



## Is globalisation great?

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It is my pleasure and privilege to welcome all of you to the 11th BIS annual conference. This year our theme is the future of financial globalisation. Anyone who has lived through the last five years must surely ask: Is globalisation great? Given the orientation of the BIS, we are forced to ask this question. In fact, I am led to ask two questions, namely: how much globalisation is good and how much finance is good. Over the next two days we will reflect on these questions. Let me give you my answers to my questions up front: financial deepening is great, but only up to a point. And, this means that the globalisation of finance is great, too; but only up to a point.

To see why I have come to these conclusions, I will take a minute to describe the relationship of finance to growth in general, and then draw out implications for cross-border banking; that is, the part related to the globalisation of finance. My comments build on work that has been going on at the BIS for some time.<sup>2</sup>

For most people, the term globalisation means cross-border trade in real goods and services; something that we would all agree has brought the greatest benefits to a large number of people. Trade very clearly supports middle-class living standards, among other things putting literally tens of thousands of different products on the shelves of even a modest-sized supermarket.

But this *real side* of globalisation relies on financial intermediaries to fund the trading of all this stuff across borders. And the recent crisis showed how problems both on and off the intermediaries' balance sheets can have very large, very real and very bad implications. Many of us have started to ask if finance has a dark side.

First, can a financial system get too big? Put differently, is there some optimal size for the financial industry after which it drags down the rest of the economy? Second, how far should countries go in outsourcing the provision of financial services? Does specialisation in financial services by some countries impose vulnerabilities on others? How we think about and answer these questions will surely have an impact on the financial system's structure and thus on the future of globalisation.

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<sup>1</sup> I thank Robert McCauley and Patrick McGuire for their contributions to this presentation. The views expressed here are those of the author and do not necessarily reflect those of the BIS.

<sup>2</sup> See, for example, the original work in C Borio and P Lowe, "Assessing the risk of banking crises", *BIS Quarterly Review*, December 2002, pp 43–54, and C Borio and P Lowe, "Securing sustainable price stability. Should credit come back from the wilderness?", *BIS Working Papers*, no 157, 2004.



Turning to some facts, consider the relationship between the size of a country's financial system and growth. We teach that, because it allocates scarce resources to their most efficient uses, one of the best ways to promote long-run growth is to promote financial development. And, a sufficiently well-developed financial system provides the opportunity for everyone – households, corporations and governments – to reduce the volatility of their consumption and investment.

It sure sounds like finance is great. But experience shows that a growing financial system is great for a while – until it isn't. Look at how, by encouraging borrowing, the financial system encourages an excessive amount of residential construction in some locations. The results, empty three-car garages in the desert, do not suggest a more efficient use of capital!

Financial development can create fragility. When credit extension goes into reverse, or even just stops, it can induce economic instability and crises. Bankruptcies, credit crunches, bank failures and depressed spending are now the all-too familiar landmarks of the bust that follows a credit-induced boom.

What is more, financial development is not costless. The expansion of finance consumes scarce resources that could be used elsewhere. And finance's large rewards attract the best and the brightest. When I was a student, my classmates dreamed of curing cancer, unifying field theory or flying to Mars. Those in today's cohort want to become hedge fund managers. Given finance's booms and busts, is this the most efficient allocation for such scarce resources? I doubt it.

So, when does financial deepening turn from good to bad and become a drag on the economy? Somewhat surprisingly, we get a consistent story regardless of how we measure financial development.

In our 2011 paper for the Federal Reserve Bank of Kansas City's Jackson Hole Symposium, Madhu Mohanty, Fabrizio Zampolli and I found that the effect of debt – public, household or corporate – turns from good to bad, when it reaches something like 90% of GDP, regardless of the type of debt.<sup>3</sup> To prevent adverse developments – both natural and man-made – policy should normally strive to keep debt levels well below this line.

If we measure the scale of the financial industry by employment or output, as Enisse Kharroubi and I do in a paper completed earlier this year, we come to the same conclusion.<sup>4</sup> When average growth in output per worker is plotted, as shown in Graph 1, against the share of employment in finance on the left and value added on the right, a parabola summarises the scatter. (Note that a multivariate regression lies behind these graphs, so that the parabola is a slice out of a more complex surface.) Again, the conclusion emerges that there is a point where both financial development and the financial system's size turn from good to bad.<sup>5</sup> That point lies at 3.2% for the fraction of employment and at 6.5% for the fraction of value added in finance. Based on 2008 data, the United States, Canada, the United Kingdom and Ireland were all beyond the threshold for employment (4.1%, 5.7%, 3.5% and 4.5%). And the United States and Ireland were also beyond the threshold for value added (7.7% and 10.4%).

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<sup>3</sup> S Cecchetti, M Mohanty and F Zampolli, "The real effects of debt" in *Achieving maximum long-run growth: proceedings of the Federal Reserve Bank of Kansas City's Jackson Hole Symposium, 2011*, forthcoming.

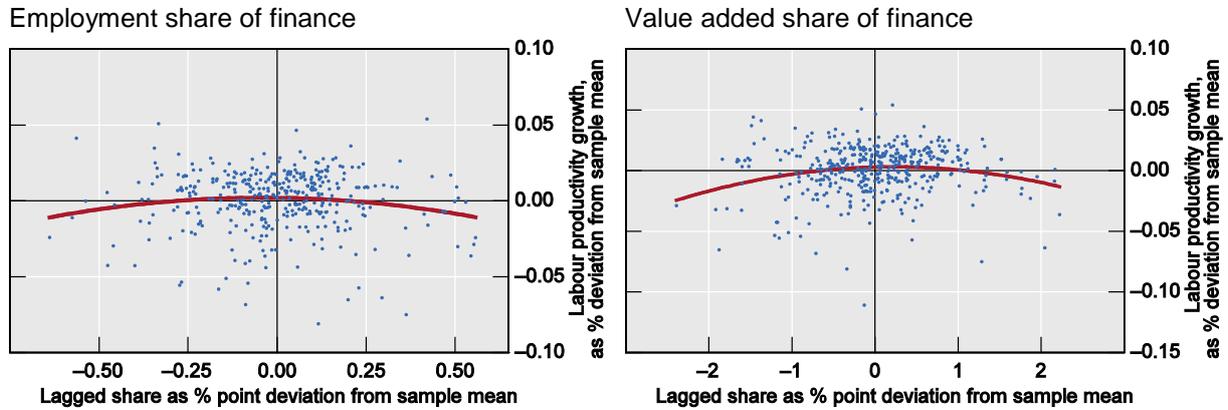
<sup>4</sup> S Cecchetti and E Kharroubi, "Reassessing the impact of finance on growth", mimeo, January 2012.

<sup>5</sup> The picture using credit-to-GDP yields the now familiar result of a peak at around 100% of GDP.

Graph 1

**Productivity growth and financial sector share**

(16 OECD countries, 1980–2009)



Note: The left- (right-) hand scatter plot represents the partial relationship between labour productivity growth and the employment (value added) share of finance, controlling for, investment to GDP, employment growth, openness to trade, initial labour productivity, and country-specific dummies.

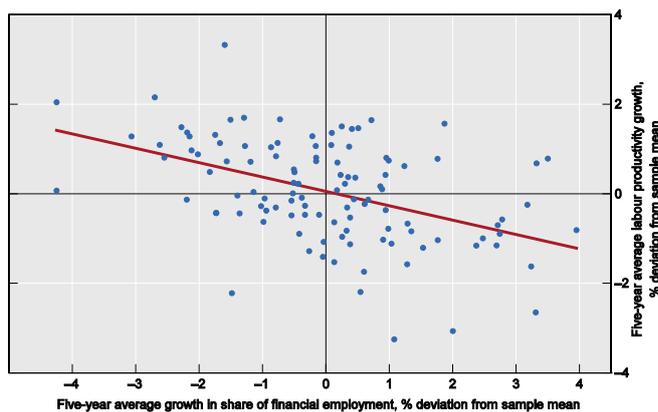
Source: Cecchetti and Kharroubi (2012) based on OECD, *Economic Outlook* and OECD, *STAN*.

Moreover, the evidence suggests that a growing share of the financial system actually slows overall economic growth. Financial sector booms consume scarce resources, especially skilled labour and specialised capital. Panel regressions of the five-year average growth rate of labour productivity on, among other variables, the growth rate of the share of finance in total employment yield the strong negative relationship displayed in Graph 2.

Graph 2

**Productivity growth and growth in the financial sector**

(16 OECD countries, 1980–2009)



Note: This scatter plot represents the partial relationship between labour productivity growth and the growth rate of the employment share of finance, controlling for investment to GDP, employment growth, openness to trade, initial private credit to GDP, initial labour productivity, and country specific dummies.

Source: Cecchetti and Kharroubi (2012) based on OECD, *Economic Outlook* and OECD, *STAN*.

Faster-growing financial employment hurts average productivity growth, as does “too much” value added. In particular, a 1 percentage point increase in the growth rate in finance’s share of employment cuts average productivity growth by nearly one-third of one percentage points per year.

Combined, these facts lead to the inescapable conclusion that, beyond a certain point, financial development is bad for an economy. Instead of supplying the oxygen that the real economy needs for healthy growth, it sucks the air out of the system and starts to slowly suffocate it. Households and firms end up with too much debt. And valuable resources are wasted. We need to do something about this.

If financial development is only good up to a point, it follows that financial globalisation might only be good up to a point. Financial globalisation is about

making it irrelevant to investors and borrowers where the services and the funds they draw on are actually located. But the spillovers during the financial crisis, when one country’s



troubles spread to others, raise the question: does it matter where the funds are coming from? That is, how should we think about cross-border flows and financial specialisation?

As economists, we are trained to think that specialisation is great. Within an economy, we believe that when individuals exploit comparative advantage, it benefits everyone. And, we have created an entire infrastructure where, for example, I am able to write and speak about macroeconomic and financial stability policy full time, but still purchase groceries. The alternative, where I would barter my insights for food, would surely not work as well.

I'll let you be the judge of whether, in my specific case, the market is yielding the right social solution. But for the world as a whole, global welfare is enhanced when we encourage international trade in goods and services. And international trade benefits emerging and advanced countries alike when it exploits comparative advantage. And this inevitably leads to specialisation.

Trade and specialisation reach their limits where economics meets national security. As an individual, I can rely on someone else to produce my food, trusting that some combination of the market and the legal system will look out for me. But would a country want to outsource its entire food production? And what about energy?

National security concerns dictate that some amount of self-sufficiency is cultivated, simply as a precaution. Some concern about food and energy security is certainly warranted. The same is probably true for strategic technologies. But clothing or coffee security is probably not worth worrying about. Where does finance stand on this spectrum between the essential and the superfluous? More specifically, can countries become vulnerable by excessively specialising in finance or by overly relying on people outside their borders for the provision of financial services? Has financial globalisation gone too far in some countries?

Over the past 30 years, the international financial system has come to be dominated by a relatively small number of large banks headquartered in a handful of advanced countries. Their growth has coincided with a push to remove impediments to the free flow of capital. As a result, a highly concentrated banking sector dominates the international provision of capital and maintains large balance sheet positions with respect to many countries. And when these balance sheet linkages are large (relative to GDP or the capital stock or domestic tax base), problems in one country's financial sector quickly transmit themselves to other countries and markets. In short, financial globalisation is bound up with a specialisation in financial services that makes countries much more vulnerable to each other's mishaps.

The experience of some countries during the crisis suggests that too much international capital, like too much debt, can be bad. For example, credit booms in the years preceding the crisis tended to outrun domestic funding and to depend on funds from abroad at the margin. Countries that relied heavily on international credit sources to finance domestic booms found themselves high and dry when these off-shore sources of funding went into reverse – which happened as soon as the foreign creditor banks ran in to trouble.

A few examples illustrate just how important cross-border credit can become. Graph 3 shows the cases of Ireland and Latvia.<sup>6</sup> The light shaded areas depict credit provided by domestic banks to non-bank borrowers, that is, domestic credit. As you can see from the picture, Ireland's non-bank borrowers also directly tapped cross-border bank credit (shown here as the green shaded area). Such credit – which bypasses the domestic banking system and, as a result, is difficult for local authorities to monitor, much less to constrain – accounted for almost half of total credit to non-financial borrowers in Ireland during the last decade!

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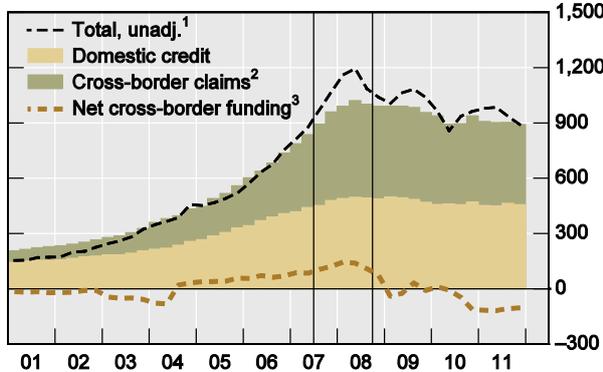
<sup>6</sup> S Avdjiev, R McCauley and P McGuire, "Rapid credit growth and international credit: challenges for Asia", *BIS working paper*, no 377, April 2012.



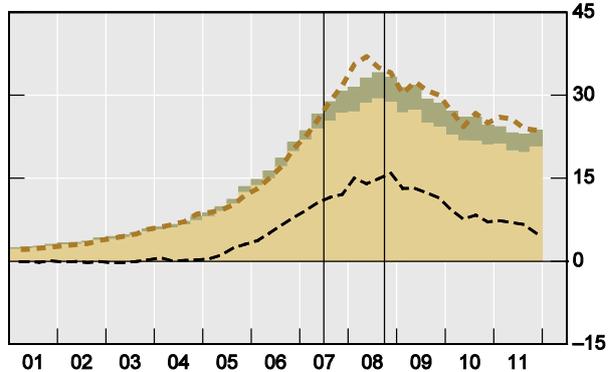
Graph 3

Bank credit to non-banks  
(at constant end-Q4 2011 exchange rates)

Ireland



Latvia



1 The stacked bars indicate total bank credit expressed in US dollars at constant end-Q2 2011 exchange rates, and thus exclude valuation effects. The dotted black line shows unadjusted total bank credit converted into US dollars at contemporaneous exchange rates. 2 BIS reporting banks' cross-border claims on non-banks. Claims include loans and securities, most of which is debt. 3 Net cross-border borrowing (liabilities minus claims) from all sectors by banks located in the country. For non-BIS reporting countries (Hungary and Latvia), BIS reporting banks' net cross-border claims on banks in the country.

Sources: IMF, *International Financial Statistics*; BIS locational banking statistics; BIS consolidated banking statistics.

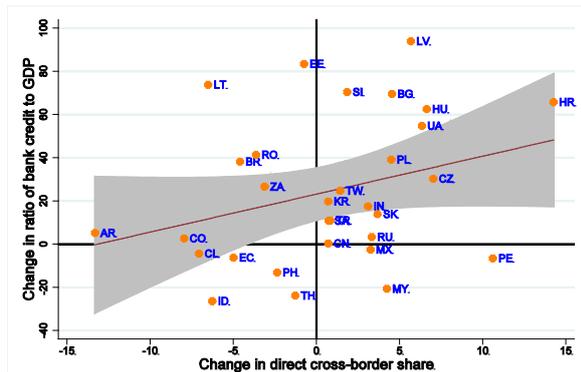
International credit can also flow into a booming economy indirectly. In Latvia, shown in the right-hand panel of Graph 3, banks financed their domestic credit expansion by borrowing from abroad. This indirect financing of domestic credit is shown as the dashed brown line. While the credit was actually extended by domestic banks (or local subsidiaries of foreign banks), the funds were raised cross-border.

Graph 4

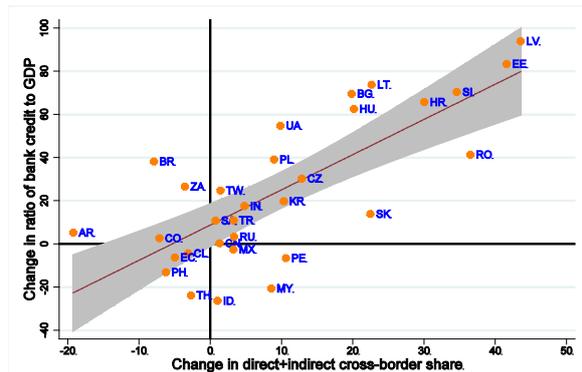
International credit and credit expansion in emerging markets (Q1 2002–Q2 2008)<sup>1</sup>

In per cent

Direct cross-border credit<sup>2</sup>



Direct plus indirect cross-border credit<sup>3</sup>



1 The y-axis shows the change in the ratio of total bank credit (including credit to governments) to GDP over the Q1 2002–Q2 2008 period. Total bank credit is the sum of domestic credit and cross-border bank credit to non-banks in the country. The red lines indicate OLS-predicted values and the gray areas indicate the 95% confidence bands for these regression lines. 2 The x-axis shows the change in the ratio of direct cross-border credit over total bank credit to non-banks (including governments). 3 The x-axis shows the change in the ratio of direct cross-border credit plus net cross-border borrowing by banks in the country (if positive) to total bank credit to non-banks.

Source: Avdjiev, McCauley and McGuire (2012).



This indirect form of international credit – from a foreign bank to a domestic bank and then on to a domestic borrower – is often overlooked when people analyse credit booms. However, by some measures, it is at least as important as direct cross-border credit. Graph 4 shows on the vertical axes the change in the credit-to-GDP ratio in emerging markets between 2002 and 2007. In the left-hand panel, the horizontal axis plots the change in direct cross-border credit; in the right-hand panel, the horizontal axis plots direct plus indirect cross-border credit.

The faster cross-border credit grows, the faster domestic credit grows. And, the relationship in the right-hand panel including indirect cross-border credit is much stronger both statistically and economically. A 1 percentage point *increase* in direct and indirect cross-border credit is associated with a 1.6 percentage point *increase* in the ratio of credit to GDP. While, in principle, financial over-development and financial globalisation may be orthogonal, in practice, cross-border finance seems to be implicated in financial over-development.

After trying to convince you that finance is only great up to a point, I have tried to persuade you that the same may apply to financial globalisation, at least in the form of cross-border banking. It provides us with opportunities, but there are also some pitfalls. As is often the case, you can have too much of a good thing. But I have less compelling evidence here, so I am left with a more tentative conclusion: financial globalisation is great most of the time but not always.

During the conference, Philip Lane, in his paper on financial globalisation and the crisis, digs deeper into the role of global imbalances in driving cross-border balance sheet integration in the pre-crisis years. Then, Alan Taylor systematically studies the relationship between credit and financial crises over the long haul. Tomorrow morning, Pierre-Olivier Gourinchas and Olivier Jeanne offer us a view into a world in which safe and unsafe assets fight for room in global portfolios. And, finally, Hyun Song Shin, in his paper with Valentina Bruno, provides a model for cross-border capital flows, including their dark side. These presentations and the discussions that they spawn will give us new perspectives on the positive and normative aspects of financial globalisation. We hope to come away with a better understanding of both what may happen and what should happen to ensure that financial globalisation makes a positive contribution to growth and world welfare.

Thank you all for coming, and I look forward to the next day and a half of discussion.