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# **Manias panics and crashes in emerging markets: An empirical investigation of the post-2008 crisis period**

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**Abstract:** Because of their economic importance, international bond markets are thought to be the likely location for the operation of financial market pressures on emerging market (EM) government policy. An important but unresolved debate that runs through the literature is the relative importance of domestic factors specific to the country receiving the capital flows (pull factors), versus push factors exogenous to the receiving country, in driving portfolio flows to EMs. Through extensive interviews with financial market participants, and analysis of the financial press between January 2008 and 2013, this paper argues that not only were market participants fully aware of the importance of push factors over the cycle, but that their perceptions of the domestic fundamentals themselves were influenced by these push factors. The paper provides evidence on the micro-foundations of investment decision making that make investors susceptible to influence by the push factors, and adds to a growing body of evidence that financial market borrowing costs are even less in the control of emerging market governments than previously assumed, because even when investors pay attention to domestic fundamentals, their assessments can be divorced from reality. This means that government efforts to attract foreign capital through implementing investors' preferred policies may be ultimately futile.

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## **Introduction: the importance of portfolio flows to EM governments**

Since the widespread liberalisation of capital accounts began in the 1980s, private capital flows to emerging market (EM)<sup>1</sup> countries have surpassed official flows, and gained paramount importance. Other trends, including the increasing importance of institutional investors, and increased complexity of financial instruments have had a profound impact on capital flows to EMs, and provoked an increase in scholarly attention to the way in which financial markets work. International government bond markets have long been considered to hold a special status since price changes in these markets determine the cost and availability of EM government's borrowing in hard currency. In the absence of the ability to borrow or refinance on these markets, countries face the prospect of default, or resorting to IMF assistance. High borrowing costs caused by investor exit can have significant economy-wide consequences, causing a deterioration in both the government's fiscal position and domestic bank balance sheets, as well as higher interest rates throughout the rest of the economy which can affect investment and consumption decisions (De Grauwe 2011; Gros 2012; Rommerskirchen 2015).

Sovereign bond markets therefore provide a most likely location for the operation of financial market pressures on government policy (Mosley 2003; Hardie 2006; Hardie 2011). To maintain access to international bond markets at low interest rates, governments need to take into account investors' policy preferences (Brooks et al. 2015), which usually include tight monetary and fiscal policy in order to control public debt and inflation, and other neoliberal reforms (Mosley 2000, 2003; Tomz and Wright 2007; Lierse and Seelkopf 2016). This structural dependence (Lierse and Seelkopf 2016; Strange 1996) of governments on bond markets has led scholars and policy makers alike to decry the power of 'bond market vigilantes (Krugman 2009)

who impose their preferences on governments at the expense of the electorate. At the same time, advocates of market discipline applaud the perceived ability of bond markets to enforce sound policies (Helleiner 1995, 324; Rommerskirchen 2015). Similarly, the IFIs regularly advise developing countries to adopt the policy mix favoured by financial market investors in order to attract foreign capital and lower their borrowing costs (Stiglitz 2005, 21). However, these arguments about financial market constraint hinge on the market price actually reflecting domestic policies (pull factors), rather than reflecting global factors exogenous to the country in question (push factors), because in order for markets to punish policies they don't like, they must actually be responsive to them in the first place<sup>2</sup>.

Relying on extensive interviews with market participants and examination of the financial press, this paper argues that not only was the post-global financial crisis (GFC) investment boom into EM sovereign bonds driven by push factors, including some not emphasised in existing literature such as crisis in unrelated markets that offered a similar risk/return profile, but also that investors' perceptions of domestic fundamentals (the pull factors) were themselves influenced by these push factors, and so became divorced from reality. In addition to the macro-level push factors themselves, the micro-foundations of investors' decision making, including investors' reliance on heuristics and shortcuts, the ways in which investors used market data to predict market reactions to changes in the push and pull factors, and the investment mandates and business models of institutional investors, made investors even more susceptible to the influence of push over pull factors.

This paper therefore contributes to a growing body of evidence that financial market borrowing costs are even less in the control of emerging market governments than previously assumed, because investors assessments of fundamentals can be, and

often are, divorced from reality. EM countries that try to attract capital through adopting policies they think foreign investors prefer might find this strategy ultimately futile.

***Determinants of portfolio flows to EMs: The pull versus push factor framework***

Ever since the seminal work of Calvo et al. (1993) which introduced the framework in order to explain the rebound of capital inflows to Latin America after the 1980s debt crisis, a central unresolved debate that runs through the vast literature on the determinants of portfolio flows to emerging markets is the relative importance of pull factors, or domestic factors specific to the country receiving the capital flows, versus push factors exogenous to the receiving country. The difference is important because if pull factors determine capital flows, the implication is that if EM governments pursue the policies that international investors like, they can successfully attract capital into their countries and lower their international borrowing costs. However, if push factors are more important, this implies that attempts to attract capital in order to reduce borrowing costs will ultimately be unsuccessful because capital flows are determined by factors outside EM government's control. Furthermore, the only way to mitigate the harmful effects of these volatile flows would be to institute capital controls.

A number of studies find that pull factors determine portfolio flows into or out of EMs. These can include the government's fiscal, monetary, and structural policies, domestic macroeconomic variables such as debt ratios, external balances, foreign exchange reserves, and GDP growth (Ahmed and Zlate 2013; De Vita and Kyaw 2008; Kim and Wu 2008; Duade and Fratzscher 2008), micropolicy indicators such as the components of fiscal spending, sources of government revenue, and structure of

the pension system (Mosley 2003, 126), and even domestic political events such as elections, ideology of the ruling party, or regime type (Martinez and Santiso 2003; Vaaler et al. 2005; Bechtel 2009; Hardie 2006; Campello 2015).

Other studies argue that market prices do not accurately reflect country fundamentals because portfolio flows are mostly dependent macro-level push factors, largely exogenous to the country in question. Numerous studies have found cyclical push factors have an effect, for example when AE interest rates, especially US interest rates are low, capital flows to EMs where interest rates are generally higher, and vice versa (Calvo et al. 1996; Eichengreen and Mody 1998; Fratzcher et al 2013; Koepke 2014; Dahlhaus and Vasishtha 2014). Because EM bonds are seen as riskier investments than AE bonds, during boom periods when investors are less risk averse, investment flows to EM assets, while during periods of risk aversion, investors reallocate capital to safe haven assets in AEs (Milesi-Ferretti and Tille 2011; Forbes and Warnock 2012; Broner et al. 2013; Ghosh et al 2014). More recent IPE literature argues that EMs might not be constrained during boom periods, because global liquidity is abundant and investors pay little to country specific policies. During bust periods however, investors' negative reactions to left-wing policies have significant consequences for EMs due to capital scarcity (Campello 2015).

Despite the exponential rise of AE institutional investors since the 1980s, with the asset management industry intermediating assets amounting to \$76 trillion (100% of world GDP and 40% of global financial assets) as of 2015 (IMF 2015, 94), fewer studies have paid attention to the micro-foundations of these investors' decision-making behaviour, which cannot be fully captured by the pull-push factor framework (Braun 2015, 2016; Koepke 2015, 19-20; Wullweber 2015). Hardie (2012) illustrates that different types of investors have varied investment strategies and capacities for

exit, and therefore, have different implications for financial stability. Foreign institutional investors in particular, are the most important actors in international capital markets (Mosley 2003, 27)<sup>3</sup>. According to IMF estimates, foreign asset managers alone owned approximately 80% of all foreign held EM debt by 2012 (Arslanalp and Tsuda 2014, 19).

Within the foreign institutional investors category, more recent research tends to follow Maxfield (1998)'s distinction between long-term, diversification<sup>4</sup> oriented investors which seek to balance their assets and liabilities, such as insurance and pension funds, and so pay more attention to domestic fundamentals, and short-term profit oriented investors such as mutual funds, hedge funds, and private wealth managers that invest on the behalf of clients to which they promise competitive yields, and so are influenced mainly by push factors (Hardie 2006; BIS 2007; Tsatsaronis 2000; Gelos 2011; Raddatz and Schmukler 2012)<sup>5</sup>. Studies have also have found evidence of shorter term investors deviating from the fundamentals due to herding behaviour, where it may be optimal (in profit terms) for investors to disregard their private information and instead imitate the behaviour of their peers, and contagion where problems in one EM country led investors to expect similar problems in other EM countries, even when these had sound fundamentals (Kaminsky Lyons and Schmukler 2001; Gelos 2011; Claessens and Forbes 2013). Other studies highlight how due to information asymmetry or bounded rationality, investors rely on heuristics or cognitive shortcuts such as sovereign ratings or category based reasoning, instead of conducting detailed analysis of country-specific fundamentals (Gray 2013; Gray and Hicks 2014; Brooks et al. 2015).

However, the literature continues to make contradictory findings on the relative importance of pull versus push factors, which is unsurprising given results

depend on the way in which capital flows are measured, the country sample, time period and data frequency used (see Koepke 2015). Most existing literature treats pull factors and push factors as analytically distinct categories in order to measure their relative importance, but does not pay sufficient attention to the interaction between the two. In a globalised world, external developments can have a real impact on domestic fundamentals, for example, portfolio inflows can significantly change macroeconomic conditions and policy<sup>6</sup>. The push factors can also impact on how investors interpret the pull factors, for example, global risk aversion could result in a more negative interpretation of the same domestic fundamentals, and vice versa for boom times. Nor is enough attention paid to the micro-foundations of investment behaviour, despite its importance in understanding how investors form their expectations of EM bond prices, and why investors might be prone to ignore or misinterpret domestic fundamentals. With some exceptions (Brookes et al. 2015), it is usually taken for granted that when investors do pay attention to pull factors, their perceptions of these actually reflect material conditions

As financial markets are forward looking, prices depend not only on current conditions, but also on future expectations of their evolution. Keynes, in his famous beauty contest metaphor, argued that due to the future being unknowable in principle, or ‘fundamentally uncertain’ (Keynes 1937, 217), financial market investors are forced to ‘speculate’ or predict ‘what average opinion expects the average opinion [of other investors] to be’ (Keynes 1936, 156) when making investment decisions. Kindleberger builds on Keynes’ work to show how financial markets have historically gone through repeated cycles of ‘mania, panic, and crash’, where push factors such as international liquidity cause asset prices to become over-inflated during the mania phase, and undervalued during the panic phase (Kindleberger 1978). It is therefore



investors' *perceptions* of pull factors that are relevant in driving portfolio flows, not the pull factors themselves, and even when investors do pay attention to the domestic fundamentals, their interpretations of these could be influenced by push factors, and divorced from reality.

These dynamics are illustrated through an examination of the drivers of portfolio investment into EM bonds between 2008 and 2013, through one cycle of panic and crash, following the GFC, and then mania after 2009. It is argued that while the push factors changed dramatically over this period, no fundamental re-orientation in policy direction occurred in major EMs during and after the crisis. During the crisis period, capital outflows were driven by risk aversion due to developments in AEs. During the mania period, rather than improved country fundamentals attracting inflows, increased inflows that were pushed into EMs by a combination of macro-level push factors contributed to an improvement in investors' expectations regarding the fundamentals. Micro-level characteristics made investors more susceptible to the influence of these macro-push factors, and encouraged investors to allocate their portfolios according to their predictions of market movements rather than their personal views of domestic fundamentals. Investors were not only aware of the influence of push factors on market movements, but relied on various shortcuts and heuristics to try and predict market opinion with regards to both push factors and domestic fundamentals. Institutional investors' business models, which required them to make a certain amount of profit to remain viable, and their investment mandates, which forced them to follow ratings agencies, exacerbated pro-cyclicality. This was the case not only for profit oriented short-term investors, but also diversification oriented patient capital, as the distinction between the two became blurred in a low interest rate environment.

## ***Research methods***

In order to enable a fine grained understanding of how push and pull factors affect investment decisions, and how investors views of fundamentals evolved over time, qualitative methods were favoured over quantitative, and depth over scope. While quantitative methods give us valuable information about market movements, they are unable to shed light on investors' motivations behind those outcomes. In-depth, semi-structured interviews were preferred over other qualitative methods like surveys because they allowed an understanding of investors' opinions and thought processes at a level of granularity that surveys are rarely able to achieve, and facilitated more accurate interpretation of data due to contextual information obtained from face-to-face interviews (Lynch 2013; Mosley 2013, 6-7).

41 Semi-structured interviews with EM bond market participants were conducted in Hong Kong, a major global financial centre for EM trading, and Singapore, a regional hub for EM institutional investors, between 19/01/2013 and 11/04/2013 (See appendix 1 for a list of interviews). Due to the concentrated nature of the industry, the largest investors, which were the most important in driving prices, were targeted through snowballing, until the saturation point was reached. Interviews focused on market participants based on relevant sales and trading desks in four major investment banks who, as market makers, could give both their own views, as well as those of their institutional investor clients<sup>7</sup>, thus making the interviews much more representative than would have been possible by interviewing a similar number of institutional investors. A smaller number of portfolio managers (PMs) at large and medium sized institutional investors were interviewed in order to crosscheck the information gained from investment bank interviewees.

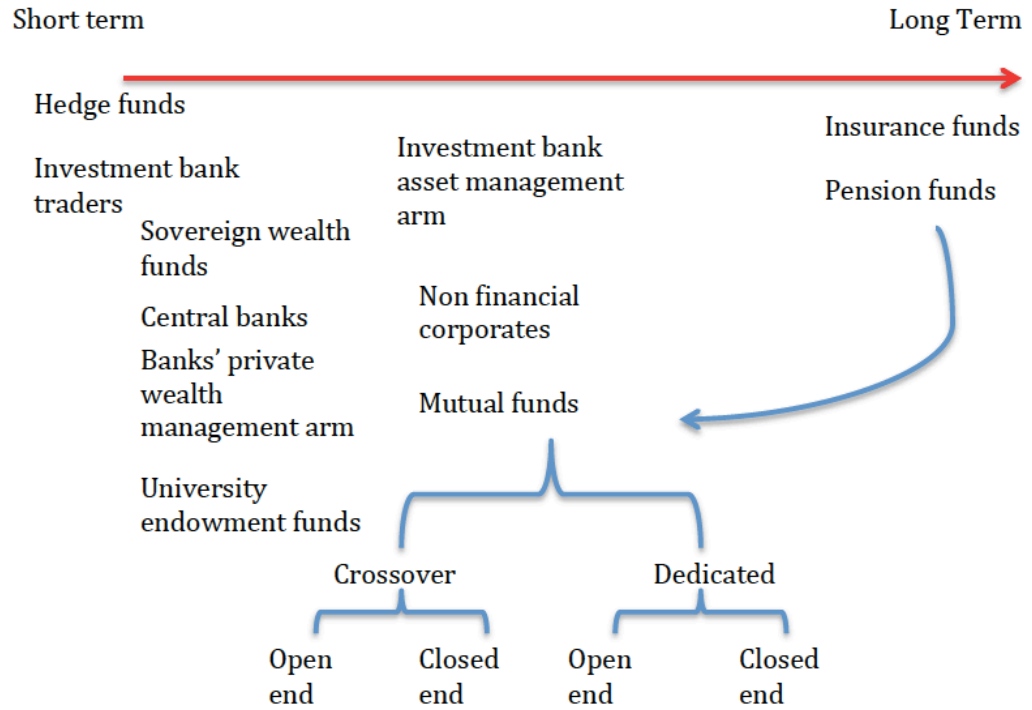
In order to document how investors' perceptions of domestic fundamentals changed over time, in addition to interviews, a comprehensive analysis of the financial press between the period 01/01/2008, just before the GFC intensified, and until interviews were conducted 19/01/2013, was conducted using Factiva<sup>8</sup>, analysing over 170,000 words of text. These articles were supplemented by documents such as bank research publications and memos, obtained from interviewees. This information was triangulated with quantitative data on bond yield and market capitalization movements for a number of well-known EM bond indices<sup>9</sup>, data on investment flows where available<sup>10</sup>, and the relevant macroeconomic indicators.

### **EM inflows during and after the GFC: a full cycle of panic, crash, and mania**

After providing some context on the major EM investors during the time period under consideration, as well as on how emerging markets have become increasingly grouped together as an asset class, the following sections discuss how the macro-level push factors, micro foundations of investment behaviour, as well as investors' perceptions of domestic fundamentals, guided capital flows to EMs through the cycle of panic, crash, and mania.

*Who is ‘the market’?*

Figure 1. Major foreign investors in EM government bonds



Source: Interviews

Although exact breakdowns are not available<sup>11</sup>, figure 1 identifies the most important foreign investors in EM sovereign bonds for the period under study and their relative time horizons for holding EM securities.

The global asset management industry is dominated by a small number of large players. In 2012, the top five accounted for 18% of total assets under management (AUM), with the largest player representing nearly 6% of the total (Miyajima and Shim 2014). The largest asset managers involved in EM bonds include PIMCO, Ashmore Group, Franklin Templeton Investments, Fidelity World Wide Investment, Aberdeen Asset Management, and Bluebay Asset Management (Interview 6, Investment Bank, Emerging Asia Sovereign Research). Important

differences within the mutual funds<sup>12</sup> category worth mentioning are ‘crossover’ versus ‘dedicated’ investors, and ‘open’ and ‘closed end’ funds. While ‘dedicated’ EM funds are constrained by their mandate to invest in EMs, and their performance is ‘benchmarked’ to an EM index, ‘crossover’ funds can invest across asset classes. These funds can be either open end, which means that their clients can withdraw funds whenever they feel the fund is underperforming, or closed end, in which the clients cannot freely withdraw their funds<sup>13</sup>.

Although IMF reports suggest that dedicated and closed end funds should provide more stability to EM markets because it is harder for them to move their investments elsewhere during a crisis period (IMF 2004, 111; 2014, 70), the findings presented in this paper suggest that even closed-end dedicated EM investors still have the possibility for exit, because they can go ‘underweight’ the EM index by selling EM securities and increasing their holdings of cash reserves (Interviews).

Contrary to the traditional distinction between short-term asset managers and longer-term diversification oriented investors like pension and insurance funds, interviewees pointed out that in practise, even the most conservative funds, but especially defined benefit pension funds, allocate part of their capital to longer-term safe investments, but then use the remainder to make risky short-term investments in order to ‘realise extra yield’ (Interview 7, Investment Bank, EM Local Rates Strategy). This is done by placing capital in shorter-term mutual funds or relying on external investment consultants (ibid; Figure 1).

Other important investors include investment bank traders. Although technically market-makers<sup>14</sup>, providing liquidity to the market and hedging their risk rather than taking speculative positions, these traders indicated during interviews that

in practice, they can never completely hedge their risk, and end up speculating on future price movements<sup>15</sup>. Newer investors in EM include foreign central banks, sovereign wealth funds, and university endowment funds that invest their savings in order to boost earnings, even though they have no client base requiring them to do so.

Financial innovations make it possible for even corporate non-financial companies to invest in EMs countries in order to boost their profits. Investment banks, though technically only supposed to help corporates with hedging foreign exchange risk in EM, in fact help them gain exposure through derivatives to speculate on EM interest rates, credit risk, or currencies. These trades were disguised as ‘lowering borrowing costs’ (Interview 12, Investment Bank, Corporate Foreign Exchange Sales, Interview 15, Investment Bank, China Corporate Financing).

### ***Emerging markets as an asset class***

Despite consisting of a large number of countries with diverse fundamentals, EMs are increasingly invested in as a group or an ‘asset class’ by financial market investors. This means that while some divergence between individual country yields remains, EM bond yields have become increasingly correlated over time (Mauro et al 2002, McGuire and Schrijvers 2003), and have been especially so since the 2008 crisis (Arslanalp and Tsuda 2014; Miyajima and Shim 2014; IMF 2015). This has been linked with the rise of the asset management industry, and increased importance of institutional investors and their short-term profit motives, which increases demand for easily definable categories to aid them in managing their portfolios (Gray 2013; Miyajima and Shim 2014). In particular, the increased popularity of index-linked investment, and the use of common indices by the largest EM investors, and correlation between the main indices can lead them to adopt similar asset allocation

strategies, and thus to increased correlation between country yields (Miyajima and Shim 2014).

Most EM investors benchmark their performance to an EM index, either being ‘active’ (trying to produce a higher yield than the index for their clients)<sup>16</sup>, or ‘passive’ (mimicking the index exactly). ‘Dedicated’ EM funds are always benchmarked to an index, while ‘crossover’ investors can still be connected to an index even if they are not benchmarked to it, by asking their fund managers to beat a particular index, or by using index derivatives to manage exposure to index member countries (Interview 36, Investment advisory firm, PM). This means that many investors decide to include ‘EMs’ as a whole, or through sub-indices, in their portfolios without much regard for variations in country specific fundamentals within the index (Interviews). Even small changes in the portfolio allocation of large investors can have a major impact on EM prices due to the massive scale of their investments relative to small and illiquid EM financial markets. Their behaviour also has knock on effects through its effect on the sentiment of smaller investors (Interview 6, Investment Bank, Emerging Asia Sovereign Research; Interview 33, Investment Management Company, CEO), magnifying the importance of the major indices relative to individual country fundamentals.

A small number of EM indices, which are themselves correlated, are used widely (Miyajima and Shim 2014). For example, BIS estimates that two JPMorgan EMBI Global indices are used for up to 34% of the total assets under management of EM bond funds (Miyajima and Shim 2014, author’s calculations) The most popular or ‘benchmark’ EM bond index is JP Morgan’s hard currency Emerging Markets Bond Index Global (EMBIG), which interviewees confirmed that the largest EM investors all track closely. Inclusion in an index, which is usually dependent on sovereign

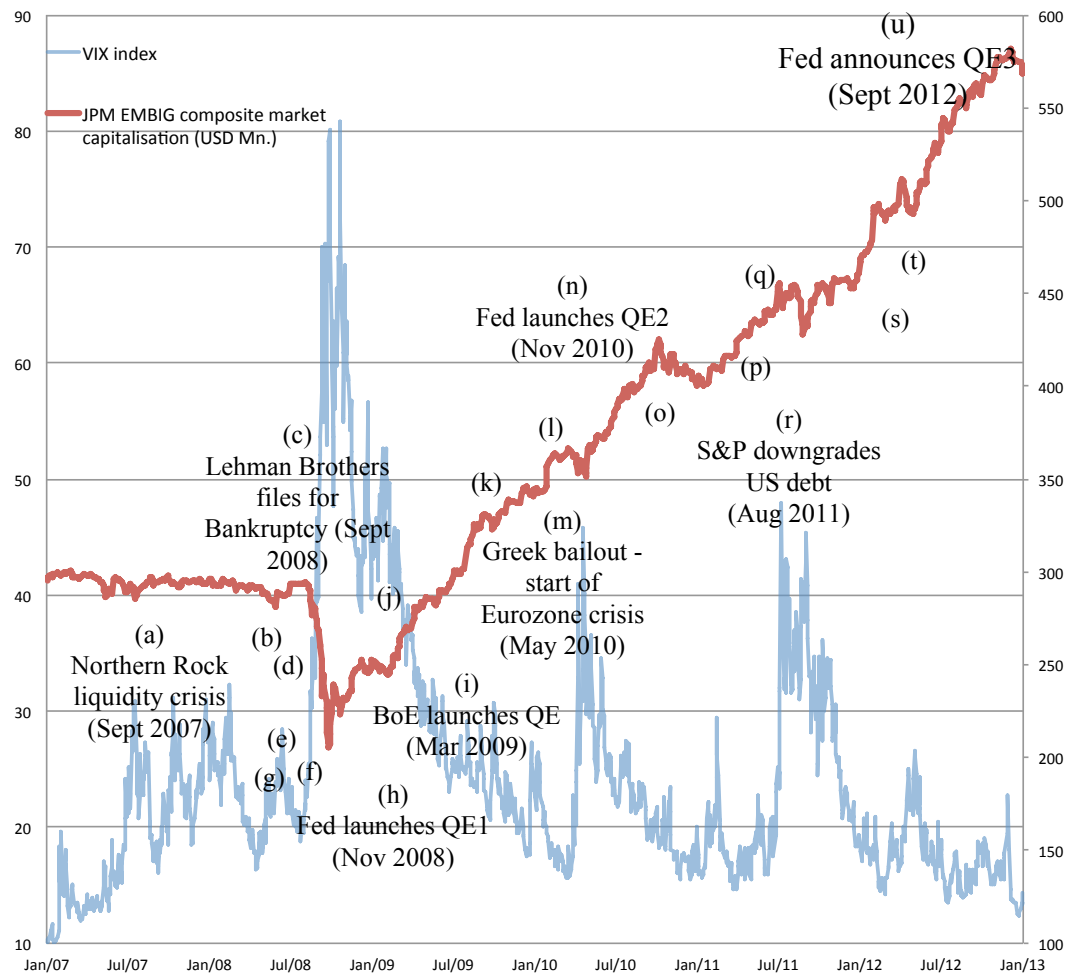
ratings<sup>17</sup>, has an important automatic effect on the price of the bond in question as it means an increased capital inflow into that bond, from all those investors benchmarked to or investing in the index. Conversely, falling out of an index, as the result of a ratings downgrade, means a huge capital outflow out of a country's bond (Interviews).

Investors can also access sub-sections of the EM asset class category, which are usually divided by risk perception. Local currency bonds, accessed through the JP Morgan's local currency Government Bond Index-Emerging Markets (GBI-EM) include additional currency and interest rate risk, while EM corporate bonds accessed through JP Morgan's Corporate Emerging Markets Bonds Index (CEMBI) are perceived as riskier than sovereign guaranteed debt, and EM equities accessed through the MSCI EM are the riskiest. 'Frontier markets' consist of less developed countries, with less established capital markets, and are considered even more risky than Ems (Interview 11, Investment Bank, Local currency bond trader; Interview 32, Investment Bank, EM credit research). Official regional divisions include Asia, Latin America, Middle East and North Africa, Eastern Europe, although the major indices are not usually divided by region (Interview 6, Investment Bank, Asia sovereign research; Interview 7, Investment Bank, Latin America sovereign research).



## The 2008 crisis: from mania to crash

Figure 2. Investor sentiment and investment into EM sovereign bond markets, 2007-2013



(a) Sept-07: Northern Rock liquidity crisis; (b) Sept-08: US govt bailout of Freddie Max and Fanny Mae; (c) Sept-08: Lehman Brother files for bankruptcy; (d) Sept-08: HBOS bailed out by Lloyds; (e) Oct-08: TARP pushed through Congress; (f) Oct-08: Coordinated central bank rate cut (including Fed, BoE, ECB); (g) Nov-08: China announces fiscal stimulus; (h) Nov-08: Fed launches QE1; (i) Mar-09: BoE launches QE; (j) Apr-09: G20 agrees on global stimulus package worth \$5trn. commitment from the G20 group of countries to triple IMF's resources to \$750bn; (k) Oct-09: True state of Greek finances revealed; (l) Apr-09: Greek debt downgraded to junk; (m) May-10: Greek bailout - start of Eurozone crisis; (n) Nov-10: Fed launches QE2; (o) Nov-10: Irish bailout; (p) May-11: ECB bails out Portugal; (q) Jul-11: Second Greek bailout; (r) Aug-11: S&P downgrades US debt ; (s) Dec-11: ECB Longer Term Refinancing Operations (LTRO) 1st round; (t) Feb-12: ECB LTRO 2nd round; (u) Sept-12: Fed announces QE3.

Source: Market capitalisation data for JPM EMBI Global Composite index from Bloomberg, time line from FACTIVA; VIX CBOE Volatility Index from Chicago Board Options Exchange

Note: The JP Morgan EMBIG is a widely used proxy for investment in emerging markets<sup>18</sup>. The VIX index measures the implied volatility of S&P 500 index options and is a widely used proxy for investor risk sentiment, with a high value representing increased expectations of volatility, in other words, risk aversion.

### *Macro-level push factors*

In the pre-crisis boom period, investment in EMs had been on a steady upward trend, with market capitalization of the EMBIG rising by over 120% between 2000 and 2007, as investor sentiment remained positive (figure 2), with reports that EM fundamentals as being ‘much stronger today than they've been any recent time period we can look at, given what's going on with exports, trade, current accounts and economic growth’ (Head of EM debt at JPMorgan Asset Management, cited in Casey 2008).

In late 2008, the GFC officially began with the bankruptcy of Lehman Brothers on 15<sup>th</sup> September, and investors became risk averse, as shown by the dramatic increase in the VIX and shifted their capital into safer AE assets. As a result, EM prices fell dramatically (Figure 2, point c) .

### *Micro-foundations of investment behaviour*

Investors were aware of the importance of macro-level push factors, and used a set of indicators to measure them, in order to better predict market reactions. According to interviews, they used certain high frequency data releases, such as US

consumer confidence, non-farm payrolls, and industrial production, and Chinese trade data, as a proxy for global risk sentiment. Negative data releases during the post-Lehman period indicated that other investors were becoming risk averse, and likely to exit EMs, prompting further disinvestment (Interview 28, Investment Bank, USD EM credit trader). Similarly, interviewees also directly kept track of ‘fund flows’, the portfolio allocation decisions of other investors, especially the largest ones (Interview 6, Investment Bank, Emerging Asia Sovereign Research). According to interviewees, this was done through word of mouth, reports on the financial news, and proprietary data services that track fund flows, such as EPFR. During this time, mutual fund flows reversed (IMF 2009), as cross-over investors left EMs altogether, while dedicated EM funds saw ‘unprecedented redemptions’, and even closed-end EM funds reduced their EM exposure, by going ‘underweight’ the EM index and increasing their cash reserves (Griffin 2009; Interview 31, Investment Bank, EM Sales). These reports sent negative signals to investors and triggered further outflows (Interviews).

When they did assess the domestic fundamentals, most investors, including investment bank traders, or fund portfolio managers tended to cover large numbers of countries (up to 40 or 50), which combined with the large amounts of available information, made it humanly impossible to have an in depth knowledge about each one of them (Interviews)<sup>19</sup>. According to the CEO of an investment fund ‘It is very difficult for even sophisticated individuals to do a lot of research on the credit worthiness or certain countries or certain companies. I don’t care how smart you are, its just impossible for you to do that much analysis’ (Interview 33, Investment Management Company, CEO). This forced investors to rely heavily on shortcuts and heuristics, such internal rules for selling securities based on ratings downgrades, or

increases in CDS spreads. In particular, many funds are required by their mandate to invest only in bonds that have investment-grade ratings from all the major ratings agencies (Interviews).

The ratings agencies began to downgrade a number of EMs after September 2008: according to the chair of S&P's sovereign ratings committee 'If our analysis is correct, this EM class as a whole has peaked in credit quality' (Litner 2008). Investors were aware that ratings downgrades tended to follow rather than predict the fall in EM bond prices: 'Rating agencies have to make a call. And often their call lags where the market is at, even subprime can be rated AAA by them... We all know there are limitations' (Interview 30, Investment Bank, Debt Capital Markets). Nonetheless ratings remained a key heuristic for domestic fundamentals during the crisis because of institutional investors' mandates: 'I followed very closely those EMs borderline, about to become high yield if they were downgraded even one more notch. That doesn't mean necessarily that's it's a bad credit, but what that means is that a lot of funds have mandates where they can only invest in investment grade credit, so they had to pull their money out [of EMs]... like on that day' (Interview 29, Investment Bank, EM Credit Trader).

Interviewees also relied on more market based measures such as the credit default swap spread to inform their analysis of country-specific sovereign default risk 'because, all the big guys [largest funds], they are trading the CDS, so that market price is probably the best reflection of what people think about this credit' (Interview 33, Investment Management Company, CEO). During the crisis period, widening CDS spreads<sup>20</sup> were interpreted as deterioration in the fundamentals, as well as a signal that large investors were selling off EM bonds, and that market sentiment was turning negative (Interview 29, Investment Bank, EM Credit Trader).

While interviewees tracked news events that could affect EM prices on a daily basis, this was done not just to form a personal opinion, but also in order to predict the market reaction to the news event. One interviewee termed this phenomenon the ‘BBC effect’ saying that if a news story appeared on major outlets BBC, Reuters, Bloomberg, or the FT, it immediately became important, as it was virtually guaranteed that all international investors would hear about it, and thus it would have an affect on prices. The interviewee also acknowledged that ‘this is stupid because there could be something big going on for three weeks and if it doesn’t make the international headlines then no one will know about it and it wont affect the market’ (Interview 2, Investment Bank, Sovereign Credit and CDS Trading). Therefore, even if investors were aware of domestic fundamentals in great detail, their actual investment strategy would only take into account those new events that ‘moved the market’. During the crisis period the most important news events centred around details of the various bailout packages in the core economies (Interview 2, Investment Bank, Sovereign Credit and CDS Trading; see figure 2). According to an investment banker specializing in debt capital markets ‘when there is a big crisis like we had in 2008, macro factors like the US and China and how they’re doing impact the market, the country is not the epicenter’ (Interview 30, Investment Bank, Debt capital markets).

This reliance on shortcuts, and the importance of the ‘average opinion’ relative to personal opinions, made it easier for the push factors to influence the interpretation of domestic pull factors themselves. The combination of negative data releases for sentiment proxies, information on investment funds reallocating their capital to safer assets, and deterioration of key heuristics like ratings and CDS

spreads, resulted in a negative feedback loop which caused EM prices to continue falling, and causing sentiment to deteriorate further as prices continued falling.

Some investors did not believe that the drastic fall in prices reflected EM country fundamentals. According to RBC Capital Markets<sup>21</sup> ‘In this extreme global financial stress environment, movements in emerging financial markets have been, and should continue to be, driven by core market developments. In many cases, moves have been inconsistent with fundamentals, and will very likely continue to behave erratically until core markets stabilise’ (Badawy 2008a). Despite their personal views about fundamentals, investors were still forced to trade according to the opinion of the ‘average’, or else make losses in the short term. Mutual funds could not afford this because of their business models that promised short term competitive returns to their clients. According to market analysts: ‘Billions of dollars have been taken out of these markets due to panic selling’, but, ‘At times like these it is not about the fundamental stories. It is about getting your money back’ (Griffin 2008)<sup>22</sup>.

#### *Investor perceptions of fundamentals during the crash*

In accordance with the change in push factors, and amplified by the micro-foundations of investment decision making, investors’ interpretations of the domestic fundamentals turned sharply negative during this time period. During the height of the panic phase, in September 2008, investors stopped paying much attention to country fundamentals altogether, reflected in a lack of reporting on EM domestic fundamentals in the financial press.

By November 2008, when panic subsided and investors once again began paying attention to the pull factors, EMs were said to be suffering from ‘weaker economic fundamentals - either current account deficits, or interventionist

government policies, or strong reliance on a single source of revenue' (Badawy 2008b), even though investors had been praising EM fundamentals only a few months ago. It was widely feared that a decline in domestic demand in the advanced countries would lead to a fall in EM exports, lower trade surpluses, and cause a growth slowdown there as well (Griffin 2008; Oakley 2008). Latin American countries were seen to be suffering from currency appreciation, inflation and weakening external balances (Sivathambu 2008). Asian countries, which had been commended for their 'newfound commitment to orthodox policies and stable prices' as recently as February 2008 (Casey 2008), were seen to have the 'most pronounced risks' as it was predicted that 'political controls and fiscal measures' would lead to 'greater distortions in the longer-term' (Sivathambu 2008). There were also worries that Asia's trade surplus was beginning to narrow since 2007 (Sivathambu 2008). Previously seen as an advantage, over reliance on commodity exports was now seen as a major risk, as analysts pointed out the negative impact a decline in commodity prices could have on the real economy of commodity exporting EM countries (Badawy 2008b). Somewhat contradictorily, at the same time as fears over slowing growth, inflation was seen by some as 'the biggest threat' facing EMs (Sivathambu 2008).

### ***From post-crisis recovery to the Eurozone Crisis: a mania in full swing (2009-2013)***

#### *Macro-level push factors*

As has been well documented in the literature, at the macro-level, the governments of major economies launched massive quantitative easing programs in response to the GFC, which made large pools of cash available to investors, and lowered AE interest rates. As risk sentiment gradually recovered, interest rate differentials prompted AE investors to re-allocate this capital to higher interest rate

EM markets: according to Ashmore Group PLC<sup>23</sup> ‘with yields in the developed world either high for a good reason or yielding next to nothing, EM debt looks highly attractive’ (Ashmore Group PLC 2012). The recovery in EM bonds began towards the end of 2008, when outflows began decelerating, and eventually reversing (figure 2), and the rally in EM bonds was considered to be in full swing by mid-2009 (Foundation and Endowment Money Management 2009).

When the Eurozone crisis officially struck with the Greek bailout in May 2010, global risk aversion triggered a sell-off in EM bonds as investors moved back into AE safe assets (Figure 2 points m and r), just as they had during the 2008 crisis. Despite overwhelmingly negative sentiment as shown by the repeated increases in the VIX in figure 2, this sell-off proved to be remarkably short lived, unlike that during 2008<sup>24</sup>. Instead, investment into EMs accelerated (figure 2), as capital that had previously been invested across different higher-yielding asset classes during the pre-2007 boom became increasingly concentrated in EMs. Interviewees cited the reallocation of capital from peripheral Eurozone to EM bonds as one of the main drivers of price increases between 2010 and 2013. For example, according to an EM bond trader:

‘Prices are driven by people pulling money out of Europe, putting it into EMs... you want some sort of return... you got all these investors looking for assets to park their money... And that’s what’s been happening over the last several years, over the last two or three years since the Eurozone crisis has intensified [2010-13]. Many of the EM countries fundamentals are not improving and yet they are benefitting from this huge amount of roll-off cash’ (Interview 28, Investment Bank, USD EM Credit Trading).

Risk perceptions of EMs started to change accordingly, as AE financial assets began to be seen as more risky. Investment banks’ reports began to market EMs as an



asset class that possessed ‘safe haven’ characteristics, yet promised the necessary high returns. According to an anonymous investment bank publication:

‘2012 will be remembered as the year that EM fixed income [bonds] cemented its position as a mainstream investment-grade asset class... EM sovereigns are now seen as a flight-to-quality trade due to their strong balance sheet and net external creditor position... providing equity-like total returns’ (Anonymous Investment Bank 2012, 1-3).

#### *Micro-foundations of investment behaviour*

Micro-level factors reinforced the concentration of capital in EMs. Soon after investors withdrew capital from Peripheral Eurozone bonds en-mass as risk perceptions of this asset class suddenly worsened, they found that their business models still required them to make a higher return than would be possible by investing in AE safe haven assets alone. An investment bank trader described the why his asset manager clients moved into EMs: ‘I need to make money, I need to earn interest or face redemptions... basically because of the low interest rate environment... people are forced to invest their money into something’ (Interview 28, Investment Bank, USD EM Credit Trading).

Investors did not look at particular financial assets in a vacuum, but make their portfolio allocations on a ‘relative value basis’, choosing between different asset classes based on the profits they offer balanced with their perceived riskiness (Interview 34, Investment Management Company, Portfolio Manager). According to interviews, during the early and mid 2000s, key ‘high yielding’ asset classes seen to have a similar risk and return profile included EMs, US subprime mortgage backed securities, and Eurozone peripheral bonds, among others. Following the bursting of the US subprime bubble in end-2007, the poor performance of commodities after the

crisis, and the bursting of the peripheral Eurozone bubble in 2010, EMs remained as one of the few relatively high yielding asset classes remained that were not perceived as too risky (interviews).

Just as they had created negative feedback loops during the crisis period, micro-level dynamics contributed to intensifying the mania by creating positive feedback loops. Key data releases such as the US ISM manufacturing index showed signs of improvement, as the US and China began to recover after massive stimulus programs (Deutsche Bank 2011, 13). In keeping with the general investor sentiment, ratings agencies upgraded a number of EM sovereign bonds to the key ‘investment grade’ status between 2009 and 2012. As of September 2012, 53.5% of the bonds included in JP Morgan's EMBIG index had an investment grade rating, compared to only 1.7% at the index's inception in 1993 (Ratner 2009). Ratings agencies cited not only improving fundamentals, but also the post-2009 capital inflows themselves as a reason for the upgrades (Rowley 2012). In turn, the upgrades had further positive feedback effects on investor sentiment, intensifying the self-fulfilling cycle of mania<sup>25</sup>.

As EM prices rose, even those asset managers who were sceptical that price increases reflected fundamentals were forced to scale up their exposure, to prevent clients from moving their money to competitor funds offering higher returns. Dedicated EM bond funds increased their investments by going ‘overweight’ the index, while new types of ‘cross-over’ investors, such as global bond funds, hedge funds, and investment banks. For example, the EM bond allocations of Pacific Investment Management Company LLC (PIMCO), the largest global bond fund, which can be taken as representative of a large portion of the crossover market, shot up after 2009 from about 3% of its total return fund, to nearly 14% in 2012 (IMF

2013, 16). News of these investors entering the market fuelled expectations for further price increases. Lucrative profit opportunities encouraged new investors like non-financial corporations to invest part of their reserves in EMs in order to boost profits. A similar profit motive applied to investors like central banks, SWFs, and university endowment funds, who took advantage of higher yielding EM assets to invest their large amounts of reserves (Interview 31, Investment Bank, EM Sales).

It was not only short-term investors that played an important part in inflating EM bond prices. Investors thought of as traditionally ‘patient capital’ with diversification rather than profit motives, such as US, European and Japanese public and private pension funds and insurance funds, were not immune to the profitable opportunities offered by EM bonds either (Lee and Teo 2011). The distinction between ‘profit’ and ‘diversification’ investment motivations became increasingly blurred in a low interest rate environment, as pension and insurance funds became involved in the desperate ‘search for yield’ abroad as they found they could no longer meet their liabilities solely from investment in low yielding AE assets. For example in 2012, the California Public Employees Retirement System (CALPERS), America's biggest pension fund, needed to achieve an annualised target return of 7.75 per cent, in order to meet its lawful obligations to pensioners. For a fund of its size (\$220 billion) this could not be achieved by investing in domestic markets alone, when the 10-year US Treasury yield was less than two per cent. (Lord and Dibiasio 2012). European pension funds allocations to Asia alone were estimated to have gone from zero to five per cent of the fixed-income portfolios (Lee and Teo 2011, Stewart 2012). EM investments were made both directly, and through increased allocations to asset managers. News of these large investors increasing their allocations sent positive

signals to the market, and attracted fresh capital (Interview 28, Investment Bank, USD EM Credit Trading).

*Investor perceptions of fundamentals during the mania*

Table 1. Push factors and investor perceptions of domestic fundamentals

	<b>Financial crisis (2008)</b>	<b>Eurozone crisis (2010-2013)</b>
<b>Push factors</b>	1. Negative sentiment and risk aversion caused by the GFC	1. Negative sentiment caused by Eurozone crisis 2. Low interest rates in AEs drive short and long term investors to EM 3. closing off of US subprime and Peripheral Eurozone bond market narrows alternative investment options
<b>Pull factors</b>	1. Trade impact of global recession: slow growth in AEs seen to reduce EM exports, and cause growth to slow. Reliance on commodity exports seen as a major risk. 2. Fiscal policy: Fiscal stimulus programs by key EMs criticised for increasing indebtedness and creating longer term distortions. 3. Debt ratios: Seen as worsening due to low growth and fiscal stimulus 4. FX reserves: worries over declining FX reserves 5. Structural reforms: Excessive government intervention seen as distortionary 6. Inflation: rising inflation seen as a major threat	1. Trade impact of global recession: 'decoupling' of EM and AE growth rates 2. Fiscal policy: Fiscal stimulus by key EMs seen as leading to higher growth. 3. Debt ratios: considered very strong and compared favourably to AEs 4. FX reserves: extensive reserves hailed as a key strength 5. Structural reforms: financial and trade liberalisation, inflation-targeting monetary regimes, floating exchange rates, and the implementation of fiscal rules seen as leaving EMs in a good position to tackle the fallout from the crisis. 6. Inflation: not seen as a major issue

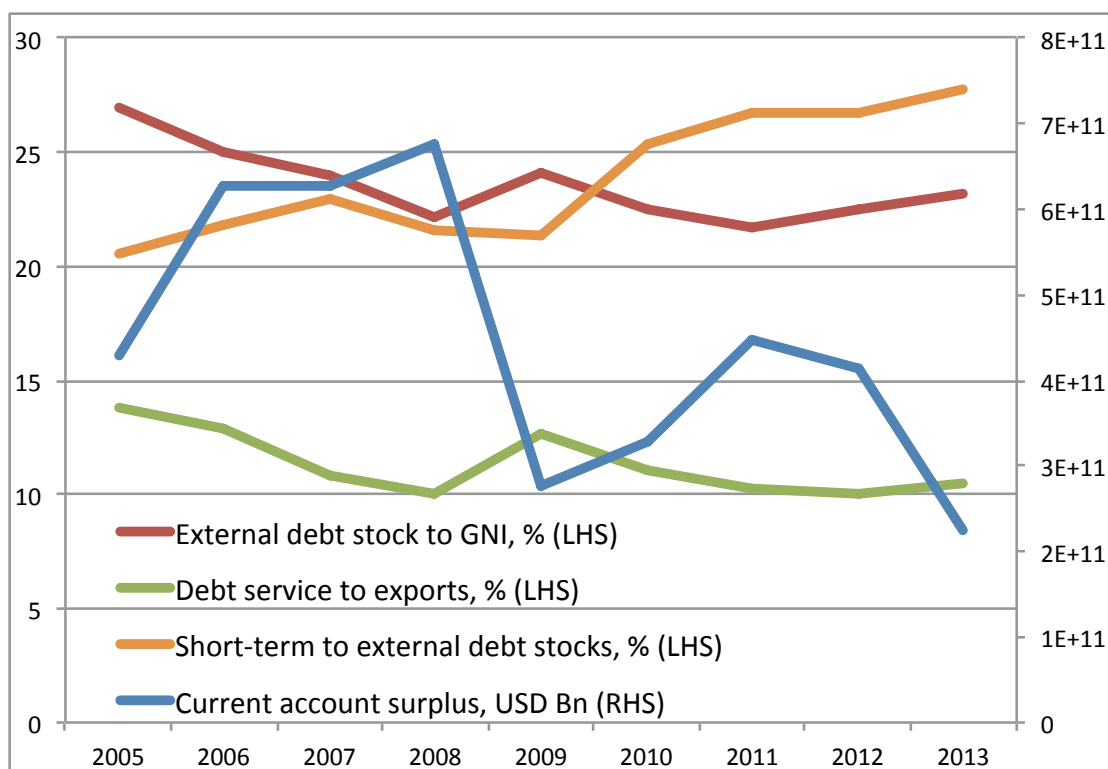
Source: Interviews, Factiva

Post-crisis reports on fundamentals dramatically reversed from 2008 as a result of the push factors discussed above, and became even more positive than in the pre-crisis period, especially after the start of the Eurozone crisis (table 1). This was despite the fact that no major structural or policy changes occurred in major EM countries between 2008 and 2013, let alone between 2008 and 2009. In many cases, the same policies or macroeconomic indicators that had been looked at negatively during the 2008 crisis when the push factors were negative (figure 2 points, such as fiscal stimulus programs, were reinterpreted to be a sign of fundamental strength once the push factors turned positive (figure 2). An analysis of investor views of

fundamentals between 2009 and 2013 reveals a narrative of a dramatic structural turnaround in EM economies due to better policies, permanently decreased EM risk, and EM economies outperforming, and eventually catching up with, AEs, especially after the second quarter of 2009.

Whereas during the panic phase in late 2008 investors were expecting slowing growth in AEs to cause slower growth in EMs due to trade links, after 2009 investors predicted a ‘decoupling’ of AE and EM growth rates (Foundation and Endowment Money Management 2009). They emphasised EM countries strong trade surpluses, even though AE growth continued to slow between 2009 and 2012 and EM countries’ export dependence on them had not lessened during this time. In fact, IMF data shows that, although the aggregate category of ‘emerging and developing countries’ were running a current account surplus, this was actually on average *lower* in the post-crisis period than it had been before the crisis (see figure 4).

Figure 3. Aggregate current account balance and major debt indicators for EM countries, 2005-13



Source: IMF online database, Balance of Payments Yearbook, World and regional Aggregates; World Bank, International Debt Statistics. Note: Current account data is for ‘Emerging and Developing countries’ category from IMF Balance of Payments Yearbook. Debt data is for middle and low-income group aggregate in which 2013 GNI per capita was \$12,745 or less

Similarly, while investors had been predicting a decline in foreign exchange reserves at the end of 2008, ‘extensive’ reserves were hailed as a key strength in EMs, especially in Asia after 2009 (Nordic Region Pensions and Investment News 2012, Ankarcrona 2012). According to 2010 report by Goldman Sachs, foreign exchange reserves had helped to moderate ‘country-risk’, and were now ‘perceived by investors as more significant than a country’s immediate fiscal situation’ (Roman 2010). These dramatic sentiment shifts occurred between 2008 and 2009 despite the fact that the building up for foreign reserves was a much longer-term trend, beginning after 1997 Asian financial crisis (Ocampo, Kregel and Griffith-Jones 2007, 21-25).

EM fiscal and debt ratios were also described as being very strong, and were almost always analysed in relation to deteriorating fiscal conditions in AEs, especially in Europe<sup>26</sup>. While fiscal stimulus programs such as those undertaken by Brazil and China were criticised for leading to higher debt and longer term ‘distortions’ in 2008, they became seen as contributing to growth in EMs after the turnaround in push factors (Belaisch 2010). At the same time, similar fiscal spending was seen as leading to higher indebtedness in AEs, echoed by the following statement from a PM at Franklin Templeton: ‘The tables have turned. Now the highly indebted are the developed markets’ (Hershey 2010)<sup>27</sup>. According to a portfolio manager at the Oppenheimer International Bond fund<sup>28</sup>, even ‘onetime fiscal ‘basket cases’ are performing better than developed countries as a group these days... They're doing the right things, running the right policies’ (Hershey 2010). However, IMF data on major debt indicators for EM countries show that not only was there no dramatic improvement after 2008, but that there was a slight deterioration in some debt indicators such as external debt to GNI and debt service to exports, in 2009, the year when massive inflows began (see figure 3).

A belief that became widespread among investors during this time was that EM countries were in a fundamentally better position approaching this global recession than they had been in at any point in history, and so would be able to deal with the fallout of the crisis much better. This was attributed to policy changes and structural reforms including financial and trade liberalization, inflation-targeting monetary regimes, floating exchange rates, and the implementation of fiscal rules, which ‘established the conditions for stability and success’, according to the executive vice president of PIMCO<sup>29</sup> (Mamudi 2009). In 2009, the head of EMs at Aberdeen Asset Management<sup>30</sup> stated, ‘We believe they [EMs] are more capable today of

dealing with perhaps the worst global financial crisis in our lifetime, due to stronger balance sheets and more prudent macroeconomic policies' (Asian Investor 2009). Some analysts went so far as to say that as a result of these developments, 'the days of extreme emerging-market risk are coming to an end' (Mamudi 2009). The head of EM equities at Schroders<sup>31</sup> went as far as to say that this 'major structural change' was 'certainly as significant as the industrial revolution, and perhaps more so' (Evans 2010). This was despite the fact that most of these liberalisation reforms had occurred in various EM countries between the 1990s and early 2000s, over a decade before the 2009 inflows began<sup>32</sup>.

## **Discussion and conclusion**

This paper has used qualitative evidence, including detailed interviews with market participants themselves, to argue that not only were push factors more important in driving EM portfolio investment during and after the GFC, but also that investors' perceptions of domestic fundamentals were influenced by the change in push factors, causing them to become divorced from reality. The paper further shows how the micro-foundations of investors' decision-making behaviour makes them even more susceptible to push factors. This does not mean that domestic factors are completely irrelevant, but rather that a degree of caution should be exercised when analyzing investors' interpretations of them. Rather than taking investors' interpretations at face value, it should be remembered that these are subjective perceptions of the average opinion of the fundamentals.

Due to the micro-foundations, even if investors do not personally agree with the average opinion of the domestic fundamentals, it is still rational for them to invest according to others investors' behaviour, as this is what moves the market. Investors



were fully aware of the importance of push factors, even using various proxies to measure their direction and effect, and were also aware the average opinion of the domestic fundamentals might be incorrect. Due to the high level of global capital mobility, even if the market view of the fundamentals turns out to be incorrect, investors can easily reallocate their capital to some other asset class during the panic phase, in order to maintain their short-term profits. Despite their different investment strategies and mandates, all kinds of foreign investors were subject to speculative behaviour, vulnerable to shorter-term market pressures, influenced by developments in other asset classes, and most importantly, had the option to exit EM markets.

This paper's main argument, that push factors are fundamentally more important than pull factors, even when investors do pay attention to the country fundamentals, although not definitive, questions the prevailing wisdom in current IPE literature, that financial markets can constrain or discipline EM government policy *through the market mechanism*, even during periods of low international liquidity. Outflows during the downturn are not primarily due to investors closely inspecting country fundamentals, but due to a panicked exit, as developments elsewhere in the world trigger capital flight, regardless of whether EM governments institute policies according to investors' preferences. This does not mean that financial market borrowing does not pose a constraint on EM governments<sup>33</sup>, but rather that this constraint does not occur directly through the market mechanism, as implied in the IPE literature, since market signals do not always convey information accurately, and especially not during a crisis.

This paper contributes to a body of research that argues that reliance on financial markets for international borrowing can leave developing country governments at the mercy of factors beyond their control, subject to volatile

international capital flows, sometimes at massive economic and social costs. If push factors are more important than pull factors in driving capital flows, this means that government efforts to attract foreign capital or reduce borrowing costs through implementing these investors' preferred policies may be ultimately futile. In conjunction with a large body of literature on developing country financial crises and boom and bust cycles<sup>34</sup>, this study points towards the need for some degree of capital controls to counter the destabilizing effects of international financial markets

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<sup>1</sup> 'Emerging markets' and 'advanced economies' both correspond to the IMF classifications given in: <https://www.imf.org/external/pubs/ft/weo/2015/01/weodata/groups.htm>

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<sup>2</sup> In order for the ‘financial market constraint’ to work, governments also have to be responsive to price changes in financial markets (Mosley 2003). This side of the story is outside the scope of this paper, which only focuses on financial market reactions.

<sup>3</sup> Hardie 2012 correctly emphasises that domestic EM investors are holding increasing amounts of foreign currency denominated debt. Nevertheless, in the market in question, foreign investors move their capital more often, and therefore, have more of an effect on prices (Interviews) and therefore, will be the focus of this paper.

<sup>4</sup> Seeking to mitigate exposure to risk from any asset class, country, or region over the long term

<sup>5</sup> Exceptions to this narrative include for Toporowski (2000), and Bonizzi (2017), which highlight the role of pension funds in increasing financial market volatility in EMs.

<sup>6</sup> Thanks to an anonymous reviewer for making this point. The effect of pull factors on push factors is much smaller. Domestic fundamentals of individual EMs could be expected to have minimal real or sentiment based impact on global push factors (Interviews)

<sup>7</sup> These clients included the largest hedge funds, asset management companies, pension funds, and insurance funds, and private wealth managers, corporate non-financial companies, and official investors such as central banks and sovereign wealth funds

<sup>8</sup> Which covers major news sources that interviewees identified as relevant including Reuters, Dow Jones Newswires, Financial Times, Wall Street Journal, Euromoney, MarketWatch, and Pension’s Week

<sup>9</sup> This paper focuses mainly on the hard currency sovereign bond market, and the 10-year benchmark government bond because it best reflects market conditions (Mosley 2003).

<sup>10</sup> Disaggregated data on investment flows by asset class and investor type is not readily available. Such data exists in the EPFR database, which is proprietary and not available for academic use. The IMF GFSR only provides data on investment flows by US mutual funds to EMs.

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<sup>11</sup> The most detailed publicly available breakdown of EM investors is available from the IMF (Arslanalp and Tsuda 2014) but does not differentiate within the foreign non-bank investors category, or between foreign and local currency EM bonds. Hardie (2012) provides further detail on the different types of EM investor, but quantitative estimates only for three countries.

<sup>12</sup> The terms mutual fund and asset manager are used interchangeably.

<sup>13</sup> BIS estimates suggest that over 90% of mutual funds in EMs are open end (Miyajima and Shim 2014, 20).

<sup>14</sup> A dealer in financial market securities who is obliged to buy and sell securities at all times in order to provide ‘liquidity’ to the market. They play the role of middleman, connecting various ‘counterparties’ or investors to buy and sell securities from each other.

<sup>15</sup> Market-making traders are different from ‘proprietary’ traders in investment banks, which invest in order to make profits for the bank, similar to an in-house asset management function. Regulatory moves have been taken to ban proprietary trading by investment banks, which have commercial banking arms.

<sup>16</sup> Here, the benchmark is the investors’ reference point in constructing their portfolio, with any deviations from the index reflecting a decision to overweight/underweight certain bonds that they think will over/under perform.

<sup>17</sup> Other criteria for inclusion and weighting include price, and tradability and liquidity of the EM bonds.

<sup>18</sup> Market capitalisation rather than total returns are used because this indicator gives information on the price level, as well as the volume of investment.

<sup>19</sup> Even if the portfolio manager had a research team covering individual countries, the ultimate decision maker still had to choose between a large number of countries, in a limited amount of time: ‘We do have some research guys, one part of their job is to talk to the 20 something banks that also produce research. Because I don’t have time to understand the 20

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banks research... So in a way they help me to summarise' (Interview 33, Investment Management Company, CEO)

<sup>20</sup> CDS represent insurance against government default. A widening CDS spread is the result of increased demand for the CDS, which indicates investors are expecting a higher probability of default.

<sup>21</sup> Canada's largest investment bank

<sup>22</sup> This is consistent with the predictions of Prospect theory (i.e. one's higher propensity to loss avoidance compared to pursuit of gains). Even though some investors believed that fundamentals were more positive than was reflected in prices, they did not want to take the risk of holding on to their investments in the hope that prices would go back up in the longer term, because they were more averse to the short-term losses they would incur with such an investment strategy. Thanks to an anonymous reviewer for making this point.

<sup>23</sup> One of the largest British investment managers specialised in EM.

<sup>24</sup> Other events that resulted in negative risk sentiment (as shown by increases in the VIX index in figure 2), including S&P's downgrade of the US from triple to double A+ in August 2011 due to the fiscal cliff (figure 2, point r), and various Greek and Irish bailouts in 2010 and 2011 (figure 2, point m, o, q) caused only brief outflows, with investors quickly going back into EM due to the lack of investment alternatives.

<sup>25</sup> For example, when Moody's upgraded Brazil to investment grade status in September 2009, even though this had widely been anticipated by the market, it led to additional inflows as it widened the range of funds that were allowed to invest in it (Vyas 2009)

<sup>26</sup> According to a report by Standard Chartered Bank<sup>26</sup>, 'Asia' was seen as having especially good fundamentals in this regard: 'If the financial market is looking to penalise fiscal imprudence and reward countries with fiscal discipline, many Asian economies with low fiscal deficits and debt should benefit' (Chatterjee 2010). Even 'Latin America', historically known for debt crisis and sovereign defaults, was seen as one of the 'best examples of this fundamental improvement in asset quality' (Belaisch 2010).

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<sup>27</sup> By 2012, some investors were of the view that ‘some of the [EM] countries are in even better positions than the key developed markets’ (Ankarcrona 2012).

<sup>28</sup> A specialised bond fund that is part of OFI Global, an American asset management company

<sup>29</sup> The largest global bond investor, with a large presence in EMs.

<sup>30</sup> A global investment group with a large presence in EMs.

<sup>31</sup> One of the largest global asset management companies.

<sup>32</sup> Furthermore, although these liberalization reforms, including the removal of capital controls and financial market development, were seen as unconditionally positive, evidence of their success has been mixed at best, especially in terms of promoting financial stability (see Arestis and Glickman 2002 and Singh 2003 for a review).

<sup>33</sup> Over-reliance on financial market borrowing may create a situation where in the bust time, because financial market borrowing becomes more difficult for emerging markets regardless of domestic policy orientation, these countries may be forced to go back to financing sources with hard conditionalities, such as the IMF, especially if sharp outflows cause a financial crisis. International financial investors can also express their policy preferences to governments more directly. Close networks between investment bankers and senior EM politicians are common, as governments are bank clients for the issuing and marketing of bonds on international markets and privatizations, and meetings are often held between large institutional investors and policymakers.

<sup>34</sup> See for example Grabel (1996), Palma (1998), Singh (1997; 2003), Chang Palma and Whittaker (2001), Ocampo, Kregel and Griffith-Jones (2007), Kaltenbrunner and Panicera (2018).