

Summary of the conference

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More than 140 participants from around 70 central banks participated in the conference. About 50 papers were discussed in plenary and breakout sessions. The conference illustrated specific initiatives that central banks have taken to address data gaps, in particular with respect to data on and from banks, external statistics, financial accounts, housing statistics, and debt securities markets and securitisation. Moreover, a number of more general approaches seem to have been taken, including reliance on micro data to complement the more traditional macro statistics, the use of surveys to remedy data gaps, and marrying analytical methods and frameworks with existing data sources.

There was a large consensus that the financial crisis was not caused directly by a lack of information, though some data were not sufficiently available or existing data showed weaknesses. To a large extent the financial crisis showed the importance of tracking the impact of rapid innovations and of globalisation. The dynamics of highly integrated economies and markets and how their stability could be rapidly undermined was perplexing to many analysts and policy makers.

Reliance on micro data

Compilation of data on and from banks is still at the core of monetary and financial statistics – despite the growing importance of non-bank financial institutions. The crisis has underlined the need to increase cooperation between central banks and supervisory authorities in compiling such data. Given the sometimes diverging needs of these institutions, novel approaches to collecting information may have to be found.

In principle, at least, the collection of publicly available balance sheet data from individual financial institutions may be a promising route, and various central banks and international organisations have explored this. Indeed, a significant amount of micro data from banks and other financial institutions is publicly available. However, finding the data can be cumbersome and their quality and user-friendliness is surprisingly poor. This hampers the use of such data and increases the perceived data gaps. Standardising and harmonising the availability of publicly disclosed data by individual institutions could thus – at relatively low marginal costs – offer large benefits to users.

The compilation of relevant banking data, at the micro as well as macro level, is complicated by the lack of uniform standards across accounting, supervisory and statistical areas. One advantage of international accounting and reporting standards like IFRS is that they provide extensive guidelines which facilitate international comparability. Accounting standards and disclosure requirements are, however, not always well suited for monetary and financial stability analysis (globally consolidated accounts are less useful for economic and monetary analysis while accounting and supervisory information may not always provide the breakdowns that facilitate the identification of systemic risks).

Another example of useful micro data is security-by-security databases. The ECB and national central banks of the euro area have developed such a database and are now taking steps to also populate it with data on the holdings of individual securities (making it, in effect, a from-whom-to-whom database). Including the holding information on securities is still in an early phase. However, a step-by-step approach is inevitable given the relatively large cost of developing and maintaining the database.

Some central banks operate the national balance sheet office where publicly disclosed balance sheets of corporations are reported. This detailed information has proven useful for the elaboration of the financial or flow-of-funds accounts, in particular to measure intersectoral linkages. It also facilitates the analysis of gaps in total balance sheets of financial and non-financial corporations.

One drawback of micro databases with huge amounts of detailed information is that they introduce additional noise into the analysis. Examples were given, however, showing that the problem can be handled with appropriate statistical tools. Another drawback has to do with the timeliness of compilation based on a very large dataset. Here it was shown that it may be possible to approximate the total population with a smaller subset of the data (eg large listed companies to represent the non-financial corporate sector).

The use of surveys

Surveys are very useful tools, widely and increasingly used by central banks to gather information for different purposes. During the financial crisis, surveys were used to gather data at short notice in order to understand the impact of the crisis on the economy, for instance through its effect on economic agents' expectations and sentiments. In some cases central banks used targeted qualitative surveys to understand developments at non-regulated financial institutions as well as in derivative markets.

In emerging markets, surveys play a key role in supporting monetary policy analysis. They are used to get information on key macroeconomic variables that are either not officially compiled indicators or that become available only with a considerable time lag.

Discussions confirmed the findings of the earlier regional seminars on the conduct of surveys by central banks, organised by the IFC in 2007-2008. These included the need to properly organise them, to apply appropriate statistical survey methodologies, to develop good questionnaires, and to make serious efforts to ensure a satisfactory response rate.

Marrying analytical methods and frameworks with existing data sources

One approach taken during the financial crisis has been to better apply analytical methods, including econometrics, to the use of existing data sources. This has allowed the available data to be exploited more actively. It has also made it possible to estimate indirectly a number of unobserved variables of interest to financial stability analysis.

The following are examples of similar approaches:

- using index methodology to measure the degree of banking fragility;
- analysing the contribution of various groups of financial institutions to systemic market risk;
- developing measures for illustrating credit risk assessments: heat maps, risk matrices and cubes;
- identifying an indicator for liquidity pressures based on measures of trading liquidity, counterparty risk and variables capturing the microstructure of markets;
- measuring the impact of CDS and government bond spreads on interest rates that banks charge companies;

- measuring carry trade activity using data on investments in exchange-traded funds, exchange-traded futures, bank lending in funding currency, and deposits in target currencies;
- estimating the link between the availability of housing credit and the duration of the vacancy of new homes, and between lending to first-time buyers and loan-to-value ratios;
- using longitudinal data and data analysis (ie tracking of cohorts) in order to understand the flow dynamics in the housing market.

General discussions

The different sessions organised at the conference left some time for a general discussion, at which some recurring themes emerged. Also, at the end of the conference a panel was organised to discuss the future international and national initiatives to close data gaps revealed by the financial crisis.

During these discussions it was noted that central banks did not await international initiatives to address specific data gaps. This has shown that it is possible to exploit existing data sources to satisfy additional user requirements. Efforts should be made in future to ensure that data collections can continue to adapt flexibly to changing requirements, for instance with respect to monitoring ongoing financial innovations such as new instruments, institutions and vehicles. Collection systems should be able to respond to ad hoc needs, as well.

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There was general agreement on the need to build a bridge between aggregate macro statistics and more granular, and perhaps also more frequent, micro data. This could include information on exposures of financial institutions, both individually and in aggregate. These exposures could be captured by appropriate breakdowns in balance sheets by type of instrument, currency, maturity, counterparty sector and counterparty country. Data from trade repositories, central counterparties and clearing and settlement systems could potentially be used to have almost instantaneous information. This would allow analysts to measure and monitor common exposures, risk concentrations, and networks.

It was clear that statistical functions at central banks faced a number of specific challenges during the crisis. One had to do with the lack of clear concepts and definitions, both at the national and international level. This complicated the already difficult reconciliation of different statistics (eg information on issues and holdings of debt securities). The difficulties in reconciling amounts outstanding and changes in positions related to loans, securities and

derivatives were particularly severe at times of large valuation changes for real and financial assets.

Another challenge was the trade-off between supporting the development and analysis of historical data (for instance for the financial accounts, in order to understand longer-term trends in savings and investments of major institutional sectors) versus work on collecting high-frequency data at short notice. In principle, different statistical instruments can be used to respond to such diverging requirements, but resources in statistical functions were not always that fungible.

The launching of various international initiatives to address data gaps or to improve statistics for the conduct of financial stability analysis was to be expected. However, it is putting considerable strain on resources (both in terms of number of staff and skill mix). For instance, the IMF and FSB made a number of recommendations for the international statistical community which were endorsed by the G20. This includes the possibility to collect specific detailed micro information on positions and exposures of systemically important financial institutions, as well as aggregate financial accounts, on a globally consolidated basis (including exposures related to derivative transactions and off-balance sheet transactions). In Europe, the European System of Central Banks is developing statistics for financial stability analysis, including those required by the European Systemic Risk Board. Here too the focus is on consolidated balance sheets for large banking and insurance groups. These will be the major new datasets post-crisis that will inform macro-prudential decisions in other countries, as well.

The question was raised whether the business model of central bank statistical departments/functions is still adequate. It is their responsibility to mediate between users and compilers of statistics (demand and supply) since there is no direct price mechanism to achieve equilibrium. One had to keep in mind that central bank statistics (and other statistics from national and international statistical agencies) are public goods. This means that costs and benefits of different statistical activities need to be traded off carefully – after the crisis, the benefits from a public-good perspective have definitely increased. It also means that resources made available should be used carefully and efficiently and that central bank statistics should conform to internationally agreed data quality principles.

What are the solutions to achieve a better reconciliation of demand and supply and a better trade-off between costs and benefits? Starting on the demand side, it would be important to set priorities more carefully. IT might help if the focus of users were not on all of the information that they do not have (which is endless) but rather on key variables that they need better information on. So far it has not transpired that massive new data initiatives are needed, and it is not necessary to reinvent the wheel in most areas. A top-down approach to arbitrage between different needs would allow a better prioritisation than a bottom-up one. A particular caveat was formulated on changing the reporting boundary of central bank statistics. Indeed, the reporting burden and cost-benefit trade-off is seen to be very different between banks and other institutional sectors/units.

Better use of IT can help manage costs in statistical departments. Experience has proven the advantage of integrated information systems rather than fully decentralised or centralised databases or warehouses. The use of international standards such as XBRL (for accounting information) and SDMX (for statistical information) can bring potential benefits. Standardised reporting by systemically significant banking and insurance groups, through a common register and, to the extent possible, with common definitions and concepts, might help. Almost everywhere, more and better human resources are needed in the statistical areas of the central bank.

An important theme was the need to improve the communication of central banks' statistics, both internally and externally. Perhaps surprisingly, even sophisticated users were not always aware of the availability of published statistics and how these conform to, or deviate from, international statistical standards. Less surprising to some extent is the lack of financial

and statistical literacy in the population as a whole, even on simple concepts. Various central banks have programmes to improve the communication of their statistics. An interesting question that arose was how to communicate the discontinuation of special statistical initiatives implemented during the crisis. What signal might this give? How would it be interpreted by the market? These questions, of course, related to the broader communication of central bank policies in the areas of monetary and financial stability.

Finally, the issue of coordination and cooperation was raised repeatedly. There was general agreement that this was crucial, within the central bank itself and at the national and international level. Within central banks, close interaction is needed between the various areas interested and involved in statistical issues (research, economics, monetary policy, financial stability, and, lastly, market operations, where there is an in-depth knowledge of markets and where much intelligence is often collected at a daily and even intra-day frequency). Irrespective of the institutional arrangements, cooperation with the bank regulators and supervisors is of key importance and needs to be strengthened. Limitations on data sharing between the two organisations need to be reduced or removed, partly in order to be able to respond to some international statistical initiatives (eg BIS international banking statistics).

Financial systems have now become truly global, and comparable statistics are important in a globalised world in which decision-makers and the public at large need to interpret not only the statistics related to their own economy and financial system, but also those of other countries and of the global economy and financial system as a whole. In this context, lack of coherence and duplication of data requests, in data collection exercises by international organisations, is frustrating in areas involving central bank statistics. More cooperation and coordination between organisations would help, with respect to both the content of data compilations and the statistical and technical standards used.

The conference agreed that whatever improvements are made to address data gaps, they are unlikely, by themselves, to limit the risk of another financial crisis occurring in the future. It will continue to be inherently difficult to measure, analyse and base policy decisions on variables capturing risk appetite, market sentiment and interconnectedness at the micro and macro level.

Special award

The conference introduced an award for the best paper presented by a young statistician at the biennial IFC conferences in Basel. More than 20 entries were received on this occasion. Mr Petr Jakubik, currently on secondment from the Czech National Bank to the European Central Bank, received the first such award for his paper “Household Response to the Economic Crisis using Micro-Simulation for the Czech Economy”.