



## International financial crises: new understandings, new data

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### Introduction

I would like to thank our hosts, the National Bank of Belgium and the publisher, the Hungarian National Bank, for the book, *Alexandre Lamfalussy: selected essays* that is launched here today. Their commendable collaboration has resurrected some remarkable arguments.

This anthology traces the trajectory of a remarkable career, from economist and banker, to manager at the oldest and the newest international organisations. Alexandre Lamfalussy championed better understanding of global financial vulnerabilities, better data collection to inform that understanding and, more generally, the macroprudential approach.

In my remarks today, I shall review the interaction between our evolving, if not always improving, understanding of financial crises, and the collection of data that allow us better to prepare for the next crisis.

- I shall argue that each crisis was conditioned by a collective misapprehension, or to use the phrase of Robert Shiller, a false popular model, that had the effect of creating a blind spot to risk.
- I shall further argue that each crisis was followed by improvements in data.
- I shall further argue that Lamfalussy was correct in what might be called Lamfalussy's law: "safety does not flow automatically from better information". In other words, connecting the dots is as important as collecting the dots, meaning the right data.
- I shall further argue that, nevertheless, the macroprudential approach requires both an ongoing improvement of our analytic framework and thoughtful extension of our data collection.
- Finally, I shall argue that, since the crisis of 2007–09, central banks have widened their data collection and sharing in ways that recall Alexander Lamfalussy's proposals of 40 years ago.

I shall begin with the origins of the BIS international banking data in the 1960s before discussing the lead-up and the response to the Latin American debt crisis in the early 1980s – a crisis that Lamfalussy himself warned about well ahead of time and also helped to manage. I will then discuss the Asian financial crisis of the late 1990s and the Great Financial Crisis of 2007–09. Before closing, I shall touch on some current analytic and data challenges.

### The origins of the BIS international banking statistics

Let me first discuss the origins of BIS international banking statistics. From its inception in 1930, the BIS compiled and analysed developments in official liquidity – meaning, those in foreign exchange and gold

movements – as well as those in international trade flows. It did so, in parallel, first with the League of Nations and then with the International Monetary Fund. As the euromarkets developed from the 1950s,<sup>1</sup> concern mounted that bankers were creating money out of control. In response, the BIS concerted efforts by central banks to put together data on new euromarket aggregates.

Thus, central banks responded to market innovation with their own innovation when, in 1964, the BIS began publishing international banking data. To be sure, some central banks had deposited their dollar reserves in banks outside the United States, so central banks were not outsiders in this market. Since data require analysis, the G10 Governors established the Euro-currency Standing Committee in April 1971 to monitor the growth of international banking. This committee was renamed the Committee on the Global Financial System in 1999, and still meets today with a wider membership and reporting to a wider group of central bank Governors.

A key aspect of the international banking data was that they went beyond the balance of payments. From the start, the data took into account liabilities to local residents denominated in foreign currency. For instance, these would include dollar deposits of UK residents in banks in London.

In the early 1970s, concern shifted from the liability side of offshore banks' eurodollar balance sheets to the asset side. Lending of eurodollars took off even before the oil price rise in 1973 and the consequent wide trade deficits of some oil-importing countries and heavy recycling of petrodollars. As Lamfalussy always stressed, eurodollar lending took off in part because of the market innovation of medium-term floating rate credits. Thus, the eurodollar market became the shadow banking of the era, transforming short-term deposits into medium-term credit. Against this backdrop, the BIS started publishing data on exposures to developing countries in 1974.<sup>2</sup>

## The lead-up and response to the Latin American debt crisis of the 1980s

I turn now to the lead-up and response to the Latin American debt crisis. In 1976, Lamfalussy drew public attention to the build-up of vulnerability. He said in a speech: "[Looking at]... the continuous growth of credits, the spread of risks to a large number of countries, and the change in the nature of credits – I draw the conclusion the problem of risks has become a very urgent one".<sup>3</sup>

But how big was the risk? Measurement was not easy since risks were dispersed. In a given bank, risk could arise from loans booked at the home office. But risk could also arise from loans booked at foreign branches or foreign subsidiaries. The Basel Committee on Banking Supervision began to discuss consolidation in broad terms from the autumn of 1977 and eventually agreed on the principle of consolidated supervision – namely, global claims against all borrowers in all sectors would be aggregated at each bank, wherever they might be booked.<sup>4</sup> With regard to claims by country, after ad hoc attempts to collect data, by 1977 the UK and US authorities had begun to collect and publish consolidated data on

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<sup>1</sup> See C Schenk, "The origins of the eurodollar market in London: 1955–1963", *Explorations in Economic History*, vol 35, issue 2, 1998, pp 221–38.

<sup>2</sup> See C Borio and G Toniolo, "One hundred and thirty years of central bank cooperation", in C Borio, G Toniolo and P Clement (eds), *Past and future of central bank cooperation*, Cambridge University Press, 2008, p 63.

<sup>3</sup> A Lamfalussy, "La centralisation des risques bancaires", speech to a seminar on the centralisation of banking risks in Luxembourg, 9 December 1976, BIS Archives, file 7.17, cited in P Clement and I Maes, "The BIS and the Latin American debt crisis of the 1980s", National Bank of Belgium *Working Paper Research*, no 247, December 2013, p 4.

<sup>4</sup> See C Goodhart, *The Basel Committee on Banking Supervision: a history of the early years, 1974–1997*, Cambridge University Press, 2011, pp 100–3.



an aggregate basis. With these new data, one could answer questions such as how much all UK-headquartered banks were exposed to, say, Brazil. For its part, in July 1979 the BIS started to publish consolidated data on claims on developing countries for end-1978, which included maturity and sectoral breakdowns. For the first time, one could answer the question: what fraction of the bank claims on Mexico were of short maturity?

In this period, Lamfalussy pushed two initiatives to restrain what Charles Kindleberger termed the “mania” of lending to developing countries.<sup>5</sup> Neither was an immediate success, but both have turned out to have legs. One initiative was an international credit registry at the BIS to which the top 40 or 50 international lenders would submit their claims by country. I shall return in a few minutes to the current parallel to this proposal. The other initiative that Lamfalussy led was to use the tools of microprudential regulation to achieve the macroprudential goal of slowing rapid credit growth.<sup>6</sup> It remains unclear whether the supervisors resisted because of their conceptual focus on risk at a point in time, because they believed that bankers knew what they were doing or because they feared banks’ successful resistance through the political process. In any case, after the 2007–09 crisis, macroprudential policy has returned with a vengeance.

Unfortunately, you know how the Latin America story turns out. As noted in Chapter VIII of the selected essays, in 1976 Lamfalussy posed the question: “Will improved reporting requirements lead to a safer euromarket?”. He prophetically answered in the negative – and let me repeat his answer: “safety does not flow automatically from better information”.<sup>7</sup> The data were one thing; the conviction ascribed to Walter Wriston, the influential American bank chief, that “countries don’t go bust”<sup>8</sup> was another. This was the popular model of the day, which prevented connecting the dots.

In early 1983, a banker complained in print that no one knew how much short-term foreign currency debt had been accumulated in the run-up to the Latin American crisis. On 6 January 1983, Lamfalussy almost lost his temper. In a letter to the editor of the *Financial Times*, he insisted that banks had plenty of opportunity to react to the deteriorating profile of Mexico’s debt. He wrote, citing the three publication dates of the international banking data: “To put it bluntly, actual or potential creditors did have early warnings on three occasions – December 1980, July 1981 and January 1982 – before the eruption of the Mexican crisis in July 1982... [B]y December 1980 anyone who cared to look at our figures could see that an increasing proportion of Mexico’s external borrowing was beginning to take the form of short-term credits”. Unfortunately, this was not the last time that timely provision of data to market participants did not prevent them from adding to a precarious structure of indebtedness.

If data did not prevent the crisis, they proved very helpful in managing it. Thus, both official negotiations on swaps for Mexico and negotiations among officials and private banks on concerted increases in commercial bank exposures drew on reasonably reliable data on who was owed what by whom.<sup>9</sup> Even so, the crisis threw into relief the limitations of the data.

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<sup>5</sup> C Kindleberger, *Manias, panics and crashes*, first edition, 1978, now updated to its seventh edition by Robert Aliber.

<sup>6</sup> See P Clement, “The term ‘macroprudential’: origins and evolution”, *BIS Quarterly Review*, March 2010, pp 59–67.

<sup>7</sup> I Maes (ed), *Alexandre Lamfalussy: selected essays*, Hungarian National Bank and National Bank of Belgium, 2017, p 165.

<sup>8</sup> See “Walter Wriston”, *Economist*, 27 January 2005. L Rieffel, *Restructuring sovereign debt*, Brookings Institution Press, 2003, Appendix A cannot find him saying it. A slightly different version is rendered by [www.azquotes.com](http://www.azquotes.com): “Countries don’t go out of business... The infrastructure doesn’t go away, the productivity of the people doesn’t go away, the natural resources don’t go away. And so their assets always exceed their liabilities, which is the technical reason for bankruptcy. And that’s very different from a company”. Lamfalussy argued that banks “were not alone in believing that sovereign borrowers cannot go bankrupt” in *Financial crises in emerging markets*, Yale University Press, 2000, p 8.

<sup>9</sup> See Clement and Maes, op cit, p 18.



Thus, in the wake of the Latin American debt crisis, the BIS international banking data were improved in many respects. Most importantly, more reporting countries, including the Caribbean centres, were added.

## Asian financial crisis and its aftermath

If Walter Wriston memorably expressed the false model of the Latin American debt crisis, then Nigel Lawson may deserve credit for the false model of the Asian financial crisis. The Lawson Doctrine, as rendered by Lamfalussy, states that “current account deficits mattered only to the extent that they mirrored a public sector deficit”.<sup>10</sup> Stated with more care, it holds that “to the extent that current account deficits reflect private saving and investment decisions, that there are no distortions, and that expectations are rational, then there are no reasons for the government to intervene”.<sup>11</sup> The more popular version skipped the caveats about the absence of distortions and the presence of rational expectations.

In any case, the Asian financial crisis was not prevented by the BIS data showing increased indebtedness of Thailand, Indonesia, Malaysia and Korea, associated with their current account deficits, and in the case of Korea, the foreign expansion of Korean banks and firms. Indeed, the crisis in East Asia was in many respects prefigured by the Mexican crisis in 1994. There the finance minister had drawn on the Lawson Doctrine to argue that private savings and investment decisions, not government deficits, underlay the current account deficit.<sup>12</sup>

Again the data were improved in the wake of the crisis. Much of the response was focused on the disclosure by the authorities. In 1998 the Euro-currency Standing Committee designed a template on information disclosure<sup>13</sup> that became the IMF special data disclosure standard for foreign exchange reserves.

In addition, there were important improvements to the timeliness, frequency and coverage of the BIS international banking data.<sup>14</sup> The semiannual consolidated data became quarterly. Moreover, consolidated data were extended to capture positions vis-à-vis industrial countries. (These would make evident the debt build-up in southern Europe in the 2000s, albeit without preventing it.) In 2005, the consolidated data were published for the first time on an “ultimate risk” basis, incorporating risk reallocations, derivatives exposures and guarantees extended.

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<sup>10</sup> A Lamfalussy, *Financial crises in emerging markets*, Yale University Press, 2000, p 24.

<sup>11</sup> As interpreted by O Blanchard, “Current account deficits in rich countries”, Mundell Fleming Lecture, 9–10 November 2006. He called it a “restatement of the second welfare theorem”. M Montes, *The currency crisis in Southeast Asia*, Institute of Southeast Asian Studies, 2000, p 15, argues that the Lawson Doctrine inhibited the Thai authorities from responding to a financial boom.

<sup>12</sup> See B De Long and B Eichengreen, “Between meltdown and moral hazard”, in J Frankel and P Orszag (eds), *American economic policy in the 1990s*, MIT Press, 2002, p 207.

<sup>13</sup> Euro-currency Standing Committee, *Enhancing transparency regarding the authorities’ foreign currency liquidity position*, September 1998.

<sup>14</sup> See Committee on the Global Financial System, *Report of the Working Group on the BIS International Banking Statistics*, Basel, September 2000 and P McGuire and P Wooldridge, “The BIS consolidated banking statistics: structure, uses and recent enhancements”, *BIS Quarterly Review*, September 2005, pp 73–96.

## The Great Financial Crisis of 2007–09

Now, what about the financial crisis of 2007–09? Perhaps it is still too soon to be able to pin down the false model that contributed to it. Perhaps it was a confluence of three. At the micro level was the fallacy of composition that banks could and would manage their own risks in an appropriate fashion and that this would add up to systemic stability. But individual firms did not internalise their contribution to systemic risk. At the national macro level, the conviction that low inflation was sufficient for financial stability had many adherents – though not at the BIS.<sup>15</sup> At the global macro level, it was perhaps the widespread idea that global imbalances in the form of trans-Pacific current account surpluses and deficits would lead to the next crisis. But the trans-Pacific savings glut story obscured the trans-Atlantic banking glut.<sup>16</sup>

Once again, the key evidence for the trans-Atlantic banking glut was plain to see in BIS data. Underneath the false comfort of more or less balanced trans-Atlantic current accounts lay an evident and massive build-up of European bank exposures to US non-bank borrowers. In particular, the claims of banks in the United States on Europe rose from \$462 billion in 2002 to \$1,543 billion at the end of 2007. These funds round-tripped into claims of banks in Europe on the United States, which rose from \$856 billion to \$2,056 billion.<sup>17</sup>

While data showing the build-up of vulnerabilities did not prevent the subprime mortgage defaults from turning into a great financial crisis, the crisis did lead to a consensus for data improvements:<sup>18</sup> the G20 has endorsed important improvements under the Data Gaps Initiative.<sup>19</sup>

In the BIS banking data:<sup>20</sup>

- The locational banking statistics now provide information on the nationality and the location of a reporting bank, the sector and the residence of its counterparties, and the position's currency of denomination.
- The consolidated banking statistics are now enhanced with complementary series on reporting banks' domestic assets, as well as additional information on the structure of their liabilities and capital. Thus, after more than 30 years of focus on the asset side, the "dollar shortage" experienced by non-US banks led to agreement on collecting liability data on a consolidated basis.
- More countries have started reporting data to the locational banking statistics.

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<sup>15</sup> See W White, "Is price stability enough?", *BIS Working Papers*, no 205, April 2006.

<sup>16</sup> See C Borio and P Disyatat, "Global imbalances and the financial crisis: link or no link?", *BIS Working Papers*, no 346, May 2011; and H S Shin, "Global banking glut and loan risk premium", *IMF Economic Review*, vol 60, issue 2, 2012, pp 155–92.

<sup>17</sup> See S Avdjiev, R McCauley and H S Shin, "Breaking free of the triple coincidence", *Economic Policy*, vol 31, issue 87, July 2016, Figure 9.

<sup>18</sup> See Committee on the Global Financial System, *Improving the BIS international banking statistics*, *CGFS Papers*, no 47, November, 2012; C Borio, "The Great Financial Crisis: setting priorities for new statistics", *BIS Working Papers*, no 408, April 2013; and BIS, "Recent enhancements to the BIS statistics", *BIS Quarterly Review*, September 2016, pp 35–44.

<sup>19</sup> See Financial Stability Board and International Monetary Fund, *The financial crisis and information gaps: sixth progress report on the implementation of the G-20 Data Gaps Initiative*, September 2015.

<sup>20</sup> See S Avdjiev, P McGuire and P Wooldridge, "Enhanced data to analyse international banking", *BIS Quarterly Review*, September 2015, pp 53–68.

In addition, the Basel Committee on Banking Supervision is systematically collecting data at both the national banking system level and the individual bank level to support its new role of monitoring the implementation of Basel III.

A further, and unprecedented, data initiative recalls Lamfalussy's push for an international credit registry for the major banks. The so-called international data hub was created in 2013 at the request of the G20 and is hosted by the BIS. There, authorities in the home jurisdictions of global systemically important banks are now sharing *bank-level* data. These not only permit assessment of common exposures, as Lamfalussy imagined vis-à-vis country risk. They also permit assessment of interlinkages among the largest internationally active banks on the asset and liability sides. Moreover, the data are reported at a weekly – rather than quarterly – frequency. Of course, these data are market-sensitive and are thus by careful design non-public. But they are putting supervisory authorities in a much better position to spot building vulnerabilities.

Beyond the banking data, there has been agreement on improving data on interlinkages and common exposures. After the experience of 2007–09, finer data are being published on credit default swaps, which proved to be the transmitters of common exposures. And new efforts have been launched on indicators of the common exposures themselves, namely property prices, credit to the private non-financial sector and the credit-to-GDP gap.<sup>21</sup> Also beyond banking, the FSB has developed an annual monitoring exercise with a view to identifying the potential build-up of systemic risks in the shadow banking system.

## Conclusion: some current challenges

Let me sum up. As Lamfalussy recognised, the challenge of all such data has been and remains their comprehensive analysis. For instance, my BIS colleagues have tried to operationalise the notion of global liquidity. One approach has been to integrate the banking data with securities data<sup>22</sup> to provide a holistic view of international credit in order to track global trends in dollar credit to non-US residents. Such data form a part of the larger set of global liquidity indicators of the BIS.<sup>23</sup> A further challenge is to assess how much larger dollar credit to non-US residents might be if one takes into account cross-currency swaps.<sup>24</sup>

Stepping back, better statistics alone do not make international finance safe. We also need to struggle to escape the popular models that prevent us from recognising the build-up of vulnerabilities. Getting all the right dots in front of you does not really help if you do not connect the dots.

Right now, I worry that even though we have data on aggregate debt, we are not properly connecting the dots and we are underestimating the risks, particularly when the high levels of debt are

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<sup>21</sup> See C Dembiermont, M Drehmann and S Muksakunratana, "How much does the private sector really borrow? A new database for total credit to the private non-financial sector", *BIS Quarterly Review*, March 2013, pp 65–81.

<sup>22</sup> BIS international securities data have been improved to provide more consistent breakdowns of issuance; this is important in the light of H S Shin, "The second phase of global liquidity and its impact on emerging economies", in K Chung, S Kim, H Park, C Choi and H S Shin (eds), *Volatile capital flows in Korea*, Palgrave Macmillan, 2014, pp 247–57.

<sup>23</sup> [www.bis.org/statistics/gli.htm](http://www.bis.org/statistics/gli.htm). See Committee on the Global Financial System, *Global liquidity – concept, measurement and policy implications*, *CGFS Papers*, no 45, November 2011; also C Borio, R McCauley and P McGuire, "Global credit and domestic credit booms", *BIS Quarterly Review*, September 2011, pp 43–57; R McCauley, P McGuire and V Sushko, "US monetary policy, leverage and offshore dollar credit", *Economic Policy*, vol 30, no 82, April 2015, pp 187–229; and R McCauley, P McGuire and V Sushko, "Dollar credit to emerging market economies", *BIS Quarterly Review*, December 2015, pp 27–41.

<sup>24</sup> See C Borio, R McCauley, P McGuire and V Sushko, "Covered interest parity lost: understanding the cross-currency basis", *BIS Quarterly Review*, September 2016, pp 45–64.



aggravated by weak productivity growth in many countries. And the standard of evidence for precautionary action has to be the preponderance of evidence, not evidence beyond a shadow of doubt. Waiting for fully compelling evidence is to act too late.

Total debt in the global economy, including public debt, has increased significantly since the end of 2007. True, banks have delevered and private debt has been reduced in some countries, namely Ireland, Spain, the United Kingdom, the United States and others. However, public debt has increased significantly in advanced economies, and private debt has increased in emerging market economies and some advanced economies less affected by the 2007–09 financial crisis. Over the last 16 years, debt of governments, households and non-financial firms has risen by 63% in the United States, the euro area, Japan, the United Kingdom, Canada and Australia, 52% in the G20 and 85% in emerging economies. Heavy debt can only leave less room for manoeuvre in responding to future challenges.

To conclude, financial crises give us an opportunity to improve the data that can indicate vulnerabilities. As Lamfalussy keenly recognised, these data can only play their part in macroprudential policy if we use them creatively to analyse systemic risk as it evolves.