Seppo Honkapohja: Financial innovation and financial stability – comments

Speech by Mr Seppo Honkapohja, Member of the Board of the Bank of Finland, at the Shanghai Forum, Shanghai, 26 May 2014.

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Slides can be found on the Bank of Finland website.

Introduction: the global financial crisis and the crisis in Europe

The start of the global financial crisis can be dated in different ways. One plausible date is almost seven years ago in August 9 in 2007. Significant turmoil in financial markets appeared after activity closures in some hedge funds specializing in US mortgage debt were announced.

The scale and the economic ramifications of the crisis have been vast. The resulting economic downturn in 2008 for a while resembled the pace of developments in the Great Depression.[1] Liquidity support operations by central banks at different stages, explicit state guarantees to banks and expansionary fiscal policies succeeded in stopping the recession and changed the course of developments in comparison to the 1930's.

In Europe, a further stage of the crisis appeared in 2010 when a sovereign debt crisis hit some euro area countries. The Euro crisis has its roots in the specific features of construction of the European Monetary Union, but it was also triggered by the second-wave shocks following the global financial crisis.

[Figure 1: Substantial crisis impact on the real economy, particularly in Europe]

The financial crisis weakened the Euro area economies and it also weakened bank balance sheets. In several countries governments were forced to support their troubled banks, which in turn adversely affected government finances. In some countries public finances became weak, which fed back to the credibility of their banking sectors, thus creating a notorious bank-sovereign feedback loop.

Troubled countries' membership in the monetary union added to the challenge to restore their competitiveness as traditional tools such as devaluation were no longer available. It became evident that the fiscal rules agreed in the monetary union had not always been honored. These developments raised concerns about credibility of the weak euro area countries in international capital markets. The so-called existential risk of the Euro zone emerged.

The culmination of the Eurocrisis in mid-2012 was tamed by the creation of the ECB's OMT (outright monetary transactions) program. I quote President Draghi's promise that "Within [its] mandate, the ECB is ready to do whatever it takes to preserve the euro".[2] OMT is a conditional promise to buy in the secondary market without limit government bonds of selected Euro area countries. OMT has worked and remarkably, there has so far not been any need to activate the program.

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1 Rajan, R. (2013), A step in the dark: unconventional monetary policy after the crisis. Andrew Crockett Memorial Lecture, BIS, 23 June 2013.

2 Speech by Mario Draghi, President of the European Central Bank at the Global Investment Conference in London 26 July 2012 (www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html).

Finance and growth

Thinking with hindsight about the causes and possible early indicators of the financial crises, one thing seems clear. The financial sector, including banks, grew to a very large scale in many countries. Recent research suggests that when the financial sector grows rapidly into large proportions, the risk of a serious crisis is heightened.[3]

[Figure 2: Rapid growth in the EU banking sector pre-crisis]

Before the crisis, the consensus view from the finance and growth literature was that financial development not only follows economic growth but contributes to it. However, after the financial crisis, the darker side of the financial sector growth has received increasing attention.

The traditional benign view of finance and growth is that a growing financial sector improves overall economic growth opportunities by mobilizing resources to finance investment projects and by facilitating risk management. The key assumption is that a well-developed financial system helps allocate productive resources more efficiently, both by channeling funds to growth sectors and by pulling resources from declining ones.

Correspondingly, research has argued that low financial development could be a factor which reduces long-run growth and also increases growth volatility.[4] However, some recent research by Cecchetti and Kharroubi at the BIS suggests that while finance does contribute to economic growth, it does so only up to a point.[5]

[Figure 3: Finance and growth]

At the level of individual financial institutions, the growth of bank balance sheets was seen as reflecting increasing returns to scale and scope from combining a wide variety of financial services and providing them also cross-border to internationally active clients.

Technological development and financial innovation enabled the creation of totally new products. These were initially seen as filling gaps in the palette of risk management products and creating totally new segments of the financial markets.[6]

Today we know that many of the new exciting risk management products increase rather than reduce risk, when applied inappropriately. Moreover, the changing shape of financial intermediation and risk management made the whole financial system more vulnerable to common shocks.

In the crisis the ultimate risk stemmed largely from the US housing market, but it had been transferred also onto European banks' balance sheets.[7] This took place with the help of securitizations and the related new financial intermediaries, generally dubbed as the shadow banking sector. As a result, the number of counterparty relationships and the ensuing counterparty risks increased. The global financial network became highly interconnected and complex.

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[3] See e.g. Claessens, Kose, Laeven, and Valencia (2013), "Understanding Financial Crises: Causes, Consequences, and Policy Responses", CAMA Working Paper 05/2013.

[4] See e.g. Aghion, P., E. Farhi, E. Kharroubi (2012), "Monetary policy, liquidity, and growth", and the literate cited therein.

[5] Cecchetti and Kharroubi (2012), Reassessing the impact of finance on growth, BIS Working Paper 381.

[6] Rajan (2006) Has Finance Made the World Riskier? European Financial Management, Vol. 12, No. 4, 2006, 499–533. See also Bolton, P. (2013), The Good Banker.

[7] Shin (2012): "Global Banking Glut and Loan Risk Premium", IMF Economic Review, 60.

Many of these developments prior to the crisis did not benefit the real economy in a sustainable manner. As suggestive evidence of this, economic recovery from the crisis has been slow.[8]

One important lesson from the crisis is the need to understand better the point where and why the expansion of the financial sector, or any of its particular business areas, turns excessive. Moreover, we need to ensure that financial innovations such as securitization are applied appropriately so that the benefits are realized.

Reasons for excessive financial growth

Why did the financial sector this time grow so much? And why was it especially hazardous? Certainly, there were global macroeconomic reasons behind the recent crisis developments, and problems with regulation and supervision in failing to see potentially dangerous market failures.

Global imbalances provided a fertile ground for the development of financial excesses, as capital inflows to the United States pushed long-term interest rates down.[9] Moreover, the monetary policy stance was accommodative in much of the early 2000's.

There may also have been a false sense of security resulting from the successful track record of monetary and macroeconomic policies, known as the period of Great Moderation. As a result, the markets placed their trust in central banks' ability to take care of liquidity if markets were to be hit by serious shocks.

These expectations may also have contributed to imprudent risk-taking which, once the crisis started unfolding, led to real losses. Banks' capital requirements and liquidity buffers had not kept pace with the growing risks as serious short-comings in risk measurement within the Basel framework became apparent once the crisis hit.

Theoretical models of the possibility of excessive financial growth range from banks' failure to internalize systemic risks from growth of bank leverage and ballooning balance sheets to rent-extraction in opaque OTC markets.[10] Research has also shown how financial innovation waves can raise the risk of endogenous crisis.[11] Moreover, as financial innovation caters to investors' desire for safe assets, systemic risk may follow if these new "safe" assets turn out to be highly risky, as happened in the last crisis.[12]

Cross-country evidence indicates that financial innovation does contribute to economic growth, especially in industries dependent on external finance. In the light of the recent crisis, such innovation also contributes to growth volatility, idiosyncratic bank risk and bank losses.[13]

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[8] See e.g. Claessens, Kose and Terrones (2013), "The Recent Global Financial Crisis: How Similar? How Different? How Costly?", in S. Claessens et al., eds., *Financial Crises, Consequences, and Policy Responses*, forthcoming, IMF.

[9] See e.g. Bernanke, B. S. (2005), "The Global Saving Glut and the U.S. Current Account Deficit", speech delivered at the Sandridge Lecture, Virginia Association of Economists, Richmond, Va., March 10.

[10] Stein, J. (2012), Monetary Policy as Financial-Stability Regulation, Quarterly Journal of Economics, and Bolton, P., T. Santos, and J. Scheinkman (2012), "Cream skimming in financial markets", NBER Working Paper 16804, respectively.

[11] Biais, B., J-C. Rochet, P. Woolley, "Innovations, rents and risk".

[12] Gennaioli, N., A. Shleifer, R.W. Vishny, 2012, "Neglected Risks, Financial Innovation and Financial Fragility" Journal of Financial Economics.

[13] Beck, T. et al. (2012), "Financial innovation: The bright and the dark sides".

Compensation schemes focusing on short-term performance became popular in the last decade and they were said to encourage risk-taking in new financial products which generated fee income.[14]

Market expectations of public support in the event of a large-scale crisis were an important reason for excessive financial growth concerns. For instance, the leading European banks are very large in an international comparison, especially in relation to the size of their home countries.

[Figure 4: Size of selected European banks]

Many large and complex financial institutions appear to have benefited from cheap funding, thanks to such too-big-to-fail expectations.[15] Cheap funding which is insensitive to balance sheet risks may easily spur risk-taking, especially when banking competition gets tougher. Sheer ignorance by bank managements of the true risks may also have played a role.[16]

The too-big-to-fail phenomenon weakened market discipline and the opacity of large complex financial institutions contributed to this. The structure of banking sector has not been reformed in a way that accords with well-established market discipline.[17] The challenge is to implement regulatory reforms and policies that steer the financial sector and banks towards a size and structure that best support economic growth. At the same time financial stability should be maintained.

No one really knows the right size of the financial sector or banks. For instance, it has been pointed out that the scale and scope of the largest banks may simply be an efficient response by banks to the bundles of services demanded by the big, internationally active customers.[18] At least, attempt should be made to remove any perverse incentives which can lead to excessive growth of the sector and its risks. Eliminating the too-big-to-fail problem lies at the core of the solution.

Financial reforms after the crises

A profound international regulatory reform agenda was endorsed by the G-20 in response to the global financial crisis. Many key parts of agenda, especially the Basel III framework, have been or are in the process of being implemented.

[Figure 5: The main building blocks of the European regulatory reform]

The EU has launched its own additional financial reform program, called the banking union, in response to the Euro crisis. The banking union entails a common banking supervision and a framework for bank resolution. The Single Supervisory Mechanism will be operated by the European Central Bank. The establishment of the Single Resolution Mechanism in the EU will facilitate the resolution of cross-border banks.

Importantly, the resolution framework gives the power to authorities to promptly implement a "bail-in" of bank debt holders when a bank goes into resolution. Banks will have to have a minimum of 8% of their liabilities eligible to bail-in. Bail-in means that debt holders will bear

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[14] See e.g. Rajan, R.G. (2005), Has Financial Development Made the World Riskier?, Proceedings of the Jackson Hole Conference organized by the Kansas City Fed, 2005.

[15] See e.g. Davies & Tracey (2014), "Too big to be efficient? The impact of implicit funding subsidies on scale economies in banking", Journal of Money, Credit and Banking (forthcoming).

[16] Rajan, R. (2013), A step in the dark: unconventional monetary policy after the crisis. Andrew Crockett Memorial Lecture, BIS, 23 June 2013.

[17] Laeven and Levine (2007), "Is there a diversification discount in financial conglomerates?", Journal of Financial Economics 85(2).

[18] See Bolton, P. (2013), The Good Banker.

losses without actual bankruptcy proceedings. Hence the potential to bail-in is a major improvement in banks' de facto solvency.

The key motivation for the banking union is to break the notorious bank-sovereign feedback loop, match the institutional structure (supervisor and resolution authority) with the geographic scope of the cross-border banks and pave way for further banking integration. True banking integration in Europe could also enhance financial stability in the EU by reversing the fragmentation of financial conditions in the aftermath of the crisis, which is apparently hampering Europe's current economic recovery.

The banking union project also includes a third element; the prospect of creating a common deposit insurance system. However, the national systems currently vary a great deal, so that the first priority ought to be harmonization of the national systems of deposit insurance. The European Commission has made proposals in this direction.

There are also a number of other regulatory initiatives in addition to the banking union. Some initiatives focus on increased transparency in the financial markets. For example, accounting standards and disclosure practices are reviewed, and banks are urged to improve risk management and corporate governance practices. Other initiatives include supervision and regulation of derivatives markets and the shadow banking system are revised, including moves to central counterparties which will help address the contagion risks embedded in long counterparty chains in the OTC markets.

[Figure 6: Additional regulatory initiatives]

An obvious question is, whether the increased regulation of banking will lead to the growth of the less regulated shadow banking sector? Would systemic risks also migrate from banking to shadow banking as a result of the new banking regulation? There are responses to this concern that aim to increase transparency and oversight of shadow banking. Some researchers have also suggested that regulatory margin requirements, an equivalent of banks' capital requirements, could be considered for shadow banking institutions.[19] This would reduce the risk of fire sales and the resulting loss spirals which were experienced during the global financial crisis both in banks and shadow banks. It is also crucial to make sure that banks' exposures to shadow banks are met with sufficient capital requirements. Furthermore, the European Commission has proposed structural regulation of universal banks, which would impose direct restrictions on banks' exposure to hedge funds. The Volcker rule implies similar restrictions in the US.

Macro-prudential analysis and tools are another area of regulation. They are being developed mainly on the national basis, but also in accordance with Basel III and the capital requirement directive (its application in Europe) for the purpose of setting counter-cyclical capital buffers. Moreover, the European Systemic Risk Board has published guidelines on the implementation of macro-prudential tools across the EU member states. This is a highly important but challenging area of work where we are most likely to see a lot more research and new developments in the future. The challenge is to find indicators which are able to warn of looming vulnerabilities sufficiently early. Potential candidates are at least market prices, credit-to-GDP ratios, and changes in banking sector liabilities.[20]

Finally, in accordance with the structural regulation of banks already agreed in the US and the UK, the European Commission has proposed a ban on proprietary trading for the largest banks and an option for subsidiarisation of other trading activities, to be placed in a separate legal entity within a banking group. The motivation for the structural regulation is to

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[19] Hanson, S.G., A.K. Kashyap, J.C. Stein (2010), A Macroprudential Approach to Financial Regulation, Journal of Economic Perspectives 25:1, pp. 3–28.

[20] Shin, H.S. (2014), Procyclicality and the Search for Early Warning Indicators, in Claessens et al. (eds.) Financial Crises, Consequences, and Policy Responses, IMF.

significantly reduce, together with the resolution framework, the largest banks' too-big-to-fail status.