic representation (see Figure 3). 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 commodities, but what makes it even more distinctive is that it is an economy with twin deficits, two weaknesses in the current environment.

In contrast to a static approach, group stability is not ensured, as the structural criteria are supplemented by more cyclical criteria. At the end of 2018, we identified two groups (see graph below):

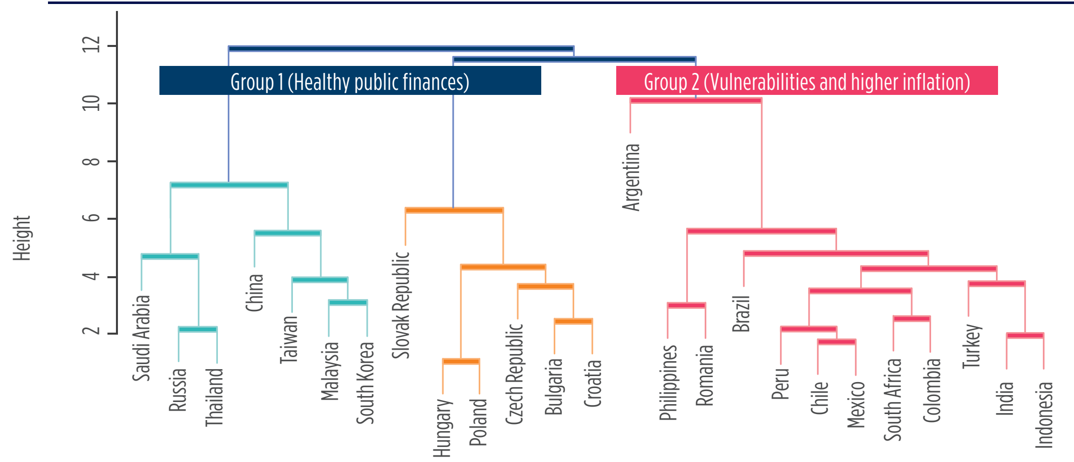
"When embracing a dynamic approach that combines both structural and more cyclical criteria, the group stability is not ensured".

The first (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 (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 in 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.

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.

Figure 3: Typology – country: A view via dendrogram (Q4 2018)



Source: Amundi Research.

This new typology has several advantages:

- It 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.
- It is particularly attractive in large market movements, as it allows portfolios to focus on tailwinds.
- It is useful in trying to mitigate drawdowns, as it allows to reduce exposure to specific risk factors (commodity prices, global growth, etc)
- It also allows a focus on the stakes of the different countries and enables investor to adapt strategies to market conditions and to the dominant factors in a given market environment.

"A dynamic approach can help investors to focus on tailwinds in their country allocation and avoid areas at risk of contagion".

In contrast, due to contagion of capital flows and financial markets, however, in cases of strong contagion or even crisis, there is no method to completely avoid the effects of contagion. **The major disadvantage of the dynamic approach is that sub-groups vary significantly from one period to another.** That is one of the main reasons why we have developed approaches that are more static.

2. **In-house 'static' approaches complement the dynamic approaches.** What is needed here is to define groups that are homogeneous and stable over time, should one want to consider the structural differences that exist between emerging countries: external debt and vulnerability to capital flows, the ability to deliver autonomous growth, whether a commodity producer or consumer, etc. **We have selected the vulnerability criterion as the discriminatory factor:** it is a financial indicator, it is also an economic indicator, and it is most of all an indicator that says a lot about the strengths and weaknesses of a country.

"Our proprietary vulnerability index helps to identify sub-groups of countries that remain more stable over time".

The vulnerability index[2] used in our study (totalling 22 countries) is made up of three components: balance of payments, 'liquidity' and external vulnerability indicators. The results are summarised in the table below. The stability of the groups is not constant (it may vary a little over time), but this approach results in much more stable groupings compared to the previous approach (scoring + HCA). Note that due to lack of data, our sample is not made up of the most vulnerable countries, which confirms that the underlying reality is certainly much more conclusive than our results indicate.

[2]See Notes at the end of the document.

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Figure 4: Country ranking by Amundii Vulnerability index: solid vs. vulnerable countries (most solid countries (top, green)-most vulnerable countries (bottom, red):

Q4 2014	Q4 2015	Q4 2016	Q4 2017	Q4 2018
China	China	Brazil	Brazil	Brazil
Brazil	Brazil	Taïwan	Taïwan	Russia
Russia	Russia	China	China	Peru
Taïwan	Thailand	Russia	Russia	Taïwan
Peru	Taïwan	Thailand	Thailand	China
Philippines	Peru	South Korea	Peru	Thailand
Thailand	South Korea	India	Bulgaria	India
South Korea	Philippines	Peru	South Korea	Bulgaria
India	India	Philippines	India	South Korea
Croatia	Romania	Romania	Philippines	Croatia
Argentina	Argentina	Croatia	Croatia	Philippines
Romania	Indonesia	Indonesia	Colombia	Colombia
Colombia	Poland	Bulgaria	Indonesia	Indonesia
Indonesia	Colombia	Colombia	Romania	Romania
Poland	Bulgaria	Hungary	Mexico	Poland
Chile	Mexico	Chile	Chile	Mexico
Malaysia	Croatia	Mexico	Poland	Chile
Mexico	Chile	Poland	Hungary	Hungary
Czech Republic	Hungary	Argentina	Malaysia	Malaysia
Hungary	Turkey	Malaysia	Argentina	Argentina
Bulgaria	Malaysia	Czech Republic	South Africa	Czech Republic
South Africa	South Africa	Turkey	Czech Republic	South Africa
Turkey	Czech Republic	South Africa	Turkey	Turkey

Source: Amundi Research.

We then analyse the two groups that are identified as solid countries and fragile countries. As stated above, even if countries have different characteristics and different risk factors, capital flows and returns (equities, FX and fixed income) tend to be significantly correlated. **However, looking then at the relative performance of FX, equity and debt markets for these two groups (equal weighted long/short portfolios), the results tend to demonstrate that vulnerability is a real criterion of discrimination.**

The performance of 'solid countries' (hereafter the Solid6, or S6) is significantly better than the performance of 'vulnerable countries' (the Vulnerable6, or V6): +16% extra performance on equities in 2018, +6% on EMBI markets, and +10% on FX markets (see table below). For the whole period (2001-2018), despite the strong recovery of vulnerable countries during 'quiet periods', the outperformance of the Solid6 vs the Vulnerable6 is still significant: more than 2% on both equity and fixed-income markets, and close to 4% for FX markets.

The performance of the most solid countries is stronger that the performance of a portfolio that includes all countries: in other words, low vulnerability seems as important as diversification.

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Table 1: Performance: Solid6 vs Vulnerable6

2018	Equity markets performance	FX (vs. USD) performance	EMBI markets performance
All Countries (our sample)	-5.2%	-9.8%	-3.1%
V6 Group	-13.7%	-18.8%	-6.5%
S6 Group	2.5%	-8.2%	-0.5%
S6 – V6	16.1%	10.6%	6.0%
2001-2018	**Equity markets performance**	**FX (vs. USD) performance**	**EMBI markets performance**
All Countries (our sample)	13.6%	-1.6%	7.8%
V6 Group	13.4%	-4.6%	7.2%
S6 Group	15.6%	-0.9%	9.5%
S6 – V6	2.1%	3.7%	2.3%

Source. Amundi Research. *All countries included in our sample. Note: for fixed income markets, due to lack of some data, the study covers 5 vulnerable countries and 4 solid countries.

"Our study points out that discrimination via vulnerability is rewarding, especially in times of crisis".

Our study points out that discrimination via vulnerability is rewarding, especially in times of crisis. We went one step further, analysing optimised[3] equity portfolios, FX portfolios and fixed income portfolios with a constraint based on our vulnerability indicator. We then compared each of these portfolios with an optimised unconstrained portfolio and an equally weighted portfolio for the 2001-2019 period, and also during 2018, when EM have been most affected The data set is, unfortunately, not sufficient to check the behaviour of portfolios over a longer period, including other periods of EM markets troubles. For the period covered, the results are as follows:

- **On equity markets,** vulnerability is not a discriminatory factor in 'normal' periods, but it tends to be an important discriminatory factor in times of trouble, ie, in 2018.
- **On fixed income markets,** vulnerability/solidity are systematically discriminatory factors, legitimate, in our view, considering that vulnerability/solvency are key criteria regarding sovereign debt. However, it was not the case in 2018, i.e. in times of trouble, where contagion was significantly high.
- The most important thing about the **foreign exchange markets** seems to be diversification, not vulnerability. Taking into account the volatility that prevails in the foreign exchange markets in general – and in periods of risk aversion, as in 2018 in particular – this is not totally surprising.
- Our results demonstrate – **regarding FX, fixed income and equity markets – that the vulnerability-constrained optimised portfolio is much better** than the optimised portfolio which is not constrained (the one that naturally has a bias to vulnerable countries). This is true in terms of performance and in terms of drawdown too (magnitude, duration and recovery time). In other words, in the foreign exchange market as well, vulnerability is a discriminating criterion that is best taken into account.

We could not analyse different crisis episodes, and our study cannot be generalised. But, all in all, in order to benefit from the significant rebounds of the vulnerable countries, it seems judicious to overweight the solid countries during challenging times, which we refer to as the 'anti-fragile'. They do not constitute, strictly speaking, macro-hedging instruments (they evolve in the same direction), but they make it possible to weather the shocks and to protect against the weaknesses of vulnerable countries which, at times, may seem overblown. Our approach can also be used as part of an overlay strategy.

[3]See Notes at the end of the document.

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With the contribution of
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EM: MOVES (Multi-Opportunity Vulnerability-Enhanced Selective) Approach

As we have seen, EM is a highly heterogeneous space, where vulnerability is a key factor to consider from an investment perspective in order to build more resilient portfolios and deliver superior returns. Therefore, our investment approach has evolved over time to reflect this, as embedded in our EM-MOVES (Multi-Opportunity Vulnerability-Enhanced Selective) approach.

- **Multi-Opportunity:** We aim to enlarge the opportunity set by widening the investment universe to off-benchmark countries/companies/instruments to enhance our non-vulnerable choices. For example, companies with strategic importance to the sovereign and quasi-sovereign entities may withstand economic pressures better than peers with no direct or indirect support from governments. The government link may have different implications from equity or fixed income perspectives, however. If we take a company like Petrobras, proximity to the government made it vulnerable from equity returns perspective at times when the company was used for public policy implementation, but protected it during the crises, benefiting fixed income investors.
  This is why a comprehensive approach that combines top-down macro assessment with bottom-up equity and credit analysis can help to build a deep understanding of this complex investment universe. With EM still offering a high degree of diversification across countries/bonds/equities and FX, the multi-opportunity approach allows investors to exploit each investment idea using the most appropriate investment instrument.
  As EM assets tend to be exposed to certain specific factors (USD dynamics, Fed policy, commodity pricing, among others), active investors could benefit from allocating risk to assets linked to factors that are supportive in certain phases of a cycle. In addition, investors should look out for opportunities that could emerge from price dislocations during phases of market stress. These dislocations can often be found outside of the traditional benchmarks, representing opportunities to take advantage of mis-pricing of liquidity by market participants.

- **Vulnerability-Enhanced:** With vulnerability being the most important discriminatory factor, we believe it is vital to assess if markets are correctly pricing different country vulnerabilities. An overweight to most solid countries, and even more importantly, an underweight to the most vulnerable ones, is logical. However, an investment approach that is too static may be problematic.
  Our internally developed 'Risk Budget' tool allows us to dynamically price vulnerability based on volatility pricing observed in the market and by using internally developed vulnerability scores from our macroeconomic research team. Vulnerability is mostly undervalued during 'good times' and typically overvalued during periods of crisis, creating investment opportunities for active managers.

- **Selective:** We focus on bottom-up selection for each investment case with integration of ESG and we combine this with top-down assessment. We analyse fragility in EM based on the five key drivers (the 5Ds: Debt, Dynamism, Diplomacy, Dependency and Domestic demand) to uncover the most compelling investment ideas.

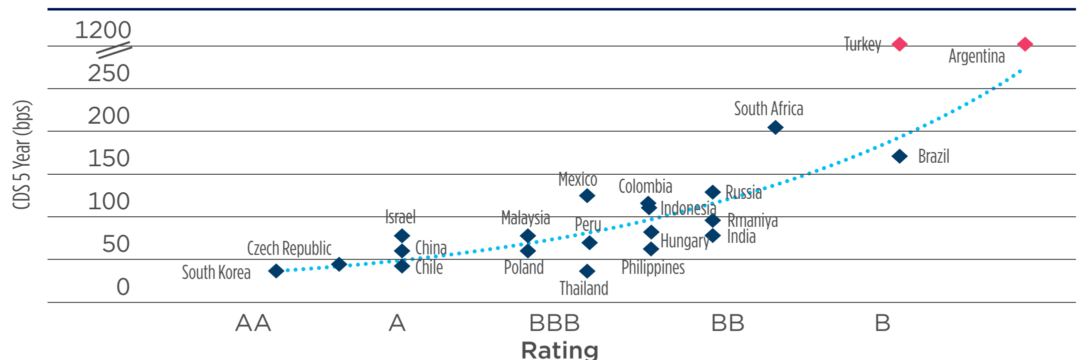
The 5Ds of emerging markets (Debt, Dynamism, Diplomacy, Dependency and Domestic demand)

In searching for market opportunities in EM, we rely on a strong understanding of the 5Ds of emerging markets – Debt, Dynamism, Diplomacy, Dependency and Domestic demand – which are also strictly interconnected with the vulnerability assessment.

"Understanding the debt sustainability path is key to uncovering market opportunities, especially in bonds".

1. **Debt dynamics:** Among the key aspects to consider with regard to EM investment ideas is that the assessment of debt dynamics plays a central role at both the country and company level, especially in EM bonds. Overall debt dynamics in the EM world appear to be under control: after years of rise, 2018 marked the slowest pace in EM debt growth since 2001, with overall levels of debt/GDP ratios (government + corporate + household) for EM at 212% of GDP in 2018 vs 390% for DM. But, the situation varies widely among EM economies. A strong understanding of the debt sustainability path is key when investing in sovereign bonds, where rising expenses related to public debt can negatively affect the growth potential of a country, due to the diversion of spending from more economically productive investments, which consequently causes further damage to the debt outlook, especially in times of global economic slowdown. **Financial markets sometimes underestimate potential rating adjustments, due to improvement or deterioration in the debt outlook which could result in repricing of the sovereign bond risk profile.**

Figure 5: EM CDS levels vs rating



Source: Amundi, Bloomberg. Data as of 31 May 2019. Notes: Turkey and Argentina are out of y-axis scale. CDS 5Y bps are 473 and 1165 bps, respectively.

On the corporate side, it is important to watch leverage dynamics when assessing the attractiveness of the overall EM credit asset class and regarding single investment ideas. **Recent dynamics have been supportive for this asset class,** as global EM leverage experienced a moderate decline in 2018, but with discrepancies across regions and names that highlight the need for a **strong focus on bottom-up selection and liquidity management, given the downside risks linked to the global economic slowdown and trade disputes.**

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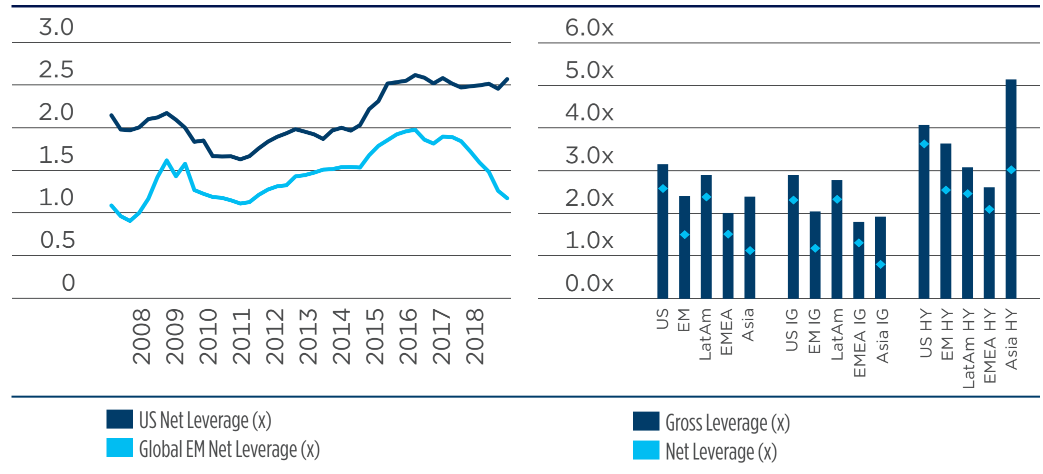
Figure 6: EM corporate leverage

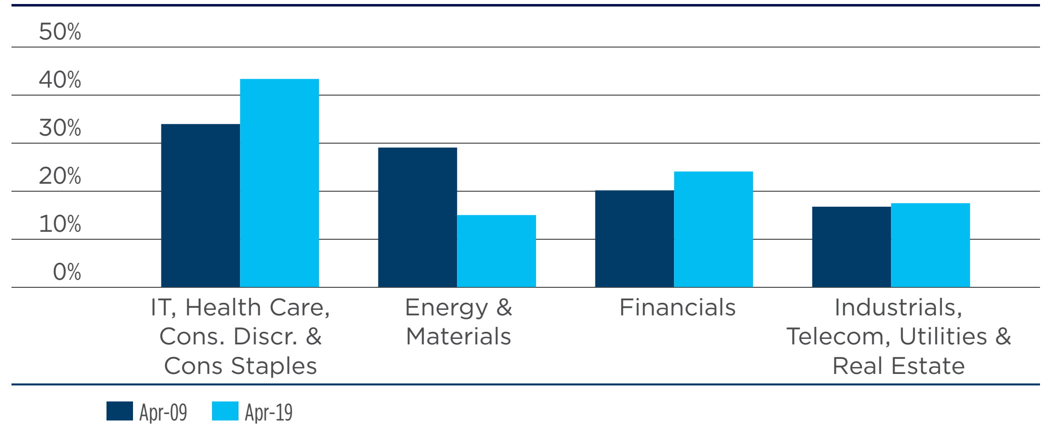


Source: Amundi, BofAML. Data as of 31 December 2018.

"In an emerging world in profound transformation, businesses and countries will need to be able to innovate to capture future opportunities".

2. **Dynamism:** The ability of countries and companies to dynamically adapt to a changing market environment is crucial to their success in a world in which rising geopolitical disputes and changes in regulations may often cause the redesign of business perimeters. Mirroring the dynamism of **EM economies, EM benchmarks have also experienced major changes in terms of sector allocation,** with information technology and communication services the fastest-growing sectors over the last decade and energy and materials shrinking the most.

Figure 7: MSCI EM Index sector weighting by market capitalisation



Source: Amundi analysis on Factset data, MSCI.

From a country perspective, future development will rely not only on population growth, but more crucially on the ability to invest in people, infrastructure, accelerate on the reforms front, improve the 'doing business' perspective, and support market openness. And, these are the elements that may also attract further capital into these economies. **India is an example of a country that has been very active on the reform side,** as reflected in the extraordinary improvement in the "ease of doing business" ranking, where the country moved from 144th in 2016 to 77th in 2019 (based on a total of 190 countries) marking globally the second-strongest improvement at a time when the market has also rewarded India vs the overall EM benchmark. The recent favourable election outcome should ensure continuity regarding the broader reform agenda which should continue to support the appeal of India's equity and bonds markets.

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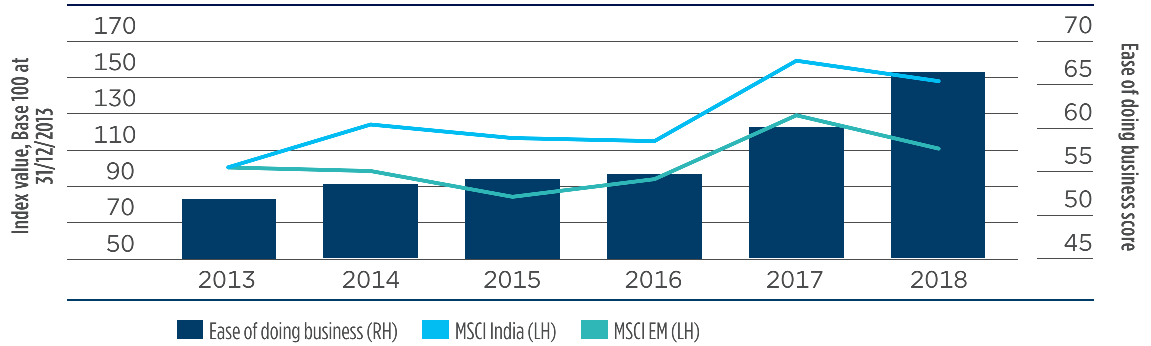
Figure 8: MSCI India outperforming MSCI EM Index at a time of strong improvement in the "ease of doing business" score



Source: Amundi analysis on Bloomberg, World Bank. Data as of 31/12/2018. Indexes in USD rebased at 100 at 31/12/2013. Past performance is no guarantee of future results.

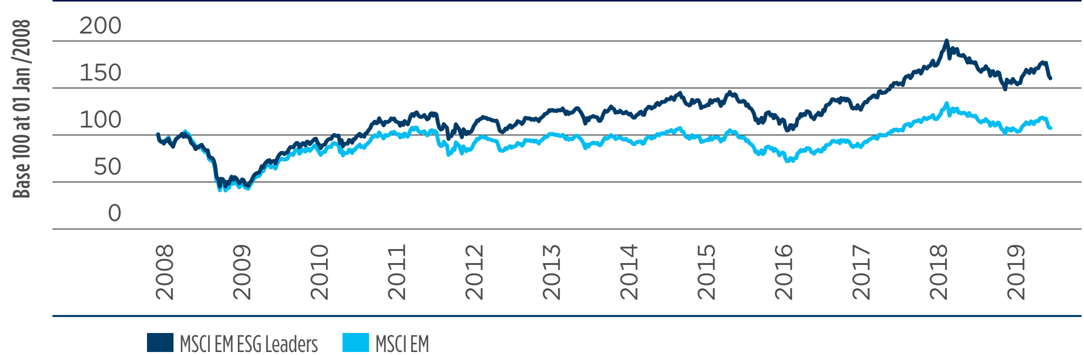
"In a period in which politics is dominating vs economics, the diplomatic attitude of each EM country will be a key factor to watch".

3. **Diplomatic attitude:** In a still-globalised financial world, but with a more polarised geopolitical order featuring trade disputes, sanctions and counter-sanctions, diplomacy will be even more relevant than in the past. We are fast moving from mono-polar to a multi-polar world, and at the country level, alignment with new 'blocks' will play an increasing role in a country's development. Of course, 'Washington consensus' and IMF-imposed rules of engagement for countries are still important anchors; however, geopolitical rivalries are adding increasingly impactful factors previously ignored by investors. This situation unfortunately results in a weakening of institutions that often leads to governance issues being key for investors (eg, independence of central banks or improvement in the effectiveness of corporate governance).

   In this respect, we see major developments occurring that could drive major transformations for certain countries. The example of China's Belt and Road (BRI) initiative is one of these, as we see some countries gravitating around China in terms of support for infrastructure building and financing initiatives.

   At the corporate level, this dimension is reflected in greater demand for high governance standards and the ability to effectively communicate with the markets as well as awareness regarding global key sustainable themes of high relevance for investors, such as environmental issues and climate change. **Therefore, ESG factors look set to be even more relevant in EM security selection.**

Figure 9: ESG matters in EM equity



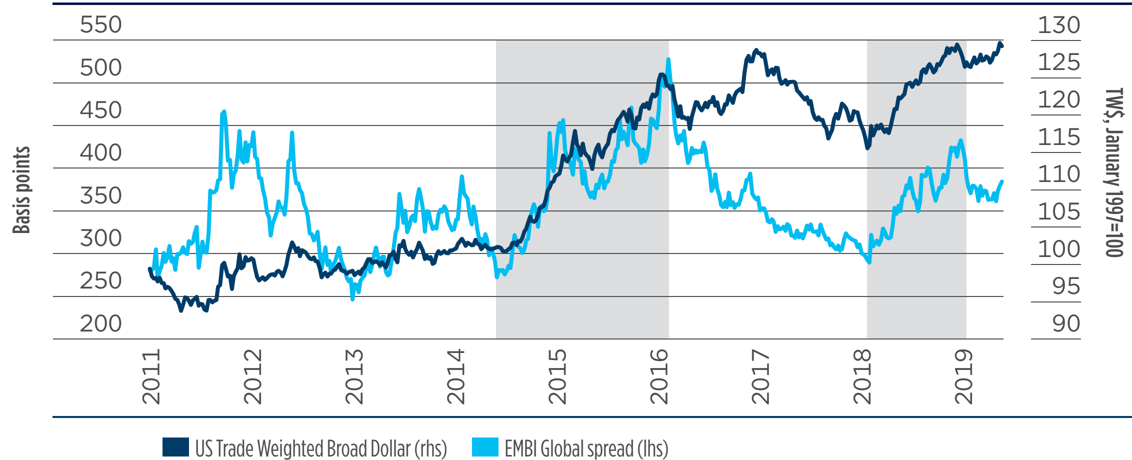
Source: Amundi analysis Bloomberg. Data as of 30 May 2019. Past performance is no guarantee of future results.

"For corporations, enhanced focus on ESG will be required to attract investor capital".

"Despite lower dependency on external markets compared to the past, Fed tightening and USD appreciation remain headwinds regarding EM investing."

4. **Dependency on foreign capital:** This remains one the most relevant topics regarding EM in times of turmoil. In fact, dependency on foreign capital is one of the assessment factors of a country's external vulnerability that we focused on in the previous section. On the sovereign side, high dependence on external debt in hard currency represents a weakness, as it exposes a country to strong outflows from international investors in times of crisis. This dependency creates a powerful link between monetary cycles of money lender developed countries and EM monetary policies, making the combined analysis inevitable.

Figure 10: EM bond spread vs US dollar Trade Weighted

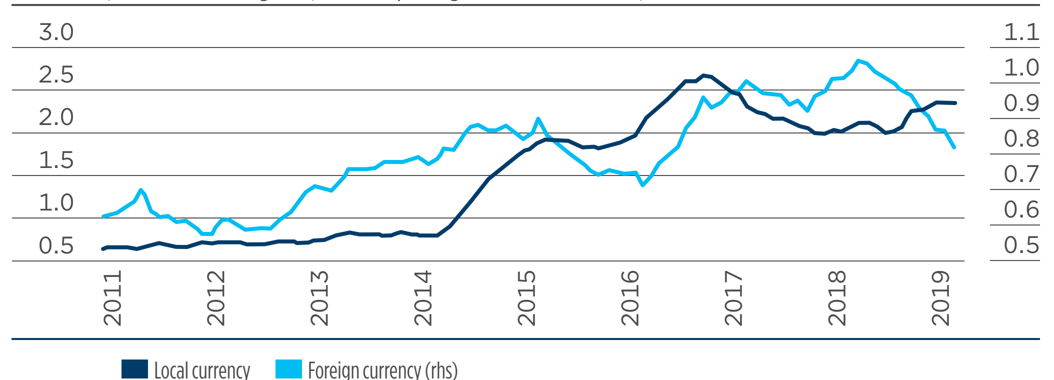


Source: Amundi analysis on Bloomberg. Data as of 31 May 2019 .

The overall level of dependency on foreign capital has improved in recent years, as there has been a slowdown in the level of EM external debt. Nevertheless, EM bonds in particular remain highly sensitive to US dollar dynamics and Fed policy. In 2018, we called for a more defensive allocation in a phase of rising rates and a strengthening USD; however, in 2019, the dovish move from the Fed has been the trigger for an entry point in EM bonds. **A backdrop of a US economic slowdown (with no recession) and a Fed in pausing mode could continue to be supportive for global investors in search of yield from EM bonds.**

Figure 11: EM debt issuance slowdown, especially in foreign currency

USD trillion, 12-month moving sum, EM30 corp and govt. bonds and loans, till end-March 2019



Source: IIF Global Debt Monitor, April 2019.

5. **Domestic demand:** The expansion of the middle classes, especially in China and India, will drive consumption and growth in the future. By 2030, two-thirds of the global middle class based on population is expected to be in Asia.

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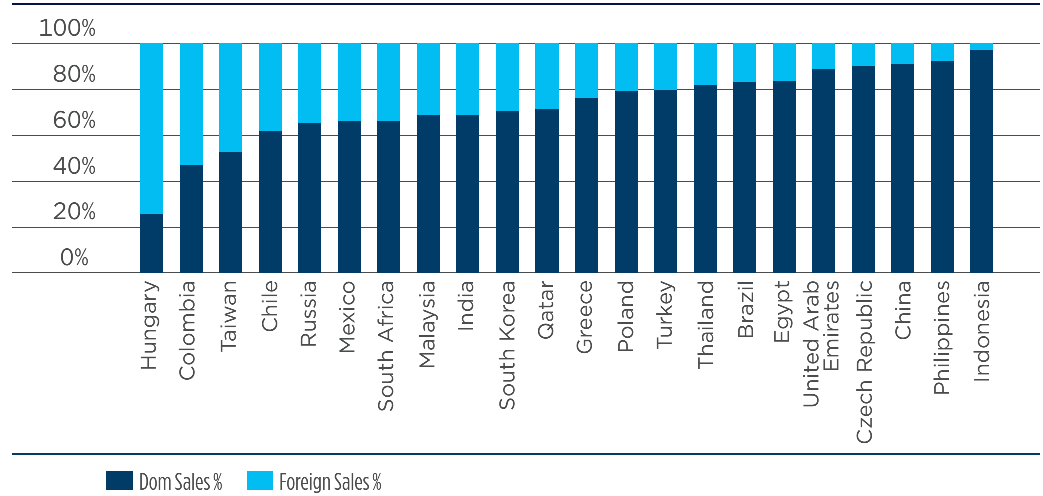
"Most future growth in EM will come from domestic demand related to the emergence of the Asian middle class".

This trend should prove most positive for companies and countries that look to capitalise on a domestic-focused perspective and thus be more insulated from de-globalisation dynamics related to a rise in trade disputes. The EM universe of companies/sectors and countries with different exposures to foreign revenues provides fertile ground for selection of investment ideas that can be more resilient to further escalations of trade disputes and the imposition of tariffs.

Figure 12: MSCI EM – Domestic vs foreign revenue breakdown by country



Source: Amundi, Factset. Data as of May 2019.

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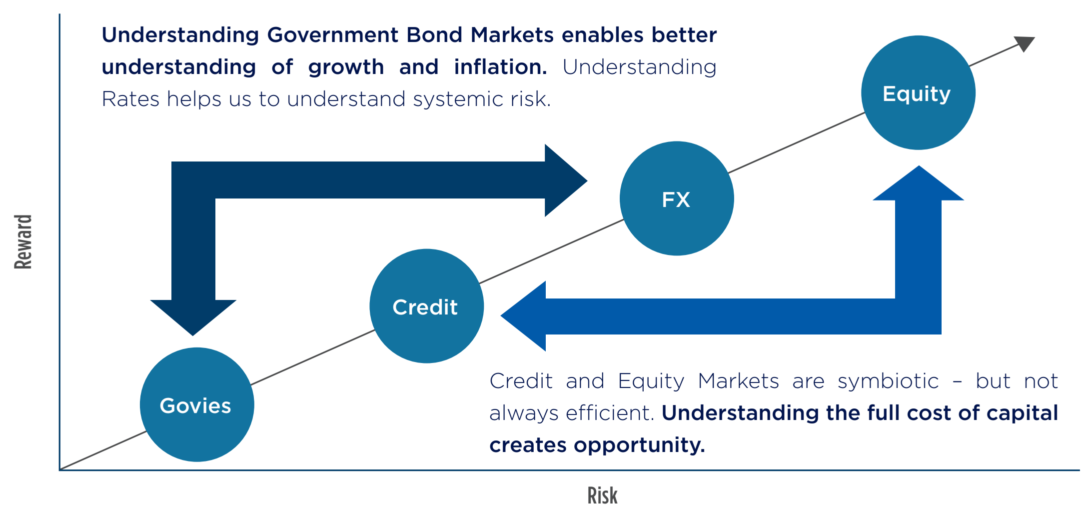
Conclusions

As EM become more relevant in strategic asset allocation, we believe investors should embrace a more holistic approach which combines multiple opportunities across EM asset classes enhanced by vulnerability based analysis. To do this, investors will need to develop tools to discriminate among countries using an integrated approach, looking at vulnerability through a lens of the 5Ds (Debt, Dynamism, Diplomacy, Dependency and Domestic demand) as well as by using the associated tools to dynamically assess vulnerability pricing. Doing this will, in our view, be key to successful investing in a rapidly evolving emerging markets world. Moreover, being able to analyse an investment case by looking at the full capital structure and bringing together varied expertise (loans, debt, equity, distressed situations) can represent a distinctive competitive advantage, resulting in the expansion of the non-vulnerable universe as well as providing opportunities to exploit mispricing of vulnerability by markets.

Figure 13: The value added of a cross asset capability in EM



Source: Amundi. For illustrative purposes only.

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Notes

1. In practice, the vulnerability index is made up: 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])

2. The optimised constrained equity portfolio is made up of 50% 'anti-fragile' countries (8.9% Brazil, 0.6% Russia, 5% China, 7.9% Peru, 14.2% India and 13.3% Thailand) and 17% fragile countries (2.9% Hungary, 5.1% Malaysia, 2.9% Czech Republic, 4.2% Argentina, 0.5% South Africa and 0.8% Turkey). The maximum weight of each 'neither solid - nor fragile' country has been set at 5%.

   Due to lack of some data, the optimised constrained fixed income portfolio is made up of four 'anti-fragile' countries, representing 50% of the portfolio (10% Brazil, 20.1% Russia, 10% China, 9.9% Peru) and three fragile countries representing 17% of the portfolio (12.2% Hungary, 3.6% Malaysia, 4.2% Argentina; South Africa and Turkey are not included in the results of the optimisation while Czech Republic was not integrated due to lack of data). The maximum weight of each 'neither solid - nor fragile' country has been set again at 5%.

   Regarding FX markets, the unconstrained portfolio gives greater weight to vulnerable countries (33% vs 27% in currencies of solid countries) and the portfolio is constrained by a vulnerability criterion that gives more weight to the solid countries (47% vs 15% in the currencies of vulnerable countries).

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