ENHANCING INFORMATION ON FINANCIAL STABILITY

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Abstract[1]

The events of the last two years in which problems in the U.S. housing market triggered the deepest global economic crisis since the Great Depression has brought to the fore the need to address key data gaps to better measure systemic risk arising from increasingly integrated economies and financial markets. Relevant statistics that are timely and internally consistent as well as comparable across countries are critical in monitoring financial stability. One area in which better information is critical for financial stability is the web of connections among financial institutions through channels such a interbank lending, securities lending, repurchase agreements, and derivatives contracts. This paper discusses the lessons from the recent crisis that have implications on data for financial stability, outlining key data gaps identified through the G-20 data gaps initiative, the progress made in addressing these gaps, and the key challenges.

I. BACKGROUND

1. The recent financial crisis revealed a deepened integration of economies and markets, and a strengthening of interlinkages across financial institutions, that data systems failed to comprehensibly capture. There is overwhelming evidence that leading to the crisis credit risks were worsened by extensive use of leverage coupled with high degree of maturity transformation, a large part of which took place outside of traditional depository corporations through the use of commercial paper, repurchase agreements, and other similar instruments. It is estimated that over-the-counter derivatives market exploded from $91 trillion in 1998 to about $600 trillion in 2008 in notional value terms. At the height of the crisis concerns about the ability of companies to make good on these contracts and the lack of transparency about what risks existed caused credit markets to freeze. As Bear Stearns, AIG, and Lehman Brothers failed, investors became weary of trading as new transactions could expose them to more risks. Liquidity-constrained institutions were compelled to offload assets at distressed prices which amplified margin calls for leveraged actors and exacerbated mark-to-market losses for all asset holders.

2. A key feature of the crisis was the high dependence on short-term finance to purchase long-term assets, leading to a mismatch between the maturity structure of the corporations' assets and liabilities. Such maturity transformation exposes financial intuitions and entire markets to vulnerabilities of market runs. However, due to a lack of data, regulators,

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[1] Prepared by Adelheid Burgi-Schmelz, Alfredo Leone, Robert Heath and Andrew Kitili as a background paper for the Irving Fisher Committee Conference, August 2010. The views expressed in this paper are those of the authors and do not necessary reflect the view of the International Monetary Fund, its Executive Board, or its management. The paper draws from the recent May 2010 progress report to the G-20 prepared by IMF staff and the FSB Secretariat.

supervisors and market participants could not fully measure the degree of maturity transformation or the extent to which financial institutions and markets were interconnected: "It was the collapse in funding markets which made the crisis global, and yet we cannot really see funding patterns in the available data[2]" (Hannoun, 2010).

3. One key lesson learned is that supervisors, policymakers, and investors should have sufficient data and information to promptly evaluate the potential effects, for instance, of the possible failure of a large bank on other large banks through counterparty credit channels, settlement arrangements, and reliance on common sources of short-term funding. The need for comprehensive, high-frequency, and timely data to monitor systemic risks associated with operations of the systemically important financial institutions (SIGFIs) was underscored by the IMF Managing, Director Dominique Strauss-Kahn, who observed in an interview "We need more data, including from a rather small number of the large financial systemic institutions." "The mandate of the Fund is to have surveillance of countries, but today you have institutions as big, maybe bigger, than many countries. How can we have global surveillance without having data on what happens with those large financial institutions?" This observation was echoed in a number of fora.

4. Recognizing the existence of data gaps, the G-20 *Working Group on Reinforcing International Co-operation and Promoting Integrity in Financial Markets* asked the IMF and the Financial Stability Board (FSB) to explore gaps and provide appropriate proposals for strengthening data. This call was endorsed by the IMF's International Monetary and Financial Committee (IMFC) at its Spring Meetings in 2009 and in 2010.[3]

II. What are the Data Gaps that must be Closed to Ensure Financial Stability?

5. In response, staff of the IMF and the FSB Secretariat, in consultation with official users of economic and financial data in G-20 economies and key international organizations, identified twenty recommendations that need to be addressed. These include:

- The need to strengthen data essential for effectively capturing and monitoring the build-up of risk in the financial sector. This calls for the enhancement of data availability, both in identifying the build-up of risk in the banking sector but also improving coverage in those segments of the financial sector where the reporting of data is not well established, such as the non-bank financial corporations.

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[2] Opening remarks to the high-level conference in April 2010 by Hervé Hannoun (Deputy General Manager, BIS) (http://www.bis.org/speeches/sp100419.htm).

[3] An initial description of the initiative was published in the F&D March 2009 edition. More information can be found at the lower part of http://www.imf.org/external/data.htm.

- The need to improve data on international financial network connections**.** This calls for enhanced information on the financial linkages of Systemically Important Global Financial Institutions (SIGFIs) as well as strengthening data gathering initiatives on cross-border banking flows, investment positions and exposures, in particular to identify activities of nonbank financial institutions.

- The need to strengthen data needed to monitor the vulnerability of domestic economies to shocks. This calls for measures to strengthen the sectoral coverage of national balance sheet and flow of funds data, including timely and cross-country standardized and comparable government finance statistics and data on real estate prices. On the latter, country practice in compiling these data is uneven, yet the impact of house prices on household net worth is highly relevant to the current crisis.

- The need to promote effective communication of official statistics to enhance awareness of available data for policy purposes.

6. These recommendations were endorsed by the G-20 finance ministers and central bank governors at their meeting in Scotland in November 2009 (http://www.imf.org/external/np/g20/pdf/102909.pdf).

III. What is the Progress Made so Far?

7. Considerable progress has been made in a very short period particularly on those recommendations for which conceptual/statistical frameworks exist (Figure 1). In June 2010, the progress made to date was reported to the G-20 ministers of finance and central bank governors (http://www.imf.org/external/np/g20/pdf/053110.pdf) at their meeting in Busan, Korea. A visible example of the accomplishments of this initiative is the Principal Global Indicators (PGI) website.

8. In April 2009, the PGI website was launched providing timely data available at participating international agencies covering financial, governmental, external, and real sector data, with links to data at websites of international and national agencies. The website—a collaborative effort of the Inter-Agency Group on Economic and Financial Statistics (IAG) involving the Bank for International Settlements, the European Central Bank, Eurostat, the IMF (chair), the Organisation for Economic Co-operation and Development OECD, the UN, and the World Bank—is available at (http://www.principalglobalindicators.org/default.aspx).

9. In developing the PGI website, the IAG recognized the importance of going beyond traditional statistical production processes, in more innovative ways, to obtain a set of timely and higher-frequency economic and financial indicators, at least for systemically important countries. In particular, because of the global nature of the recent crisis, data users demand more internationally comparable, timely, and frequent data. The benefits of this inter-agency approach are that it mobilizes existing resources, builds on the comparative advantages of

each agency, and supports data sharing in a coordinated manner. The international agencies have access to selected country datasets that they present in a manner broadly comparable across countries. The website was already enhanced several times. Now efforts are underway to expand the country coverage in the website beyond the G-20 economies. These concerted efforts are being carried out in tandem with other ongoing data initiatives at the IMF and collaborating agencies (see below).

10. The G-20 Report of November 2009 provided significant impetus for action. For several of the 20 recommendations, international bodies have already taken a number of actions that support their implementation, including the IMF with regard to Financial Soundness Indicators (FSIs) (# 2), the International Investment Position (IIP) (# 12), and Government Finance Statistics (# 17), and the BIS (via the CGFS) with regard to Credit Default Swaps (# 5). For other significant recommendations progress has been made in international working groups and task forces (securities (# 7), public sector debt (# 18), real estate prices (# 19), and the Principal Global Indicators (PGI) website (# 20)).

11. In March 2010, the IMF Executive Board took a number of decisions related to recommendations # 2, and # 12. In particular, the IMF Executive Board decided to enhance the Special Data Dissemination Standard (SDDS) by:[4]

- including seven FSIs into the SDDS on an "encouraged" basis (that is, not legally "prescribed" under the SDDS)—to strengthen information about the financial sector and better detect system risks (Recommendation # 2); and
- moving to quarterly reporting (from annual) of the IIP data, with a maximum lag of one quarter (quarterly timeliness), on a "prescribed" basis, after a four year transition period—in order to better understand cross-border linkages (Recommendation # 12).[5]

12. Also in March 2010, the IMF Executive Board approved a phased migration strategy for implementing the *Government Finance Statistics Manual 2001* (*GFSM 2001)* as the standard for IMF fiscal data (Recommendation # 17).[6] This will contribute to better and more comparable fiscal data, including on government assets and liabilities.

13. In June 2009, the CGFS approved changes to Credit Risk Transfer Statistics (Recommendation # 5) that include improved information on counterparty risk and exposure to various reference entities and expanding the reporting to collect details on instruments such as index CDS contracts (http://www.bis.org/publ/cgfs35.htm). Subsequently agreements

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[4] IMF Public Information Notice (PIN) 10/41 of March 23, 2010.

[5] It was also decided to add a simplified table on countries' external debt by remaining maturity (on an encouraged" basis) to better monitor the vulnerability of domestic economies to shocks.

[6] See http://www.imf.org/external/pp/longres.aspx?id=4431.

have been reached by the BIS with the reporting central banks to report these new datasets, with implementation phased in two steps, for June 2010 and June 2011 data.

14. Progress has also been made to enhance securities statistics (Recommendation # 7) both conceptually through the BIS-ECB-IMF *Handbook on Securities Statistics* and through the collection of data by the BIS. Moreover, the BIS has solicited authorization from a wider range of central banks to report residential property price indices for dissemination on the BIS website (Recommendation # 19).

15. The World Bank's public sector debt database (Recommendation # 18) which is being developed under the auspices of Task Force on Finance Statistics (TFFS)[7] is due to be launched by end-2010 providing quarterly public sector debt data from developing and emerging market countries. The global financial crisis reinforced the importance of integrated economic data, both stocks and flows, so that the impact of developments in one sector of the economy on other sectors, and flows such as valuation changes, can be reliably analyzed. Strengthening sectoral information is reflected in Recommendation # 15. The IMF is currently creating an inventory of existing practices with the intent of conducting an expert group meeting in early 2011, to share experiences, discuss the gaps, and identify common templates to take this work forward.

16. Two recommendations deserve particular attention because of their importance in helping to understand cross-border financial networks (recommendations # 10 and # 11). These recommendations build on the existing initiatives of the quarterly BIS International Banking Statistics (IBS) and the annual IMF Coordinated Portfolio Investment Survey (CPIS), which provide data on cross-border banking transactions and portfolio debt and equity positions respectively.[8]

17. These data sets help track financial transactions and/or positions on a bilateral basis. In addition to enhancements regarding country coverage, the CGFS and the IMF Balance of Payments Committee have created working groups to study other enhancements (such as the separate identification of nonbank financial institutions in the consolidated banking data, as well as information required to better track funding patterns and maturity mismatches in the international financial system in the case of the BIS (also relevant for Recommendation # 4); and, the enhancement of the frequency and timeliness of the CPIS data and the identification of the institutional sector of the foreign debtor in the case of the IMF). These working groups are expected to give careful consideration to the benefits and the costs of enhancements and report to their parent committees in the second half of calendar 2010.

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[7] The TFFS consists of representatives of the BIS, Commonwealth Secretariat, ECB, Eurostat, IMF (Chair), OECD, Paris Club, UNCTAD, and the World Bank.

[8] The IMF has also conducted a Coordinated Direct Investment Survey with a reference date of end-2009. First results are expected towards the end of calendar 2010.

18. The involvement of all the G-20 economies in these two long-standing collections is fundamental given their relevance for understanding cross-border financial flows and positions. In particular, there are positive externalities that flow to other economies through mirror data that can be compiled from the counterpart information supplied. In this regard, the IMF and the BIS continue to work to increase country participation in the CPIS, and the IBS, respectively.

IV. What are the Major Challenges

19. While progress is being made in closing data gaps in areas where the conceptual framework is already established, it has become evident that closing the gaps where the statistical framework is still not fully developed poses significant challenges. Some of the most challenging areas are also among the most important for improving financial stability analysis and macro-policy decision making more broadly.

A. Build-up of Risk in the Financial Sector

20. The build-up of leverage and maturity mismatches within the financial system is one area were conceptual frameworks need to be developed before ascertaining specific data collection demands. This is further complicated by the fact that the measurement of leverage and maturity mismatches is not necessarily conceptually uniform across sectors, institutions, or markets and, therefore, it may prove difficult (or in fact misleading) to devise aggregate measures across sectors. Given the importance of monitoring leverage and maturity mismatches to prevent future crises, addressing these gaps is a high priority. The IMF and the BIS staff are working closely on addressing these gaps. The BIS has made significant recent advances in the analysis of maturity mismatches ("funding gaps") for the banking sector on the basis of its IBS data. [9] But pursuing this work further is likely to involve longer-term projects, as the analytical and data challenges involved remain significant.

B. Developing a Template to Capture Data on SIGFIs

21. It is imperative that data collection effort particularly on global financial networks take cognizance of international dimensions and must seek appropriate participation from regulators and supervisors worldwide, especially in jurisdictions with significant financial centers. For instance, the international nature of financial markets hampers the extent to which one economy acting single-handedly can organize data on financial markets globally. However, moving from identification of data gaps to efficient systems of data collection and reporting on SIGFIs is challenging and requires prioritization of activities, effective coordination and cooperation among international agencies and national authorities, adequate

[9] For details, see McGuire, P. and G. von Peter (2009), "The US dollar shortage in global banking and the international policy response," BIS Working Papers, no 291, October.

resources, and appropriate legislative framework to improve the ability of regulatory/ supervisory and statistical agencies to collect the necessary data. Indeed, senior officials at a conference held in Basel in April 2010 on data gaps (http://www.imf.org/external/np/seminars/eng/2010/infogaps/index.htm) observed that "closing all the gaps will take time and resources, and will require coordination at the international level and across disciplines, as well as strong high-level support. In this context, cooperation across disciplines—financial stability, supervisory, statistical, and coordination with standard setters, notably the Basel Committee on Banking Supervision, as well as high-level support are needed to deliver a successful outcome. As noted above, there may also be some need for strengthening legal frameworks for data collection in some economies. Differences in accounting standards across countries would also need to be considered."

22. While the priorities have been identified through the G-20 data gaps initiative, there are many complex and sensitive issues and questions that need to be addressed with regard to SIGFIs. Pertinent questions include:

Who should collect the data?

23. The crisis demonstrated both the difficulty of capturing, and the importance of, sound indicators of the degree and location of leverage or excessive risk-taking within the system, particularly as regards unregulated or lightly regulated institutions and instruments (the "shadow banking system") but also liquidity, credit and tail risks within the regulated sector. Related is the issue of a better understanding of where risks actually lie across institutions and markets given the growth of risk transfer instruments. Given this, national regulatory and supervisory agencies have a great role to play—the data should be sufficiently timely and with sufficient coverage of significantly important financial (bank and nonbank) and nonfinancial corporations. Some countries are in the process of enacting legislation to monitor risks relating to SIFIs. The US financial reform bill creates a new Office of Financial Research within the Treasury that will collect and analyze data to identify and monitor emerging risks to the US economy and make this information public in periodic reports and testimony to Congress every year.

How should the data be organized and reported?

24. Standardization of data reporting allows efficient aggregation of information for effective monitoring and analysis. It is therefore important to promote the use of common reporting systems, across countries, institutions, markets, and investors to enhance efficiency and transparency. Standardized reporting allows assemblage of industry-wide data on counterparty credit risk or common exposures, thus making it possible for stakeholders to construct basic measures of common risks across firms and countries.

Who should have access to the data?

25. The enhanced data collection by regulatory and/or supervisory agencies must be accompanied by a process for making data available to key stakeholders as well as the public at large. This is consistent with the "public good" nature of data while safeguarding confidentiality concerns of both the home and host regulators and supervisors. Differences in accounting standards across countries would also need to be addressed through the legislative framework.

26. It is in recognition of these factors that the FSB Secretariat in close collaboration with IMF Statistics Department and support from the IMF Monetary and Capital Market Department adopted a consultative international approach to developing a common reporting template for SIGFIs as required in recommendation #8 and #9 of the G-20 Report. This work is making progress and involves financial stability experts, supervisors, and statisticians from the FSB membership. When completed, the reporting template could play an important role in standardizing information and facilitating the process of sharing data on common exposures and linkages between SIGFIs.

C. Vulnerability of Domestic Economies to Shocks

27. The lack of information on how income, consumption, and wealth are distributed within sectors, particularly households (as reflected in Recommendation # 16) hampered the identification of vulnerabilities developing in the domestic economy. The OECD, with Eurostat, are leading this work to rectify this gap, and are looking to define common international methodology and implementing pilot studies.

V. Conclusions and Way Forward

28. Recent years have seen significant progress in the availability and comparability of economic and financial data. However, the present crisis has thrown up new challenges that call for going beyond traditional statistical production approaches to obtain a set of timely and higher-frequency economic and financial indicators, and for enhanced cooperation among international agencies in addressing data needs. As noted, one area in which better information is critical for financial stability is the web of connections among SIGFIs through channels such a interbank lending, securities lending, repurchase agreements, and derivatives contracts, and with national markets. While data in these areas are the most important for financial stability, key challenges must be addressed including legal barriers, regulatory issues, and resource availability, especially in national statistical agencies. Organizational issues also need to be tackled especially in developing common and standardized data sets on exposures of SIGFIs. We are looking forward to the outcomes of the ongoing work in developing the common template.

Figure 1: Overview of the 20 Recommendations

	Conceptual/statistical framework needs development	**Conceptual/statistical frameworks exist and ongoing collection needs enhancement**
Build-up of risk in the financial sector	# 3 (Tail risk in the financial system and variations in distributions of, and concentrations in, activity) # 4 (Aggregate Leverage and Maturity Mismatches) # 6 (Structured products)	# 2 (Financial Soundness Indicators (FSIs)) # 5 (Credit Default Swaps) # 7 (Securities data)
Cross-border financial linkages	# 8 and # 9 (Global network connections and systemically important global financial institutions) # 13 and # 14 (Financial and Nonfinancial Corporations cross-border exposures)	# 10 and # 11 (International Banking Statistics (IBS) and the Coordinated Portfolio Investment Survey (CPIS)) # 12 (International Investment Position (IIP))
Vulnerability of domestic economies to shocks	# 16 (Distributional Information)	# 15 (Sectoral Accounts) # 17 (Government Finance Statistics) # 18 (Public Sector Debt) # 19 (Real Estate Prices)
Improving communication of official statistics		# 20 (Principal Global Indicators)