2013/0
2013

- In the wake of recent crisis developments in the US and Europe, non-bank credit channels have often been portrayed as 'shadow banking' and have been considered primarily through the lens of the risks they may pose to financial stability. However, the debate about financial system structures remains immature, in large part due to lack of reliable and comparable data.

One clear lesson from the US financial crisis of 2007-09 and the European financial crisis since 2007[1] has been the lack of adequate understanding of the linkages between the financial system and the economy as a whole, hence the generalised emphasis in the past few years on 'macro-prudential' policy and 'macro-financial' modeling and research (Galati and Moessner, 2011; Roger and Vlcek, 2012). Economists and policymakers have gradually realised the extent of the gaps in their analysis of the economic role of the financial system, which were almost systematically overlooked in macroeconomic models. Filling these gaps is now broadly understood as a policy objective, not least as an analytical underpinning of better regulation of the financial system (Hanson, Kashyap and Stein, 2011). But advances in understanding and modeling are slow and still at a far too-early stage to provide a basis for policy (Goodhart *et al*, 2012).

In this context, renewed attention is being paid to structures of the financial system(s) and how such structures interact with the broader economy (Tarullo, 2012). Broadly speaking, there have been three main aspects to this debate. The first aspect, on which this paper is focused, is the respective roles and mutual interaction of bank and non-bank financial intermediation within a given financial system, including the existence of non-bank structures involving bank-like risks often captured by the term 'shadow banking' (McCullen, 2007; Gorton, 2009; Pozsar *et al*, 2010; Adrian and Ashcraft, 2012). The second aspect is structures within the banking segment of the broader financial system, including the debate about so-called too-big-to-fail banks and the question of legal, operational and/or accounting separation between different sub-segments of banking activity (Independent Commission on Banking, 2011; Goldstein and Véron, 2011). The third aspect is the cross-border integration of the financial system and its relationship with both financial stability and growth, a topic that before the crisis tended to be studied more in-depth in the context of emerging economies than advanced ones (Edison *et al*, 2002; Rodrik and Subramanian, 2009) but which has gained attention since the crisis as 'financial fragmentation' both at global level (McKinsey Global Institute, 2013) and particularly in the euro-area context (IMF, 2012).

The debate about the respective roles and mutual interactions of bank and non-bank financial intermediation has tended in the past few years to be focused primarily on concerns about shadow banking, which is framed as a list of specific financial stability challenges that may be addressed by targeted regulatory policy initiatives. These include the risks associated with specific segments such as special investment vehicles, asset-backed commercial paper conduits and other types of securitisation products, repurchase (repo) markets, securities lending, money market

1. The often-quoted expression 'global financial crisis' is avoided here because it fails to describe accurately both the vastly different degrees of financial disruption experienced by different parts of the world, and the fact that the crisis was largely resolved in the US after less than two years, while it remains unresolved in Europe.

Against this backdrop, the preliminary thoughts presented in this paper are intended as a contribution to a research effort that may more clearly distinguish between shadow banking and non-bank credit, and would focus on the broader features of financial systems and frame the assessment of new policy initiatives within this more holistic approach.

Differences in regulatory and statistical frameworks make it notoriously difficult to make quantitative cross-border comparisons of financial systems beyond the bluntest of indicators. Figure 1, which shows the evolution of stocks of bank loans to non-financial corporations and non-financial corporate bonds in the world's three largest economic regions, provides a broad-brush indication of both the overall credit development trend and the relative importance of bank credit.

Notwithstanding the differences in quantities measured (eg loans to households are included in the Asia data), Figure 1 captures some well-known differences between the financial systems and conditions of the three regions. Bond financing is considerably more developed in the US than in comparably large economies; the financial crisis has slowed or even reversed credit expansion in the US and Europe but has barely dented it in Asia. Interestingly, the US is the only one of the three regions where the share of bond to total financing, thus measured, has increased significantly in that period (from 39 percent in 2007 to 47 percent in 2011), while it has increased only slightly (from 11 to 13 percent) in Europe and not at all (at 10 percent) in Asia.

It is even more difficult to draw quantitative comparisons between shadow banking systems, if only because the study of shadow banking is still in an embryonic phase. Some go as far as arguing that singling out the shadow banking system as a category is unhelpful and that specific activities

whole is useful and desirable, there is a keen acknowledgment of data limitation. Pozsar and Singh (2011) note that ***"[t]he flow of funds accounts, as currently designed, are insufficient to adequately understand the shadow banking system."*** The European Central Bank, in what it

bond finance is comparatively much more developed than in the euro area (S&P, 2012). Moreover in the euro area, the vicious circle between banks and sovereigns has led to a trend of ***'financial fragmentation'*** (IMF, 2012) characterised by increasingly divergent lending conditions, particularly for small- and medium-sized enterprises (SMEs), depending on the country in which they operate. Lending data collected by the ECB and presented in Figure 2 illustrates this trend.

SMEs in Europe are generally not able to access bond markets directly; moreover SME credit securitisation is not well developed in Europe and, in at least several EU member states, severe regulatory limits exist on the operations of certain types of non-bank intermediation, such as leasing outside of banking groups. If anything, aggregate lending data such as that shown in Figure 1 tends to underestimate the negative economic impact of credit scarcity for SMEs, first because anecdotal evidence suggests that banks maintain their lending relationships with larger, 'blue-chip' borrowers as a matter of priority, and second because weak banks tend to prioritise the extension of credit to ailing borrowers in order to avoid the recognition of losses that would be inevitable if such borrowers default, a phenomenon that has been variously labelled 'extend and pretend' or 'zombie banking', and which has been analysed both in the US Savings and Loan crisis of the 1980s and in the Japanese crisis of the 1990s and early 2000s (Kane, 1987; Caballero, Hoshi and Kashyap, 2008). The upshot is that significant segments of the EU economy appear to have severely restricted access to financial credit as a result of bank deleveraging, the euro crisis and the relative lack of alternative financing channels.

In China, there has been a dynamic expansion in recent years of both the bond markets and non-bank financial intermediaries such as trust companies, which have been reported as significantly outpacing the growth of banks, most of which are state-owned. According to such reports, in the second half of 2012 non-bank credit provision was even as large as bank financing for the first time[5]. In the Financial Times' estimate, assets managed by trust companies reached RMB 6.3 trillion in late September 2012 from only RMB 4.1 trillion by end-2011, and 'wealth management products' were expected to reach RMB 20 trillion by the end of 2012 from RMB 800 billion five years earlier[6]. The extraordinary expansion of China's financial sector over the past decade or so has occurred without major financial disruption so far, even though concerns have been aired repeatedly about the sustainability of the Chinese financial system's current structures (eg Walter and Howie, 2011) and have been fed more recently by sustained investor demand for emerging market securities more generally[7]. Even though assessment is made difficult by the lack of comparable data, available information suggests that the role of non-bank credit is now greater in China than in Europe in the financing of the economy, though probably not as large as in the US.

The trends are not only at regional or national level. The deleveraging of European banks has led them to sharply reduce their exposures to specific global market segments, such as the financing of infrastructure, commodities trading, or purchases of aircraft or ships. While some of this activity has been picked up by banks from other parts of the world (particularly from Japan), part of the substitution has been not by banks but rather by non-bank financial players including pension funds and insurance companies[8]. More generally, trends including regulatory initiatives such as Basel III, the rigidity of many banks' corporate culture and the increasing difficulties they experience to attract the best financial talent, and new data, technologies and tools that enable smaller non-bank actors to assess credit as effectively as incumbent banks, might be contributing to a shift of activity from banks to non-banks on a global basis[9].

This brief overview suggests that while the development of non-bank credit has occasionally been spurred by regulatory arbitrage or excessive reliance on perceived public guarantees (such as for US Money Market Mutual Funds), it has generally had rather beneficial economic consequences (or its absence has been detrimental) in the three regions observed:

- In the US, non-bank credit channels have been major contributors to the mitigation of the neg-

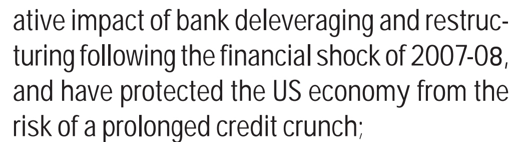
5. Simon Rabinovitch, 'Risk increases in alternative finance sector', ***Financial Times***, 12 December 2012.

6. Simon Rabinovitch, 'Uncertain foundations', ***Financial Times***, 3 December 2012.

7. See eg Vivianne Rodrigues and Stephen Foley, 'Concerns over high demand for EM bonds', ***Financial Times***, 28 March 2013.

8. See David Oakley, 'Shadow banks fill infrastructure debt void', ***Financial Times***, 1 February 2013.

9. See John Dizard, 'How banking will and must change', ***Financial Times***, 28 July 2012.



ative impact of bank deleveraging and restructuring following the financial shock of 2007-08, and have protected the US economy from the risk of a prolonged credit crunch;

- In Europe, conversely, the dominance of banks has tied credit conditions to the fiscal situation of the local sovereign and has thus contributed to poor economic growth, without bringing any benefits in terms of systemic stability;
- In China, while it remains too early to assess the financial stability impact of the rapid expansion of non-bank credit in the past half-decade,

Adrian, Tobias and Adam Ashcraft (2012) 'Shadow Banking: A Review of the Literature', ***Staff Report*** No. 580, New York: Federal Reserve Bank of New York, October

Caballero, Ricardo, Takeo Hoshi and Anil Kashyap (2008) 'Zombie Lending and Depressed Restructuring in Japan', ***American Economic Review*** 98:5

Darvas, Zsolt (2013) 'Can Europe recover without credit?' ***Policy Contribution*** 2013/03, Bruegel

Edison, Hali, Ross Levine, Luca Ricci, and Torsten Slok (2002) 'International Financial Integration and Economic Growth', ***Working Paper*** 9164, National Bureau of Economic Research

ECB (2012) 'Shadow Banking in the Euro Area: An Overview', ***Occasional Paper Series*** No. 133, European Central Bank

European Commission (2012) 'Green Paper – Shadow Banking', COM(2012) 102

FSB (2012a) ***Global Shadow Banking Monitoring Report 2012***, Financial Stability Board, November

FSB (2012b) 'Strengthening Oversight and Regulation of Shadow Banking – An Integrated Overview of Policy Recommendations', ***Consultative Document***, Financial Stability Board, November

Galati, Gabriele and Richhield Moessner (2011) 'Macroprudential policy – A literature review', ***BIS Working Paper*** 337, Bank for International Settlements

Ghosh, Swati, Ines Gonzalez del Mazo and Inci Otker-Robe (2012) 'Chasing the Shadows: How Significant is Shadow Banking in Emerging Markets?' ***Economic Premise*** No. 88, The World Bank

Goldstein, Morris and Nicolas Veron (2011) 'Too Big To Fail: The Transatlantic Debate', ***Working Paper*** 11-2, Washington DC: Peterson Institute on International Economics