Chairmen and distinguished participants,

I would like to begin by thanking the organisers for inviting me to address this impressive meeting. I spoke in this forum in Tokyo in 2009. The title of my presentation then was *The collapse of Iceland’s cross-border banks: lessons for regulation, supervision and crisis management*. The experience of the financial crisis in Iceland was then fresh in our minds, and it was considered to be both an extreme and an interesting case. But now, after other cases have been better analysed and after the banking and sovereign debt crisis in the euro area, it is clearer that although there was a significant domestic element in the financial and economic crisis in Iceland, the cross-border banking crisis aspect was to a significant degree an extreme manifestation of a global problem. That is partly why I want to take a more global perspective here today than I did in 2009 and ask where we stand with cross-border banking.

To gain a clearer perspective on the big risks in recent forms of cross-border banking, it is useful to remind ourselves that fractional banking, with the associated maturity transformation, is inherently very risky. In national settings we learnt through trial and error over long periods how to design a safety net around the banking system in order to mitigate its inherent instability. The Bank of England was at the forefront in learning how bank runs could be contained through lending against collateral to banks that were presumed to be solvent. Deposit insurance was introduced later, both as an additional mitigating device against runs and as a consumer protection device.

In order to operate this system, it was necessary to have an assessment of the state of health of the banks. It was also necessary to mitigate the moral hazard introduced by the safety net. Thus banking supervision initially emerged mostly as part of central banking, although the legal powers were initially often on a weak foundation. Finally, bank resolution schemes were needed to efficiently clean up any mess that might occasionally be made and limit contagion from individual bank failures to the system as whole.

In many advanced countries, this system worked so well that the memory of bank runs had faded. Perhaps this is why, when I last saw the musical about Mary Poppins in a theatre, the scene with the bank run was omitted! Banks could still fail, of course, because of capital erosion, and even entire banking systems could do so, as in the Nordic banking crises in the late 1980s and early 1990s. But the liquidity risks inherent in fractional banking were mostly contained.

It was an important causal element of the financial crisis that part of the financial sector had escaped this safety net. This applied in particular to cross-border banking. Let me take two examples to illustrate this.

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First, the euro area as a whole had a more or less balanced current account position during the build-up to the financial crisis. A fact that drew less attention at the time, however, was that European banks had built up huge USD-denominated balance sheets that had mismatches, especially in terms of maturity. This became a major problem when there was a run on the dollar-denominated bank liabilities of non-US international banks post-Lehman.3

Second, the Icelandic banking system expanded very rapidly prior to the crisis, growing in just five years from a combined balance sheet of less than 2 times GDP (at the end of 2003) to almost 10 times GDP (in mid-2008). Most of this expansion was cross-border, and a significant part of it was really off-border, having very little to do with Iceland, as both financing and investment took place abroad.

This was facilitated by two factors: first, Iceland’s membership in the European Economic Area (EU + Iceland, Lichtenstein, and Norway), which gave banks headquartered anywhere in the region the right to operate throughout the region, and second, the prevailing global conditions of abundant, cheap credit.

Just before their failure, the Icelandic banks had foreign currency balance sheets amounting to almost 7.5 times Iceland’s GDP, with a significant maturity mismatch between assets and liabilities. In comparison, the Central Bank of Iceland’s foreign reserves amounted to 21% of GDP.4

These and other examples I could mention were accidents waiting to happen. And happen they did in the autumn of 2008, when, during the panic that gripped markets after the collapse of Lehman Brothers, there was a full-scale run on cross-border banks’ foreign currency liabilities. What prevented the ensuing international dollar shortage from triggering a widespread failure of internationally active non-US banks to deliver on their foreign currency payments were major LOLR operations in foreign currency, using countries’ reserves and, more importantly, US dollar swap lines granted to central banks around the globe on a large scale.

Strictly speaking, a currency swap between two central banks is a symmetric agreement. In most cases, however, it is the central bank providing the reserve currency in excess demand at the time that is the party putting real money on the table. When the swap is used to lend to banks in the receiving country, that country’s central bank bears the counterparty risk. But from a liquidity standpoint, the foreign central banks were intermediaries of the Federal Reserve’s global liquidity operations. And so the LOLR function at the national level was replicated at the global level.5

Does this mean that we have a solution to the problem of mitigating the extra risks in cross-border banking compared to national banking? Unfortunately not. First of all, there are big question marks over central bank swaps as permanent and widespread tools of crisis prevention and management, as I will come back to later in my speech. Second, the failures

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3 This case is described in Ingo Fender and Patrick McGuire, “European banks’ U.S. dollar funding pressures”. BIS Quarterly Review (June 2010): 57–64.


of the safety net and the associated moral hazard-mitigating mechanism in cross-border banking applied across the board to regulation, supervision, LOLR, deposit insurance, and crisis management and resolution.

The adjustment that needs to take place after the crisis in order to make cross-border banking safer is clear in principle: the market action and the public framework in the form of the safety net and other arrangements has to be better aligned. Again, in principle, this can take place through two channels: through retrenchment of cross-border banking so that national safety nets of big countries are more sufficient, or through international expansion of safety nets. There was significant retrenchment during and immediately after the crisis, and it was unavoidable and necessary at that point in time.6

There are significant benefits to be derived from financial globalisation, including cross-border banking, so we will have to hope that extending public frameworks through international and regional co-operation will be an important part of the story. Here progress is uneven and occurs on three tracks: national, regional, and global.

Policy initiatives taken at the national level after the crisis have partly made banking safer by contributing to the retrenchment of cross-border banking. In the absence of credible multilateral safety nets, countries will have to take unilateral action to reduce the risks they face. In my country, we have taken action to limit the FX liquidity risk of our banks by imposing limits on the size and composition of their FX balance sheets. Thus we have a specific liquidity coverage ratio in FX, as does Sweden. We have also introduced a specific net stable funding ratio in FX, which at present goes one year out but might be extended further as we make the system safer in anticipation of lifting capital controls.7

There has been major progress within the EU through the implementation of a banking union. Again, the biggest strides have been taken in the realm of supervision, but a greatly improved resolution framework is also in the process of being introduced. A common deposit insurance system is not yet on the agenda, however. That might be an impediment to further banking integration and potentially a source of vulnerability. EU members outside the euro area can opt into banking union. This introduces the possibility of deep banking integration without a LOLR, which is a risky combination, as we have seen. That risk could of course be mitigated through uncapped central bank swaps and mutual acceptance of collateral, but as far as I can see, there is as yet no formal framework for this.

In this connection, I note with interest the plans in this region to progress with regional banking integration by, for instance, the ASEAN. The benefits will be substantial, but we need to be mindful of the risks and learn from the European experience. As I see it, banking integration without a monetary union or alternative arrangements for FX liquidity provision is potentially very risky. That said, recent events have shown that a monetary union without a banking union is also risky.

At the global level, there has been some progress on the framework for supervision, cross-border crisis management, and resolution of cross-border banks through the work of the Financial Stability Board (FSB). The progress on resolution through aligning national resolution regimes to the FSB Key Attributes of Effective Resolution Regimes is still limited, however, and the risk of non-cooperative and disorderly resolution is still high if the system should experience significant stress. This is a complex area and in many ways more difficult

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than cross-border cooperation of supervisors. To illustrate the issues involved, let us briefly review the resolution of the Icelandic cross-border banks.

Given the lack of international cooperation, the Icelandic authorities were forced to consider radical solutions in order to preserve the domestic payment system and basic banking services. In doing so, it had to take into account that these were private banks and socialising their losses carried the risk of bankrupting the government.

In essence, the adopted solution saved the domestic operations of the banking system by creating new banks, which was done by carving a big part of the domestic assets and liabilities out of the old, failing banks. The new banking system amounted to 1.7 times GDP. The rest – and much bigger part – went into a resolution process, where it largely remains, pending a solution that would make it possible for Iceland to lift its comprehensive controls on capital outflows, but that is another story.

In order to reverse the ongoing run on domestic deposits, a declaration was made that all deposits in Iceland were safe and all deposits in Icelandic-headquartered banks were given priority over other unsecured claims. This distinction made between domestic deposits and foreign currency deposits in the banks’ foreign branches added fuel to the fire of the so-called Icesave dispute about the settlement of deposit guarantees in the Dutch and British branches of one of the banks. But guaranteeing those deposits would never have been credible and might have bankrupted the Government had it been attempted. The deposits in question were in foreign currencies and amounted to 11½ billion euros – far in excess of Iceland’s FX reserves, which amounted to 2½ billion euros. And the sovereign was completely closed off from foreign capital markets at that point. Furthermore, in economic terms, given that these deposits were used to a significant degree to finance illiquid assets in outside Iceland, such a payment, if it had been possible, would have amounted to a net transfer of resources from Iceland to other countries – where the United Kingdom would have been prominent – at a time when Iceland was going through its deepest financial and economic crisis in the post-war period! That made no sense. Finally, it should be noted that the deposit preference introduced before the banks failed is securing full recovery to all deposits if we discount the time value of money, which so far has been low during the post-crisis period.

This case clearly highlights the link that must exist between the LOLR function and deposit insurance, which, in the absence of clear prior arrangements for currency swaps or other such mechanisms, must be predominantly in the same currency in order to work. The EU framework for this was therefore deeply flawed, as has been recognised in the discussions about a banking union.

You can see from this that the key characteristics of crisis management and bank resolution in Iceland during the crisis were that share-holders lost all their equity, unsecured bond holders were bailed in, vital infrastructure elements of the domestic banking system were preserved and deposit were given preference over other unsecured claims. It seems in many ways a standard approach today, but it was not always well received at the time.

Finally, I would like to briefly discuss an important unresolved part of the story: the future of central bank swaps of the type initiated between the US Fed and several other central banks

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around the globe during the crisis\textsuperscript{10}. It should be noted, however, that there are several other arrangements around the globe which, with time and modifications, could become partial substitutes for these swaps. Examples of this are the multilateralisation of the Chiang Mai Initiative in this part of the world, swap lines among BRIC countries, and the bilateral swap network of the People’s Bank of China. But as they are currently constructed, these are not well suited to large-scale and speedy provision of liquidity in reserve currencies more or less directly to internationally active banks.

In the absence of almost total retrenchment in international banking – except in cases involving countries issuing reserve currencies and with strong fiscal capacity – the problem these swap lines were meant to address will not go away. The past few years have seen lively discussion of whether it is desirable and feasible to anchor the swaps more firmly in the international monetary system, through clearer and more transparent access criteria and a multilateral governance mechanism.

Clearly, there are arguments for such institutionalisation, but I sense that this might be premature and that we should allow the discussion to evolve further. Those who oppose constraining central bank discretion in this area present important arguments. The most compelling are those based on the analogy with liquidity provision and LOLR in a national setting, where flexibility, speed, and large scale can be essential. This argues in favour of giving central banks a major role in the arrangements. Less compelling are arguments based on moral hazard, which would apply equally to domestic arrangements.

What seems clear is that even greatly enhanced IMF facilities are not close substitutes for swap lines among central banks. First, the swap lines are there to provide short-term collateralised FX liquidity to banks, whereas IMF facilities are uncollateralised longer-term lending to sovereigns and are intended primarily to mitigate balance of payments problems. Norway and the euro area were offered USD swaps without prior balance of payments disequilibrium and the euro area, at least, badly needed it. Second, IMF facilities generally cannot match the swap lines in terms of speed of delivery, as the decision processes at the IMF are unavoidably more cumbersome. At present, the IMF’s maximum lending capacity is just over a trillion US dollars. At their peak in early December 2008, the USD swaps amounted to over USD 580 billion, after having increased very rapidly to that level in a matter of a few weeks\textsuperscript{11}. If needed, the total could have risen much higher because the swaps had been uncapped vis-à-vis key central banks, which also mattered greatly in terms of signalling. If the IMF or any other international organisation is to be able to provide a credible alternative to the swaps, it must be able to expand its balance sheet speedily and on a large scale when the need arises. In short, it would have to function like a global central bank. This is not likely to be in the cards in the near future.

So where do we stand regarding cross-border banking? In some sense, we are in the middle of a strong river. Some want to go back, as they do not find it safe to continue – perhaps because they are not offered a helping hand – and given the choices currently available, it could be better for them to stay on the other side. Others are banding together to hold hands and wade across. And still others are strong enough to go it on their own. It will be interesting to see how this story plays out in coming years.

Thank you very much!

\textsuperscript{10} I have discussed the potential implications of the foreign currency surplus for the international monetary system in: “The implications of cross-border banking and foreign currency swap lines for the international monetary system”, in O. Blanchard, D. Romer, M. Spence and J. Stiglitz (eds), In the Wake of the Crisis, MIT Press, 2012.

\textsuperscript{11} See Flemming and Klagges (2010), op. cit.