

Have we passed “peak finance”?

Lecture by Jaime Caruana
General Manager, Bank for International Settlements

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I am grateful to Charles Wyplosz and his colleagues at the International Center for Monetary and Banking Studies for the invitation to speak. BIS archives show that my predecessor Alexandre Lamfalussy gave a keynote speech at the Center in December 1976 on “Les incertitudes actuelles dans l’économie mondiale”, a topic that is surely a hardy perennial. My colleagues in the Monetary and Economic Department of the BIS have served as discussants on most of the 18 *Geneva Reports on the World Economy* since this flagship set sail in 1999. A particularly memorable moment came when Andrew Crockett authored the 2009 report and Bill White gave the keynote. Moreover, the current head of the Monetary and Economic Department serves on the board, as did his two predecessors. I hope to contribute this evening to the many evident synergies between the Center and the BIS.

You are all familiar with the concept of “peak trade”: that global trade is no longer growing faster than the world economy. Or, to put it more concisely, that trade will no longer serve as a major contributor to global growth. Some have called this “deglobalisation”.¹ Whether there is trade deglobalisation remains to be established. I would note the usual challenge of distinguishing the cyclical from the secular: has world trade growth really slowed relative to global economic growth? Or have we just gone through a cycle, perhaps associated with weak investment and weak commodity prices?² Time will tell whether we have passed peak trade.

I did not travel from Basel to Geneva to take up the merits of this claim. Indeed, I recognise the important contributions to this debate on the Vox website and in a book put out by the Centre for Economic Policy Research, for which Richard Baldwin deserves great credit.³

I *am* here today to talk about “peak finance”. This claim asserts a parallel thesis that the world has seen the peak of global finance and that financial deglobalisation has begun. An early use of the term

¹ See G Sarvelos and R Winkler, “Deglobalization is here to stay: what it means for global macro”, *Deutsche Bank Special Report*, 16 November 2016.

² See discussion in H S Shin, “The bank/capital markets nexus goes global”, speech at the London School of Economics and Political Science, 15 November 2016.

³ See I Tomb and K Trivedi, “‘Peak trade’ is premature”, *Vox*, 6 January 2017; M Timmer, B Los, R Stehrer and G de Vries, “An anatomy of the global trade slowdown based on the WIOD 2016 release”, University of Groningen, *Groningen Growth and Development Centre Research Memorandum*, no 162, December 2016; G Sarvelos and R Winkler, “Deglobalization is here to stay: what it means for global macro”, *Deutsche Bank Special Report*, 16 November 2016; B Hoekman (ed), *The global trade slowdown: A new normal?*, CEPR Press, 2015; C Constantinescu, A Mattoo and M Ruta, “Explaining the global trade slowdown”, *Vox*, 18 January 2015; E Boz, M Bussière and C Marsilli, “Recent slowdown in global trade: cyclical or structural”, *Vox*, 12 November 2014.



“financial deglobalisation” was in a 2009 Vox blog,⁴ more recently it has been used by economists connected to the Bank of England.⁵

While one can imagine that capital *flows* serve as a leading indicator,⁶ the acid test of financial deglobalisation is a decline of foreign claims relative to global activity. Two economies can share risks by exchanging financial claims, increasing foreign claims without a rise in leverage that increases risk. Specifically, a decline in stocks of cross-border assets in relation to global activity can be interpreted as one indicator of financial deglobalisation. This ratio grew strongly until 2007, as we’ll see in a minute. Cross-border banking in particular is put forward as the strongest evidence for what is sometimes called global financial disintegration.

Today I shall marshal BIS international banking and securities data to assess this claim, and then discuss the stake that we all have in financial globalisation. I shall argue three points.

- First, the appearance of peak finance is more a feature of European banking than of global banking. The deleveraging of European banks should be understood as a post-crisis cyclical development rather than as a secular trend. It is more deleveraging than deglobalisation.
- Second, one has to look beyond banking to the boom in global capital markets, which my colleague Hyun Shin has dubbed the “second phase of global liquidity”. Global finance has favoured bond markets over banking since 2009 in both the dollar and the euro.
- Third, all this is not only a matter of academic debate. There is a clear and present risk of a political reaction to global finance. To guard against this risk we need to recognise that global financial integration is not in secular retreat already. Global financial integration can play a key role in the spread of best practice and innovation and contribute to economic growth. Continued interdependence in international finance requires global cooperation in managing its risks and in setting global standards with global implementation.

While the retreat in international banking is more regional than global, more deleveraging than deglobalisation, and while global bond market credit continues to grow apace, we need answers for those who question the benefits of global financial integration.

The balance of payments view: banking deglobalisation

Let me now turn to the main body of my remarks and look at some BIS data. Taken at face value, BIS data on cross-border banking positions may give the appearance that financial deglobalisation set in during the 2007–09 crisis and has continued since. Graph 1 shows how the outstanding amounts of cross-border claims of BIS reporting banks have evolved since the 1990s. These data are put together on a balance of payments basis – or, in other words, on a locational basis. They show a decline of bank assets from a peak

⁴ See C Broda, P Ghezzi and E Levy Yeyati, “The new global balance: financial de-globalisation, savings drain, and the US dollar”, *Vox*, 22 May 2009.

⁵ See K Forbes, D Reinhardt and T Wieladek, “How the interactions of monetary and regulatory policies may have been ahead of the anti-globalisation backlash”, *Vox*, 23 December 2016; and K Forbes, “Financial ‘deglobalization’? capital flows, banks and the Beatles”, speech to Queen Mary University, London, 18 November 2014; but see S Verma, “A cheat sheet on the deglobalization of the financial world”, *Bloomberg*, 6 December 2016; and P Hooper, M Spencer, T Slok and M Luzzetti, “Global financial integration and disintegration”, Deutsche Bank Economics *Global Economic Perspectives*, 29 November 2016; B Eichengreen, “Globalization’s last gasp”, *Project Syndicate*, 17 November 2016.

⁶ An important indicator of net flows is the estimated Feldstein-Horioka parameter that links domestic investment and domestic savings, and it shows smaller net flows in recent years. See B Cœuré, “Sustainable globalisation: lessons from Europe”, speech, Maastricht University, 16 February 2017.

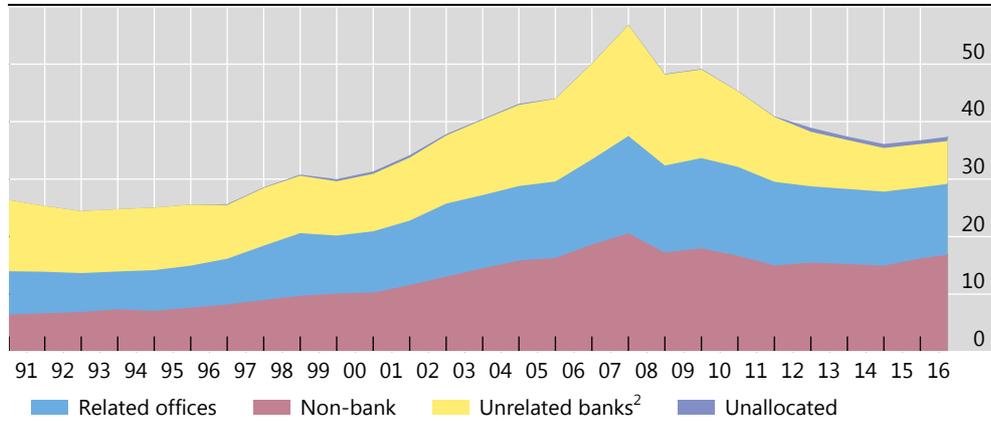


approaching 60% of global GDP in 2007 to less than 40% in the third quarter of 2013. But I shall argue that it is easy to draw the wrong inference from these data.

Cross-border claims of BIS reporting banks¹

As a percentage of world GDP

Graph 1



¹ At quarter-end. Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date. ² Includes central banks and banks unallocated by subsector between intragroup and unrelated banks.

Sources: IMF; BIS locational banking statistics; BIS calculations.

Does such a decline in this particular measure of de facto international financial integration point to a new trend of financial deglobalisation? Or at least banking deglobalisation? One might suppose so.

However, I contend that the answer is no. These data show only cross-border assets, that is, bank claims on borrowers outside national borders. These data are not the best way to analyse globalisation trends. They may double-count some positions, eg positions in which a bank’s headquarters funds its branch in a financial centre like London, which in turn lends to a borrower outside the United Kingdom. This is shown by the “related offices” series – the blue area – in Graph 1. At the same time, these data take no notice of financial globalisation through overseas branches and subsidiaries, eg lending from a UK bank to a French borrower through the bank’s branch or subsidiary in France that takes deposits from local savers.

So, what is really going on? To obtain an answer, we need to leave the banking data put together on a balance of payments or locational basis, since they give priority to where the business is conducted. This can be useful in a discussion of employment and value added. But to obtain a yardstick for the generality of peak finance, we instead want to look at data put together on the basis of bank ownership or nationality.



The view by bank nationality

One of the remarkable features of the BIS banking statistics is that they make it possible to pivot from location regardless of bank ownership, to bank ownership regardless of location.⁷ For example, rather than looking at bank claims booked in the United Kingdom, the data also allow us to look at claims of UK-headquartered banks, no matter where they are booked.

Assets are lost and gained in the transition from location to ownership at the bank level. Take again the UK example: when we move from location to ownership, we lose the claims of French and German banks that are booked in London. And we gain the assets that UK bank subsidiaries have abroad, for instance, mortgages and other loans extended by HSBC in France. Note that such locally funded mortgages in France would not appear in the UK locational statistics. In effect, we redraw the UK border. Inside the border, we place the affiliates of UK-headquartered banks, whatever their longitude, whenever the sun sets on them. These bank ownership-based data are the consolidated international banking statistics that the BIS has published since the late 1970s.

In addition, in our “consolidated plus” measure, we add the deposits of UK residents in foreign banks that are located in the United Kingdom. For instance, UK depositors in Santander’s UK subsidiary are part of “bank-related” UK foreign claims. Thus, in redrawing the UK border we put foreign-headquartered banks outside the border.

Graph 2 shows how the consolidated measure (in blue) and the consolidated plus measure (in red) evolved in the years before and after the Great Financial Crisis. The left-hand panel is for 20 advanced economies. Taken at face value, the lines in this panel at first seem to bear out the financial deglobalisation hypothesis. Just like the cross-border data shown in Graph 1, both measures of consolidated bank-related claims for advanced economies peaked before the crisis and by eight years later had fallen by 15–25% of GDP. Meanwhile, the openness of emerging market economies based on “consolidated plus” claims fluctuates at lower levels of around 15% of their GDP in the right-hand panel of Graph 2.

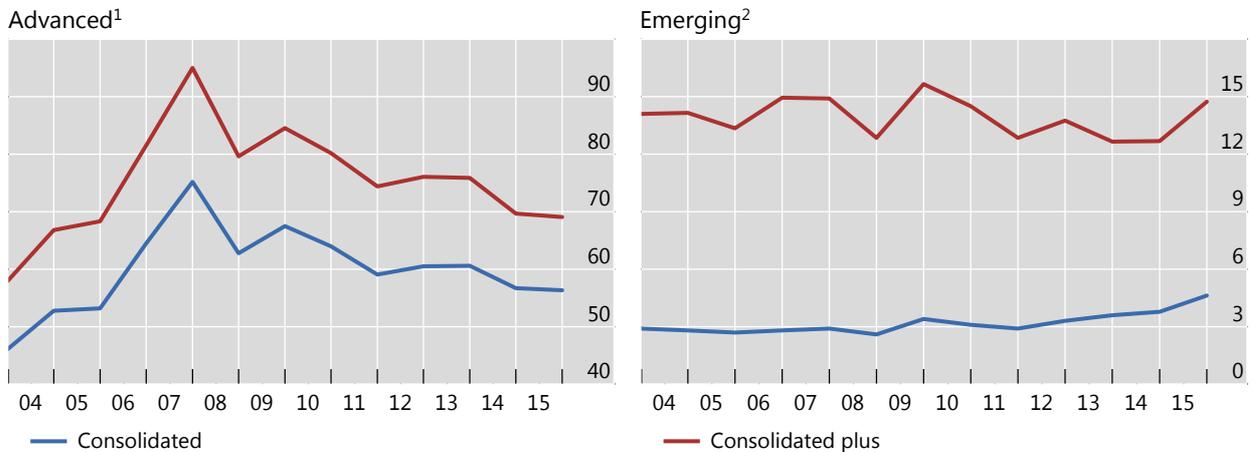
⁷ See discussion in BIS, *85th Annual Report*, 2015, Box V.E, pp 98–9. For an account of the development of BIS statistics and their relationship to financial crises, see J Caruana, “International financial crises: new understandings, new data”, speech on the occasion of the launch of the book *Alexandre Lamfalussy: selected essays* at the National Bank of Belgium, Brussels, 6 February 2017.



Consolidated bank-related assets

As a percentage of GDP

Graph 2



Consolidated shows all foreign assets of banks headquartered in the respective jurisdiction, wherever they are booked; they exclude intragroup claims and include local claims in foreign and domestic currency outside the home country. Consolidated plus adds deposits of residents in foreign banks in the respective jurisdictions.

¹ Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States. ² Brazil, Chile, India, Mexico, Panama and Turkey.

Sources: A Bénétrix, R McCauley, P McGuire and G von Peter, "The consolidated wealth of nations: a first step", mimeo, February 2017; BIS consolidated international banking statistics.

If we decompose the advanced economy data, however, the post-crisis downtrend looks *regional* rather than *global*. In particular, consolidated claims of euro area, UK and Swiss banks are the main contributors to the downtrend in the advanced economy data. The left-hand panel of Graph 3 shows that the consolidated bank-related claims of these three jurisdictions fell by over 50% of their GDP to 105% using the consolidated plus measure and to about 90% using the standard measure. This decline reflects both the collapse in European bank credit to the United States after 2008 and the collapse of northern European bank credit to southern Europe after 2011. This decline may also reflect that banks were encouraged to maintain lending at home.

The argument against the banking deglobalisation thesis can be seen in the right-hand panel of Graph 3, showing the measures for six other advanced economies. These include the big economies of the United States and Japan, as well as Australia, Canada, Denmark and Sweden. Their ratio has risen since 2007 to a level approaching 50% of GDP using the consolidated plus measure and 37% of GDP using the standard measure. On this view, banking integration has roughly levelled off since the 2007–09 crisis.

This is the evidence for the factual part of my first thesis: that *the appearance of peak finance is more a feature of European banking than of global banking*. Now consider the interpretive part of my first thesis, that the deleveraging of European banks should be largely understood as a healthy deleveraging after a banking glut.

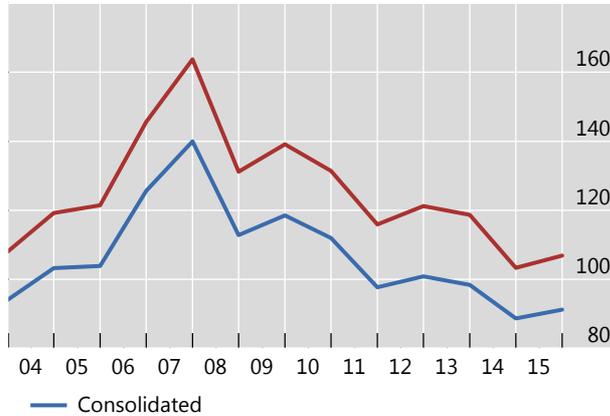


Consolidated bank-related assets

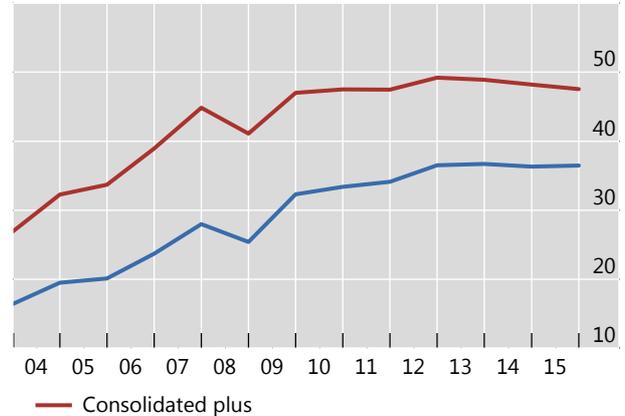
As a percentage of GDP

Graph 3

Euro area, United Kingdom and Switzerland¹



Other advanced²



Consolidated shows all foreign assets of banks headquartered in the respective jurisdictions, wherever they are booked; they exclude intragroup claims and include local claims in foreign and domestic currency outside the home country. Consolidated plus adds deposits of residents in foreign banks in the respective jurisdictions.

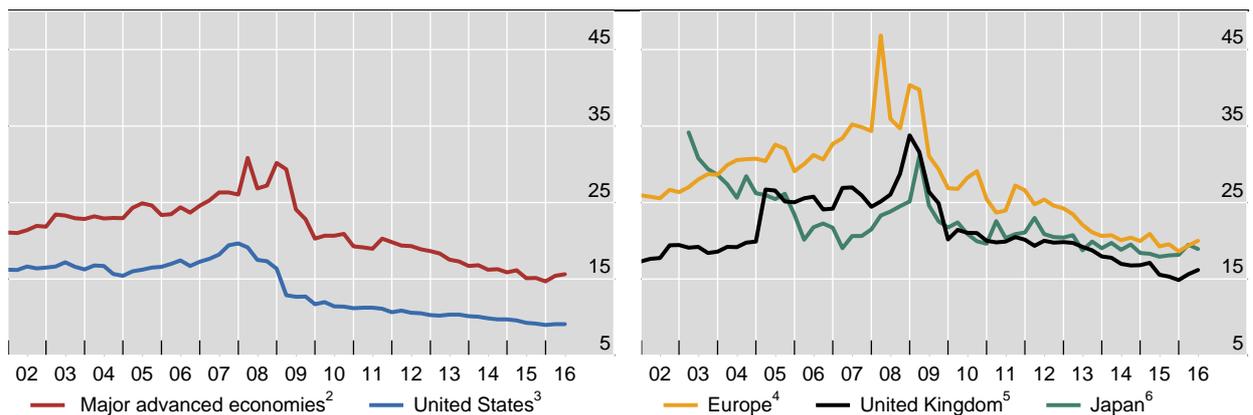
¹ Sum of euro area, United Kingdom and Switzerland. ² Australia, Canada, Denmark, Japan, Sweden and the United States.

Sources: A Bénétrix, R McCauley, P McGuire and G von Peter, "The consolidated wealth of nations: a first step", mimeo, February 2017; BIS consolidated international banking statistics.

The deleveraging story is illustrated by Graph 4, which shows the simple leverage of European, Japanese, UK and US banks, measured as total assets divided by total equity. While there is a common move to reduce leverage after the 2007–09 crisis, we can see in the right-hand panel that European and, to a lesser extent, UK banks had further to go than their US counterparts shown in the left-hand panel.

Bank balance sheet leverage¹

Graph 4



¹ Total assets divided by total equity, weighted by asset size. ² For all the banks shown in this graph. ³ Bank of America, Citigroup, Goldman Sachs, JPMorgan Chase, Lehman Brothers (up to Q2 2008), Merrill Lynch & Co, Morgan Stanley, Wachovia Corporation (up to Q2 2008) and Wells Fargo & Company. ⁴ Banco Santander, BNP Paribas, Commerzbank AG, Credit Suisse, Deutsche Bank, UBS, UniCredit SpA. ⁵ Barclays, HSBC, Lloyds TSB Group, Royal Bank of Scotland. ⁶ Mitsubishi UFJ Financial Group, Mizuho Financial Group, Sumitomo Mitsui Financial Group.

Sources: Capital IQ; BIS calculations.



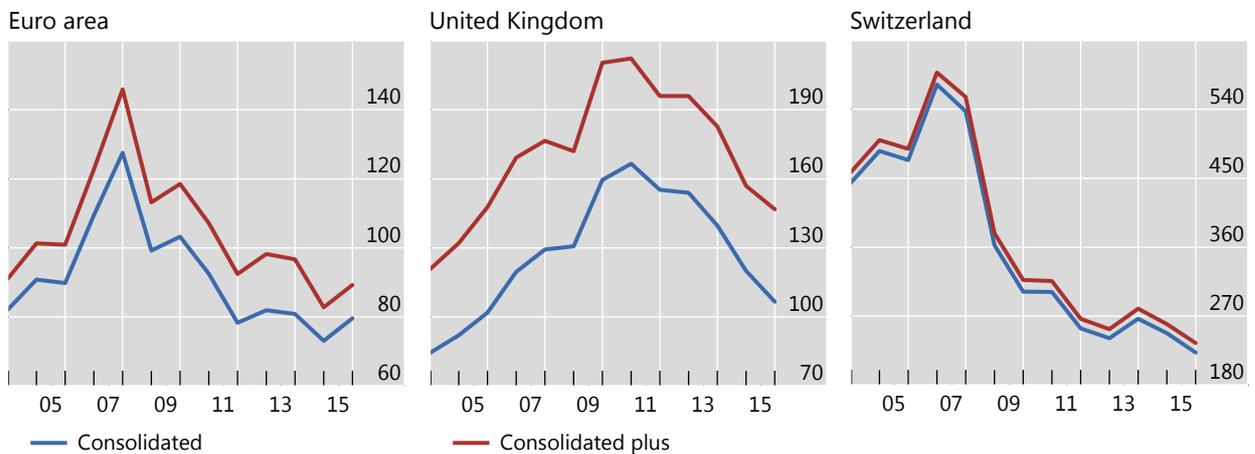
Looking at the consolidated claims of euro area, UK and Swiss banks in Graph 5, these banks all squeezed foreign assets, albeit from different starting points. Especially after the European sovereign strains in 2011, banks in the north of the euro area recalled credits to banks in the south, and central bank credit replaced this bank credit.⁸ However, euro area bank-related assets have stopped falling while those in the UK have not. Swiss banks more than halved their consolidated foreign assets from a very high level of about 600% of GDP to below 300%.

Policies in the aftermath of the crisis have encouraged banks to restore capital buffers and in some jurisdictions may have focused deleveraging on foreign assets. Let us recall the roll call of euro area, UK and Swiss banks that received capital support from their governments. After supporting the banks, the authorities pressured them to restore capital. When banks chose to reduce assets, increased risk aversion, preference for core markets or policy in some jurisdictions led banks to squeeze their foreign claims rather than credit at home. The result was some home bias in the deleveraging.

Consolidated bank-related assets

As a percentage of GDP

Graph 5



Consolidated shows all foreign assets of banks headquartered in the respective jurisdictions, wherever they are booked; they exclude intragroup claims and include local claims in foreign and domestic currency outside the home country. Consolidated plus adds deposits of residents in foreign banks in the respective jurisdictions.

Sources: A Bénétrix, R McCauley, P McGuire and G von Peter, "The consolidated wealth of nations: a first step", mimeo, February 2017; BIS consolidated international banking statistics.

Bank deleveraging is even more of a regional story if we take into account the fact that mainland China only started reporting locational statistics recently and therefore is not included in the consolidated data shown in Graphs 2, 3 and 5.⁹ Banks in China reported \$778 billion in cross-border claims in June 2016.

⁸ See S Cecchetti, R McCauley and P McGuire, "Interpreting TARGET2 balances", *BIS Working Papers*, no 393, December 2012.

⁹ See K Goh and S-K Pradhan, "China and Russia join the BIS locational statistics", *BIS Quarterly Review*, December 2016, pp 25–6.



Moreover, *Chinese banks' affiliates outside the mainland* were estimated to have \$1 trillion in assets offshore at the end of 2014.¹⁰ The latter in particular has grown rapidly.¹¹

In sum, the financial deglobalisation that *seems* to characterise international banking looks different in a consolidated perspective. It seems more a regional phenomenon that reverses an earlier banking glut that afflicted Europe.¹² This distinction between deglobalisation and deleveraging is important. Both could reduce the stocks of international claims, but the motivations and implications are different. Deleveraging is a prerequisite for restoring sustainable growth after a financial credit boom.

It is true that even if it is a regional story, other advanced economy banking systems show a lower rate of growth of consolidated bank claims since the 2007–09 crisis. But to some extent, this reflects the rise of the contribution of bond markets to global liquidity growth in the last eight years. To this I now turn.

Beyond banking: the contribution of bond markets to global liquidity

Taking into account not just banking but also credit extended through bond markets reinforces the view that we are not witnessing financial deglobalisation. In 2013, the BIS began to publish on its website various indicators of global liquidity given the interest in the subject in the G20. One such indicator is dollar borrowing by non-US residents and euro borrowing by non-euro area residents. Monetary policy in both jurisdictions lowered term premia in bond markets, and these drew outside borrowers into issuing dollar and euro bonds. You can see the dollar and euro credit aggregates in Graph 6.

In terms of US dollar credit, shown in the left-hand panel, bonds issued by non-banks (the blue area) have grown much faster than bank loans (the red area). In the first quarter of 2009, outstanding bank loans to non-US residents, at \$3.4 trillion, were one and a half times the size of outstanding bonds at \$2.3 trillion. By the third quarter of 2016, the aggregate reached \$10.5 trillion, according to just-released data. Bonds outstanding had doubled while loans had risen by just over a half. Thus, bonds had almost caught up with loans. Moreover, the aggregate of dollar credit to non-US residents has grown faster than that to US residents.

As for euro-denominated credit, shown in the right-hand panel, bank loans lost out to bonds over the same period. In the first quarter of 2009, bank loans to non-euro area residents were €1.3 trillion and bonds €0.9 trillion. By the third quarter of 2016, bonds had grown to €1.4 trillion and bank loans had fallen to just €1.2 trillion. And again, the aggregate of euro-denominated credit to non-euro area residents has grown faster than that to euro area residents.

¹⁰ See R McCauley and G Ma, "Transforming central bank liabilities into government debt: the case of China", *China & World Economy*, vol 23, issue 4, July–August 2015, pp 1–18. Credit in Hong Kong SAR represents a sizeable fraction, but Chinese bank claims increasingly span the world.

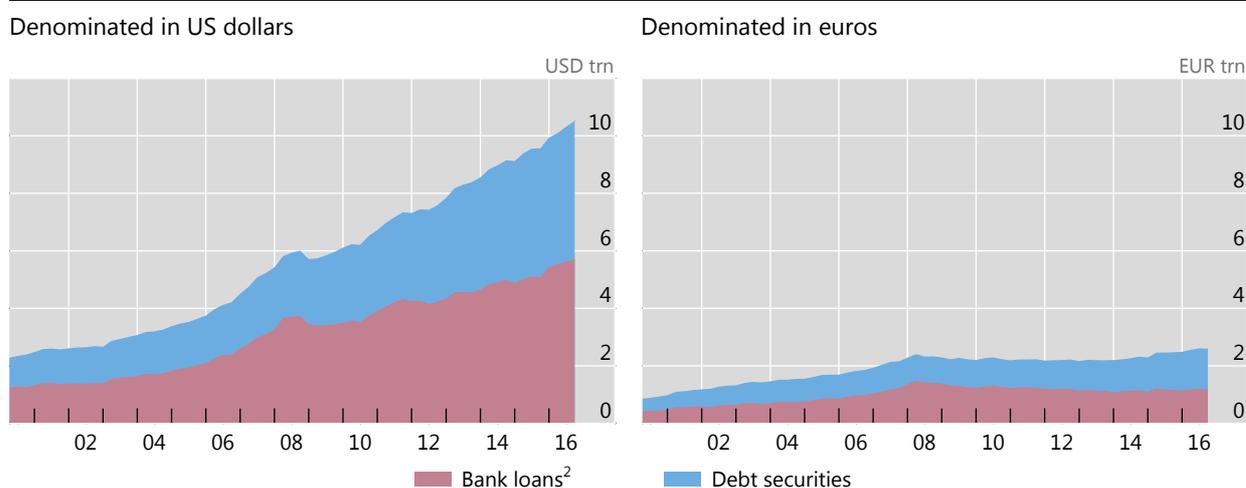
¹¹ This can be inferred from BIS data; see P McGuire and A van Rixtel, "Shifting credit patterns in emerging Asia", *BIS Quarterly Review*, December 2012, pp 17–18.

¹² See H S Shin, "Global banking glut and loan risk premium", *IMF Economic Review*, vol 60, issue 2, 2012, pp 155–92.

Emerging market economy borrowers have taken advantage of favourable terms to issue bonds, often through offshore financing subsidiaries. As a consequence, bond flows may show up as direct investment in the balance of payments statistics.¹³

Credit outstanding to non-resident non-banks¹

Graph 6



¹ Amounts outstanding at quarter-end. ² Loans by banks that report to the locational banking statistics (LBS) to non-bank borrowers, including non-bank financial entities, comprises cross-border plus local loans. For non-LBS-reporting jurisdictions, local loans in US dollars and euros are estimated as follows: for China, local loans in foreign currencies are from national data and are assumed to be composed of 80% US dollar-denominated and 10% euro-denominated; for other non-reporting countries, local loans to non-banks are set equal to LBS-reporting banks' cross-border loans to banks in the country (denominated in US dollars or euros), on the assumption that these funds are onlent to non-banks.

Source: BIS global liquidity indicators.

What is clear is that one cannot gauge financial globalisation by bank activity alone. In this "second phase of global liquidity", bond markets and asset managers – spurred by low yields and sometimes negative term premia – have taken the lead over banks.

To summarise my remarks thus far, it would be premature at the very least to declare that global financial integration has gone into reverse. The strongest case has been made in banking, but looking at developments from a bank nationality perspective, the shrinkage of claims in relation to activity is a feature of European banking, not global banking. Moreover, this shrinkage is mostly deleveraging after a banking glut – though, admittedly, it has some element of home bias. And the point emerges even more strongly when it is recognised that capital markets have gained on banking since 2009 in both the dollar and the euro.

¹³ See R McCauley, C Upper and A Villar, "Emerging market debt securities issuance in offshore centres", *BIS Quarterly Review*, September 2013, pp 22–3; and B Gruić, M Hattori and H S Shin, "Recent changes in global credit intermediation and potential risks", *BIS Quarterly Review*, September 2014, pp 17–18. For a discussion of how the repatriation of such funds shows up in balance of payments statistics, see S Avdjiev, M Chui and H S Shin, "Non-financial corporations from emerging market economies and capital flows", *BIS Quarterly Review*, December 2014, pp 67–77. P Lane and G Milesi-Ferretti, "International financial integration in the aftermath of the Global Financial Crisis", mimeo, 1 November 2016, find that cross-border direct investment has grown a great deal in financial centres. Along with tax-driven complexity in corporate structures, the boom in emerging market corporate bond issues from offshore financing subsidiaries contributes to the growth in direct investment in offshore centres.



The risks of accepting peak finance

Does it matter whether we think that we have passed peak finance? I submit that it is more than a matter of academic interest. Just because the figures do not support peak finance does not remove the risks to international financial integration.

If one thinks that peak finance is passed, then one may believe that there is less harm in policies that interfere with the free flow of capital.

If one thinks that peak finance is passed, then one may believe that there is less harm in policies aimed at keeping national savings for one's own workers.

If one thinks that peak finance is passed, then one may believe that there is less harm in choosing purely national regulatory solutions and in reducing international cooperation at the risk of fragmenting financial markets.

Thus, the risk is clear. The thought that global finance has already peaked may sap our will to resist policies that push in that direction. And even if the data show that financial deglobalisation is not happening, it is the case that pressures are building to push back financial globalisation. I have already suggested that the disengagement of European banks from foreign claims may have been in part a response to national pressure, leading to a home bias in the needed deleveraging.

Our stake in global finance

To highlight the stakes in global finance, let me shift from bank credit and bond markets to the type of capital flows that, as we have been reminded in recent weeks, can provoke a national reaction. Indeed, foreign acquisitions of firms, as well as direct investment by domestic firms abroad, are attracting controversy in a variety of countries. I would like to suggest just one aspect of what can be at stake in allowing foreign acquisitions.¹⁴

My starting point is studies that find that many firms operate at some distance from the frontier at which factors of production are most efficiently combined.¹⁵ Convergence of firms to the frontier is one way to raise productivity and to raise standards of living. Thus, one of the potential benefits of international mergers and acquisitions is to spread best practice. In an ideal world, firms that are closer to the frontier would be well appreciated in the stock market and find it easy to raise the funds necessary to take over firms that are some distance from the frontier. But it can also work the other way.

A Chinese chemical firm is bidding for a Swiss agricultural seed and chemicals business. One can imagine that the products of the research of the target firm could be marketed in rural China to raise agricultural productivity. Similarly, a US pharmaceutical and consumer company is bidding for a small Swiss drug research firm. One can easily imagine the bidder marketing new drugs through its distribution network.

¹⁴ For a review, see A Kose, E Prasad, K Rogoff and S-J Wei, "Financial globalization: a reappraisal", *IMF Staff Papers*, vol 56, no 1, 2009, pp 8–62.

¹⁵ See D Andrews, C Criscuolo and P Gal, "Frontier firms, technology diffusion and public policy: micro evidence from OECD countries", *OECD Productivity Working Papers*, no 2, November 2015.



In different ways, the promise of such deals is moving the would-be buyer to the frontier of the possible. Of course, mergers and acquisitions, perhaps especially cross-border ones, fall short of their promise with some frequency. But a key observation is that this is not a zero-sum game.

You might argue that I have carefully chosen direct foreign investment, which many might put in the category of the “good” global capital flow rather than the “bad” or the “bubbly”.¹⁶ But it would be simplistic to think that bank flows can be cut off while allowing such deals to flourish.

In conclusion

Let me sum up. I have argued that we have not passed peak finance. Data on banks headquartered in key advanced economies outside of Europe show bank-related claims not falling relative to GDP. The shrinkage of European banks’ foreign claims in relation to activity reflects a needed deleveraging after unhealthy financial booms. Outside of banking, global liquidity has flowed through bond markets to an unusual extent since 2009. Deglobalisation is not an apt characterisation of global finance.

This matters because our will to resist policies that could lead to financial deglobalisation is sapped if we misapprehend that the process is already under way. While the retreat in international banking is more regional than global, and while global bond market credit continues to grow apace, the political pressure to roll back global financial integration is very real. Indeed, policies that tend in that direction may have already shaped European banks’ deleveraging.

If there had been – or were to be – broad deleveraging, it would be a matter of fine judgment whether to interpret the result as financial deglobalisation. But, as I have pointed out, the post-crisis deleveraging has been confined to certain sectors in certain economies amid a general march to higher levels of global leverage.

To conclude, we need to make the positive case for financial globalisation – though not for increasing global leverage. I have suggested some reasons to believe that financial globalisation can still contribute to higher global productivity and thereby support the advance of living standards. But financial globalisation clearly carries risks that need to be managed. Given its nature, its full potential can be realised only if there is far-reaching cooperation in its management.

¹⁶ See G Hoggarth, C Jung and D Reinhardt, “Capital inflows: the good the bad and the bubbly”, *Bank Underground*, Bank of England, blog, 14 February 2017.