BANK OF ENGLAND

Quarterly Bulletin

2017 Q1

Report

BoE-HKMA-IMF conference on monetary, financial and prudential policy interactions in the post-crisis world

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ISSN 2399-4568

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During 24–25 October 2016, the Bank of England (BoE), the Hong Kong Monetary Authority (HKMA) and the International Monetary Fund (IMF) held their second joint conference on monetary, financial and prudential policy interactions in the post-crisis world.[1] The conference, hosted by the HKMA, provided a forum for leading academics and senior policymakers from across the world to discuss challenges that central banks and other policymakers face in the post-crisis environment. Topics were the rise of non-bank intermediation and its implications for funding conditions, monetary policy transmission, systemic risk and appropriate policy responses on the national and international level. Policy discussions surrounded the optimal mix of monetary, macroprudential, and microprudential policies and the appropriate or feasible level of international co-ordination.

This report summarises the main issues discussed by participants during the two-day conference. The programme and presentation slides for the sessions held on 24 October are available on the Bank's website.[2] The roundtable discussion on 25 October was conducted under 'Chatham House Rules'.

How is the importance of non-bank intermediation affecting the monetary transmission mechanism?

The discussion on this topic was wide-ranging. Participants noted that the type of non-bank intermediation present in the run-up to the financial crisis had changed, with the likely transmission mechanisms also altered. In the post-crisis environment, with very low interest rates and depressed term premia, non-financial corporations have found it advantageous to issue bonds rather than borrow from banks. Non-bank intermediaries (particularly asset managers) have responded to the low interest rates by searching for yield, providing demand for the robust issuance of corporate debt. By itself, this development could be interpreted as providing a better environment for the funding of firms. However, if this activity was being spurred by regulatory arbitrage (say, to avoid capital requirements) then one could expect amplified activity or more procyclicality from non-bank positions than from banks. This might pose a challenge to the effective working of the transmission mechanism in the event of an exogenous shock given the heightened 'run-ability' of liabilities unprotected by deposit insurance and the availability of more sources of finance through the non-bank sector. And having reached the effective lower bound (ELB), some participants argued that interest-sensitive parts of advanced economies had not yet recovered suggesting that (even with a larger non-bank sector and more funding sources) the effectiveness of monetary policy was impaired.

By contrast, others noted that non-bank financial intermediation seemed to have strengthened monetary transmission. The IMF's *Global Financial Stability Report*, in a chapter titled 'Monetary Policy and the Rise of Nonbank Finance' concluded that the rise of non-bank financing, and the importance of the risk-taking channel, had actually strengthened the transmission of monetary policy over the past fifteen years.[3] Using microdata on banks, a participant provided evidence that banks alter their portfolios in favour of securities when rates are low and the prospect of profits from previous fire sales are high. Non-banks, as financial institutions active in securities markets, follow suit. This might lead to the crowding out of riskier loans to the real sector, having potential downside consequences for productivity and growth. This view was, however, challenged as it is not clear if such a development was driven by the supply or demand for loans, as risk aversion by companies could play an important role.

Some participants observed that the transmission mechanism also depended on the type of monetary policy tool being used.

(1) This report was prepared by Gaston Gelos (IMF), Julia Giese (BoE), Andreas Joseph (BoE), Sujit Kapadia (BoE), Laura Kodres (IMF), Linda Tse (HKMA) and William White (Chair of the Economic and Development Review Committee, OECD). This summary does not represent the views of the BoE, the Monetary Policy Committee, the Financial Policy Committee, the Prudential Regulation Committee, the HKMA, the IMF or the OECD. The write-up of the first conference is available at www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2015/q406.pdf.
(2) See www.bankofengland.co.uk/research/Pages/conferences/2016/24-251116.aspx.
(3) See www.imf.org/external/pubs/ft/gfsr/2016/02/pdf/c2.pdf.

For instance, reserve requirements typically affect only banks and hence non-banks are not subject to them. Some non-conventional monetary policy instruments, such as the purchase of securities by the central bank, affect banks and non-banks equally. Overall, it appeared to many participants that without more theory and empirical evidence available, it was still unclear what types of (perhaps non-standard) transmission mechanisms were currently at work through non-bank intermediaries. Clear definitions within the non-bank sector, a more comprehensive data coverage, additional modelling efforts, better measurement of non-bank intermediation and investigation of non-standard transmission channels would be some ways to determine the influence of non-banks on monetary transmission.

The implications for financial stability, and hence for the mix of monetary and macroprudential policies, was hotly debated. A number of participants viewed the chances of instability arising from non-banks' fire sales of securities and runs as potentially higher in the post-crisis environment. Others noted that the non-bank intermediaries could provide a floor when fire sales ensued as some would find profit opportunities in such sharp declines. Despite differing views, most participants felt that the central bank should not provide its lender of last resort facilities for non-banks. Instead, they favoured *ex-ante* micro and macroprudential policies as an appropriate response — that is, a preference or 'leaning' against a build-up of risks rather than 'cleaning' up the financial system after a crisis occurs.

How might the rise in non-bank intermediation affect spillovers of monetary policy across countries?

Arguing that it was important to understand the alterations in capital flows to determine whether the global financial system was safer or not, one participant provided a set of empirical results regarding global capital flows and their determinants and trends. Several observations were noted: capital flows were increasingly less bank-based and more tilted to the use of corporate debt. Moreover, these types of flows were more sensitive to both measures of global risk-taking (proxied by the VIX index) and to global monetary policy (proxied by the US federal funds rate appropriately adjusted for its proximity to the ELB).

In the discussion that ensued, several participants commented that the correlations obtained in the study, although compelling, should be treated as such and not viewed as causal. In particular, global conditions were viewed as influencing monetary policy and hence endogenous relationships should not be ruled out. Another issue arising in the general use of capital flow data is the inability to detect the maturities of debt instruments and the credit riskiness of such instruments. For this reason, conclusions about the overall riskiness of the financial system relative to the spillover of monetary policy should be carefully interpreted.

It was also pointed out that non-banks stepped in to provide funding in advanced economies (AEs) when AE banks searched for yield in emerging market economies (EMEs). An interest rate rise in AEs, however, could give rise to a contraction abroad as AE banks pull back from riskier EME lending, suggesting an international risk-taking channel of monetary policy and a potential vulnerability for EMEs.

The view of the participants was that there were spillovers from US monetary policy on EMEs occurring through capital flow changes and that given the increased heterogeneity of the types of institutions intermediating such flows, it was difficult with this information alone to conclude whether they had made the global financial system more stable or not. Moreover, some of the spillovers and transmission effects of monetary policy might be intentional, not unintended. Indeed, several participants noted that the use of market-based finance had many positive characteristics and a reliance on more risk-taking from non-bank players and instruments might help revive stagnant economies.

What are the implications of non-bank activities on the design and effectiveness of prudential policies?

Since non-bank activities can take a number of different forms and affect financial stability in myriad ways, the discussions elicited a large number of suggestions, depending on the perspective taken. Measures to stop 'runs' received a lot of attention, in particular better 'gates' to prevent rapid and/or large redemptions and better liquidity management by asset management firms. In addition, macroprudential-based margins and haircuts for repurchase agreements and over-the-counter derivatives could help to limit the procyclicality of some types of disruptive market activities. At least one participant suggested that broad standards that created positive incentives could be used to condition market behaviour. Along these lines would be the elimination of tax incentives for the use of debt instruments. Another felt that there should be the equivalent of the Basel Committee for non-banks. In contrast, it was not yet clear which part of non-bank financing required a policy response. It was stressed that one should not overburden macroprudential policies and avoid a 'macroprudential infinity'.

Reflecting concerns that the financial system might now be less stable, and that macroprudential tools might be inadequate to maintain stability, a number of participants raised the issue of resolution procedures ('cleaning' rather than 'leaning'). A good legal framework for restructuring debt

and resolving companies (including centralised counterparties) could cut the costs of an economic and financial crisis. There was a sense that not enough had been done on this front. In particular, the 'too big to fail' problem is still unresolved. And one participant argued that because global systemically important financial institutions' profitability may have been reduced by tougher regulation, the likelihood of the taxpayer having to bail them out might actually have increased.

Many participants called for better data to inform policymakers about developments outside the banking system. Additionally, the information could be used to sensitise market participants, such as asset managers, regarding the conditions under which they might pose risks to financial stability, through say, herding behaviour. It was very clear that one of the reasons for the varied views about the design and effectiveness of potential tools was an inability to discern the reasons underpinning non-bank intermediaries' strategies and the extent of the build-up of risks.

What are the implications for (the mix of) monetary policy and prudential regulation from the changing financial system?

Several participants noted that some factors leading to financial instability were common across banks and non-banks — notably that bad incentives were prevalent throughout the financial system and that credit bubbles, not asset bubbles, had been the source of the crisis. Despite the prevalence of these features, most of the response to the crisis has been to regulate banks. Going forward, many agreed that the objective was to reduce excessive risk-taking, and that macroprudential regulation of the financial system as a whole was key. Various participants agreed that a stronger focus on asset management was needed, as compared to a complex regulatory framework for banks. The role of synthetic leverage among funds and securities lending was highlighted as well as the risks of exchange-traded funds. Still, there was a fair degree of scepticism from some participants about whether such regulations could be effective given the limitations of extending the regulatory perimeter to include non-banks.

On whether monetary policy should react to asset price bubbles, there was debate with some arguing that although macroprudential policies should be the first line of defence, monetary policy had a role to play in leaning against credit-driven asset prices bubbles. Others suggested that this type of 'leaning against the wind' might dilute the credibility of central banks in their fight against inflation. Another participant argued that leaning against the wind could be warranted under certain circumstances, but that it had costs in terms of output and inflation volatility that would need to be considered relative to the risks of a crisis. It was therefore more important to examine *how* 'leaning against the wind' should be done alongside macroprudential tools, not whether to do it at all.

In this context, several participants highlighted the importance of co-ordination between monetary and macroprudential policies, since they were intrinsically linked — and how to communicate their relative usefulness to others in government and the general public. It was argued that the use of macroprudential tools could be limited by political economy constraints in which monetary policy makers (especially those using inflation-targeting frameworks) had gained credibility but were afraid to compromise it by adding another objective — financial stability.

More than one participant noted that at the moment, with monetary policy loose and macroprudential policies attempting to limit the risk-taking that was naturally induced, the two policies were being used as substitutes, not complements. Moreover, this combination might well be exacerbating interconnectedness, not mitigating it. One participant noted that the activities that gave rise to credit risks outside the banking system were now reintegrated into banks, and that asset management was now the dominant shadow banking activity in many advanced economies, with accommodative monetary policy affecting both banks and non-banks.(1) Given this fact, and the redemption risks in the non-bank sector, runs on asset managers could entail price externalities that would also affect banks.

Can a country insulate itself from monetary policy from abroad with the use of macroprudential policies?

One participant provided some new research that shed light on the channels through which monetary policy is transmitted abroad and hence what types of policies could be used to insulate countries from external shocks. The basic intuition was that the introduction of heterogeneity in financial institutions' risk-taking predilections (as modelled by different Value-at-Risk constraints) along with limited liability of these financial institutions led to a non-linear effect at low interest rates. Although the typical result was that lower interest rates were associated with less risk-taking and leverage, as interest rates fell below some threshold, large intermediaries increased their risk-taking and their leverage instead of reducing it. This suggested that financial stability risks might increase non-linearly in low interest rate environments and that certain types of intermediaries were at higher risk and bear watching.

In terms of policy responses, many emerging market country officials viewed monetary policy and macroprudential tools as

(1) Shadow banking in this report is defined using the Financial Stability Board's definition of credit or liquidity intermediation through activities or institutions outside the traditional banking system.

mostly complementary, but there were situations in which macroprudential tools might be difficult to implement. Examples included strong trade lobbies, the lack of co-ordination between central banks and ministries of finance (if the latter have control of macroprudential tools), and incomplete understanding by local markets. Also complicating the use of macroprudential policies was the fact that global and local financial cycles might be of different lengths and based on different factors. Most agreed that more data, better models, and further experience with the use of macroprudential tools would help isolate their usefulness (or lack thereof).

In addition, it was thought that EMEs might face practical difficulties in convincing others about their intention to use capital flow measures (CFMs) for macroprudential purposes. Particularly problematic was the discriminatory character of CFMs (against foreign investment) even though, as macroprudential tools, they could be shown to affect both domestic and foreign investors and have positive effects on the target variables. It was also argued that different types of capital flows posing domestic financial risks could be controlled by different types of macroprudential tools, but that the structure of the financial sector and political institutional environment implies that such tools needed to be carefully chosen. Financial constraints and the financial development of various countries would need to be more explicitly incorporated into models before usable results would be forthcoming.

Can global monetary policy co-ordination be effective in reducing financial stability risks or should global macroprudential policy co-ordination be used?

Many participants questioned the practicality of global monetary co-ordination, while recognising that the world is now faced with an unprecedented heightened global connectivity of institutions and markets, and the spillover effects from US monetary easing are not negligible. Not only had US monetary easing brought about much greater effect on the leverage of banks outside the United States than that of their own jurisdictions, the significant amount of US dollar-denominated liabilities outside the United States had also strengthened the cross-border policy transmission.

Another participant shared the view that while global *monetary* co-ordination under normal circumstances yielded insignificant or no benefits, there might be more room for co-ordination when policy rates in many countries are at the ELB. Otherwise, each country would seek to depreciate its exchange rate to stimulate its economy at the expense of other countries and hence engage in a currency war.

The situation was different for macroprudential policies that might be prone to cross-border leakages. This is a strong argument for global co-ordination of *macroprudential* policy with the objective to maintain the resilience of the international financial system, which was mostly accepted by the participants. A general idea was to think global, but act local. A strong domestic macroprudential framework would be needed to discern where regulatory intervention could be most effective to thwart global spillovers.

The existence of a global financial cycle and US monetary policy spillovers, alongside the widespread use of US dollar funding abroad, raised a number of difficult issues in this regard. For instance, suggestions included the extension of standing swap facilities between central banks and emerging market economies beyond those already in place for advanced economies. Another idea was to agree on a single point of entry resolution for cross-border failures. Additionally, more clarity on ways to deal with liquidity shortages in foreign currencies, including the demarcation between the IMF and central banks, could be helpful.

Other views included: (i) raising a common resilience standard across countries to manage the risks associated with spillovers; (ii) sharing of information with the aim to mitigate cross-border regulatory arbitrage; and (iii) conducting global stress tests. Another view was that at the ELB, global macroprudential co-ordination could aim to resolve global safe asset scarcity. Proposals to improve the availability of safe assets included: (i) pooling and tranching existing public assets to match demands; (ii) supporting the supply of private safe assets (eg through securitisation) by providing a backstop for severe tail-risk; and (iii) promoting alternatives to official reserve accumulation that release global safe assets from central banks' balance sheets.

Still other participants noted difficulties even if some international co-operation of macroprudential policy could be achieved. Policymakers should be mindful of heterogeneity of timing, and institutions and jurisdictions which might warrant different policies, instead of assuming a 'one size fits all' approach. In addition to cross-sectoral and cross-border dimensions, consideration should also be given to how long the co-ordination of macroprudential policies should take; in particular, what are policymakers' views of the expected time frame to resolve a problem. For instance, the Basel Committee had required institutions to adapt to the higher capital requirement by 2019, while the United States had seen much faster progress in recapitalising banks' balance sheets compared to their European counterparts. While further empirical research is necessary to determine if co-ordination is working, due consideration should be given to exploring areas in which co-ordination is needed and areas where it is unnecessary.

Concluding perspectives

Data needs and new modelling approaches. Nearly all participants stressed the importance of having more and better data, but also uniform definitions and standards, to gauge and measure financial sector activities (eg the global supply chain for the flow of funds) and, in particular, the shadow banking system. Data sources, like credit registers and trade repositories, are likely to be invaluable. More granular data, whereby types of institutions and their various qualities could be examined, would help determine appropriate (or inappropriate) regulatory responses. From a methodological perspective, the global financial and economic system should be modelled as a complex adaptive system. This is currently outside the scope of many conventional approaches. For instance, concrete policy questions could be addressed by means of computational agent-based modelling, while being integrated into a global flow of funds model of financial balances.

Monetary policy effectiveness through non-banks. The ability of central banks to influence the real economy through their monetary policy tools was viewed as requiring further theoretical and empirical research. The widespread use of unconventional monetary policy tools and their likely effects on the actions of non-bank financial intermediaries, not limited to shadow banks, but also including pension funds, insurance companies and asset managers, was still not well understood.

Limitations of macroprudential policies. Overall, many participants asked whether there was a risk that macroprudential policies were overburdened. It was not clear that the combination of loose monetary policy alongside tight macroprudential policies would spur the real economy while limiting financial stability risks as desired — indeed a significant number of participants felt that recent policy responses had made the global financial system more, not less, risky. Some noted that governments (not central banks) should be taking a larger role and that the climate for doing so was lacklustre at best. It was clear to most that there were limits to the effectiveness of prudential policies and further modelling and understanding of the practical workings of excessive procyclicality (as at least one issue) was necessary to determine these limits.

Political constraints to international co-operation. Finally, there was general agreement that international co-operation was desirable in many areas of prudential policies (and even monetary policy), but some participants argued that the political environment was not particularly conducive to forward progress at the current juncture. Specific measures, such as the reciprocity of banking rules, the establishment of central bank swap lines, and further work on cross-border recovery and resolution were concrete areas where, in the view of participants, global co-operation could realistically be pursued.