The transmission of emerging market shocks to global equity markets

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The paper analyzes whether, and to what extent, emerging market economies (EMEs) have systemic importance for global financial markets, above and beyond their influence during crises episodes. Using a novel database of exogenous economic and political shocks for 14 systematically relevant EMEs, we find that EME shocks not only have a statistically but also economically significant impact on global equity markets. The economic significance of EME shocks is in particular underlined by their remarkably persistent effects over time. Importantly, EMEs are found to influence global equity markets about just as much in “good” times as in “bad” times, though they tend to be stronger during crises or periods of financial turbulence. Finally, we detect a large degree of heterogeneity in the transmission of EME shocks to individual countries’ equity markets, stressing the different degrees of financial exposure, which is relatively higher for European equity markets.

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1. Introduction

On 27 February 2007, Chinese news reports suggested that the government was about to impose controls to curb speculation in the overheating stock market. These reports triggered a record 9% drop in the local stock markets, and sent down equity markets worldwide by more than 2%. Other emerging economies as well as the US, Europe and Japan were affected. Market observers were unanimous that the drop in global equity markets on that day can be attributed primarily to developments in China.2 The size and global importance of the Chinese economy, and to an extent also the Chinese equity market at least within Emerging Asia, are likely to be factors that explain why events such as this one imply that emerging market economies (EMEs) may at times be an important or even dominant driver of global financial markets.

This challenges our general perception that EMEs are relevant for global financial markets mainly when they experience financial crises, thus inducing an abrupt portfolio rebalancing that also affects investment decisions and thus returns in markets of

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2 “Stocks worldwide fall on China” (Bloomberg 27 Feb 08); “Equity markets tumble following Asian sell-off” (Financial Times, 28 Feb 07); “Emerging stocks fell for a second day amid a slump in global equities that wiped almost $1 trillion off the value of world benchmarks. A slide in markets started in China yesterday amid concern the government will tighten controls on investment” (Bloomberg 28 Feb 08).

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mature economies. In fact, there is a large literature focusing on and indeed finding evidence for the international transmission of EME shocks and for contagion during crises in emerging markets, foremost the Latin American crises of 1994–95 the Asian crisis of 1997–98 and the Russian default of August 1998 (see e.g. Kaminsky and Schmukler, 1999; Baig and Goldfajn, 1998; Rigobon, 2002; Wongswan, 2003). However, the evidence on contagion is rather mixed (Bekaert et al., 2005).

However, there have been no major crises in systematically relevant emerging markets since 1998 – apart from the Turkish and Argentine crises of 2000 and 2001 – which arguably have had little systemic repercussions for global financial markets (Krueger, 2002; Fischer, 2002; Hall and Taylor, 2002). At the same time, emerging markets' assets have become increasingly important over the past decade, also for investors in mature economies; and emerging economies have developed into an ever more relevant driver of global economic growth, being increasingly intertwined with mature economies via trade, FDI and the relocation of production.

The present paper asks whether, and to what extent, EMEs have systemic importance for global financial markets, above and beyond their influence during crises episodes. Such an analysis is complicated by an identification problem, i.e. the difficulty to distinguish financial market developments in emerging markets from those in mature economies. We use a novel database of shocks that are truly idiosyncratic and specific to EMEs. These shocks are based on and extracted from “exogenous” sources, i.e. on International Finance Corporation reports (factbooks, quarterly reviews, and monthly reviews of emerging markets, among others), as well as Bekaert and Harvey (1998, 2003) and various IMF reports. The news reported in these sources has been selected based on their country-specific nature and overall economic and political importance, and not based on their financial market impact. Considerable effort has been put into dating the various events identified, based on newswire services.

More specifically, the database comprises a broad range of important political and economic events, which covers both “negative” events that drive markets lower as well as “positive” news such as the announcement of important economic reforms. Using daily data over the period 2000–2004, we analyze the transmission of these shocks from 14 EMEs in Latin America, Asia and Eastern Europe to 15 mature economies' equity markets – covering the 12 euro area countries at that time, the United States, Japan and the United Kingdom – plus global equity market returns, as well as the intra-regional and extra-regional spillover across EMEs. Thus the analysis based on such identified EME shocks allows a very rich analysis of the transmission of different types of shocks, and during tranquil rather than only crises periods.

The empirical analysis yields a number of striking findings. Overall, there is a substantial transmission of EME shocks to global equity markets: EME shocks have a significant and sizeable effect, inducing on average a 0.3% change in global daily equity returns on the day a shock occurs. The magnitude of this impact may appear substantial, but it should be noted that we include as EME shocks only events that represent significant economic or policy-relevant news or developments in the country concerned, and that the database contains EME shocks for only about one quarter to one third of all trading days. Moreover, while we have few crisis periods in our sample, this effect is found to be twice as large during times when individual EMEs experience and emit particularly large shocks.

Second, there is evidence that this effect of EMEs on global equity markets is fairly persistent, as it is detectable even after a few days. While it is difficult to quantify precisely the overall explanatory power of the EME shocks for global equity markets, in particular the persistence of the effects stresses the economic relevance and systemic importance of emerging markets for global equity markets. Our empirical analysis indicates that on those days when EME shocks occur, they explain about 20% of global equity return movements. The impact of EME which we can identify is nevertheless not too large given that, as mentioned earlier, our database contains EME shocks for only a limited share of trading days in the sample.

A third key finding of the paper is that global equity markets react almost as strongly to positive EME news as to negative news, with this result being robust across EMEs and over time. This underlines that EMEs matter for global financial markets not only during crises or other less favorable episodes, but that investors in mature economies also share the gains from positive developments in EMEs.

Finally, there are a number of intriguing cross-country differences: although EME equity markets generally react more strongly to shocks in other EMEs of the same region, mature economies overall react mostly more strongly to EME shocks than emerging markets from other regions. Among mature economies, US equity returns respond much more to shocks in Latin America than to those in Emerging European and Asian EMEs, while Japanese markets are somewhat more sensitive to Asian EMEs. By contrast, euro area and UK markets not only show the strongest exposure and overall reaction to EME shocks, but they appear to be roughly equally sensitive to shocks from all the three EME regions of Asia, Emerging Europe and Latin America.

In sum, the findings of the paper emphasize the emergence and relevance of EMEs for global and in particular mature economies' financial markets. Given the importance and ongoing increase of cross-border financial investment as a transmission channel and the rapid growth of EMEs as an asset class, the results suggest that EMEs are likely to continue becoming an even more important factor for the determination of global asset prices in the years to come.

The paper is organized as follows. We start with a brief review of related literature in Section 2, before proceeding to a detailed presentation and some stylized facts of our dataset in Section 3. Section 4 presents the empirical methodology as well as the benchmark empirical results for the transmission of EME shocks. Section 5 then discusses various extensions to the benchmark model and several robustness tests. Section 6 concludes.

2. Related literature

The empirical literature has pointed towards a rapidly increasing degree of financial market integration, at least over the past decade. In the early 1990s, most evidence pointed towards no or little market integration, as shown e.g. by King et al. (1994) who
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