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Keynote
Data needs and statistics compilation for macroprudential analysis[1]

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[1] This keynote was prepared for the meeting. The views expressed are those of the author and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.

Speech

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Data needs and statistics compilation for macroprudential analysis

Keynote Remarks IFC – National Bank of Belgium Workshop

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Good afternoon ladies and gentlemen and a warm welcome to the IFC – National Bank of Belgium's Workshop on "Data needs and statistics compilation for macroprudential analysis". I am happy to see the broad support of many researchers and practitioners contributing to progress in the area of statistics for financial stability. Thanks a lot to the organisers for putting together a very interesting programme.

The workshop continues discussions in several publications and previous conferences of the Irving Fisher Committee. Ideas developed in these discussions influence official statistics. Let me take the 2015 IFC report on data sharing as an example (IFC 2015). This paper has stimulated discussions at the G20 level. About two months ago, G20 Finance Ministers and Central Bank Governors endorsed recommendations for sharing and accessibility of granular data (G20 2017). Now, we need to implement these recommendations in line with the second phase of the G20 Data Gaps Initiative (DGI).

This workshop will underline the close connection between financial stability analysis and statistics. My talk today will focus on the contribution of statistics to the evaluation of the

post-crisis financial sector reform agenda and the role of the G20 Data Gaps Initiative. Given that the goal of post-crisis reforms has been a more resilient financial system, let me begin with a broad overview of where we stand.

1 How resilient is the global financial system?

Resilience is a core theme of the German G20 presidency. The G20 recently endorsed resilience principles which complement the comprehensive financial sector reforms that were agreed upon in the aftermath of the global financial crisis. A stable financial system and a resilient real economy are two sides of the same coin. Almost ten years after the onset of the global financial crisis, its legacies continue to weigh on the world economy. Global growth is below its pre-crisis trends, debt levels remain high. Sustained resilience to shocks thus remains of key importance – for both the private and the public sectors.

So how can we make sure that the financial system is resilient and that risks to financial stability are contained? Let me start with a definition of systemic risk.

Systemic risks arise if the distress in one institution or a group of financial institutions threatens the functioning of the entire financial system. Systemic risk can arise through domino effects due to direct contractual linkages. Empirically, informational contagion leading to runs on assets of other financial institutions, even without any direct contractual linkages, is at least equally important. Resilience of the financial system thus depends on the ability of financial institutions to buffer shocks. It is affected by the magnitude of shocks, by amplification mechanisms, and by exposure to common shocks.

Recent indicators of systemic stress have remained low despite some bouts of market turbulence. Asset returns have become less correlated across classes, regions, and sectors. At the same time, political uncertainty has increased. The precise nature and timing of future policy changes and their impact remain unclear. Changes in the macroeconomic policy mix, a push for deregulation, or growing protectionist pressures could affect growth outcomes. Volatility could rise. If history is any guide, the potential for abrupt reversals of financial market conditions remains significant.

In particular, persistently low interest rates can encourage the build-up of risks to financial stability. The longer low interest rates persist, the larger the share of low-yielding assets on financial institutions' balance sheets will become. Low interest rates may induce investors to systematically underestimate risk, thus skewing risk premia downwards. This can encourage the build-up of latent risks across many sectors of the economy. Finally, low interest rates may trigger a credit-financed real estate boom. As a consequence, risks associated with a change in interest rates increase.

Hence, safeguarding against systemic risks remains a priority. Each market participant must ensure that contractual terms are appropriate and that risk buffers are sufficient to absorb losses from unexpected developments. Regulators need to ensure that capital buffers in the financial system as a whole are sufficient. And we need good data to monitor the build-up of systemic risk and to assess the effects of reforms.

Financial sector reforms have been set against threats to financial stability.

G20 Leaders committed to a fundamental reform of the financial system, and substantial progress has been made in four main reform areas:

- making banks more resilient,
- ending too-big-to-fail,
- transforming shadow banking into market-based finance, and
- making derivative markets safer.

Now, it is time to move on from implementation monitoring to the evaluation and possible refinement of reforms. We need to evaluate whether reforms are achieving their intended outcomes or whether they are having material unintended consequences. This is part of regulators' accountability to the public, and it is needed to ensure transparency.

Reform evaluation is challenging. We need to answer questions such as:

- Have reforms achieved their objectives? How can we isolate reform effects from other factors influencing financial market outcomes?
- What are the short-term and long-term costs and benefits of reforms? How do they differ across jurisdictions?
- And what are the overall effects of reforms?

Rather than exacerbating these challenges, a structured evaluation helps manage and address them. The Financial Stability Board (FSB) is currently working on a framework that will help gain a better understanding of reforms and provide a basis for informed policy decisions, without compromising on the reforms' objectives and the resilience of the system. This structured framework for post-implementation evaluation of the effects of financial regulatory reforms is explicitly welcomed by the G20 and underwent public consultation (FSB 2017).

Above all, reform evaluation needs to be based on good data. So let me turn to the role of the G20 Data Gaps Initiative.

2 The Role of the G20 Data Gaps Initiative

Let me illustrate what kind of information is required for effectively monitoring risks to financial stability – and to assess the effects of reforms in a structured way. I will focus on three areas: the real estate sector, shadow banking, and international capital flows.

2.1 The Real Estate Sector

The real estate sector plays an important role for the real economy and the financial system. Monitoring developments in real estate markets is, therefore, key to an early identification of vulnerabilities.

- More than two-thirds of all Europeans own the homes they live in.[1] Residential property typically forms the largest component of homeowners' wealth.
- The majority of households borrow to finance a home purchase. In many places, housing assets can be used as collateral to access funding. Mortgage debt is thus the main financial liability of the household sector.[2]
- Mortgage loans are also a major asset of the financial system. In advanced economies, about 60 percent of banks' total lending portfolios are held in the form of mortgage loans.

Given this large exposure of financial institutions, risks to financial stability can occur if a strong rise in house prices coincides with a strong expansion in mortgage loans and an easing of credit standards.

Risks can build up if market participants form overly positive expectations regarding future developments in debt sustainability. They may not give due consideration to the possibility that asset prices may fall and that interest rates may rise. If property prices subsequently decline, and if this is coupled with a simultaneous increase in default rates, banks may not be able to offset losses from mortgage lending.

The bursting of credit-driven real estate price booms does significant and long-lasting damage to the real economy (Jordà, Schularick, and Taylor 2016; Brunnermeier and Schnabel 2015, Taylor 2015). A fall in house prices may also affect financial institutions more directly through their specific investments in residential real estate assets.

The availability of data on real estate markets does not match the importance of these markets for financial stability. The European Systemic Risk Board (ESRB 2016) has thus recommended "closing real estate data gaps". Much work needs to be done to improve data on real estate in terms of coverage as well as of comparability across countries.

The lack of data is profound. For Germany, indicators are available only for (aggregated) prices and credits. Information on credit standards is insufficient for monitoring financial stability. Information is limited to the Eurosystem's quarterly Bank Lending Survey (BLS). But this survey includes only qualitative information, and it is constrained to a sample of 139 large banks. As regards markets for commercial real estate, reliable indicators on both price and lending volumes are lacking.

The G20 Data Gaps Initiative aims at improving the availability of Residential Property Price Indices (RPPI) (IMF and FSB 2016).[3] By the year 2021, G20 economies are to provide nationally available data on Commercial Property Price Indices to the BIS. In September 2016, the BIS had already published such data, including information on coverage and methodologies, for a number of countries.

The session on the real estate sector today provided illustrative country examples related to the connections between real estate data, statistical compilation methods, and financial stability analysis.

2.2 Shadow Banking

The second area I want to comment on in the context of data needs is shadow banking, which was also a topic of our workshop in the morning. Shedding light on the shadow banking sector has been a priority for policymakers since the global financial crisis. Let me clarify upfront that the "shadow" in shadow banking refers to what is less visible from the point of view of both banking supervision and market participants; it does not refer to illegal activities.

Shadow banking "activities" cannot be measured directly. The easier task is identifying shadow banking intermediaries, or subsectors. The Financial Stability Board defines shadow banking as credit intermediation by intermediaries and activities outside the regular banking system (FSB 2011).

Over the past years, the Financial Stability Board, the European Systemic Risk Board, central banks, and macroprudential supervisors have set up monitoring systems for shadow banking sectors. The work of the FSB is linked to recommendation 5 of the second phase of the G20 Data Gaps Initiative: G20 countries are encouraged to contribute to the FSB monitoring process and the provision of sectoral accounts data. At the same time, the FSB initiated improvements of the conceptual framework at the global level in a way that is as consistent as possible with the traditional System of National Accounts (IMF and FSB Secretariat 2016).

The FSB provides two publicly available datasets within the frame of the Shadow Banking Monitoring Report: (1) globally and nationally aggregated figures, and (2) report-related data, including diagrams. Furthermore, the Bundesbank publishes data on the German shadow banking activities as part of its Financial Stability Reviews. These time series on the German shadow banking sector can be downloaded, and data on relevant sub-subsectors, for example on investment or money market funds, are updated on a regular basis.

Measuring financial stability risks arising from institutions of activities that are classified as "shadow banking" is difficult. Recall the definition of financial stability risks as arising through direct and indirect financial contagion. Measuring contagion arising from common exposures, for instance, requires empirical analysis. These risks cannot simply be read from official statistics.

The route taken by the FSB to address this issue is to start from broad, aggregate statistics, and then to "narrow down" in order to obtain more risk-related measures. For monitoring purposes, different statistics need to be combined, including flow of funds data, financial accounts, supervisory, and statistical data. For Germany, these sources include the statistics on investment funds, on financial vehicle corporations, or on securities holdings. Some of the related data gaps have been closed recently. The German investment fund statistics now also covers closed-end funds. Other data gaps are about to be closed, for example regarding so-called alternative investment funds or securities financing transactions.

One important next step will be to develop and use analytical approaches identifying sources of systemic risk arising from "shadow banking" activities: How do shocks hitting individual financial institutions propagate through the system? How important are linkages between different sectors, including the traditional banking sector, for the propagation of shocks? Has the strength of cross-border channels of contagion increased or decreased? And how relevant are common exposures?

All these questions cannot be answered looking at aggregate statistics only. They require drilling down to the granular level and meaningful aggregation across the system at the same time. This is extremely challenging analytically. But, fortunately, we have better data than before the crisis, we have improved methodologies for analysing those data, and we have international fora where experts get together.

We now have to deliver and exploit our international cooperation to improve upon our analysis of systemic risks.

The first step towards improved analysis is the ability to access and share granular data. The report on the Data Gaps Initiative and the Outcome of the Workshop on Data Sharing approved by the G20
Finance Ministers and Central Bank Governors on 17/18 March 2017 are important milestones in this regard (Inter-Agency Group on Economic and Financial Statistics 2017).

2.3 Global Financial Cycles

Today's workshop also deals with international debt and funding patterns. These patterns have changed noticeably over the last two decades. Global (gross) capital flows have outpaced global trade flows, and the importance of capital flows to emerging market economies has increased. From 1999 to 2015, the amount of global gross foreign assets grew from about USD 27 trillion to more than USD 130 trillion, which is about twice as high as global GDP.[4]

This higher degree of international financial integration can contribute to a more efficient allocation of capital, a wider range of funding opportunities, and better risk sharing. But it can also lead to an
overheating of sectors or markets, increase imbalances, and serve as a propagation mechanism during a crisis. There is evidence that global financial cycles have intensified and risks of capital flow reversals have increased (Eichengreen and Gupta 2016; Sahay et al. 2014). The first line of defence is a higher resilience of the financial system, both in the source and in the destination countries of global financial flows. The higher the leverage in the financial system is, the stronger propagation mechanisms are, and the more likely destabilising global capital flows become (Rey 2013).

Consequently, the design and use of macroprudential measures should be considered within the context of cross-border capital flows. Timely and granular data are the precondition for proper analysis and for the calibration of potential instruments. Results from a large cross-country study of the International Banking Research Network (IBRN)

suggest that prudential policies spill over internationally through banks. But the transmission differs by types of banks and types of funding flows, and banks' responses to regulatory changes are heterogeneous (Buch, Bussiere, and Goldberg 2016).

The International Banking Research Network uses granular data that are available across central banks. However, it does not share the data, only the results of the common analytical research template. To gain the most value out of granular data, particularly in a cross-border context, different data sets need to be linked. Sharing data across sectors and jurisdictions is crucial for monitoring systemic risks. Shared data help bridge the divide between micro and macro analysis. And shared data allow taking a truly global – systemic – view where needed.

But to improve data sharing, the availability of sufficiently granular data is not enough. Beyond that, we need common global identifiers. The Legal Entity Identifier (LEI)[5] helps identify legally distinct entities that engage in financial transactions, and progress in implementing the LEI for financial corporations has been made through various legal acts.[6] Yet coverage of the LEI should be expanded to the non-financial corporations sector and to the identification of consolidated group-level structures.

Indeed a key recommendation on data sharing,[7] which was endorsed by the G20 Finance Ministers and Central Bank Governors in Baden-Baden (G20 2017), has been to encourage G20 economies to widen the scope of the LEI and enable a better coverage of the non-financial sector. At the European level, I welcome the initiative by the Committee on Monetary, Financial and Balance of Payments Statistics (CMFB 2017), which has published recommendations on business identifiers and business registers to advance the LEI's implementation.

The LEI-related expenses vary from country to country, depending on the competent contracting authority. The German "Bundesanzeiger", for example, charges EUR 140 for the initial registration covering the first year and EUR 90 for each subsequent year, excluding value added tax. A CMFB High Level Group, in cooperation with the LEI bodies, is currently investigating concrete cost reduction measures. Accordingly, the CMFB recommendations are an important step to further promote the propagation of the LEI, especially for non-financial corporations.

Finally, let me mention recent progress we have made in terms of improving our joint knowledge of macroprudential policy measures that have been taken across countries. The IMF, in consultation with the FSB and the Bank for International Settlements (BIS), is working on a publicly available macroprudential policy database which could serve as an information basis.

3 Summing Up

Surveillance of risks to financial stability requires good data and information. The second phase of the G20 Data Gaps Initiative plays an important role for improvements in the statistical infrastructure. Apart from providing a conceptual framework for the collection of data, implementation of new concepts nationally and internationally will be crucial.

I have highlighted three specific points:

First, with its framework for the evaluation of financial sector reforms post-implementation, the FSB has started an ambitious project. The success of this project will depend crucially on the timely and comprehensive availability of granular data. Now is the time to start developing protocols defining how statistical and policy evaluation work can be integrated more closely.

Second, we have made much progress in the surveillance of non-bank finance or "shadow banking". Assessing risks in this area requires drilling down further, using the infrastructure that we have in terms of data and methodologies. But it also requires further developing our analytical tools, especially in order to strengthen our understanding of shock transmission channels and the relevance of common exposures and inter-sectoral linkages for the latter, including those that extend across borders.

Third, international capital flows have many positive effects – but can also propagate shocks across borders. To address this concern, timely and granular data are needed for policy use. An improved sharing of and accessibility to sufficiently granular data is crucial for monitoring systemic risk. This implies the use of common identifiers in order to allow a better linking of different micro datasets and a more refined analysis of channels of propagation.

4 References

Brunnermeier, M. and I. Schnabel(2015). Bubbles and Central Banks: Historical Perspectives, CEPR Discussion Paper No. 10528, April 2015.

Buch, C.M., M. Bussière, and L. Goldberg (2016). Prudential policies crossing borders: Evidence from the International Banking Research Network. http://voxeu.org/article/prudential-policies-crossing-borders

CMFB (2016). Committee on Monetary, Financial and Balance of payments statistics opinion on business identifiers and business registers: recommendations for statistical production, 2 December 2016, available at: http://www.cmfb.org/publications/opinions

Eichengreen, B. and P. Gupta (2016). Managing Sudden Stops, World Bank Policy Research Working Paper 7639, April 2016.

European Systemic Risk Board (2016). Recommendation on closing real estate data gaps (ESRB/2016/14), October 2016.

Eurostat (2017). Distribution of Population by Tenure Status, Type of Household and Income Group – EU-SILC Survey, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho02&lang=en, accessed 3 April, 2017.

Financial Stability Board (2011). Shadow Banking: Strengthening Oversight and Regulation, Recommendations of the Financial Stability Board, 27 October 2011.

Financial Stability Board (2017). Proposed Framework for Post-Implementation Evaluation of the Effects of the G20 Financial Regulatory Reforms, Consultation document on main elements, 11 April 2017.

G20 (2017). Communiqué of the G20 Finance Ministers and Central Bank Governors Meeting, Baden-Baden, Germany, 17-18 March 2017.

International Monetary Fund and Financial Stability Board (2016). The Financial Crisis and Information Gaps, Second Phase of the G20 Data Gaps Initiative (DGI-2), First Progress Report, September 2016.
Inter-Agency Group on Economic and Financial Statistics (2017). Update on the Data Gaps Initiative and the Outcome of the Workshop on Data Sharing, March 2017.
Irving Fisher Committee on Central Bank Statistics (2015). Data-sharing: issues and good practices, Report to BIS Governors prepared by the Task Force on Data Sharing, January 2015.
Jordà, Ò., M. Schularick, and A. M. Taylor (2016). "The Great Mortgaging: Housing Finance, Crises, and Business Cycles," Economic Policy, Vol. 31 No. 85, pp. 107–152.
OECD (2017). Households' Financial Assets and Liabilities, http://stats.oecd.org/Index.aspx?DataSetCode=QASA_7HH, accessed April 4, 2017.
Rey, H. (2013). Dilemma not Trilemma: The global financial cycle and monetary policy independence. VoxEU, 31 August 2013.
Sahay, R., V. Arora, T. Arvanitis, H. Faruqee, P. N'Diaye, and T. Mancini-Griffoli (2014). Emerging market volatility: Lessons from the taper tantrum, IMF Staff Discussion Note 14/09, September 2014.
Taylor, A.M.(2015). Credit, Financial Stability, and the Macroeconomy, NBER Working Paper No. 21039, March 2015.

Footnote

1. Home ownership rates in Germany are somewhat lower. In 2015, a little more than 50 percent of households owned the houses they lived in. See Eurostat (2017).
2. Mortgage debt amounts on average to about two-thirds of household liabilities in euro-area countries. In Germany, mortgages accounted for about 70 percent of total household debt in 2016. See OECD (2017).
3. More specifically, recommendation 17 of the second phase of the Data Gaps Initiative addresses this issue. In addition, recommendation 18 was set up to "enhance the methodological guidance on the compilation of Commercial Property Price Indices (CPPI) and encourage dissemination of data on commercial property prices via the BIS website".
4. Source: IMF databases, own calculations.
5. For details, see https://www.gleif.org/de/about-lei/introducing-the-legal-entity-identifier-lei/.
6. For details, see https://www.gleif.org/en/about-lei/regulatory-use-of-the-lei. Broader coverage is expected through the forthcoming Markets in Financial Instruments Directive (MiFID II) and Regulation (MiFIR) https://www.gleif.org/en/about-lei/how-to-get-an-lei-find-lei-issuing-organizations/registration-agents, which will cover trading venues, investment firms and intermediaries.
7. Inter-Agency Group on Economic and Financial Statistics (2017).

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