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The financial crisis: what implications for new statistics?

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Introduction[1]

We live in a world of paradoxes. And the financial crisis has put the spotlight on yet another one: in our internet age we are constantly bombarded with data, and yet we do not have at our finger tips the information that would answer even the simpler questions we might ask about the health of our financial system. Either this information does not exist or, if it does, it is not collected in a way that makes it easily available and digestible.

Can this really be true? Consider just one example. Public reports by banks are growing ever more voluminous. And yet anyone who has been charged with monitoring banks' health knows just how difficult it is to draw on this material and other sources of information. Often, special data gathering exercises have to be carried out. And even these are quite laborious. Those that have been involved in efforts to assess the macroeconomic impact of the latest Basel Committee proposals know this all too well. It is just hard to gather the necessary information: it is hard with respect to current conditions and even harder with respect to their historical evolution.

Every financial crisis brings in its wake demands for more information. The crises in developing countries of the 1970s and early 1980s gave a big push to improvements in the BIS international banking statistics.[2] The Asian crisis led to refinements in those statistics, resulted in major enhancements to the disclosure of foreign exchange reserves, and gave birth to the IMF's Special Data Dissemination Standard (SDDS). The current upheaval is no

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[1] Keynote speech delivered at the Fifth IFC Conference "Initiatives to address data gaps revealed by the financial crisis", Basel, 25–26 August 2010. I would like to thank Dietrich Domanski, Ingo Fender, Bob McCauley, Pat McGuire and Paul van den Bergh for helpful comments and suggestions. The views expressed are my own and do not necessarily reflect those of the Bank for International Settlements.

[2] For accounts of these efforts, and the obstacles they faced, see Borio and Toniolo (2008), Lamfalussy (2000) and Maes (2009).

exception. Just to mention one of the many efforts, the G20 have identified a large set of data gaps that are now being addressed (FSB-IMF (2009)).

Crises open windows of opportunity that cannot be missed. In deceptively tranquil times, it is simply too difficult to foster the consensus necessary to improve data availability. The sense of urgency is not there. Why fix what, seemingly, ain't broken? The cost/benefit analysis calculus is heavily biased towards inaction.

To take advantage of these narrow windows of opportunity, we need to have the right expectations and set the right priorities. Even in the internet age, and contrary to what finance textbooks often assume, the costs of gathering information are not negligible. Beyond technical factors, disagreements over the value of the information stand in the way, as do concerns about confidentiality, both within and across countries.

In what follows, I will address three questions. First, what can we realistically expect regarding the benefits of better statistics for financial stability? Second, what should be the priorities for what information to collect and for how to collect it? Third, what role can the BIS play in this endeavour?

Let me highlight the main takeaways. First, there is no holy grail. Better statistics can no doubt be a big help in safeguarding financial stability; improvements are badly needed. That said, the main reason why crises occur is not lack of statistics but the failure to interpret them correctly and to take remedial action. Second, we should walk before we run. Concerning the "what", out of the myriad of new statistics being put forward I would highlight two sets, one for prices, of which there is otherwise an abundance, and one for quantities, for which information is much more limited. What we urgently need here are internationally comparable sets of property prices; and, above all, consistent and timely balance sheet information for banks on a consolidated and global basis – the cornerstone of any more encompassing, sophisticated and granular reporting system. Concerning the "how", the collection process should be supported by sound governance arrangements, flexible and cost-efficient. Finally, the BIS stands ready to help. To do so, it can leverage its comparative

strengths: a long track record; the presence of key players (central banks, supervisory authorities and you – the Irving Fisher Committee (IFC)); and a specific infrastructure on which to build – the international banking statistics.

I. Expectations: there is no holy grail

Could better statistics *by themselves* have allowed policymakers to anticipate the recent catastrophic financial crisis? I very much doubt it.

To be sure, there *were* big statistical gaps. For instance, aside from some aggregate figures, notably those compiled by the BIS, we had hardly any information on credit derivatives. Gross and net volumes in CDS markets by underlying name became available via DTCC only a long way into the crisis; and, even then, the identity of the counterparties has remained beyond reach for a broader audience, even as supervisors can now obtain such data from the DTCC. Similarly, the extraordinarily large US dollar funding needs of European banks – a puzzling factor at the core of the unfolding strains – were on no-one's radar screens. Only after the crisis broke out did work at the BIS, drawing on its international banking statistics, provide tentative ranges of their size (McGuire and von Peter (2009)).

But the failure to anticipate this crisis, and those before it, did not stem from faulty *statistics*, as it turned out. Rather, it resulted from the faulty *lens* through which those statistics were examined. Ultimately, we see what we want to see.[3] What is a sustainable credit boom for some raises alarm bells for others. What some view as a healthy redistribution of risk in the financial system, others see as fuelling dangerous risk-taking. Policies that some regard as prudent others consider reckless. Historically, time and again,

[3] Psychologists have a specific term for this well known phenomenon: "cognitive dissonance".

adjudicating between these fundamentally different perspectives drawing on data alone has not proved feasible. Add to this the human tendency to take credit for successes and to disown failures – so that "booms have a thousand fathers, busts are orphans" – and the enormous difficulties in anticipating the crisis, let alone taking action to prevent it, become apparent.

And yet, signs of the gathering storm were there. True, they could not be detected through the popular macro-stress tests. Indeed, all those run *before* the crisis failed to identify vulnerabilities. As argued in detail elsewhere, given *current* technology, regardless of data availability, these tests risk lulling policymakers into a false sense of security (Borio and Drehmann (2009a), Alfaro and Drehmann (2010)). But they could be spotted through simple real-time leading indicators of financial distress, such as those based on the *joint* deviation of the ratio of credit-to-GDP and asset prices, notably property prices, from historical trends (Borio and Drehmann (2009b)). Indeed, such indicators have also performed well out of sample. The secret of their comparative success is simple: they focus on the most systematic and general signs of the build-up of risks across policy regimes and historical periods – they focus, that is, on what is common to the various episodes, rather on what differs across them.

At the same time, it would be a serious mistake to infer from all this that more and better data is not necessary. Far from it! First, even those simple indicators could greatly benefit from better data, given the major limitations of available property price series and the inability of available credit series to fully capture cross-border exposures – points to which I will return later. Second, by their very nature, those indicators have a *very* limited function. Their source of strength is also their source of weakness. Given their generality, as a prevention tool, they can at most act as a starting point for a fuller analysis based on much

more granular information.[4] They raise a flag, which has to be followed by a drill-down exercise. They are silent about the more specific nature of the vulnerabilities and, hence, about the possible dynamics of financial distress. Moreover, by design, they cannot help us understand unfolding events during a crisis and in its aftermath. Barometers are helpful, but so are thermometers! Third, and looking further ahead, better statistics are indispensable to improve our understanding of the mechanisms that underlie the build-up of financial risks and their crystallisation in financial crises. They are essential to develop and test analytical hypotheses from which eventually to refine or develop concrete policies.

To sum up, any set of statistics, no matter how sophisticated and reliable, inevitably has limitations. However, it is important that policymakers, market participants and scholars have the best possible set of statistics at their disposal, subject to a proper cost/benefit test. And awareness of what statistics can and cannot do is the best way of limiting the risk of putting too much faith in their power.

2. Priorities: walk before you run

The crisis has provided one of those rare opportunities to implement a welcome and much needed step-enhancement in available statistics. But gathering statistics is costly. Priorities have to be set regarding what to collect and how to collect it. Consider each of these issues in turn.

[4] For a conceptual framework on how such a two-step approach might be set up, see Eichner et al (2010) and Cecchetti et al (2010).

What to collect

As for the "what", I would highlight two gaps: the first, quite specific, concerns price series; the second, potentially much more extensive, concerns quantities.

The proliferation of price series is, without a doubt, extraordinary. In particular, financial innovation and deepening have spawned an unprecedented expansion of financial contracts. Risk has been spliced and diced, reduced to its atomistic components and recombined in various ways. The corresponding financial contracts trade at a price. Those prices have generally become publicly available, in some cases even at intra-day frequencies.

If anything, I would argue that there is an *overabundance* of such information. All too often observers, policymakers and market participants are glued to their screens, their attention riveted on the latest blip. It is hard to distinguish true information from noise. And there is a risk of misreading that information. This is especially the case when assessing potential vulnerabilities in the financial system. Time and again, financial market prices have proved to act more like *contemporaneous* indicators of financial distress rather than true *leading* indicators – that is, acting more like *thermometers* than *barometers* (Borio and Drehmann (2008)). Volatilities, spreads and risk premia tend to be unusually low precisely when risk is building up, and to spike only when it materialises. What looks like low risk is, in fact, a sign of high risk-taking. The build-up of risk is akin to the slow shift in tectonic plates: high-frequency information distracts our attention, it obscures the bigger picture.

One critical exception to this wealth of data is *property prices*, for both residential and commercial property (and corresponding information about rents). This is puzzling, since throughout history property prices have been at the heart of some of the most serious and damaging financial crises with major macroeconomic costs (eg Hoyt (1933)). The reasons are not hard to find: property prices are subject to major boom and bust cycles, especially those for commercial property; property represents a major fraction of an economy's

perceived “wealth”; it is extensively used as collateral; and its purchase is largely financed with debt. Not surprisingly, property prices also play an important role in the above-mentioned leading indicators of banking crises. And yet, available statistics are extremely poor. The series are generally limited in coverage and granularity, their extension back in time is gravely inadequate, and consistency across countries is a serious problem.

At the BIS, we started to collect information on property prices in the early 1990s, drawing on a mix of official and private sources. Judging from external requests, this has proved to be one of the most successful sets of ad hoc statistics we have ever put together. Over time, interest in property price data in official statistical circles has grown, as recently confirmed again by specific recommendations made in recent G20 reports (FSB-IMF (2009)). And I am glad to see that an informal survey of IFC members ahead of this conference indicates that many countries have assigned a high priority to collecting this data. That said, while improvements have been made concerning residential property prices, statistics for commercial property are lagging badly behind. So I would very much hope that these efforts will be intensified and coordinated internationally, to ensure greater consistency. Maybe this is an area in which the IFC could play a more active role.

But the more pervasive gaps relate to *quantities*, not prices, and especially to balance sheet information. It is rather extraordinary that, even today, we still lack readily available statistics for comprehensive consolidated balance sheet data on banks’ global operations. The publicly available data that do exist are incomplete or sparse. And, with few exceptions, the BIS international banking statistics being one of them, they are generally unreliable, untimely, inconsistent across firms and borders, user-unfriendly and hard to aggregate meaningfully. At the BIS, we regard this as *the* top priority going forward (eg Cecchetti et al (2010)).

The consolidated principle is critical. Residency-based data – the data that underlie national account statistics – are the right ones if we are interested in knowing *where* output is produced and financial claims held. But they do not tell us *who* makes the underlying

economic decisions. In a world in which firms increasingly operate across borders, consolidated data provide a better approximation to the actual decision-making units. It is these units that decide where to operate, what goods and services to produce and at what prices, and how risks should be managed. Importantly, it is these units that ultimately survive or fail.

Such a set of statistics, covering *both* assets *and* liabilities (on- and off-balance sheet) comprehensively, and complemented with the income statement, would be a solid basis on which to build further. It would provide the basic building blocks for the assessment of exposures to various risks – credit, market and liquidity (funding) risks.[5] And, over time, it could be refined in terms of granularity and be extended beyond the banking sector. The banking sector is no doubt the right place to start. Financial crises have repeatedly shown that, one way or the other, problems elsewhere in the non-financial and broader financial sector ultimately end up back with the banks, as strains become acute and more damaging.

What about the usefulness of information on bilateral exposures in all this? This has become quite popular following the financial crisis and the development of analytical approaches to the modelling of systemic risk that trace the knock-on effects from one institution to the next. The approach views the financial system as a network of connections linking institutions. One of the working groups under the aegis of the G20 is actively considering the collection of this type of information.

My sense is that this type of information falls under the category “nice to have”, but is not a priority on a par with the core balance sheet information just discussed. True, interlinkages are necessary to estimate meaningful balance sheet measures of sectoral or aggregate leverage: the capital available to absorb losses in any given sector can easily be

[5] For a systematic analysis of the type of possible risk information at the level of individual institutions and the system as a whole, see Borio and Tsatsaronis (2005). For individual institutions, see also BCBS, CGFS, IAIS and IOSCO (2001).

overstated unless interlinkages within the sector are taken into account (eg, the well known "double leverage" phenomenon). But detailed counterparty exposure information would have very limited value unless it was grafted onto reliable, basic information about each institution's balance sheet. Moreover, there is a risk of putting too much emphasis on interlinkages as a factor driving contagion. Common (similar) exposures of institutions, on both their asset and liability sides, together with undiscriminating responses by investors and counterparties, are the main drivers of the dynamics of financial distress. A financial crisis is more like a tsunami that sweeps away all that gets in its way than a force knocking down one domino after the other along a specific path[6]. Even so, granular, up-to-date information about interlinkages can be helpful in managing a crisis – making it particularly relevant for exchanges of information among supervisors.

Of all the international reporting systems available, the one that comes closest to providing the core balance sheet information identified here as a priority is the BIS international banking statistics. The set combines consolidated balance sheet information with residency-based (locational) information, providing a bridge between national account statistics and those needed to understand the behaviour of individual decision units.[7] The statistics are collected on a consistent basis internationally. Their timeliness has improved over time, with a current reporting lag of roughly one quarter. The coverage is quite extensive, including internationally active banks from some 40 jurisdictions, and accounting for about 95% of all international claims. Their reliability is constantly checked and improved.

At the same time, these statistics have a number of limitations. In particular, they cover only the *international* operations of the reporting banks. And the granularity of the

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[6] See Elsinger et al (2006) for empirical evidence on this point; see Upper (2007) for a critical survey of contagion analysis based on networks.

[7] For an illustration of how rich the analysis based on the combination of consolidated and residency-based data can be, see Fender and McGuire (2010), who explore funding risk in the global banking system.

information could be enhanced significantly. Not least, for historical reasons the consolidated statistics have focused primarily on the *asset* side of banks' balance sheets. While combining them with the residency-based statistics that identify the nationality of the bank can help to overcome some of these limitations, the scope for improvements is substantial (Cecchetti et al (2010), and Fender and McGuire (2010)). In particular, the improvements would be necessary to get a better handle of the banks' funding risks that have been so prominent in the current crisis, including those resulting from maturity transformation**.**

How to collect it

Priorities have to be set not only for what to collect but also for how to collect it. The process is important. A number of principles suggest themselves (see also Tarullo (2010)).

First, governance matters. For one, to ensure consistency, the process should be guided internationally. Purely domestic efforts risk resulting in inconsistent data sets. If the data sets are consistent, the total is more than just the sum of the parts. Given the global nature of the operations of many reporting firms, international coordination should also facilitate the collection of the data. In addition, those responsible should have the necessary legal powers to collect the information. In some cases, data may need to be gathered on a voluntary basis. International peer pressure could contribute to catalysing the necessary efforts. Finally, and critically, the process should ensure the confidentiality of the data, whenever necessary. This is especially important when supervisory information is involved.

Second, flexibility is critical. The *specifics* of the next crisis will be different from those of the recent one. The financial system will continue to evolve rapidly and, rest assured, it will do so especially in the shadows, away from the reach of regulation (Eichner et al (2010)). Any collection system should be flexible and agile enough to keep up with these changes. The chain from the identification of the necessary data to its collection should be short and efficient. This should apply to both permanent revisions to the reporting frameworks and to more ad hoc, one-off collection of statistics to address specific issues.

Third, costs matter. In order to reduce collection costs and barriers to the gathering of new information, it would make sense to build as far as possible on available infrastructure, whenever it is up to the task.

3. What the BIS can do

Throughout its history, the BIS has been instrumental in developing consistent sets of global financial statistics. This has been a core task in the performance of its overall mission. Since the 1970s alone, in addition to the international banking statistics, other examples include the statistics on derivatives instruments, those on activity in foreign exchange markets and the securities statistics. The Committee on the Global Financial System (CGFS) – formerly known as Eurocurrency Standing Committee – and the Markets Committee – formerly known as the Committee on Gold and Foreign Exchange – have played a lead role in this area. More recently, the establishment of the IFC provides yet another channel that could help catalyse improvements in available statistics. And the Basel Committee, too, could play a key role in future.

Currently, the BIS is closely involved in several efforts to enhance available statistics. It is participating in various capacities in the work on 11 out of 20 of the recommendations that are being pursued under the aegis of the G20, alongside the Financial Stability Board and other international financial institutions. In addition, the CGFS is seeking further enhancements to the international banking statistics, in terms of both instrument and country coverage, and to the derivatives statistics, notably to get a better handle of credit risk transfers; it is also exploring the collection of data on the evolution of credit terms in wholesale lending and derivatives markets.

Looking forward, the BIS stands ready to support further statistical efforts that can leverage its comparative advantages. One such strength is its long track record of using economic expertise to identify and subsequently analyse and disseminate the relevant data.

Another is the technical expertise to set up and run the necessary infrastructure. And, crucially, the BIS houses the relevant authorities for statistical governance, notably the committees that include not just central banks but also supervisory authorities.

Conclusion

To conclude, let me just recall some of the key points of my presentation. Better statistics will not prevent the next crisis, but will definitely help policymakers and market participants to identify vulnerabilities, monitor financial health and better manage financial strains once they emerge. Above all, they will remove an easy excuse to disown responsibility: “if only I had known….”. The recent financial crisis offers a window of opportunity to address serious gaps in available statistics; that opportunity cannot be missed. Since collecting information is costly, priorities have to be set. I have highlighted two such priorities: better property price data and comprehensive balance sheets that illuminate banks’ global operations on a consolidated basis. The process for collecting the information should be guided internationally, not least to ensure its consistency and overcome confidentiality restrictions; it should retain the necessary flexibility to respond to changing demands; and it should limit costs, building as far as possible on existing reporting infrastructures. The BIS strongly welcomes these efforts and it stands ready to support them by leveraging its comparative strengths, notably its extensive track record in this core aspect of its mission.

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