

Economic and financial statistics: a glass half full or half empty?

Keynote presentation by William R White, Economic Adviser, Bank for International Settlements, at an Irving Fisher Committee conference on “Central bank issues regarding national and financial accounts”, Basel 9-10 September 2004.

1. Introduction

It is again my pleasure to welcome the members of the Irving Fisher Committee (IFC) to Basel and to the Bank for International Settlements. You may recall the very successful conference we held here two years ago, and I have every hope that this one will prove as stimulating as the last one. We have a large number of expert speakers on topics that are, well, topical and I have every expectation that people will either go away more knowledgeable or, at the least, more confused at a higher level.

I am particularly glad that you are here because I have been encouraging the BIS, with some success, to become more involved in issues having to do with statistical methodology. These are crucial issues for central bankers as they try to conduct their policies in a world that is both complex and constantly changing. Indeed, data issues have come up very regularly at the meetings of Governors that I have attended at the BIS over the last 20 years.

As an international financial institution whose principal mandate is to foster central bank cooperation, the BIS has sought in recent years to do more for its clients in this area. It has been in that spirit that I supported my colleague Paul van den Bergh's decision to accept the position of Chair of the IFC Executive Body, and also encouraged the BIS staff to cooperate actively with the IMF, the OECD and a number of other international and regional groupings on statistical issues. Among these initiatives I would particularly note the conference on property prices last autumn, which was jointly sponsored by us and the IMF.

The conference two years ago had as its theme “Challenges to central bank statistical activities”. You may also recall that the individual sessions and workshops had to do with challenges identified in particular areas such as the pursuit of monetary stability, the pursuit of financial stability, cooperation with national statistical offices and a host of others. This year, the principal theme is: “Central bank issues regarding national and financial accounts”. Evidently, it is a somewhat narrower theme, and focused more directly on methodological issues, but it seems to me to be wholly appropriate to start with the big picture and then gradually home in on more practical issues. I have no doubt that “perfecting” the data on prices, productivity, output gaps and the financial accounts, and assuring that everything is internationally consistent, will keep us busy for at least two days. And if we finish early, have achieved perfection, then we can just go home early with a sense of a job well done.

Over the last few years, a lot of progress has been made in the area of compiling statistics and statistical methodology. Yet we all know that there remains a lot to do. Let me review briefly some of the issues under the heading of “Is the glass half full or half empty?”. I will begin with a review of some good news and bad news with respect to a number of statistical issues, move on to the added problem that the glass seems constantly to be changing both size and shape, and finish up with what we might collectively do to move the agenda forward.

2. Is the glass half full or half empty?

Let me answer this question with respect to four issues: first, methodological issues affecting measurement and measurement bias; second, the quality of the data we are collecting; third, issues of intertemporal and international consistency; and finally, the resource issue. Are we doing enough even to know where we are, much less where we are going?

The first and likely most important issue has to do with methodology. Are we measuring accurately what we want to measure? Do we have a clear sense of what the data are for? In particular, can the

data be used to test hypotheses that are of interest to central banks as they carry out their most important function: namely, deciding whether policy rates should go up or down in the pursuit of monetary and financial stability?

Here there are many grounds for believing that the glass is half full. At the level of theory, we have a well developed system of National Income and Expenditure Accounts, and an increasingly sophisticated set of Financial Accounts measuring both financial flows and associated stocks of assets and liabilities. In particular, the importance of compiling monetary and credit aggregates is once again being recognised after a long period in the wilderness. Moreover, new models have become available to measure and price financial risks of various sorts: market risk, credit risk, liquidity risk and even operational risk. This is particularly important given the growing importance of financial markets in the modern world, with their promise of greater efficiency but also greater instability. At the level of application, the glass is also half full in that we now possess a whole multitude of agreed international methodologies (eg Balance of Payments, International Investment Positions and Government Accounts) as well as compilation manuals and standards of best practice. Moreover, as this gathering attests, there are now many groups of international statistical experts, and technical assistance is being provided through many channels so that the more knowledgeable can share their insights with the less knowledgeable. This is all to the good.

Yet this particular glass might still be considered half empty. Our theoretical frameworks often have serious shortcomings. Does rapid growth in GDP really measure an increase in human welfare if associated with unmeasured increases in hours worked (with mobiles and laptops we are all on call all the time), or if earned through great environmental degradation (as increasingly evident in a number of emerging market economies)? Moreover, our empirical measures often are biased estimates of what we really want to measure or can suffer from sampling errors or other estimation problems. The price deflators in rapidly expanding service sectors also need to be looked at, as does more generally the question of quality adjustments and the use of hedonic pricing. Finally, as globalisation continues and the importance of cross-border transactions grows, the implications of intrafirm transfer pricing need to be reassessed. This is obviously an issue with fiscal implications, but there are other implications as well.

Even in the context of the NIA, a myriad of problems can be identified. Not least is the fact that many key data observations are in fact not observed but inferred. Consider the difficulty involved in measuring real output growth and determining in turn whether productivity growth has in fact sped up over the last few years. Deciding whether we are living in a “New Era”, or not, obviously has immense policy implications for central bankers. In the medium run, higher productivity growth implies more scope for lower interest rates to foster non-inflationary growth. Over the longer run, however, such faster growth also implies a higher natural rate of interest.

Consider as well some of the measurement problems in the financial sector. The sectoral breakdowns in the financial accounts are particularly problematic, as are measures of private sector wealth. As house prices increase, the measured wealth of the housing sector increases even though the future liabilities of households (higher implicit rents on the same properties) have gone up. There is something odd here. And it becomes all the odder, and more worrisome, when we realise that in many countries the household sector has reduced its saving rate dramatically in response to these measured wealth increases.

The second issue I want to deal with is closely related, namely the quality of the data being collected. On the half-full side of the ledger is the fact that improvements in quality are ongoing, in large part because of the pressure being exerted by various communities of users. International organisations and bodies like the IMF and the Financial Stability Forum are exerting constant pressure for statistical improvements. These pressures are being manifested in the implementation of the SDDS and GDDS standards for the macroeconomic data and FSAPs and ROSCs for the financial sector in particular. But in addition, we have all benefited from the advice and support of policymakers, financial market participants and analysts of various sorts who often make strong arguments for the statisticians to do more and offer specific suggestions as to how to move forward. Paradoxically, it is often the same people making the suggestions for more work who complain the most about the added burden of responding to new statistical requests. Of course, there is nothing new in that.

As expected, however, it is not so hard to make the argument for the glass being half empty. One shortcoming is that data for the emerging market countries tends still to be of lower quality than for the industrial countries. This is particularly unfortunate since, albeit subject to measurement error, such countries are increasingly important at the global level. From 2001 to the present, using PPP for

comparisons, China and India are estimated to have accounted for 30% of global growth in real GDP. That China has made a significant contribution to the run-up in global commodity prices, particularly oil, over the last year can hardly be doubted. Yet equally important is that the persistence of this effect will in part depend on stockbuilding in China, for which there are effectively no reliable numbers. Finally, if the data is generally better and more complete in the industrial countries, major shortcomings remain. House prices seem to play a large role in economic cycles worldwide, yet in many countries there are no reliable statistics. This issue needs to be urgently addressed.

A third issue that merits some attention is that of intertemporal and international consistency. On the one hand, it might be possible to identify some statistical series where revisions seemed to be less significant than previously. This could imply that original estimates have become more accurate though, logically, it could also imply less interest in getting it right at the second round. As for international consistency, there are again grounds for satisfaction. The recently introduced framework for the harmonised EU statistics has remarkable promise, and international comparability (or at least transparent reasons for differences) has been steadily improving. The fact that best practices concerning data quality (the IMF's Data Quality Assessment Framework) are increasingly respected is another plus.

On the other hand (the half-empty hand), the frequency and size of data revisions remain important. It is obviously disquieting when policy leans against a recession that is subsequently revised away, although it is perhaps equally disquieting when initial estimates are never subject to revision at all. And the degree of international comparability of data is still not fully satisfactory. In particular, gaps exist between internationally agreed methodologies and actual approaches used nationally. Moreover, the source data for statistics are often rendered idiosyncratic by conventions associated with national accounting practices. Finally, these deviations are often not well described, perhaps because it would simply be embarrassing to do so. In too many areas there remains too much national discretion as to how things should be done.

The final issue I wish to say a few words about is the amount of resources being directed to statistical questions around the world. There are some grounds for satisfaction and even optimism. Significant levels of spending continue to characterise most of the industrial countries, and governments are becoming increasingly aware of the importance of a good statistical base in many emerging market countries. Statisticians, perhaps even more than others, are also benefiting from the productivity increases being made possible by new IT technology. For similar reasons, great improvements have been made in making data available to users and increasing its usefulness. There are a growing number of both national and international statistical publications and databases, and the electronic dissemination of such information via websites is now commonplace. Commercial vendors are now providing all sorts of new data, especially in the realm of financial data. In short, "there is more bang for the statistical buck".

Yet, in this area as well, many possible problems and improvements could be identified. Even given the boost to productivity from IT, statistical activities remain resource-intensive. The lack of IT standards limits the integration of platforms and, as a result, the duplication of databases and the need for customised information flows are much increased. Commercial databases are costly, and we all know that the vendor's attention to detail and accuracy sometimes leaves a lot to be desired. Finally, reporting burdens remain high both for reporters and for the statistical agencies. One reason for this is the great difficulty we all have in withdrawing from areas that used to be important, so that resources can be shifted to new areas of growing interest. This observation brings me to my next major theme. The glass, whether viewed as half full or half empty, is constantly changing in both shape and size. How do we keep up with such a changing environment?

3. A glass of changing shape and size

The most obvious example of change on the real side of the postwar economy has been the shift out of agriculture into manufacturing and then in turn into commercial services. Yet in most countries the shift in statistical resources has by no means been comparable. The end result is that we continue to know too little about developments that are becoming increasingly relevant to our future well-being and might well be amenable to some kind of policy influence.

And if there have been difficulties in keeping up with change on the real side of the economy, the vast changes in the financial sector have proved even more of a challenge. In the past, credit was essentially loans from banks in local currency. Now markets provide credit from many sources in many currencies. We need both better and more timely measures of the risk exposures of the household, corporate and financial sectors and the economy as a whole. As for better numbers, this is not going to be an easy task. We need better aggregates of balance sheet data. Of particular importance will be indicators of the extent to which currency and maturity mismatch problems are developing given the crucial role such mismatches have played in many recent financial crises. Moreover, attention must also be paid to off-balance sheet data as well, and we know virtually nothing about such exposures. In addition, we need better measures of liquidity, both actual and potential, in certain key financial markets. In this regard, measures of institutional concentration might prove useful indicators of potential problems affecting the functioning of markets. As for the problem of timeliness, this will also prove a major challenge. In modern financial markets, exposures can be altered quite drastically in very short time periods, implying that anything short of real-time information might well prove misleading. However, such requirements would immediately run into major problems having to do with privacy and proprietary rights, as well as the obvious technical challenges.

4. Can we fill the glass further?

The answer is obviously “yes”. One might start by trying to address a number of the specific shortcomings I have just identified as being associated with the glass being “half empty”. Moreover, even in areas where current practices are judged quite satisfactory in industrial countries, it would likely prove beneficial to strengthen statistical capacities in emerging market countries as well. This is in everyone’s interests in an integrated global economy.

With respect to methodological issues, it is important to regularly review what it is that we wish to measure in the interests of both better understanding and better policy. Moreover, we need to review and adequately maintain international statistical methodologies to ensure they continue to be relevant to a changing world. As for data collection, it is important from time to time to do cost/benefit analyses of current procedures, and to investigate the usefulness of alternative data sources. For example, in the financial area a number of unexplored possibilities present themselves: the use of corporate data revealed through enhanced disclosure requirements, supervisory data, and data drawn from payment and settlement systems as well as custodian arrangements.

As for problems of international consistency, we need to keep up the pressure to have countries conform to internationally agreed standards. Moreover, we need to make it easier to compare data internationally. In this regard, having more and better metadata to allow identification of conceptual differences would be particularly welcome. Finally, we need to pursue the ongoing efforts to develop globally accepted technical standards for statistical data exchange. Given that single data sets must now often be reported to different institutions in different formats, the general acceptance of SDMX would sharply ease reporting burdens and overall costs for everybody.

5. The role of the BIS and the Irving Fisher Committee

The IFC is a very useful platform for discussions on methodological issues. I hope this will become increasingly apparent both today and tomorrow. As for the BIS, our general role is to support central bank cooperation, which of course includes the statistical function of central banks. Both the IFC and the BIS are also in a position to represent the views of central banks and support their interests in international forums from time to time.

More particularly, the BIS has focused on developing methodologies for the collection of international financial statistics, and for collecting, compiling and publishing such statistics. Our original interest in cross-border banking flows has now been extended to international securities markets, to derivatives markets and the markets for foreign exchange. Increasingly, we have tried as well to analyse these numbers as they evolve over time, to see what the implications might be for the efficiency and stability

of the international financial system. For those of you who are interested in such questions, I can do no better than refer you to the BIS Quarterly Review, which has changed enormously in recent years, and to our BIS website, where all our publications are listed.

I would be remiss if I did not also draw your attention to the BIS Data Bank, which is increasingly a one-stop hub for all of our (or perhaps I should say your) economic, monetary and financial statistics. From its original rather modest coverage of only 11 countries, the macro database now covers 36 countries, and a number of other countries are in the process of joining – including India and China. The same kind of geographical expansion also characterises the financial statistics. We hope this process will continue until the BIS Data Bank eventually contains all the data and metadata that central banks in a global economy really need to have. As I said, one-stop shopping.

With this advertisement out of the way, let me finish with one last thought. Statistics had their beginning with a wish to measure the state of the here and now, albeit with the usual reporting lags. This is as true of accounting and micro statistics as it is of traditional macro statistics. Over time, however, interest began to shift to more forward-looking statistics which might indicate how the world could evolve over time. Of particular relevance to central banks and the BIS, we began to take more interest in measures of risk exposure to assess how vulnerable the economy and the financial system might be to shocks of various sorts.

With respect to all these statistics, it is important to remind ourselves of the considerable uncertainty which remains as to the relevance and the reliability of the numbers we have collected or calculated. Statisticians would make a material contribution to global well-being if they would sometimes remind their economist friends of the natural limitations of the statistician's trade. If this encouraged economists to be a little more humble about what they know, and a little less dogmatic in their policy advice, this would surely be no bad thing.