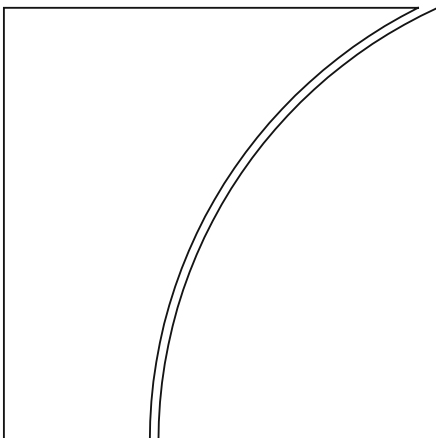


Irving Fisher Committee on Central Bank Statistics



2012 Annual Report

March 2013



BANK FOR INTERNATIONAL SETTLEMENTS

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2012 Annual Report of the Irving Fisher Committee on Central Bank Statistics

This is the first public Annual Report of the Irving Fisher Committee on Central Bank Statistics (IFC). It provides an update on the governance and organisation of the IFC, reviews the IFC activities during 2012, summarises some key messages resulting from them, and presents the planned future activities of the Committee.¹ More details on a number of topics are provided in the Annexes.

Governance and organisation

The IFC is a global network for the exchange of views amongst central bank economists, statisticians and policymakers on statistical issues of interest to central banks. The institutional membership of the IFC continues to expand gradually and stood at 81 in December 2012, including almost all the BIS shareholding central banks.²

The Committee held its annual meeting on 27 August 2012 in Basel under the chairmanship of the new IFC Chairman, Mr Muhammad Ibrahim, Deputy Governor of Bank Negara Malaysia. The Committee reviewed past activities and discussed the future work proposed by the Executive. It also agreed on the proposal by the Executive to elect Mr Joon Jung of the Bank of Korea and Mr Huseyin Zafer of the Central Bank of the Republic of Turkey as new members of the Executive.

In order to ensure continuity, the Committee renewed the term of Mr Chihiro Sakuraba of the Bank of Japan, Mr Aurel Schubert of the European Central Bank and Mr Charles Thomas of the Board of Governors of the Federal Reserve System. In addition, in order to ensure balanced regional representation of senior positions in the Executive, Ms Katherine Hennings of the Banco Central do Brazil and Mr Rimantas Vaicenavicius of the Bank of Lithuania were elected as Vice Chairperson. The updated list of the Executive members and their terms of office is attached as Annex 1.³

Finally, the Committee took note that the three-year term of Mr Joe McNeill of the Central Bank of Ireland and Ms Branka Achari-Djokic of the Bank of Algeria had come to an end. The Committee also thanked them for the excellent contributions they had made to the work of the Executive, and the activities of the Committee.

During the year, the Executive reviewed the governance arrangements of the Committee and were approved by the Committee members during its annual

¹ The report was prepared by Mr Paul Van den Bergh (paul.van-den-bergh@bis.org) with the active contribution of the members of the IFC Executive. Any questions or comments that central banks may have on this report should be addressed to him.

² In the course of 2012, 6 new central banks joined the IFC as full institutional members, namely Angola, Kazakhstan, Malta, Suriname, Tunisia and Venezuela. In early 2013 the Bank Al-Maghrib also joined. The full list of IFC members is available at www.bis.org/ifc.

³ In early January 2013, Mr Sakuraba retired from the Executive and is succeeded by Mr Masahiro Higo. In early March 2013, Mr Zafer and Mr Vaicenavicius also withdrew from the Executive.

meeting. Therewith, the process for appointing IFC Executive Members and the Chairperson would become more transparent and selection criteria for, and roles of the Executive members would be more clearly spelled out. Members of the Executive would also receive formal letters of appointment.

Finally, the IFC took steps last year to clarify its relationship with the International Statistical Institute (ISI), a well-known and respected international scientific organisation with which it has been associated since its inception. The ISI promotes the understanding, development and good practice of statistics worldwide as well as the collaboration among its member organisations, statistical societies and other national and international statistical organisations. The IFC statutes stipulate that the IFC is associated with the ISI but the nature of this association is not specified. In August 2011, the new governance arrangements of the ISI was approved by its General Assembly and now identifies a new category of membership called Affiliated Members. The IFC has submitted a draft Memorandum of Understanding that sets out such an affiliation with the ISI. It is in the process of finalising this document and arranging for a yearly financial contribution to the ISI.

IFC activities over the last year

The IFC organised a number of activities during 2012.⁴ Individual members of the IFC Executive contributed to the organisation of these activities, with the support of the IFC Secretariat provided by the BIS. The Committee was also able to rely on contributions from its member central banks as well as from international organisations in terms of resource persons, logistical support for meetings outside Basel and the payment of travel and accommodation costs of staff participating in these events.

Webcast on Billion Prices Project

On 16 February, Professor Roberto Rigobon of MIT presented his work on the Billion Prices Project (BPP) via a webcast viewed by over 100 participants from over 25 IFC member institutions. The project collects price data and product descriptions every day from online retailers in over 70 countries. On the basis of this data, a daily price index is calculated which is then used to estimate inflation rates. This work is of interest to many economists and statisticians in the IFC community. During the interactive webcast, Professor Rigobon explained the methodology, output and applications of the project, and answered questions from the audience on these broad themes as well as on related policy issues. He clarified that the daily inflation rates for a number of countries are available via subscription from State Street and that the underlying micro data and the actual compilation methods are proprietary. This makes it difficult for outsiders to assess the quality of the indices or to

⁴ In developing its activities, the Committee aims to strike a balance between exploring: (i) topics that are of interest to senior executives at central banks and that can be reported to meetings at the BIS; (ii) topics at the frontier of research and analysis by users and compilers at central banks, which are covered at the Committee's flagship biennial conferences and the sessions it organises at the biennial World Statistical Congress of the International Statistical Institute; and (iii) technical topics that are discussed in workshops and seminars, including at the regional level, and that aim to promote the exchange of views, or training, on existing practices or statistical standards.

incorporate them into their regular analysis. Some central banks have indicated an interest in discussing the data compilation and statistical methodology developed by the BBP and, perhaps even, to try to replicate them.⁵ Summaries of the webcast are provided in Annex 2 (by Bank Negara Malaysia and the European Central Bank respectively).

Biennial conference at BIS in Basel on 28–29 August 2012

On 28–29 August, the sixth biennial IFC conference was held in Basel with the theme “Statistical issues and activities in a changing environment”. The conference was attended by more than 130 economists and statisticians. Well over 30 papers were presented on a range of topics, including the measurement of shadow banking, residential and commercial property prices, commodity markets, market expectations, effective exchange rates, and private and public sector indebtedness. A keynote speech was delivered by Deputy Governor K G Nishimura of the Bank of Japan on “Market Intelligence, Market Information and Statistics in Central Banking”.⁶ The conference closed with a panel discussion on the question as to whether appropriate data will be available to monitor future developments in the financial system and evolving financial conditions.

A brief summary of the conference sessions and the closing panel discussion is provided in Annex 3. The papers presented at the conference are also available on the IFC website (IFC Bulletin no 36). Mr Assil El Mahmah from the Bank Al-Maghrib won the Young Statistician Award at the conference with his paper on “Constructing a Real Estate Price Index: the Moroccan Experience”.

Survey of IFC membership

The third survey of the IFC membership was carried out in July 2012. 58 of 74 institutional members responded to the 2012 survey of the IFC membership. This 79% response rate is as high as it was last year. Findings can therefore be considered to adequately represent the collective views of the IFC community. As in previous years, the survey addressed current central bank statistical responsibilities and recent new developments, as well as satisfaction of the IFC membership with the governance and activities of the Committee. In addition, two new specific topics were included: a self-assessment of members’ satisfaction with specific aspects of their institution’s statistical activities and members’ views on data sharing issues. The summary of the survey findings is attached as Annex 4.

Workshop on Financial Inclusion Indicators

On 5–6 November, a workshop was organised by the IFC on Financial Inclusion Indicators in cooperation with Bank Negara Malaysia. The objective was to widen the discussion on financial inclusion data beyond the expert groups of the G20, World Bank Group and other international governmental and non-governmental

⁵ There are other internet-based indicators, such as those from Google. There is an interesting question as to whether internet-based real time information might be useful for assessing current economic conditions and could enhance analysts’ “nowcasting” capabilities.

⁶ See http://www.boj.or.jp/en/announcements/press/koen_2012/ko120830a.htm/.

organisations. This worked very well thanks to the active support from IFC member central banks in the form of presentations and the sharing of experiences at the workshop. A keynote presentation was delivered by Mr Kamalesh Shailesh C Chakrabarty, Deputy Governor of the Reserve Bank of India.

One particular issue on the agenda was the advantages and disadvantages of developing composite indicators of financial inclusion. Views differed on this issue and there was a general agreement that it would also be useful to explore other analytical tools such as dashboards or heat maps. A high-level summary of the findings of the workshop was published as a press release by Bank Negara Malaysia (the so-called "Sasana Statement" is attached as Annex 5). The closing remarks provided at the workshop by Mr Alfred Hannig, Executive Director of the Alliance for Financial Inclusion is attached as Annex 6.

Key messages resulting from IFC activities

The most important key message resulting from recent IFC activities and discussions relates to the *need to improve data sharing between organisations at the national and international levels and to overcome confidentiality constraints and obstacles to the exchange of data.*

This year's IFC membership survey indicates that data sharing, in particular with respect to banks' balance sheets and activities, is considered by many central banks as a real challenge. Reasons include legal constraints, a general reluctance of sharing confidential data, significant reporting burdens and the need to obtain permission each time from reporting agents. At the same time there seem to be ways to enhance data sharing both at the national and international levels.

The Committee will set up a Task Force to address the issue of data sharing in more detail, starting with the national level. The 2013 membership survey could be used to collect more detailed information in this area and make international comparisons of existing practices. Case studies would provide insights on practical ways that have been, or are being, used to overcome different constraints. The Task Force will be chaired by Mr Aurel Schubert of the European Central Bank (also a member of the IFC Executive). It would have a balanced representation of different regions as well as developing, emerging and developed countries. The report would be finalised towards the end of 2013. The terms of reference of the Task Force are attached as Annex 7.

The second key message is that central banks should continue to *act as a catalyst of change in a wide range of economic and financial statistics.* They have the advantage of seeing the nexus between monetary and financial stability, the latter at both the micro and macro level. Moreover, central banks can play a key role in promoting new or improved data collections, even outside their area of direct responsibility. One example is to support the efforts to improve data on financial inclusion. The Committee proposes to contribute, upon request, to international discussions on methodologies for financial inclusion data and indicators. This could be done by individual IFC members participating in existing or new groups.

The third key message relates to *the importance of micro data for supporting monetary and financial stability analysis.* There are many examples of micro data that central banks are exploring, or could explore. They include security by security databases, loan by loan micro data, payments and settlements data, credit registers,

data on company balance sheets, and internet-based data (e.g. BPP, Google). There are many ways in which such databases could be better utilised. In particular it might be useful to establish links, methodologically or otherwise, between micro and macro data. This would allow analysts to drill down from the macro to the micro level. Micro databases might also be available much earlier, some even in real time, which would allow the early identification of developments in particular areas. Finally, micro data might indicate limitations to existing macro data and their frameworks (methodology, reporting templates, and data collections). The Committee intends to explore such issues more systematically, including at a workshop to be co-sponsored with the Central Bank of Portugal in June 2013 as well as at a session organised on the occasion of the 2013 ISI World Statistics Congress.

Looking ahead

IFC member central banks have made a number of suggestions for topics for discussion and possible meetings to address them. Apart from the work on data sharing mentioned above, the following activities are being considered by the IFC:

- The organisation of a workshop on BOP compilation issues in cooperation with the Banque de France, 28 February–1 March 2013, Paris;
- The organisation of six sessions at the 59th ISI World Statistics Congress, 25–30 August 2013, Hong Kong. Topics would include the measurement of domestic and international inflation; of capital flows including speculative flows; of external debt; of effective exchange rates; of interest rates as well as the use of micro data from central counterparties, trade warehouses and exchanges;
- The co-sponsoring of a seminar on “Measuring Structural Change in the Financial System after the Crisis” together with the People’s Bank of China, 23 August 2013, Shenzhen;
- The conduct of various regional workshops on Developing and Improving Financial/Sectoral accounts, in cooperation with regional central banking groups, where possible.

Other activities are under consideration. One relates to the use of micro databases for statistical purposes, as mentioned above.⁷ Another would be the dissemination and communication of statistics, an area that receives increasing attention at the national and international levels.

Updates on IFC activities are provided on the IFC website www.bis.org/ifc.

⁷ A workshop, co-sponsored with the Bank of Portugal and the European Central Bank, will take place in Porto on 20–22 June 2013 on the topic “Integrated Management of Micro-databases: Deepening Business Intelligence within Central Bank’s Statistical Systems”.

Annex 1: Institutional members represented on the IFC Executive on 1 January 2013

Executive member	Institution	Term
1. Mr Muhammad IBRAHIM (Chair)	Bank Negara Malaysia	2011–2014
2. Ms Katherine HENNINGS (Vice-Chair)	Central Bank of Brazil	2010–2013
3. Mr Rimantas VAICENAVICIUS (Vice-Chair)	Bank of Lithuania	2010–2013
4. Mr Jacques FOURNIER	Banque de France	2011–2014
5. Mr JUNG Joon	Bank of Korea	2013–2015
6. Mr Pascual O'DOGHERTY	Banco de Mexico	2011–2014
7. Ms RUAN Jianhong	People's Bank of China	2007–2013
8. Mr Chihiro SAKURABA	Bank of Japan	2009–2015
9. Mr Aurel SCHUBERT	European Central Bank	2006–2015
10. Mr Charles THOMAS	Federal Reserve <i>Board of Governors</i>	2009–2015
11. Mr Hüseyin ZAFER	Central Bank of the Republic of Turkey	2013–2015

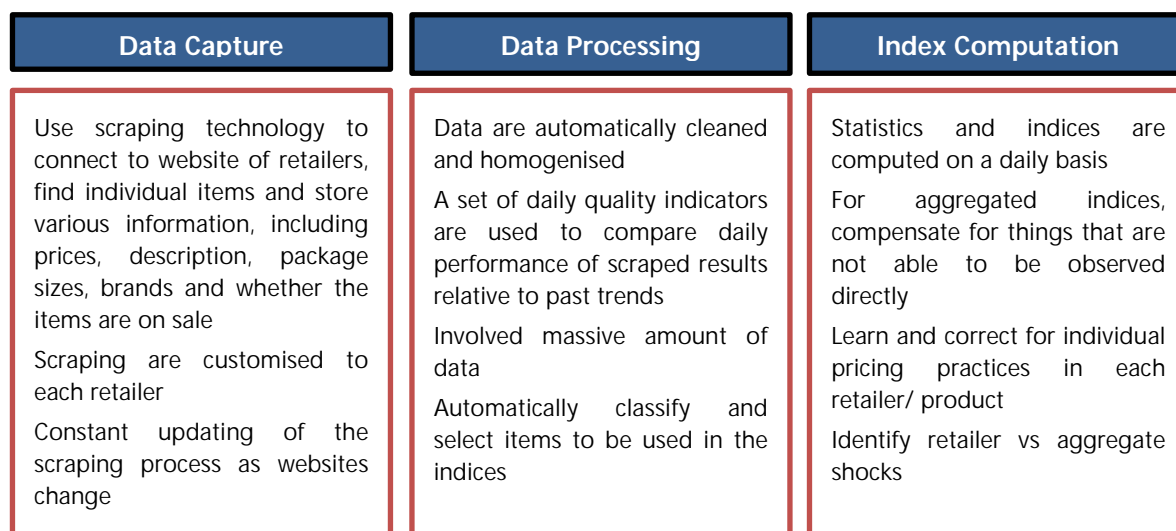
Annex 2: Summaries of the IFC Webcast on the Billion Prices Project by Professor Roberto Rigobon, Sloan School of Management, MIT, 16 February 2012

A. Summary by Bank Negara Malaysia

The Billion Prices Project (BPP) is an initiative that uses data collected from online retailers around the world on a daily basis to construct real time economic indicators. The objective of the initiative is to provide a complementary measure of economic indicators, and not to replace the existing data collected by the official statistical authority.

As the project is costly, the collection of data was privatised under PriceStats, a start-up based in Cambridge MA with the mission of becoming a leading source of daily inflation statistics around the world.

The method implemented by BPP involves three stages as depicted in the following chart:



The key success factor of the method lies in the clear understanding of the pricing behaviour of retailers with respect to the category of products, the individual products and the cycle of the product. This facilitates the construction of a robust index, with appropriate categorisation and weighting of products and services.

Research Interests under BPP

The BPP's current focus is to construct alternative measure of inflation, including aggregate and sectoral inflation and real estate prices. The project constructed a daily inflation index for 70 countries around the world.

In addition to inflation, the BPP also attempts to construct alternative measures of economic activity, including an index of product variety availability, a labour

market activity index as well as indices of GDP and output. Moreover attempts have been made to calculate measures of product attribute values, such as a green index, brand value index and energy efficiency price index.

The BPP team is maximising the information content of the daily inflation index by using the data it collects to conduct research that is not otherwise possible. For example, its research had found a clear relationship between inflation and the performance of stock markets as well as exchange rates.

Advantages of PriceStats' daily inflation index

The first advantage of the BPP daily inflation index is that it could serve as a check on official CPI data. For instance, the inflation index computed for Argentina has become a widely used by analysts who doubt the quality of the official inflation data for that country.

Second, the daily inflation index helps to predict turning points of official inflation data. This is because online prices are normally revised in advance of those in physical stores as price revision does not involve large menu costs. For example, the daily inflation index for the US showed prices recovering in early January 2009, well before a trend could be seen in official CPI announcements. In that sense the BPP data could also be used as an indicator of inflation expectations.

Third, the real-time property of the index may allow it to serve as a forward looking indicator to real economic activity. For example, following the Japan earthquake in early 2011, the Goods Availability Index constructed by PriceStats for Japan bottomed down in April. It was already indicating that economic activity had slowed. But the official industrial production index (IPI) only detected a decline in output in May. Moreover, this data was only announced in June as the IPI was constructed from a company survey, which took time to compile. In contrast, the gradual rise in the Goods Availability Index since April was already implying rising output.

Finally, the methodology developed for the BPP may help to simplify computation of statistics. Since the collection of data is done on a daily basis and covers all products in retailers' websites, quality and product variety adjustments can be easily derived and adjusted. The BPP hopes that the technology it has experimented with would change the paradigm on how statistics are collected.

The scraping and collecting of price information

In terms of legal impediments to the collection of data, the BPP does not collect information from a website if it violates its terms of use. In order to differentiate between offer prices that are published to attract consumers and the actual transaction prices, the BPP identifies which are the truly relevant data to download for each website.

In terms of the extent of resources required in collecting prices, the BPP has visited in total 42 out of the 70 countries to truly understand how prices are determined in each country. For some countries, information can be proxied from what the project knows to be relevant. For example, the price of education was computed from prices of text books, uniforms, energy and construction materials, which represent 75% of cost of education.

The adjustment for different product attributes, for example, larger size shirt versus smaller size shirt, for which prices could differ, requires a detailed scraping process to capture detailed product information.

The methodology in computing the indices

In computing the CPI index, weights of the main components such as food, clothing and transport are those of the official index. Within each main component, weight for sub-categories and each item in the sub-categories would be determined by information in the online stores such as how products are organised, how the store promote these products and how products are introduced.

In some emerging market economies, online retailing may not be as prevalent compared to the advanced economies, and prices captured from online retailers may reflect those faced by consumers from the upper income group. However, given that companies normally apply constant mark-ups, inflation (changes in prices) computed from online stores tends to track official inflation and would also be similar to the inflation of the average consumer.

The basket that is used to construct the inflation index is flexible and changes according to what the stores are selling.

Statisticians commonly face problems of adjusting for quality changes as well as addressing the break in series when one product is discontinued and replaced by an improved and more expensive newer version. This is because prior to the discontinuation of the product, they only collect the price of the old version. The new version would be included in the basket when the old version is phased out. In this case, the BPP's method is more superior in handling quality adjustment and the break in series. First, the data is collected on a daily basis. Second, the collection covers all type of products in the store, including the old and new version of the product. Hence, quality adjustments can easily be computed as the price difference between the old and new version. With quality adjustment computed, the project can also avoid the break in data series.

The implications to policy making

Due to the high frequency of these data, they can be used to predict movements of other indicators such as the stock and exchange rate markets.

The daily inflation index and other information derived from online retailers such as changes in local demand and consumption trend could also be used to construct consumers' inflation expectations.

Dissemination of indices constructed by PriceStats

The daily inflation index for countries is available through State Street Global Markets. State Street Global Markets is an investment research and trading arm of State Street, which provides customers with access to specialised research, trading, securities lending and innovative portfolio strategies. PriceStats partners with State

Street Global Markets to provide two inflation products.⁸ First, there are daily series that represent an average of individual price changes across multiple product categories and retailers by country. It is updated on a daily basis and used to calculate annual and monthly inflation. It is designed to provide real-time information on major inflation trends. In addition, PriceStats also make projections about inflation in selected countries, by combining the Country Inflation Series with publicly available macroeconomic information. Projections are model-based and differentiate from standard forecasts by using daily price information. These projections are released on a monthly basis prior to the publication of official statistics by the statistical office.

B. Summary by the European Central Bank

“The Billion Prices Project @ MIT” is a project by the MIT Sloan School of Management Professors Alberto Cavallo and Roberto Rigobon on compiling high-frequency macroeconomic indicators from internet data.⁹ Indicators on consumer price inflation have been presented to the public since November 2010. Other internet-data based indicators created in this project are in earlier phases of their development, while some of them, e.g. on product availability, already allow deriving some insights about recent developments. The project was presented by Prof. Rigobon on 16 February 2012 in a webcast, organised by the BIS. This note summarises this webcast and discusses key statistical features of the Billion Prices Project’s consumer price indicator, in particular in terms of the representativity of price data collected online and the way changes over time in product quality are dealt with in the compilation process. Overall, the lack of detailed information regarding the methodologies used, product and geographical coverage, weighting and aggregation makes it difficult to assess the quality and usefulness of the data. One potential use of the data suggested by Prof. Rigobon is for short term forecasting of inflation owing to the fact that in some countries they have found the online prices lead retail prices by 2–3 months.

The “Billion Prices Project” compiles inflation indicators from price data collected online for around five million products which are offered by around 300 retailers in around 70 countries. These price indicators represent changes in prices by retailers who announce the prices of their product offers online. The scope of official consumer price indices is broader, i.e. to reflect changes in prices sampled at various places where consumption goods and services are sold, including, e.g., specialised shops and traditional markets and with a wider range of product categories (including health, education and other services prices of which are typically not available online). Since products offered online represent only a certain segment of final household consumption expenditure, the usefulness of the index hinges on the correlation between online prices and those in traditional stores. Prof. Rigobon suggested that this correlation is stronger for some countries (in particular in emerging markets) than in others. No detailed evidence was provided on this crucial aspect, however.

⁸ Information obtained from www.pricestats.com.

⁹ For further details see the BPP website: <http://bpp.mit.edu/>.

While the “Billion Prices Project” focuses on a narrow segment of outlet types, within each product category it covers a broader variety of product offers, whereas official price indices typically refer to one product variant that is considered to be most frequently sold in the medium term in a given outlet (“price representative”).¹⁰ For the time being, experience with using mass data for compiling consumer price indices is limited. Scanner data have been investigated more intensively for the purpose of integrating them into official price statistics.¹¹ Test calculations with scanner data indicate that applying standard approaches to price statistics to the aggregation of high-frequency data might fail, producing results that might be substantially biased.¹² Assuming that the data characteristics of online-collected daily price information are very similar to those of scanner data thus calls for applying tailor-made aggregation methods. However, Prof. Rigobon, for the sake of preventing that information leaks might appear from online price collection, refuses to provide detailed information about the statistical procedures applied.

Reporting inflation at a daily frequency and the nature of online prices suggest that turning points might be detected earlier. In some countries it was found that online prices have led retail prices by 2–3 months. One reason mentioned was that given the lower costs of implementing price changes (and the lack of “memory” of online customers compared to customers of physical stores) online prices react much more quickly to shocks compared with prices in physical stores. The impact of shocks and its profile over time could therefore provide useful information for economic analysis and forecasting. However, current index values of the “Billion Prices Project” indicators suggest that, at a higher frequency, the volatility of price changes is substantially higher than in official monthly data. The sample size seems to matter in this context, suggesting that it is (too) small (300 retailers in 70 countries) in terms of margins of estimation errors, given the indications about the variability of items prices.

Prof. Rigobon argued that the huge amount of data collected at a daily frequency allows applying more straightforward approaches to quality adjustment. The “Billion Prices Project” derives the price equivalent of the differences in the quality of an existing model of a product and a new one directly from a pure price comparison. In the monthly compilation of traditional consumer price statistics there are usually, if at all, only few overlapping periods of old model and a new one, most of which are characterised by either high introductory prices of the new model or heavily discounted prices of the old one. While daily mass price information might cover periods in which the market shares of the old model and the new one are more balanced, the identification of these periods requires information about transactions. Prof. Rigobon did not explain at which point in time the change over from the old model to the new one takes place. However, since the numbers of transaction are not available in the set of data collected online, one could imagine

¹⁰ The broad variety of items covered by the “Billion Prices Project” is a feature which could be used by official statisticians, e.g. for testing the judgemental sampling of price representatives.

¹¹ Scanner data often represent supermarket prices, but differ from online prices in being transaction prices rather than offer prices and thereby also provide information about turnover.

¹² See, e.g. de Haan, J., van der Grient, H. (2009): “Eliminating Chain Drift in Price Indexes Based on Scanner Data”; <http://www.ottawagroup2009.ch/bfs/ottawagroup2009/en/index/05.parsys.23741.DownloadFile.tmp/dehaanvandergrient.pdf><http://www.ottawagroup2009.ch/bfs/ottawagroup2009/en/index/05.parsys.23741.DownloadFile.tmp/dehaanvandergrient.pdf>.

that a straightforward way of implementing the direct price comparison was chosen, i.e. to take into account the prices of a new model when it is offered for the first time, whereby its first price change is linked to the index level of the old model.¹³ This might imply that the price of the new model is an introductory price which is higher than offers at later points in time when the new model is well established. In general, automatic procedures which refer to direct price comparisons of old and new models, applied without interventions by experts, have a high potential to produce different index developments than obtained by applying quality adjustment methods from the tool box of official statistics.

Another well-known issue of quality adjustment in consumer price statistics is the distinction between a new product and a new model of an existing product. For the delineation between new models and new products official statisticians have referred to the same or a new purpose of consumption. Eventually, only a change in the product variant requires the application of quality adjustment methods while new products serving new consumption purposes are introduced into the indices by way of linking. Moreover, for the treatment of online prices of durable consumer goods, e.g. refrigerators, washing machines or furniture, it is crucial to define appropriate consumption segments, while practical aspects might call for defining broad product segments which cover a relatively wide variety of variants. It would be useful to get deeper insights into the way the "Billion Prices Project" has set its framework in terms of product definitions, sampling, classification and criteria used for allocating products to product classes.

As regards availability of the data, overall inflation indices are available via subscription via State Street Bank. It is planned by end-2012 to have five breakdowns by broad product categories. Without more detailed data it is very difficult to assess the data or incorporate it into regular analysis.

Altogether, the "Billion Prices Project" provides useful complementary information to official price statistics. At the same time, this way of collecting price data and compiling price indices is not inducing or requiring a change in paradigm, since the potential of online collected prices could be integrated into official price statistics. Whatever its value may be, a more in-depth assessment of the statistical feature of the "Billion Prices Project" requires explanations about the methods applied for aggregating prices at the product level. As long as such insights are not available, it is difficult to gauge the reliability of these price indices.

¹³ This approach to the treatment of quality differences is called "link-to-show-no-price-change".

Annex 3: Summary of the Sixth IFC Conference – “Statistical Issues and Activities in a Changing Environment”, Basel, 28–29 August 2012

Sessions 1 and 2: Measuring the shadow banking system (Chair: Muhammad Ibrahim, Bank Negara Malaysia)

A total of 7 papers were presented on shadow banking, covering the national experience in countries of different regions. One key issue discussed during the session related to the definition of shadow banking. Most papers and analysts have adopted the broad definition established by the Financial Stability Board i.e. “the system of credit intermediation involving entities and activities outside the regular banking system”. Although this definition generally allows one to determine some common characteristics of shadow banking, it may not be sufficient to interpret and understand what precisely constitutes a shadow banking system in individual countries. A more practical definition is needed to facilitate the measurement of shadow banking in individual countries and an accurate comparison and assessment of risk across countries.

Authorities face a number of important challenges in monitoring shadow banking and implementing an appropriate regulatory framework. These include:

- The development of relevant financial soundness indicators for shadow banking entities and activities;
- The collection of sufficiently granular information for risk assessments by micro-prudential and macro-prudential authorities;
- Integrity of information to identify which aspects of shadow banking warrant attention and immediate policy action;
- Better access to high-frequency and transactional data;
- Develop experience in collecting and monitoring cross-border and cross-market risks involving shadow banking entities.

It was recognised that central bank statistical functions would need to keep pace with the different financial innovations related to shadow banking. This called for cooperation – including data sharing – between authorities, both domestically and internationally. Better public information about balance sheet activities of financial and non-financial corporation could also further enhance the understanding of the shadow banking system and the risks associated with it.

It is important that national statistical agencies remain abreast of the various initiatives and calls by international agencies to improve the understanding and monitoring of shadow banking. To the extent possible they should also actively participate in these activities. The IFC could play an important role in this respect.

Session 3A and 4A: Residential and commercial property price indices

(Chair: Chihiro Sakuraba, Bank of Japan)

The Conference provided a series of sessions on property price indicators. Session 3A discussed adequacy of residential property prices in two emerging market economies, Morocco and Turkey. The number and geographical distribution of micro data are insufficient to compile a hedonic price index of nationwide estate markets in both countries. In such a case, either repeat sales method or stratified price selection shows relevant statistics for residential property prices. Discussions elaborated non-trivial problems such as augmentation for missing values. In addition, timeliness of those price indicators is strongly requested from policy perspectives. There was agreement that gathering and analysing information other than target prices is also useful for real estate markets, particularly those growing strongly.

Reflecting the recent experience of the Euro area, participants showed a keen interest in investigating methodologies and data sources for commercial property prices. Session 4A provided 1) the recent argument led by the international organisations, 2) measurement issues underlying in splitting a property into land and building stocks, and 3) heterogeneity in quality that makes it difficult to compile reliable price indicators. These issues are in particular significant in well-developed real estate markets, which coincidentally raise questions about reporting more than one price for the same property. The German and Italian researches showed the way of controlling price granularity in commercial properties. Furthermore, the session discussed whether competition among private institutions engaged in reporting real estate transactions leads to an accurate price generation. No agreement was reached on this point. Instead, a longer time-series of price data in some European countries will be shared by other countries in economic research regarding the interconnectedness between property transactions and other macroeconomic activities.

Sessions 3B and 4B: Measuring expectations

(Chair: Katherine Hennings, Central Bank of Brazil)

Measuring economic agents' expectations aims to anticipate their behaviour and quantify them as an input to improve the macroeconomic policies. The methods and the models that could be used were the theme of the first paper (Tine Janzek and Petra Zihelr, Bank of Slovenia). The variety of the uses of the measurement of expectations and its targets were shown by the diversity of the papers presented in the sequence.

From the Bank of Korea came an evaluation of the economic sentiment indicator adopted in June this year as a leading indicator of the GDP path and the GDP cycle (identification of GDP turning points). The results were positive and the questions posed were linked to details of the methodology. (Hyejung Moon and Jungick Lee)

In Nigeria, the available studies did not encompass the consumer confidence as a function of relative price of petrol, unemployment rate, VAT revenue and other

macroeconomic indicators. Discovering the link between consumer confidence and other macroeconomic variables was the objective of the paper presented by the colleagues from the Central Bank of Nigeria (Olorunsola Olowofeso and Sani Doguwa).

The paper from the ECB investigated firms' financing patterns and constraints within the euro area using the results of the EC/ECB survey on the access to finance of small and medium sized enterprises (SAFE). The study develops a composite indicator that captures perceived changes in the needs and the availability of external financing of firms, as well as the match between the two. The results of the investigation of the characteristics of the firms and their potential difficulties to access financial funds showed that the firms most affected are: i) the firms that experienced declines in turnover and in profit margin; ii) firms that make financially autonomous decisions; iii) younger firms; iv) and firms not listed on the stock exchange. Questions were raised on the methodologies and the use of the results for policy purposes (Sebastien Perez-Duarte et al.).

From the Central Bank of Brazil came the explanation of how the institution collects professional forecasters' forecasts on tens of economic variables for monetary policy purpose and for communication and expectations coordination. The on line Expectations System presented seemed very quick in the capture of information and in its distribution. Questions argue of a possible bias of the forecast imputers. However, the high number of professional forecasters that provide the information in the systems tends to keep the figures path neutral to any group preference (Andre Marques).

From the Q&A and the discussions after the presentations emerge that credibility is fundamental when dealing with expectations. Therefore, it is very important to keep methodologies simple, in a way that once explained it is easy to understand how the data are collected and how they are treated.

There are a significant number of models and methodologies to measure expectations and the definition of the best to each case depends on the availability of data and the objective. Nevertheless, as showed in the Korean economic sentiment indicator, from time to time it would be necessary to evaluate the variable chosen to compose the index, as well as checking the results of the expectations x the current data are fundamental (questions on this too).

The high number of variables that could be anticipated through forecast and through the measurement of the sentiment of the economic agents, as well as the new methodologies developed assure that the theme will continue to be in the top of the interest for long time.

Session 3C: Monitoring commodity markets (Chair: Charles Thomas, Board of Governors of the Federal Reserve System)

Various lessons could be drawn from the papers and presentations. The first lesson was a reprise of a familiar truth: analysts and policy makers need (or would certainly like) more and better data on commodity prices and quantities – particularly inventories.

The second lesson, delivered in a very positive way by the Brazilian contribution, was that with hard work and solid analysis it is possible to construct measures that well capture the influence of commodity prices on consumer inflation – both the direct impact and the second-round effects as other prices and expectations adjust. However, these measures (systems really) are very tailored to the specifics of the economy.

The same (or a similar) lesson came from the two ECB papers, although it was derived as a negative result. Specifically, the ECB papers described how the standard aggregates used to measure commodity prices and gauge how sensitive consumer prices are to them do not work very well, even if the commodity price aggregates seem to be tailored to the specifics of the economy. That is, old standard aggregates, even if they seem reasonable – such as those based on import shares, are not particularly useful.

There is an overall lesson here that the policy and statistical communities may find uncomfortable to hear. It is that there may be less value in standardising and harmonising measures and methodologies than is thought. The ECB started with very standard and easily harmonized measures, found they were not useful, and is now trying to tweak them to make them work. The approach of the Brazilian analysts was to see if they could make something that works for them and then see what it actually looked like. It is not at all clear that what they wound up with could be transplanted to other economies. Thus, harmony, and even transparency, may be somewhat at odds with usefulness.

Session 4C: Exchange-rate indicators (Chair: Charles Thomas, Board of Governors of the Federal Reserve System)

There were two main lessons from this session: The first was that, despite the long history of developing exchange-rate indicators, analysts are still finding clever and useful ways to improve them.

The second was that, finding a single measure that well captures all the complex interrelations behind notions of competitiveness is probably impossible. Different measures can lead to very different conclusions regarding whether international competitiveness has increased or decreased. This is not an entirely negative result as it indicates that there is a richer set of measures that are capturing more dimensions of the economy. This is good for the understanding of the world. However, it does mean that policy makers and those judging the appropriateness of policy cannot expect to have an easy time assessing whether exchange rates are misaligned and by how much. And whatever they do, they will need to look at several types of indicators. This will no doubt make communication about policy more difficult, but it seems to be a fact of life.

Session 5: How reliable are debt measures? (Chair: Aurel Schubert, ECB)

The first paper, entitled “The story of debt indicators and the hidden truth”, was presented by Ágnes Tardos, Director of the Statistics Department in the Central Bank of Hungary. The author provided a very good overview, illustrated by concrete examples, on how different statistical concepts and angles of views could impact the measuring of debt. As a way forward, the author suggested that statistical data compilers should make an effort to harmonise debt concepts, to find closer links between accounting and statistical concepts and to explore new data collections on cross border exposures.

The second paper, entitled “How reliable and comparable are private debt measures: The French case”, was presented by Franck Sedillot, Head of the Financial Accounts Division in the Bank of France. Comparing the private debt data currently published by the Bank of France with those published in the European Commission Scoreboard, the author showed how different instrument coverage for one indicator can cause important misleading economic conclusions.

The third paper, entitled “Tax planning may have contributed to high indebtedness among Swedish companies” and jointly written by Gunnar Blomberg, Jyry Hokkanen and Sofia Kahre, was presented by Jyry Hokkanen, Head of the Statistics Division in the Sveriges Riksbank. In their paper, the authors examined to what extent non-consolidated debt and, in particular inter-company loans from abroad, could inflate the risk of potential imbalances in the non-financial corporations sector.

A number of conclusions can be drawn from the discussions at the session:

- Harmonising statistical concepts and compiling reliable measures that reflect the economic reality is of primary importance for statistical compilers and for those using the data, particularly in such a moving environment.
- One cannot expect that a single debt indicator provides all the relevant information to assess financial stability and risks. Indicators, like debt ratios, should be taken in perspective and as part of a more encompassing risk assessment framework, like the European Dashboard and Scoreboard. The preference should be to provide additional information instead of creating indicators that deviate from internationally agreed statistical definitions.
- Statisticians should avoid deviating from harmonised statistical concepts when indicators do not provide the right perspective on the object of measurement. When needed (e.g. for administrative purposes), non-statistical concepts could be derived from harmonised statistical data, but a clear line should be drawn between the purpose and methodology behind the various concepts.
- The definition of best indicator to measure a certain reality should best be entrusted to representative international fora. One should avoid unilateral deviations from sound international statistical standards to satisfy internal agendas. However, as data producers, one should certainly contribute to the definition of these concepts and raise awareness on aspects that may jeopardise international comparability and that create an unfair playing field.

Session 6A: Methodological issues regarding the compilation of financial accounts (Chair: Rimantas Vaicenavicius, Bank of Lithuania)

Central bank policy makers increasingly rely on a detailed, consistent map of financial flows and stocks of the economy in the national accounting framework, which is sometimes referred to as a flow of funds. Statistical dissemination of consistent sectoral financial balance sheets is still a long standing challenge in many countries. Even among those central banks which disseminate such statistics, only a minority are able to disseminate full financial accounts for institutional sectors in the from-whom-to-whom framework. When statistical estimation techniques are applied where information is missing, justification of the methods and their transparency is important for data users. The methodological change related to the implementation of SNA 2008 constitutes an important challenge in all these respects.

After central banks start disseminating financial accounts information in a consistent framework, they meet the next generation of challenges: low acquaintance of users with the framework and its concepts, inadequately presented statistical methodologies, and developing IT tools for dealing with data or visualising them. On top of these challenges comes the quality of data sources: how to improve the quality of fiscal (especially local government) accounts, information on non-financial corporations and households, or non-bank financial subsectors. These quality demands come hand in hand with the requests of advanced timeliness, a particular challenge since the financial accounts statistics can only be compiled after all input sources are available.

Financial accounts compilation acutely needs a more standardised toolkit for statistical estimations, imputations and presentations. Ryoichi Okuma from the Bank of Japan suggested closing the gaps of sectoral inter-linkages by linear techniques, calling them “pro rata”. Moreover, he showed how to derive better estimates for Japan’s financial accounts by excluding the linear interpolation of those parts where the phenomenon is missing. The author called this method “the enhanced pro rata method”. Moreover, it was suggested that financial accounts could not only employ a square matrix presentation, known as a financial social accounting matrix or financial input-output matrix, but also a power-of-dispersion index and a sensitivity-of-dispersion index. A power-of-dispersion index shows the influence of a unit shock in a sector’s financing demand to other sector’s demand. A sensitivity-of-dispersion index displays the influence of a unit shock in total financing demand on each sector’s demand.

Financial accounts of institutional sectors have to comply with the new standard SNA 2008, which better captures financial transactions than the previous national accounting standard. For instance, the new SNA manual recommends that employee’s stock options (ESO) should be recorded in the financial accounts. This request increases liabilities of non-financial corporates, compared to the previous SNA93. As in financial accounting employee’s stock options are recorded at book value, the estimates at market prices needed for national accounts have to be estimated. Ryoichi Okuma and Tomotaka Hiroki from the Bank of Japan presented the statistical estimation methods applicable for the estimation of ESO’s market prices.

Compilation of financial accounts relies heavily on security-by-security databases, where available. Though in some countries security-by-security (SBS) databases for statistical purposes were created 20 years ago, over the last years there was a lot of progress in many central banks, as new databases have been created or existing ones improved. Security-by-security databases might have not only issuance information, but also information on holders of securities. Alfredo Fuentes from the Central Bank of Chile presented his country experience. The Chilean SBS database contains information on asset holdings (98% of total fixed income market); thus, it is highly valuable for the compilation of financial accounts. The ECB statisticians presented the outcome of an experimental production of securities holdings statistics. They also described the plan for a steady-state approach to compile SBS holdings by euro area and EU residents. It is important to observe that SBS databases on holdings of securities allow to present information to financial accounts in a from-whom-to-whom framework.

Session 6B: Measuring households' financial positions (Chair: Jacques Fournier, Bank of France)

Evaluating household financial positions have become a key policy issue during the crisis, not only in Europe but also in many other countries across the globe. At a macro level, there could be a trade-off between more growth via more consumption on the one hand, and more systemic and financial risks due the stocking up of household debts on the other.

The three papers that were presented in this session study the evolution in wealth and indebtedness on the basis of surveys, and of banking and administrative data. The local situations differ due mainly to different positions in the growth cycle:

- in Poland, a fast evolving country, a multi-group latent class approach has identified that most of the changes that occurred between 2003 and 2011 were due to the transition of the Polish credit market, in particular the growing role of the commercial banking sector;
- in Denmark, a country with a rather high debt-to-income ratio, the distribution of debt has shown a growing dispersion during the crisis;
- in Italy, the research presented concluded that over-indebtedness measures depend heavily on the range of indicators used.

Questions were raised as to whether variables such as credit conditions – for instance are rates fixed or variable? – could be used more or more extensively in studies on wealth and indebtedness. There seemed to be further potential to look at other variables than have been used so far.

The session considered that a few general conclusions could be derived from the papers, their presentation and the discussions they triggered:

- Micro data are increasingly important to support statistical analysis,
- The scientific analysis of the relevance of statistical data, including those on indebtedness and wealth, needs to be monitored closely by statisticians;
- Increasing attention to possible looming risks for financial stability, require a pro-active approach from users of central banks surveys as well as banking and administrative registers.

Session 6C: External aspects of financial accounts (Chair: Joe McNeill, Central Bank of Ireland)

Two papers were presented during this session on very different aspects of the financial sector. The first presentation was titled "Cross-border banking transactions in the euro area" by Antonio Colangelo of the ECB. It focussed on developments in euro-area MFI balance sheets which are central to financial intermediation in the euro area. These developments are examined at national, intra-euro area and extra euro area levels, with a particular focus on cross-border transactions. The paper showed how the use of transactions data and the derivation of notional stocks to exclude reclassifications and revaluations effects, provides an appropriate framework for economic analysis.

The paper provided an overview of developments in the MFI sector from 1999 onwards. Domestic positions steadily increased up to the financial crises but came to a sudden stop with the Lehman's collapse, mainly driven by developments on the domestic interbank market and, to some extent, loans to non-MFIs. Extra-euro area cross-border transactions showed early signs of deceleration since mid-2007, while intra-euro area transactions continued to increase up to the Lehman's default. German banks have been reducing their liabilities on the Eurosystem since end-2009. This was the case for French and Spanish MFIs up to the second half of 2011, when these positions trended sharply upwards. Italian MFIs liabilities also increased rapidly from Q3 2011. This suggests that these countries have a high recourse to long-term refinancing operations. Intra-euro area cross border MFI holdings of debt securities can be used to study the linkages between euro area bond markets, from which the ECB are able to construct financial integration indicators. These positions were increasing from Q1 1999 until mid-2009, before turning negative. This suggests that deleveraging of euro area MFIs on their securities portfolios was mainly connected to their intra-euro area cross border holdings.

The paper highlighted how better use of existing data can enhance analysis. Using national data in conjunction with euro area aggregates can help decompose euro area aggregates unto national contributions, sometimes challenging conventional wisdom.

Questions related to links with shadow banks, the treatment of retained securitisation, data gaps related to residence, matching inflows and outflows across countries and between MFIs and central banks and the extent to which German MFIs are financing peripheral economies. The presenter acknowledged that research was still in the early stages and that these issues could be explored in further work.

The second presentation covered the paper entitled "Towards a better view of Dutch net foreign assets" and was presented by both authors, Gerrit van den Dool and Rini Hillebrand of De Nederlandsche Bank. The Net International Investment Position (IIP) is now the focus of renewed interest following its inclusion in the European Union macro-economic Scoreboard. This paper looks at how the application of market value (as laid down by the IMF) to Dutch subsidiaries abroad and foreign-owned subsidiaries in the Netherlands significantly improves their IIP position. The paper focuses on the methodology used to derive market value for both inward and outward equity positions and the reasons why it is higher than book value measures by up to €225 billion. Both inward and outward investment holdings of equity capital are often significantly undervalued where book value is

used. The use of market value instead for the past decade, gives higher yearly values for IIP, with increases repeatedly exceeding €100 billion and in some cases even exceeding €200 billion. This type of analysis is especially relevant to smaller countries where large numbers of multinational companies are located. It is also particularly useful in helping to reconcile developments in the current account with changes in net external assets, especially as valuation changes have been particularly significant in the latter.

Questions related to the treatment of the cross border positions of special purpose entities, the impact of transfer pricing and the stability of profit shares over time. The authors confirmed that profit shares were stable over time and that they did not consider transfer pricing to be a major issue for the Netherlands. They acknowledged that the treatment of special purposes entities could be explored in further work.

Session 7: Panel discussion on “Will we have appropriate data to monitor future developments in the financial system and evolving financial conditions?” (Chair: Muhammad Ibrahim, Bank Negara Malaysia)

Three major themes emerged from the panel discussion.

Data gaps

There was a general recognition that there would always be data gaps for a number of reasons. Firstly, modern financial systems are unavoidably complex as illustrated by the development of shadow banking and its potential impact on financial markets. This may make measurement complex too. Figures can be volatile, particularly in circumstances of major bankruptcies in the financial and non-financial corporate sector.

Secondly, in many countries it is difficult to obtain and use data on non-bank financial institutions, even if they are regulated entities and sectors. In addition, the reliability of data in this area is often a problem.

Thirdly, statistical systems may be slow at reflecting rapid developments. This is not only related to the issue of timeliness but also to the process of adjusting data collection processes.

Fourthly, in addition to financial innovation, increasing globalisation poses a major challenge to compilers. New analytical and methodological frameworks may need to be developed, such as the one based on nationality and global group consolidation.

Fifthly, the issue is not always one of quantity of information but also of quality. Defining appropriate quality is the key. This requires ongoing interaction between users and producers of statistics (e.g. some approximations/sampling may be acceptable to users rather than full reporting). Users need to be involved in discussing the cost/benefit trade-off of data collections. A particular challenge is to reconcile the needs of different users which may each have their own analytical perspectives.

What can statisticians do to address data gaps?

Different suggestions were made in this respect. With respect to the cost/benefit trade-off, it is important to always ask what the purpose is of new data. There is a risk that many new data initiatives are fighting the last data-gaps war. One needed to look forward as much as possible.

Technology would continue to facilitate data collections. It could help to further improve data collections, for instance to capture supervisory and statistical data (some are considering drawing data directly from internal IT systems of financial institutions). IT could also help to support the intelligent re-use of information, for instance through data sharing. And business intelligence systems could be developed to link and compare micro and macro data and databases.

There was little doubt that statisticians need to take further steps to improve the international comparability of national data. That means they should support and closely monitor initiatives taken by international organisations in this respect.

Overall, statisticians needed to evolve from simple number crunchers to become intelligence agents. This requires a better skill mix for statisticians. They need to keep abreast of new statistical methods, collection techniques and analytical frameworks. Concrete examples were the use of surveys and understanding how Herfindahl indices could be used to measure concentration/diffusion? They should also train to combine data from the central bank's own systems with other sources of data (including market intelligence).

Importance of communication of statistics

Apart from data gaps there are also analysis gaps (within statistical area but also with supervisors and economists) as well as communication gaps (with different stakeholders). Communication with policy makers is a particular challenge. For one, it is not always clear what data they expect to have at their disposal – see the debate on data needs to support financial stability analysis. In addition, policy makers may be difficult to convince of the quality of the data that is available (both in the positive and negative sense). Often this is because there is no appropriate analytical or conceptual framework to present the data to them.

Whatever difficulties may exist, statisticians and economists should be encouraged to be forthright when speaking to senior policy makers about the quality/adequacy of data collected and used for analysis. They should not be embarrassed to indicate the limits to what is, and can be; known (could one have forestalled the Great Financial Crisis if all missing data had been available?).

Discussions in IFC meetings should help identify emerging issues, including regarding the communication and dissemination of statistics. The strength of the Committee is that it provides a global platform where users and compilers can speak freely.

Annex 4:

Key findings of the 2012 IFC membership survey

58 of 74 institutional members responded to the 2012 survey of the IFC membership. This 79% response rate is as high as it was last year. Findings can therefore be considered to adequately represent the collective views of the IFC community. As in previous years, the survey addressed current central bank statistical responsibilities and recent new developments as well as satisfaction of the IFC membership with the governance and activities of the Committee. In addition, two specific topics were covered: a self-assessment of members' satisfaction with specific aspects of their institution's statistical activities and members' views on data sharing issues.

Current central bank statistical responsibilities and new developments

With respect to the recurrent part of the survey, no major new findings were transpired. Current responsibilities of central banks, in advanced as well as in emerging market economies, mostly reside in the area of financial and external sector statistics. These are also the areas in which they have launched new collection initiatives. The objective of new data collections is related to both the financial and monetary policy objectives of central banks. New data collections are often part of international initiatives to close data gaps and to support macro-prudential surveillance.

Central banks are comfortable that they have the legal or statutory authority to compel reporting, in particular from banks. In some countries, initiatives have been taken, or are being taken, to strengthen this authority. Even so, around half of the central banks, particularly those in advanced economies, are facing restrictions in widening their mandate for data collection.

In terms of collecting, processing, analysing and disseminating the statistics, almost all central banks increased their IT budget for the statistical functions and staff resources are also being increased in over half of the central banks. Big effort is being made to improve the dissemination of statistics, in particular through the internet. Moreover, around half of the responding central banks are also improving their communication with the media and data reporters.

The survey confirmed that senior management in most central banks are involved in discussing statistical matters, both in terms of data themselves as well as the governance and managerial aspects of their statistical activities. However, as noted below, it is felt that this could be improved.

IFC members' satisfaction with their central bank's statistical activities

This year's survey included a self-assessment by Committee members of their personal satisfaction with selected aspect of their central bank's statistical activities. The intention was to allow IFC member central banks to benchmark themselves vis-à-vis their peers. Also, the results might allow the Executive to identify issues that would merit further attention for future IFC activities.¹⁴

The findings are interesting. In general, IFC members are satisfied with the various aspects of their statistical activities that were covered by the survey. In particular, there is a generalised high satisfaction with the output of central bank statistical work, including the timeliness and accuracy of statistics. Still, one third of members are dissatisfied with one or more aspects, including:

- HR issues (number of statisticians, their skill mix, and career opportunities for them);
- senior management's attention to statistical matters;
- involvement of user areas in defining statistical needs;
- technical assistance received from foreign organisations;
- data sharing with other relevant institutions.

Data sharing in the area of banking information

This year's survey drilled down the issue of the collection and sharing of data in the area of banking information. The results show that the legal power to collect certain types of banking data depends on whether or not the banking supervisory task is performed by the central bank itself or by a separate supervisory authority. It should be noted that 57% indicated that central banks have such supervisory responsibilities.

The division of tasks also seems to have a bearing on the extent to which data are exchanged at the national level. The survey indicates that when the banking supervisory tasks are performed by the central bank, full sharing of data takes place in 57% of the cases while partial sharing of data occurs in 43%. When the banking supervisory tasks are performed by a separate authority, the extent to which data are shared appears to be lower with only 44% for full data sharing and 56% for partial data sharing. The main obstacles to data sharing are similar in both types of set-ups:

- legal constraints: 31% when the task is performed by the same authority while 40% in case the task is performed by two separate institutions;

¹⁴ The responses were, of course, subjective assessments of each individual Committee member. One half of the respondents had a high mean satisfaction and a low distribution of their individual answers, one third had a significantly lower mean satisfaction with a higher distribution of answers. Tests were applied to normalise the data.

- inconsistencies in data requirements (i.e. in the definitions, coverage, IT systems¹⁵) in 31% of the cases when the task is performed by the same authority or 20% when it is performed by separate authorities.

Regarding the data sharing at the international level, the survey questioned the main obstacles to share individual banking data with international organisations. 74% of respondents claimed that legal constraints are the biggest hurdles, in particular banking secrecy laws or other legal provisions safeguarding the confidentiality of the information. Other reasons mentioned are:

- reluctance of supervisors/central banks to share confidential data collected for other than legal or contractual reasons (29%);
- strong concerns voiced from financial institutions for fear that it may hamper their strategic management (19%);
- significant reporting burden, particularly in compiling data in internationally standardised form, and in constructing new IT system needed for submitting data (17%); and
- need to request permission from reporting agents.

The results indicate that data sharing at the national and international levels depends on a variety of factors: the statistical domain, the authorities involved in the collection and exchange of information, the legal framework and the confidentiality of the information. Indeed, central banks use a wide range of financial and economic statistics and often the collection and compilation of information is fragmented among various stakeholders.

Data sharing is considered by many central banks as a real challenge. Improvements would be welcomed and beneficial as they may also respond to the challenge of reducing the burden on reporting agents. In the area of banking, the survey indicated a rather low level of data sharing among authorities. As a result, there is a rather high percentage of central banks and supervisory authorities collecting data directly twice. However, the question that arises is whether the double collection takes place because a smooth data sharing is not feasible or the other way around, ie that no data sharing takes place because data are collected directly by authorities that need them separately for the performance of their own tasks.

Overall, the survey indicates possible ways to enhance data sharing both at the national and international levels. At national level, the following suggestions were put forward:

- bilateral or multilateral MOUs (50%);
- changing national legislation (45%);
- national agreement translated into regulations or practices (36%);
- general national agreement on data sharing (35%);

¹⁵ IT may not be an issue as 68% of the central banks responded that there is a connection between the statistical IT systems of the central banks and the banking supervisory authority even when there is an organisational separation of the two activities. Amongst these central banks, only 28% actually use the same statistical IT systems. Nevertheless, this does not prohibit the exchange of data either periodically (44%) or when needed (33%).

- best practices or guiding principles on data sharing (29%).

At the international level, almost two third of the respondents agreed that “international agreement on data sharing that is then translated into national laws, regulations or practices” and “international treaty on data sharing” would be the best solutions (62% and 47% of the respondents respectively). The proposal to create or assign to an existing authoritative international statistical organisation the role of designing, or at least endorsing, a set of practices/guidelines relating to data sharing was supported by 35% of the respondents. Furthermore, to overcome secrecy/confidentiality constraints, the most popular solutions cited are: limiting data sharing to aggregates (31% of the responses), having an international organisation warehouse the data and distribute it or aggregates as appropriate, and using technological solutions to mask individual names (17%).

Assessment of IFC activities

A large majority of IFC member central banks participated in one or more IFC activities in 2011. Almost all members consider IFC activities to be relevant to their institutions. They are satisfied with the transparency of the decision making by the Executive, and with the communication of the IFC Chairman. The services of the Secretariat are likewise appreciated by all. They emphasise the important catalytic role that the IFC plays and can play in the future. They encourage communication with non-member central banks. The Committee is seen to be doing a good job at supporting active networking between and among users and compilers of central bank statistics and is thereby becoming an opinion leader in the international statistical community.

IFC institutional members find the annual survey useful. Almost all are willing to continue to respond to the survey. Finally, almost all members would find it useful if the Committee could publish a sanitised (and expanded) version of its Annual Report to Governors.

Annex 5:

Sasana Statement on Financial Inclusion Indicators

On 5 and 6 November 2012, Bank Negara Malaysia co-sponsored an international meeting at Sasana Kijang, Kuala Lumpur, to discuss financial inclusion measurement and indicators. The other sponsor was the Irving Fisher Committee on Central Bank Statistics (Irving Fisher Committee), a forum of economists and statisticians from 80 central banks from all regions, which operates under the auspices of the Bank for International Settlements. The meeting, which was presided by Deputy Governor Muhammad Ibrahim, who is also the Chairman of the Irving Fisher Committee, yielded the following insights:

1. Greater financial inclusion is essential for accelerating and sustaining employment, economic growth and financial stability. There is currently no standard definition on financial inclusion. In a narrow sense, it refers to the delivery of accessible, affordable, appropriate and cost-effective financial products and services to unserved or underserved households. The definition is sometimes extended to also include products and services to unserved or underserved enterprises. In its broadest form, financial inclusion takes into account the qualitative aspects of inclusiveness such as financial literacy and consumer protection.
2. As in other policy areas, good policy requires good data, at both the macro and micro level. The meeting highlighted the crucial role of measurement and performance indicators for the promotion of financial inclusion. Useful initiatives have been taken at the international level to provide guidance on the collection and dissemination of data on access to and usage of the financial products and services, as well as qualitative aspects of financial inclusion. International data-related initiatives include those of International Monetary Fund, the World Bank, the G20, Consultative Group to Assist the Poor, and International Finance Corporation, the Alliance for Financial Inclusion (AFI) and its Financial Inclusion Data Working Group (FIDWG), and Microfinance Information Exchange.
3. Many developing, emerging, and advanced countries are implementing current international recommendations related to data frameworks and methodologies for financial inclusion indicators. Nevertheless, they have yet to be fully used by all countries due to diverse levels of financial inclusion across countries. Many are also participating in internationally-coordinated data collection initiatives in order to map financial inclusion in their jurisdiction and make data more comparable across countries.
4. In addition, countries are implementing country-specific data-driven approaches to measure financial inclusion by different dimensions, including financial literacy, consumer protection, household indebtedness, micro credit, the financing of small and medium-sized enterprises and community development.
5. Central banks in different regions in the world have a clear interest in promoting financial inclusion, in particular by improving policy-relevant data. This includes the development of composite indicators or indices of financial inclusion at the national and international levels. While the appeal for such

interest is well-founded, a number of methodological issues need to be carefully considered in using such indicators for policy development purposes, both in terms of comparing financial inclusion across different countries and over time.

6. The Irving Fisher Committee stands ready to contribute to international efforts in the standardisation of the relevant financial inclusion measurement and development of composite indices or dashboards. The statistical expertise of Irving Fisher Committee members is available to national and international organisations and groups.

Annex 6: Concluding remarks by Alfred Hannig, Executive Director, Alliance for Financial Inclusion (AFI) at the Workshop on Financial Inclusion Indicators co-sponsored by the IFC and Bank Negara Malaysia in Kuala Lumpur on 5–6 November 2012

We have witnessed two days of rich discussions with insightful presentations on the current state of financial inclusion measurement. This workshop gives us an excellent basis and background from which we can further promote national and international efforts in financial inclusion measurement and data.

AFI would like to express its appreciation to Bank Negara Malaysia (BNM) and the Irving Fisher Committee on Central Bank Statistics (IFC) for preparing and hosting this workshop.

This workshop originates from a high-level meeting co-chaired by Her Royal Highness Princess Máxima of the Netherlands, the UN Secretary General's Special Advocate for Inclusive Finance for Development, and Dr. Stefan Ingves, Chairman of the Basel Committee on Banking Supervision, at the Bank for International Settlements (BIS) on March 19th, 2012. The purpose of the meeting was to discuss ongoing initiatives, to explore how further cooperation among Standard-Setting Bodies (SSBs) could advance financial inclusion and global standards, and how SSBs can take financial inclusion into consideration within their respective mandates.

Following this meeting, the Irving Fischer Committee on Central Bank Statistics suggested exploring opportunities for collaboration with the Alliance for Financial Inclusion (AFI) in its data collection efforts. AFI welcomed this proposal, as an effective dialogue would be established among SSBs and developing countries, based on mutual learning with evidence-based feedback on data collection efforts from both ends. Looking at the productive discussions held at this workshop, we feel that the AFI members' presence could make a contribution to an improved understanding of developing and emerging countries' practices in data collection.

In this context, let me take this opportunity to mention that as part of their financial inclusion agenda and during their recent meeting held November 4–5 2012, the G-20 Finance Ministers and Central Bank Governors commended the additional commitments to the Maya Declaration made in Cape Town in 2012, and encouraged countries to measure progress through national data collection efforts.¹⁶

The Maya Declaration is the first global and measurable set of commitments by developing and emerging countries to increase financial inclusion. The commitments are being measured through the Core Set of Financial Inclusion Indicators developed by the AFI Financial Inclusion Data Working Group (FIDWG), which has already encouraged other countries to gather this information.

¹⁶ Provide reference to G20 statement and Maya Declaration (and therefore AFI website).

Key findings of the Workshop

Both developed economies and Low and Middle Income Countries (LMICs) recognise the critical importance of financial inclusion to economic and social development. However, developed economies and LMICs seem to be facing different challenges along the financial inclusion curve. Overall, developed countries are confronted with usage and quality issues while the majority of LMICs are putting a lot of emphasis on increasing access. These differences in policy focus were reflected in the range of approaches presented at this workshop, which aim to measure financial inclusion with data that captures various dimensions of financial inclusion.

As a result of the increasing relevance of policies to enhance consumer protection and financial capability, financial inclusion quality indicators need to be developed further. “Financial education makes people creditworthy”, according to Reserve Bank of India Deputy Governor Chakrabarty.

AFI will have to think about how members can better connect with developed countries to discuss and exchange on pertinent financial inclusion issues such as data and measurement.

Reliable, comprehensive and country-specific data is critical to inform financial inclusion policymaking, and at this workshop we have seen good examples from developing countries (Mexico, Colombia, Brazil and Mozambique) on country-specific data. From our point of view, data can be standardized and harmonized for comparison among countries and benchmarking, however, the priority is on gathering relevant country-specific data for domestic policymaking. Too much standardization or harmonization of data collection efforts could reduce the relevance for each country.

It is important to note that technological or infrastructural innovations have implications for data capturing and measurement methodologies. As was demonstrated by the Malaysian case, the addition of agent banking pushed the indicator of financial inclusion upward.

This brings us to the important point of developing a composite index for financial inclusion. It is our impression that we have not reached a consensus on whether a composite index is recommendable or not. Some participants mentioned the “dubious significance” of the composite index and argued that the use of dashboards might be the most prudent way to reflect the complexity of the data collection effort. This view was supported by the Mexican case, which showed that a composite indicator could be used as an instrument to diagnose financial inclusion on the country level. However, it has limitations in terms of comparability with other countries. Bank Negara Malaysia’s (BNM) presentation in this context provided a very interesting example on how a composite index can be built on an agreed set of financial inclusion indicators (the FIDWG Core Set).

Next steps

BNM will share progress made on the development of its financial inclusion composite index at the next meeting of the AFI FIDWG. The Working Group is currently developing the 2nd tier indicators to complement the Core Set of Financial

Inclusion Indicators, which will include indicators of quality, and additional indicators of access and usage.

It is good news that the IMF has reported an increasing number of LMICs participating in its global data survey. AFI will encourage more members to embark on data collection efforts through the Maya Declaration and the FIDWG, thereby broadening the group of countries involved in systematic financial inclusion measurement.

The European Central Bank's (ECB) efforts to measure SMEs' access to finance could be a relevant input for the planned AFI working group on SME Finance. The presentation will be shared with the working group members and ECB could be invited to one of the first meetings of the group.

In light of the numerous data collection efforts currently taking place, any existing gaps for potential additional activities need to be carefully analysed. IFC could continue systematic knowledge exchanges like this workshop. IFC will also be invited to the next FIDWG meeting and other AFI events.

Annex 7:

Terms of reference of an IFC Task Force on Data Sharing

The 2012 IFC Membership Survey confirmed the need to improve data sharing between statistical organisations at the national and international levels. In particular, efforts need to be made to overcome confidentiality constraints and obstacles to the exchange of data. Consequently, the IFC has agreed to set up a Task Force to review practices concerning data sharing.

The Task Force is mandated to take stock of existing practices regarding the sharing of data, in particular with respect to banks' balance sheets and activities. Case studies would provide insights on ways that have been, or are being, used to overcome different constraints. Practical guidance on improving data sharing may then be elaborated.

The starting point of the work of the Task Force will be the 2013 IFC Membership survey which will be dedicated specifically to data sharing practices. This exercise may provide insights on practical ways that have been, or are being, used to overcome different constraints. Bilateral contacts with IFC members may also be established where deemed relevant. In addition, particularly concerning data sharing at the international level, experience with existing and newly-established data sharing exercises in the area of banking could be reviewed, including the legal arrangements.

The Task Force will be chaired by IFC Executive member, Aurel Schubert of the ECB. Each Committee member will be able to nominate one member of the Task Force. However, the final composition of the Task Force will be decided by the IFC Executive in order to ensure a balanced representation of IFC members of different regions as well as developing, emerging and developed countries. Also, the size of the Task Force will need to remain manageable. The expertise of the Task Force needs to be as broad as possible. Therefore, if appropriate, the Chair of the Task Force may invite other relevant parties, such as legal experts and bank supervisors, to attend meetings. In addition, the Task Force may be opened to selected observers of relevant international bodies.

The Task Force will be a temporary group. One or two physical meetings may be organised but a substantial part of the work will be conducted electronically (eg via email and the eBIS room of the IFC).

The secretarial support for the Task Force will be provided by the ECB, which will liaise and coordinate with the IFC Secretariat at the BIS.

The Chairman of the Task Force will keep the IFC Executive informed of progress being made. He will also inform the Committee of the progress of its work at the 2013 Committee meeting. The Task Force will deliver its final report towards the end of 2013.