

Financialisation in Emerging Economies: A Systematic Overview and Comparison with Anglo-Saxon Economies

Ewa Karwowski* and Engelbert Stockhammer*

* Kingston University London, UK

Email: e.karwowski@kingston.ac.uk

Abstract

Financialisation research has originally focussed on the US experience, but the concept is now increasingly applied to emerging economies (EMEs). There is a rich literature stressing peculiarities of individual country experiences, but little systematic comparison across EMEs. This paper fills this gap, providing an overview of the debate and identifying six financialisation interpretations for EMEs. These different interpretations stress (1) financial deregulation (2) foreign financial inflows, (3) asset price volatility, (4) the shift from bank-based to market-based finance, (5) business debt, and (6) household indebtedness. We construct and compare measures of the six financialisation interpretations across a sample of 17 EMEs from Latin America, emerging Europe, Africa and Asia, contrasting them with the US and UK, two financialised economies.

We find considerable variation in financialisation experiences of EMEs. Asset price volatility is found across continents. Asia has been more exposed to capital inflows, stock markets have gained importance and private sector debt risen. In emerging Europe financial deregulation has been more pronounced with lower levels but strong increases in household debt. The picture is similar in South Africa, the African EME in the sample, where household debt is comparatively high. Financialisation in Latin America is weaker according to our measures.

Keywords: financialisation, emerging markets, financial instability, asset price volatility, heterodox economics

JEL codes: F30, F34, G01, G12, G15, B5

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1. Introduction

The term ‘financialisation’ was coined in the early 1990s¹ and has since been interpreted in varying ways, resulting in different research strands across a range of academic disciplines, including economics, sociology and geography. Financialisation research initially centred on the US economy. While the geographical focus of the research agenda has widened over time, a bias towards rich countries remains. Literature on financialisation in emerging and developing countries gradually developed in the context of Latin American countries, parts of emerging Europe, South Africa and some East Asian ‘tigers’. Similar to the literature on financialisation in advanced economies, research on financialisation among emerging market economies (EMEs) focuses on changes within a specific country over time (see, for instance, Rethel, 2010; Correa, Vidal, & Marshall, 2012; Ashman & Fine, 2013) or the changing nature of an economic sector (e.g. non-financial companies, NFCs) in a small number of countries (Demir, 2009; Becker, Jäger, Leubolt, & Weissenbacher, 2010). Thus, much of the research on EME financialisation offers longitudinal analysis but there are few cross-country comparisons.

Interpretations of the term ‘financialisation’ can vary widely. The working definition of the phenomenon used by many economists is Epstein's (2005, p. 3) broad understanding of financialisation as ‘the increasing role of financial motives, financial markets, financial actors and financial institutions in the operations of the domestic and international economies’. While a broad definition allows for a rich research agenda, it also means that many different interpretations of the phenomenon co-exist.

¹ Foster (2007) argues that the term was either coined by Arrighi (1994) in his *The Long Twentieth Century* or by Phillips (1994) in *Arrogant Capital* which contains a chapter dedicated to ‘The Financialization of America’.

This paper focuses on the financialisation literature dealing with EMEs². The aim of the paper is to outline different interpretations of financialisation in EMEs that exist in the literature, rather than providing a detailed account of the various research strands in the broader financialisation debate (see Karwowski, Shabani & Stockhammer (2016) for an exposition and assessment). We identify six such interpretations that can be quantified: (1) Financial deregulation³ and the integration of EMEs into the global financial system drives financialisation in these countries. (2) Foreign financial inflows result in financialisation in EMEs. (3) Financial liberalisation encourages asset price inflation in EMEs, which is an important aspect of financialisation. (4) The shift from a bank-based to a market-based financial system causes financialisation in EMEs. Financialisation in EMEs is often characterised as country-specific, but the uniqueness of financialisation experiences is expressed comparatively to the US, the archetypal financialised economy. Two more interpretations emerge from this comparison: (5) Debt levels among businesses in EMEs have been seen with concern as sign of financialisation. (6) The increased involvement of households in finance, e.g. strongly rising indebtedness of individuals, characterises household financialisation.

We have constructed a sample of 17 countries that fall into the category of EMEs. Guided by existing financialisation work but limited by data availability our sample covers the three Latin American EMEs Argentina, Brazil, and Mexico. From emerging Europe we included the Czech Republic, Hungary, Poland, Russia, and Turkey. South Africa is the only African economy considered. Finally, apart from China we assess the following Asian countries in our analysis: India, Indonesia, Malaysia, Singapore, Thailand, and South Korea.

² While some work refers to the financialisation of developing and emerging economies (such as Bonizzi, 2013), the actual focus of this research agenda are EMEs, i.e. middle-income countries. Many developing (i.e. poor) countries have such rudimentary financial systems that it would be difficult to speak of their financialisation, which implies both a certain size as well as sophistication of the financial sector.

³ We use the terms ‘financial deregulation’ and ‘financial liberalisation’ interchangeably. We measure two distinct interpretations of financialisations linked to deregulation. First, we account for financial reforms (captured by the financial reform index) and second, we measure the extent of foreign financial inflows which are facilitated by deregulation.

Our paper complements earlier studies that focus on specific countries or sectors that are impacted by financialisation over time. We evaluate financialisation across our sample countries in two time periods: the decade before the financial crisis (1997-2007) and the most recent years (2008-2015). While the former years are often understood as a period of accelerating financialisation, the debate on financialisation in China, for instance, has only emerged in the latter period (Chong, 2012; PwC, 2014).

The contribution of the paper is a cross-country comparison of the financialisation experiences in 17 EMEs along the lines of the six identified financialisation interpretations. We have constructed six measures that capture the different interpretations. Using these six indicators, we assess the relative positions of EMEs among themselves. We also compare the 17 EMEs more generally to the positions of the US and the UK since the two Anglo-Saxon countries are typically understood as the benchmark of a financialised economy.

Overall, we find that the indicators used to capture the six interpretations of financialisation illustrate the heterogeneity of financialisation across EMEs. There is a substantial variation among EMEs' experiences: While Asia has not experienced strong financial deregulation, especially East Asian economies have been more exposed to financial inflows. Stock markets have become more important in the region and debt levels in the private sector are relatively high. Asset price volatility, which can be found across all regions, has been strong in many Asian EMEs. In comparison to Asia, financial deregulation was more pronounced in emerging Europe and South Africa. Here asset price volatility has also been strong and household debt has either increased substantially or been comparatively high in recent years. For Latin America our six financialisation measures are more moderate.

Our findings illustrate that an understanding of financialisation as entirely externally driven is overly simplistic. Countries that have actively deregulated might experience household financialisation and asset price inflation without being exposed to strong foreign capital

inflows (e.g. South Africa). Hence, domestic institutions and internal dynamics have to be studied carefully to understand the differences in financialisation trajectories among EMEs (as argued by Rethel, 2010, for Malaysia; see also Becker et al., 2010).

The paper is structured as follows: the subsequent section provides an overview of the most salient research strands on EME financialisation, from which we distil six financialisation interpretations. Section 3 introduces our sample countries and the financialisation indicators capturing the six interpretations. In section 4 we systematically analyse financialisation among the 17 EMEs and in comparison to the US and UK, i.e. the two most financialised countries. Finally, section 5 summarises our findings and concludes.

2. Financialisation in emerging economies: A literature review

The research agenda on financialisation in EMEs developed only in recent years, remaining a nascent area of research (see Bonizzi, 2013 for a detailed survey). Attempts to address financialisation can mainly be found within heterodox economics and economic sociology. In the case of EME financialisation much of the existing research is part of either the post-Keynesian (Demir, 2007, 2009; Correa, Vidal, & Marshall, 2012), Marxist (Ashman, Fine, & Newman, 2011; Lapavitsas, 2013) or Institutionalist tradition (such as the regulationist school, Becker et al., 2010). These heterodox approaches, which often inspire and conceptually borrow from each other, are in stark contrast to mainstream economics. Mainstream, i.e. neoclassical, economists understand financial markets generally as efficient and individual agents as rational. Mainstream economics has a more radical, New Classical wing, which regards clearing markets as the normal feature of actual economies and a New Keynesian version, which regards market failures and price rigidities as widespread in reality. By contrast, in heterodox economics instability is inherent to financial markets and capitalist societies more broadly. For instance, post-Keynesians stress fundamental uncertainty of

agents in their decisions, the tendency towards speculation among financial investors, the procyclicality of credit extension, favouring asset price bubbles, and the consequent need and rush to liquidity during crises. Marxists additionally emphasise how power relations and class impact economic interaction. Institutionalist analysis focuses on how institutions – be they organisations, conventions or rules more generally – shape economic interaction.

While heterodox economists are very critical of financialisation, warning of its adverse impact on financial stability, income distribution and productive investment, the mainstream either does not engage with the phenomenon or reduces it to ‘financial deepening’, i.e. the development of financial markets and instruments. For example, the accounting firm PwC (2014), representative for mainstream thinking, has pronounced financialisation as a \$9 trillion opportunity for China and six other EMEs⁴ because this is the sum it would take in loan extension to match the credit-to-GDP ratios in the rich G7 countries⁵. By contrast, heterodox approaches see a larger financial sector as a mixed blessing: it enables more productive investment, but also allows for more speculation and is a source of systemic instability. In EMEs the financialisation phenomenon is believed to take on characteristics distinct from financialisation in rich countries (Becker et al., 2010). For one, financialisation is often characterised as externally driven (see for instance Powell (2013) on ‘subordinate financialisation’). And secondly, country-specific incarnations of financialisation are stressed and often contrasted with the US experience.

Research on financialisation in EMEs is situated in the context of older debates between mainstream and heterodox economists on the role of finance in development. In the early 1970s, Shaw (1973; and Gurley & Shaw, 1955) and McKinnon (1973) put forward the claim that financial development fuelled by deregulation would stimulate growth in developing countries and EMEs. In the aftermath of World War II, governments around the world

⁴ Brazil, India, Indonesia, Mexico, Russia and Turkey.

⁵ The G7 include Canada, France, Germany, Italy, Japan, the UK and US.

regulated and intervened in financial markets heavily with the aim to encourage credit-financed investment and trade. Interest rate controls such as caps, i.e. prescribed maximum levels of interest rates, were common policy tools in the attempt to encourage capital accumulation. As development among poor countries proceeded much more slowly than predicted by modernisation theorists (such as Lewis or Rostow), by the 1970s economists and policy makers became increasingly disillusioned with the prospects for ‘catching-up’ in the developing world (Leys, 1996). Against this background, Shaw and McKinnon formulated the ‘financial repression’ hypothesis, claiming that interest rates in developing countries and EMEs were too low because of interest rate controls, which hampered investment and growth. Deregulation was required to liberate financial markets, which would increase interest rates, saving among the domestic population and, subsequently, investment. This recommendation became a key part of the Washington Consensus⁶; and since the 1980s mainstream economists, the World Bank and the IMF have been advising developing countries to reform their financial systems, i.e. to reduce government intervention in order to get ‘interest rates right’ (Long, 1990, p. 169; World Bank, 1989).

There are several empirical shortcomings of this approach, even within a mainstream framework. First, the sensitivity of saving to interest rates is rather weak (see, for example, Giovanni, 1985), which in fact was acknowledged among key proponents of the financial repression hypothesis (Shaw, 1973; Fry, 1988). Poor households, i.e. those close to the subsistence level of consumption, were found not to react to rising interest rates (Ostry & Reinhard, 1992). Thus, in low-income countries saving decisions are mainly determined by considerations of subsistence rather than interest rates (Ogaki, Ostry & Reinhard, 1996). Second, more recently Rashid (2013) found that in Sub-Saharan Africa financial

⁶ In response to the economic and financial crises of the 1980s in many developing and emerging economies the IMF and the World Bank developed a ‘standard’ policy package that was prescribed to distressed countries. This became known as the Washington Consensus due to the geographical location of the two institutions. At the centre of these standard policies are deregulation, liberalisation, privatisation and fiscal policy discipline (see Williamson, 1990).

liberalisation, measured by the IMF's financial reforms dataset (Abiad, Detragiache, & Tressel, 2008), had a *negative* effect on financial development.

As a consequence mainstream research on the role of finance in development has bypassed the link between financial liberalisation and savings rates: a new research strand emerged in the 1990s arguing that financial development, i.e. financial deepening, induces growth. In this context, financial liberalisation became known as a policy mix not only targeting the elimination of credit controls but also advocating free entry to the financial sector, bank autonomy and private ownership of banks and the liberalisation of international capital flows (Rashid, 2013). Levine and King (1993) prominently initiated this research agenda (see also Levine, 1997, Levine, 2005, Čihák, Demirgüç-Kunt, Feyen, & Levine, 2012), showing that the size of the financial sector, volume and share of credit expanded to domestic NFCs in an economy are associated with future growth rates. On this basis, they argued that financial deepening stimulates growth. In the aftermath of the global financial crisis it was acknowledged that situations can emerge where there is 'too much' finance in an economy (Cecchetti & Kharroubi, 2012, p. 1). Thus, the current argument is that there is a quadratic relationship between finance and growth, an inverted U-curve, describing an optimal level of finance that maximises growth. Most EMEs are regarded to be far away from reaching the optimal size of their financial sectors, requiring further deepening of their financial markets (see Sahay et al., 2015).

Financialisation research, from the very beginning, has taken a more critical view of the impact of financial liberalisation on economic stability. Since much of it is based on post-Keynesian, Marxist and Institutionalist economic theories, it stresses the destabilising effects of financial activity. In advanced economies, financial liberalisation has been identified as an important driver behind financialisation. Here, deregulation has led to the rise of institutional investors such as insurance companies and pension funds (Clark, 2000; Toporowski, 2000).

This is illustrated in the immense growth of financial assets held by institutional investors. Pension funds, commercial insurers and investment companies in the US and UK quadrupled their assets between the 1980s and 2000s. The figure surged from around 50% of GDP in 1980 to almost 200% by 2005/6 (Evans, 2009). Deregulation also allowed for the emergence of the shadow banking sector, i.e. non-traditional lenders that are less tightly regulated while effectively providing credit in the same fashion that banks do (Pozsar, 2008; Adrian & Shin, 2009; Kessler & Wilhelm, 2013). A similar argument has been made for developing countries. Lapavitsas (2009, p. 10) suggested that '[t]he beginnings of financialisation in developing countries can probably be found in financial liberalisation in the 1970s, which lifted price and quantity controls in domestic financial systems'. Correa, Vidal, & Marshall (2012) also identified the liberalisation of trade and financial accounts in developing countries as origin of financialisation in this part of the world. Hence, our first interpretation of financialisation is that the phenomenon is caused by financial liberalisation (or deregulation) in EMEs.

An important aspect of financial liberalisation was the opening up of financial accounts. Mainstream economists believed that deregulating restrictions on international capital flows would improve efficiency in local financial markets through, for example, increased competition of foreign banks in domestic financial markets of developing economies (Levine, 2004) or foreign participants in domestic equity markets (Bekaert, Harvey & Lundblad, 2005). Increased efficiency should result in better allocation of resources and higher growth.

In the course of the 1980s and 1990s, developing and emerging economies increasingly subscribed to financial liberalisation, integrating more closely into global financial structures (Abiad, Detragiache & Tressel, 2008). This happened not least since financial account liberalisation was typically required under the IMF and World Bank's structural adjustment packages, implemented in many developing countries as result of mounting exchange rate

pressures and foreign-denominated debt burdens (for instance, see Moyo, 2001, for Zambia in the 1990s). Financial flows into EMEs picked up over the 1990s and surged in the 2000s (Schmuckler, 2004; Aizenman, Jinjark, & Park, 2011; Nier, Saadi Sedik, & Mondino, 2014). Higher interest rates in EMEs made those countries attractive destinations for financial investors. Accommodative monetary policy implemented in rich economies in response to the financial crisis of 2007/8 and the ensuing protracted stagnation, further entrenched this trend (Akyüz, 2015). Surging foreign inflows make developing countries more vulnerable, especially when inflows are dominated by short-term portfolio investment, which is prone to ‘sudden stops’ of inflows as well as their reversals. But similarly, empirical evidence on the growth-impact of long-term inflows such as foreign direct inflows (FDI) is mixed (Alfaro, Chanda, Kalemli-Ozcan, & Sayek, 2010), even though it is praised as source of resources, technology and human development among many policy makers and academics (Stiglitz, 2000).

The rise in cross-border capital flows and their intensified inflows into EMEs constitute the international dimension of financialisation (Stockhammer, 2013). On the one hand, developing countries and EMEs are impacted by the financialisation of rich economies (McKenzie & Pons-Vignon, 2012). Thus, the surge in international (private-sector) financial flows during the 2003-2007 global boom was driven by intensifying financialisation forces (Tyson & McKinley, 2014). On the other hand, these flows can also bring financialisation dynamics to EMEs, which then play out domestically. For instance, using firm level data Demir (2007, 2009) found that capital inflows (portfolio flows and FDI) contributed to financialisation in Argentina, Mexico and Turkey, inducing a shift away from productive towards more short-term and speculative financial investment among domestic NFCs. For Central Eastern Europe (CEE), Gabor (2012) pointed out that the inflow of investment by foreign banks contributed to the financialisation of domestic financial systems. A direct result

of increased global financial integration is rising exchange rate volatility in EMEs (Kaltenbrunner, 2010, 2011). As reaction, many EMEs including China have amassed large foreign exchange reserves, effectively subsidising rich countries by holding their low-yielding government bonds or currencies (Painceira, 2009). In short, the interpretation of financialisation highlighted here is that foreign financial inflows contribute towards the phenomenon in EMEs.

While foreign financial inflows are regarded as driver of efficiency gains by mainstream economists, they are viewed as potential source of Minsky-type asset price inflation by heterodox economists, especially those writing within a post-Keynesian tradition. Kregel, 1998; Dymski, 1999; and Arestis & Glickman, 2002 have applied this to the EME experience. This strand of research came out of the literature critical of deregulation and financial liberalisation and was spurred by the East Asian financial crisis of 1997/1998. Due to liberalised financial accounts the corporate sectors in numerous East Asian economies (including Hong Kong, Malaysia, South Korea and Thailand) borrowed substantially in foreign currency in the run-up to the crisis, which was attractive because of the high interest spread between domestic and rich country lending rates. This borrowing was also often short-term (Corsetti, Pesenti, & Roubini, 1998). The foreign capital inflows were channelled into the stock and real estate markets causing prices to rise. Positive feedback effects in reaction to increasing prices triggered asset price inflation. Simultaneously, the balance sheets of domestic companies became increasingly fragile as debt burdens rise while cash flow did not (Cozzi & Toporowski, 2006). In such a situation an exchange rate and financial crisis can be triggered easily by a sudden shortfall in income or a revaluation of the exchange rate among other events. In this interpretation financialisation is interpreted as inherently linked to asset price inflation and volatility since it induces NFCs and other investors to shift from accumulation of productive capital to financial and real estate investment.

While mainstream economists typically see finance as generic markets across countries with few if any differences, research inspired by Institutional approaches emphasises variations in financial systems depending on the country and historical background. The creation of a typology of different financial markets can be traced back to Gerschenkron's ideas on the role of finance in development (Gerschenkron, 1962). He argued that a bank-based system, i.e. a financial system dominated by large banks and their credit extension, was necessary in Germany and other lagging industrialisers in order to catch up with Britain's level of development. By contrast, Britain is historically classified as market-based system, where capital markets are the most important source of external finance for NFCs. For rich economies, there is evidence that since the 1970s financial structures have converged, while investment rates have been dampened (Schaberg, 1999), supporting the idea that financialisation coincides with a shift from bank-based to market-based finance. Aglietta & Breton (2001) argued that after World War II and up to the mid-1970s financial markets were subordinated as the financial sector was heavily regulated and dominated by banks. Financial liberalisation shifted the balance towards equity markets, contributing to financialisation. For EMEs, Lapavitsas (2009) argued that financialisation entails a shift from a bank-based (or relational) financial system to a market-based (or arms length) financial system in developing countries. He attributed this shift to the Washington Consensus policies (where financial liberalisation is an important aspect) as they were promoted by the World Bank and the IMF since the 1980s. Other financialisation researchers take a more nuanced view, stressing that these changes in financial structures cannot be simplistically understood as externally imposed but in fact are also deeply embedded in local institutions (see Rethel, 2010, on Malaysia). This gives us another financialisation interpretation, referring to the shift from a bank-based to a market-based financial system.

While much of the financialisation research in EMEs stresses the distinct characteristics of the phenomenon in these economies (see Becker et al., 2010), the US experience remains a clear reference point because distinctiveness is typically expressed in contrast to US financialisation. In rich countries, the financialisation of the NFC was one of the first foci of financialisation research. Here rising NFC debt levels have been identified as potential sign of financialisation (Orhangazi, 2008). Following Minsky, the ratio of debt stock to income flow is crucial to judge whether an economic unit (such as the firm) can stem the repayment of its debt (Minsky, 1975). Rising indebtedness can mean growing financial vulnerability since larger volumes of cash flow are required to meet future debt servicing commitments. Increased financial vulnerability in turn will dampen NFCs' investment. The latter has been identified a symptom of financialisation, both in rich countries and EMEs (for rich economies see Stockhammer, 2004; Orhangazi, 2008; for EMEs see Demir, 2007, 2009). Currently, high and rising debt burdens among business in EMEs are becoming a worry among financial investors. In particular, the development of debt in Asian economies such as China, India, Indonesia and Malaysia are seen with growing concern by credit rating agencies (CBNC, 2016). Thus, NFC indebtedness is another interpretation of the financialisation phenomenon.

Household financialisation was also first noted in the context of rich economies, but recently there has been concern about rising household indebtedness in EMEs. Some investors – such as George Soros – herald that the Chinese economy is on the brink of a major financial crisis comparable to the 2008 subprime mortgage crisis in the US (Chang, 2016). As discussed above, mainstream economists see rising credit volumes in EMEs often uncritically, arguing that – at least as long as the credit-to-GDP ratio is below its optimal level – rising borrowing will fuel growth. Heterodox economists distinguish between different types of credit, highlighting that especially household credit doesn't contribute to the expansion of productive capacity, but can increase financial fragility. This means that households, in contrast to firms,

typically don't use the borrowed funds to improve their ability to generate cash flow. As consequence, sudden declines in collateral values or job loss can result in their inability to meet debt servicing commitments. Thus, financialisation research is wary of rising household debt burdens (see Karacimen, 2014, for Turkey). For EMEs, dos Santos (2013) and Gabor (2012) argue that the entrance of foreign banks and rising foreign ownership of domestic banks have resulted in a strong rise in household indebtedness. When facing financialisation banks are under pressure to find new clients as NFCs increasingly tap capital markets for external financing. Rising household debt is therefore a consequence of financialisation. This is another interpretation of financialisation in EMEs.

There are some aspects of the financialisation debate that we will not be able to cover in our empirical analysis either due to data limitations or the macroeconomic angle of this analysis. First, as the financialisation literature is inspired by heterodox economics approaches where income distribution plays a key role in determining macroeconomic outcomes, there has been a keen interest in the distributional implications of financialisation. Jayadev (2007) and Stockhammer (2016) provide econometric evidence that financial globalisation has had negative impact on the wage share in panel analyses that include advanced economies as well as EMEs. Second, post-Keynesians have developed a typology of demand regimes that includes wage-led as well as profit-led regimes (Bhaduri & Marglin, 1990), which has been extended to include debt-driven and export-driven growth models (Lavoie & Stockhammer, 2013). Hein and Mundt (2013) apply this framework empirically to the G20 countries and classify Mexico as having a debt-led consumption boom, India, South Africa and Turkey as domestic demand-led economies and China, Indonesia and Korea as strongly export-led mercantilist and Argentina, Brazil and Russia as weakly export-led economies. Third, the shareholder value motivation, first observed among rich country corporates, has also been increasingly impressed onto EME businesses. For the US, Lazonick and O'Sullivan (2000)

analysed how financialisation has changed firm management's goals towards maximising shareholder value in the form of increased dividend payments and share buybacks. Stockhammer (2004) provided econometric evidence for several advanced economies that increased financial activities of firms had a negative impact on real investment. Authors writing in the Marxist tradition argued that NFCs have also been under pressure to generate financial profits (Krippner, 2005). In the context of EMEs, integration in global financial markets and competition with foreign NFCs have put pressure on domestic NFCs to generate financial profits. For Argentina, Mexico and Turkey, Demir (2007, 2009) provided firm-level evidence, showing that NFCs in these countries increasingly undertake financial and short-term, often speculative, investment. Farhi & Borghi (2009) argued that international financial integration exposes NFCs in EMEs to global competition, pressuring these companies to generate short-term (often speculative) financial profits. Fourth, one of the interesting features of the financialisation debate is that it recognizes the endogeneity of the aims (in neoclassical terminology: preferences) of the actors. One stream of the research, thus, has investigated how the perception of households and individuals changes in the course of financialisation. Within a Cultural Political Economy approach and building on Foucauldian analysis Langely (2007) has pointed out that subjectivities change due to increasing involvement with financial market and internalise a financial self-discipline.

To summarise we have identified six financialisation interpretations for EMEs based on the literature, which can be operationalized empirically for our sample of 19 countries. (1) Financialisation is the result of financial deregulation. (2) Foreign financial inflows can cause financialisation. (3) Asset price inflation encourages financialisation. (4) The shift towards a market-based financial system is the origin of financialisation. (5) NFCs increasingly engage with financial markets, experiencing rising debt burdens. (6) High and rising household debt

is a sign of the financialisation of the household. The next section will outline the financialisation indicators we have compiled to capture these six interpretations.

3. Financialisation indicators: Sample countries and data sources

Our country sample consists of 17 EMEs plus the two financialised economies: US and UK. The term EME is not well defined in the literature, loosely referring to middle-income economies that are undergoing economic transformation, for instance, from planned to free-market economy (Kvint, 2009). The choice of our EME sample was guided by the financialisation literature but restricted by data availability. The literature has identified economies in Latin America as financialised, especially Argentina (Ciblis & Allami, 2013), Brazil (Barbosa-Filho, 2005; Rossi, 2013) and Mexico (Correa et al., 2012; Powell, 2013). Emerging Europe is another geographical focus of financialisation research. Here we have included Central European (CE) countries such as the Czech Republic, Hungary, Poland, as well as Russia (Gabor, 2012) and Turkey (Akyüz & Boratav, 2005; Karacimen, 2014). The three former economies together with Russia are collectively referred to as the Central Eastern European (CEE) countries in our sample.

From the African continent only South Africa was considered since there are few signs of financialisation among other African economies (Ashman, Mohamed & Newman, 2013). Finally, from emerging Asia the following countries are part of the sample alongside China: the East Asian economies of Hong Kong, Indonesia, Malaysia (Rethel, 2010), Singapore (Daniels, 2015), South Korea and Thailand as well as India. For this study Hong Kong is particularly important. The city state has been in the analytical focus of research on global financial centres (Wójcik & Burger, 2010; Zeyun & Sheikh Dawood, 2016). Additionally, Hong Kong became an autonomous region of the People's Republic of China in 1997. This tightened the links between the city state and the other large Chinese financial centre,

Shanghai. Thus, a discussion of financialisation dimensions emergent in China necessitates the analysis of Hong Kong's financial structures.

To illuminate the degree of financialisation in EMEs with respect to the six interpretations discussed in section 2 we have compiled six indicators for the countries in our sample, using data from international institutions to ensure the comparability of the figures. These are summarised in table 1 below. Table A.1 in the Appendix contains information about data sources and availability for each indicator.

Table 1. Interpretations of financialisation in emerging economies

Financialisation interpretation	Indicator
Financial deregulation	Financial reform index
Foreign financial inflows	Stock of foreign liabilities (portfolio investment, FDI and other financial inflows)
Asset price volatility	Real house price indices (2010 = 100), coefficient of variation
Shift to market-based finance	Ratio: stock market value traded (% GDP)/ bank credit (% GDP)
NFC financialisation	NFC debt (% of GDP)
Household financialisation	Household debt (% of GDP)

To measure the extent of financial deregulation we use the IMF financial reform index (Abiad et al., 2008). The index ranges between 0 and 1 with higher values indicating more advanced financial liberalisation. Thus, both Anglo-Saxon economies in the sample reached a financial reform index of 1 by the late 1990s, indicating complete deregulation of their financial sectors. The extent of foreign capital inflows present in our sample countries is measured by the stock of foreign liabilities (including portfolio, foreign direct and other financial investment) present as share of GDP. The inclusion of FDI is justified since financialisation can take hold of EMEs as domestic NFCs or banks emulate financial practices of foreign companies that are financialised. The data were obtained from the Lane & Milesi-Ferretti database (Lane & Ferretti, 2011).

Asset price inflation is captured through real house price indices sourced from the Bank of International Settlement (BIS). We focus on house prices rather than other measures of asset prices such as equity prices due to ease of data availability. When inflationary pressures (i.e. a bubble) in the housing market tip house price deflation can be triggered. Hence, it is not merely the high level of house prices that is alarming but more so the large volatility of house prices, the result of inflation combined with deflation of asset prices. Therefore, we consider the coefficient of variation⁷ of real house prices. This is a standard measure of volatility for financial investors, expressing the dispersion of prices as percentage of their mean value.

The nature of the financial system (i.e. whether it is more bank- or more market-based) in the sample countries is assessed using the World Bank's activity indicator. The measure is the ratio of value traded on the domestic stock exchange (expressed as share of GDP) and the share of outstanding credit in total GDP. An activity measure above 1 is usually interpreted economy is more market-based because the activity in capital markets is stronger relative to bank lending. While the use of this indicator is rather standard in the literature (e.g. Čihák et al 2012), there are problems with this interpretation: most stock market trading is secondary trading and an increased market value can have little impact on NFC's financial position. Conversely an increase in bank lending can finance speculative activities.

The financialisation of NFCs is evaluated using data on NFC debt as ratio of GDP. The ratio provides an indication of how much NFCs are exposed to the financial sector through borrowing. Due to limited data availability we can't obtain figures on debt-to-cash flow ratios for NFCs in our sample countries. The debt-to-GDP ratio for NFCs is a good proxy of NFCs' financial vulnerability given that higher debt ratios will require more resources to be paid off. The data were obtained from the BIS database. Finally, figures on the level of household debt (as share of GDP), which is a measure of household financialisation, were sourced from the

⁷ The coefficient of variation (CV) is defined as the ratio of standard deviation (σ) to expected value (μ): $c_v = \frac{\sigma}{\mu}$. The CV is a scale-invariant measure, which is advantageous when assessing volatility (Allison, 1978).

BIS. Ideally, household debt should be assessed as share of disposable household income to obtain a picture about the sustainability of this debt. Data availability limits our study once again, only allowing for an analysis of household debt data as share of GDP. These figures are useful, nonetheless, since they give an indication of the size of household debt in relation to aggregate income in the economy, coming close to a Minsky-type analysis.

Our sample is constraint by data availability and our aim to include several financialisation measures, both in terms of the time period and the countries included. The period studied runs from 1997, when the East Asian financial crisis hit, to 2015, the most recent year for which data are available. For many EMEs, in particular the Eastern European and Asian countries financialisation, this time period is suitable to study the six highlighted financialisation interpretations. By contrast, for Latin American countries a longer time period, capturing, for instance, the international financial flows and financial crises in the region since the 1980s would be more desirable.

We use the global financial crisis as a divider, splitting the period into two: the decade before the global financial crisis (1997 to 2007) and its aftermath (2008 to 2015) to allow for variation. The decade before the financial crisis was characterised by accelerating financialisation (as noted for instance by Tyson & McKinley, 2014, in the context of foreign financial inflows into EMEs). Some countries such as China have experienced financialisation only in more recent years (i.e. from 2008 onwards). The turmoil in Chinese financial markets in 2015/early 2016 sparked a discussion about China's growing financial sector, introducing the issue of financialisation. In this context accommodative monetary policy, embraced by the People's Bank of China in response to the financial turmoil, were seen critically as contributing to 'excessive financialisation' (Chengsi, 2016).

In the next section we will consider the average values for the six indicators outlined here for the periods 1997-2007 and 2008-2015. Where data for 2015 are not available we will include

all available data up to the most recent figures. In one case, for the financial deregulation indicator, we cannot evaluate recent developments since the dataset only provides figures up to 2005. All data are presented in bar charts for better illustration while exact figures are included in table A.2 in the appendix. Where important, growth rates have been included in the graphs. All rates of change (i.e. between the 1997-2007 average and the average of the most recent period available) are also reported in table A.2. Using these six financialisation indicators, the next section will assess the extent of financialisation in 17 EMEs in contrast to the US and UK.

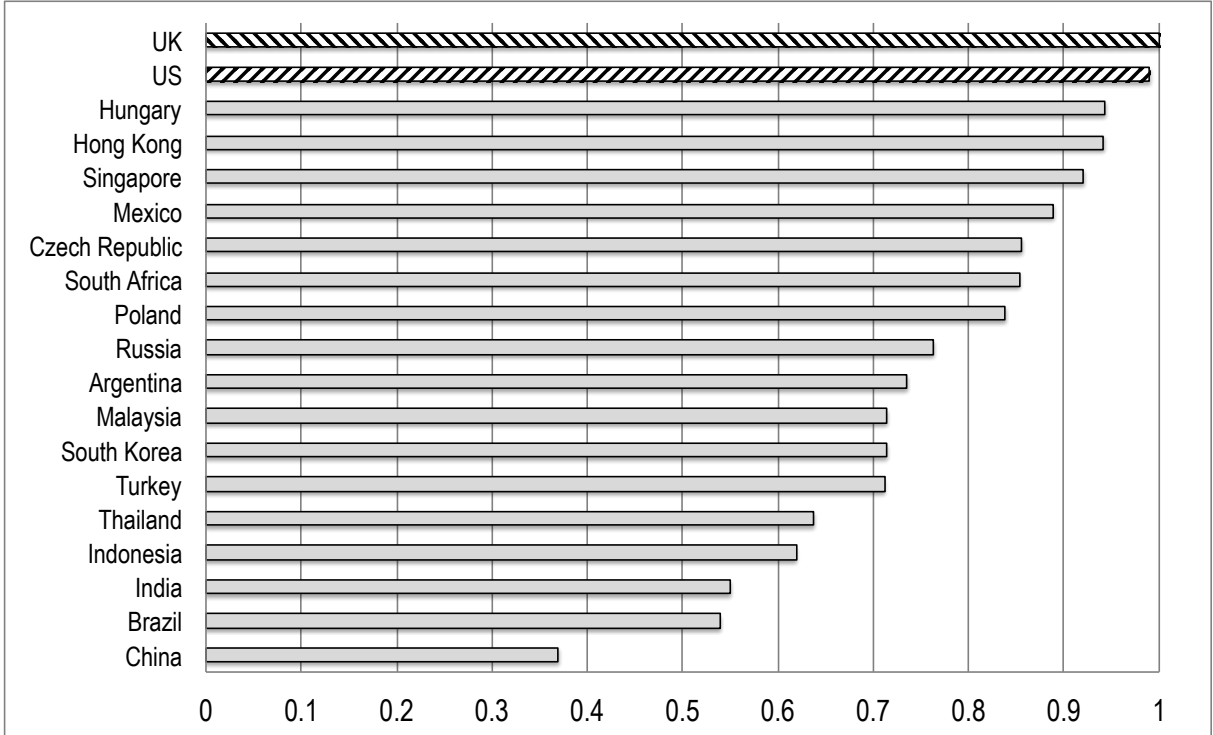
4. Assessing financialisation of emerging economies

The first interpretation of financialisation to be considered is the degree to which countries have implemented financial deregulation. Graph 1 shows the financial reform index across our sample for the decade before the financial crisis. Data availability restricts our analysis to the period 1997-2005. In the US and UK the financial deregulation process started in the 1970s, which explains why both countries were virtually completely financially liberalised, scoring a financial reform index of 1 (or almost 1 in the case of the US) on average during the decade before the financial crisis. In contrast, most of the Asian economies in the sample took a more careful approach to financial deregulation, illustrated in financial reform indices rarely averaging more than 0.7. Notable exceptions are Singapore (with an average financial reform index of 0.92) and Hong Kong (0.94).

The two city states alongside Hungary (0.94) were according to this indicator almost completely financially ‘reformed’ during this period. While Hong Kong and Singapore had historically relatively liberalised financial systems, other East Asian economies – such as Indonesia (0.62), Thailand (0.64), Malaysia (0.71) and South Korea (0.71) – started

deregulation efforts during the 1980s⁸ which crucially contributed to the outbreak of the East Asian crisis in 1997/8 (Arestis & Glickman, 2002). China was hardly affected by the crisis and in fact, despite some financial reforms under way the government still exercises much more substantial controls over the domestic banking sector than its EME peers (Prasad, 2016), illustrated in an average financial reform index of 0.37 for the period 1997-2005.

Graph 1. Financial deregulation of selected EMEs, US, UK (1997-2005 average)



Source: (Abiad et al., 2008).

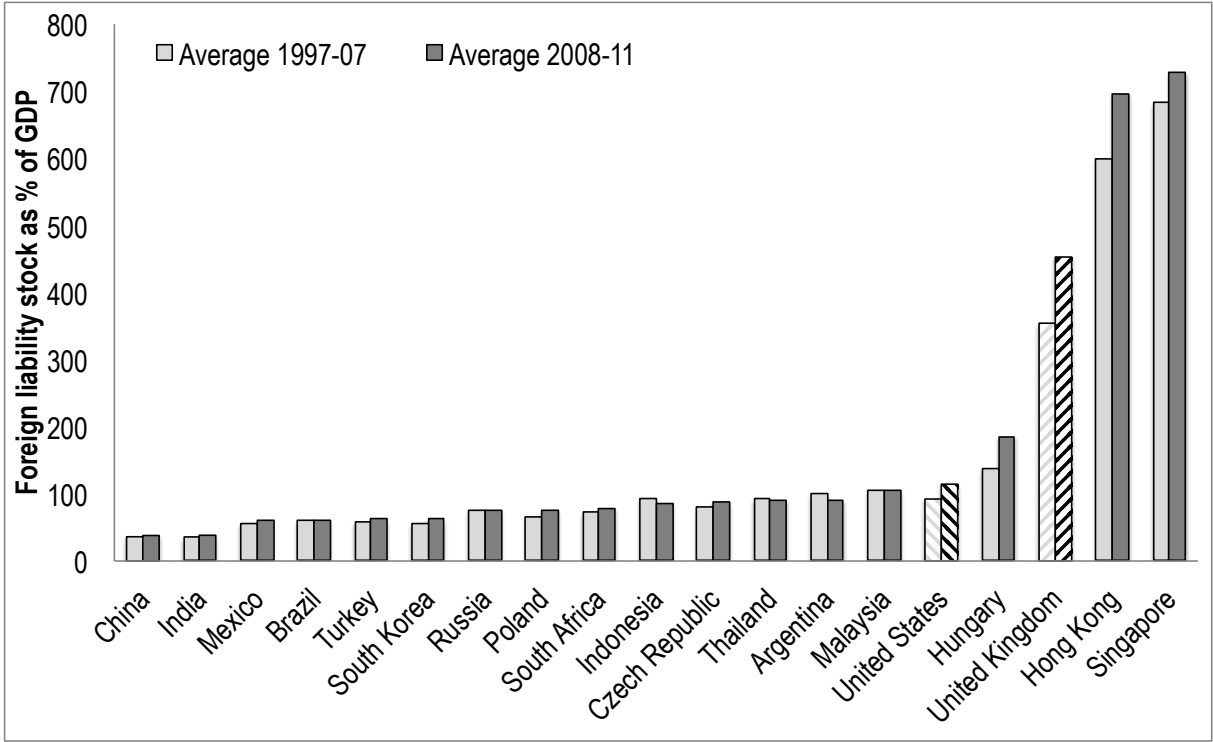
India (0.55) and Brazil (0.54) appear similarly cautious with respect to financial deregulation. In contrast, the CE countries in our sample – i.e. the Czech Republic (0.86), Hungary (0.94) and Poland (0.84) – along with Mexico (0.89) and South Africa (0.85) undertook fast financial liberalisation during the 1990s, bringing these economies close to a fully liberalised regime by 2005 when the dataset ends. Argentina (0.74) rolled back some of its financial liberalisation in the early 2000s as reaction to the 2001 crisis, being one of two EME

⁸ South Korea started even earlier, in 1978 (Arestis & Glickman, 2002).

countries in the sample (alongside Thailand) that did not see a steady progression in financial sector deregulation.

Financial deregulation is closely linked to capital account liberalisation, allowing for freer entry and exit of foreign capital into a country. Graph 2 shows the stock of foreign liabilities present in the sample countries for the periods 1997-2007 and the most recent years, i.e. 2008-2011, on average. Singapore, together with Hong Kong, hosts foreign capital, which amounts to a multiple of the country’s output. Between 2008 and 2011 on average the stock of foreign investment in Singapore was worth 727% of GDP.

Graph 2. Foreign liability stock for selected EMEs, US, UK (1997-2007 and 2008-2011 averages)



Source: Lane & Ferretti, 2011.

FDI was central for Singapore’s industrialisation success, explaining the high figure. In the case of Hong Kong (hosting foreign investment averaging almost 700% of GDP for 2008-11), it is mostly foreign financial investment that account for the large volume of foreign liabilities. In relationship to GDP, the two Asian city states dwarf stocks of foreign financial inflows that the US hosts (114% of GDP) while the UK comes close to their levels (453% of

GDP). At the face of it, financial deregulation and liberalisation of the capital account have moved together. Singapore, Hong Kong and Hungary ranked as the top three EMEs with respect to financial deregulation are also the three EMEs that have accumulated most of the stock in foreign liabilities in the sample. The countries that were most cautious with financial deregulation have also received the smallest volumes of foreign financial liabilities relative to their GDP. China's exposure to foreign financial inflows is the smallest in our sample, reaching merely 38% of GDP on average for 2008-2011. The figures, however, don't suggest that financial liberalisation necessarily attracts foreign financial inflows. While Mexico figured among the top financially deregulated EMEs, its stock of portfolio investment and FDI (60% of GDP) is smaller than Brazil's (61% of GDP).

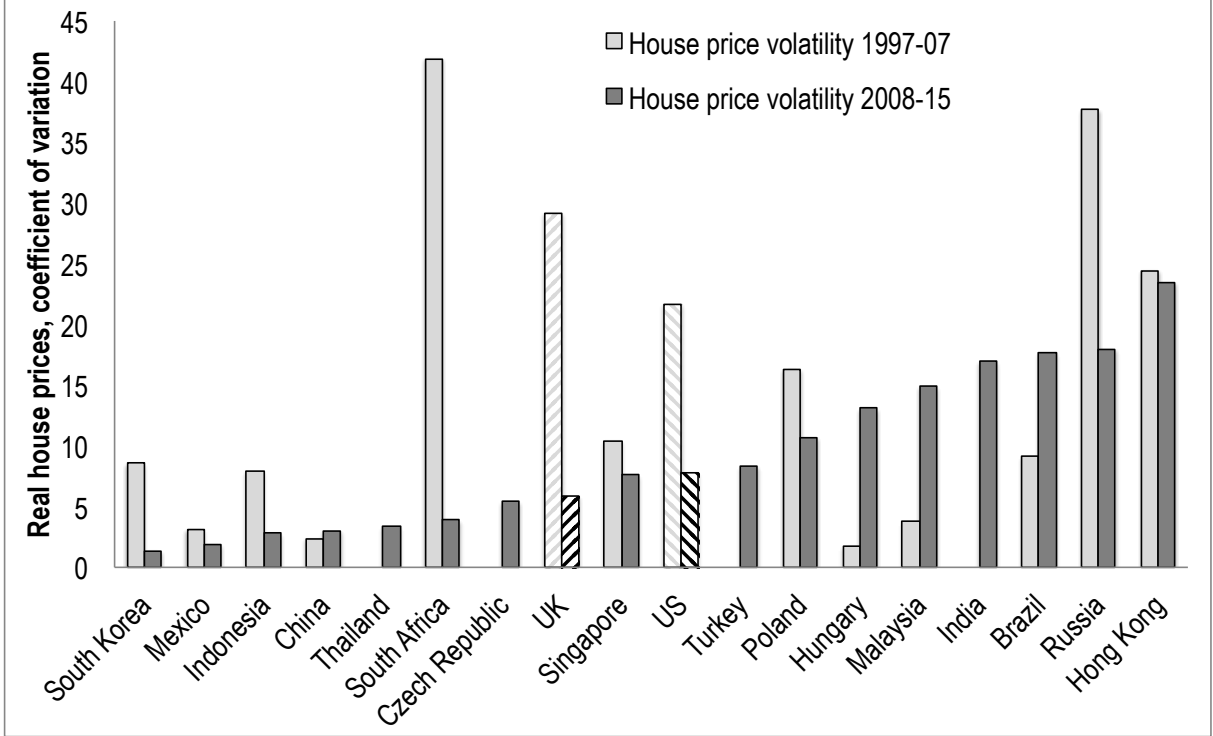
Hong Kong, where deregulation and foreign inflows are more pronounced, could provide an entry point for financialisation into China. Since 2000 Chinese authorities have allowed for selective deregulation of the financial system and liberalisation of capital flows. Especially in recent years this opening up has strengthened the ties between Hong Kong and Shanghai, the prime mainland stock exchange. For instance, the Shanghai-Hong Kong Stock Connect introduced in 2014 enables foreign investors to buy selected Shanghai-listed stocks, while allowing Chinese investors to buy Hang Seng-listed equity. Since 2015 eligible mainland and Hong Kong-based mutual funds can also be purchased in both markets (Prasad, 2016). As these changes are relatively recent, their impact could not have been reflected in neither of the two indicators presented so far.

In recent years, house price volatility has been particularly strong in EMEs, much stronger than in the Anglo-Saxon markets. Graph 3 depicts the volatility of house prices for our sample with volatility during the most recent years (2008-2015), increasing as we read the bar chart from left to right. For the most recent years (2008-2015), volatility in house prices remains present in Hong Kong (23%) and Russia (18%) but has subsided notably in the Anglo-Saxon

economies and South Africa. In our sample, Brazil, India, Malaysia, Hungary and Poland all experienced relatively higher volatility with coefficients of variation exceeding 10% during the latest years. In contrast, China (with a coefficient of variation of 3%) alongside South Korea (1%), Mexico (2%), Indonesia (3%), Thailand (3%) and South Africa (4%) saw relatively lower volatility in their housing markets since 2008.

For the decade before the financial crisis, volatility in house prices was particularly noticeable in South Africa (with a coefficient of variation of 42%), Russia (38%), the UK (29%), Hong Kong (25%), the US (22%) and Poland (16%). While the US subprime mortgage crisis received the most medial and academic attention, inflation in real house prices in EMEs like South Africa in fact outpaced price growth in the US and UK (see Karwowski, 2015, for South Africa). This high level of asset price volatility in EMEs is alarming. Given that these countries are poorer than the US/UK their ability to cope with the adverse effects of house price bubbles is also more limited.

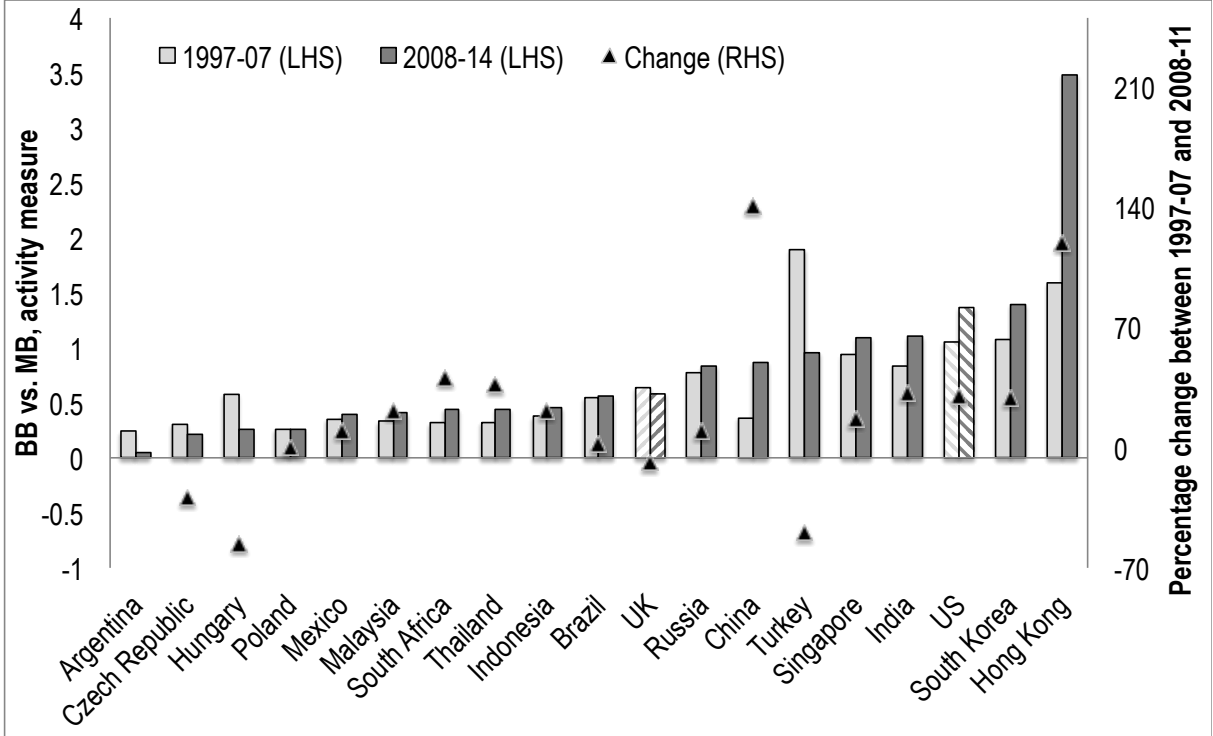
Graph 3. House price volatility in selected EMEs, US, UK (1997-2007 and 2008-2015 averages)



Source: BIS, 2016.

Another interpretation of financialisation in EMEs, highlights the shift from bank-based to market-based finance as the central characteristic. Graph 4 below shows the relative importance of market-based versus bank-based (MB vs. BB) activities in the sample countries. During 2008-2014, alongside the US (with a MB vs. BB indicator of 1.37), Hong Kong (3.48), South Korea (1.39), India (1.11) and Singapore (1.1) possess a financial system, which is dominated by capital markets as the activity indicator is above 1 (see graph 4, left-hand scale (LHS)). This means that the turnaround in capital markets is larger than bank credit expanded. According to this measure, CEE and Latin America countries in the sample possess a more bank-based system. The activity measure of market-based activity (versus bank-based activity) more than doubled in China between the two time periods considered, as can be seen on the right-hand scale (RHS) in graph 4. A similar trend can be observed for Hong Kong, which has reached levels of market-based activity by far exceeding those in the US, typically seen as the archetypal market-based system.

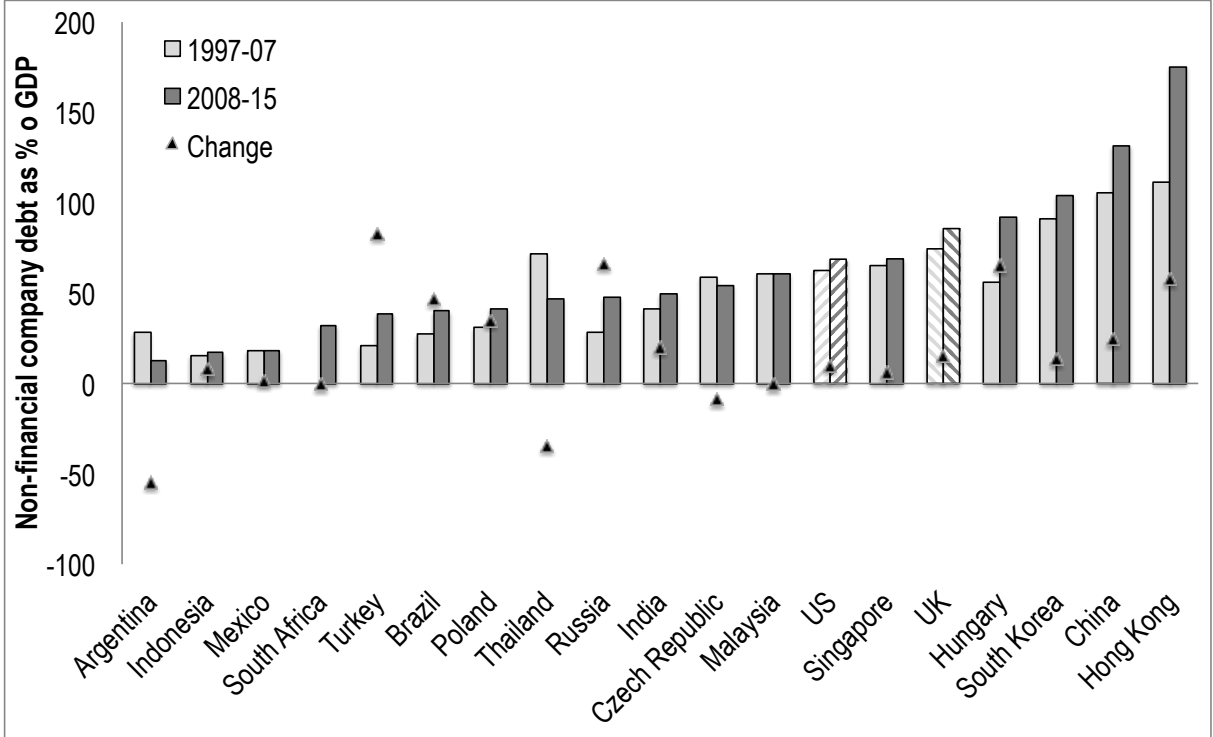
Graph 4. MB vs. BB indicator for selected EMEs, US, UK (1997-2007 and 2008-2014 average)



Note: The averages (1997-2007 and 2008-2011) for the MB-BB activity measure are indicated on the left-hand scale (LHS), while the percentage change in the indicator between the two decades is shown on the right-hand scale (RHS). Source: World Bank, 2013.

For rich economies researchers writing in the post-Keynesian and Marxist tradition have argued that NFCs are increasingly engulfed in financialisation, dampening real investment. We use NFC debt-to-GDP ratios to proxy for businesses’ exposure to financial vulnerability (see graph 5). Countries are arranged from those with the lowest debt burden as share of GDP (on the left) in 2008-2015, moving along the horizontal axis to those with the highest indebtedness (on the right). NFCs in East Asian economies, especially in Hong Kong (176% of GDP), China (131%), South Korea (104%) and Singapore (69%), have the highest debt-to-GDP ratios, with the exception of Singapore all exceeding corporate debt in the UK (86%) and also in the US (69%).

Graph 5. NFC debt as share of GDP for selected EMEs, US, UK (1997-2007 and 2008-2015 averages)



Source: BIS, 2016.

Debt levels in Malaysia (61%), India (50%), Thailand (47%) and especially Indonesia (17%) are, however, more moderate. The Latin American economies in our sample have, by contrast, much lower debt-to-GDP ratios. In Argentina aggregate debt of NFCs merely amounts to 13% on average for the years 2008-2015, while the figure reaches 18% in Mexico

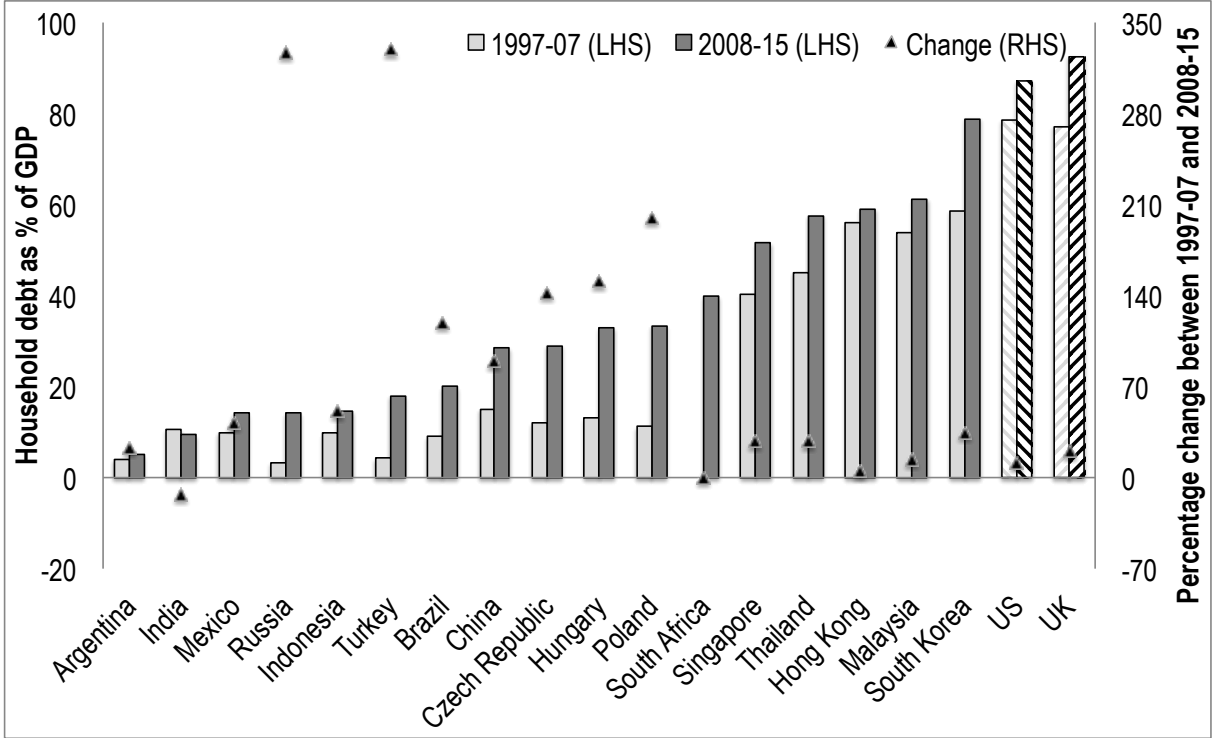
and 40% in Brazil. These low levels of NFC liabilities are a reflection of the difficult access to finance in Latin America, especially in comparison to East Asia and CE (see, for instance, the Milken Institute's capital access index, Barth, Li, Lu, & Yago, 2010). NFC debt burdens in emerging Europe are mostly moderate, ranking from 39% debt-to-GDP in Turkey with only slightly higher ratios in Poland (41%), Russia (48%) and the Czech Republic (54%). Hungary is a notable exception where NFCs in aggregate were more indebted than in the UK in relation to GDP, carrying debt worth 92%. Here as well as in Russia and Turkey NFC debt grew by more than 60% between the two periods of analysis, showing a strong increase in corporate debt.

High and rising levels of household indebtedness are another concern of financialisation research. Graph 6 shows household debt as share of GDP for our sample of EMEs, the US and UK. The two Anglo-Saxon economies possess household debt-to-GDP ratios far larger than most of the EMEs in our sample. Namely, household debt in the UK during the years 2008-2015 was on average 92% of GDP while the figure was 87% for the US. The only EME that comes close to this level is South Korea with a household debt-to-GDP ratio of 79%. Four East Asian countries follow suit, albeit at markedly lower levels: Malaysia with 61%, Hong Kong with 59%, Thailand with 58% and Singapore with 51%.

Emerging Europe tends to possess much lower household debt, not exceeding one third of total GDP in CE: Poland (33%), Hungary (33%), the Czech Republic (29%); and even lower in Turkey (18%) and Russia (14%). The Latin American economies in the sample are less exposed to household debt (Brazil: 20%, Mexico: 14%, Argentina: 5%), once again this is likely to be related to access to finance more generally. In recent years, China has caught up with the CE countries in terms of household debt, reaching a household debt-to-GDP ratio of 28% of GDP for 2008-2015 on average. All of emerging Europe has seen phenomenal growth rates in household debt. In Turkey and Russia household debt more than tripled between 1997-2007 and 2008-2015, growing by 330% and 326%, respectively. In Poland the

household debt burden doubled (growing by exactly 200%), while it increased by a factor of ca. 1.5 in Hungary (152% growth) and the Czech Republic (142% growth). Thus, although household debt remains at a low level in comparison to the Anglo-Saxon economies and many of the East Asian countries, household debt has expanded rapidly in emerging Europe. This raises concern about financialisation in these economies, which could be spurred by entry of foreign banks (Gabor, 2012; dos Santos, 2013)

Graph 6. Household debt as share of GDP in selected EMEs, US, UK (1997-2007 and 2008-2015 averages)



Source: BIS, 2016.

Similar trends in household debt expansion, albeit less pronounced, can be observed in China and Brazil where household indebtedness on average rose by 89% and 119% between the 1997-2007 period and the most recent years (2008-2015). Hence, while overall debt burdens stayed low their growth should be monitored with care.

Summarising the findings of our assessment, we have ranked the countries in the sample from most to least financialised according to the six financialisation interpretations found in the literature. Table 2 provides this overview, using all available data (i.e. 1997-2015 or most

recent year). Countries are arranged by quartiles, ranging from a ‘high’ extent of financialisation in comparison to other sample countries, over ‘medium high’ (labelled ‘mhigh’), medium low (labelled ‘mlow’) to a low extent of financialisation (‘mlow’). The table also groups our sample countries according to their geographical region, which is specified in the first column. Our six measures confirm that there is a large degree of heterogeneity among EMEs in their financialisation experiences since very few countries rank consistently high or low. The Anglo-Saxon economies, by contrast, show up as financialised across these measures, especially. The US and UK rank high or medium high on all six interpretations. This makes them indeed good benchmarks for comparison. In that sense, the chosen measures reflect the debate on EME financialisation well, which tends to stress country-specific developments while comparing them to the Anglo-Saxon experience.

Table 2. Overview of six financialisation dimensions by quartile (1997-2015 averages or latest data)

Region	Country	Financial deregulation	Foreign financial inflows	Asset price volatility	MB vs. BB financial system	NFC debt	Household debt
Latin America	Argentina	mlow	mhigh	low	low	low	low
	Brazil	low	low	high	mhigh	mlow	mlow
	Mexico	mhigh	low	low	mlow	low	mlow
Emerging Europe	Czech Republic	mhigh	mhigh	low	low	mhigh	mlow
	Hungary	high	high	mlow	mlow	high	mhigh
	Poland	mhigh	mlow	mlow	low	mlow	mlow
	Russia	mhigh	mlow	high	mhigh	mlow	low
	Turkey	mlow	mlow	mlow	high	low	low
Africa	South Africa	mhigh	mlow	high	mlow	mlow	mhigh
Asia	China	low	low	low	mhigh	high	mhigh
	Hong Kong	high	high	high	high	high	high
	India	low	low	mhigh	mhigh	mlow	low
	Indonesia	low	mhigh	mlow	mlow	low	mlow
	Malaysia	mlow	mhigh	mhigh	low	mhigh	high
	Singapore	high	high	mhigh	high	mhigh	mhigh
	South Korea	mlow	mlow	mlow	high	high	high
	Thailand	mlow	mhigh	low	mlow	mhigh	mhigh
Anglo-Saxon countries	UK	high	high	mhigh	mhigh	high	high
	US	high	high	mhigh	high	mhigh	high

The two city states among the EMEs, i.e. Hong Kong and Singapore, consistently rank high or medium high on all six measures of financialisation just like the Anglo-Saxon economies. In fact, Hong Kong even appears more financialised than the US and UK according to the six measures since it is the only country that makes part of the top quartile in each of our

financialisation rankings. This is a reflection of its role as financial centre for Asia. Comparing geographical regions, East Asia is particularly exposed to financialisation. Here, house price volatility has been high and foreign financial inflows are especially strong. There are signs of an increasing importance of financial markets in external financing, while both, NFC and household debt burdens are relatively high. Paradoxically, financial deregulation has not been as pronounced as in other EMEs (e.g. CEE). Emerging Europe, by contrast, has liberalised its financial markets much more strongly. The region experienced asset price inflation together with a dramatic surge in household indebtedness and a rise in NFC debt, albeit both from a relatively low base. However, foreign capital inflows were more moderate in CEE. A similar picture emerges in South Africa where deregulation was swift, asset price volatility strong and household debt levels relatively high. Foreign capital inflows have not played such an important role in the African economy. Thus, an understanding of financialisation as mainly externally driven and imposed, for instance through capital inflows (see Lapavistas, 2009), is too simplistic. The role of domestic institutions and internal dynamics has to be studied carefully to understand the different financialisation trajectories in EMEs (as argued by Becker et al., 2010).

Generally, Latin American economies have seen relatively weaker financialisation according to the six measures surveyed, which is somewhat surprising given the large body of research focusing on this geographical area. This shows that our analysis is complementary to studies of changing financial structures in countries over time. The work presented here outlines the relative intensity of specific financialisation interpretations across EMEs. As such its strength is to establish a framework for comparison among EMEs, highlighting those countries that are potentially under-researched despite important signs of financialisation being present.

With respect to China, we find relatively few reasons to be alarmed about the financialisation of the Chinese economy. In this sense, we agree with assessments that don't see China taking a neoliberal turn (which would include a turn towards financialisation) (Lo, 2016). The

connections with Hong Kong should be studied carefully since city state could introduce financialisation to China.

5. Conclusion

This paper has surveyed the financialisation debate on EMEs, identified six interpretations of financialisation and presented empirical measures for these for 17 EME and compared them to the US and UK. Finance plays a prominent role in both, the mainstream and the financialisation debate. The latter is mostly based on post-Keynesian, Marxist and Institutionalist theories and economic sociology. While mainstream economics typically highlights the efficiency of financial markets and regards financial instability as the results of market failure, most non-mainstream economic theories see the financial sector as intrinsically unstable. The post-Keynesian approach appears particularly fruitful for the analysis of financialisation because it emphasises fundamental uncertainty, resulting in rushes to liquidity in times of crisis, the tendency towards speculation among financial investors, the pro-cyclicality of credit extension and the possibility of asset price bubbles. As consequence, post-Keynesians are sceptical about the effects of financial inflows, which tend to impact asset prices rather than real investment and are prone to sudden stops.

Most of the financialisation debate has centred on the US experience of financialisation, but there is a growing literature on financialisation in EMEs. Compared to the debate on advanced economies discussions on EMEs have had a prominent role for capital inflows in economic instability, in part reflecting the experience of the Latin American countries of the 1980s and the Asian economies in the late 1990s. While there is a debate on the relative weight of external and domestic factors, there is an agreement that capital account

liberalisation has had a profound impact on EMEs. Authors like Lapavitsas (2009) stress external factors as main determinants, Becker et al. (2010) and Rethel (2010) emphasise that external effects interact with domestic institutions and power relations in complex ways.

We have compiled six measures of financialisation that correspond to different interpretations within the financialisation debate. These included the key role of financial deregulation, foreign capital inflows, the volatility of asset prices, the relative size of banks versus stock markets and the degree of indebtedness of businesses and of households. We found a substantial variation within the EMEs' experience. EMEs mostly rank lower than the US or the UK on these indicators with the important exception of house price volatility. Here, EMEs across geographic regions have sometimes experienced stronger and often more persistent volatility than the Anglo-Saxon countries. This is alarming given the more limited resources of EMEs to deal with adverse effects resulting from asset price bubbles.

There are some patterns that can be distilled across continents. Asia, especially East Asia, has been more exposed to financial inflows, stock markets have become more important in the region, while debt levels (both for households and NFCs) are relatively high. Emerging Europe has very actively deregulated its financial sectors, experiencing asset price bubbles and a strong surge in household indebtedness together with growth in business debt. South Africa's experience was similar to emerging Europe's except that corporate debt levels remained relatively low. Latin America (Brazil, in our sample) was also exposed to asset price inflation over the past two decades. However, other financialisation measures appear more moderate in comparison to Asia and CEE. This finding is somewhat surprising given the large body of financialisation research for Latin America, while financialisation in Asia and CEE is comparatively under-researched.

There are concrete insights from our findings that are relevant to policy makers. Thus, our analysis lends support to the heterodox perspective on the role of finance in development. While mainstream analysis stresses potential long-term growth effects from financial

deregulation, heterodox economists are more sceptical cautioning of potential risks from financial growth. For instance, the volatility of house prices is a concern across EMEs. Hence, policy makers should be more wary of potential asset price inflation. Equally, debt levels – be they of firms or household – should be monitored carefully especially in relation to income to assess the sustainability of debt burdens.

For future research several questions arise. First, we have identified six interpretations of financialisation. An important question is whether these measures do reflect distinct financialisation processes or whether they merely map different dimensions of the same socio-economic process. To address this question future research should investigate the correlation among financialisation measures. Second, the question arises whether those six interpretation are of equal relevance and explanatory power. Future research should analyse the determinants of the financialisation measures and whether they help explain changes in economic performance and income distribution.

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Appendix

Tabel A.1. Financialisation interpretations: Data coverage

Indicator	Coverage
Financial reform index	1997-2005
Stock of foreign liabilities (portfolio investment, FDI and other financial inflows)	1997-2011
Real house price indices (2010 = 100)	1997-2015; data for Argentina are not available; for the following countries data are not available for the entire period: for Singapore data start in 1998, for Malaysia in 1999, for Brazil and Russia in 2001, for India in 2002, for China and Mexico in 2005, for Poland in 2006, for Hungary in 2007, for the Czech Republic and Thailand in 2008, for Indonesia in 2009 and for Turkey in 2010.
Ratio: stockmarket value traded (% GDP)/ bank credit (% GDP)	1997-2014
NFC debt (% of GDP)	1997-2015
Household debt (% of GDP)	1997-2015; for the following countries data are not available for the entire period: for Russia data start in 1998, for Indonesia in 2001, for China and Malaysia in 2006, for India in 2007, for South Africa in 2008.

Table A.2. Financialisation dimension: Overview

Indicator	Financial deregulation			Foreign financial inflows			Asset price volatility			Shift from MB to BB financial system			NFC financialisation			Household financialisation		
	Financial reform index (0-1)			Foreign liabilities (stock, % GDP)			Real house price volatility			MB vs. BB activity indicator			NFC debt (% GDP)			Household debt (% GDP)		
	1997-2007	2008-2015	% Change	1997-2007	2008-2015	% Change	1997-2007	2008-2015	% Change	1997-2007	2008-2015	% Change	1997-2007	2008-2015	% Change	1997-2007	2008-2015	% Change
Argentina	0.74	n/a	n/a	100.9	90.9	-10.0	n/a	n/a	n/a	0.24	0.05	-80.7	28.4	12.8	-55.0	4.1	5.1	23.3
Brazil	0.54	n/a	n/a	59.8	61.3	2.4	9.1	17.7	0.93	0.55	0.56	2.1	27.2	39.9	46.8	9.1	20.0	119.4
Mexico	0.89	n/a	n/a	55.9	59.7	6.7	3.1	1.9	-0.39	0.36	0.39	9.4	18.1	18.3	1.3	9.9	14.1	42.0
Czech Republic	0.86	n/a	n/a	80.4	89.0	10.6	n/a	5.4	n/a	0.31	0.22	-29.2	59.1	54.3	-8.1	12.0	29.1	141.9
Hungary	0.94	n/a	n/a	136.8	185.3	35.5	1.8	13.1	6.43	0.58	0.26	-56.2	55.6	91.9	65.3	13.1	32.9	151.8
Poland	0.84	n/a	n/a	66.3	76.5	15.4	16.3	10.7	-0.34	0.27	0.27	0.5	30.8	41.4	34.3	11.1	33.4	199.9
Russia	0.76	n/a	n/a	76.3	75.5	-1.0	37.7	18.0	-0.52	0.77	0.84	9.4	28.7	47.6	66.2	3.3	14.3	326.3
Turkey	0.71	n/a	n/a	58.5	62.1	6.2	n/a	8.3	n/a	1.89	0.96	-49.1	21.1	38.7	83.2	4.2	18.1	329.8
South Africa	0.85	n/a	n/a	72.1	78.6	9.0	41.9	3.9	-0.91	0.32	0.45	40.7	n/a	32.2	n/a	n/a	39.8	n/a
China	0.37	n/a	n/a	36.2	38.0	5.0	2.3	3.0	0.28	0.36	0.87	140.7	105.6	131.5	24.6	15.1	28.5	89.1
Hong Kong	0.94	n/a	n/a	599.4	696.2	16.2	24.5	23.5	-0.04	1.59	3.48	119.1	111.5	175.5	57.5	56.0	59.0	5.4
India	0.55	n/a	n/a	34.6	38.5	11.2	n/a	17.0	n/a	0.84	1.11	32.1	41.1	49.5	20.5	10.7	9.3	-12.7
Indonesia	0.62	n/a	n/a	94.0	84.7	-9.9	7.9	2.8	-0.65	0.38	0.46	21.7	15.7	17.0	8.0	9.7	14.7	50.8
Malaysia	0.71	n/a	n/a	106.1	106.6	0.5	3.8	14.9	2.95	0.33	0.40	21.3	61.1	61.0	0.0	53.7	61.2	13.9
Singapore	0.92	n/a	n/a	682.4	727.3	6.6	10.4	7.6	-0.27	0.94	1.10	16.9	65.0	69.0	6.1	40.4	51.5	27.4
South Korea	0.71	n/a	n/a	55.4	62.8	13.3	8.6	1.4	-0.84	1.08	1.39	28.9	91.5	104.2	13.9	58.6	78.9	34.7
Thailand	0.64	n/a	n/a	92.4	90.8	-1.6	/a	3.4	n/a	0.33	0.45	37.0	71.6	47.1	-34.2	45.1	57.6	27.6
UK	1.00	n/a	n/a	354.3	452.9	27.8	29.2	5.9	-0.80	0.64	0.58	-8.9	74.5	85.8	15.1	77.1	92.5	20.0
US	0.99	n/a	n/a	92.3	114.5	24.0	21.7	7.8	-0.64	1.05	1.37	29.7	62.5	68.7	9.9	78.6	87.2	11.0

