



EUROPEAN CENTRAL BANK

STATISTICS AND THEIR USE FOR MONETARY AND ECONOMIC POLICY-MAKING

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**SECOND ECB CONFERENCE
ON STATISTICS
22 and 23 April 2004**





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This publication is dedicated to
the memory of the late Mr. Eugenio Domingo Solans,
former member of the Executive Board of the ECB.

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Contents

| | |
|--|----|
| Foreword by <i>Jean-Claude Trichet</i> | 7 |
| A bird's eye view of the conference: summary of contributions by <i>Steven Keuning</i> | 9 |
| Conference programme | 25 |
| Euro area statistics and their use for ECB policy-making: opening address by <i>Jean-Claude Trichet</i> | 29 |
| I Statistics for monetary policy and financial stability purposes | 39 |
| The art of central banking requires more than just intuition by <i>Wolfgang Duchatczek</i> and <i>Aurel Schubert</i> | 39 |
| Statistics for financial stability purposes by <i>Hermann Remsperger</i> | 55 |
| Comment <i>Christa Randzio-Plath</i> | 63 |
| Discussion summary | 71 |
| II Business accounting standards and statistical standards | 73 |
| Introduction by <i>Nout Wellink</i> | 73 |
| Round table discussion | 79 |
| <i>Carol S. Carson</i> <i>Jean Cordier</i> <i>Paul Rutteman</i> <i>Klaus Pohle</i> | |
| Discussion summary | 87 |
| III Policy uses and future developments in balance of payments statistics ... | 93 |
| How does globalisation affect the use of balance of payments statistics for policy purposes? by <i>José Viñals</i> | 93 |

| | |
|--|-----|
| Policy uses of and future developments in balance of payments statistics: some European perspectives by <i>Sinikka Salo</i> | 117 |
| Comment | |
| <i>Vítor Gaspar</i> | 127 |
| Discussion summary | 131 |
| IV Economic and financial accounts for monetary and economic policy | 133 |
| The use of economic and financial accounting in the conduct of monetary policy by <i>David J. Stockton</i> | 133 |
| Economic and financial accounts for monetary and economic policy by <i>György Sándor</i> | 145 |
| Comment | |
| <i>Luigi Federico Signorini</i> | 157 |
| Discussion summary | 171 |
| V International statistics: quality and policy issues | 173 |
| Statistics and politics by <i>Michel Vanden Abeele</i> | 173 |
| The quality of international statistics: outstanding issues and proposals for improvement by <i>Enrico Giovannini</i> | 181 |
| Comment | |
| <i>Gert Jan Hogeweg</i> | 201 |
| Discussion summary | 207 |
| Statistics and their use by central banks: closing remarks by <i>Eugenio Domingo Solans</i> | 209 |
| Discussion summary | 215 |
| Contributors | 217 |
| Abbreviations | 219 |



This publication is dedicated
to the memory of the late
Mr Eugenio Domingo Solans.
Mr Domingo Solans was a member
of the Executive Board of the ECB
from June 1998 to May 2004.

Foreword

The Second ECB Conference on Statistics, which was held in April 2004, has served two main purposes. First, a wide range of policy-makers, including a number of ECB Governing Council Members, were able to review the statistical requirements for central bank policy-making. Second, it provided the statistical community with an opportunity to bid farewell to Eugenio Domingo Solans, the Executive Board Member responsible for statistics, who left the ECB at the end of May 2004.

As the basic statistical requirements of the ECB have been met under the guidance of Eugenio Domingo Solans, it was a good moment to invite central bank policy-makers to look ahead and to identify their most pressing unfulfilled statistical needs. At the same time, the timing of the conference – just a few days before the historical expansion of the European Union (EU) to incorporate 10 new Member States – could hardly have been more appropriate. From now on, the representatives of those Member States will be fully involved in the statistics developed, compiled and disseminated by the ECB.

The conference centred on several of the core objectives for ECB statistics that have been identified in its medium-term strategy:

- Statistics for monetary policy and financial stability purposes;
- Business accounting standards and statistical standards;
- Policy uses and future developments in balance of payments statistics;
- Economic and financial accounts for monetary and economic policy;
- International statistics: quality and policy issues.

The closing address was given by the ECB Executive Board Member in charge of statistics, Eugenio Domingo Solans. In his speech, he drew upon his experience at the ECB, describing the remarkable development of European economic and financial statistics in the past years as a “silent revolution”. The ultimate objectives, however, should be firstly to move from a good European statistical system to a better one by shifting its focus from national statistics to euro area statistics, and secondly, to reach a similar degree of statistical harmonisation among large economic areas as there is currently within them.

I am sure that the new ECB Executive Board Member in charge of statistics, José Manuel González-Páramo, will build on the excellent achievements of his predecessor, and I strongly believe that the success of the second biannual ECB conference on statistics is worth repeating.

Eugenio Domingo Solans passed away on 9 November, only a few weeks before the publication of the present proceedings. This book is dedicated to his memory.

Jean-Claude Trichet
President

A bird's eye view of the conference: summary of contributions

Steven Keuning

The Second ECB Conference on Statistics has served to review the statistical requirements for central bank policy-making. At the same time, it has provided the statistical community with an opportunity to bid farewell to Eugenio Domingo Solans, the Executive Board Member responsible for statistics, who left the ECB at the end of May 2004 and sadly passed away in November of that year. Besides this, as the basic statistical requirements of the ECB have been met under the guidance of Mr Solans, it was a good moment to invite central bank policy-makers to look ahead and to identify their most pressing unfulfilled statistical needs.¹ The timing of the conference was indeed highly appropriate, as it took place just a few days before the historical expansion of the EU to incorporate 10 new Member States. From now on, the representatives of those Member States will be fully involved in the statistics developed, compiled and disseminated by the ECB.

This introduction provides a bird's eye view of the contributions and discussions that are contained in the rest of this volume. These contributions can be grouped into seven parts. First, ECB President Jean-Claude Trichet provided his views on the subject 'Euro area statistics and their use for ECB policy-making'. Thereafter, the conference discussed five themes:

- I. Statistics for monetary policy and financial stability purposes;
- II. Business accounting standards and statistical standards;
- III. Policy uses and future developments in balance of payments statistics;
- IV. Economic and financial accounts for monetary and economic policy;
- V. International statistics: quality and policy issues.

Finally, Mr Solans, ECB Executive Board Member in charge of statistics, delivered a closing address on the topic 'Statistics and their use by central banks'.

The President of the ECB, **Jean-Claude Trichet**, started his opening address on *Euro area statistics and their use for ECB policy-making* by stating that the importance of official monetary, financial and other economic statistics for the ECB's monetary policy should not be underestimated. As statistics provide the foundation for economic analysis and policy-making, the availability of trustworthy and timely statistical time series is a prerequisite for an effective and correct assessment of the monetary and economic situation and future prospects. Moreover, economic agents also use these statistics for their decisions, which then drive developments in financial and other economic markets.

¹ See Bull (2004) for an overview of the statistical preparations for EMU and the further developments in the first five years thereafter.

In this regard, he stressed the importance of a single set of statistics that is used by all economic and financial policy-makers, market participants and the public at large. In an effective policy preparation process, public and private decision-makers do not need to debate about the numbers, whatever the outcomes are. Instead, they can then focus their deliberations on the best possible policy assessment based on these statistics and the forecasts derived from them.

Of course, this also places a heavy responsibility on the shoulders of those responsible for the development, compilation and dissemination of these statistics. In this regard, **Jean-Claude Trichet** quoted a statement in a recent report by the ECOFIN Council and the Commission (2003): “For the smooth functioning of the euro zone as a monetary union working under a single monetary policy and decentralised but coordinated fiscal policies, macroeconomic statistics of the highest quality are required. The principles of impartiality, reliability, relevance, cost-effectiveness, statistical confidentiality and transparency must be fully applied.” The increasing importance of euro area statistics means that appropriate priorities should be set and the corresponding resources made available for compiling the contributions to these statistics at the national level. This may need to coincide with a continued shift in emphasis from simply compiling national statistics to delivering a pertinent contribution to European statistics, and a practice of publishing simultaneously area-wide and the fastest national Principal European Economic Indicators, according to the so-called First for Europe principle.

The ECB President also mentioned that, besides monetary policy, the central bank’s statistical department should provide services to other central bank functions (e.g. financial stability, payment systems, operations) and, of course, to users outside the central bank (e.g. market players, researchers and the general public). The different tasks of a central bank are clearly related, and statistical information required for policy actions in these different areas has related or even shared sources, must follow similar methodological treatments, and benefits from being embedded in an integrated statistical framework.

When looking at the current state of euro area statistics, the ECB President recalled that less than a decade ago, the statistical requirements for Monetary Union had not been established, and euro area statistics did not even exist. By contrast, in 2003 the ECB alone issued 48 press releases on euro area statistics, and Eurostat many more. The ECB’s statistics are published on its website, in the statistics section of the Monthly Bulletin and in the monthly Statistics Pocket Book. These achievements have only been possible because of the intensive and fruitful cooperation between the statistical departments of the NCBs and the ECB, as coordinated by the Statistics Committee, and between the ECB and Eurostat. Solving coordination issues at the European level is one of the main tasks of the CMFB, which brings together the senior managers responsible for statistics at Eurostat, the ECB and the NSIs and NCBs of the EU Member States. This Committee also plays a key role in the statistics used for the EDP. Improving the credibility of fiscal figures and the effectiveness of the monitoring and auditing process is still needed.

Looking ahead at the future orientation of euro area statistics, **Jean-Claude Trichet** mentioned the need to help the new Member States to catch up fully with the current

euro area countries in terms of the quality and availability of economic and financial statistics. Since the compilation of statistics is an activity that is typically characterised by significant economies of scale, the situation in the smallest Member States, particularly those with sizeable financial sectors, deserves specific attention. More generally, possibilities for economies of scale in the compilation of European statistics should be regularly reassessed and exploited where appropriate.

The priorities for ECB statistics in the medium term appeared to be well reflected in the five main themes of the conference: (i) a full system of euro area quarterly accounts for institutional sectors, integrating both financial and non-financial accounts; (ii) more comprehensive statistics for the monitoring and analysis of financial stability, with explicit links to statistics used for monetary policy purposes; (iii) the further development of external statistics; (iv) better interplay between international accounting standards and statistical standards; and (v) increasing focus on the various quality dimensions of European statistics.

The first theme of the conference, *Statistics for monetary policy and financial stability purposes*, was introduced by the session's Chairman, Governor **Guy Quaden** from the Nationale Bank van België/Banque Nationale de Belgique. The first paper was presented by **Wolfgang Duchatzek**, Vice-Governor of the Österreichische Nationalbank, and **Aurel Schubert**, Director of its Statistics Section, and focused on monetary policy issues. According to the authors, good data are not only needed for the decision-making process per se, but also – and especially – for the communication aspects of monetary policy. They also advocate a distinction between structural information, for which high quality and quite detailed statistics are essential but timeliness is somewhat less vital, and conjunctural information, to which the reverse applies. Of course, having both simultaneously may entail insurmountable costs.

As a successful central bank needs to gear its monetary policy to a medium-term perspective and to act in a forward-looking manner, it must monitor and analyse vast amounts of statistics. In addition to monetary and general economic growth and current inflation, this especially relates to indicators of expected inflation as well as all information on potential future cost and price pressures. Only in the case of an exchange rate peg or a currency board can a central bank do without a wide range of data. Specifically, the explicit medium-term, “steady-hand” orientation of the ECB's monetary policy strategy, its single purpose and its two-pillar approach should be reflected in the timeliness and the quality of the required data. This should be kept in mind, for instance, when comparing data availability in the US and in the euro area.

Turning to the more concrete statistical needs of the ECB, Wolfgang Duchatzek and Aurel Schubert first referred to the suitability of the current euro area HICP, while acknowledging the omission of expenditure on owner-occupied housing. They also mentioned the increasing importance of asset price information, especially concerning data on real estate and stock market developments. Furthermore, a comprehensive evaluation of the liquidity situation is required, including the components and counterparts of the monetary aggregate M3 and the real money gap. In this context, the completeness of the available data and the recent development of a monetary presentation of the euro area b.o.p. were hailed by the authors as important

achievements. In their view, statistics on the expectations and sentiments of economic agents play an increasingly important role, although the high degree of volatility of data on market prices that reflect expectations (e.g. the yield curve, stock market indices and prices of index-linked bonds) limits their usefulness.

On the current gaps in data availability, the authors identified scope for better clarification of the “bridge” between the two pillars of the ECB’s monetary policy strategy. In this regard, they referred to the need for progress regarding the sectoral and financial instrument breakdowns of financial accounts statistics. Furthermore, there is still a shortage of data on service activities. However, they also stressed the demand for stability in the data requirements for reporting agents and the importance of balancing the marginal benefits and costs of additional statistics. Specifically, they questioned the analytical value of recompiling pre-EMU data, and cautioned against placing too much emphasis on timeliness where this entails less data quality.

Concerning communication, they underlined the fact that statistics are an excellent instrument for promoting the concept of the “euro area”, which remains somewhat abstract for many of its citizens. In this context, they saw the lively public debate following the first release of harmonised euro area interest rate statistics as an encouraging sign of the positive contribution that statistics can make outside the thick walls of central banks. Similarly, European statisticians collectively play an important role when it comes to the credibility of (national) statistics on government deficits and debt. All this means that the independence of statistics in Europe must be defended and enhanced. Generally, the authors concluded that adequate resources must be ensured to enable statistics to meet challenges now and in the future.

The second contribution to this theme, by **Hermann Remsperger**, Member of the Executive Board of the Deutsche Bundesbank, concentrated on financial stability issues. He started out by stating that the aim of financial stability analysis is more complex than that of monetary policy. Two important considerations in this regard are: first, financial stability is not confined to banking stability; and second, financial instability can occur even in an environment of price stability. In addition, the statistics should facilitate not only euro area but also national analyses. The author saw scope for collecting and compiling new data for financial stability purposes, whereby the IMF’s compilation guide on financial soundness indicators may provide a useful framework.

Whereas the traditional focus of financial stability indicators is more on categories of individual banks than on the average bank, macro-data are also needed because the causes of financial instability are often common to all banks. Concerning the required financial and real estate markets statistics, the availability of the latter is less satisfactory, particularly concerning real estate prices. Financial stability indicators relate to the vulnerability of the financial system (such as credit, liquidity and market risk indicators) and its capacity to absorb shocks. In this context, the main challenge for banking statistics appears to be to combine data collected for monetary policy purposes and those collected for supervisory purposes, a goal that requires some further methodological work. In addition, indicators must be compiled for other financial intermediaries, insurance corporations and pension funds. According to **Hermann Remsperger**, it is very important to gain more insight into credit risk transfers from banks to these

institutions through credit derivatives or securitised loans. Finally, data on the financial condition of non-financial corporations and households are also needed.

More generally, the author stressed both the necessity for and the complexity of cross-country harmonisation of financial stability statistics, which are typically derived from a variety of data sources produced by different authorities for different purposes. He mentioned the option of enlarging the number of harmonised and consistent financial stability indicators under the stewardship of the ECB in the field of money and banking statistics. At the same time, setting priorities for new harmonised statistical requirements is essential, if only because producing statistics is costly, particularly from the viewpoint of the data suppliers. In this regard, the author attached the highest priority to statistics on the securitisation of bank loans. By contrast, it should be checked whether existing statistical surveys, e.g. on banks' regionally disaggregated balance sheets, could be discontinued. Moreover, various data requirements could possibly be met by a single sample survey of respondents (e.g. concerning banks' profit and loss accounts), complemented by estimation techniques. In conclusion, the author emphasised that clear-cut mandates are necessary for formulating reporting requirements and for assessing the cost of filling in the existing gaps in the set of financial stability indicators.

The discussant, **Christa Randzio-Plath**, Chair of the ECON of the European Parliament, not only provided some comments but also offered her views on the importance of statistics for monetary and economic policy-making. In her opinion, the wide range of important statistics that policy-makers rely on is somewhat daunting. At the same time, statistics must dynamically reflect changes to society and to the economy. Moreover, because the ultimate beneficiaries of good economic and monetary statistics are Europe's citizens, these statistics must be made more accessible, understandable and useful for everyday life. In this context, the author mentioned the gap between measured and perceived inflation and the paramount importance of measuring productivity accurately. In both cases, covering services adequately is key, yet also very challenging.

As priorities for the future, she mentioned timely quarterly data on economic developments, a harmonised system of asset price developments, more data on structural differences between countries and regions, and consistent cross-country b.o.p. statistics. She also advocated a permanent external mechanism for evaluating the quality of statistics at the European level, and more funding for statistical colleges and academic work. In conclusion, she pointed to the necessity of giving Eurostat more responsibilities to coordinate data aggregation and analysis and, where appropriate, to enable it to retrieve the data itself. This may in turn result in more quantum leaps for European statistics.

The second conference theme, *Business accounting standards and statistical standards*, was cast in the format of a round-table discussion, with an introductory paper by the Chairman, De Nederlandsche Bank President **Nout Wellink**. In his view, the development of IAS and their endorsement by government bodies may enable both a lower statistical reporting burden and a higher quality of statistics. This firstly requires that the IAS are applied by all enterprises, notably in their unconsolidated accounts, and secondly that the IAS definitions conform with statistical demands. Moreover, since statistics are mainly directed towards the production of consistent time series,

statisticians have a special interest in a well-organised, preferably simultaneous, introduction of the IAS, at least in Europe. He recalled that international statistical organisations such as the IMF, Eurostat and the ECB have recently made extensive comparisons of the statistical concepts within their areas of competence with the relevant parts of the IAS. While there are many similarities between business accounting and statistical standards, differences may continue to exist in terms of coverage (e.g. the individual enterprise or the whole economy, including the intersectoral relationships), classifications (e.g. income and expenditure by function or by nature), presentation (net versus gross recording of financial items) and the valuation of loans (at fair value or at book value). He advocated the need for the European Commission to take into account the statistical needs for source information when it makes the application of the IAS compulsory. In any case, society may benefit from closer cooperation between accountants and statisticians.

Subsequently, **Paul Rutteman**, Secretary General of the EFRAG, stated that although financial reporting requirements are addressed to investors, there are some overlaps with statistical requirements. He also recalled that the scope of the IAS, or the IFRS as they are now called, goes beyond Europe, and he went on to mention the convergence project with the US rules. However, the IFRS must be handled with caution. Insurance companies in particular face difficulties when assets are valued at fair value while liabilities are recorded at cost. Similarly, banks complain that the IFRS are not in line with their risk management techniques. He concluded that fair values should mainly be used where liquid markets exist, and that the IFRS will bring more transparency, but at the same time also more complexity and more work to interpret company data.

Next, **Carol Carson**, Director of the IMF Statistics Department, stated that the time is ripe to “harmonise” guidelines for macroeconomic statistics and financial accounting standards. There are three main reasons for this: the latter are now also being harmonised internationally; they come closer to the former thanks to their use of fair valuation; and more knowledge now exists with regard to the areas where cross-fertilisation can be achieved. Therefore, accountants and statisticians should work together to a) identify and describe differences, b) narrow differences, and c) develop bridges where differences remain. As good examples of joint work, she mentioned the preparation of the IMF compilation guide on financial soundness indicators and the TFHPSA. She concluded that harmonisation results in two important benefits: reliance on the same common elementary data for a number of purposes, and better interpretation of data by users.

Klaus Pohle, President of the German Accounting Standards Board, stressed in his contribution that, while statistics based on cash-flow data are reliable and relatively stable, statistics derived from accounting data imply a certain degree of judgement. In addition, given the diversity of national business accounting standards, cross-country comparisons of business accounting data are currently not possible without prior adjustments.

Moreover, accounting standards may change over time, e.g. due to the introduction of the IAS. The IAS will have the largest impact on the accounts of banks and insurance corporations. Among the balance sheet items affected by the IAS, he mentioned pension

liabilities. As a consequence, indebtedness ratios are likely to increase, while companies' return on investment may decline in some cases. Finally, he expected that the forthcoming accounting change will not proceed at the same speed in all countries.

Jean Cordier, Chairman of the CMFB, then stated that the impact of the IAS should not be underestimated, because statistics heavily rely on accounting data. He also mentioned the risks of the introduction of the IAS (e.g. different implementation scope and timing across countries, or loose interpretations), but suggested that these should instead be turned into opportunities, such as the further harmonisation of data across Europe and the promotion of more effective reporting channels. In particular, while the IAS will be able to track the current wealth of enterprises, much attention should still be paid to the recording of actual monetary flows. He also suggested that EU official statistics might benefit from the introduction of a core chart of accounts for firms of different sizes, and from the use of a common and widespread reporting technology.

In the discussion that followed, one issue centred on how cooperation between the different professions could be incorporated into the decision-making process of revising both the IAS and the international statistical standards, and how a consistent application of the IAS across countries could best be fostered. It was considered that convergence in some fields might be found if accountants and statisticians are prepared to enter into a genuine dialogue. Both macroeconomic and microeconomic analyses are needed, together with some sophisticated behavioural and expectations theories. In general, the micro perspective was seen to fit into the macro one. Establishing a dialogue between both groups would help the new business accounting and statistical standards to become widely accepted, i.e. beyond just the immediate circle of their own professions.

Banque de France Governor **Christian Noyer** chaired and introduced the third theme, *Policy uses and future developments in balance of payments statistics*. **José Viñals**, Director-General of International Affairs at the Banco de España, presented the first paper dealing with the impact of globalisation on the usage of b.o.p. statistics for policy purposes. The core issue in this paper is that while globalisation has made the statistical recording of (international) economic and financial interlinkages all the more relevant, it has also complicated both this recording and the drawing of correct policy implications from the resulting statistics. Of course, this has a specific significance in Europe, since the creation of the euro area can be regarded both as a consequence of globalisation and a further step in that process. According to the author, the so-called First for Europe principle for statistics in euro area Member States is the natural consequence of the new European monetary and policy framework.

When discussing the impact of globalisation on the benefits and costs of b.o.p. statistics, the author first referred to the dramatic increase in both the size and the volatility of cross-border capital flows and the concomitant greater dispersion of b.o.p. current account balances. As a consequence, i.i.p. statistics have become more relevant as a supplementary source of information. However, at the same time, the costs of producing b.o.p. statistics may have risen because the deteriorating quality of traditional sources of information has required the introduction of more expensive data collection and compilation methods (e.g. direct reporting by firms).

Euro area b.o.p. statistics contribute to both pillars of the single monetary policy. In addition to being an indispensable building block of the national accounts, they are useful for economic analysis as shorter-term indicators to analyse both the interplay between supply and demand factors and the financing/financial investment of the deficit/surplus. With regard to monetary analysis, these statistics, and particularly their monetary presentation, are necessary in order to monitor the external counterpart of monetary developments. They also play a role in helping to identify the international transmission of the monetary policy measures adopted in the euro area. At the same time, the compilation of separate euro area b.o.p. statistics involves additional costs that are related, among other things, to the need to distinguish between euro area and non-euro area residents and to eliminate asymmetries in bilateral b.o.p. statistics of the Member States. These national b.o.p. statistics have now lost some of their value, but they remain helpful in identifying national supply and demand imbalances, competitiveness issues and each individual country's vulnerability to external shocks.

Subsequently, **José Viñals** discussed four main specific policy challenges that b.o.p. statistics face as a consequence of globalisation. Firstly, he referred to the increasing ease of creating liquid assets in non-resident MFIs without converting them into their national currency, and the ensuing need for detailed statistics on this phenomenon. Secondly, the proliferation of firms' international activities through branches and subsidiaries requires Foreign Affiliate Trade Statistics that are consistent with the b.o.p. statistics. Thirdly, the increasing trade in services and the concomitant international negotiations have led to a requirement for related data collected through direct reporting by firms. Fourthly, the high degree of financial integration has necessitated the creation of a CSDB to help measure portfolio investment flows and stocks, the separate identification of special purpose entities in direct investment flows, and the timely availability of information on all the foreign currency liabilities of a given country.

In conclusion, the author emphasised the continuing relevance of b.o.p. statistics, but also the increasing need to incorporate them into a wider, consistent framework of macroeconomic statistics. It has also become a priority to increase the degree of international cooperation in the production of these statistics and to enhance the consistency of the related international statistical standards.

Subsequently, **Sinikka Salo**, Member of the Executive Board of Suomen Pankki, started her paper on this theme by stating that, in spite of substantial progress in the availability of euro area statistics since the launch of EMU, there is still vast room for improvement, particularly with regard to timeliness and quality. Improving the cost-effectiveness of producing euro area statistics may require substantial input from Eurostat and the ECB, which define the conceptual framework and coordinate the collection and compilation of b.o.p. data. Moreover, instead of aiming for actuarial precision, a more focused approach is needed, for instance by placing greater reliance on corporate surveys when collecting b.o.p. data.

In her review of the general challenges that globalisation poses for b.o.p. statistics, she elaborated on the problems faced by statistical authorities in a very small country (in this case, Finland) in which either one or a few very large global enterprises are based. In

particular, she drew attention to the fact that the undistributed profits contained in that country's national income, savings and current account surplus are misleading if in fact foreign investors own 90% of the company concerned. Similarly, the country's apparent high indebtedness is then nothing but a statistical artefact. Besides this, national foreign trade statistics, and particularly the first monthly figures of reinvested earnings, are already now merely indicative for the corporate sector. These problems should preferably be taken up in the next revision of the IMF manual on b.o.p. statistics, as should the urgent need to harmonise further the application of the statistical concepts in national accounts on the one hand and in b.o.p. statistics on the other.

Turning to the specific European challenges, she invited euro area Member States to accelerate the modernisation of their data collection system for b.o.p. statistics. This is all the more relevant as errors and omissions in the euro area b.o.p. and asymmetries in the national contributions continue to raise concerns. Concerning the latter issue, she considered that, from the ECB's point of view, it would be more useful to focus directly on the reduction of asymmetries with the b.o.p. of major partners. Next, she warned that the introduction of the ECS can have substantial implications for national statistics and may also affect euro area aggregates, especially if the company concerned is partly based in one or more non-euro area Member States.

According to **Sinikka Salo**, all this requires good cooperation between national statistical authorities and possibly also multinational reporting systems. Moreover, a distinction should be made between the fast compilation of aggregate information from a limited set of large respondents, and the compilation of more detailed, but less timely, structural statistics covering the whole population of respondents. She concluded by emphasising that the ECB should be selective when deciding what euro area statistics are needed, and that these statistics should be produced as efficiently as possible. She also recommended a review of sampling practices implemented at the European level, especially considering the statistical burden for smaller EU Member States.

The discussant, **Vítor Gaspar**, Director General of Research at the ECB, was broadly in agreement with the arguments and conclusions in both papers. He focused his contribution on the importance and difficulties of analysing b.o.p. statistics as set out by the second author, and on some specific features of euro area economic governance as derived from the first paper. Concerning the first point, he mentioned that a large corporation can always be addressed directly and that the data problems may actually be greater if integration implies a significant amount of cross-border activity and ownership of (many) small and medium enterprises. Concerning the second point, he questioned whether monetary unification necessarily reduces the benefits of b.o.p. statistics for national policies.

The fourth theme, *Economic and financial accounts for monetary and economic policy*, started with some introductory remarks by its Chairman, ECB Executive Board Member **Otmar Issing**, focusing on the importance of euro area sector accounts and of excellent cooperation between statisticians and economists. He then requested **David Stockton**, Director of the Research and Statistics Division at the US FRB, to present his paper on the use of economic and financial accounting in the conduct of monetary policy. The author first provided a short overview of the development and use of national

economic accounts in the US. He concluded that the information summarised in the economic and financial accounts forms the basis for much of the economic analysis by the staff of the Federal Reserve, and that staff members often combine the discipline of economic accounting with alternative sources of data.

The author then went on to explain that much of the economic and financial forecasts for the US economy prepared before each of the eight yearly meetings of the FOMC is based on the structure of the national accounts. Particularly, separate, detailed (nominal and real) expenditure and income-side forecasts are produced, which are not necessarily consistent. These forecasts of real activity and prices are then integrated with the projection of financial flows structured on the flow-of-funds accounts. The latter forecast traces out financial flows and accumulates those flows, along with projected physical investment, into detailed projections of the balance sheets of the household and business sectors. He concluded this part by stating that the approach of producing a full set of accounts for the forecast imposes considerable discipline on the staff to understand how details fit into the broader economic and financial picture. At the same time, the practice of macroeconomics almost always entails making judicious choices about the level of aggregation.

Subsequently, **David Stockton** gave three examples of applying the discipline of economic accounting to the analysis of data outside the core national accounts. Firstly, the Federal Reserve uses indirect methods to break down the national accounts' estimate for the change in inventories by type of product, in the absence of frequently compiled supply and use tables for the US. Secondly, additional insights into the crucial relationship between stock market wealth and economic activity are obtained from a quarterly estimate of household saving by income quintile, as derived from a combination of the financial accounts' measure of aggregate saving and data from the Federal Reserve's own Survey of Consumer Finances. Thirdly, data from many sources are combined at the Federal Reserve to construct alternative, more detailed productivity measures, which have refined the information available from the standard measures.

The author concluded that national (financial and non-financial) accounts provide policy-makers with powerful tools to organise data and that in the US these formal accounts are at the centre of analysis. However, this information base is supplemented by alternative implementations of economic accounting.

The second contribution to this theme was delivered by **György Sándor**, Managing Director at MNB, who provided a short description of the Hungarian financial accounts and their present usage and importance for monetary policy-making. In addition, he reflected on some limitations to the current worldwide national accounting standards.

Concerning the compilation of the Hungarian financial accounts at MNB, he mentioned the long lead time needed for development and the importance of having regular access to the individual corporate tax declarations of all companies, including their balance sheets and profit and loss statements. Flow data are mostly derived from stock figures and transactions are then computed using additional information on revaluations and 'other' changes in volume. The whole set of financial accounts is always cross-checked with the source statistics, such as monetary and b.o.p. statistics. In

addition to the dissemination of data, compilers of the Hungarian financial accounts regularly prepare analytical papers with the aim of instructing potential users on how to use these accounts in economic analysis.

Regarding their usage in monetary policy, the author mentioned the crucial importance of forecasting the sources and uses of funds, for four main reasons. First, financial account forecasts provide a consistency check on the forecasts for changes in the non-financial economy and thus for expected changes in inflation. Second, they include a forecast for changes both in the b.o.p. current account deficit and in its financing, which enables the central bank to estimate roughly the optimal foreign reserves level. Third, the net liquidity position of the banking sector can be forecasted residually from financial accounts' forecasts for the total balance sheet of the central bank and information about all the other items on its balance sheet. Fourth, combining the flow-of-funds forecast with monthly monetary and financial institutions statistics yields early signals about changes in income and expenditures by institutional sector. He then underpinned his arguments by elaborating a recent case in which an erroneous policy conclusion could have been drawn in the absence of these accounts.

At the end of his presentation, **György Sándor** gave three examples of methodological issues that in his view require attention in the ongoing review process of the international standards for national accounts. Firstly, in an inflationary environment, interest income must also provide compensation for the decrease in purchasing power of the principal, contrary to other types of income. He therefore proposed to account for this part not in the distribution of income account, but in the revaluation account, thereby reducing the disposable income of the creditors and increasing that of the debtors. Secondly, in his view, if the government assumes public companies' debt, this should be spread out over the whole period in which the debt originated. Thirdly, he questioned the current national accounts' treatment of reinvested earnings, an issue which also came up in the previous session of this conference.

In his discussion of these papers, **Federico Signorini**, Director of Statistics in the Research Department of the Banca d'Italia, mentioned three possible roles for financial accounts in the context of monetary policy-making: (1) as input for day-to-day (or month-to-month) policy decisions; (2) as data for structural analysis and research; and (3) as an instrument for data cross-checking. Every central bank combines each of these roles, but in varying degrees. The discussant himself believed that in Europe in particular type (1) of these roles may be further developed, but that generally type (2) should remain the principal one, thanks to the comprehensiveness and methodological soundness of these accounts. He also commented on the methodological issues that were raised by both authors. Among other things, he argued in favour of supplementing national accounts data on inventories by qualitative survey data as well, and made a special caveat with regard to the international comparability of productivity estimates. Finally, he suggested that additional accounts could be computed with the treatment of the inflation compensation included in interest payments as suggested by the second author, but that this should not be incorporated into the current statistical standards.

The Chairman of the fifth conference theme, *International statistics: quality and policy issues*, ECB Director General of Statistics **Steven Keuning**, then briefly

introduced the subject before giving the floor to Eurostat's Director General **Michel Vanden Abeele**, to present his paper on statistics and politics. Public administration and political responsibility, at whatever level, rely on information, and information often means statistics for a politician. In the author's view, power and statistics are thus interlinked. It is therefore not surprising that legislators have entrusted the task of official statistics to one or more specific administrative bodies, nor that statistics are the subject of constitutional provisions. A common feature of statistical institutes in the EU is that either de jure or de facto they have a degree of independence in their operations. The author stressed this principle of independence. He also recalled that, right from the start, Eurostat was meant to provide an independent European statistical function.

The author then elaborated on the functions that Eurostat, NSIs and central banks must fulfil vis-à-vis the EU and its decision-makers, and identified five main issues. Firstly, in his view all statistics must be of use not only to researchers, but to decision-makers as well. He also mentioned that too much information risks smothering the information that is most useful. In this context he referred to the current debate on the number of structural indicators required for monitoring the so-called Lisbon strategy and, more generally, to the need to confine the level of detail of statistics. Secondly, statistics must be comprehensible and accessible to those who need them, and access should be popularised – in the proper sense – by means of user-friendly presentation. Thirdly, geographical and intertemporal comparability are important requirements. Within the EU, this should imply the harmonisation of methods, the establishment of common rules for the compilation of statistics, and monitoring and ensuring compliance with these rules. Fourthly, a key feature is the speed with which the information becomes available. Finally, the ability of statistics to adapt to new needs is a pressing need.

Subsequently, **Michel Vanden Abeele** questioned whether sufficient resources are available to fulfil all these demands, while also ensuring the independence and the quality of the statistics produced. He then concluded that a bold and determined reappraisal of priorities is needed, including a cost/benefit analysis regarding whether or not to maintain certain current programmes. In this connection, he referred to the level of detail of the intra-EU trade and b.o.p. statistics, and wondered whether the Community statistical programme should be linked indefinitely to existing common policies such as agriculture. Earlier, he noted that, while Europe supposedly knows the precise number of cows within its boundaries, this does not apply to the number of residents. He then concluded that, because this prioritisation process involves making political choices, a statistics policy for the EU and a coherent action programme for European statistics should be submitted to the relevant Council authorities. He also announced his plan to discuss once a year the constraints and the future of the European statistical system with the ECOFIN Council, in order to contribute to a better understanding between statisticians and politicians.

The second speaker in this theme, OECD Chief Statistician **Enrico Giovannini**, dealt with the quality of international statistics. In his view, this subject is increasingly relevant because of the difficulty of distinguishing between good and bad information in a world characterised by large volumes of readily available data. Although quality can be defined as 'fitness for use', it is in general a multidimensional concept. The author then briefly described the quality frameworks developed by the IMF and Eurostat, covering

issues such as the relevance, reliability, comparability (closely related to methodological soundness), consistency, frequency, timeliness, punctuality, accessibility and clarity of the statistics, and how to assure their integrity. For an international organisation, however, the quality of the statistics depends not only on the quality of its own internal processes, but also on the quality of the statistics received from its Member States. Whether or not the international organisation concerned has regulatory power vis-à-vis its members plays a crucial role in this regard.

The author then described the OECD statistics quality framework, which aims at improving internal statistical processes and management. Quality is defined in terms of roughly the same dimensions as listed above, but an additional important consideration is cost efficiency. Furthermore, a number of core values for OECD statisticians have been defined, in addition to internal rules, IT tools and training.

Subsequently, **Enrico Giovannini** noted the difficulty of organising statistical cooperation among international organisations, as statistical activities normally form only a small part of the overall activities of these organisations. Yet such cooperation has recently improved, as evidenced by the establishment of a Committee on Coordination of Statistical Activities and the joint BIS/ECB/Eurostat/IMF/OECD/UN initiative on SDMX. He then elaborated on five key quality challenges for international organisations:

- to improve the international comparability of statistics, particularly between main economic areas (if needed, this could perhaps include an ex post harmonisation of data collected from national sources);
- to improve the timeliness of international statistics, including revision policies and data sharing;
- to increase the length of time series, which is particularly complex for the EU and the euro area in view of their regularly changing composition;
- to expand free access to data and metadata; and
- to reduce the burden on national data providers, which is a core objective of the SDMX initiative.

The author concluded by making a plea for a common strategy regarding improving the quality of international statistics. The first step would then be to agree on a few core principles, followed by the development of quality frameworks, international data dissemination standards and common IT tools (building on SDMX). Finally, a programme for staff exchange and joint training may be conducive to developing a common quality management culture among statistical departments of international organisations.

The discussant, ECB Director General of Economics **Gert Jan Hogeweg**, commented on both papers in turn. Whereas he found it difficult to argue with the first author concerning his list of principles that should underlie official statistics, he added the

perspective of the role of analysts and forecasters as a channel between statistics and policy-makers. In any case, the principle of independence of statistics should be stressed as much as possible and enshrined in law where feasible. The statistical policy agenda should also not be prone to political fashion. At the same time, statisticians sometimes need to provide timelier data and longer time series, even if these data are not perfect. According to him, the second paper left little to be desired. He just advocated a somewhat more in-depth discussion of the similarities and dissimilarities of international organisations and its implications for the quality frameworks to be adopted by these organisations. He also dwelt upon the issue of official versus unofficial data available on the market, and stated that while the ECB has a clear preference for the former, it is prepared to have recourse to the latter if the former are not available and clear user demand for them exists.

Afterwards, ECB Executive Board Member **Eugenio Domingo Solans** delivered the closing address of the conference, concerning Statistics and their use by central banks. In his speech, he drew upon his experience at the ECB. He reiterated the view expressed by the ECB President that the business area in charge of statistics in central banks should be responsible for the statistics relevant for all functions and tasks of the central bank and should also serve outside users. In connection with this, he emphasised that the principle of independence of statistics and statisticians from policy-makers should also be based on an appropriate organisational framework.

He then turned to the statisticians' main trade-off between the quality of statistics and the reporting burden of collecting them. On the one hand, the unavailability of required statistics, their late provision or insufficient accuracy can entail significant costs. On the other hand, official statistics cost taxpayers money and resources from reporting agents are required to produce them. It is therefore of the utmost importance to establish a procedure according to which the merits and costs of new statistics can be weighed up when deciding on their introduction, and to review from time to time, together with the most important users, whether the compilation of existing statistics should be discontinued. A more integrated set of statistics must be produced, and not every new policy issue requires new statistics tailored to that particular question.

Eugenio Domingo Solans then emphasised the need for better coordination of the compilation of economic statistics in a united Europe. This should coincide with a shift in focus from national to euro area statistics. In some cases, it would be advisable to obtain national breakdowns of the aggregate European data, instead of harmonising and consolidating national data at the European level. In this context, he referred to the Principal European Economic Indicators and to the "First for Europe" principle. In particular, he found the dichotomy between comparable, harmonised HICPs and national non-harmonised CPIs increasingly hard to justify. More generally, it is vital to draw up a long-term map for the European statistical system at this point, especially as new countries are preparing to adopt the statistical standards well in advance of their entry into the euro area.

Afterwards **Mr Solans** briefly addressed the importance of aligning international business and government accounting standards and statistical standards. In addition, he mentioned the need to reflect more accurately the growing importance of official statistics in general, and national accounts in particular, in university courses. On a related topic, he also advocated that the academic community should contribute more to the further development and application of international statistical standards and other statistical issues. He concluded by calling the remarkable development of European economic and financial statistics in recent years a “silent revolution”. The ultimate goal, however, would be firstly to reach a similar degree of statistical harmonisation among large economic areas as there currently is within each area, and secondly, to move from a good statistical system to a better one in Europe.

References:

Bull, P. (2004), *The Development of Statistics for Economic and Monetary Union*, ECB, Frankfurt.



Conference programme

Thursday, 22 April 2004

13:15 - 14:15 Registration

14:30 - 15:00 **“Euro area statistics and their use for ECB policy-making”**

Mr J.-C. Trichet

President, European Central Bank

15:00 - 16:05 **Theme I**

Statistics for monetary policy and financial stability purposes

Chair:

Mr G. Quaden

Governor, Nationale Bank van België/Banque Nationale de Belgique

Speakers:

15:00 - 15:15 **“The art of central banking requires more than just intuition”**

Mr W. Duchatzek

Vice-Governor, Oesterreichische Nationalbank

15:15 - 15:30 **“Statistics for financial stability purposes”**

Mr H. Remsperger

Member of the Executive Board, Deutsche Bundesbank

Discussant:

15:30 - 15:45 **Ms C. Randzio-Plath**

Member of the European Parliament, Chair of the Committee on Economic and Monetary Affairs

15:45 - 16:05 Discussion

16:05 - 16:25 Coffee break

16:25 - 17:40 **Theme II**

Business accounting standards and statistical standards

Round table discussion

Chair:

Mr N. Wellink

President, De Nederlandsche Bank

Participants:

Mr P. Rutteman

Secretary General, European Financial Reporting Advisory Group

Mrs C. Carson

Director, Statistics Department, International Monetary Fund

Mr K. Pohle

President of the German Accounting Standards Board

Mr J. Cordier

Chairman of the Committee on Monetary, Financial and Balance of Payments Statistics

17.20 – 17.40 Discussion

17:40 - 18:45 **Theme III**

Policy uses of and future developments in balance of payments statistics

Chair:

Mr C. Noyer

Governor, Banque de France

Speakers:

17:40 - 17:55 **“How does globalisation affect the use of balance of payments statistics for policy purposes?”**

Mr J. Viñals

Director General International Affairs, Banco de España

17:55 - 18:10 **“Policy uses of and future developments in balance of payments statistics: some European perspectives”**

Mrs S. Salo

Member of the Board, Suomen Pankki – Finlands Bank

18:10 - 18:25 Discussant:

Mr V. Gaspar

Director General Research, European Central Bank

18:25 - 18:45 Discussion

Friday, 23 April 2004

09:30 - 10:35 **Theme IV**
Economic and financial accounts for monetary and economic policy

Chair:

Mr O. Issing

Member of the Executive Board of the ECB

Speakers:

09:30 - 09:45 **“The use of economic and financial accounting in the conduct of monetary policy”**

Mr D. Stockton

Director of the Research and Statistics Division, US Federal Reserve Board

09:45 - 10:00 **“Economic and financial accounts for monetary and economic policy”**

Mr G. Sándor

Managing Director, Magyar Nemzeti Bank

Discussant:

10:00 - 10:15 **Mr L. F. Signorini**

Director of Statistics, Research Department, Banca d'Italia

10:15 - 10:35 Discussion

10:35 - 11:00 Coffee break

11:00 - 12:05 **Theme V**
International statistics: quality and policy issues

Chair:

Mr S. Keuning

Director General Statistics, European Central Bank

Speakers:

11:00 - 11:15 **“Statistics and politics”**

Mr M. Vanden Abeele

Director General, Eurostat

11:15 - 11:30 **“The quality of international statistics: outstanding issues and proposals for improvement”**

Mr E. Giovannini

Chief Statistician, Organisation for Economic Cooperation and Development

Discussant:

11:30 - 11:45 **Mr G.-J. Hogeweg**

Director General Economics, European Central Bank

11:45 - 12:05 Discussion

12.05 – 12.30 Closing remarks

Chair:

Mr S. Keuning

Director General Statistics, European Central Bank

Keynote speech

“Statistics and their use by Central Banks”

Mr E. Domingo Solans

Member of the Executive Board of the ECB
(by video conference from Madrid)

12.30 End of second day

Euro area statistics and their use for ECB policy-making: opening address

Jean-Claude Trichet

Colleagues, fellow central bankers, ladies and gentlemen,

I would like to welcome you most warmly to this the Second ECB Conference on Statistics. I am particularly happy to see so many participants from the countries that will join the EU in just a few days time. This milestone in European history marks the successful completion of intensive preparations in many fields, including statistics.

The goal of this conference is to review the statistical requirements for central bank policy-making. In addition, it provides the statistical community with an opportunity to bid farewell to Eugenio Domingo Solans, the Executive Board member responsible for statistics, who will leave the ECB at the end of May 2004.

Although the emphasis of this conference will obviously be the future of statistics, I would also like to take this opportunity to briefly review the current state of euro area statistics that are produced by the ESCB.

Let me first, however, underline the importance of euro area statistics for ECB policy-making.

The importance of euro area statistics

We should not underestimate the importance of official monetary, financial and other economic statistics for the ECB's monetary policy. As statistics provide the foundation for economic analysis and policy-making, the availability of trustworthy and timely statistical time-series is a prerequisite for an effective and correct assessment of the monetary and economic situation and future prospects. Moreover, economic agents also use these statistics for their own decisions, which then drive the developments of financial and other economic markets.

In this regard, I would like to stress the importance of a single set of statistics that is used by all economic and financial policy-makers, market participants and the public at large. The familiar credo of the media, "facts are sacred, opinions are free", should also apply to statistics and the use of statistics. An effective policy preparation process requires that public and private decision-makers need not debate about the numbers, whatever the outcomes are. Instead they can then focus their deliberations on the best possible policy assessment based on these statistics and the forecasts derived from them.

Of course, this also places a heavy responsibility on the shoulders of those who are responsible for the development, compilation and dissemination of the statistics. In this regard, I fully agree with the content of the statement in the joint report on euro area statistics and indicators adopted by the ECOFIN Council and the Commission and forwarded to the European Council in spring 2003. The report states: “For the smooth functioning of the euro zone as a monetary union working under a single monetary policy and decentralised but coordinated fiscal policies, macroeconomic statistics of the highest quality are required. The principles of impartiality, reliability, relevance, cost-effectiveness, statistical confidentiality and transparency must be fully applied”.

The increasing importance of euro area statistics means that appropriate priorities should be set and the corresponding resources made available for compiling the contributions to these statistics at the national level. This may need to coincide with a continued shift in emphasis from simply compiling national statistics to delivering a pertinent contribution to European statistics. This focus on the euro area has already been largely achieved for statistics that are compiled and disseminated by the ESCB, such as monetary and financial statistics, the balance of payments and international investment position statistics, and quarterly financial accounts. However, for other economic statistics too, reliable euro area aggregates should be published as soon as possible and preferably at the same time as the data releases for at least the largest countries. This applies, in particular, to the short-term, high-frequency statistics on prices and costs, national accounts, labour markets, business developments and external trade, which are needed for business cycle analysis and for monetary policy preparation.

This practice of publishing simultaneously area-wide and national data follows the “First for Europe” principle. This principle implies that the statistics, at least the Principal European Economic Indicators, are published on the same day for the euro area as for the fastest countries. These countries should cover a sufficient proportion of the euro area to enable the computation of reliable estimates for the area as a whole. In addition, the release calendar of these indicators should take account of European policy needs, and revisions and seasonal adjustment practices of these indicators should be coordinated. At present, this situation has not yet been reached. And as a consequence, a number of European and national institutions, market participants, forecasters, etc. are all second-guessing, on their own, at what the euro area aggregate will be as soon as the data for one or more of the larger Member States have been released. Moreover, even when the euro area aggregate has been published, based on sufficient country coverage, it can still be revised every time another “larger” Member State publishes this statistic for the same reference period. The volatility of the euro area aggregate is clearly a second-best solution both from a monetary policy perspective and in terms of the effectiveness and efficiency of the statistics concerned.

Within the statistical community of the ESCB, a shift in emphasis towards a truly European team spirit is already taking place. For instance, when the ECB releases its monthly statistics on monetary developments in the euro area, the NCBs publish the results for their respective country shortly afterwards. I am convinced that the European Statistical System – comprising of Eurostat, the Statistical Office of the European Communities, and the NSIs – will want to follow suit.

The harmonisation of the methodologies used by the various countries for the collection and production of statistics lies at the heart of a monetary union: it enables us, for example, to compile meaningful area-wide aggregates. At the same time, the fruitful and fairly detailed statistical harmonisation achieved in the euro area may inspire the further development of worldwide statistical standards. Given that cross-country comparability of official statistics is key to their usefulness and credibility, all countries across the globe should then want to implement such worldwide standards in their official economic and financial statistics. Of course, this applies a fortiori to external statistics, such as the trade balance, the balance of payments and the international investment position, where we still have a lot of progress to make. Partner countries will only be able to share a common analysis of their bilateral economic and financial relationships if their mutual external statistics mirror each other. In turn, this is only feasible if these statistics are compiled using the same concepts and definitions, and similar methodologies. In view of their importance for policy-making, it may be worthwhile embarking on more intensive coordination among the statisticians involved, particularly those within the euro area and in the other major economic blocs of the world, to minimise the present “asymmetries” in external statistics.

Besides monetary policy, which is certainly the main user of our statistics, the central bank’s statistical department should provide services to other central bank functions (financial stability, payment systems, operations, etc.) and, of course, to users outside the central bank (market players, researchers and the general public). The different tasks of a central bank are clearly related, and statistical information required for policy actions in these different areas has related or even shared sources, it requires similar methodological treatments, and it benefits from being embedded in an integrated statistical framework.

Going beyond the use of ECB statistics by the ECB itself, these statistics may also be able to play a role as a neutral and trustworthy benchmark for market participants and the public at large. In this context, I would like to give three examples.

- First, the European ACI recently published the final report on the “Short-term Paper (STEP) Market in Europe – Recommendations for the development of a pan-European market”. This report recommends, among other things, that the ECB, as a neutral party, should publish statistics on volumes and prices covering the STEP market.
- Second, since last November, the ECB and the NCBs have released every month harmonised euro area and national statistics on interest rates on deposits and loans by households and corporations. These and other ECB statistics are also suitable for assessing progress in financial integration in the euro area.
- Third, the ECB, together with colleagues from NCBs and other experts, is developing a European standard classification of financial instruments which may eventually be of use to market participants as well.

As a last example of the importance of euro area statistics, I would like to mention the indicator that lies at the heart of the ECB’s quantitative definition of price stability, namely the HICP for the euro area. This index is compiled and disseminated every

month by Eurostat, in close cooperation with the national statistical institutes. It is made available with a reasonable degree of detail and timeliness. In addition, a very timely “flash estimate” is published at the end of the reference month.

However, for some time now, survey results have indicated that a number of euro area citizens have the impression that the inflation is higher than the moderate levels that are evidenced by the HICP development.

- A first explanation of this phenomenon may be the lasting memory of some (or a few) price increases, mainly for personal services, that occurred when the euro was introduced. These increases had no lasting impact on inflation because fortunately there were not many of them. But, in certain cases, they may have left a psychological mark.
- A second reason may be the need for some consumers to adapt to the euro as the new yardstick for price tags. This effort may be associated with some suspicion about actual price developments.
- A third cause for the discrepancy between the inflation “feeling” of some people and the actual inflation is the fact that the prices of products that are bought “out of pocket” and at a high frequency have tended to rise faster than the average. By contrast, the prices of several products that are bought only occasionally, such as household appliances or package holidays, or the prices of services that are paid by giro transfers, for example telephone subscriptions, have typically increased much less or have even decreased. Understandably, if you are confronted daily by somewhat higher prices for relatively small purchases and you only benefit occasionally from more substantial price advantages for some expensive products, you may well perceive inflation to be higher than it actually is.

Taking all this into account, I can assure you of the quality of the HICP estimate and I have invited the consumers in the euro area to fully trust the figures which show that inflation is moderate. Households and all other economic agents can be assured that the ECB will preserve the purchasing power of the euro and that future price stability will continue to be ensured in line with our definition.

Some achievements of euro area statistics

When looking at the current state of euro area statistics, it is worth recalling that less than a decade ago, we had not even established the statistical requirements for Monetary Union, let alone that euro area statistics existed. As the ECB’s former Director-General of Statistics, Peter Bull, describes in his record of the euro area’s statistical history, the approval of the statistical requirements in July 1996 was a landmark in the statistical preparations for EMU. A lot has been achieved since then, which may perhaps be best illustrated by the fact that in 2003 the ECB issued 48 statistical press releases and Eurostat many more. The ECB now publishes every month, among other things:

- the most recent monetary aggregates, their components and counterparts;
- the balance sheets of all banks and similar institutions in the euro area, and a list of all the Monetary Financial Institutions;
- a full b.o.p., including the Eurosystem's international reserves;
- the effective exchange rates of the euro (which are updated daily);
- new issues, redemptions and outstanding amounts of almost all debt securities and quoted shares in the euro area;
- average interest rates paid and received by households and corporations on all kinds of loans and deposits (including loans for house purchases and for consumption).

In addition, quarterly press releases are published on investment fund statistics, specified by the investment policy of the fund concerned, and on the financing and financial investment of households, non-financial corporations, insurance corporations and pension funds, and the government. Finally, the ECB regularly disseminates the international investment position of the euro area, various financial soundness indicators, a range of government finance statistics, a variety of financial market statistics, a residential property price index, statistics on payments and statistics on the international role of the euro. Only five years ago, most of these statistics did not even exist at the euro area level.

Of course, all these statistics, the methodologies applied, the release calendars, etc. are available on the ECB's website. In addition, they are published in the euro area statistics section of our Monthly Bulletin and in our monthly Statistics Pocketbook. The Pocketbook was launched in August 2003 and aims to provide euro area citizens, the media and other institutions with relevant, up-to-date euro area economic and financial statistics and publishable indicators in a user-friendly format. It also contains several tables comparing the euro area with other main economic regions, such as the United States and Japan, and it contains various national statistics.

These achievements have only been possible because of intensive and fruitful cooperation between the statistical departments of the NCBs and the ECB, as coordinated by the Statistics Committee. In addition, the division of tasks between Eurostat and the ECB's DG-S has been laid down in an update of their Memorandum of Understanding. This update was signed in March 2003 and has recently been re-examined in certain areas, such as the compilation of euro yield curves and annual financial accounts. In those and other areas of statistics, the ECB also stands ready to serve the needs of the European Commission and other users.

At the national level, the distribution of statistical tasks between a country's central bank and its statistical institute is not the same across Europe. Solving the coordination issues at the European level is one of the main tasks of the CMFB, which brings together the senior managers responsible for statistics at Eurostat, the ECB, and the NSIs and NCBs of the EU Member States. This Committee not only has a pivotal coordination

function for European statistics, but also must play a key role in one of the most sensitive and crucial areas of statistics in Europe, that is, the statistics as part of the EDP. These statistics should be compiled in strict conformity with the European Regulation for compiling national accounts, the ESA 95, and the related Manual on Government Deficit and Debt.

The Code of best practice on the compilation and reporting of these data, which was endorsed by the ECOFIN Council in February 2003, states that the actual data of the ESA 95 government accounts must be compiled by the NSIs, and where applicable by the national central banks. The NSIs must act in full scientific independence and the government must ensure that accurate basic data and other information needed for compiling reliable ESA 95 accounts are made available to the compiling authorities in time and with sufficient detail. All current and new EU Member States are encouraged to fully implement these statements in the Code of best practice and to build up the statistical capability in both the NSIs and NCBs that is needed for an adequate fulfilment of these tasks. The Code of best practice also refers to the procedure for resolving methodological issues and states that Eurostat must consult the CMFB in cases which are not adequately covered by the ESA 95, or cases that are particularly complex or of general interest. Eurostat must, as a general rule, publish its decision together with the CMFB opinion. Clearly, the CMFB should then form its opinion strictly in the framework of the ESA 95 Regulation and solely on the basis of its professional expertise in national accounts, in line with a transparent procedure, which is available on the CMFB website (www.cmfb.org). Obviously, this procedure requires all CMFB members to contribute a high level of professional expertise in national accounts. Improving the credibility of fiscal figures and the effectiveness of the monitoring and auditing process is still needed and can be done without altering the current fiscal framework.

As far as other areas of euro area statistics are concerned, the Action Plan on EMU Statistical Requirements, which was endorsed by the ECOFIN Council in September 2000, has stimulated substantial improvements in the timeliness and availability of crucial economic indicators. Major progress has been made in, for example, main aggregates derived from the quarterly national accounts, the HICP, quarterly government finance statistics, several short-term business indicators and foreign trade statistics. By contrast, the situation is not yet fully satisfactory for the quarterly national accounts for institutional sectors and labour market statistics.

Future priorities for euro area statistics

Looking ahead now at the future orientation of euro area statistics, our short-term priority should be to help the new Member States to fully catch up with the current euro area countries in terms of the quality and availability of economic and financial statistics. In this context, I am delighted to announce that the ECB, together with the Commission, will shortly publish, for the first time, long-term interest rates for the acceding countries. At the same time, I am aware that any enlargement of the EU and, subsequently, the euro area creates particular statistical challenges for the ECB, Eurostat and all of the countries concerned. For example, adequate resources must be available to re-create all euro area time-series each time one or more countries joins EMU. Among

these statistics, the indicators that will be used to assess the convergence of these Member States towards EMU deserve particular attention.

Currently, the ECB's Governing Council monitors twice a year the progress of the current pre-ins and the new Member States in their statistical preparations for EMU. Many countries have made very significant progress in a very short space of time, but full compliance with all legal requirements has not yet been reached. Since the compilation of statistics is an activity that is typically characterised by significant economies of scale, the situation in the smallest Member States, particularly those with sizeable financial sectors, deserves specific attention.

More generally, possibilities for economies of scale in the compilation of European statistics should be regularly re-assessed and exploited when appropriate. A good example in this context is the current creation of a CSDB at the ECB, which should become available on line to the NCBs as well. Similarly, more comprehensive corporate data for conducting balance sheet analysis are widely considered as a priority in the period ahead, but organising a new data collection for this purpose at the national level would be very costly and would create high administrative burdens on businesses. The best way forward appears to be to integrate and expand the national CBSO that already exist within various NCBs and to set up a more comprehensive European CBSO. A last example of possible economies of scale at the European level refers to more international concentration of the data collection from multinationals. Obviously, progress in this area also depends on the interest expressed by the European multinationals themselves.

Among the other important new statistics that are in the pipeline, I would like to single out the forthcoming geographical breakdown of counterparties in the euro area balance of payments and international investment position. The ECB intends to launch these statistics within the next 12 months, and it is hoped that they may give some important new insights into the external economic relations of the euro area. Also over the next year, the frequency of the statistics on the international investment position will be increased from annual to quarterly. These statistics provide an overall picture of the euro area's claims on and liabilities to the rest of the world. In the near future, the monetary presentation of the balance of payments will also be published monthly instead of quarterly, while work is already under way to update the trade weights of the ECB's effective exchange rate statistics. In that way, the analysis of the euro area's competitiveness remains up to date. Finally, the investment funds statistics will be enhanced by separating the changes in the outstanding amounts into two: the changes due to transactions on the one hand, and those due to valuation and other changes on the other.

All these statistics will become available on a much enhanced, easily accessible statistics section of the ECB's website. Also, a statistical information service has been set up to answer specific queries from both external and internal users.

The priorities for ECB statistics in the medium term are very well reflected in the themes of this conference:

A full system of euro area quarterly accounts for institutional sectors, integrating both financial and non-financial accounts, would provide an integrated statistical basis for the ECB's monetary and economic analysis.

More comprehensive statistics for the monitoring and analysis of financial stability, with explicit links to the statistics for monetary policy purposes, would make it possible to deliver a more thorough analysis of interactions between these policy goals.

Further development of external statistics (e.g. on the international role of the euro or concerning the details of the international investment position) would enable better monitoring of the continually increasing, global economic intertwining.

Better interplay between business accountants and statisticians would enable cross-fertilisation of the considerable expertise in these adjacent fields. This has an enormous potential for decreasing the administrative burden for businesses, while at the same time improving the quality of statistics.

An increasing focus on the various quality dimensions of European statistics as reflected, for instance, in the ECB's intention to regularly publish quantitative output quality indicators (on revisions, consistency, etc.) and more comprehensive quality reports on its statistics.

At the same time, the ECB attaches great importance to improving further the availability, timeliness and other qualities of the Principal European Economic Indicators and to receiving more elaborate and consistent euro area statistics for assessing and analysing productivity changes, for service activities and for housing, including house prices. Moreover, incorporating price developments of owner-occupied housing in the HICP would be an important achievement. In any case, Member States may want to consider giving more prominence to national HICPs and less to their specific national CPI. By way of a supplementary measure, the analysis of any inflationary pressures would be served by the regular availability of an HICP-variant that excludes the direct effects of tax changes and, possibly, other administrative measures.

However, implementing the necessary improvements to European statistics can only be achieved if sufficient resources are made available. It may therefore also be useful to regularly review the need for existing statistics that were agreed upon many years ago.

Concluding remarks

To conclude, let me say that I wish to reflect today the importance that the ECB attaches to timely and reliable euro area statistics as a basis for policy-making. Statistics are like the glasses through which policy-makers and all other economic agents view macroeconomic reality. If the glasses are totally reliable, well polished and easy to handle, we may hardly notice that we are wearing them and we do not realise how vital they are for our clear view of reality. Surely, we only start to complain when the glasses are out of focus and we want to have a new pair when glass-making technology proceeds. This conference may be a good opportunity to put our glassmakers into the limelight, for a change, and to tell them, at the same time, how we would like our glasses to be even better polished in the future.

In any case, it is clear that producing euro area statistics is all about teamwork: time and time again, from the preparatory stage to publication. Over the past six years, Eugenio Domingo Solans has ably steered the statisticians of the ESCB: both quietly and persistently, directly and indirectly – but always in the right direction. I am convinced that the ground has now been laid for further excellent work to complete the provision of euro area statistics in the future.

Ladies and gentlemen,

I wish you all very fruitful discussions. It gives me great pleasure to declare the conference open.

Thank you very much.

I Statistics for monetary policy and financial stability purposes

The art of central banking requires more than just intuition

Wolfgang Duchatzek and Aurel Schubert

“Statistics... are to central bankers what evidence is to juries.”
(*The Economist*, 22 April 2000)

*“We don’t need a scalpel to slice a loaf,
but a knife, and we have a good enough knife.”*
(*E. Domingo Solans*)

1. Introduction

Central banking is often characterised as more of an art than a science. Artists require first of all talent and intuition. However, central banking also requires information, i.e. a sound base of data and models that allow central bankers to decide on the most appropriate course of monetary policy. How large the set of required information is depends – among other things – on the monetary policy strategy the respective central bank follows. A policy based on strict adherence to a rule will rely on a smaller set of data than discretionary policies. Milton Friedman’s famous $k\%$ rule for monetary growth can live almost without data (not even a full-blown central bank is required)¹, and exchange rate targeting can live with relatively little statistical information, while the more discretionary monetary policy becomes, the larger the required data set is.

What then are the main functions of a central bank? First of all, a central bank has to ensure monetary stability. At the same time, most central banks also play an important role in ensuring financial stability, not necessarily at the micro level but definitely at the macro level. Ensuring a smooth and safe payments system is also a core function. To fulfil any and all of these three functions, a sound and broad statistical basis is required.

Central banks not only require a lot of data, they also produce a lot of data, especially in the area of statistics and concerning financial sector data in particular. In the areas in which they do not generate data themselves, they rely on the national statistical institutes – at the European level, Eurostat – and on financial markets data.

Although the twin tasks of monetary stability and financial stability and their statistical requirements are related or even overlap, we will mainly focus on the role of statistics for monetary stability purposes, as the second paper of this session by Mr Rempserger concentrates on the role of statistics for financial stability.

¹ “In my ideal world there would be no central bank at all... There would be a computer that would be grinding out a 5% per year increase in high-powered money” (Friedman, 2002).

The first President of the EMI, Baron Alexandre Lamfalussy, wrote in 1996: “Nothing is more important for monetary policy than good statistics. Statistical information is necessary to decide what policy actions to take, to explain them publicly, and to assess their effects after the event. Unless policy can be justified and explained, it will not be understood and the institution carrying it out will lack credibility.”

We cannot think of a better way to put the role of statistics for monetary policy purposes. What is especially important in this statement is that good data are not only required for the decision-making process per se, but also especially so for the communications aspects of monetary policy. Good statistics are not only needed for an “open market policy”, but also for an “open mouth policy”. As monetary policy works to a large extent via expectations, this is crucially important.

2. Structural versus conjunctural information

When we talk about the statistical information requirements of a central bank, we need to distinguish between structural economic information and conjunctural or cyclical economic information.

Structural information provides us with the basis to understand how the economy works and what role monetary policy can play in influencing the economy. We need this information to develop our models and to estimate the parameters of those models. Only on the basis of a thorough understanding of the economic relationships and dependencies and their strengths in the relevant economic area can we decide on the right instruments to influence the economy.

Once we understand the workings of the economy, we need the relevant conjunctural or cyclical information to make the right policy decisions at the right time. These data tell us where the economy stands at any moment in time, what kind of decisions need to be taken, and what the right timing for such decisions is. They also tell us how to justify our decisions to the public and how to explain them in a credible and consistent way.

Given the different purposes of the two sets of statistics, it is rather obvious that the timeliness and frequency requirements also differ. While the availability of timely cyclical information is clearly absolutely necessary for decision-making, information on the working structure of the economy is much less time-dependent. At the same time, the quality requirements and the details needed also differ. While the cyclical information has to point in the right direction and give us the relevant trends as quickly as possible, without the need for extensive detail and extreme accuracy, the structural information needs to be of a high quality, and a considerable amount of detail is necessary for analysis. In this case, however, quality goes before timeliness, although of course within limits.

This distinction needs to be kept in mind when formulating data requirements for monetary policy. To mix up the two different purposes of statistical information would lead to too much detail being required at too fast a speed and therefore at too high a cost for both reporters as well as compilers. The risk in the end would be that – despite the high costs involved – the product would fail to meet either requirement in full.

3. Statistical requirements for monetary stability

Now, let us turn to the concrete statistical requirements for ensuring monetary stability. As Friedman's famous dictum says, "inflation is always and everywhere a monetary phenomenon."² If we take this statement from a statistical point of view to its extreme, the central bank would not need to watch anything but the amount of money (in whatever relevant definition) or monetary growth, plus – at most – a measure of real growth, as inflation will occur only if the amount of money grows faster than potential growth.

However, as Friedman himself noted, monetary policy works with long and variable lags, i.e. the transmission mechanism between changes in monetary policy and their effects on nominal spending and the inflation rate are long, variable and hard to predict. Therefore, it is too late to attempt to fight inflation with changes in current monetary policy. A successful central bank needs to gear its monetary policy to a medium-term perspective, act in a forward-looking manner and adjust its monetary policy long before undesired inflation or deflation occurs. In order to react in a timely manner to such pressures, a modern central bank needs to monitor and analyse many other indicators besides current monetary growth and current inflation, especially indicators of expected inflation and information on potential future price pressures. In addition, the robustness of the link between money and prices might at times be disturbed by other influences. This opens the door to the need to have access to, or to collect, indicators on possible future cost and price pressures. It then depends on the economic structure of the monetary area as well as on the models of the respective central bank as to which indicators it judges to be of particular relevance.

3.1 The strategy of the Eurosystem

The Eurosystem has chosen an innovative monetary policy strategy that tries to use all possible information available that might be of relevance. In order to structure the information as well as the analysis, it groups the data into two pillars, a *monetary* pillar as well as an *economic* pillar. This is – as the OECD once called it – a "relatively eclectic" strategy.

The monetary policy strategy of the Eurosystem therefore requires considerable amounts of data in an explicit way (by defining the two pillars). Most modern central banks use the same set (or very similar sets) of data for their analyses and their decisions, even if they are pursuing an explicit strategy of inflation targeting or do not have an announced strategy at all.³ Only in the case of an exchange rate peg (as Austria had before EMU) or a currency board can a central bank do without this wide range of data. With an exchange rate peg, a central bank can make do with timely information on the exchange rate, the foreign exchange reserves, and the short-term interest rate differential to the peg. In addition, from the longer-term perspective of the credibility

² According to the classical quantity theory – building on the quantity equation, $MxV=PxY$ – the price level is proportional to the money stock.

³ The US Federal Reserve System's Chairman Alan Greenspan is said to have his staff regularly monitor and analyse several thousand time series.

and sustainability of the peg, the main results of the balance of payments and of the government budget might be necessary.

For any large monetary area, exchange rate targeting is not a viable strategy, and therefore there is an especially large need for data. Whatever the strategy is – be it monetary targeting, inflation targeting, any combination of these or even no explicit strategy at all – vast amounts of statistical information are necessary. As Alan Greenspan puts it, “in practice, most central banks, at least those not bound by an exchange rate peg, behave in roughly the same way. They seek price stability as their long-term goal and, accounting for the lag in monetary policy, calibrate the setting of the policy accordingly.”⁴ The announced strategy only determines a way of analysing the information and communicating with the public. In terms of the volume of different data required, there is no visible difference.

In addition, the monetary policy strategy of the Eurosystem explicitly has a medium-term orientation. The Eurosystem does not want to fine-tune the economy by frequent changes in monetary policy, and follows a “steady-hand” policy rather than an overly activist one. Therefore, as a rule monetary policy is only discussed once a month (at every other Governing Council meeting). During the first 64 months of EMU, the ECB’s interest rates have been adjusted only 15 times, and only twice has the direction of monetary policy changed. No monetary policy decision was hampered or delayed owing to a lack of timely data. This medium-term orientation should also be reflected in the data requirements and especially in the timeliness requirements. A steady hand does not need to grab nervously for speedy data, but should prefer to receive higher-quality data instead.

As the Eurosystem’s monetary policy approach, with its single-purpose mandate and its explicit medium-term orientation as well as the clearly specified two pillars, is different from that of the US Federal Reserve, both the timeliness and the quality of the required data might also differ. This should be kept in mind when comparisons are made between data availability in the US and in the euro area.⁵

3.2 What are the specific statistical needs for monetary stability?

First of all, the central bank needs reliable and timely information on the achievement of the ultimate goal, price stability. The ECB has defined price stability as a year-on-year increase in the HICP for the euro area of below but close to 2% to be achieved in the medium term. With the HICP, Eurostat provides the euro area with a suitable indicator and its relevant sub-components. From the first day of EMU onwards, the ECB as well as the markets and the public have been able to monitor whether this goal was achieved. The available data allow a timely and thorough analysis of the extent and the sources of consumer price inflation, e.g. what role changes in administered prices – which are usually unrelated to economic price pressures – play. In addition, Eurostat’s very timely

⁴ Greenspan (2004, p.7).

⁵ The data needs of the financial markets might differ from the needs for monetary policy decisions and, therefore, timeliness could play a different and much larger role for them than for monetary policy decisions.

flash estimate for the HICP is a useful early warning device, not so much for monetary policy – with its medium-term orientation and its long lags – but for the financial markets.

The quality of the HICP is very good, as it covers all household consumption expenditures as well as adjustments to account for quality improvements. The only important missing piece is expenditure on owner-occupied housing. Eurostat is working on a solution to this problem. We can only encourage Eurostat in that endeavour, as it will increase the coverage and representativeness of the HICP.⁶

To understand the dynamics of inflation better, we also need information on core or underlying inflation, i.e. inflation excluding very volatile elements or special developments. However, there is no single commonly agreed definition of the relevant concept, although we must bear this question in mind.

In addition to consumer prices, asset prices have started to receive more attention as they have begun to play a larger role in some euro area countries (and in addition especially in countries outside the euro area). Real estate price developments, for instance, require further analysis, as real estate accounts for a very large part of the wealth of households, and variations in these prices can have a strong influence on consumption and saving.⁷ Stock market developments are another important area of asset prices. Asset price inflation might be driven by excessive liquidity looking for profitable investment opportunities. Therefore, these developments can be early warning indicators of a build-up of inflation.⁸

3.3 The first pillar – monetary statistics

The Eurosystem has assigned the development of money a prominent role in its strategy. It has set a reference rate for the growth rate of broad money (M3) in the role of a policy guide rather than a formal target.⁹ This reference rate was set at 4½% at the beginning of EMU and has remained unchanged ever since. This is considered to be consistent with the achievement of price stability, i.e. an inflation rate of less than 2%. The reference rate is derived from empirical estimates of potential growth and the velocity of money. Setting this reference rate for M3 has a disciplinary effect for monetary policy-making, as deviations – especially if they are persistent – need to be evaluated in terms of their relevance for future price stability and explained (with data) to the markets and the public.

Detailed monetary analysis is a key task for all the world's major central banks.¹⁰ Owing to the medium-term orientation of monetary policy, the Eurosystem primarily needs to monitor the *trend* of money growth. It is not the short-run fluctuations that are

⁶ The inclusion of owner-occupied housing expenditures would also increase the cross-country comparability of the national HICPs, as the share of households that own their dwelling differs greatly from country to country within the euro area. However, for monetary policy purposes, only the (average) HICP of the euro area is relevant, not its national components.

⁷ “Asset prices will remain high on the research agenda of central banks for years to come.” Greenspan (2004, p.8).

⁸ In addition, they could represent important signals for financial stability purposes.

⁹ For the distinction between policy guides and formal targets, see Freedman (1989).

¹⁰ ECB (2003, p.14).

relevant, but the underlying longer-term trend. Therefore, the Eurosystem needs to extract from the monetary data the information relevant for longer-term price developments.

In order to understand fully the developments in money, we therefore need a comprehensive evaluation of the liquidity situation in the euro area. The components as well as the counterparts of M3 need to be analysed regularly and thoroughly. Very detailed knowledge about the institutional features of the financial and monetary sector is thus a prerequisite. The national central banks of the euro area, with their long and extensive expertise and their closeness to the respective markets, are best placed to provide this information.

Within the monetary pillar, special attention should be paid to credit growth, as it is very significant for corporate investment and also for important parts of private consumption. Therefore, it might represent a better early indicator for economic developments than M3.

An analytically interesting concept relevant for policy is the real money gap, which helps gauge the level of excess liquidity in the economy. It adjusts the growth of the nominal money stock by the amount of past price increases, thus highlighting the amount of liquidity not yet soaked up by past inflation.

The monetary data that are actually available to the ECB and the Eurosystem are highly developed and extremely complete. The consolidated monetary union data are provided in a very timely way every month following a pre-announced release calendar. The initial data problems with the distortions owing to non-residents' holdings of money market paper have been solved. On this basis most of the relevant questions can now be answered. We congratulate the ECB and NCB statisticians – under the leadership of Eugenio Domingo Solans – for this achievement.

However, providing relevant statistics is a never-ending task. Another important but still not fully communicated source available for the analysis and understanding of monetary developments in the euro area is the use of balance of payments information in order to analyse external influences on monetary developments, the so-called monetary presentation of the balance of payments. This innovative way of combining information from two very different sources has been published by the ECB since mid-2003 and has a strong potential to improve our understanding of the forces driving M3.

3.4 The second pillar – economic statistics

The economic analysis is a broadly based assessment of the short and medium-term risks to price stability. It follows a philosophy expressed by Donald Kohn (now Governor of the FRB) ten years before EMU: “Realistically, policy cannot afford to lose any information about the complex relationships in the economy. Signals from financial and foreign exchange markets, and from the domestic economy and foreign economies, all need to be filtered for clues about where the economy and the price level are headed relative to the objectives for policy. Casting the net wide is especially important when the underlying relationships among financial and economic variables seem to be

evolving in ways that are not easy to predict.”¹¹ This statement definitely applies to EMU.

For this assessment, central bankers need indicators that can help them identify potential price pressures arising in the short to medium term, preferably in a forward-looking way. Such price pressures can originate from different economic shocks, such as rising input costs, i.e. “cost push”, or from a discrepancy between supply and demand conditions, i.e. “demand pull”, or, alternatively, could be based on sudden changes in expectations.

There is a need for all kinds of different indicators of input costs, such as wages, the spot and futures prices of important commodities such as oil, but also asset prices or exchange rates. Indicators of aggregate demand, such as consumption, investment, government spending (fiscal policy) or external demand (balance of payments), are also needed to shed light on the real economy as well as to serve as input for measuring potential output and for estimating the output gap. These need to be monitored in order to identify demand pressures on the economy relative to its production capacity.

As central banks need to emphasise the influence of forward-looking expectations on economic decisions, a special role is played by market prices that can reflect expectations, such as the yield curve, stock market indices or the prices of inflation-indexed bonds. There is a considerable amount of information embedded in interest and exchange rates and in financial market prices which needs to be taken into account by monetary policy-makers. However, one should not fall into the trap of reading too much into these data, as asset market prices tend to exhibit more volatility than can purely be explained by changes in their fundamental determinants.

As Alan Greenspan once put it, “the success of monetary policy depends importantly on the quality of forecasting.”¹² Therefore, available forecasts, different sentiment indicators as well as macroeconomic projections play an important role in monetary policy-making, and serve to anticipate future developments. To this end, the ECB has developed – besides internal forecasts – a regular biannual macroeconomic projection exercise as well as a regular inflation projection exercise. These all constitute important inputs for the assessment of the outlook for price stability.

The growing importance of forward-looking information has been addressed with two new innovative sources of information, the Bank Lending Survey and the ECB SPF. The Bank Lending Survey, which was developed by the Eurosystem, is an attempt to complement the existing data on bank lending with – albeit only qualitative – forward-looking information on loan markets. The main objective of the survey is to enhance the Eurosystem’s knowledge of financing conditions in the euro area and to serve as input for monetary policy decisions. It is designed to complement existing statistics on retail bank interest rates and credit with information on supply and demand conditions in the euro area credit markets and on the lending policies of euro area banks.

¹¹ Kohn (1989, p.139).

¹² Greenspan (2004, p.7).

Expectations for the rates of inflation, real GDP growth and unemployment are gauged via the quarterly SPF. The participants of the survey are experts affiliated with financial or non-financial institutions based within the EU.

2003 also saw the successful development and implementation of harmonised retail bank interest rates (MFI interest rate statistics, or MIR) for euro-denominated deposits and loans by euro area residents. This was a major achievement, as it finally closed a large gap that had existed since the beginning of EMU. Now, the transmission of the monetary impulses of the ECB via the banking sector to enterprises and private households can be monitored on a regular (monthly) basis.

These very broad data requirements of the Eurosystem were designed so as not to lose any information that is available or relevant. “One should keep an eye on all variables that are known to contain information about inflationary developments,” as Charles Freedman once put it.¹³ We need to turn over every stone and look behind every bush, cross-checking information from one pillar with information from the other pillar to detect or predict inflationary tendencies. The art of central banking thus lies in the careful assessment of the different pieces of information and their proper weighting, especially if they happen to send conflicting signals.

Therefore, the two pillars do not stand in isolation like a ruined Greek temple – as they are sometimes portrayed – but are instead closely interlinked and regularly cross-checked by the Governing Council. There may be, however, scope to clarify the existence of a bridge between the two pillars which ensures the use of all information provided by the economic and monetary analyses. Indeed, more flexible formats of communication are conceivable and could be fruitfully employed in the future,¹⁴ as the ECB observed during the reflection process on its strategy.

4. Are there any gaps in the data underpinning European monetary policy?

Policy mistakes could lead to a higher or a more volatile inflation rate, which in turn could lower output or increase output variability. This would result in even greater uncertainty with negative repercussions for all economic agents. Therefore, as *The Economist* put it in the early days of EMU, “[w]ithout up-to-date and reliable economic data, monetary policy-makers risk making costly mistakes.”¹⁵

We now have 63 months of monthly data, such as M3 and its counterparts, HICP inflation and its components and balance of payments (monthly key items), and we have 20 quarters of quarterly data. We have about 1,400 days of daily data on exchange rates, market interest rates, and the prices of actively traded assets. The semi-monthly “Orange Book”, which is at the disposal of the Governing Council of the ECB at each of its meetings, already contains about 170 pages of data and charts on the euro area. In other

¹³ Freedman (1989, p41).

¹⁴ ECB (2003, p.19).

¹⁵ *Economist*, 22 April 2000.

words, we can already access a vast amount of information, a real treasure trove, on EMU, ready to be thoroughly analysed.

In order to remain relevant and to measure the right things in the right way, central banks need to keep up with financial market developments. New products are constantly being developed that might replace traditional financial instruments or change the transmission mechanism of monetary policy.

The monetary pillar is well-covered and almost complete. Some gaps exist in the economic pillar, such as for instance information on the service sector. This sector already accounts for about two-thirds of economic activity, and is much more important than agriculture and manufacturing, two areas that are very extensively – maybe too extensively – covered by existing statistics.

To improve our understanding of the monetary transmission mechanism and the reaction functions derived from interest rate changes in financing and investment behaviour, financial accounts statistics need to be developed further. They can provide a consistent framework for the different financial statistics already collected and disseminated, such as statistics on money and banking, securities issues, balance of payments, the international investment position or even government finance. It will show how financing and investment by the different sectors of the economy adjust to the changes in central bank and market interest rates. Progress is mainly necessary as far as sectoral breakdowns and financial instruments are concerned.

There is undoubtedly still some room for improvement in terms of the timeliness and availability of data, especially in the area of national accounts. However, one has to keep in mind that the structure of Europe differs considerably from that of the US, Japan or the UK, the usual benchmarks.

Justified demands for more information notwithstanding, there is, of course, also a need for stability in the data requirements for reporting agents, compilers and data users. Too frequent changes are costly and might confuse more than they enlighten. This is also important with a view to the enlargement of the euro area. We should avoid confronting the new Member States with moving targets. On a general note this then leads us on to the question whether the information needs of central banks can ever have an upper limit.

5. Can a central bank ever have enough data at its disposal?

In a world of uncertainty in which monetary policy-makers have to act decisively, more information always seems preferable to less information. As Wim Duisenberg once put it, “one of the few things we economists know with certainty is that we know little without uncertainty.” Alan Greenspan echoed this on the occasion of this year’s meeting of the AEA, saying that “uncertainty is not just a pervasive feature of the monetary policy landscape; it is the defining characteristic of that landscape.”¹⁶

¹⁶ Greenspan (2004, p.4).

But how can we – in such an environment – strike a reasonable balance with regard to statistical demands? As economists we know that there is an infinite demand for any given good which is free to users (but not to producers). Collecting new statistics, however, is resource-intensive and expensive. It carries a heavy burden for respondents as well as a burden on the compilers. In addition, we live in times of increasing resource constraints – that also affect central banks – in which all public expenditures need to be justified. We therefore have to set priorities.

From a certain point onwards, the marginal benefits of additional statistics naturally decline; however, this point has not yet been reached, and we are still at a time when the overall benefit is rising. Nevertheless, it should be noted that the marginal benefits vary greatly across different areas of statistics. At the same time, the marginal costs of collecting additional data are increasing.

Under these circumstances we need a transparent and formal cost/benefit analysis. The Eurosystem's so-called merits and costs procedure is a very welcome move in the right direction. To enhance the usefulness of this procedure and the credibility of its results, further work needs to focus on the presentation of the merits of new data requirements, i.e. the analytical use of and need for new statistics. The Statistics Committee of the ESCB is already intensively working on this procedure.

First of all, we should make clear and explicit what the marginal benefits are of additional information in the decision-making process. How can such additional information improve monetary policy-making? What are the potential costs of policy mistakes owing to the non-availability of such data? Do the data serve to improve the understanding of the workings/structure of the economy and of monetary policy, and do they help to assess more accurately the current state of the economy? These issues will determine the required frequency and timeliness of data. Is there a need for a new data collection/reporting method, or can the data be estimated on the basis of existing proxies? Does a sample fulfil the purposes it is intended for?

In addition, we should review regularly whether the data collected and compiled are still needed, whether they are used efficiently, and whether they are still required at the same frequency and timeliness. At the same time, we should review our priorities. Special attention should be given to the question of back data, i.e. of recreating history. In particular, providing pre-EMU data is either completely impossible or very expensive. Although the demand for sufficient data for model estimations or historical comparisons from other business cycles is understandable, the analytical value of this might be questionable as the establishment of EMU may have fundamentally changed many economic relationships. This calls for a careful comparison of the merits and costs of any new data.

However, let us not forget that we also have to be forward-looking and anticipate future needs in the area of statistics for monetary policy. Statistical data production does not work like a light switch; you cannot simply switch it on when needed, or switch it off to save resources and then switch it on again when it suits you. It takes years to prepare for collecting the right data, and years of continuous time series are a prerequisite for meaningful analysis. Fortunately, the EMI was sufficiently forward-looking to complete

and publish statistical requirements for the single monetary policy more than two years before the start of EMU.

6. Timeliness versus quality of data

In the production of statistics there is always a trade-off between quality and timeliness. Monetary policy-makers – like all policy-makers – usually want information as quickly as possible. However, such speed can only come at the expense of quality. We should take a closer look at this trade-off. From the economics literature we know that monetary policy works with long and variable lags. The overall time-lag can be split into the *recognition* lag (i.e. the lag in discovering that policy intervention is called for), the *decision* lag (i.e. the time needed until the relevant body manages to take a decision), the *implementation* lag (i.e. the time between the decision and the mobilising of the implementation tools), and finally the *effectiveness* lag (i.e. the time between the implementation and when the intended effects emerge).¹⁷ Speeding up the availability of data can only influence the recognition lag, with a minor effect on the overall lag. Therefore, the possibilities (and the costs) of faster production of such statistics should not be seen in isolation from the other lags. In addition, lower-quality data can lead to policy mistakes, which can be costly and have negative repercussions on the predictability and credibility of the policy-makers.

7. Let the data do the talking – statistics and communication

The Eurosystem's existing large data pool on the euro area is an enormous asset. There is a lot of potential in mobilising this asset in order to create an identity for the euro area and to create a European constituency for monetary stability.

Monetary policy-makers only set the short-term interest rate a central bank charges banks. To influence the overall economy, a central bank should –primarily seek to influence market participants' expectations. To this end, it has to communicate with the market participants and the general public in a convincing and credible fashion. As the former Vice Chairman of the FRB, Alan Blinder, once remarked, a “central bank is credible if people believe it will do what it says.”¹⁸ To achieve this, central banks need to supplement their interest rate decisions with data, facts and time-consistent explanations that the markets and the public understand. At the same time, by supplying the public with an extensive and liberal supply of quantitative information, a central bank can alleviate the information asymmetry between the bank and other market participants, helping the latter make informed decisions and form rational expectations. This should be a priority for the Eurosystem.

First and foremost we should aim to promote the concept of the euro area. Indeed, statistics is an excellent instrument for this purpose. In spite of its economic and population size (containing more than 305 million people), the euro area is still a very abstract concept for most of its citizens (or even for the world in general).

¹⁷ See Burda and Wyplosz (1993, p.306).

¹⁸ Blinder (2000, p.1422).

There is no common euro area flag, euro area anthem or euro area football team. We only have a common currency and a common central bank, and a considerable amount of useful common economic data on the euro area. However, precisely by using and communicating these data in an innovative and effective manner, we can make the concept of the euro area more tangible. This will help overcome the existing persistent, dominant national orientation. Of course, as Stephen Cecchetti recently remarked after several years as a central banker, communication is a difficult business.¹⁹

Properly marketing the wealth of information and its relevance and establishing in a credible way the links to monetary policy decisions is both a challenge and a great potential chance for the future. Markets and analysts want to understand (and be able to forecast) the monetary policy decision-making process. As Eugenio Domingo Solans put it so well two and a half years ago in Vienna, “where statistical information contributes to policy decisions, it is important for the ECB to be able to refer to this information as part of the background to the decision.”²⁰ If we succeed in this, we will have made an important contribution to transparency. Transparency “reduces uncertainty about monetary policy, interest rates and inflation, thus making private-sector planning easier. Transparency and communication also promote a better public understanding of what central banks can do... and what central banks can’t do.”²¹

The recently developed MFI interest rate statistics are just one good example of the real value added and transparency that statistics can provide to the markets and to economic policy-making. The lively public debate following the first data releases is an encouraging sign of the positive contribution that statistics can make outside the thick walls of central banks. It also highlighted the major challenge of communicating the concept of the euro area, as most commentators were primarily interested in national data, not euro area data.

8. Statistics versus politics – the Stability and Growth Pact

Before concluding, we would briefly like to address a topical issue that is closely linked to monetary policy and that shows the limits of statistics. Not limits in terms of quality limitations, but rather in terms of the limited influence of statistics. Despite our best efforts to supply the data required by European legislators and institutions, relevant data ended up being (at least partly) ignored by policy-makers. This is obviously the case with regard to the EDP and the SGP.

The convergence criteria for entry into Monetary Union suddenly assigned a highly *political* role to statistical data.²² Macroeconomic statistics were used to decide whether a country was or was not (yet) ready to introduce the common currency. The EDP (together with the SGP) ensures that statistical information on government deficits and debt remains of central political importance. It even envisages sanctions if a country does not

¹⁹ Cecchetti (2004).

²⁰ Domingo Solans (2001, p.4).

²¹ Mishkin (2000, p.14).

²² The Lisbon Process is another political process that relies heavily on statistical indicators and goals.

fulfil the limits on government deficits and debt. But what is the purpose of objectively produced statistics if they are ignored by the (fiscal) policy-makers?

First of all, sound public finances are important for sound monetary policy. Fiscal excesses by one country – especially if it is a large one – can have negative repercussions on all the other members in the common monetary area. It could drive up interest rates and lead to pressure for a looser monetary policy which would be incompatible with the mandate of ensuring price stability.

Statisticians have put – and continue to put – substantial effort into making budgetary and debt data comparable across the Member States of the EU. With the ESA 95 they created a coherent framework. In addition, there are well-established procedures – such as the CMFB consultations – to deal with new forms of government financing or even attempts at creative accounting. For the first time in history, we have largely comparable data on government deficits and debt in Europe; however, ironically enough, those who passed the legislation and required the data now feel free to ignore them. No doubt it is their political privilege to ignore the results if their political priorities have changed. However, as responsible policy-makers, they should consider the detrimental effects on the credibility of the rules, institutions and decision-makers of the EU. The failure to comply with the rules and procedures foreseen in the SGP risks – as the Governing Council of the ECB has pointed out – undermining the credibility of the institutional framework and confidence in sound public finances.²³ What is more, it is important to consider what such action signals to future Member States.

Nevertheless, there is also a positive side to these developments. The emphasis has changed from trying to put pressure on statisticians to *change* the numbers – as had happened repeatedly before the first convergence tests – to the political decision to *ignore* the numbers. While this may still be discouraging for statisticians, it is still much more transparent to the markets and the public, who can form their own opinions on the basis of reliable data.

9. Challenges for the future

Some of the main challenges for the Eurosystem in the area of statistics are as follows. The Eurosystem should:

1. close the remaining, monetary policy-relevant gaps in euro area statistics;
2. keep track of possible changes in the economic environment that impact macroeconomic behaviour and the way monetary policy works;
3. keep track of financial innovations that might have repercussions on the relevance of our traditional measures of money or of the transmission mechanism;
4. develop a convincing case for all new requirements and follow the merits and costs procedure;

²³ ECB Press Release of 25 November 2003.

5. make the facts and analyses underlying the decision-making process clear, i.e. show which decisions were taken based on which statistics.
6. defend and enhance the independence of statistics in Europe; and
7. ensure adequate resources for statistics to meet both present and future challenges.

10. Conclusions

The establishment of EMU went hand in hand with a fundamental and unprecedented change in the monetary regime. Gone are the small monetary areas, most of which had an exchange rate peg to the Deutsche Mark. Today we have one system, the Eurosystem, which is a global player, one of the two most important central banking systems in the world. This new (monetary) Europe entails responsibilities that differ substantially from those of the old (monetary) Europe. The new global role brings with it new responsibilities, including the provision of adequate statistical information on the euro area, and explanations for all monetary policy decisions that explicitly refer to the underlying data. As Baron Lamfalussy said, “[u]nless policy can be justified and explained, it will not be understood and the institution carrying it out will lack credibility.” Therefore, the provision of an adequate statistical data pool – by the ECB as well as by the NCBs – is a necessary prerequisite for ensuring the long-term credibility of the Eurosystem. This does however come with a price. Satisfactory and complete statistics require adequate resources that have to be met if we are to live up to our European and global responsibilities.

Negative newspaper headlines, such as “*Data shortage damaging bank credibility*” in the Financial Times in May 2000²⁴ and “*A dearth of data at the ECB*” in The Economist in April 2000²⁵ – as much as they might have been appropriate at the time – are fortunately no longer correct, and such headlines have in the meantime vanished from the media. This is to a large extent due to the hard and efficient work of Eugenio Domingo Solans and his team of Eurosystem/ESCB statisticians. Last year he called the recent progress in the development of European economic and financial statistics a “silent revolution.” To continue with his metaphor, Mr Solans can be seen – so to speak – as “el líder” of this revolution. Together with the Eurosystem/ESCB team of statisticians and in cooperation with Eurostat, he has established an excellent basis for his successor.

This revolution was truly a silent one, as statisticians tend to keep a low profile and are not used to being in the limelight. This conference provides us with an excellent opportunity to give centre stage to statisticians for a change.

Artists need specific material, tools or instruments to transform their intuition into artworks. The art of central banking is impossible without a pool of reliable, high quality statistical data. Eugenio Domingo Solans has provided us with that in his quiet but very

²⁴ *Financial Times*, 9 May 2000, p.29.

²⁵ *Economist*, 22 April 2000, p.80.

efficient way. In addition, he has already outlined the way forward. In his speech on the occasion of the 54th Session of the ISI last year, he told us that “this silent revolution must now continue at an international level. The ultimate goal would be to reach a similar degree of harmonisation among large economic areas as there is within them.”²⁶ He has left plenty of work for us if this goal is to be fulfilled.

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²⁶ Domingo Solans (2003).

Statistics for financial stability purposes

Hermann Remsperger

1. Sound statistics for monetary policy and financial stability

Sound statistics are needed for both fields of central banking, monetary policy and the safeguarding of financial stability. Statistics for monetary policy purposes mirror the two pillars of the ESCB's monetary policy strategy: first, monetary statistics, such as monetary aggregates and their counterparts, which are compiled by the ESCB on the basis of banks' balance sheet data; and second, a wide range of real economic indicators such as GDP growth, wage developments, price indices, balance of payments data and exchange rates. Most of these indicators are collected and compiled by the European Statistical System which comprises Eurostat and the national statistical institutes.

Statistics on financial developments are needed not only because of the key role that financial intermediaries and financial markets play in monetary policy. They are also needed because monetary stability consists of both price stability and financial stability. Central bank policy is more than monetary policy alone.

It is against this background, as Eugenio Domingo Solans pointed out in his speech at the 54th Session of the ISI in Berlin last year, that the ECB has added the development of a statistical framework for financial stability to its medium-term agenda.

Today I would like to focus on the use of statistics for financial stability purposes. The questions that I will raise are, first, to what extent financial stability purposes require different statistics from those which are already available for monetary policy purposes, and second, in which areas can deficiencies concerning their availability still be identified.

2. Measurement without definition?

The ultimate aim of monetary policy is price stability. The usefulness of all indicators in this field of activity therefore has to be assessed in terms of their relation to inflation. By contrast, the aim of financial stability analysis is more complex as no single and straightforward definition of financial stability exists.

According to Tommaso Padoa-Schioppa, financial stability means "a condition whereby the financial system is able to withstand shocks without giving way to cumulative processes, which impair the allocation of savings to investment opportunities

and the processing of payments in the economy”.¹ This definition shows that financial stability is not confined to banking stability. Furthermore, recent research has pointed out that financial instability can occur even in an environment of price stability.

This is the underlying situation that makes statistics for financial stability purposes more diverse and less well-established than statistics for monetary policy. Moreover, unlike statistics for monetary policy purposes, financial stability indicators not only focus on the euro area as a whole, but also have to facilitate the analysis of financial stability at the national level.

Thus, although a comprehensive set of harmonised and consistent series of euro area indicators for monetary policy is now available, there is scope for collecting and compiling new data which could be used for financial stability purposes.²

As any assessment of financial stability is a very complex matter, we need a multidimensional framework when dealing with financial stability. Take the IMF initiative on financial soundness indicators as an outstanding example. Its “monitoring grid” focuses on four main areas, the first of which is financial market surveillance. In order to evaluate the risk arising from imbalances or shocks, data on asset prices are needed, as are early warning indicators. The second area which the IMF’s grid focuses on is macroprudential surveillance, which concentrates on the impact of shocks on the financial sector. The third area consists of the analysis of macro-financial linkages. In particular, I would like to mention credit spreads, credit to the private sector and balance sheet data for different sectors of the economy. Last but not least, the fourth area of focus is the surveillance of macroeconomic conditions.

At first glance, monetary policy seems to rely more on aggregated statistics for the whole economy, whereas for financial stability purposes a more disaggregated, or micro, view is what is needed. However, as Andrew Crockett pointed out a few years ago, there is also a macro dimension to financial stability analysis.³ It is certainly true that the focus of financial stability indicators is more on the distribution within peer groups (i.e. categories of individual banks) that are at risk rather than the average bank. However, at least some degree of aggregation is normally needed, as the causes of financial instability are often common to all banks. It is unlikely to be the occasional failure of one bank that triggers a crisis, but rather a shock to the financial system as a whole, caused, for example, by an earlier asset price boom and/or lending boom.

While the analysis of shocks to the economy and the surveillance of macroeconomic conditions are also essential parts of monetary policy analysis, the question of how these shocks affect the financial sector is typically only relevant to financial stability purposes.

¹ Tommaso Padoa-Schioppa, “Central banks and financial stability”, speech delivered in Jakarta on 7 July 2003.

² Even though most statistical indicators, such as balance sheet statistics, interest rates and exchange rates, can serve both monetary policy and financial stability purposes, there are also a number of indicators which relate exclusively to one area or the other.

³ Andrew Crockett, “Marrying the micro- and macro-prudential dimensions of financial stability”, speech delivered at the Eleventh International Conference of Banking Supervisors, Basel, 21 September 2000.

The frequency at which financial stability data are compiled differs greatly, depending on the user's requirements. Some indicators for financial stability should be available at an even higher frequency than data for monetary policy. To give you an example, I would like to point to intraday financial market prices as a means of studying market dynamics. On the other hand, other financial soundness indicators such as balance sheet and profitability data for banks at the bank category level can only be provided at a lower frequency – for example, quarterly.

3. The infinite variety of financial stability indicators

I suggest that we now concentrate on three areas. First, financial and real estate markets; second, financial institutions; and third, non-financial companies and private households. With this set-up in mind, I will first focus on the situation in Germany, before drawing your attention briefly to the euro area as a whole.

As far as data for the surveillance of financial markets are concerned, these are more or less readily available with long time series and adequate frequency. Examples of such data include stock price indices, bond yields and emerging market spreads, all of which are obtained through commercial data providers.

However, the availability of indicators for other asset markets is less satisfactory. One example is price indicators for the real estate markets, where the Bundesbank currently calculates indicators for terraced houses and flats based on data from a commercial data provider at annual frequency only. We are now investigating a way of moving to a quarterly frequency for these data.

The second group of financial stability indicators relates to the banking system, which forms the backbone of the financial system. It is precisely this area that is stressed in the IMF project on financial soundness indicators, namely setting up indicators that can assess the vulnerability of the financial system (such as credit, liquidity and market risk indicators) and its capacity to absorb shocks.

In Germany, there are two different data sources in this area. First, there are data collected for monetary policy purposes, such as balance sheet statistics and all kinds of interest rate statistics. Second, there are data used for supervisory purposes, such as data on profitability, risk and capital. These data cover the total business of individual German institutions, and thus also include foreign branches. Sometimes even the whole bank group is covered, i.e. including domestic and foreign bank subsidiaries or even other financial subsidiaries.

The Bundesbank is currently working closely with the Federal Financial Supervision Agency and the Ministry of Finance to investigate how these two data sets could be combined and better displayed. The aim is to improve the analysis under the umbrella of financial stability. While a nearly comprehensive set of raw data is more or less readily available, further work may be necessary in respect of the methodology and frequency of these data. From the perspective of financial stability, it would be preferable to increase the frequency of the statistics on banks' profits and losses from annual to quarterly.

For the monitoring of financial stability it is not sufficient to look only at banks: other financial intermediaries, insurance companies and pension funds must also be considered. The IMF has, for instance, encouraged the compilation of two indicators for the “other financial corporations” economic sector; these cover “assets to total financial system assets” and “assets to GDP”.

A very important issue here is to gain more insight into the credit risk transfer from banks to these institutions through credit derivatives or securitised loans. Although some fundamental data do exist in this regard in Germany, data availability in this field should be improved in order to provide more information on the links between different sub-sectors within the financial industry.

Turning now to the third area of financial stability indicators, we also need data on the financial conditions of non-financial enterprises and households. Economic shocks might also be transmitted to the financial industry from these sectors – for example, via a deterioration in the quality of banks’ assets. The IMF is also taking the lead in this respect and has incorporated a number of indicators into its monitoring grid.

It is precisely in this data segment, namely the quantification of the overall liabilities of non-financial corporations and households, that the Bundesbank is currently improving data availability. We have established a data pool related to non-financial enterprises in Germany which is fed by various sources (our own information, associations of banks and credit insurers, public information services, etc.).

In addition to the banks’ balance sheet data, which allow the liabilities of non-financial corporations and households vis-à-vis banks to be quantified, supplementary information from the data pool on corporations may shed more light on the overall indebtedness of the private sector. This is particularly true for the services sector, which was previously only poorly covered. Here, a possible indicator may be the ratio of non-financial corporations’ total debt to equity. A second set is composed of profitability indicators, such as return on equity.

As regards households’ assets, the Bundesbank has reasonably comprehensive information on securities held in safe custody with banks in Germany. Admittedly, these data are only supplied on an annual basis. However, the frequency of the safe custody statistics is currently being increased to a quarterly basis. That is why we may be in a position in due course to monitor specific developments in securities holdings of households, as well as of other economic sectors such as non-financial corporations, in a more timely manner and with greater precision.

Turning now to the analysis of financial stability for the euro area as a whole, at least two additional issues arise from a statistical point of view. First, the degree of cross-country comparability of the data, and second, the availability of indicators at euro area level. The medium to long-term aim should be to achieve a sufficiently high degree of coverage and harmonisation for each indicator considered essential for the analysis of financial stability in the euro area.

On the one hand, the ESCB already collects and compiles a comprehensive and harmonised set of statistics for monetary policy purposes. This allows the derivation of high-quality indicators referring to the business of bank head offices and bank branches located in the countries of the euro area. However, bank branches/subsidiaries outside the euro area are not covered by these data, and other financial subsidiaries are excluded in general. On the other hand, there are indicators covering the entire bank or bank group. These indicators are derived from national supervisory data sources and are thus not harmonised. Harmonisation issues may also arise in the area of financial markets indicators and real estate prices.

4. Feasibility constraints

Against this background, it does not come as a surprise that there are a number of harmonisation gaps that must be tackled. Furthermore, there is no doubt that the availability of reliable statistical data for financial stability purposes is not yet complete, as data gaps do exist. There are, however, practical difficulties with regard to gathering additional, and more detailed, statistical data. Financial stability indicators draw on a variety of different data sources from different authorities or institutions such as central banks, supervisory authorities, national statistical institutes, stock exchanges, associations or market participants. As a rule, these bodies currently produce such data for a range of different purposes.

One way of reducing these difficulties is to consider whether more data could be purchased from commercial data providers. However, the scope may not be sufficient as the focus of private providers is on financial market data. In addition, this option could also turn out to be quite costly.

Another option might be to consider extending the statistics produced under the stewardship of the ESCB in the field of money and banking statistics. The aim would be to enlarge the number of harmonised and consistent indicators for financial stability purposes. There is no doubt that statistics are a public good and have, as such, considerable merit.

And yes, there is broad agreement that the task of central bank statisticians is to construct a mansion with many different statistical rooms to accommodate all users of statistical information and to provide support for the decision-making process by the ESCB and other external users.

However, a good sense of proportion is necessary when deciding on new harmonised statistical requirements to be formulated by the ESCB. There is a common understanding that producing statistics is a costly matter, in particular from the viewpoint of the data suppliers. Budgets and resources are very limited. Any new statistical reporting measure will place an increased burden on the reporters and strain their resources. And we all know that central bank statisticians and reporting agents (with the MFIs in the front row) are also faced with statistical requirements for analytical purposes other than financial stability.

On top of that, central bank statisticians and data reporters have to cope with a multitude of new challenges: for example, the enlargement of the EU, any potential enlargement of EMU, changes in accounting rules, and, last but not least, the Basel II regime, which requires new indices and indicators to be calculated for banking supervision purposes.

Given all these competing tasks, it is absolutely essential to set priorities. The highest priority should be attributed to closing data gaps with regard to essential indicators such as statistics on the securitisation of bank loans. In order to narrow the data gap in this area, we should use existing data with sufficient coverage from other sources. An obvious example is the biannual information provided by the BIS on derivative instruments, which is collected from a small number of leading market players but still covers 80% of the overall market volume.

At the same time, we have to check whether existing statistical surveys could be discontinued in exchange for any new data requirements. For example, regionally disaggregated balance sheet data of banks in Germany no longer have any analytical relevance because of euro area membership.

In order to keep the costs within strict limits, statisticians may find it helpful to determine the extent to which one and the same data source might serve different analytical purposes. For instance, monthly balance sheet statistics of MFIs serve monetary analysis purposes as well as microprudential and possibly macroprudential purposes.

Statistics on banks' profit and loss accounts provide microeconomic as well as macroeconomic information. The advantage is that the reporters only have to submit one statistical return. Both users and reporters may stand to gain if this option is pursued.

We also have to check whether new data requirements can be met from existing statistics if we estimate parts of the data cells and accept – as far as tolerable – estimation errors. This could apply to some specific sectoral breakdowns within the credit aggregates of MFIs which are not actually reported but are estimated from specific benchmarks.

In order to reduce the reporting burden, statistics could be compiled, whenever possible, on a sample basis, in particular in those cases where prices or indices are to be calculated. The MFI interest rate statistics could be taken here as an example.

At the very least, statistics or surveys could be reported on a voluntary basis. This would be feasible in cases where a very small number of institutions cover the bulk of the business in question. Statistics on derivatives and the Bank Lending Survey are valid examples of this.

In those cases where no compromise solution can be found, a balanced decision still has to be reached. The benefits to be gained from collecting new statistics need to be offset against the costs of harvesting the data from the reporters. Central bank statisticians have been advised to take a cost/benefit approach before proposing to

produce any new statistics, at least within the fields of money and banking statistics and balance of payments statistics, and to the extent that these are under the aegis of the ESCB. Within this framework, all parties involved may have their say, i.e. users, data reporters, data compilers, associations and other pressure groups, parliaments, governmental bodies including supervisory authorities, and so on. At the end of the day, the data providers need to submit the statistical information which is absolutely essential from both the users' and the producers' point of view with the aim of ensuring adequate reporting.

5. Conclusion

Let me conclude by summarising the points I have made. First, there is a need for financial stability statistics beyond those that are already available for monetary policy purposes. Second, although progress has been made, a more extensive set of indicators is still missing. Third, clear-cut mandates are necessary for the formulation of reporting requirements and for the cost assessments; all the parties involved have to acknowledge that the production of statistical data is costly and burdensome and that budgets for statistical reporting are in no case unlimited.

Comment

“The ultimate purpose of statistics: serving European Citizens”

Christa Randzio-Plath

1. The importance of statistics for monetary and economic policy-making

Monetary and economic policy-making can only be effective if they are based on sound statistics. They are the raw material from which policy proposals and forecasts are constructed: thus this material needs to be of optimal quality if the end product is to be of real use.

The wide range of important statistics that we rely on is somewhat daunting. Key macroeconomic statistics such as aggregate demand, consumption and investment need to be collected. GDP growth, deficit figures, and balance of payments statistics drive policy-makers, markets and citizens alike. Wage levels, profit levels, input costs and sector-specific data on the services, industrial or agricultural sectors are also important. Exchange rates, asset prices (whether referring to stocks and bonds, or the housing market), prices of commodities, bank interest rate levels, and monetary aggregates such as M3: all of these constitute part of the tools we need. Productivity statistics are perhaps one of the most important measurements of our economies, and yet we are not sure of their accuracy. And of course, let us not forget inflation, the star statistic of our era, which the whole central banking philosophy of price stability revolves around.

Economic policy, budgetary policy, monetary policy, social and employment policy and business decisions are all driven and formulated using the building blocks of statistics. Therefore quality is needed. Our data must fulfil a series of criteria or questions: are they frequent or timely enough? How accurate are they? We all know there is usually a trade-off between timeliness and accuracy. Are they relevant to the purpose or just a meaningless waste of resources? Do we have an overdose of figures or do we actually need more? Cost-benefit analyses with regard to compiling yet more data need to be performed. And most importantly: if the statistics are of a sufficient quality, do policy-makers understand and interpret them correctly, and are they using them efficiently?

Statisticians and policy-makers need to step back and see the bigger picture from a distance: it is precisely these sort of rhetorical questions that need to be asked. Sometimes, in the midst of producing technical and complex statistical analyses, some of the simpler questions are forgotten. Statistics are not however an inanimate and static intellectual construction, but instead the reflection of a dynamic and changing society and its economy. Data need to adapt to fast-changing shifts in culture, in consumption

patterns, in fashions and in technological progress. For example, the growth of services primarily reflects a shift in demand as people become richer and live longer, and as technology improves. We know for a fact that many services are more difficult to measure than traditional goods. The hectic pace of change in our capitalist, consumption-oriented culture brings about an ever-increasing array of new products trying to cater to new demands and new needs. In this sense, statistics need to be a vibrant, adaptive and always alert science, not a technocratic domain where orthodox rules and complacency stifles innovation.

2. The ultimate purpose of statistics: serving European citizens

That said, it is also crucial to identify the ultimate beneficiary of good economic and monetary statistics. It is not the policy-maker, who uses them and needs them; nor is it the markets, which base their economic stances on them. Rather, it is the European citizen, that is, you and me, who ultimately reaps the benefits or bears the brunt of good or bad policy-making based on accurate statistics. Citizens are, moreover, active and direct users of statistics themselves. Thus we need to make statistics more accessible, understandable and useful as guidance for citizens in their everyday lives. We should not forget that citizens do not perceive indicators as policy-makers do, and there is an obvious comprehension gap that needs to be narrowed. Good economic statistics in Europe should provide citizens with an accurate picture of where we are and where we are going, and offer us a clear comparison of the EU and the euro area with other countries or economic blocs. For example, standard of living indicators, possibly one of the most relevant indicators for citizens, are sometimes meaningless for ordinary people, one of the reasons being that as the economy becomes more complex, the standard of living is harder to measure accurately.

This need to communicate better with the average person in the street is all the more necessary today. Statistics must instil confidence in European consumers and investors, at a time of grave economic crisis in the EU. Policy-makers must make the best use of statistical data to reinvigorate the European economy in this period of uncertainty and volatility on all fronts.

3. Inflation: real versus perceived

It is an understatement to say that inflation is the king of statistics in Europe. With the ECB, the most independent central bank ever, and a monetary policy centred exclusively on price stability, the accuracy and correctness of measuring inflation takes on a new meaning. A slight inaccuracy in the HICP can have tremendous consequences for the euro area's economy. It seems to me that there is no historical precedent for an economic indicator of such importance. That is why I think it is legitimate to ask some tough questions which should make us all reflect. Are we overstating inflation? Is it representative enough of the consumption patterns of the twenty-first century? Is it really comparable with the US? I do not have the answers to these questions, but they need to be asked.

Citizens' perception of inflation is clearly very different from measured inflation. How can this gap be narrowed? The most obvious problem of perception arose with the

introduction of euro banknotes and coin. Whereas by all measurements, inflationary pressures were minimal, consumers saw a completely different picture – a picture that has still not changed. Key indicators lose much of their meaning if citizens do not have any confidence in them; they will also lose faith in the policy-makers that use them. The debate since the introduction of the euro banknotes and coin is a clear example of this. Public perception of an excessively expensive new currency has damaged the faith of European citizens in the ability of policy-makers to deliver on their promises. Even the ECB has admitted that perceived inflation linked to the euro changeover has damaged the statistical reliability of price measurements. As long as measured inflation differs significantly from what is felt every day by the users of our new currency, there will continue to be a credibility gap.

Is the solution to come up with an alternative to the HICP? That our interest rates and our whole monetary policy are based on a narrow definition of inflation is at the very least somewhat frightening. The measurement of services by the HICP is of particular concern, as they are much harder to account for in a realistic and meaningful way. In any case, citizens perceive prices differently than policy-makers and economists.

Perhaps what we need is a more global macroeconomic indicator that can take into account new behavioural patterns of consumption and quality of life issues. This more dynamic concept would ideally encompass the variations in households' consumption and working patterns. We also need to ask whether quality improvements in products and services are not being systematically under-reported in our statistical system, or whether the rapid introduction of new products is not being properly accounted for. Many of the new products and quality changes come from technology and innovation, and technology moves so rapidly that our indicators cannot keep up. The knowledge-based era needs a knowledge-based measurement of prices if we want policy-making to be effective, and if we want citizens to have confidence in our indicators and use them as guidance in their everyday life.

The other key statistic that should seriously be focused on is productivity. We all understand how crucial productivity measurements are in describing the efficiency of our economies. Productivity describes the quantity of output produced by a given quantity of input. Productivity gains are the key to improvements in the material standard of living. The more output we obtain from a given input, the more wealth we generate. Productivity can be seen from several different perspectives: productivity per hour worked, productivity per capita, productivity per sector and total factor productivity. All these are crucial because not only do they inform us about technological progress and how well investment is being used, but they are also the basis of comparisons between the performances of individual economies. Productivity growth in the US has been outpacing that of Europe for a long time now. According to the figures, productivity per capita is much higher in the US than in Europe, because Americans work more hours than us. However, Europe's labour productivity, that is, productivity per hour worked, is not that far away from that of the US. Because of the importance of these comparisons for the future of our economy and our model of society, it is vital that these productivity figures are as close to reality as possible. But are they? Are we properly measuring the efficiency of our economies? Measuring productivity in the industrial sector is a relatively accurate task, but it is much harder to

measure precisely the productivity of services, which now constitute the bulk of our economies. The intangible output of services is particularly hard to quantify. Measuring quality-adjusted value added in knowledge-based activities is difficult in theory and virtually impossible in practice. Are our statistical systems in Europe addressing this issue seriously? It is imperative to devote many more resources to developing the tools, knowledge and expertise needed to tackle the changing nature of modern economies. This has to be one of the principal challenges for statistics in the years ahead.

4. The role of the European Parliament in ensuring quality statistics

Ever since the project of EMU began in the early 1990s, the European Parliament has been intimately involved in its design, development and advancement. With the adoption of the single currency in the euro area and the increased coordination of the macroeconomic policies of the Member States, overcoming the deficiencies in the European statistical system has become a key priority. In addition, the creation of the single market and the abolition of border controls resulted in the abolition of customs declarations, which underpinned statistical information about trade in goods between Member States. All this has meant a substantial increase in the volume of legislative work undertaken. The Parliament has fulfilled its duty in this domain, ensuring democratic accountability and transparency. The legitimate role of our institution in this field could be described as one of monitoring the impact of statistics on society, dealing with any complaints and suggesting changes or solutions.

The Parliament has produced legislation, together with the Council, on EMU statistics such as quarterly non-financial and financial accounts by the institutional sector; the creation of a Balance of Payments Committee; the establishment of a trans-European network for the production of statistics on the intra and extra-Community trading of goods; EU systems of labour statistics and structural business statistics; the establishment of a common statistical classification of territorial units to enable the collection, compilation and dissemination of harmonised regional statistics in the Community (the so-called NUTS system); and so on.

With regard to the ECB, our role of oversight has resulted, upon our insistence, in the central bank publishing its macroeconomic forecasts on a six-monthly basis, and making publicly available the econometric models it uses. Over the course of our monetary dialogue with the members of the Executive Board of the ECB, we have debated the measurement problems of inflation, the issue of inflation targets and price stability definitions, and contributed generally to a healthy debate on the importance of economic and monetary statistics for good policy-making.

Finally, in this context, the role of Eurostat has to be enhanced. The European Parliament believes that a strong European statistical office is needed, delivering robust figures and processing and publishing comparable statistical information at the European level. We need this aggregate view of the EU and the euro area in order to enable adequate comparisons between countries, regions and other economic blocs that will reveal whether we are doing things right or not.

5. Proposals for the future

It is not enough to analyse the situation and describe it as it is. A proactive and constructive attitude is also needed vis-à-vis the future of statistics. What this means is concrete proposals that aim to address some of the existing problems.

First and foremost, regarding monetary policy, we need a suitable, harmonised framework for data retrieving and analysis to achieve proper aggregated time series of monetary statistics. Statistics for monetary policy purposes require a special focus on timeliness as the transmission process of monetary policy action requires an appropriate timeframe. The timely provision of quarterly data on economic development should therefore be given priority over detailed yearly data series. The High-Level Group on Short-term Indicators has rightly called for further improvement in the provision of quarterly data in as timely a manner as possible. In the European Commission's Action Plan this issue was given priority as well. The US, where first estimates on social product data are available with a time-lag of just 30 days, serves as an example in that respect. To avoid bottlenecks, each Member State has to do its utmost to contribute to the timely provision of aggregate data. In other areas, for example asset price development, harmonised data are still rather limited. This is clearly not acceptable from a policy-maker's point of view, and a harmonised system needs to be implemented.

Statistics are also vital with regard to the EU structural funds policy. Fostering economic and social cohesion is at the very heart of the EU, which devotes substantial funds to this goal. For the structural funds alone, EUR 180 billion are assigned over the period 2002-2006. The role of statistics in this case is of the utmost importance: to highlight the differences in economic development and structures between individual countries and regions, in order to provide a proper background for policy decisions in the field of structural policy. In this respect – besides remarkable progress – much work still has to be done. We need clearer indicators to measure structural differences. This is particularly important in the light of enlargement, as economic and social differences will surely increase and become ever more complex.

To contribute to the above, we need a permanent external mechanism to evaluate the quality of statistics at the European level. Substantially more resources are also needed to fund academic work on statistics, with more numerous and widespread statistical colleges accompanied by EU funding in this area. We ought to “think out of the box” and innovate. I believe public statistical agencies can learn from private sector methods, and complement each other.

It is clear that in some other areas too, our statistical knowledge continues to be poor. Take for instance national accounts. There is a worldwide problem that distorts trade decisions and economic policy actions. If we were to add up the current account positions of all the countries in the world, we would not end up with a balance of zero as should be, but rather we would find that the entire world trading system is running a large deficit. Does this just mean that some countries are not correctly measuring their economies, or is it all of us? This and other questions need to be addressed at the international level.

6. Some comments on the two speeches

Referring to the contribution of Mr Remsperger, I agree that monetary stability should comprise both price stability and financial stability. He is indeed on the right track when he says that policy-makers do need a very extensive statistical and analytical framework to approach the analysis of financial stability. I found the stocktaking of available indicators for the measurement of financial stability also helpful. Mr Remsperger is also right in drawing attention to the costs of new statistics, which represent a restrictive factor in the development of new statistical requirements. Statistics are a public good and a scarce resource at the same time. It is therefore necessary to set priorities and to concentrate on the most essential user needs in a cost-effective way. But I concur with the assertion that there is still scope for the introduction of new statistical requirements.

With regards to the contribution of Mr Duchatczek and Mr Schubert, the conclusion that I derive is that while there is a creative element in the exercise of monetary policy, it must necessarily be based on a solid foundation of strong and reliable data. It is hard to disagree with this, and I would go so far as to say that the appropriate mix of art and science (more science than art, though) is the way forward to make monetary policy useful and efficient. With regard to the “innovative” two-pillar strategy of the Eurosystem, our model is still young and is still being tested: time will tell if the current strategy is the most suitable. For the time being, in Europe we are experimenting and opening up new ground on how statistics are used. I fully agree with the problems with the second pillar as far as information on the services sector is concerned. And I subscribe to their concluding remarks, in that the euro area has new and important global responsibilities. I am not sure if a “silent revolution” in statistics is really under way in Europe, but it is true that we have just started down this road, and though mistakes will be made, I believe we are on the right track.

7. Conclusion

In these times dominated by the speed of the media, decision-makers at all levels, be they in government or business, need timely and accurate statistics to make decisions and take actions. European citizens also need statistics to measure properly the performance of their economies and that of their leaders, and to obtain an accurate picture of contemporary society and where it is heading.

All this clearly calls for more harmonised data retrieving. That would mean a more coordinated approach to data retrieval and a strengthening of central European research in the field of statistics. In concrete terms, it could be worthwhile rethinking the role of Eurostat, giving it more responsibilities to coordinate data aggregation and analysis and, where necessary, enable it to retrieve data by itself. Such centralisation would give more weight to European data collection and would enable European institutions to have a stronger voice and input in the international sphere, in collaboration with multinational institutions (such as the UN, IMF, OECD, etc.). These statistics should enable policy-makers to compare the differences between countries and regions, by making it easier to compile national data together, both at an EU and EMU level. This aggregation is necessary to create the tools for the conduct of structural policies and economic policies.

Democratic societies clearly do not function properly without a solid basis of reliable and objective statistics. Thus European economic policy requires the timely provision of high-quality statistics, which should not be seen as a goal in themselves but as a means to an end, the ultimate end being to serve Europe's citizens. It is with this in mind that we should take the opportunity to thank Mr Domingo Solans for his efforts and work as the person responsible for statistics at the ECB, in particular for having contributed to our common objective of improving the quality and reliability of the European statistical system. Nevertheless, I still hope for more quantum leaps for European statistics – in the interests of growth, employment and innovation, Europe needs them.

Discussion summary

After the contribution of **Christa Randzio-Plath** (Chairperson of the ECON of the European Parliament), the Chairman of the session, **Guy Quaden** (Governor, Nationale Bank van België/Banque Nationale de Belgique), opened the floor and gave the audience the opportunity to ask some questions.

Christian Noyer (Governor, Banque de France) recalled the great importance of statistics in the eyes of the general public. Against this background, he asked whether giving too much relevance to past figures could potentially entail some degree of risk, given that the conduct of monetary policy is forward-looking.

Referring to Mr Noyer's observation and more generally to the issue of transparency, **Wolfgang Duchatzek** (Vice-Governor, Oesterreichische Nationalbank) noted that what is read in newspapers comprises both facts and comments. In a similar way, even if the main focus of the monetary policy decision-making process is on facts, the way figures are interpreted is also a relevant component of transparency.

On this issue, **Hermann Remsperger** (Member of the Executive Board, Deutsche Bundesbank) observed that data never speak for themselves. If we want to use statistics to communicate, we have to interpret them as well. He then addressed another observation made by Ms Randzio-Plath, according to which the entire monetary strategy of the Eurosystem is based on a narrow definition of inflation, leading to the question of whether we are possibly overstating inflation. Mr Remsperger stated his belief that the HICP is a good index. The measurement bias in Germany is generally thought to be less than half a percentage point, which does not constitute a problem for the conduct of monetary policy.

In answering Mr Remsperger, **Ms Randzio-Plath** stressed that there are always questions to be asked and issues to be clarified. For instance, when the EU is compared with other entities, is this always done in the proper way? If in the EU a narrow definition of inflation has been selected, it is natural to ask whether this is correct and appropriate. This choice must be explained and justified on the basis of a comparison with other relevant definitions.

On this point, **Nout Wellink** (President, De Nederlandsche Bank) took the floor and remarked that the broader the concept of inflation, the less the average citizen will recognise himself or herself in that index. Picking up on his comments, Ms Randzio-Plath again emphasised the issue of the discrepancy between perceived and measured inflation as already mentioned in her contribution.

II Business accounting standards and statistical standards: introduction

Nout Wellink

The continuing development of IAS by the IASB and their endorsement by government bodies inside and outside the EU open up the prospect of a simultaneous decrease in the statistical reporting burden and an improvement in the quality of statistics. As a matter of fact, these are additional goals formulated by policy-makers. The drafting of the IAS had a more limited goal: greater transparency and improved comparability of financial reports published by enterprises. In any case, it is clear that society may benefit from better cooperation between accountants and statisticians.

Reduction of the administrative burden – of which the statistical reporting burden forms just a part – is one of the policy goals of the present Dutch government. The government's objective is to reduce the administrative burden by 25% during its period of office from 2004 till 2007. It also intends to prioritise this issue during its presidency of the EU in the second half of 2004. Estimates suggest that roughly half the administrative burden is due to European regulations. Therefore, a critical review of the latter from the point of view of the burden they impose on enterprises would assist the Dutch government in reaching its goal.

The application of the IAS to the bookkeeping of enterprises provides an opportunity for statisticians to derive clearly defined, harmonised data from this source. To them, this is an attractive possibility to improve the quality of statistics. In this case, two requirements must be met: the IAS must be fully applied, and the definitions of the source data must conform with statistical demands.

For the time being, the IAS - with two exceptions - have only been made obligatory within the EU for listed enterprises and, moreover, are limited to their consolidated reporting. The IAS Regulation¹ is a step ahead compared with previous Regulations, because it opts for a single accounting standard, whereas the latter mainly imposed minimum demands that still allowed a large number of different accounting rules. Compilers of statistics will only be able to benefit substantially from the IAS if they are applied universally, e.g. not just in the consolidated accounts of listed enterprises, but also in the non-consolidated accounts of listed enterprises and in the accounts of unlisted enterprises. This extension may be realised spontaneously when listed companies choose the same accounting rules for their consolidated and unconsolidated accounts, and if the remaining enterprises themselves understand the advantages of conforming to an international standard. An

¹ Regulation EC/2002/1606, (July 2002).

alternative solution – without considering its feasibility for the moment – would be for the European Commission to extend the scope of the Regulation to all enterprises.

Of course, it is also important that the IAS are widely accepted outside the EU. In this respect, it is encouraging that the FASB (responsible for the drafting of accounting standards in the United States) and the IASB issued a common Memorandum of Understanding in 2002, in which they committed themselves to striving for harmonisation of accounting standards.

Statisticians have a special interest in a well-organised introduction of the IAS. Unlike the annual reports of enterprises, which are strongly directed towards the single period under review, statistics are mainly directed towards the production of consistent time series. Changes in the sources introduce the risk of breaks in time series. This is the price that has to be paid for the availability of better, harmonised data. On the statistician's side, this requires extra effort to process the source data.

The issuance of the IAS provides statisticians with a standard to which they may compare their own methodology. It forces them to be more aware of when their own definitions conform with the IAS, and when they differ. In the past, national accounts methodology existed independently from the IAS. The revised SNA 1993 contains only general references to accounting standards; the same holds true for the ESA 95. This was understandable, as a multitude of national accounting rules existed when the SNA 1993 and ESA 95 were issued. Moreover, the attention of statisticians was more focused on harmonising statistical systems: concurrently with the revision of the SNA, the drafting of the fifth edition of the IMF's BPM5 was completed and both statistical standards were (almost) completely harmonised.

The methodology of the national accounts, and related statistical systems such as balance of payments and government finance, has its own theoretical foundation. Therefore, the classification of transactions and their valuation and timing may diverge from the IAS. The question is whether these differences are fully justified. Similarly, is harmonisation with the IAS desirable, as this may improve the quality of statistics? Some differences are most probably unavoidable, such as the definition of income, which in national accounts is embedded in a larger consistent framework of production, income and expenditure. In other areas, for example, the treatment of non-performing loans, a reduction in the differences does not appear to be impossible.

An important difference between the IAS and national accounts is that the information needs of the former are viewed from the angle of the individual enterprise. The definitions are geared to that goal. The national accounts, on the contrary, are constructed as an interrelated system of transactions between sectors. The recording of a transaction in one sector must conform to the recording of the same transaction in another sector with respect to its valuation and timing. The same holds true for the balance of payments. This is indeed designed as a type of national statistics, but in order to derive a b.o.p. statement for larger regions like the euro area, definitions need to be harmonised internationally and transactions between countries must be recorded identically. This is also relevant for the studies on global discrepancies conducted by the IMF, which represent an important quality check on the work of balance of payments compilers all over the world.

In a remarkable change from the past, international statistical organisations have made an effort to compare statistical systems and the IAS. The IMF, Eurostat and the ECB have performed extensive comparisons of statistical areas under their competence with the IAS. By doing so, statisticians acquire greater insight into their own source data, and are forced to review critically their own methodological framework. This process of scrutiny has not yet been finalised. Much useful information may be found on Eurostat's website under 'Accounting and Statistics'.²

The ECB has made an extensive comparison in the area of **monetary statistics**. Its judgement is that universal application of the IAS by monetary financial institutions would positively influence the quality of monetary statistics. The ECB still has some reservations with regard to the classification of financial instruments and the valuation of some financial assets and liabilities. Both issues are covered by two standards, IAS 32 and IAS 39, which are under review by the IASB and have not yet been made compulsory by the European Commission. One disputed area is, for example, the application of fair value accounting on non-tradable balance items, such as loans and deposits. In monetary statistics, they must be recorded at nominal value. Application of the proposed changes to IAS 32 and IAS 39 would mean that source data are no longer usable for statistics without adjustments, and that supplementary information is necessary. In the area of monetary statistics, this is the most hotly debated issue.

Eurostat has made an extensive comparison in the area of **national accounts**.³ The main conclusion of the report is that application of the IAS does not provide source data that can be used directly in financial accounts. Therefore, a transformation process is needed, but this seems to be easier for non-financial enterprises, as book values in the IAS correspond more closely to the concept of market value in the SNA 1993. Because of the uncertainty about IAS 32 and IAS 39, the report is not yet able to judge the consequences for financial enterprises. With regard to non-financial accounts, the influence of the IAS is actually limited. In many respects, the accounting rules meet the demands of the SNA 1993; in other respects, transformation of the source data will be necessary, as is the case today.

In its report on the comparison of the IAS and external statistics, which comprise the b.o.p. and the i.i.p., the ECB concludes that the IAS roughly correspond to the concepts and rules for classification and valuation in the BPM5.⁴ In particular, this holds for the proposed valuation of loans and deposits at fair value. However, this conclusion seems to be disputable. The BPM5 prescribes that assets and liabilities in the i.i.p. are valued at current market prices, *with some exceptions* (paragraph 467), such as financial instruments that are not readily transferable (for example, loans and deposits). The latter must be recorded at nominal or face value (paragraph 471). This also means that it does not seem justified to note a discrepancy between the international investment position and monetary statistics with respect to the recording of loans and deposits. Apparently, the BPM5 leaves some room for different interpretations. This issue at any rate

² <http://forum.europa.eu.int/irc/dsis/accstat/info/data/en/index.htm>

³ Eurostat, "Comparison between IAS and ESA 95: Implications for financial accounts and non-financial national accounts" (2003).

⁴ ECB, "Impact of international accounting standards on external statistics" (12 September 2003).

underlines the usefulness of these comparative studies. Unanimity within the statistical community is vital regarding interpretation of both the IAS and its own methodological rules.

However, the IAS may play an important role – and actually aid statisticians – with respect to the valuation of traded loans. The BPM5 notes the risk of asymmetric treatment – because the creditor records traded loans at market value, but the debtor continues to record them at nominal value – but does not present a clear solution. This problem occurs both with the compilation of the balance of payments and the i.i.p. It would be very convenient if the IAS could provide a solution that also satisfies statistical needs.

Only recently, in October 2003, Eurostat started a large-scale technical comparison of the Regulation on SBS and the IAS⁵. A previous study into the differences between the SBS and the 4th Accounting Directive has already identified important differences that hamper the use of the balance sheet and the profit and loss account as statistical sources. For example, complications arise with the measurement of gross fixed capital formation. The 4th Accounting Directive leaves companies with a choice with respect to the presentation of the profit and loss account. If they opt for a breakdown of expenses *by function*, this would severely limit its use as a statistical source. Therefore, it is not in all instances possible to derive statistical information from company annual reports, and compilers of statistics are forced to resort to the use of surveys. This puts an additional, and probably avoidable, statistical reporting burden on enterprises.

The IMF's recently published Compilation Guide on **Financial Soundness Indicators** (FSI Guide) includes an extensive comparison between FSIs and the SNA 1993 on the one hand, and between FSIs and the IAS on the other.⁶ Implicitly, it also contains a thorough comparison between the SNA and the IAS. It is the first methodological manual that devotes attention to the relationship between statistics and accounting rules for financial reporting by enterprises. One of the conclusions reached by this study is that the definitions in the FSI Guide more closely resemble the SNA rules with respect to the valuation of financial assets and liabilities, but that the concept of profits in the FSI Guide corresponds more strongly to the IAS.

The most important question is how are we able to meet statistical information needs in a world in which IAS (or harmonised standards) are applied on a large scale? It must be recognised that the IAS are drafted primarily from the point of view of providing financial information about the individual enterprise. Statistical information in the IAS can be supplementary at the most. What counts is preventing a situation whereby classification or valuation standards are chosen in the IAS, but lead to shortcomings in the available source information for statistics, even when supplementary information is available. An example of a classification difference is the arrangement of current income and expenditure *by function* in the IAS and *by nature* in the SNA. The first classification roughly corresponds to the split into fixed and variable costs; the second follows a division by transaction categories that exist, for example, in national accounts (wages and

⁵ Eurostat, "Business accounting and the Structural Business Statistics (SBS) Regulation" (2003).

⁶ IMF, Compilation Guide on Financial Soundness Indicators (2004), see Appendix IV.

salaries, intermediate consumption, depreciation). It is important that the second division *by nature* may also be derived from the bookkeeping of enterprises. Another example of a classification difference concerns financial assets and liabilities: in the IAS, they are subdivided by nature and subsequently by liquidity. In the SNA, on the other hand, they are divided first by liquidity, and subsequently by legal characteristics. Moreover, the concept of liquidity differs: in the IAS it is based on remaining maturity; in the SNA, on original maturity. The next difference concerns the netting of financial items in the IAS against gross recording in the SNA. It is important that the information on gross items is not lost. This would lead to the conclusion that burdensome additional surveys might be required if statistical needs are completely ignored when applying the IAS.

An example of a difference in valuation methods is the valuation of loans (unless they are traded): *fair value* according to the draft IAS 39, nominal value according to monetary statistics, SNA/ESA and the BPM5. The present IAS distinguish between held-to-maturity investments and financial assets for trading. The former are valued at amortised costs, the latter at fair value. This distinction does not exist in the SNA, and therefore the difference in valuation does not conform to valuation rules in national accounts.

The next question is whether the authors of the IAS recognise the statistical needs, and also whether they realise that by taking these into account, they may reduce the statistical reporting burden on enterprises. If the answer is affirmative, it must still be determined how this may be realised. One possibility is to incorporate statistical needs in the IAS; another is to adjust the IAS in such a way that statistical source data can easily be acquired through supplementary surveys. Of course, it is important that statisticians are ready to translate their information needs in terms of the IAS. If the answer is negative, statisticians must plead their case with policy-makers, for example the European Commission. The latter must take into account the statistical needs for source information when it makes the IAS compulsory. One possibility is to incorporate these in a revised IAS Regulation, another to make them the subject of a separate Regulation. Confronted with similar problems with respect to monetary statistics, the ECB's Statistics Committee intends to propose an adjustment to the present BSI Regulation, which covers the statistical reporting by MFIs in the euro area, with the aim of ensuring that data on loans and deposits will continue to be reported at nominal value.

Round table discussion

“Harmonisation: a view for consideration”

*Carol S. Carson**

Thank you for the invitation to present views in this panel discussion. Indeed, I believe that, especially at this juncture, the subject of the panel is an important one and I hope I can make a contribution to the overall discussion.

My theme is as follows: I believe that the time is ripe to harmonise guidelines for macroeconomic statistics and financial accounting standards. In this presentation, I will first define what I mean by “harmonise,” then explain why I think the time has come to take harmonisation forward, and finally describe some of the benefits that I see could be obtained by harmonisation.

What does “harmonisation” mean?

For the purpose of our discussion, “harmonisation” may be defined broadly. The term here encompasses three interrelated kinds of efforts that would involve both accountants and statisticians. First, most obviously, harmonisation includes efforts to identify and describe differences between guidelines for macroeconomic statistics and financial accounting standards. Second, the term includes efforts to narrow differences. Third, where differences remain, and I am confident that there will be some, harmonisation includes developing bridges between the two sets of standards.

This definition is more than academic. There are some concrete recent and ongoing examples of efforts at harmonisation. I will mention two with which I am most familiar. One example can be found in the recently completed Compilation Guide on Financial Soundness Indicators. Financial soundness indicators, or FSIs, comprise a new field that brings together statistics, financial accounting, and information from prudential systems. The consultations that led to the Compilation Guide recognised clearly that it would be important to identify and describe carefully the variables used in the indicators. Among other tasks, this meant identifying and describing differences in terms such as “income” that might appear in more than one set of information. As a concrete result of some of

* The views expressed in this paper are those of the author and do not necessarily represent those of the IMF. I am grateful to Lucie Laliberté for stimulating my thinking on this topic. Many points made in this brief presentation were subsequently developed more fully in her paper entitled “Relationship Between Macroeconomic Statistical Guidelines and Accounting Standards,” presented at the 28th General Conference, International Association for Research in Income and Wealth, 22-28 August 2004.

the detailed and careful work, the Compilation Guide contains an appendix that provides a bridge between accounting and the SNA 1993 for the income and other variables used in FSIs.²

In addition, there is a formal initiative at the international level to try to harmonise statistical guidelines and accounting standards. This is the Task Force on the Harmonization of Public Sector Accounting (TFHPSA), set up in 2003. It brings together the International Federation of Accounts – Public Sector Committee and several of the international organisations that foster the use of international statistical guidelines as well as interested national representatives. One specific purpose is to narrow differences between the statistical guidelines and accounting standards, and another is to provide inputs for public sector activities to the ongoing update of the SNA 1993 (see below). For the former purpose, an important first step was to categorise differences and similarities between statistical guidelines and accounting standards. This led to a comprehensive matrix, now widely available, dealing with the boundary of the entity, definition and recognition issues, measurement issues, and presentation in the two sets of standards.³

Why now?

Accounting and statistics have coexisted for decades. It is reasonable to ask why I think the time is ripe to take harmonisation forward. At least three developments augur well that these and other initiatives could progress at this juncture.

First, and very important, the diversity of national financial accounting standards is narrowing. The IASB (earlier, the IAS Committee) is taking a lead at the world level to develop common reporting standards. Earlier, the diversity among national standards about aspects of recognition, timing and measurement had represented an even greater impediment to harmonisation, as there was no one body of financial standards with which the multinational macroeconomic statistical guidelines could be harmonised.

Second, the move towards the use of fair value in accounting standards is narrowing the gap with valuation used in national accounts. Previously, a fundamental difference in the valuation of the two sets of information had been a major impediment to harmonisation. National accounts record assets at market value, while accounting standards record them at historical cost. The latter valuation is increasingly challenged as these costs fail to reflect the true financial situation.

Third, research has enhanced knowledge in areas where cross-fertilisation can be helpful. In particular, research that cuts across finance, accounting and statistics has enhanced understanding of the valuation of assets.

² See Appendix IV, Reconciliation between the Guide's Methodology and National and Commercial Accounting. The complete Compilation Guide is available on the IMF website at <http://www.imf.org/external/np/sta/fsi/eng/2004/guide/index.htm>.

³ The updated matrix is available at <http://www.imf.org/external/np/sta/tfhpsa/2004/030504.pdf>.

What are the benefits?

I see two major benefits that could flow from harmonisation, both of which contribute in important ways to larger goals. First, at a time when the burden on respondents who have been asked or are required to report information is a growing concern, attempts to use the basic data in multiple ways can make an important contribution to minimising the burden. Harmonised standards yield the possibility that the same piece of information could be picked up and used by both accountants and statisticians within their respective frameworks. In addition, although statistics emphasise aggregates, the availability of detail, such as is available in accounting data, is increasingly seen as important for trade, industrial, financial and a broad range of other analysis and policy. Second, users of the two sets of information can more readily interpret results. Both try to provide information on the same underlying realities and, granted that they do so from different perspectives, unhelpful differences only cloud their interpretation.

Looking forward

The international effort to update the SNA 1993, which is the international set of guidelines for national accounts and the overarching guidelines for balance of payments, government finance, and monetary and financial statistics, is now under way. As the last update was over a decade ago, this update therefore provides an opportunity to build on the progress made in recent years to advance the goals of harmonisation of accounting standards and statistical guidelines. I believe both accountants and statisticians should seize the opportunity to make a difference.

“New business accounting standards: an opportunity for public European statistics”

Jean Cordier

It has become very clear to the CMFB that official statistics should not underestimate the coming important change to the IAS.

Nowadays, ever more statistical information is drawn from private accounting sources, and not only for business or money and banking statistics. These types of sources are also very important for national and financial accounts. Their importance is also growing for b.o.p. statistics, which increasingly rely on direct reporting from companies rather than on indirect reporting from bank settlements.

Two very different attitudes can be adopted in the face of this upcoming change:

- On the one hand, there may be some benign neglect, partly owing to the uncertainty surrounding the matter, which is still significant. Moreover, some public offices and tax departments – not to mention statistical institutes – may think that this matter is only relevant to financial markets and institutions, and that they will always be able to meet their specific needs by requesting additional specific questionnaires on top of the current accounting reporting system. Unsurprisingly, this approach neither sounds very cost-effective nor very intellectually challenging.
- On the other hand, one could try to benefit from the current dynamics to improve some aspects of the European statistical system. The aim of the whole enterprise is to achieve a higher level of data quality. The overall improvement should also come from the settlement of more cost-effective reporting channels for European statistics.

The CMFB has clearly opted for the second stance. Certainly the field is still very open, and its borders are neither clear nor fixed. Despite this, we think there is a way for European official statistics to benefit actively from and contribute to the momentum induced by the implementation of the IAS. This is a medium-term strategy which should help to overcome the current difficulties by promoting both standardised statements of public needs and efficient reporting techniques.

I- A clear opportunity to be seized

• Some risks may exist

It may seem odd to speak of an opportunity when important risks owing to the new IAS are so commonly mentioned. Two major risks in particular stand out:

- Firstly, the scope of implementation and timing is expected to differ across countries and types of firms, which will induce some loss of comparability and many breaks in the time series.
- Secondly, loose interpretations of the new rules are to be anticipated.

In certain instances, the IAS approach leaves considerable room for interpretation. For example, very often the intention behind a specific transaction may be considered as being more important than its objective characteristics.

• But these risks should be turned into an opportunity

However, these risks can also be seen as an opportunity, which takes two main forms:

- Firstly, data can be harmonised further across Europe.
- Secondly, more cost-effective reporting channels in Europe can be promoted. This is vital to save resources both in commercial firms and in statistical offices, both of which should indeed be effective allies in this respect.

II- Further European action

Only if further European action is undertaken will we reap the full benefit of change.

• Further European action is needed

- Public institutions may fear that with the new IAS, some basic information may be missed out: they need transparent track records of effective flows, not just sophisticated evaluations of current wealth.

The IAS are clearly intended to improve the quality of information for investors, which represents a clear benefit for everyone. However, at the same time this specific approach makes public bodies afraid that the information they need for public policies could be neglected, a worry reflected in the ECOFIN council on 15 July 2003. For instance, regarding the income statement, it is feared that a breakdown by function would be systematically preferred to a breakdown by nature of activities, whereas the latter is most useful for the computation of national accounts.

- Positive externalities should be exploited by setting a common basic European framework for multipurpose reporting.

Economists in charge of statistics are aware that the same basic data source may have several different uses according to the segment of the economic policy concerned. They are also aware of progress in the IT sector that allows different users to access online the same type of information. They are also convinced that important positive externalities can be exploited when reporting accounting data. This is perhaps simply because official statistics are at the crossroads of private data, quantitative data management and economic policy.

Is all of the above merely utopian, or an extremely long-term prospect? Not necessarily: it can be achieved if further effort is devoted to the European initiative.

- **European public statistics should promote two complementary standards**

- One useful action would be to design a core chart of accounts for firms of different sizes. This is the type of development that the Central Balance Sheet Data Offices are very familiar with, as they have extensive experience in setting questionnaires based on private accounting. Their European Committee is in the process of finalising an important work aimed at building such a core chart of accounts on the IAS. The IASB project on accounting standards for small and medium-sized enterprises is likely to develop along the same lines.
- Technology may also be of assistance. More efficient reporting channels for accounting data seem to be within reach. The implementation of mark-up languages (XML, short for “extensible mark-up language”) to the world of business data seems to be a very promising development (yielding XBRL, short for “extensible business reporting language”). Surfing on the internet wave, it allows any provider to offer simultaneously data to different users in only one repository. The point here is that it is a very good discipline to cast the needs of users in the mould of such IT languages. This should help to define one common core set of multipurpose data that is widely accessible. On top of this set, data specific to more demanding and costly uses could always be added.

This approach would also have a positive impact with regard to the acceptance of the new accounting standards and the training of the many professionals or educated people who will have to deal with them. This is a dimension which should not be overlooked.

Discussion summary

The Chairman of the session, **Nout Wellink** (President of De Nederlandsche Bank), introduced this theme, stressing that business accounting standards and statistical standards are often conceived as two completely different worlds, which often ignore each other, even within central banks. However, both parties may benefit from increased cooperation. He then introduced the participants in the round table discussion and started by presenting his own introductory paper.

The old-fashioned concept that defines central bankers as artists, meaning that they act intuitively when taking decisions, **Mr Wellink** considers to be primitive. In fact, a considerable amount of information is needed to carry out this profession. He recalled that statisticians are now realising the benefits, in terms of methodology and data quality, of knowing the accounting world better. Many studies, not all of which have been finalised, have been carried out in this direction, with the aim of understanding accounting better, and also as an input to the further development of international statistical standards, such as the SNA and the BPM. In addition, **Mr Wellink** wondered how accountants will react to statistical demands. **Mr Wellink** mentioned that he is keen to reduce the administrative burden on companies, which is also a goal of the present Dutch government (in particular, to reduce the burden by 25% within the next few years). For this reason, he called for a critical review of the regulations (including statistical regulations) that have an impact on the administrative burden on companies. He recalled a couple of experiences in connection with this, and invited the participants to make additional proposals on how to reduce this burden.

Paul Rutteman (Secretary General of EFRAG) stated that although financial reporting requirements are addressed to investors, there are some overlaps with statistical requirements. In fact, if both investors and users of statistics throughout Europe were to use the IAS (recently renamed the IFRS), there would be clear advantages in terms of transparency and data comparability. In particular, this would result in the following benefits:

- More consistent accounting thanks to fewer options
- Greater comparability across Europe
- The use of fair values where appropriate (which avoids issues regarding holding gains)
- Improved reliability of figures
- Better disclosure of information.

There are also risks to be faced which concern the remaining accounting differences (for instance, concerning the accounting of insurance, concessions, the use of the fair value option, and regarding property, plant and equipment). The use of judgement also remains high; volatility must be interpreted correctly; mismatches arising from mixed accounting models must be avoided where possible (especially for banking and

insurance); there is an overall lack of experience in the use of fair values; certain issues are becoming increasingly complex (e.g. the accounting of stock options); and so on.

Mr Rutteman recalled that the ECB has expressed concerns from a financial stability perspective on the use of the fair value option. In response, the IASB recently issued an Exposure Draft to amend this part of IAS 39. However, he emphasised that while supervisors believe that the IFRS represent a major improvement compared with the past, those who actually prepare financial statements are generally less happy about it. Supervisors are concerned that the use of fair values will increase volatility. However, statisticians (unlike prudential supervisors) are not interested in smoothing profitability figures, but rather in collecting “real” figures.

Mr Rutteman also noted that the scope of the IFRS extends beyond Europe, and is indeed a worldwide phenomenon. In this context, he mentioned the convergence project with US GAAP. The IFRS also require the disclosure of additional information, e.g. on stock options. However, the IFRS must be handled with caution, especially as far as banks and insurance companies are concerned. In particular, insurance companies face difficulties when assets are valued at fair value, while liabilities are recorded at cost. Similarly, banks complain that the IFRS are not in line with their risk management techniques. Moreover, companies need to gain experience in order to handle the fair value option properly as well as the requirements in terms of the identification of goodwill impairment. He concluded that, in general, mismatches for the financial industry arise owing to the use of mixed models (i.e. historical cost accounting and fair value accounting). He stressed that fair values should mainly be used for liquid markets. In sum, the IFRS will bring more transparency, but at the same time also entail more complexity and extra work to interpret company data. Finally, he mentioned that banks are anticipating possible implementation problems in the transition to the IFRS in 2005, owing to delays in agreeing on hedge accounting issues and the subsequent endorsement process by the European Commission. Nevertheless, some banks have already announced that they will fully apply IAS 32 and 39, regardless of whether the Commission has finally endorsed the IFRS or not (because they do not have to use the fair value option and there would be no restrictions preventing them from following the IAS 39 requirements for hedge accounting).

Carol Carson (Director of the IMF Statistics Department) stated that the time is ripe to harmonise guidelines for macroeconomic statistics and financial accounting standards. However, she qualified this statement by explaining that “harmonisation” in this context means that accountants and statisticians should work together to a) identify and describe differences, b) narrow these differences, and c) develop bridges where differences remain. As an example of harmonisation, she mentioned two experiences. First, the IMF compilation guide on financial soundness indicators: given its complexity and breadth, the drafting of this guide not only involved experts in the field of financial supervision but also entailed close cooperation with accountants, particularly in the preparation of a reconciliation table of financial reporting with the SNA 1993. Second, the activity of the TFHPSA: this effort brings together accountants and statisticians, and its work is being timed to feed into the review of the SNA.

According to Ms Carson, the time is ripe for more harmonisation for three main reasons. First, because the diversity of the national business accounting standards has been an impediment to harmonisation. Second, fair valuation narrows the gap between accounting practice and statistical valuation requirements, leading to more realistic valuations. Finally, research in this field has increased knowledge of the areas where cross-fertilisation can be achieved. Ms Carson concluded that harmonisation basically brings two benefits: reliance on the same common elementary data for a number of purposes, and better interpretation of data by users. The current reviews of the SNA and the BPM5 also offer a unique opportunity to bring the accounting and statistical worlds closer to each other.

Klaus Pohle (President of the German Accounting Standards Board) stressed that while statistics based on cash-flow data are reliable and precise, statistics derived from accounting data imply a certain degree of judgement which may change over time. The comparison of accounting-based statistics in different countries is only possible after adjustments (or interpretations) of the basic data. In fact, what he terms a “paradigm change” is expected in 2005. He noted that, given the diversity and degree of maturity of the national business accounting standards, no cross-country comparisons are possible unless adjustments are made. Moreover, a one-off adjustment to the time series will be necessary owing to the introduction of the IAS.

According to *Morgan Stanley Research*, the IAS will have the largest impact on the accounts of banks and insurance companies (see the table below)¹:

| | SPEs and Securitisations | Financial Instruments | Pensions | Provisions | Liability/Equity Classification | R&D |
|--------------------------|-------------------------------------|----------------------------------|-----------------|-------------------|--|----------------|
| Banking | H | H | M | H | M | L |
| Insurance | M | H | M | H | M | L |
| Chemicals | M | M | M | M | M | L |
| Pharmaceuticals | M | M | M | M | M | H |
| Oil & Gas | M | M | M | M | M | L |
| Media | M | M | M | M | M | L |
| Food & Beverages | M | M | M | M | M | L |
| Utilities | M | M | M | M | M | L |
| Telecommunications | M | M | M | M | M | H |
| Luxury Goods & Cosmetics | M | M | M | M | M | L |
| Autos | M | M | M | M | M | H |
| Technology | M | M | M | M | M | H |

The implications of the IAS are expected to vary considerably across countries. For instance, the impact of the IAS concerning financial instruments is expected to be high in France, Italy, Spain and Switzerland; the accounting treatment of pensions is a key topic for the UK; the IAS will have a major effect on SPEs and securitisations in France; and finally, Italy expects the treatment of provisions to have a considerable impact.

¹ Note: H = High significance; M = Medium significance; L = Low significance, *Source: Morgan Stanley Research.*

Among the balance sheet items affected by the IAS, **Mr Pohle** mentioned pension liabilities; for example, German companies are expected to raise their pension liabilities by 50-100%. Therefore, indebtedness ratios are likely to increase, while companies' return on investment may decline in some cases. Finally, **Mr Pohle** noted that the forthcoming change in accounting will not proceed at the same speed in all countries. Rather, the adjustment will take place over time, as several countries have permitted companies to change from local GAAP to the IAS since 1998.

Jean Cordier (Chairman of the CMFB) stated that the Committee is aware that the impact of the IAS should not be underestimated, because statistics rely heavily on accounting. He continued by analysing the risks introduced by the IAS (in terms of different implementation across countries, interpretations left open, loss of comparability, etc.) which should be turned into opportunities, such as the further harmonisation of data across Europe and the promotion of more effective reporting channels. He went on to stress the need for European action, in order to avoid an increase in the statistical reporting burden. In particular, while the IAS are able to track the current wealth of enterprises, much attention should still be paid to the recording of effective monetary flows. Moreover, the IAS offer the possibility to exploit externalities such as a common framework for multi-purpose reporting. In this context, Mr Cordier suggested that EU official statistics would benefit from the introduction of a core set of accounts for firms of different sizes and from the use of a common and widespread reporting technology, possibly based on a language such as XBRL. The European Committee of Central Balance Sheet Offices is very active in these fields. In fact, the European Commission is testing the possibility of such an approach with the IASB.

The Chairman then gave the audience the opportunity to address questions to the participants of the round table discussion. **Enrico Giovannini** (Chief Statistician, OECD) remarked that there is an increasing demand for statistical analysis of micro-data, both at the national level and to compare countries' performance. For this purpose, the IAS represent a very welcome development towards the harmonisation of data collected for administrative purposes and used for compiling statistics. Moreover, he stressed the importance of business data to measure stocks and not only flow concepts such as GDP. For this reason, he agrees with the need to harmonise a core set of variables representing both stocks and flows. **Coen Voormeulen** (De Nederlandsche Bank) queried how cooperation between the different business areas could be involved in the decision-making process of both the IAS and international statistical standards. **Mr Rutteman** replied that the aim of EFRAG is to collect the views on the IAS from the marketplace. Hence, it is keen to also establish closer links with statisticians. In fact, an Advisory Forum has recently been established and will meet for the first time on 17 June 2004. **Mr Wellink** wondered how best to foster a consistent application of the IAS across countries. **Mr Pohle** replied by recalling both the closer convergence with US GAAP and the impressive progress in terms of data harmonisation is currently being made in Europe and will become apparent from 2005. While he admitted that the first-time application of the IAS might suffer from some shortcomings owing to differences in the interpretation of the new rules, it is expected that the data quality is expected to will be the same in most countries as from 2007. On the latter point, however, **Mr Rutteman** noted that for small and medium-sized enterprises, this

convergence might take more time. **Eva-Maria Nesvadba** (Oesterreichische Nationalbank) commented on **Mr Giovannini's** initial remark, stating that she considers that statistics serve macroeconomic analysis on the basis of a well-defined framework. For this reason, she questioned whether the demand for microeconomic analysis, though legitimate, would challenge such a framework. **Ms Carson** commented that if accountants and statisticians are prepared to enter into a genuine dialogue, convergence in some fields could be found. In her opinion, both the macroeconomic analysis and the microeconomic analysis have their merits. Both are needed, together with some sophisticated behavioural and expectations theory. In general, she sees the micro perspective fitting into the macro one. However, it is important to draw a road map for this purpose. **Mr Pohle** mentioned the case of on-balance sheet recognition of provisions as another example of the higher degree of data reliability introduced by the IAS. **Mr Cordier** emphasised the merits of a pragmatic approach and of a core set of accounts. These would create an opportunity to establish a dialogue between statisticians and accountants, and would help to get the new standards widely accepted in accounting circles and beyond. He also stressed the need for statistical requirements to be more widely accepted when new IAS are proposed or old IAS are amended. In this regard, he called for concrete action from accountants.

III Policy uses and future developments in balance of payments statistics

How does globalisation affect the use of balance of payments statistics for policy purposes?

*José Viñals**

1. Introduction

The most important structural change that has taken place in the world economy over the last two decades has been the very significant degree to which trade and financial relationships have increased across countries. This phenomenon – popularly known as globalisation – is having a deep impact on the way modern economies work and on the manner in which the effects of shocks and policies are transmitted internationally. Thus, it should come as no surprise that discussions focusing on the economic and financial effects of globalisation nowadays figure prominently in the agendas of both policy-makers and private sector participants.

Because globalisation is nothing but the reflection of the growing interdependence of national economies, and since b.o.p./i.i.p. are precisely designed to record such interdependence in the most faithful way possible, it follows that the more globalisation progresses, the more interest there is in such statistics both from the economic and the policy-making viewpoints.

However, the forces unleashed by globalisation also have the potential to weaken, sometimes fundamentally, the connection between the underlying economic phenomena and their statistical representation. First, the liberalisation of trade and capital flows makes it harder to collect the information that allows such flows to be recorded properly. Furthermore, as globalisation leads to the delocalisation of economic and financial activities, there is a risk that the residence criterion on which b.o.p. statistics are based may fail to capture properly the true underlying economic behaviour. Consequently, while globalisation has made the statistical recording of economic and financial interlinkages all the more relevant, it has also made it harder to make such a recording properly or to continue to draw correct and accurate monetary and economic policy implications from b.o.p. statistics.

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Of course, globalisation also has a special significance in Europe, since the creation of the euro area can be regarded as both a consequence of the process of globalisation – one money was finally created to accompany one market – and a further step in this process. Indeed, the creation of the euro area has provided the world with a new regional currency which is now the second global currency after the dollar. Moreover, the resulting elimination of exchange rate risk within the euro area, together with the deep degree of integration of money markets already achieved in the context of the single monetary policy, are powerful forces pushing for economic and financial integration within the euro area. Finally, EU enlargement, which on 1 May 2004 will add ten new Member States to the EU, confirms that globalisation continues to thrive in Europe.

Precisely because of the creation of the euro area, some important consequences have emerged that are very closely linked to the conduct of the single monetary policy. This policy is – as we all know very well – firmly oriented towards the pursuit of price stability. This has made it essential to create euro area-wide statistics which were, until a few years ago, simply non-existent. The “First for Europe” principle is therefore nothing less than the natural consequence of the new European monetary and economic policy framework.

As concerns b.o.p. statistics, the advent of the euro area also entails a number of challenges. From the viewpoint of the single monetary policy, there is no doubt that b.o.p. statistics play a relevant role: firstly, as indicators of economic, financial and monetary developments that help the ECB decide the appropriate monetary policy stance; and secondly, to enlighten our understanding of how monetary policy changes are transmitted internationally and how external shocks may affect domestic conditions in the euro area. In respect of national b.o.p. statistics, the existence of the euro area also poses a number of challenges related to the different light in which one has to understand and analyse such statistics now that the future paths of the exchange rate and of interest rates in any Member State are no longer linked to the current and prospective evolution of its b.o.p..

The main message of this paper is that, given the importance of properly understanding the functioning of highly interdependent economies, b.o.p. statistics will continue to be of great relevance to both policy-makers and economic agents. This is even more so in the euro area, given the importance of properly taking international factors and repercussions into account when conducting the single monetary policy.

The paper is structured as follows. Section 2 looks at the general challenges that the process of globalisation poses to b.o.p. statistics. Section 3 explains the usefulness for policy-making of b.o.p. statistics nowadays concerning monetary and economic policies in the euro area. Section 4 examines in some detail the specific policy challenges posed by globalisation to b.o.p. statistics. Finally, Section 5 draws the paper’s main conclusions and implications for policy.

2. Globalisation and balance of payments statistics

The increasing interdependence of national economies that globalisation entails spans several basic dimensions which have important implications for b.o.p. statistics. While both commercial and capital flows have been rising rapidly over the past two decades, as previously existing trade barriers and exchange controls have been reduced or eliminated, it should nevertheless be acknowledged that capital flows have risen considerably more rapidly than trade flows (Federal Reserve Bank of Kansas, 2000; Obstfeld and Taylor, 2002). In fact, during the period 1980-2002, while the total aggregate dollar value of world nominal imports increased at an average annual rate of 5.5%, the dollar value of total aggregate external liabilities increased twice as fast at an average annual rate of 11% (Greenspan, 2003). Figures 1 and 2, which depict the expansion of trade in goods and services and of external positions in the OECD over the past two decades, basically tell the same story for industrialised countries as for the world as a whole.

The expansion in the global exchange of goods, services and financial assets has translated into an increasing dispersion in current account balances, which also reflects the easier financing of external deficits in an environment of free capital mobility and increasingly sophisticated financial markets (Freud, 2000; Edwards, 2003). The well-known finding of Feldstein and Horioka (1980) that there seemed to be an extremely high correlation between national saving and investment positions and thus a considerably low dispersion of current account imbalances is now much less so. Indeed, this correlation has gone from 0.97 in the 1970s to 0.96 in the 1980s and to less than 0.80 most recently when looking at industrial countries (Greenspan, 2003). Thus, in today's world, external imbalances among the major global partners are taking on a dimension that is greater than in the past – as with the US current account deficit – since they tend to be more easily financed over longer periods.

While capital flows have dramatically increased in size, they have also become highly volatile, at least as far as short-term flows are concerned. This volatility is underpinned not only by the fact that investors' access to almost instant information and new technologies allows them to alter with great speed their global portfolios, but also due to well-known market dynamics such as herding and so on. However, even with the traditionally more stable capital flows, such as foreign direct investment, things seem to be different too. In today's economy an increasing number of firms and financial intermediaries have become multinational as a result of pursuing international diversification strategies. This implies that knowledge about the i.i.p. has become increasingly relevant as a source of information about the location of direct, portfolio and other investment.

Consequently, as economies have become more open and exhibited larger and more dispersed current account imbalances against a background of significantly larger and more volatile capital flows, which have led to a wider international diversification of assets and liabilities, interest in b.o.p. statistics has increased compared with the past.

As policy-makers we care about b.o.p. statistics because they provide relevant information that can help us answer certain questions and formulate better policy

decisions. Typical questions include: is the US external deficit sustainable at the present exchange rate levels, or will further adjustment be necessary? How could a further fall in the dollar against the euro affect the European recovery and the balance of risks to price stability in the euro area? How much are purchases of US bonds by Asian central banks preventing a further fall in the dollar and keeping long-term interest rates in the US lower? What is the most advisable international allocation of responsibilities in addressing the present global imbalances through policy action? How large are the trade surpluses that Argentina should run in the future to service its official and private external debt? To what extent do the potentially very high capital flows into the new Member States of the EU, which are needed for real convergence, also subject their economies to the risk of macroeconomic or financial instability in the transition to EMU?

The above questions show that b.o.p. statistics are useful for a number of policies (Banque de France, 2002; South African Reserve Bank, 2002; Office for National Statistics, 2001). At the national level, they provide important inputs for the conduct of monetary, financial, fiscal and structural policies. At the international level, they are a valuable source of information for the design of mechanisms to prevent and resolve crises and to contain international contagion. They also play a role in international policy discussions such as those within the G7, G10 or G20, which often relate to the risks posed by global external imbalances and how to reduce them. Table 1 summarises the different ways in which b.o.p. statistics are useful in each of these policy domains.

While past experience tends to support the view that the usefulness of b.o.p. statistics of a given quality tends to increase with the degree of globalisation, this may not always be the case in the future. To illustrate this idea in a simple way, Figure 3 represents the usefulness (for policy) of b.o.p. statistics as a function of the degree of globalisation. Clearly, when economies are closed, there is no need to have b.o.p. statistics since there is no exchange of goods, services or capital. Similarly, in an extreme case where the degree of globalisation is so high that the national economies are as integrated – both in economic, financial and institutional terms – as the individual states in the US, the value of b.o.p. statistics becomes quite small (although you then need good regional statistics). Without going to such an extreme, it is fair to assume that as globalisation becomes very intense, the value of b.o.p. statistics will decline beyond some point, since the nationality – or even supranationality – principle becomes so much more important from an economic viewpoint relative to the residence principle upon which traditional b.o.p. statistics are based. So, it is natural to think that while the usefulness of b.o.p. statistics of a certain quality increases as globalisation advances, such benefits – while continuing to be positive – may begin to diminish after a certain point (although as the shaded area in the figure shows, it is not clear how rapidly these benefits may decline after reaching a maximum). My feeling is that economies are nowadays in the ascending segment of the curve, although there may be reasons to think that they will be approaching the global maximum over time as globalisation continues. However, this is only likely to happen in the very distant future.

Turning now from benefits to costs, Figure 4 illustrates how globalisation affects the costs of producing b.o.p. statistics of a certain quality. As can be seen, the costs rise as

globalisation advances, since many of the traditional sources of information have become less relevant (e.g. many of the previous controls on capital and trade flows were a key source for the statistics) and new, more costly methods of gathering the necessary information have to be put in place to maintain a reasonable degree of quality. It is also quite natural to think that costs tend to increase faster as globalisation increases, ultimately making it extremely costly to collect such statistics while, as seen in Figure 3, they become much less useful.

Figure 5 puts together both benefits and costs to make the basic point that b.o.p. statistics of a certain quality will need to be collected – even at an increasing cost – as long as their usefulness for both economic agents and policy-makers outweighs their production costs. My feeling is that this is the case today and is likely to continue to be the case in the foreseeable future. Specifically, it would be desirable to make efforts to produce b.o.p. statistics of a certain quality insofar as the cost required to do this (including the complementary statistics which are deemed to be necessary) does not outweigh their usefulness. Alternatively, one may still want to continue producing b.o.p. statistics beyond this point, but settling for a lower overall quality insofar as this still allows the usefulness of such less-precise b.o.p. statistics to more than compensate for their production cost.

3. The usefulness of balance of payments statistics in the euro area

As a general point, the availability of reliable, timely and comprehensive statistics is clearly of critical importance for the conduct of monetary and economic policies (ECB, 2001). While it is a fact of life that policy is always conducted under uncertainty, the quality of statistics can very much contribute to reducing this state of affairs. Good statistics give us a better idea of the current state of the economy and help us refine our econometric models so as to better capture the behavioural relationships that are then used to forecast future price and output developments and to ascertain the impact of policy actions. Good-quality and timely statistics allow policy-makers to reduce the so-called data, parameter and model uncertainties, thus contributing to better, more timely policy decisions and, ultimately, to improved economic performance.

Given the economic and (all the more so) financial interdependencies existing between the euro area and the rest of the world, it is only natural to think that good and timely b.o.p. statistics at the level of the euro area can also significantly contribute to the overall quality of the single monetary policy and of other policies in several ways. When examining the usefulness of b.o.p. statistics in the euro area and how globalisation is likely to affect them, a distinction should be made between the usefulness of such statistics at the euro area-wide level and at the national level.

Firstly, euro area aggregate b.o.p. statistics play a role through their contribution to the two pillars of the stability-oriented single monetary policy. With regard to economic analysis, in addition to being an indispensable building block of national income and national financial accounts, such b.o.p. statistics can be useful as shorter-term indicators to assess current and prospective economic and price developments in the euro area, complementing other statistics. Specifically, such statistics provide an interesting and different angle on the interplay between supply and demand forces, and this may be

revealing as regards the extent to which the rate of expansion of aggregate demand is or is not likely to be consistent with the maintenance of price stability in the euro area. For example, while it is a truism that an external deficit reflects the fact that absorption is higher than output, under certain conditions this is also a reflection of excess demand pressures. In addition, depicting the current account balance as the sum of private and public saving-investment net balances is helpful for gaining a first impression of whether an overall external deficit reflects, for instance, a higher fiscal deficit or higher private investment, which have very different economic implications. Looking at the sources of an external deficit and how it is financed – through FDI, portfolio or other investment flows – is also valuable as a rough guide of the sustainability of current account imbalances and of potential exchange rate pressures which could affect future price developments. As concerns monetary analysis, euro area-wide b.o.p. statistics are necessary to enable us to compile and analyse the external counterpart of monetary developments (Frenkel and Johnson, 1987; Polak, 2001; and ECB, 2003).

Euro area-wide b.o.p. statistics also play a role in helping identify the international transmission of monetary policy measures adopted in the euro area through the relevant trade and capital flows. Such b.o.p. statistics also reflect how external developments affect the euro area economy. Finally, euro area-wide b.o.p. statistics are not only useful for the single monetary policy, but also for all economic policies with a European dimension. For instance, changes in trade and capital flows are informative concerning competitive advantages and disadvantages in certain sectors or markets across the euro area, which may be useful both for designing structural reforms and for conducting international trade negotiations.

As concerns the economies of the Member States, the existence of the euro necessarily means that national b.o.p. statistics must lose part of their direct value for national policy-makers since – unlike in the case of national currencies – their evolution is no longer linked to potential exchange rate developments, and the financing of national current account imbalances is easier since a significant part of exchange rate risk (intra-euro area) has been eliminated. But this loss at the national level – which reflects the transfer of monetary sovereignty from the national to the supranational sphere – does not mean that b.o.p. statistics do not continue to be valuable in a national context. In addition to being a necessary building block of national income and financial accounts, national b.o.p. statistics are also necessary to enable the euro area-wide b.o.p. statistics to be obtained by aggregation, thus playing an important role in the conduct of the single monetary policy. Moreover, national b.o.p. statistics can be particularly helpful at the national level in identifying national supply and demand imbalances or competitiveness problems and in providing useful hints for domestic fiscal and structural policies (see Table 1). Furthermore, given the internationalisation of the economic activities of financial and non-financial firms, the analysis of investment flows and the i.i.p. may also reveal how the country's fortunes are linked to the rest of the world and what are the likely future sources of external shocks (e.g. when significant investments are made in emerging market economies). To sum up, national b.o.p. statistics continue to be valuable for those policies which remain under the direct control of national authorities after the creation of the euro area.

The graphical representation used earlier also illustrates how globalisation affects the usefulness and costs of b.o.p. statistics in the euro area both at the national and euro area-wide levels.

Let us consider, for example, the case of any euro area country, say Spain. Before the creation of EMU, and given the existing degree of globalisation, Spain was at the point marked SP98 (Spain in 1998) in the upper part of Figure 6, which depicts the national benefits from using national b.o.p. statistics. Following the creation of EMU, the benefits to be gained from national b.o.p. statistics by Spanish policy-makers became lower as they could no longer be used to assess future exchange rate pressures on the (now defunct) peseta or for the conduct of the (now relinquished) national monetary policy. Thus, immediately following the creation of EMU, the benefits for national use are lower at each degree of globalisation (or integration), with Spain moving to the point SPEURO along a lower benefit schedule. Of course, as the very existence of the euro area leads over time to a higher degree of integration between the constituent national economies, the benefits to be reaped by Spain should become progressively greater, meaning that the point SPEURO should move rightwards along the lower schedule with time.¹

Moreover, if one looks at the lower part of the figure, the costs of producing national b.o.p. statistics of a given quality should have actually increased following the creation of EMU. Spain would have thus moved from SP98 to a position like SPEURO in the now-higher cost schedule. This point is also likely to shift rightwards over time along the new schedule as economic and financial integration deepens within the euro area. Consequently, the net benefits (benefits minus costs) of producing national b.o.p. statistics have decreased for local policy-makers following the creation of EMU, but remain significant enough for us to continue producing such statistics.

Turning now to the value of b.o.p. statistics at the euro area level for purposes relating to the single monetary policy and other policies, the point marked EURO in the upper part of Figure 7 reflects the benefits to be drawn from the availability of such statistics (which, as explained, are most important for policies at the European level). As far as costs are concerned, the lower part of the figure illustrates a fact well-known to our statisticians, namely that there is a cost to producing good quality euro area-wide b.o.p. statistics which exceeds the traditional cost of producing national b.o.p. statistics, owing, for example, to the need to distinguish between “euro area residents” and “non-euro area residents” or to the presence of asymmetries when aggregating national b.o.p. statistics to arrive at euro area-wide b.o.p. statistics. It should be noted, however, that since the benefits of collecting b.o.p. statistics at the euro area-level are higher than the costs, the net benefits to European policy-makers stemming from the existence of euro area-wide statistics (which were previously not collected) counter the lower net benefits of national b.o.p. statistics for national policy-makers, which have now resulted following the creation of EMU. Finally, as the economy of the euro area becomes more globalised as time goes by, there should be a gradual rightwards movement of benefits and costs along their respective schedules.

¹ Whether the final benefits for Spain (SPEURO) after enough time has passed are equal to or higher than those that existed before the creation of the euro area (SPAIN98) cannot be ascertained in advance. In short, it depends on how the schedules are drawn

4. Specific policy challenges raised by globalisation to balance of payments statistics

While the previous sections have described the impact of the globalisation process on b.o.p. statistics in rather general terms, this section looks at the issue in more detail in order to identify the main instances where globalisation has more significantly widened the gap between the statistical recording and the underlying economic behaviour that is of interest to policy-makers. It is the task of policy-makers to ask that this gap be kept within acceptable limits, and that of statisticians to try to satisfy this demand while also taking into account cost-effectiveness considerations.

The main channels through which globalisation tends to widen the gap include:

- i. The appearance of new phenomena (driven by technology and financial innovation), which the statistics must reflect or for whose analysis they must provide (so as to allow, for example, study of the sustainability of external imbalances, calculating equilibrium exchange rates or assessing the success of foreign exchange intervention).
- ii. Less accuracy in the measurement of certain economic events that b.o.p. statistics have been recording but whose measurement is becoming more difficult in the new international environment (e.g. the international provision of other services, tourism, FDI and portfolio investment flows, reinvested earnings, etc.).
- iii. The need to compile aggregate statistics for areas that are fully integrated in economic and monetary terms, with the difficulty this entails in an area without internal borders (e.g. to identify the relations between euro area residents and between a euro area resident and a non-resident, the double counting of certain transactions, the asymmetries stemming from differences in valuation methods, etc.).

It is fair to say that statisticians have not remained impervious to this changing reality, though their reaction has not always been the same. The responses have included:

- i. Making changes to b.o.p. statistics by redefining statistics, introducing new products, etc.
- ii. Modifying statistical compilation procedures with regard to new sources of information, new estimation procedures, radical changes in data production systems, etc.
- iii. Providing in some cases supplementary statistics (for example, those of the BIS), which requires the different statistics involved to be brought closer into line.

Table 2 summarises the main cases in which both the origin of the gap and the statistical response are paradigmatic. A brief description follows of these cases.

4.1. Delocalisation and diversification

a) Impact on monetary (and credit) aggregates

As financial markets have continued to develop in an environment of increasing competition, innovation and integration across national borders, monetary policy-makers have begun to ask themselves whether the domestic monetary aggregate that they use as a target, a reference (like M3 in the euro area) or an indicator of liquidity conditions still appropriately represents spending capacity and, therefore, continues to warn of imbalances in the economy. Specifically, the possibility of creating liquid assets without problems of conversion in the national currency in non-resident monetary financial institutions may give rise to doubts as to whether such assets should be included in the definition of the more widely used monetary aggregates. In principle, this phenomenon – which affects all economies and also applies to credit aggregates – may hinder the diagnosis of the liquidity situation.

Given that this is a significant problem and that b.o.p. statistics are the statistical framework in which the demand for information must be satisfied, in the specific case of the euro area countries, compilers have had to make a substantial effort to provide the relevant information. Moreover, owing to the detail of the data required (identification of specific instruments not included in the usual categories, of the currency in which they are denominated, and of non-resident counterparties), it has been necessary to resort to supplementary information – such as BIS statistics – which has meant further work to ensure the consistency of the results obtained.

b) Impact on portfolio investment

In general, in a context of high financial integration it becomes very difficult if not impossible to know with precision the geographical origin of portfolio investors. This leads to a loss of information concerning this category of capital flows relative to, say, FDI investors. The Co-ordinated Portfolio Investment Survey (CPIS) represented a response to this general need, and sought to provide all countries with a geographical picture of the holders and of their liabilities. From a policy-making standpoint it was relevant to identify the ultimate holders of the resident issues in order to make an accurate assessment of the nature of the capital flows in terms of foreseen volatility and of the stability and solvency of the financial sector. The challenges that the compilation of portfolio investment poses to euro statistics are even higher. In the euro area, the difficulties in identifying the holder of domestic securities has made it necessary to use a residual method to obtain euro area aggregated portfolio investment liabilities. For this reason, the introduction of security-by-security compilation systems and the creation of the CSDB are the way to collect adequate information on this item.

c) Impact on firms' international activities through branches and subsidiaries

The proliferation of subsidiaries or branches established abroad to produce goods for and to provide services to non-residents has generated demand for information on the real activity of such firms (FATS). Although these firms fall within the scope of b.o.p. statistics, the information afforded to users by such statistics is limited to the

measurement of the “direct investment capital” supplied among the firms in the group and of the return on this investment (with different classifications that enable the geographical component and the sector of activity of the firms involved to be analysed). The information requested by users is nevertheless much broader. Specifically, given the impact on the economy of the country in which these branches and subsidiaries are established and on the investor country, interest is focused on certain variables that approximate their gross value added and can consequently help better assess such impact. Notable among these are: the number of employees, the value added of the services they provide, and the value of exports and imports of goods to and from firms of the same group and of firms not belonging to the group. This information is crucial for decision-making at the international level, where the principle of nationality rather than residence may be more important.

Moreover, the international strategies of major banks also pose a challenge for b.o.p. statistics. On one hand, these may cause significant capital flows between the countries where the headquarters are located and those where the branches and subsidiaries are located. Because many such flows simply reflect the way risk and liquidity are managed by global financial intermediaries, this should be taken into account when interpreting b.o.p. statistics. On the other hand, branches and subsidiaries which borrow and lend in the same local markets will experience an increase in their overall banking activity – and possibly in the risks taken by the headquarters, especially in the case of branches – without leaving any direct trace in b.o.p. statistics.

B.o.p. statistics, which are based on the principle of residence and measure economic transactions, can hardly meet this new demand for information without undergoing a radical transformation. However, since the sector whose activity needs to be measured partially coincides with firms that have direct investment ties, there is an obvious relationship between the new demands for information and the balance of payments. In this case, although it seems best to bridge the gap by using new sources of information and establishing more comprehensive FATS statistics, it is worth exploiting the synergies that may exist between the two types of statistics – b.o.p. and FATS – and ensuring that they are consistent.

d) Impact on direct investment

Another factor intimately related to the internationalisation of firms’ activities is the existence of chains of investment, a concept that statisticians and users of statistics have been familiar with for many years. Although more recent, the use of SPEs is not new either. What is new is the widespread use of SPEs (e.g. in the form of holdings) and the increase in their level of activity in the last few years. The establishment of SPEs in countries in which they did not previously exist results in many cases from legal changes that have reduced the advantages of setting them up only in certain countries. The operations conducted by these SPEs are of such a scale that they distort the measurement of the economic events that b.o.p. statistics are intended to reflect. It is therefore vital that these operations be identified, since otherwise the FDI data may lose a good deal of their significance.

In this case, it was the b.o.p. statistics compilers themselves – rather than policy-makers – who pointed out the need to compile and disseminate additional data to enable the activity of these firms to be identified in FDI data. It is intended that, as a result of these additional breakdowns, the studies based on current FDI data to determine the economic impact of FDI on a region or its profitability in terms of expected income flows will lead to the right conclusions and thus to the right investment decisions on the basis of these results.

The SPE phenomenon, though it affects all countries, is of greater importance in those in which it is more attractive to set up SPEs, which can, for instance, be attributed to fiscal or legal factors. For the same reason, it has a stronger effect on countries considered individually than on aggregates corresponding to a given area. Yet the methodological and consistency problems in constructing euro area data that may arise in the light of the above as a result of the process of aggregation cannot be overlooked.

4.2. Increase in trade in services

Because of the higher weight of services in national economies coupled with greater openness and international integration, there is greater demand on the part of users (by the European Commission in the case of the EU) for b.o.p. data, in particular under the “services” heading. The extra breakdowns required, both in terms of headings and of geographical areas and currencies, exceed those requested by the ECB. Unlike in the goods trade, where customs statistics traditionally offer a more detailed breakdown than b.o.p. statistics, there are no alternative sources offering more detailed information on trade in “other services”, so demand has focused on this statistic.

The difficulty of filling this gap using the main information collection systems in the industrialised countries has in many cases led national central banks and other competent authorities responsible for compiling b.o.p. statistics to radically modify their compilation systems so as to make greater use of procedures for obtaining data directly from firms instead of using indirect information channels (such as the receipts and payments of financial institutions). These changes have, in turn, led to an increase in the participation of national statistical institutes in information gathering procedures, given their greater experience with this type of system.

4.3. International liquidity analysis

The Mexican and Asian crises showed that the “foreign reserves” heading had in some cases ceased to be an appropriate indicator of liquidity and financial soundness and, therefore, of a country’s potential vulnerability. In a globalised world where financial and currency crises can be propagated very swiftly, it is all the more necessary to have statistics that faithfully reflect a country’s foreign exchange liquidity and its ability to react to sudden changes in world markets. Aware of this problem, international institutions, policy-makers responsible for ensuring international financial stability and investors themselves stepped up their demands for information. The need was for timely information on all liabilities denominated in foreign currency and on commitments that could affect the foreign currency liquidity of a country (i.e. of its national central bank and government).

The demand for these new statistics, prompted by a specific event with a major impact on international financial markets (as was the case with the Asian crises), has been successfully met. The new statistics (“Data Template on International Reserves” and “Foreign Currency Liquidity”) provide important information on the liquidity actually available in a country, particularly in emerging countries where there is some uncertainty about the soundness and stability of their financial systems. They are useful not only for policy-makers but also for investors.

However, given the wide range of possibilities now available in financial markets for transferring risk from one country to another (guarantees, collateral, derivatives, off-balance sheet transactions, etc.), assessing the risks faced by institutional or individual investors would require the information in the template to be supplemented with additional vulnerability indicators (for example, a country’s debt broken down by maturity structure, currency and creditor country). B.o.p. statistics probably cannot completely bridge the statistical gap in this field and will have to be supplemented by other sources. For example, the growing demand for statistics reflecting the country risk borne by the banking sector has given rise to the publication of consolidated banking statistics by the BIS (Wooldridge, 2002).

4.4. Sustainability of external imbalances

While financial globalisation has contributed to an easier financing of current account deficits, assessing the sustainability of such deficits – and therefore the expected direction of future capital flows and potential exchange rate pressures – requires additional information to that provided by b.o.p. statistics (covering, for example, the evolution of trend productivities among other variables). The demand for statistics to proxy these factors is broadly based – ranging from policy-makers to market analysts – and is growing. The rise in the US current account deficit to record highs and its partial financing through the purchase of US bonds by Asian central banks, together with the relocation to China of US firms exporting their end product to the US (the business delocalisation mentioned above), have highlighted the need for statistics enabling these phenomena to be assessed accurately. However, this task is clearly beyond the scope of b.o.p. statistics.

In summary, this section has described several cases in which globalisation has led to a significant gap between economic events and b.o.p. statistics. As indicated, some of these gaps have been closed or reduced by statistics compilers, who have modified their information systems, produced new statistics or started to provide data breakdowns not previously envisaged. In other instances, the challenges are still being addressed and the gaps will be at best closed in the medium term. Finally, in certain cases, b.o.p. statistics alone will be unable to meet information needs. This means that information requirements will have to be addressed on a coordinated basis through the use of various types of statistics, thereby making it very important to ensure the overall consistency of the statistics involved.

5. Conclusions and policy implications

This paper has reviewed how the process of globalisation affects the use of b.o.p. statistics for policy purposes. The main message is that given the importance of properly understanding the functioning of highly interdependent economies, b.o.p. statistics continue to be of great relevance to both policy-makers and economic agents. In addition to being an indispensable building block for the preparation of national income and financial accounts, the information supplied by b.o.p. statistics is useful for monetary and financial policies as well as for fiscal and structural policies. They also have an important role to play in the introduction of mechanisms to achieve a more stable international financial system, as well as in helping to focus international policy discussions when, as is now the case, there are sizeable external imbalances.

However, it has also been explained that the process of globalisation poses significant challenges for the use of b.o.p. statistics for policy purposes that must not be overlooked. On the one hand, since globalisation has flourished in a context of reduction or elimination of trade barriers and exchange controls, some of the traditional sources of information used for the production of b.o.p. statistics are no longer available, with the consequent risk of a deterioration in the quality of such statistics. On the other hand, and more fundamentally, as globalisation leads by its very nature to the delocalisation of economic and financial activities and to a significant increase in the degree of international diversification of investments, there is a danger that the residence criterion on which b.o.p. statistics are based may fail to properly capture the true underlying economic behaviour that is of interest for policy-makers. Needless to say, these challenges have become particularly important in the euro area as a result of the need to produce timely and accurate b.o.p. statistics at the euro area-wide level for the conduct of the single monetary policy, among other reasons.

Given the current high degree of globalisation, policy-makers need to continue using b.o.p. statistics for a number of purposes. However, since policy-makers also need to know certain things that traditional b.o.p. statistics can no longer provide, this has led in recent years to the redefinition of certain items of b.o.p. statistics, to new products and even to the development of new supplementary external statistics. Consequently, the position has changed from a previous situation where policy-makers were satisfied with using traditional b.o.p. statistics to a situation where something like “b.o.p. plus” statistics have become necessary. This has meant that in responding to the new needs of policy-makers, statisticians have had to weigh up carefully the benefits to be obtained from adapting the statistics so that they continue to capture as well as possible the relevant underlying economic behaviour in a globalised world against the material costs that have to be incurred in effectively and efficiently performing this task.

Concerning the euro area, it is evident that national b.o.p. statistics have lost some of their value to national policy-makers, as their evolution is no longer linked to potential national exchange rate developments, and as the financing of national current account imbalances has become easier in the context of a monetary union. Nevertheless, in addition to continuing to be indispensable for constructing national income and national financial accounts, national b.o.p. statistics play an important role in helping identify national supply and demand imbalances and any competitiveness problems, all of which

is of great help to domestic policy-makers when designing fiscal and structural policies. In addition to their usefulness to local policy-makers, national b.o.p. statistics are in any case necessary to enable euro area-wide b.o.p. statistics to be obtained by aggregation. The latter play an important role in enriching both the economic and the monetary analyses on which the conduct of the stability-oriented monetary policy is based, and also help the ECB better understand the international transmission of monetary policy measures and how economic and price developments in the euro area can be affected by external factors.

Given the dynamism of the globalisation process, it is very important that statisticians continue to respond to the most fundamental needs of policy-makers while ensuring that the production costs of “b.o.p. plus” statistics are kept within reasonable limits and that the necessary degree of stability is preserved in the main external statistics. Furthermore, since globalisation poses an important challenge for b.o.p. statistics, it is only natural that the response should also be global. Consequently, it becomes an absolute priority to enhance the degree of international cooperation in the production of b.o.p. and “b.o.p. plus” statistics and to increase the consistency of international standards to improve to the greatest extent possible the trade-off between benefits and costs. This may be of particular importance in relation to international capital flows.

Last but not least, in Europe the “First for Europe” initiative has highlighted the importance of ensuring that the quality of aggregate statistics is at least as high as that of the Member States. This will allow asymmetries detected in national statistics to be analysed and eliminated from the aggregate data, as well as the introduction of other measures aimed at improving their overall consistency, accuracy and timeliness.

To conclude, although in a globalised setting b.o.p. statistics have become less adequate than in the past in answering a number of questions of interest for policy-makers, they nevertheless continue to be as necessary as ever.

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Table 1: The usefulness of b.o.p. statistics for policy purposes

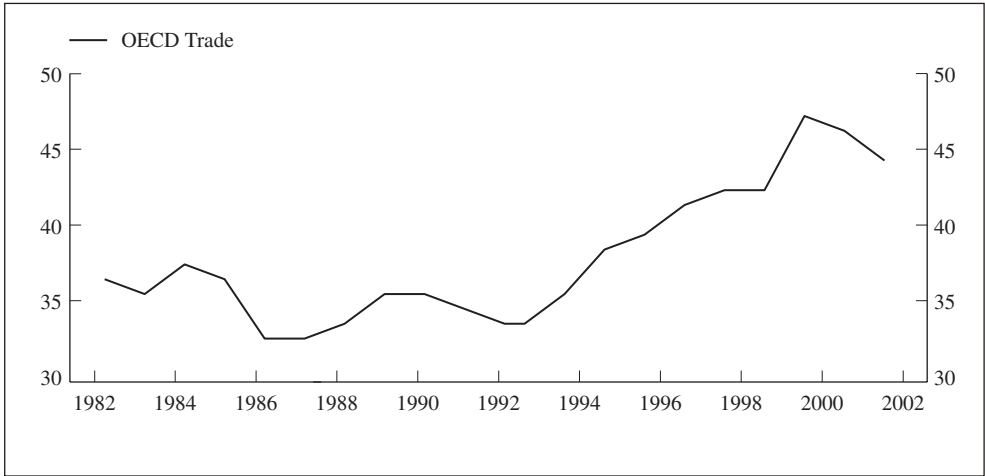
| Policies | Usefulness of b.o.p | Course of action |
|--|--|--|
| Monetary policy | <ul style="list-style-type: none"> - Compilation and analysis of the external counterpart of monetary developments - Assessment of economic and price developments - Identification of international transmission of shocks | Change in the stance of monetary policy to achieve or preserve price stability in the face of domestic or foreign shocks |
| Financial policy | - Identification of risks to financial stability (unsustainable current account imbalances, excessive risk-taking by the financial sector, etc.) | Financial regulation and/or financial supervision measures to preserve financial stability |
| Fiscal policy | - Detection of external imbalances associated with unbalanced fiscal policies | Fiscal correction |
| Structural policy | - Detection of changing patterns of comparative advantage and competitiveness problems | Structural policies aimed at resolving competitiveness problems |
| International financial architecture | <ul style="list-style-type: none"> - Detection of underlying economic and financial vulnerabilities and risks of international propagation of crises through trade and capital flows - Facilitating the design of mechanisms aimed at preventing and resolving crises so as to avoid widespread contagion and instability in the international monetary system | <p>Policies of surveillance and transparency</p> <p>Design of conditionality in IMF programs</p> |
| International policy discussions (G3, G7, G10, etc.) | - Identification of major global external imbalances and their repercussions | Distribution of policy responsibilities across economic areas for the correction of global imbalances |

Table 2: From "economic" event to "statistical" event

| Economic event | Trigger | Impact | |
|---|---|--|--|
| | | Variable | Action by economic agents |
| 1. Delocalisation and diversification | | | |
| 1.a. Delocalisation of deposits and credit | Euro area | M3 Credit | Design of monetary policy |
| 1.b. Diversification of portfolio investment | Freedom of capital movements and development of financial markets | Portfolio investment | Financial policy measures and investment decisions |
| 1.c. Delocalisation of financial and non-financial firms | Freedom of movement of goods, services, people and capital | Productive and trade structures | Economic policy measures and investment decisions |
| 1.d. Proliferation of special purpose entities related to direct investment | Freedom of capital movements and development of financial markets | Direct investment | Investment decision (region and sector) based on distorted statistics |
| 2. Increasing trade in services | International agreements (GATT) | International trade in services | Trade policy decisions |
| 3. International liquidity analysis | Asian crisis | Financial and foreign exchange variables | Investment and economic policy decisions based on "inaccurate and inappropriate" risk indicators |
| 4. Sustainability of current account deficit | Persistence and size of the US current account deficit and dollar exchange rate movements | Equilibrium exchange rates | Monetary and fiscal policy measures and investment and cost-cutting decisions |

| | | |
|---|--|---|
| Demanded by | Economic importance | Statistical event |
| | | |
| Monetary authority (NCBs and ECB) | Heightened by greater openness and greater monetary integration | BIS statistics supplement external sector statistics |
| Economic policy-makers and investors | Heightened by greater openness and more developed financial markets | Creation of Centralised Security Database (CSDB) |
| Economic policy-makers and investors | Heightened by greater openness and by changing comparative advantages | FDI and supplementary statistics (e.g. FATS) |
| Producers of statistics | Heightened in countries that are more attractive (regulation, educational level, etc.) for the establishment of these firms | More detailed FDI |
| Governments (national, European Commission) and international bodies (WTO) | Heightened by greater openness and greater economic and financial integration | More detailed statistics on trade in services |
| International bodies and investors to prevent financial crises more effectively | Heightened in economies with a less sound and stable financial system and with a higher likelihood of crises spreading to them | External sector statistics (template) supplemented by BIS statistics (consolidated basis) |
| Policy-makers and investors | Heightened by greater openness and more developed financial markets | Macroeconomic and financial statistics |

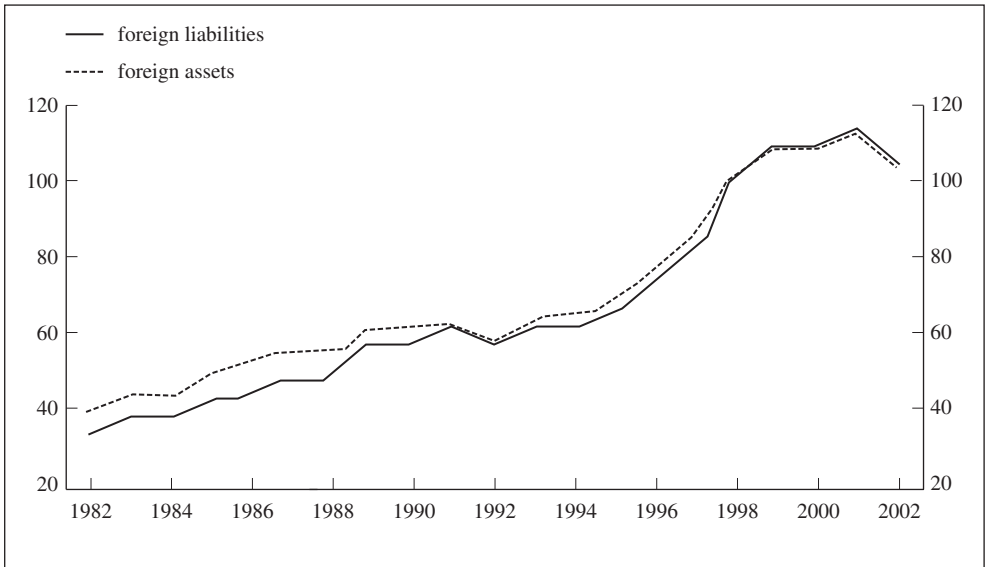
Figure 1: Trade globalisation
(in percent)



Source: OECD

Note: Measured as the sum of goods and services exports and imports in current dollars as a percentage of GDP.

Figure 2: Financial globalisation
(in percent)



Source: International Financial Statistics (IMF and OECD)

Note: The date of foreign assets and liabilities relate to the sample of 13 OECD countries, and to extrapolations for those years for which there are no available data. The GDP figure is for the OECD as a whole, meaning the ratio of foreign assets and liabilities to GDP is slightly understated.

Figure 3: Globalisation and the usefulness of b.o.p. statistics

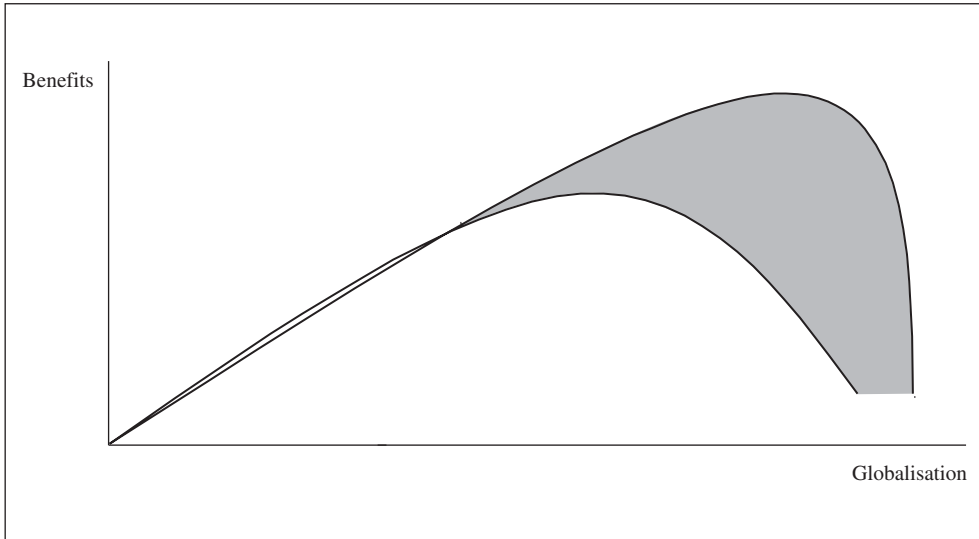


Figure 4: Globalisation and the costs of producing b.o.p. statistics

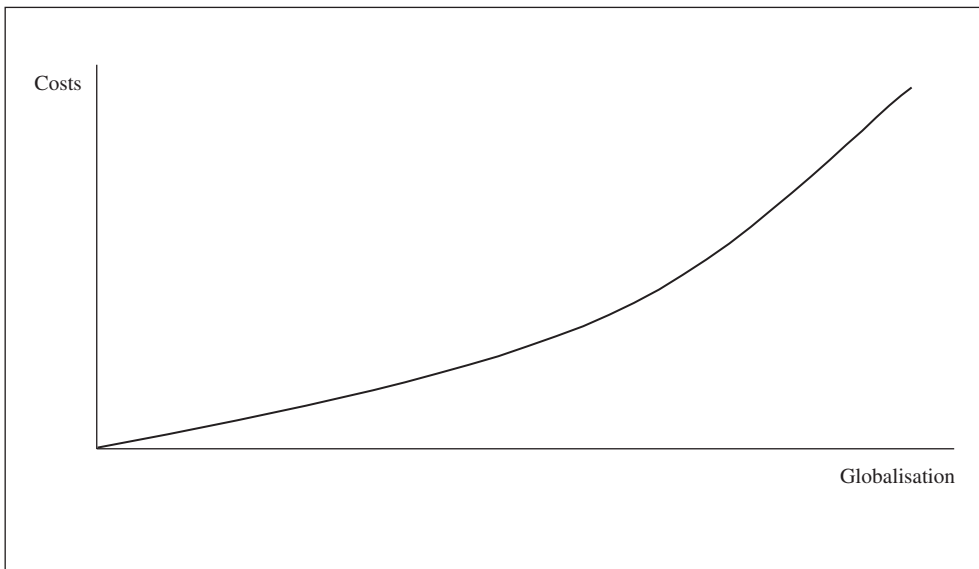


Figure 5: Benefits and costs compared

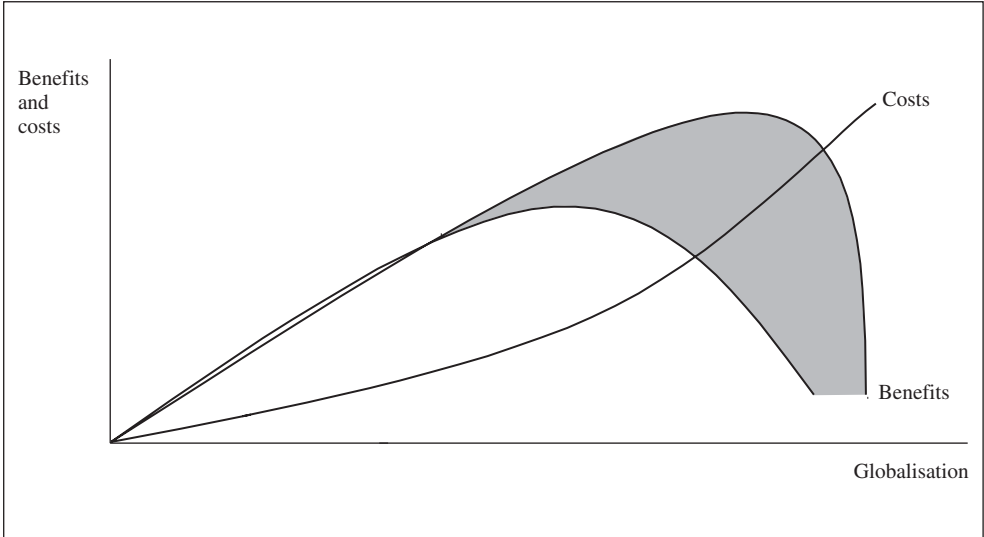


Figure 6: How does EMU affect the usefulness and cost of national b.o.p. statistics?

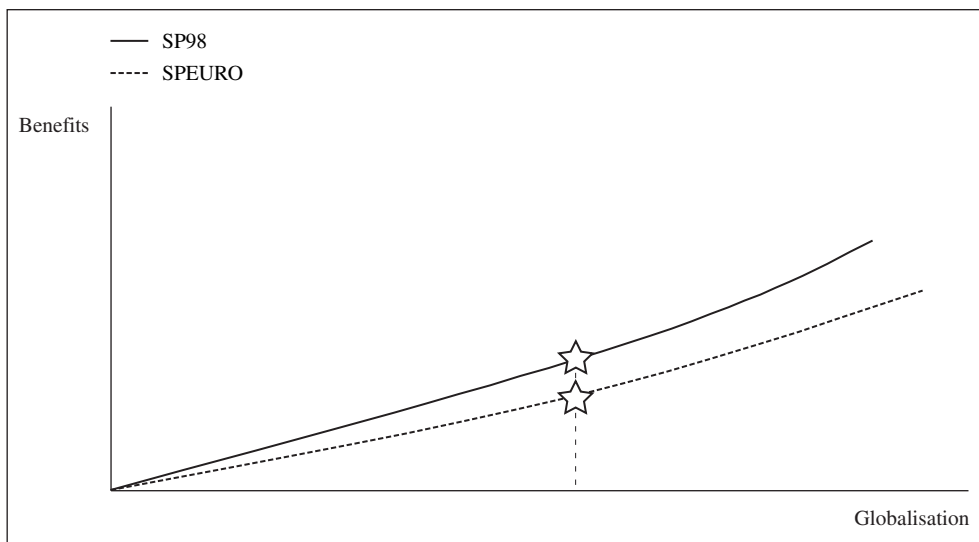
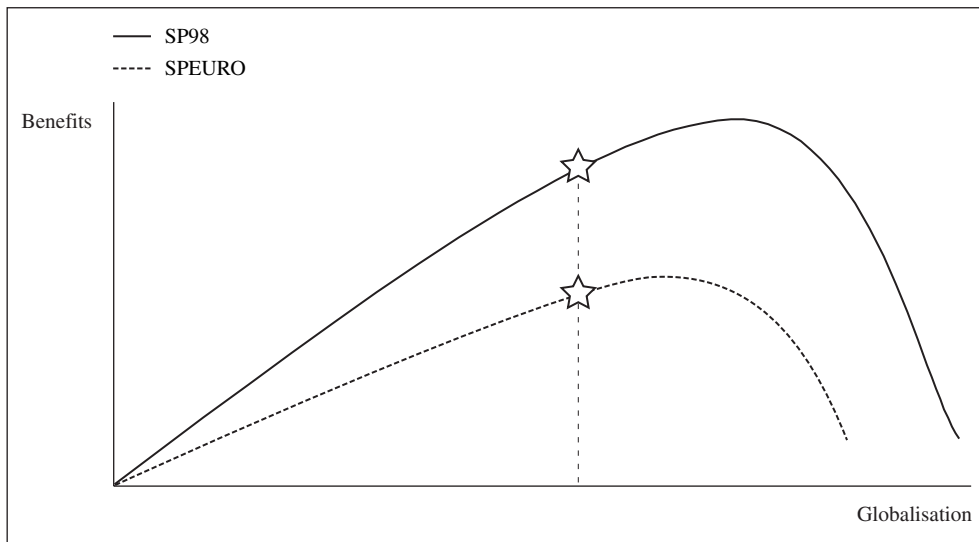
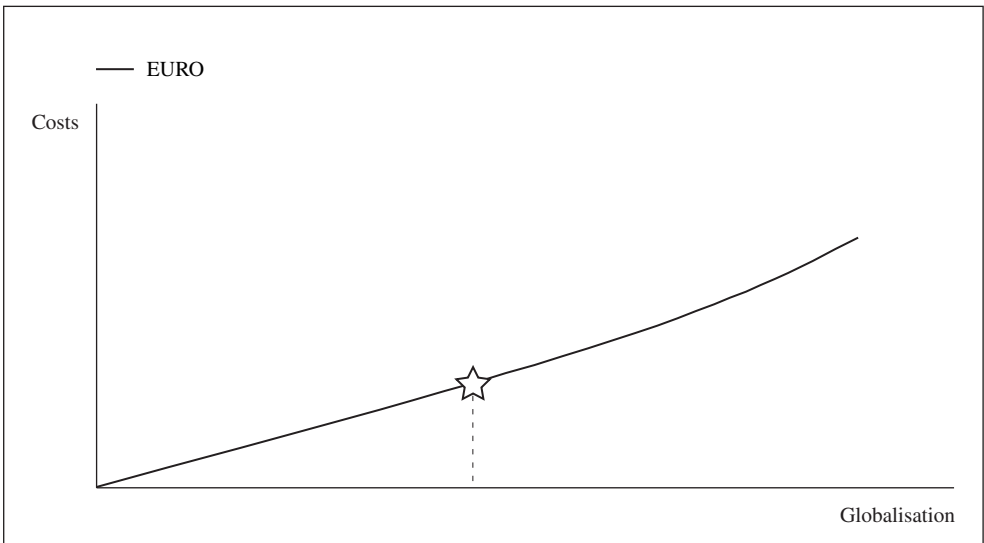
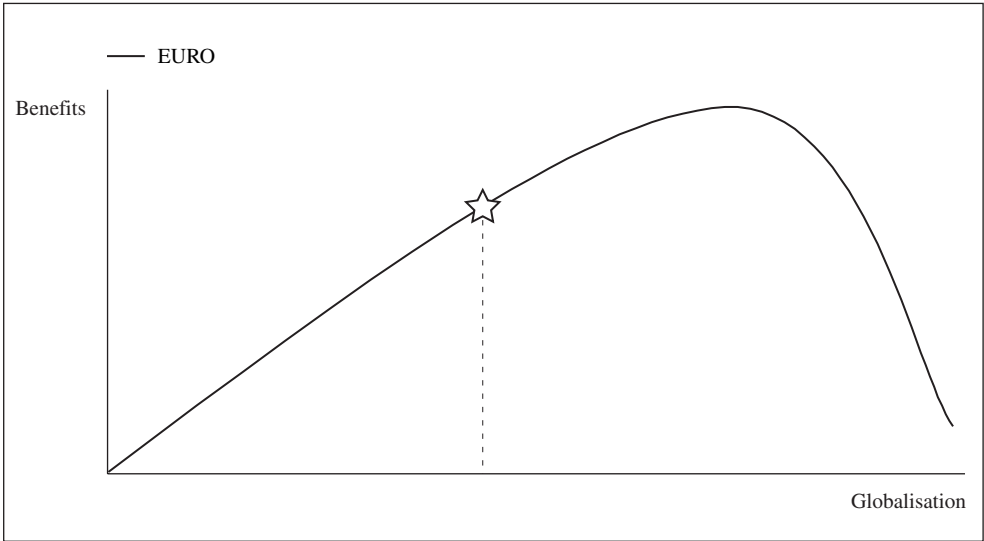


Figure 7: How does EMU affect the usefulness and costs of b.o.p. statistics at the euro area-wide level?



Policy uses of and future developments in balance of payments statistics: some European perspectives

Sinikka Salo

1. Introduction

I think we all agree that good macroeconomic statistics are essential for the smooth functioning of EMU, working under a single monetary policy and decentralised but coordinated fiscal policies. At the same time, it is clear that the institutional settings of EMU impose immense challenges for the collection, compilation and dissemination of statistical data.

A comprehensive set of timely, reliable, sufficiently detailed and frequent aggregate-level statistics is crucial for the conduct of monetary policy. Timely, reliable and frequent statistics are invaluable, especially for a central bank like the ECB, operating in an environment where economic structures and the monetary policy transmission mechanism are not yet fully known and are likely to undergo continuous change. As for the conduct of economic policies, national data may lose some of their significance in a monetary union, but nevertheless they tend to remain important, not only for national economic policies but also for their coordination.

Since the launch of EMU, Europe has improved tremendously in terms of the coverage and quality of aggregate time series at the euro area and EU level. This is particularly true for the balance of payments statistics, which are now compiled and disseminated monthly for both the euro area and the entire EU. These improvements have largely been a product of the close cooperation between the European statistical system, i.e. Eurostat together with the national statistical institutes, and the ESCB, these two systems sharing the responsibility for balance of payments statistics in Europe.

In spite of the substantial progress achieved since the launch of EMU, there is still room for improvement. Aggregate level statistics have not yet achieved standards comparable to those of the other large currency areas, notably the United States. From the monetary policy perspective, action is needed to improve the timeliness and quality of euro area statistics in particular. In the field of balance of payments statistics, the most urgent needs are probably linked to improvements in the quality of first monthly preliminary figures.

The institutional structure of EMU naturally tends to make not only statistical requirements but also data collection and processing procedures unwieldy. Compilation of the aggregates requires harmonised data with sufficient coverage, and therefore collection and compilation procedures are necessarily more complicated than in the case of a single country.

I do not know of any systematic comparative study on the efficiency of the production of statistics in major currency areas. However, even a casual comparison of Member States' national statistical systems gives some support to the notion that their efficiency varies quite considerably across Member States. This suggests that our statistical system, taken as a whole, cannot be fully efficient. To avoid misunderstandings, it is perhaps worth repeating that a comparison of aggregate-level outputs and inputs between the euro area and other currency areas may be grossly unfair to the euro area, as data requirements and the conditions of statistical systems elsewhere may differ greatly from those in Europe.

There is a strong public good element to aggregate statistics, and their production has always been and probably always will be financed mainly from public sources. In view of the formidable budgetary challenges that most if not all Member States are facing today (and probably increasingly in coming years), it would be wishful thinking on the part of European statistical authorities, irrespective of their institutional background, to expect significant increases in the total amount of budgetary resources for the production of statistics in general or balance of payments statistics in particular.

If we want to improve the timeliness and quality of balance of payments series, the only option seems to be to rebalance priorities within the statistical system. In my contribution to this conference, I would like to stress two aspects of this rebalancing of statistical priorities.

In the first place, it is necessary to focus demand for aggregate data only on what is really needed for policy use, additionally taking into account the cost of production of aggregate time series. The potential need for statistics is unlimited and cannot be satisfied with limited resources. Setting priorities for the demand for statistics used for monetary policy purposes is mainly the responsibility of the ECB; however, as far as cost assessment is concerned, national authorities responsible for the collection and compilation of data are also involved.

In the second place, it is absolutely vital to ensure, preferably in a coordinated manner, that statistics are collected and compiled as efficiently as possible, given the basic institutional constraints of EMU. Setting priorities for the use of resources in the supply of statistics is mainly the responsibility of the national authorities, which are responsible for the collection and compilation of national data. However, the achievement of an efficiency frontier in the production of statistics may be impossible without substantial and constructive input from Eurostat and the ECB, which define the general conceptual framework as well as coordinate the collection and compilation of balance of payments data.

The basic theme in this contribution is that statistics, by their very nature, tend to be more or less incomplete, and are even more so owing to the integration of markets as a result of globalisation, coupled with the emergence of single European markets. My Danish colleague, Jens Thomsen, once put the very point very nicely in the context of identifying b.o.p. crises *ex ante* by saying that when mistakes are analysed in retrospect, the relevant statistics – i.e. those that could have prevented a wrong decision being taken – always seem to be the ones which were missing at the crucial time of decision-taking.

Because statistics are always incomplete, there is no need for actuarial precision in the design of the statistical system. I shall argue instead that we need a more focused approach. In particular, in the case of balance of payments statistics, the adoption of more up-to-date collection systems with greater reliance on corporate surveys is needed.

2. Challenges of globalisation for balance of payments statistics

While it is often claimed that balance of payments statistics are now less important than they used to be – say even twenty or thirty years ago – I fully agree with José Viñals' conclusion that, in spite of all the conceptual and operational challenges globalisation has created for balance of payments statistics, such statistics continue to be very important, especially at the euro area level, for monetary policy purposes. I would like to add to his presentation, however, by arguing that statistical problems related to the globalisation process extend even further and deeper than he envisages.

I would like to start by drawing your attention to one well-known consequence of globalisation, namely the rise of extremely large global corporate units. A less well-known but nevertheless self-evident fact is that these global companies are perfectly capable of growing yet still operating – or at least maintaining their head office – in a very small country. This development, which has taken place in Finland and probably also in some other smaller Member States, reflects the declining significance of national frontiers. As a consequence, national statistical authorities are faced with the problem of recording the transactions of very large companies. These transactions may be extremely large, complex and numerous if compared with the transactions of “normal” enterprises operating entirely or mainly at national level.

Let me illustrate some of the challenges large companies pose for statistics by using the Finnish ITC company Nokia as a concrete example.

Nokia grew very rapidly in the 1990s. Measured by its stock value, at the height of the IT boom in 2000 it was among the ten largest enterprises in the world, with a market value nearly double the value of Finland's GDP – a valuation naturally reflecting high expectations of future growth in sales and profit opportunities.

Nokia's undistributed profits after dividends and taxes amount to 2% of Finland's GDP. In national accounts, Nokia's undistributed profit is included in Finland's national income, savings and current account surplus. This explains, in part, Finland's exceptionally high trade account surplus. However, some 90% of the company is owned by foreign investors. If undistributed profit to portfolio investment were allocated in national accounts and balance of payments in the same way as profit to direct investment, Finland's national income, savings and current account surplus would have been annually some 2% lower than in published statistics. From an economic point of view, the current statistical figures can be regarded as misleading.

In i.i.p. statistics, shares are valued at market prices. In 2000 Nokia's high market valuation was reflected in Finland's i.i.p. statistics with the consequence that, measured by its net international investment position, Finland was at the time one of the most indebted countries in the world. Of course, in spite of these statistics, neither the

government nor any other body had any rational reason to worry about our international net position, as Nokia was mostly owned by foreigners, and almost all of its sales and presumably also the company's profits were generated outside Finland. Finland's high level of indebtedness in 2000 was nothing more than a statistical artefact. This observation was confirmed by subsequent developments. Finland's net position diminished to about one-tenth of its peak value as Nokia's share price declined to a quarter of its peak value or even lower. Nevertheless, Finnish i.i.p. figures have in the past confused economists who are not familiar with statistical recording practices and the structure of the Finnish economy, and are likely to continue to do so in the future as well.

The problems large global companies create for national accounts and balance of payment statistics are fundamental. While in institutional sector accounts – households, public sector, non-financial corporations and financial institutions – it is relatively easy to classify activities by nation for the household and public sectors, this has become increasingly difficult and in some cases outright impossible for the non-financial corporation and financial institution sectors. For the corporate sector, foreign trade statistics can already be characterised as being merely indicative. Statistics have been contaminated not only by cross-border mergers and acquisitions but also – and more importantly – by so-called invisible transactions, comprising foreign trade in services and capital income as well as the financial flows of large multinationals, whose share of the total value of transactions is often substantial.

As I have already mentioned, the size distribution of relevant populations in economic and financial statistics, including the balance of payments, have become extremely skewed as a consequence of the globalisation process. At the same time, many of the transactions conducted by these extremely large enterprises can be highly complex.

The quality implications of these phenomena are already apparent in the existing balance of payments statistics, most notably in the first monthly preliminary figures for the current year retained profits, which are highly unreliable. In fact, proper data are only available a year or more after the first estimates. Preliminary figures are often subject to delayed major revisions. At the disaggregated level, these problems may hamper their use for monetary policy purposes.

While the problems of extremely large corporations – in relation to the size of the country – and complex foreign trade transactions may be exceptionally acute in Finland, there can be no doubt that they are also highly prevalent in other Member States, particularly in the smaller ones. Furthermore, these problems are likely to increase and become more intense as further global integration takes place. As many of the problems in balance of payments statistics are universal, solutions to them should preferably be sought, in the first place, at international level. Some of the old typologies and classifications may have become outdated, and it is a challenge for the international community to drop these from international standards.

The IMF has already started preparations on the sixth Balance of Payments Manual, which is expected to be ready around 2008. Topics under discussion include the

increased consistency and integrity of national accounts and balance of payments statistics, the increased role of foreign asset positions, and the relation of statistical standards to international accounting standards. Attention has also been paid to balance of payments problems in monetary unions. In this context, I would particularly like to mention the need to harmonise further national concepts in national accounts and b.o.p. statistics. This need is demonstrated by the large asymmetries in b.o.p. statistics for the major currency areas and the whole world*. Another example I would like to mention is that of institutional sector figures in national accounts, where different treatments of depreciation allowances by different authorities make economically interesting comparisons very difficult.

While revisions in international standards are important, the process whereby they are established is likely to be very slow. It may be too much to expect substantial progress as early as the next BOPM. In any case, some restructuring of statistics must be carried out in advance of the revision of the international manuals. Without prompt response at the European or Member State level, problems may emerge, as statistical concepts are no longer in line with relevant economic or business concepts. Unfortunately, in practice these cases have become increasingly common in recent years.

3. Emerging single European markets: challenges for balance of payments statistics

While market integration has in the global context been largely a market-driven process, in the European context it is an explicit policy goal of the highest priority. In many cases, integration at the European level has already proceeded significantly towards truly single markets. However, many European markets, including those for financial and other services, are still highly segmented along national borders. Considerable policy efforts, both in the context of the Lisbon strategy and elsewhere, have been devoted to removing the remaining legal and other factors which act as frictional elements impeding the creation of integrated European-wide markets. The establishment of such markets creates further challenges for statisticians. Moreover, in some cases statistical issues may also be included in these frictional elements, giving rise to a consideration of different priorities.

I would like to mention a couple of examples of difficulties related to b.o.p. that have more directly affected recent policy issues in the EU.

The Regulation (2560/2001) on cross-border EU payments effectively made the cost of cross-border payments within the EU equivalent to the cost of domestic payments. At the same time, it relieved banks from all reporting requirements on cross-border euro payments below a threshold of EUR 12,500. In the framework of the Regulation, the Commission will report no later than July 2004 on the advisability of increasing this threshold to EUR 50,000 as from January 2006. Increasing the threshold has been resisted on the grounds that it could pose a risk to the quality and detail of balance of payments. This is a clear illustration of a conflict between technical statistical requirements on the one hand, and the achievement of the broader economic and financial policy goals of the Community on the other.

Rather than resisting the rise of the threshold, Member States should be asked to accelerate their plans to modernise their data collection systems for balance of payments statistics. This is all the more relevant because the bias in errors and omissions in the euro area balance of payments continues to raise concerns. Many of the asymmetries in European aggregate balance of payments statistics are due to deficiencies in Member States' national data collection and compilation systems.

In many countries work has already started on improving existing data collection systems. In particular, Member States are introducing corporate surveys and building more accurate registers. Furthermore, they have committed themselves to compiling more reliable portfolio investment statistics, to building more accurate registers, and to recording mergers and acquisitions, reinvested earnings and income more thoroughly, the latter being a major reason for existing asymmetries. These examples are only a sample of the existing quality projects. This work is very important both in principle and in practice. However, my personal feeling is that it would be more useful to focus directly on external transactions in order to reduce asymmetries in the balance of payments in major currency areas. This is because it is practically impossible to remove all asymmetries from different national statistics, at least at a reasonable cost.

Another example with a significant European dimension that I would like to take up here concerns the statute on the European company, which is due to enter into force in October 2004. This statute will remove some of the legal and regulatory impediments which thus far have prevented EU firms from fully exploiting the benefits of cross-border corporate restructuring. The European company form would facilitate not only the merger of complicated group structures into a single legal entity, but also the transfer of a company's headquarters from one Member State to another. Financial groups with pan-European or regional cross-border activities are also likely to be interested in the new company form. The statute has important implications for financial stability, prudential supervision and crisis management.

There are also significant implications for money and banking statistics, specifically for balance sheet statistics relating to monetary financial institutions (MFIs), as well as to other financial intermediaries. In principle, a change in legal status will have no direct statistical impact, since for statistical purposes foreign branches and subsidiaries are treated identically, regardless of legal status. However, in practice there may be several indirect effects. There is also a risk that economic transactions pertaining to national areas will no longer correspond to existing statistical reporting and that the reorganisation of business activities could significantly affect the information content and usefulness of national statistics.

An MFI operating as a European company would be able to restructure its business activities on an ongoing basis and in a smoother fashion than is the case today. This could for example involve possibly recurrent reorganisations of branch activities across the company that might entail considerable implications for the statistical reporting of the various national branches. As an example of such a reorganisation, the administration of all derivatives business might be concentrated in one national branch. While the other national branches may still continue to conduct derivative transactions with their customers, this activity made on behalf of the designated branch would no

longer show up in the national statistics. That is, while the economic transactions still pertain to the various national areas, they may no longer correspond to the statistical reporting. It is possible to envisage other examples of reorganisation, such as the concentration of the loan portfolio or securities holdings in the group's head office. It may even be envisaged that a cross-border banking group may choose to record its deposit accounts in specific locations, for example in order to exploit differences in deposit guarantee systems. Such re-bookings could imply a substantial reduction in key items of the national monetary statistics of the countries hosting the group's branches.

This has become a topical issue in Sweden, Finland, Denmark and Norway, as the Nordic banking group Nordea Bank has announced its intention of becoming a European company and has already taken steps to implement this legal restructuring. As a European company, the Nordea Group would be a single legal entity under Swedish law, and its present subsidiaries outside Sweden would become its foreign branches. Its legal restructuring and the consequent adoption of a branch structure would therefore be a major challenge for statistical authorities in Sweden, Finland, Denmark and Norway as well as in the Baltic countries.

Even though the implications for national monetary statistics may in some cases be substantial, the effect on euro area aggregates would be limited to situations where activities are transferred from or to euro area MFIs to or from non-euro area MFIs. However, this is precisely what is anticipated in the Nordea case, where the bank is active both inside and outside the euro area.

The handling of Finnish clients directly from the head office would mean that under normal procedures, different deposit, credit and other items would only be recorded in the balance of payments, not in Finnish or euro area monetary or credit aggregates. No-one can say how predominant this kind of customer relationship would be, but at most, some 30-40% of the amounts currently recorded in Finnish MFI statistics could be transferred to Swedish statistics. Such reclassifications would show up clearly even in euro area monetary aggregates.

As a further implication of the move to a single corporate structure, it is to be expected that cross-border banking groups will start to compile a single set of business accounts and be subject to the rulebook of a single supervisor. This is likely to generate a reorganisation of internal information management systems, as the "home country" reporting system becomes predominant.

I would like to add a few remarks to this discussion.

The imposition of extraordinary information requirements for a European company is expensive, and could run against the basic aims of the European Company statute. Therefore, reporting requirements to be imposed on European companies need careful consideration.

If the same data collection procedures are adopted as before, Nordea would not report at all to the Finnish authorities on its direct transactions from Finland to Sweden for b.o.p. statistics. In this case, the Finnish authorities would need to collect data for b.o.p.

statistics from Finnish bank customers, as is standard practice with Finnish residents dealing with non-resident banks. However, in practice, this would be difficult if not impossible, at least for households. On the other hand, it is not inconceivable that Nordea could voluntarily provide supplementary information. This practice would not be in line with current practices in balance of payments and monetary statistics, and would be possible only as an unofficial supplementary system. Unofficial national figures could perhaps be published, but this might lead to confusion and problems, for example with respect to the confidentiality of the figures. Furthermore, while in the case of Nordea there is every reason to expect good cooperation between it and the statistical authorities, the risk of uncooperative companies in future cases cannot be excluded a priori.

Nevertheless, in the future the use of complementary statistics is likely to emerge as an established procedure if the branch office structure becomes popular for banks operating across national borders. In any case, if branch office structures and direct links between customers and head offices become prevalent, reliable national accounts and balance of payments statistics will require good cooperation between national authorities and possibly also multinational reporting systems. To prevent information requirements from becoming excessive, such systems should not try to cover all aspects and should certainly avoid trying to include every detail.

As long as there are no such complementary data, complementary data for banking statistics could in principle be collected by utilising b.o.p. data. Under standard statistical procedures, this procedure would be very difficult, as the correspondence between b.o.p. and monetary and financial statistics is still rather weak. Furthermore, b.o.p. statistics do not include information on currency denominations, to say nothing of information on interest rates, etc.

4. Concluding remarks

In the past, when European statisticians have encountered difficulties in the classification and compilation of balance of payments data for the euro area, their prevailing – almost instinctive – reaction seems to have been to increase the collection of more detailed information. This strategy of increasing the level of detail and developing almost real-time registers has, however, obscured the difference between fast indicators and structural statistics. The costs of compilation are spiralling upwards and, in spite of all the computations, fragmented data does not lend itself easily to fast and effective quality control methods. The probable outcome is that the data are likely to be overly fragmented and difficult to handle. This development may lead to a vicious circle of ever-increasing IT and personnel costs, combined with explosive growth in the volume of information.

Another approach could be to differentiate between the compilation of fast aggregate information and the compilation of structural statistics. As I have mentioned before, the respondent populations in financial statistics including the b.o.p. are highly skewed. However, it is possible to identify reasonably well-behaved sub-populations with regard to the distributional properties. These sub-populations cover a relatively high proportion of the total value of the main aggregates, facilitating low cost collection, and make it

possible to compile timely, non-biased preliminary aggregates. These aggregates can be very useful, provided that their indicative nature is properly understood. On the other hand, the whole respondent population should be sufficiently covered for the more structural national statistics, which do not need to be as frequent or as timely as indicator statistics.

In EMU, as is probably the case elsewhere, basic national statistical information systems constitute the backbone of the collection and compilation of statistical data. These systems provide much useful information, in particular for monetary policy purposes. However, they tend to be expensive, rigid and are not easily adapted to rapid changes in the economic environment brought about by policy decisions and globalisation. By their very nature, statistics are incomplete. Furthermore, one consequence of global and European integration seems to be that national statistics will become increasingly uncertain. This conclusion certainly also concerns b.o.p. and i.i.p. statistics. This does not necessarily imply that the significance of b.o.p. statistics has diminished. The implication is rather that the responsibility of the user of statistics has increased: he or she must interpret time series properly and cautiously.

If we want to maximise the support that b.o.p. statistics give to monetary policy purposes, we should aim at developing good rather than perfect statistics. This implies that we should be selective when deciding what statistical items to produce; that the limited aggregate data set should be timely and reliable; and that data for it should be collected and processed as cost-effectively as possible, given the institutional constraints of EMU. In order to improve the timeliness, quality and cost-effectiveness of b.o.p. statistics, we should consider, in particular, a careful review of the sampling practices implemented at European and national levels.

What we need for policy purposes is a focused approach. Firstly, in order to maximise the support statistics give to the ECB's monetary policy, we should be extremely selective in deciding what statistics should be produced for policy purposes. Secondly, this focused set of statistics should be produced as efficiently as possible, while respecting existing institutional constraints in the production of statistics.

Comment

“Balance of payments statistics in the face of globalisation: policy uses and prospects”

Vitor Gaspar

It is a privilege for me to have the opportunity to discuss the contributions by Sinikka Salo and José Viñals on the costs and benefits of b.o.p. statistics in a world characterised by increasing globalisation. Both contributors agree that globalisation increases the costs of production of b.o.p. statistics, and makes economic interpretation more difficult. They also argue that growing international linkages and interdependencies increase the benefits of these statistics. They conclude that b.o.p. statistics are and will continue to be worthwhile despite the increased costs and challenges. Given that I am broadly in agreement with the arguments and conclusions in both papers, I will confine myself to a few minor points which concern (1) the importance and difficulties in analysing b.o.p. statistics (focusing on Ms Salo’s contribution); and (2) the creation of the euro area and some specific relevant features of economic governance in this context (focusing on Mr Viñals’ contribution).

Ms Salo looks closely at the costs associated with producing and interpreting b.o.p. statistics in an environment characterised by deeper integration. She examines the problems connected with large global corporations residing in small open economies, naturally focusing on the specific example of Nokia and Finland. She argues that deeper economic integration brings a greater need for economic reasoning and analysis when interpreting aggregate time series.

Ms Salo further argues that statistical information is necessarily incomplete and that integration exacerbates this problem. To support her assessment she quotes Jens Thomsen, who, in the context of ex ante identification of b.o.p. crises, remarked that often the crucial piece of information for a correct diagnosis was precisely the one which was conspicuously missing.

This is a very incisive and relevant remark that reminds me of a famous text by Goethe:

*Happy the man who still can hope
To swim safely in this sea of error
What we don't know is what we really need
And what we know fulfils no need at all.*

The examples Ms Salo uses to illustrate conceptual issues arising when using b.o.p. statistics – Nokia and Nordea – are particularly well chosen. She points out that Nokia, one of the largest global corporations in the world, has such a weight that treating its undistributed profits as part of Finland’s national income significantly inflates Finland’s national savings and current account surplus, while at the same time exaggerating Finland’s position as a net debtor in accordance with its net investment position. This exaggeration was particularly pronounced in 2000, at the height of the IT euphoria. Ms Salo concludes that Finnish b.o.p. statistics are likely to perplex economists who ignore statistical conventions and the structure of the Finnish economy. Finally, she emphasises the extreme complexity and general relevance of transactions carried out by global corporations such as Nokia. I agree with all these points. However, the strength of Ms Salo’s analysis illustrates that, in cases where the source of difficulty is well-understood and located, it may be possible to ascertain the true nature of the situation. A large corporation such as Nokia, for example, can always be directly scrutinised, and it is probable that after some effort, the analyst will be able to clarify the issues at stake. In my view the situation is much more challenging when integration implies a significant amount of cross-border activity and ownership with regard to small and medium-size enterprises. In this scenario direct enquiry may be impracticable (or too costly), while indirect means (through financial transactions and reporting by financial institutions) may be cumbersome or simply impossible. Therefore I would tentatively suggest that the challenge to b.o.p. users will be tougher when integration has become so relevant that it dominates the retail transactions of most agents in the economy. Such a situation corresponds to what Mr Viñals labels “full globalisation”.

In Figures 3 to 7 of his presentation, Mr Viñals introduces a graphical analysis of the relationship between the costs and benefits of b.o.p. statistics and international integration (which he labels globalisation). He then applies this analysis to European integration in connection with monetary unification, arguing that the benefits from b.o.p. statistics are likely to increase with higher levels of international trade and greater financial integration. The argument is very intuitive: as the importance of international relations increases, so too does the relevance of accurate, pertinent information on it. Nevertheless, he argues that as integration deepens in all dimensions – economic, financial and institutional – the value of b.o.p. statistics is reduced. As relevant examples he cites regional b.o.p. statistics at national level and state b.o.p. statistics in the US. The argument demonstrates that the relationship between the benefits from b.o.p. statistics and globalisation is a bell-shaped one – increasing at first, but declining after a certain point. On the other hand, it seems clear that the costs associated with the production of b.o.p. statistics of a given quality increase with the degree of international integration, a point that the graphical analysis helps visualise clearly.

However, I would nevertheless like to make a minor qualification, which may not be immediately clear from the presentation in the paper. Someone browsing quickly through the paper and thinking about the statistician’s problem might be tempted to conclude that he or she should maximise the benefits (net of costs) for society by equating marginal costs with marginal benefits, thereby determining the optimal degree of globalisation from the viewpoint of our optimising statistician. This is not what the paper intends, and would also be wrong. Globalisation (or integration) is not a choice variable for statisticians, who must take the state of globalisation (and its likely

dynamics) as given. The relevant choice variable when trying to maximise the net benefits from b.o.p. statistics is their quality (timeliness, accuracy, coverage, etc.). The choice dimension is not covered in the graphs included in the paper.

Figure 6 shows how the costs and benefits from b.o.p. statistics have changed following the creation of the euro area. The argument here is that participation in the euro area means that Spain foregoes national monetary and exchange rate policies, immediately reducing the benefit from b.o.p. statistics for a given level of integration (globalisation). Therefore the benefit schedule shifts downwards. Over time the degree of integration will increase with monetary unification (via so-called one-money one-market effects), and the relevant point will shift to the right along the lower benefit schedule. Whether benefits will in the end be higher or lower than before is not determined and depends on how the drawing is made. On the other hand, the cost schedule shifts upwards because monitoring cross-border transactions is more difficult after the elimination of the national currency.

The point I want to emphasise here is that, as Mr Viñals clearly states, fiscal, financial and structural policies remain national responsibilities in the euro area. These policies will be conducted under a new regime: Monetary Union. I am unsure as to whether one may safely conclude that the benefits of monetary, exchange rate, fiscal, financial and structural policies before monetary unification are necessarily larger than the benefits of fiscal, financial and structural policies after the creation of the euro area. The relationship between total benefits and the number of policies under different policy regimes is, in my view, an important one. This makes both the initial impact and the final impact on the net benefit from b.o.p. statistics indeterminate.

To conclude, therefore, I fully subscribe to the conclusions presented in the two papers, in spite of some occasional qualifications.

Discussion summary

Following the discussant's presentation, the Chairman of the session, **Christian Noyer** (Governor, Banque de France), opened the floor for a handful of questions, given the time constraint. Referring to the presentation by **Sinikka Salo** (Member of the Board, Bank of Finland), **Peter Charleton** (Central Bank and Financial Services Authority of Ireland) said he was struck by what Ms Salo had said as he comes from a country which is perhaps one of the most globalised in the world. In Ireland, cases such as the cited example of Nokia not only concern multinationals, but all kinds of companies. Even households are very globalised. This makes it very difficult not only to measure b.o.p. transactions but also to interpret them. He then argued that in a situation where there are many statistical demands, the opportunity costs of devoting more and more resources to balance of payments statistics become rather high. In his eyes, the question is whether we can afford to devote more and more resources to b.o.p. when there are so many other things that need to be done. **David Stockton** (Director Research and Statistics Division, US FRB) confessed to being sceptical about the remaining value of national b.o.p. statistics for purposes of the conduct of monetary policy, in the transition phase, during integration and in the steady state in the euro area. He observed that in the United States, the monetary policy of the Federal Reserve is determined without any knowledge of or reference to the balance of payments between California and Kansas or New Hampshire, and he wondered whether they would conduct a better monetary policy if they knew what these balance of payments were. If not, then logically he questioned whether the importance of national b.o.p. statistics within the Monetary Union would not diminish over time. **Ms Salo** replied that national policies in the euro area remain and that Member States still need national accounts statistics, including an account for the rest of the world. **Mr Noyer** added that this need had also been referred to by José Viñals (Director General International Affairs, Banco de España) when he mentioned fiscal policies or structural policies, for example. These are relevant policies from the point of view of both the Member States and the euro area/EU.

By way of conclusion, **Mr Noyer** first stated that he had heard that balance of payments statistics are very useful but costly, and that there is still a need to improve the quality and reduce the costs; he then made a more personal reflection, prompted by Mr Stockton's remarks, on a recent study by the ECB showing that the euro area balance of payments statistics surprisingly fared rather well in terms of compliance with the standards of the IMF, regarding quality and periodicity, by comparison with those of longer established economies such as the United States or the United Kingdom.

IV Economic and financial accounts for monetary and economic policy

The use of economic and financial accounting in the conduct of monetary policy

*David J. Stockton**

1. The development of the national economic accounts

Attempts to measure economy-wide activity go back a long time. In his history of national economic accounting, John Kendrick (1970) traces early efforts to develop estimates of national income to the latter part of the seventeenth century and the work of Sir William Petty and Gregory King in England, and Pierre Boisguille in France. Economic accounts and systems of economic measurement were the subject of growing interest as the field of economics developed in the eighteenth and nineteenth centuries. In the United States, the measurement of national income had its roots in work undertaken at the NBER. Among its first publications, the NBER issued a study in 1920 prepared by Mitchell, King, Macaulay, and Knauth entitled *Income in the United States*. This line of work was advanced further at the NBER through the 1920s.

However, the major impetus to the development of what would become the modern system of national economic accounts occurred a decade later and arose from the needs of economic policy-makers to cope with events that had profound consequences for the performance of the macroeconomy. The first was the Great Depression, which confronted policy-makers with the challenge of formulating responses to an economic event without apparent precedent. The modifier “apparent” must be used here because policy-makers at the time had no systematic economy-wide measures to gauge the depth and breadth of the downturn in aggregate output. By 1919, the staff at the Federal Reserve had developed and published measures of industrial activity to monitor the most cyclically sensitive portion of the economy – the industrial sector. And although measures of industrial production were, and still are, valuable in identifying business cycle events, they were not intended to paint a broad picture of the macroeconomy.

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To fill that gap, the US Department of Commerce commissioned Simon Kuznets to head a group of researchers from the department's Division of Economic Research and from the NBER to produce a set of national economic accounts (Landefeld, 2000). The work of Kuznets and his colleagues paralleled that of Richard Stone in the United Kingdom. The results were reported to Congress in 1937. Initial efforts were focused on the measurement of national income, but by 1942 estimates of gross national product had been completed.

By then, the Second World War was confronting policy-makers with a new challenge – determining whether limited resources could be allocated to meet the expanding demands of wartime production, and, if they could, how they would be allocated. That task was made all the more pressing by the existence of price controls that covered a significant share of economic activity and prevented the price mechanism from ensuring that the allocation problem would be solved by usual market mechanisms. The subsequent development of input-output accounts for the United States by Wassily Leontief was a major addition to the infrastructure of national economic accounts. Thus, although the national economic accounts have always been used widely in both the private and the public sectors, it is impossible to divorce the development of the accounts from the requirements of economic policy-makers, as the two are inextricably intertwined.

Of course, as practitioners of economic accounting often note, the accounts themselves are works in progress, evolving in response to economic developments and to the needs of decision-makers for organised information. In recent years, major advances in the national income accounts have been made in the measurement and treatment of investment in software, government investment and financial services. Economic theory guided the BEA of the US Department of Commerce in the implementation in 1996 of chain weights for real GDP. The BEA has amassed an impressive record of accomplishments over the years – a testament to the bureau's intellectual energy, given the limited resources at its disposal and the magnitude of the challenge that it faces.

Although many significant improvements have been made over the years, the basic architecture of the national accounts has proven to be remarkably durable. The accounts remain the principal intellectual organising device for coherently integrating and summarising a massive quantity of economic data for macroeconomic analysis. Much of that success can be credited to the fact that the developers of the accounts grounded their structure in economic theory. The basic units of analysis for purposes of constructing the income and product accounts – households, businesses, governments and the rest of the world – have natural counterparts in most theoretical models found in macroeconomics. With the Fed's dual mandate to pursue output and price stabilisation, the decomposition of nominal GDP into its price and real output components is especially relevant for the conduct of monetary policy.

Financial accounting has also been an integral input to the policy process. Work began on the development of a set of national financial accounts at the FRB in 1948 when it became clear that policy-makers needed a better understanding of the financial transactions that supported real economic activity. The FFA were first published in 1955. These allow the tracking of the sources and uses of funds that arise from the saving and

investment decisions of private and public sector agents in the domestic economy, together with the flow of capital between the US and the rest of the world. The information summarised in the economic and financial accounts forms the basis for much of the economic analysis that the staff of the Federal Reserve conduct for the Board of Governors and the FOMC.

Despite the considerable sophistication of the national economic and financial accounts and the high quality of the underlying statistics, policy-makers cannot afford to depend solely on these accounts when setting policy. At the Federal Reserve, we study detailed data on labour markets, prices, interest rates, asset prices, exchange rates, industrial production, sentiment surveys, regional economic developments, and much more. Moreover, we sift through similar information on the economies of our major trading partners. However, as I will underscore below, staff at the FRB often combine the discipline of economic accounting with alternative sources of data to gain perspectives on economic developments beyond those offered by the formal accounts.

In the next section of the paper (Section Two), I will describe the central role played by the NIPA and the FFA in the analysis and forecasting operations of the staff of the FRB. In Section Three, I will discuss some of the possible shortcomings of relying on a single implementation of the economic accounts. I will illustrate some of the power of using economic accounting outside the formal accounts with three examples: (1) the estimation of alternative measures of inventories; (2) the use of FFA saving measures to identify wealth effects on consumption; and (3) the calculation of alternative measures of productivity. The purpose of these endeavours is not to determine what constitutes “truth”: making monetary policy in real time will never afford one that luxury. Rather, the purpose is to demonstrate that economic accounting and additional data sources can be used to gain a valuable perspective on emerging economic developments. Such efforts can be helpful in identifying tensions and inconsistencies in the published accounts and in gauging the uncertainty regarding the economic outlook. Likewise, the congruence of traditional and alternative measures may afford policy-makers a greater sense of confidence in their assessment of the economy. Section Four presents some conclusions.

2. The use of the economic and financial accounts in the conduct of monetary policy

The staff of the FRB monitor an enormous quantity of information in the Fed’s efforts to analyse and forecast economic and financial developments. Indeed, across the three economic research divisions, more than 52,000 time series are regularly maintained for purposes of macroeconomic analysis. This figure that does not include specialised databases developed by economists for research projects or any of the large cross-sectional databases that the staff develop or acquire. Despite our access to and use of such a massive amount of information, much of our macroeconomic analysis and forecasting work is organised around the NIPA and FFA.

The FOMC meets eight times a year on a regularly scheduled basis, and before each meeting the staff prepare an economic and financial forecast for the US economy.¹ Much of the forecast uses the structure of the NIPA. A detailed expenditure-side forecast is produced, including consumption; residential investment; business fixed investment; inventory investment; federal, state, and local consumption and investment; exports; and imports. Estimates of nominal and real spending are prepared along with a set of chain-weighted price indexes. Each of these components is disaggregated to the extent that leverage can be gained from refinements in econometric specification or from the ability to use high-frequency indicators to improve forecast performance.

Similarly, an extensive set of income-side projections is developed during the forecasting process, including labour compensation, proprietors' income, rental income, net interest, corporate profits, and the consumption of fixed capital. Just as in the published data, the expenditure and income sides of the accounts in our forecast do not always mesh neatly. When we are filtering near-term indicators of income and expenditure, we let the associated statistical discrepancy vary in our forecast; as a consequence, the projected change in real gross domestic product does not always equal the projected change in real gross domestic income. For the long-term projection, the standard practice has been to employ the discipline of holding the statistical discrepancy constant to ensure that the implications of projected spending can be reconciled with our outlook for wages, prices, productivity, and profits.²

These NIPA-based forecasts of real activity and prices are integrated with our projection of financial flows structured on the FFA. The FFA forecast traces out financial flows and accumulates those flows along with projected physical investment into detailed projections of the balance sheets of the household and business sectors. Taken together, these forecasts allow the staff to address questions such as how the projected level of investment will be financed; whether debt markets will provide the necessary funds at the interest rates and asset prices assumed in the projection (and if not, what adjustments will be likely to transpire); and how the anticipated changes in sectoral balance sheets will feed back on aggregate demand.

The value of integrated economic and financial accounts can be demonstrated by developments last year. In the second half of 2003, equipment spending turned up sharply and the run-off of inventories began to wane. At the same time, commercial and industrial loans at banks and commercial paper borrowing were contracting (Figure 1). The FFA suggested that these observations could be reconciled chiefly by examining two financial developments. First, firms had issued heavily in the bond market for several years – especially so in the first half of 2003, when long-term interest rates fell. In the process, they accumulated considerable liquid assets. Second, cash flow and profits surged in the latter half of the year. As a consequence, firms could readily

¹ For a detailed description of the forecasting process employed by the staff at the Federal Reserve Board, see Reifschneider, Stockton and Wilcox (1997) and McIntosh, Scherschel and Teplin (2000).

² Exceptions have been made in periods when the statistical discrepancy appears to be trending for a considerable time.

finance a rapidly rising level of investment without borrowing. The important implication was that the weakness in borrowing did not portend a softening in spending.

Such observations help explain the high level of complexity involved in the production of the forecast. After all, one might reasonably ask, why bother with all this detail? Would it not be possible for a small-scale vector autoregression model that includes the key variables of policy interest – for example, inflation, real output and interest rates – to produce a forecast with a similar root mean squared error of those key variables? I cannot answer this question. Academic researchers have found that the detail-oriented approach to forecasting used by FRB staff has performed significantly better in forecasting inflation than the private sector's approaches, though the advantage is much less clear for the forecast of real GDP (Romer and Romer, 2000). The approach of producing a full set of accounts for the forecast imposes considerable discipline on staff to understand how details fit into the broader economic and financial picture. That detail allows policy-makers to probe the consistency of the staff projection, to assess its congruence with emerging developments, and to formulate alternative views more clearly. Of course, one must quickly concede that detail is not necessarily associated with knowledge; little purpose is served by forecasting at a level that neither theory, data nor empirical analysis can reasonably support. The practice of macroeconomics almost always entails making judicious choices about the level of aggregation.

3. Economic and financial accounting beyond the accounts

The guiding principle in making such choices should be to avoid discarding information that is valuable in understanding current economic developments. With this aim in mind, we have found that applying the discipline of economic accounting to the analysis of data outside the national accounts is often useful. By doing so, we can look for verification of the signals provided by the published accounts and spot anomalies that warrant further investigation. The statistical agencies themselves undertake many similar cross-checks, both formal and informal. However, the consumers of the accounts must also be attentive to tensions and anomalies in the data. The use of economic accounting outside the accounts can provide alternative perspectives on issues of macroeconomic consequence.

A. The cyclical dynamics of inventories

Because of their role in shaping the cyclical dynamics of the economy, inventories remain a central preoccupation of macroeconomists. Timely information on the emergence of inventory imbalances and on the subsequent correction of these imbalances is helpful in understanding how these dynamics are playing out, and is thus helpful in calibrating monetary policy. The NIPA employ a variety of data sources in estimating inventory investment, but the vast bulk of the NIPA estimate of inventory investment is derived from book value data on inventories reported by manufacturers, wholesalers and retailers to the Census Bureau. The BEA uses these data along with estimates of valuation adjustments, inventory acquisition costs, and prices to estimate real inventory investment. Inventory investment (ΔI) is then chain-weighted with

measures of final sales (FS) to estimate real output (Y), which with only minor violence to chain weighting can be written:

$$(1) \quad Y = FS + \Delta I$$

The data are collected by surveying firms in the manufacturing and trade sectors about the value of the inventories that they hold in total and by stage of processing. However, no information is collected about the specific items that they are holding in their inventories. For example, we may know the total value of inventories held by aircraft manufacturers, but not how much of those inventories consists of aluminium, textiles or semiconductors. In gauging where production adjustments are likely to occur and the probable magnitude of those adjustments, a measure of specific items in inventory “wherever held” would be informative. For example, semiconductors are held in inventory by many types of firms and not just by manufacturers of semiconductors. Potential production adjustments in this industry can be more accurately assessed by estimating the total volume of semiconductors held in inventory throughout the supply chain of the economy.

Charles Gilbert at the FRB has been investigating this issue. He starts with the simple observation that rather than using final sales and inventory investment to infer output, if one instead had a measure of output and final sales, then one could infer inventory investment:

$$(2) \quad \Delta I = Y - FS$$

He is working on a disaggregated system that uses the components of industrial production as measures of industry output and various indicators of the consumption of industry product to infer inventory investment. His estimates comprise data on 64 industries that make up the manufacturing and mining sectors of the US economy.

The estimation system used by Gilbert is far too complex to describe in full here, but a brief sketch should suffice. Where possible, he uses physical product data on inventories, for example on motor vehicles and petroleum products. For other industries, he uses data on industrial production (Y), imports (M), and exports (X) to estimate total domestic absorption (DA):

$$(3) \quad DA = Y + M - X \quad \text{Sources of product for domestic absorption.}$$

Domestic absorption can then be split into domestic consumption (C) – defined broadly to include consumption and investment spending other than structures by the household, business, and government sectors – and inventory investment:

$$(4) \quad DA = C + \Delta I \quad \text{Uses of product in domestic absorption.}$$

Nothing comes for free. Although Gilbert employs indicators of consumption of industry product, both consumption and inventory investment are, in fact, unobservable. To solve this problem, he imposes some structure on the dynamics governing the evolution of inventories and consumption, and then decomposes domestic absorption into consumption and inventory investment using the Kalman filter.

The results of his computations for the inventory-consumption ratio (or days' supply) in the industrial sector are displayed in Figure 2. For comparison, the inventory-sales ratio derived from the NIPA and placed at factory value is also plotted. Remarkably, these measures, which use very different data sources, trace out similar patterns and indicate a pronounced falling off in inventories relative to sales in recent quarters.

The most recent business cycle in the United States was characterised by a significant downturn in high-tech industries. The IP-based system allows the inventories of those products to be tracked wherever they are held in the economy. The consequent estimates of the days' supply of semiconductors and other electronic components, plotted in the upper panel of Figure 3, reveal the large overhang of semiconductors that developed in the wake of the tech collapse that began in late 2000. After wrenching production adjustments over the following couple of years, days' supply by late last year had moved once again to very lean levels, and production began to recover noticeably. The middle panel presents similar readings on communications equipment, an industry that experienced an especially sharp contraction in demand. After soaring to unprecedented highs in late 2001, days' supply has moved down over the past couple of years. However, inventories remain high relative to consumption, and the recovery in production has been modest to date. Finally, days' supply of computers as estimated by this system (the bottom panel) has trended downwards over the past few years and now stands at a very low level.

Again, the purpose of the exercise is not to argue that these estimates are "better" than those included in the national income accounts; given the embedded assumptions and the empirical structure that is imposed in their estimation, these inventory estimates would actually not be attractive to economic accountants. However, the exercise demonstrates how the application of accounting identities and the use of alternative data sources can both confirm in a timely fashion the broader trend of a spending component that figures prominently in the determination of the cyclical dynamics of the economy, and add texture to and perspective on industry developments as those dynamics unfold.

B. The saving rate and stock market wealth

Over the past decade, enormous swings in US equity prices have renewed interest in the relationship between stock market wealth and economic activity. Researchers, including many at the FRB, have expended considerable energy attempting to determine whether movements in stock market wealth influence aggregate spending and, if so, through what channels. The bulk of the time series empirical work on this subject have employed data on consumption and saving taken from the NIPA. Careful time series econometrics appears to support a causal relationship running from wealth to consumption (see among many others, Davis and Palumbo, 2001), though there are some dissenting opinions (see, for example, Ludvigson and Steindel, 1999).

Moreover, the mechanism through which that influence operates is open to question. Increases in stock market wealth could raise consumption by raising the lifetime resources of those households that hold equity. Another possibility is that increases in equity prices could be viewed as a signal of improving economic conditions that boosts the sentiment and spending of economic agents more broadly, including those that have

little or no exposure to equity markets. Dynan and Maki (2000) explore this issue with micro-level data from the Consumer Expenditure Survey, and find strong evidence of a direct link between stock ownership and wealth effects on consumption.

More recently, Maki and Palumbo (2001) use a combination of portfolio data from the Federal Reserve's SCF and saving measures from the FFA to address this issue. In the NIPA, personal saving (S) is measured as disposable personal income (DPI) less personal outlays (PO):

$$(5) \quad S = DPI - PO$$

An alternative measure of household saving is available from the FFA. This measure of saving utilises information on financial flows and investment in tangible assets to estimate saving. Specifically, household saving (S) is defined as the net acquisition of financial assets (ΔFA) plus net investment in tangible assets (ΔTA) less the net increase in financial liabilities (ΔFL):

$$(6) \quad S = \Delta FA + \Delta TA - \Delta FL$$

As shown in Figure 4, the FFA measure of personal saving exceeds the NIPA measure. The difference between them is mainly the result of including investment in consumer durables in the FFA measure; the NIPA measure does not include this investment. Comparison of the FFA measure with the NIPA measure of personal saving is facilitated by removing investment in consumer durables from the FFA saving measure. For reasons that are not fully understood, the adjusted FFA saving rate (the blue line) still exceeds the NIPA measure, though the measures are much closer.

Maki and Palumbo first construct detailed distributions of assets and liabilities across income quintiles as reported every three years in the SCF. They then interpolate these distributions, which tend to change only slowly between the surveys. Using these distributions and the detailed changes in financial and tangible assets and in financial liabilities taken from the FFA, they are able to estimate saving by income quintile at a quarterly frequency.

As seen in Figure 5, the results of the analysis are quite striking. On these estimates, households in the top 20% of the income distribution experienced both the largest swings in net worth and the largest movements in personal saving; the saving rate for this group dropped sharply in 1999 and 2000, rose again after their net worth plummeted, and has since fallen once more as their net worth has recovered. For households in the bottom 80% of the income distribution, net worth and the saving rate have fluctuated relatively little. These findings provide further evidence in support of the direct ownership channel between stock market wealth and consumption. The work of Maki and Palumbo also provides another illustration of the use of innovative economic accounting to gain traction on an issue of importance to policy-makers.

C. Accounting for productivity

Published figures from the Bureau of Labor Statistics (BLS) on output per hour are derived using a measure of non-farm business output taken from the expenditure (or product) side of the NIPA.³ The hours measure used in the denominator is based principally on hours reported in a survey of establishments.⁴ The choices made by the BLS for both numerator and denominator are eminently sensible and are the focal point of our macroeconomic analysis of productivity. As seen on line 1 of the table in the top panel of Figure 6, the published figures on productivity in the non-farm business sector have shown a remarkable acceleration over the past decade. The average growth rate of output per hour between 1995 and 2003 was more than double the average pace of the preceding decade and a half. Perhaps even more astonishing, productivity appears to have accelerated further since the trough of the cycle – averaging 4.8% per annum over the past two years.

However, the magnitude and the timing of the acceleration of productivity are sensitive both to the measure of output and to the measure of hours used in its construction. Staff at the FRB have for a long time constructed alternative measures of productivity.⁵ As shown in the middle panel, growth of income in the non-farm business sector exceeded that of product in the second half of the 1990s, but that pattern has been reversed over the past two years. Using an income-side measure of output in the non-farm business sector (line 2 in the top panel of Figure 6), productivity is estimated to have accelerated slightly more than the official measure over the past decade. However, that measure also suggests that there has been less further acceleration over the past few years.

As has been widely noted, employment and hours worked as measured by the household survey have diverged noticeably from employment and hours worked as measured by the establishment survey, with the household survey measures showing less weakness than the establishment survey (bottom panel of Figure 6). Although we view the establishment survey as the more accurate measure, the household survey no doubt contains useful information. Output per hour can be calculated using total hours strictly from the household survey; these calculations are shown on lines 3 and 4 of the top panel. Productivity estimated with household hours has accelerated less than comparable measures using establishment hours and has not accelerated further over the past few years.

Of course, the most important conclusion to be drawn from this analysis is that regardless of the measure of output or the measure of hours used for its calculation, productivity growth in the United States has posted an extraordinary performance over

³ This was not always the case. Until 1995, labour productivity figures in the “Productivity and Costs” release of the BLS were derived from an income-side measure of non-farm business output. Productivity for the non-financial corporate sector is still based on an income-side measure of output.

⁴ The published measure of hours, which I have labelled “establishment” in Figure 6, incorporates data on non-employee hours that are taken from the household survey. Non-employee hours are roughly 10% of the total.

⁵ Researchers at the BLS have recently explored this issue. See Eldridge, Mansur and Otto (2004).

the past decade. It seems only a remote possibility that the substantial acceleration in measured productivity in the US could have resulted from data anomalies.

Other important work that uses alternative implementations of economic accounting is under way at the Fed. Beaulieu and Bartelsman (2004a, 2004b) have developed a massive relational database that integrates data from many sources. This system enables detailed decompositions of sectoral productivity that may ultimately provide us with a deeper understanding of the sources of the improved performance of productivity in the United States. On the financial side, a joint team from the FRB (Antoniewicz, McIntosh, Palumbo, Solomon and Teplin) and the BEA (Mead, Moulton and Moses) has been working to deepen the integration of financial and non-financial economic accounts in the United States in the style of the SNA.

4. Conclusion

Economic and financial accounts provide policy-makers with powerful tools to organise data, assess economic developments, and gauge the influence of policy actions on the economy and the financial markets. In the United States, the formal accounts sit at the centre of the analysis and forecasting work performed by the staff of the Federal Reserve for use by the FOMC in the conduct of monetary policy. The sophistication and quality of both the economic and the financial accounts has grown steadily over the years, providing policy-makers access to ever-souder information on which to base their decisions.

As Chairman Greenspan has noted (2004), the conduct of monetary policy is best thought of as an exercise in risk management. Among the risks faced by policy-makers are faulty, incomplete or contradictory readings on the economy. Reliance on any single system of measurement or any one set of statistics to formulate policy would be unwise. At the Fed, as I am certain is the case at all central banks, policy-makers monitor massive amounts of information. Some of that information is statistical, and some is anecdotal. Most comes from the formal economic accounts, but some comes from alternative implementations of economic accounting. In the end, policy-makers will never have complete information, but they should strive to make the most effective use of the information that is available to them. Economic and financial accounting are powerful tools to guide that endeavour.

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Economic and financial accounts for monetary and economic policy

György Sándor

1. Introduction

Since the beginning of the 1990s MNB, the Hungarian central bank, has, in common with many other central banks in Europe, devoted considerable resources to developing a detailed system of financial accounts. The improving quality of these accounts makes it possible to use them in policy-making.

This paper presents the compilation process and the different areas of policy use of the financial accounts. According to our experience, financial aggregates can be used in a wide range of policy analyses. Forecasts of the financial accounts can be used to cross-check forecasts of the real variables, and as early signals for changes in real variables.

Though the financial accounts form a detailed and consistent system, analysts should be aware of certain weak points. In the last part we argue for the use of operational aggregates and show some of the limitations of the existing statistical standards for analytical purposes.

2. A short description of Hungarian financial accounts

2.1 Institutional arrangements

According to the division of tasks between the Hungarian statistical institutions, the compilation of non-financial national accounts is the responsibility of the Hungarian Central Statistical Office, while MNB compiles the financial accounts. The methodology is based on the ESA 95 and SNA 1993 manuals. The whole set of non-financial accounts has not yet been compiled, although financial accounts (stocks and flows) are available at a quarterly frequency.

The compilation of financial accounts for the whole economy is the task of the Financial Accounts Division of the Statistics Department within MNB. The Financial Accounts group consists of five persons, and the work is divided by economic sectors and instrument groups of financial accounts.

2.2 Work conducted

Work related to financial accounts started approximately seven years ago in MNB. Several individual data collections, methodological improvements and structural

changes were concluded during this period to achieve the goal of publishing financial accounts. In the early stages the major task was the methodological development of the main data sources: household, monetary, general government, balance of payments and securities statistics. The following stage was mainly characterised by the introduction of new data collections for the remaining fields and building up a new system for the compilation of the entire set of financial accounts. Regarding the early stages, it is important to stress that, from the beginning of 1997, methodological changes were gradually introduced in the sector statistics of MNB, for example in the sector classification of institutions or breakdown by sectors and types of instruments, which made them as a result directly usable sources.

Concerning the second stage of development of financial accounts, it was especially important to have regular access to the annex of corporate tax declarations for all companies, which includes their balance sheets and profit and loss statements. These reports became relevant sources for financial accounts in the presentation of assets and liabilities that are not available from banking statistics. These data are mainly used in the case of non-financial corporations and of non-listed shares and equities.

In the development phase of the data collection and compilation methods, our goal was to achieve the most detailed breakdown at the greatest possible frequency and with the shortest time-lag for all figures. For this reason a quarterly data compiling system was created which currently contains data since the end of 1994. Stocks and flows data are obtainable from the system, including transactions, revaluations and other changes in volume. The financial assets and liabilities are broken down by 18 asset categories, by denomination, and by 12 issuer and holder sectors in accordance with the SNA 1993 and ESA 95 manuals.

2.3 Products and dissemination

Until 2003, MNB published financial accounts-type statistics (financial savings) only for the household and general government sectors at a monthly frequency. Since 1 April 2003, MNB has started to disseminate financial accounts (stocks and transactions) on its website for every sector on a quarterly basis, going back to the end of 1997. From 1 April 2004, data going back to the end of 1994 are also available. The time-lag of publication is 90 days.

The financial accounts calculated and published by MNB contain a full sectoral breakdown of the economy and also include the rest of the world. All financial assets and liabilities of these sectors have been included in the accounts. All data were compiled with the aim of achieving full compliance with the accrual accounting principle and market valuation, although estimation also proved necessary during compilation.

Consolidated and non-consolidated data for all sectors are also published, together with the methodological description of the rules applied. Continuing its earlier publication, MNB also releases a more detailed information of the financial accounts of the household and general government sectors. Additional details on households are included, regarding the breakdown of assets and liabilities by type (for instance: housing loans and consumer credits), and concerning operational transactions (i.e. separating the compensation for inflation component of interest).

MNB plans to develop the Hungarian financial accounts further with the presentation of operational transactions and an additional breakdown of instruments by the end of 2004. There are also plans to lengthen data series back to the beginning of the 1990s.

In addition to the publication and dissemination of data, compilers of financial accounts regularly prepare analytical papers on financial accounts data for a national economic daily. The aim of these articles is to teach potential users how to use financial accounts data in economic analyses. On its home page, MNB publishes these articles in both Hungarian and English as well as the methodological description concerning the compilation of financial accounts.

2.4 Methodological aspects of data compilation

Most stock data are collected directly. Only some stock figures for shares and equities and loans taken from balance of payments statistics are derived from flows accounts. Quarterly figures are sometimes estimated using annual figures or quarterly flows in the case of intercompany loans and other receivables/payables. Listed securities (shares, government securities and mutual fund shares) are included at market value. In the case of other assets, estimated market value or book value is used. Flows data are mostly derived from stocks. Transactions are computed using additional information on revaluation and other changes in volume. Transactions are directly available only in the case of b.o.p. statistics and for some operations of the central government.

Regarding the accrual principle, receivables and payables related to trade credits and advances, accrued interest, compensation of employees and accrual accounting of taxes and social contributions are always taken into account in each sector.

Annual and quarterly accounts are also compiled by the same system. In this way the breakdown of both the annual and the quarterly accounts is the same. Annual accounts (flows) can be computed by adding quarterly data. The only difference between the annual and the quarterly accounts is in the accuracy of the data, as quarterly data contain more estimation.

Since the whole set of non-financial accounts has not yet been completed, comparison of the net lending positions is not possible for every sector. The possibility of comparing the balancing items is only available in the case of the general government and household sectors. Both the Ministry of Finance and MNB estimate net lending of general government from above the line. The Statistical Office compiles the full set of non-financial accounts of households.

The whole set of financial accounts is always cross-checked with the sector statistics (monetary and balance of payments statistics) prepared by the Statistics Department of MNB. There are differences, but these can always be explained owing to methodological differences.

3. Use of financial accounts in monetary policy

3.1 Earlier use of financial accounts aggregates and forecasts

Since the early years of economic transition there has been increasing demand from both policy-makers and analysts to obtain consistent time series that can be used to explore the relationship between real and financial variables or among different sectors. The different partial statistics available then were insufficient and thus could not provide a reliable overall picture of the economy required for policy decisions. Hence MNB – like many other central banks in Europe – has devoted considerable resources to creating a consistent and detailed system of financial accounts.

The net lending of the individual institutional sectors has been analysed and forecasted by the Monetary Instruments and Markets Department since the early 1990s. Initially the forecasts were prepared only once a year, owing to the insufficient and unreliable data. Improving methodology and longer time series available made it possible from 1998 to prepare forecasts on a quarterly basis. The projection's horizon was extended to three to six quarters, and was later adjusted to the horizon of the inflation forecast.

These projections on the net lending of each sector (i.e. the financial and non-financial corporate, household, general government sectors and the non-residents), the key monetary aggregates, the balance sheet of the central bank and the consolidated balance sheet of the banking sector are aggregated in the so-called Monetary Programme. Net lending is derived from both the financing and income sides, and hence enables the forecasts to be cross-checked for consistency. The Monetary Programme serves as an important input for analysis and monetary policy decisions.

Nowadays the financial accounts are prepared in full accordance with the international standards. However, in certain cases the Monetary Programme goes well beyond them for analytical purposes. Considering the characteristics of the Hungarian economy (a small open economy, inflation targeting, etc.), some entries are further decomposed (by currency or maturity) to allow a more detailed and profound analysis.

3.2 Present use for monetary policy

Since Hungary is a small open economy, the inflation-targeting framework requires less attention to be paid to the monetary aggregates. However, forecasting the sources and uses of the funds of the banking sector is essential for four main reasons. Firstly, by applying a consistency check, financial account forecasts can support the forecasts of the changes in real economy and thus expected changes in inflation. Secondly, financial account forecasts also predict changes in the internal and external balances that enable the central bank to give a rough estimate of the optimal level of its foreign reserves. Thirdly, forecasting MNB's balance sheet results in the probable changes of outstanding value in the main policy instrument. Fourthly, comparing flow of funds forecasts with monthly information on monetary and financial institution data can indicate any possible deviation in consumption or capital formation trends for which data are published with about a four month lag.

3.2.1 Consistency of macro forecasts

Flow of funds forecasts check the consistency of the sectors' income and final use of GDP. Net lending can be obtained by two approaches: the difference between financial assets and liabilities, or disposable income less consumption and investment. After the first draft of forecasts on the financing and income sides has been prepared, the two values for net lending must be cross-checked against each other by sector. In the event of any discrepancy, both estimates are checked for possible methodological errors or improper assumptions for external items, with the aim of narrowing the deviation between the two estimates. For example, an increase in households' liquid balances may function as an indicator of future rises in consumption, but shifts in the balance of corporates' assets and liabilities within their net lending may also be a gauge of the sector's future profitability trends. So the forecasts for variables which (based on past data and economic developments) exhibit the greatest probability of deviating from the initial estimate towards equilibrium are modified.

The consistency checks are used to fine-tune the forecasts of financing-side variables when establishing consistency with the income-side numbers. In such modifications, the mutual consistency of potential increases in consumption and income is examined, taking into account the impact of these modifications on other sectors as well. (For example, the disposable income-to-GDP ratio of an individual sector may only change to the detriment of the others.)

After finishing a consistency check of the different sectors' net lending, we determine a portfolio structure that is suitable for the obtained net lending values of the individual sectors. Forecasting different sectors' financial assets and liabilities provides the balance sheets of commercial banks. The difference between total assets and liabilities must be consistent with the expected profitability of banks, or the forecasted net lending of financial corporations, which is determined by the sum of net lending of non-residents, households, general government and non-financial corporations.

3.2.2 Current account financing

The forecasting of financial accounts provides an estimate of the current account deficit as well as the most probable structure of its financing. The projected changes in the internal and external balances enable the central bank to calculate the optimal level of its foreign reserves.

MNB uses multiple criteria for this purpose, including indices based on the evolution of the monetary base, debt reimbursement obligations and Hungary's foreign currency needs. A stress test approach is also applied. These forecasts represent valuable input when deciding on the currency composition structure of the newly issued government debt. The financing of the government deficit is the sole responsibility of the AKK, and the forecasts are shared with the AKK for consideration.

The acquired estimates of non-residents' demand for the local currency can indicate probable market pressure on the exchange rate. (During the earlier narrow exchange rate band period, this served as a useful estimator of foreign exchange intervention.)

3.2.3 Forecasting interbank liquidity

After becoming acquainted with the amount of government debt being issued abroad, we obtain changes in foreign reserves in the balance sheet of MNB. Since we also know changes in other items of the balance sheet (monetary base by taking the required reserve ratio, M3 and credit institutions' foreign liabilities; items of the central government, etc.) the only unknown item on the balance sheet remains the outstanding amount of the net liquidity position of the banking sector. Consequently, the net liquidity position of the banking sector is an item on the central bank's balance sheet that is determined on the principle of residuals. In Hungary there is a structural liquidity surplus that continues to decrease as the monetary base increases. Thus liquidity forecast has an added significance as it informs us about the probable date when the liquidity surplus will be absorbed, allowing the central bank to introduce a two-week repo facility to inject liquidity into the banking system.

3.2.4 Early signals for changes in real data

Detailed data on changes in the final use of GDP are published with about a four-month lag. The flow of funds forecast offers a basis for evaluating higher frequency information on financial flows – for example, data on bank deposits and credits or unit trusts are available monthly. Besides the monthly available wage data, the deviation in net lending of the different sectors from the forecasts is an early signal of a possible change in consumption or capital formation trends.

Data on the total revenue of the sectors are published with about a one and a half-year lag. However, by adding net lending data of financial accounts, consumption and investment, we can obtain the total revenue of the sectors.

3.3 The importance of financial accounts: an example

Though we all face an enormous amount of economic information, it is always tempting to look for simple answers to different problems in the economy. Aggregate data and partial economic analyses sometimes give simple and plausible explanations to different phenomena at first glance, but frequently turn out to be misleading.

Financial accounts often provide a proper starting point for comprehensive and detailed analysis. One recent example is in detecting the sources of the deterioration of Hungary's external balance.

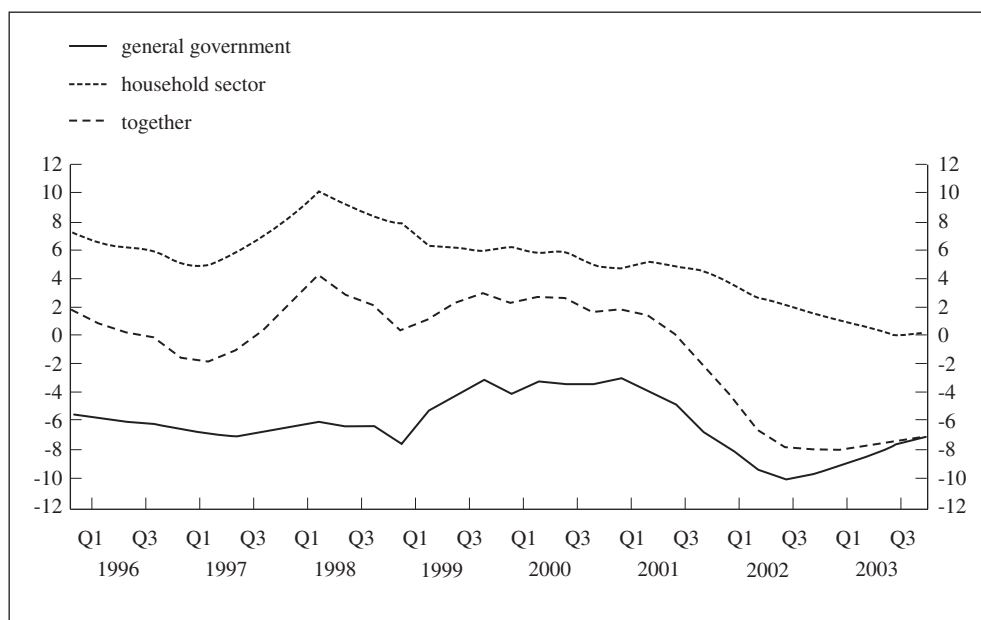
From the third quarter of 2001 Hungary experienced a gradual deterioration in its external balance. Between 2001 and 2003 the country's net external financing requirement increased from 5.1% to 8.3% of GDP. The starting point of this phenomenon roughly coincided with the change in the monetary regime, which allowed the Hungarian forint to appreciate by 9% over the next few months.

If you look at the aggregate data it is easy to assume a strong causality between the two phenomena: the lagged effect of the strong real appreciation between May 2001 and

December 2002 weakened the export competitiveness of the economy, and put a strain on the external balances.

But examination of the financial accounts reveals a different story (Chart 1). The worsening degree of competitiveness should imply a deterioration in the profitability and financial position of the corporate sector. However, the opposite happened.

Chart 1: Net lending of the general government and household sectors
(as a proportion of GDP)



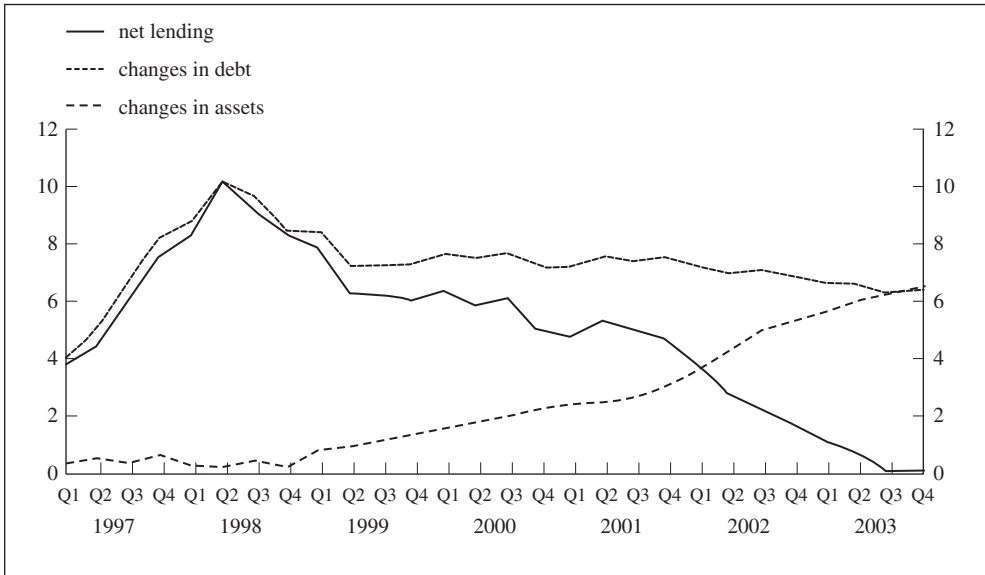
However, the net financial position of the corporate sector did not weaken; in fact, the sector was a net saver, and its disposable income increased. The sector – which is characteristically a net borrower – thus reduced the external borrowing requirement of the economy.

On the other hand, from late 2001 there is a marked increase in the fiscal deficit. At an early stage fiscal expansion reflected the aim of sustaining a high level of economic growth in an environment of weak external demand. In 2002, the main factor behind the fiscal slippage was the strong pay rise in the public sector.

The other factor that contributed to the deterioration of the external balance was historic lows recorded in the net lending of the household sector. The deterioration of households' net lending in 2003 can be attributed to structural as well as one-off factors. In 2001 the government introduced a subsidised mortgage loan scheme. Starting from a very low basis, the indebtedness of households recorded an extremely high rate of growth (Chart 2). The introduction of subsidies gave sudden momentum to the structural

development of financial intermediation, which made plenty of funds available that were spent on other purposes such as purchases of durable consumer goods. In addition to fuelling household consumption, in 2002-2003 the programme caused a marked reallocation of household savings from financial assets to real assets. Housing investments thus crowded out financial savings.

Chart 2: Elements of net lending of the household sector
(as a proportion of GDP)



4. Additional alterations necessary for analytical purposes

From the Hungarian experiences, some conclusions can be drawn as to the limitations of the methodological solutions given by the ESA 95 in the use of financial accounts data for monetary policy purposes. These are the distorted nature of interest payments in an inflationary environment, the large volume debt assumptions carried out by governments and the asymmetric treatment of reinvested earnings.

4.1 Advantages of Operational Aggregates

Unlike other types of income, interest income is affected by inflation and changes in inflation in a special way. For example, if inflation increases from 4% to 6% from one year to the next, then, ceteris paribus, the interest expenditures of debtors and interest receipts of creditors can increase considerably by up to 50%, whereas other types of income would approximately increase by only 6%.

In an inflationary environment, interest must also compensate for the decrease in purchasing power of the principal. Other types of income do not contain this kind of compensation. The compensation for inflation included in nominal interest does not

change according to the rate of inflation from one time period to the other but rather by the change in inflation. If inflation increases by 50% (e.g. from 4% to 6%), then the compensation for inflation also rises by 50% for that particular instrument.

Non-interest-bearing instruments usually react to inflation through growth in their prices. In national accounts these changes in prices are not accounted for as transactions but as revaluations. Thus changes in the prices of instruments held on the balance sheets of economic players has no effect on their income. Interest-bearing financial instruments denominated in foreign currency are protected against domestic inflation by revaluation as well. The difference between domestic and foreign inflation – in case all other conditions remain unchanged – has an influence on the exchange rate of the domestic currency, which means that the financial instruments denominated in foreign currency are subject to revaluation. Revaluations originating from changes in exchange rates do not form part of the income of economic entities either.

In the case of interest-bearing instruments, the compensation for inflation included in nominal interest has the same economic rationale as revaluation in the case of non-interest-bearing or foreign currency instruments. It is for this reason that the compensation for inflation included in interest should be seen as a revaluation and accounted for in the revaluation account instead of the distribution of income account. This alternative way of accounting for interest reduces the disposable income of creditors and raises that of the debtor, and has the same effect on savings and net lending/lending/borrowing.

This alternative accounting method has three principal advantages in an inflationary environment. Firstly, it can handle the distorting effects originating from the existence of inflation. It will eliminate this revaluation-like component linked to interest-bearing instruments from the income of creditors and debtors. Secondly, it handles the distortions arising from the change in inflation. As described in the first paragraph of this section, compared to other income types, the change in inflation affects interest incomes in a special way. After eliminating the compensation for inflation, the change of inflation would not have such an extreme effect on the level of the “cleaned” interest income. Thirdly, by using this alternative system of accounting of interest, the distorting effect which arises when economic players reorganise their financial assets and liabilities between interest-bearing and non-interest-bearing instruments or between financial instruments denominated in domestic and foreign currencies could be eliminated. Such a reorganisation may have a relevant influence on the volume of the compensation for inflation which, in the case of a conventional accounting of interest, influences the “conventional” incomes, savings and net lending position of economic entities. (For example, in countries with high inflation, the conversion of general government debt denominated in domestic currency into foreign currency can transform a considerable part of interest expenditure into revaluations.)

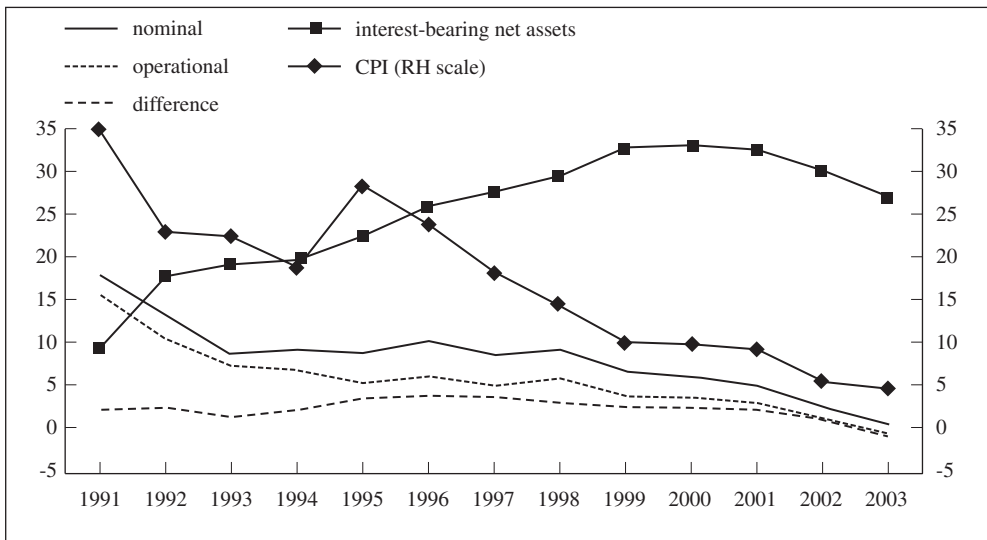
The authors of the SNA 1993 have recognised the distorting effect that the conventional method of accounting interest has in an inflationary environment. Therefore in Annex B of Chapter XIX of the SNA 1993, a suggestion is given to use the alternative way of accounting of interest in countries with high inflation. The ESA 95 does not mention this alternative way of accounting of interest, probably because high

levels of inflation are not relevant for Member States. Nevertheless, for the reasons given below, it is still important to use alternative interest accounting in the countries of the EU. On the one hand, inflation is still relatively high (and has been changing significantly) in some of the acceding countries that will join the EU on 1 May 2004. Without the alternative way of accounting interest, it is not possible to compare historical data for income, savings and net lending/borrowing. On the other hand, compensation for inflation not only depends on the level of inflation, but also on the level of the interest-bearing net assets. From the point of view of the distorting effect, a low inflation rate may also be considered relevant if interest is accounted for on a large stock of interest-bearing assets. For example, a 2% inflation rate may significantly distort the deficit of general government as a percentage of GDP (by around 1%) if the net debt of general government is 50% of GDP.

4.2 Operational indicators in Hungarian financial accounts

In Hungary the effect of the alternative method of accounting interest is presented in financial accounts publications in the case of the household sector. In the case of the other sectors, owing to the lack of data and to some methodological difficulties, alternative or operational net lending/borrowing has not yet been published. Households' conventional and alternative (or nominal and operational) net lending/borrowing differs considerably in the last decade (Chart 3).

Chart 3: Net lending of households and the CPI
(as a proportion of GDP; previous year = 100)



Since 1991 the net lending of households has significantly dropped according to both indicators. By 2003, households' financial saving had almost totally disappeared. Behind this declining tendency lies the more rapid growth in household consumption and investment than income.

Households' operational net lending in the period under examination is lower than the nominal one. This is due to the fact that households' interest-bearing assets are higher than their interest-bearing liabilities. Compensation for inflation included in the nominal interest – gains from exchange rate revaluations – has raised the net worth of households.

The difference between nominal and operational net lending, i.e. the compensation for inflation, reached its highest value in 1996, when it stood at 3.9% of GDP, but has been falling ever since. Compensation for inflation basically depends on two factors: the difference between interest-bearing assets and liabilities, and domestic inflation. In addition to these, foreign inflation (in the case of foreign currency-denominated instruments) and certain interest rates (in instances of instruments with lower interest rates than inflation) also exert some influence on compensation for inflation.

The difference between nominal and operational net lending rose from 1993 to 1996 because interest-bearing stocks and inflation also increased over this period. Between 1996 and 2000, however, the difference declined, since the effect of lower inflation was more significant than the effect of growth in stocks. Since 2000 both inflation and net stocks have been falling, which explains the further decline in the divergence of the two figures.

Compensation for inflation included in nominal interest can considerably distort the trend of financial savings of households. This distortion was most significant in the time period from 1993 to 1996, when the nominal figure showed a 1.3 percentage point increase in the financial savings rate as a percentage of GDP. However, looking at the operational figure, one can see a fall in this rate by 1.2 percentage points. Between 1996 and 2003, according to the conventional (nominal) figure, net lending as a percentage of GDP fell by 9.6 percentage points, while the alternative (operational) figure saw a drop of only 6.7 percentage points.

4.3 Large volume debt assumptions

Governments often assume public companies' debt. These transactions are usually settled in one amount, whereas the lending activity will have normally lasted for many years. Therefore, their influence on aggregate demand differs from developments that would be considered based on changes in financial accounts. Probably one of the most well-known examples is bank consolidation. Commercial banks accumulate huge amounts of bad debt that are usually incurred many years earlier. If this debt jeopardises the stability of the banking sector, the general government will assume a large part of the outstanding debt of the commercial banks and will give them government bonds in return. Since the assumed bad debt was created by lending activity over a number of years, financial accounts data – showing an instantaneous increase in government debt – are misleading. In order to determine the demand impact of the assumed debt, one should take into account that the impact on the aggregate demand does not happen at the time of the debt assumption, but instead when the borrower spends the borrowed funds. The timing and the size of the demand effect could be estimated by using other available information.

4.4 Reinvested earnings

Statistics on reinvested earnings are another weak point in the financial accounts. The amount of non-resident corporations' reinvested earnings strongly depends on the structure of foreign ownership. As only foreign direct investments appear in the financial accounts, the reinvested earnings of portfolio investments (otherwise less than a 10% share of the company) do not affect the current account balance. It follows from the mentioned procedure that the real net lending of a country differs from the data that result from the financial accounts. If there are few foreign owners with a high proportion of ownership in a country, this means a larger amount of reinvested earning – and thus a more unfavourable balance in the current account – than in a country where foreign ownership is more dispersed.

Comment

“Economic and financial accounts for monetary and economic policy”

*Luigi Federico Signorini**

It is a privilege to have been given this opportunity to comment on two very rich and interesting papers. As the papers cover, though briefly, many important topics, the discussion will have to be selective to be meaningful within reasonable time and space constraints.

While different in scope and content, the two papers by Mr Stockton and Mr Sándor have a similar structure. Both, like Caesar’s Gaul, are divided *in partes tres* (net of introductory remarks). Part I provides an overview of the development of financial accounts (and, in Stockton’s case, of national accounts more generally) in, respectively, the US since the early 20th century, and post-socialist Hungary. Part II examines the use of financial (and economic) accounts in the two countries in the conduct of monetary policy, and illustrates certain aspects with apposite examples. Part III covers a number of special topics in greater detail. The last parts of the two papers do differ, however, in that Stockton is more interested in providing examples of the use of external statistics as a complement to the System of National Accounts, whereas Sándor makes suggestions concerning possible methodological modifications to the system itself.

I shall touch on Part I only briefly. Here the two national viewpoints are as different as they could be. The US has the longest tradition in financial accounts (although, as Stockton reminds us, Europe’s proto-economists may have developed vaguely similar ideas centuries earlier¹), and the development of basic concepts and uses of financial accounts, at least in the early stages, overlaps to a large extent with theoretical and methodological work conducted at the Federal Reserve. Hungary’s story, on the other hand, is typical of many central European countries which switched to a market economy little more than a decade ago. The work done in Hungary in seven years, in preparation for accession to the EU, is impressive. The wide range of policy-oriented uses of financial accounts and the quality of the methodological contributions, as

* I wish to thank Riccardo Bonci, Riccardo De Bonis, Eugenio Gaiotti, Andrea Generale, Giuseppe Parigi, Gabriele Semeraro, Roberto Tedeschi, Ignazio Visco and Francesco Zollino for helpful input, suggestions and comments. The opinions expressed in this discussion are those of the author and do not necessarily reflect the views of the Banca d’Italia.

¹ In addition to Petty and others, Quesnay can also be mentioned with his *Tableau Économique*, complete with institutional sectors, macro-level real flows and counterpart financial flows.

documented in Sándor's paper, bear witness to the remarkable achievements of the national bank's statisticians.

I should perhaps mention at this point that Italy was a very early follower in the development of financial accounts after the Second World War. The Banca d'Italia Annual Report for 1948 included a highly simplified table of financial flows with a limited number of sectors (see Picture 1). The Report for 1964 contained the first fully-fledged financial accounts (for the year 1963), as well as a more limited set of data for 1950-62.² A driving force in the early development of aggregate financial statistics in Italy was the prevalence of Keynesian theory, with its emphasis on macro aggregates. In America, the pre-Keynesian tradition in business cycle research, based on the work of Mitchell and others, was also important.

Much more recently, the development of euro area accounts has been a challenge for the ECB and the ESCB. The integration of highly developed, but to some extent dissimilar, national statistical traditions into one euro area framework for financial accounts is still in progress. Data on the main financial assets and liabilities, as well as on saving, financing and investment, are regularly published for the main sectors of the euro area economy. However, a fully-fledged system of financial accounts for the euro area is still some way away. A huge amount of methodological work has been done, though it may not yet fully show in the published data. In the process, national financial accounts have also been developed and improved further. Fully harmonised financial accounts data exist for 12 of the 15 current Member States.

I now turn to the second parts of both papers, concerning the use of financial accounts in the conduct of monetary policy. This subject cannot be exhausted in a brief discussion – and at this table I am surely the least qualified to speak authoritatively on this. I shall, however, make a few broad points as a general reaction to the two papers.

It would appear that there are basically three possible roles for financial accounts in the context of monetary policy-making: (1) as input for day-to-day (or month-to-month) policy decisions; (2) as data for structural analysis and research; and (3) as an instrument for data cross-checking. Every central bank does a little of each, but in varying degrees. My impression from the papers is that in Hungary, and to an extent in the US, the use of financial accounts as immediate input for policy decision-making is much emphasised. I think that a similar paper from the ESCB might have put greater emphasis on the substantial research conducted here in the past few years on the subject of financial structures and their impact on the channels of transmission of monetary policy.³

This is not to say that financial accounts play no "type 1" role in Europe. The Governing Council of the ECB is regularly briefed on financial developments and trends

² A brief history is provided in Banca d'Italia (2003). Several later governors of the Bank of Italy seem to have been directly involved in the early development of the Italian financial accounts. Bank folklore has it that Paolo Baffi, Governor during the years 1975-79, spent some months at the Federal Reserve in 1956 to study the US flow of funds accounts; Baffi also described the early Italian financial tables in an IMF paper (Baffi, 1957). Antonio Fazio, the current Governor, worked on, among other things, the inclusion of financial flows in the Bank's first econometric model (Fazio et al., 1970).

³ A very comprehensive work on this subject is ECB (2002a).

based on financial accounts data, and this is clearly part of the body of evidence that is considered in evaluating price developments. The Monthly Bulletin carries a quarterly regular analysis of these data. However, perhaps the emphasis has so far been more on qualitative judgement than formal projections. The type of medium-term analysis that is found (e.g. in an article that appeared in the August 2002 Monthly Bulletin⁴) is perhaps more salient in the ESCB tradition of use of financial accounts.

To an extent this may be an issue of presentation. Some of the indicators that are mentioned in Sándor's paper, or close relations, would be thought of in the ESCB as monetary data or counterparts to monetary aggregates, rather than as financial accounts data proper. But if there is, as I am inclined to think, some truth in this difference of emphasis, this may be an interesting point to discuss.

Let me offer just two remarks on this, and leave the rest to the floor. First, monetary policy-making is a high-frequency process for which every last piece of updated information is vital. Financial accounts are typically quarterly series compiled with a lag. The current 120-day lag may be shortened somewhat in the future (Hungary, we learn, does better), but there is a limit to this. The compilation of financial accounts is inherently complex. To be reliable and complete, it has to rely on a body of very diverse original sources, to use an array of estimation methods, and to satisfy a complex structure of consistency checks. From the European perspective, such data appear better suited to provide sound background knowledge than last-minute updates; while high-frequency financial data, amply and promptly available at the European level, are of more immediate relevance for day-to-day decisions. Let me point out in this regard that, although gaps in high-frequency real data for Europe are often cited, the situation is very different for financial data. The ECB/ESCB can rely on data collected from banks and other financial institutions that are monthly, timely, very detailed, and, I venture to add, extremely accurate. While improvements are still possible and, indeed, are under way (especially for non-banks), the mass of timely information that these data offer on the financial sector, and its counterpart sectors, is remarkable.

My second remark is that the special emphasis that the Eurosystem has put on structural analysis in the first few years of its existence is justified in view of the large amount of uncertainty that formerly existed on the functioning of monetary policy in a new currency environment, and the need to ensure the establishment of a single set of financial markets. While many uncertainties have disappeared since 1999, and the single money market has functioned as such from day one, other parts of the European financial structure are still diversified and complex enough to warrant special attention to structural issues in economic analysis and research for years to come.

Some convergence in type 1 uses of financial accounts may occur; within the ESCB, some of us are thinking about further developing financial accounts-based short to medium-term analysis. Nevertheless, financial accounts will always remain, I believe, principally a precious instrument for a well-founded structural analysis, thanks to their comprehensiveness and methodological soundness.

⁴ ECB (2002b). In this particular case the analysis covers the period 1995-2001.

Which brings me to the third role of financial accounts in monetary policy making (and beyond), namely, that of providing a way of checking the consistency of data from independent sources. This point is treated in both papers, but I will refer mainly to Stockton's paper. Financial accounts are fundamentally based on double-entry accounting. In terms of stocks, every financial asset of one sector must appear as the financial liability of another. Similar constraints apply to transactions. When different sources are subjected to such systematic cross-checking, discrepancies often arise, and weaknesses in the underlying data are brought to light. Discrepancies serve two purposes. Firstly, they alert analysts and policy-makers to potential tensions in the data, and thus they bring perspective and provide caveats. Secondly, they help statisticians to improve definitions as well as collection, estimation and compilation methods. No statistics are perfect; gaps and pitfalls always exist, *in theory*; discrepancies are precious in that they are one way of showing where the problems are important *in practice*.

Some useful statistical work has been conducted on discrepancies in the ESCB.⁵ An issue is to what extent discrepancies should be cleaned out of published data. Opinions and practices differ on this topic. Personally, I would recommend that compilers exercise statistical restraint. So long as adjustments based on reasonable, innocuous assumptions can be made, cleaned data will clearly be better for users. However, this is often not the case. When discrepancies remain fundamentally unexplained, the inherent weaknesses of the underlying data are better exposed than concealed, even though this may make life harder for users (or more embarrassing for compilers), until statisticians have found a way to understand and correct them.

Consistency checks are present everywhere in financial accounts, but the central focus for the analysis of discrepancies is the amount of saving, which constitutes, ideally, the link between economic and financial accounting. This point is treated in Stockton's paper with reference to the US. Before briefly commenting on this and providing a European perspective, one preliminary point to make is that we usually talk about US-style flow of funds accounts (FFAs) and European-style financial accounts as if they were the same thing, but they are not. The main difference is that financial accounts, as the name suggests, only consider financial assets, while FFAs consider tangible assets (including consumer durables) as well. Thus, in the European ESA 95 framework one cannot directly compare two different measures of saving, unlike in the American NIPA/flow of funds framework. The financial accounts provide only the difference between the net acquisition of financial assets and the net acquisition of financial liabilities.

That said, $\Delta FA - \Delta FL$ is the financial side of the excess of saving over real investment (the "net lending/net borrowing" item) found in the capital account. Therefore, one still has two different sources for the net funds raised by a generic sector. Let me rewrite Stockton's equations (5) and (6) on p.11:

$$S^{NIPA} = DPI - PO$$

$$S^{FOFA} = \Delta TA + (\Delta FA - \Delta FL)$$

⁵ See for example Marchese (2002).

Here S^{NIPA} and S^{FOFA} represent saving as measured in the income and product accounts, and in the flow of funds accounts, respectively. Disregarding consumer durables, these two measures of savings should, in principle, be equal. If the NIPA measure of investment is the same as the increase in flow of funds tangible assets, then:

$$S^{NIPA} - I_{real} = S^{FOFA} - \Delta TA = \Delta FA - \Delta FL$$

In ESA 95 terminology, the leftmost and rightmost sides of this equation are called the capital and the financial account balancing items, *c.a.b.* and *f.a.b.*, respectively:

$$S^{NIPA} - I_{real} = c.a.b.$$

$$\Delta FA - \Delta FL = f.a.b$$

Both items measure net funds raised by a generic sector; thus they should, again, be identical. If $I_{real} = \Delta TA$, then $S^{FOFA} - S^{NIPA} = f.a.b. - c.a.b.$; that is, the discrepancy between S^{FOFA} and S^{NIPA} is mirrored by the discrepancy between *f.a.b.* and *c.a.b.*. Despite the theoretical equivalence, the published EU data⁶ usually exhibit non-negligible discrepancies between these two items (see Table 1 for the household sector).

It may be interesting to compare Europe's situation with that of the US. From Stockton's Figure 4 it appears that, in recent years, the FFA measure of household saving has been approximately 3% of disposable income larger than the NIPA figure (after correcting for durables). In EU Member States the sign of the discrepancy varies (13 out of 55 non-zero figures are negative) and the amounts are generally smaller: in only three EU countries does the mean discrepancy between *f.a.b.* and *c.a.b.* exceed 3%.

I turn now to the last part of the two papers, where specific methodological points are raised. The issues are different and I have therefore made my comments separately.

Stockton shows three examples of the use of various external data, alongside national accounts, to add depth and detail to the information set available to policy-makers. The examples concern respectively: (a) an estimation of the dynamics of inventories; (b) the impact of stock market wealth on consumption; (c) the issue of measuring hourly productivity.

I propose to skip example (b) to save space, but not because it is uninteresting – in fact, quite the contrary: I rather think there is insufficient space here for an economically meaningful discussion of the very interesting results that are presented. As for the statistical aspects, I have just commented on certain issues concerning the comparison of financial and economic accounts. Let me only add very briefly that I find (b) a particularly illuminating example of the potential of micro data for policy-relevant analysis. I think this is an open field for development in the ESCB context; some NCBS may have some experience to share on this.

⁶ Available online from Eurostat's Newcronos database.

Let us now turn to example (a), the estimation of inventories, which is a notoriously elusive piece of real economic statistics. Improving knowledge about this estimation is thus an important ingredient in understanding the cyclical situation better. The paper addresses a fruitful area for investigation, which is even more valuable from a euro area standpoint if one considers the uneven quality of data on inventories now available in real time in Member States and therefore for the euro area as a whole⁷.

The paper shows how firm-level data can be used to gather detailed information on the industry composition of inventories. This is arguably policy-relevant if, for example, bottlenecks in some specific parts of the economy could exert a disproportionate influence on aggregate tensions. A specific example of the application of this method is provided, which shows that the recent business cycle saw a pronounced fall in the ratio of inventories of semiconductors and other electronic components to sales.

The general argument is convincing and the methodology interesting, although it is difficult to make in-depth comments from the methodological sketches provided in Stockton's account. Specifically it is not easy to understand how and to what extent independent information is used for the allocation of domestic absorption between consumption and inventory change, a point which is central to the method.⁸ I would invite the speaker to expand on this topic if there is time.

I would also push Stockton's argument in favour of using complementary sources on inventories one step further. While quantitative information on inventories, such as it is, is important, qualitative data are also useful. In order to assess the cyclical situation, one would like to know not just the level of inventories, but also whether this is above or below the level desired by firms. Regular evidence on voluntary versus involuntary accumulation of inventories is available from qualitative surveys of firms. In such surveys, which are similar across Europe, firms are asked to report how current inventories compare with their "normal" state. Although normal is not necessarily the same as optimal, experience says that time series of standardised survey replies do provide some insights. They are also useful for assessing the impact of statistical discrepancies in the national accounts statistics.

As an example, based on Italian data, Chart 1 compares the national accounts measure of the contribution of inventory change to quarterly GDP growth, with survey data (normalised at 100 when inventories are, on average, "normal"), over the period 1995-2003. According to national accounts, in the last year and a half the growth in inventories has significantly contributed to overall GDP growth. This could be taken as a signal of a potential inventory overhang. However, survey data for end-2003 show inventories to be well below normal for raw materials and intermediate goods, and close to normal for finished goods. We have no model to translate this evidence into precise

⁷ One issue is that, unlike in the US, in some European countries the national account measure of real inventory change is partly constructed from discrepancies between income and expenditure estimations of GDP.

⁸ See p.9: the imposition of a structure of dynamics governing the evolution of inventories and consumption is mentioned, but without any comments on the way it is obtained and tested. In general, one wonders how much in the procedure is based on independent information and how much on the method of decomposition chosen.

quantitative estimates of the inventory overhang.⁹ Nevertheless, I do think such data offer a valuable qualitative contribution to the evaluation of the business cycle.

Stockton's third example concerns hourly productivity. Here the point is the notorious divergence, in the US, between the two sets of data on hours worked: one based on establishment surveys, the other on household surveys. Which one of these is used as a denominator in measures of output per hour makes a major difference to the results. Although there is little doubt that productivity in the US grew more in 1995-2004 than during the previous decade(s), the magnitude and timing of this acceleration is open to question.

There is little I can add to Stockton's discussion of the US case. However, from the point of view of statistical methodology I find the evidence he presents somewhat more disturbing than he appears to.

Stockton's argument is positive in tone: despite large differences in the information provided by separate sources, both show a long-run acceleration of productivity; therefore the case is proven beyond reasonable doubt. I readily accept his conclusion in this case. But it seems to me that such unambiguous signals are likely to be the lucky exception rather than the rule here. On many equally important issues, the evidence may be much less clear, and a more accurate understanding of reality is therefore needed.

Let me illustrate this point with the example of transatlantic comparisons of per capita income and productivity. As is well known, per capita GDP in the EU (15 current Member States), in purchasing power terms, stands at approximately 70% of per capita GDP in the US. This has changed little, if at all, in the past thirty years. Does this mean that Europe's workers are less productive? Not necessarily. The employment rate, for one thing, is lower in Europe (about 65% as against more than 70% in the US in 2002). So in terms of GDP per *worker*, Europe is closer to America. Furthermore (and here is the rub), the average hours worked per worker also appear to be lower in Europe. There is a growing literature on comparisons of this kind. In a recent paper¹⁰, for instance, Olivier Blanchard makes use of similar data to claim that productivity per *hour* in France is actually 105% of that in the US. The figure he gives for Europe as a whole is 91%. He concludes that a lower per capita GDP is the result, not of lower productivity, but of a higher preference for leisure.

The economic interpretation is interesting, though debatable. One is perhaps reminded of Modigliani's famous remark that, according to some extreme views, the Great Depression would appear to be just the product of a collective fit of laziness. More seriously, differences in the allocation of income between consumption of commodities and of leisure may result from inefficient regulation besides individual, or conscious collective, choices. (Blanchard only considers distortionary taxation as a possible constraint on individual choice in the long run, but various other possibilities spring to

⁹ Although attempts in this directions exist: see for example Sestito-Visco (1995).

¹⁰ Blanchard (2004). The paper also makes a number of further adjustments to account for, e.g. lower productivity of marginal workers.

mind.) Be that as it may, my point here is not about the economics, but about the statistical underpinnings.

There are serious doubts on the international comparability of data on hours worked, hence on productivity per hour, on which the above discussion is based. (Employment data may also be less than perfectly comparable, but the situation there seems much more favourable.) There are several separate issues as regards working hour statistics. One is coverage: the set of workers considered should be consistent with national account definitions, the main point here being correctly considering the self-employed. Another is definition. A recent OECD study by Ahmad et al. (2003) lists no fewer than six separate main concepts of hours of work. Specifically, contractual hours and actual hours worked sometimes differ markedly, and even the time trends may be different.

And, last but not least, there is the issue of sources and collection methods. Ahmad et al. also document wide variation in the main sources used for estimating hours worked across OECD countries. They include labour force surveys, establishment surveys and administrative sources. National accounts are also often cited as a source, but these in turn usually rely on establishment surveys.

It is here that Stockton's paper brings bad news – or rather, that it shows that much needed statistical work lies ahead of us. Even within the US, data based on different sources paint significantly different pictures of the same phenomenon. (No matter if the answer to one specific question is qualitatively unambiguous.) One is led to conclude by implication that international comparisons must be extremely shaky. They are, however, important for policy-relevant discussions.

The good news is that in Europe an attempt to compile reliable, comparable figures on hours worked is well under way as part of the so-called EMU Action Plan. This is expected to bring a degree of certainty to comparisons within the EU. However, the issue does not end at the boundaries of Europe. Much more international coordination, I think, would be in order.

Let me finally turn to the last part of Sándor's paper.

Sándor has three specific proposals to modify the ESA 95 rules on financial accounts. They are: (a) introducing inflation accounting for interest-bearing financial assets; (b) spreading the effect of large debt assumptions by governments over several years; (c) treating reinvested earnings from portfolio foreign investment like those from direct investment.

The first proposal is most extensively argued in Sándor's paper. When inflation is high and variable there is clearly a case for taking explicit account of the fact that part of interest payments only restores the real value of the principal. Without some correction for this, both the levels and the year-on-year variations of interest flows are misleading. Sándor argues this case quite convincingly and illustrates it with an example based on net lending by households in Hungary. When the appropriate correction for the erosion of the real value of securities (principal) is made, the surplus of households is reduced and its time profile is significantly, if not dramatically, altered.

In Italy, as you might expect, this correction was the subject of much thinking and methodological work in the 1970s and 1980s, when inflation was high. Uncorrected financial flows painted an entirely misleading picture at the time. For instance, one subject of great concern and policy debate was the very high level of interest payments by non-financial corporations. While the concern was indeed legitimate, in view of the financial vulnerability of many firms, especially large ones, and the high level of real interest rates in the early 1980s, the measure of this flow was highly distorted by the effect of inflation on nominal interest rates. The same fact exaggerated the effect of the subsequent restructuring of non-financial firms, which saw their profitability restored mainly through a reduction in interest expenditure: to a large extent the reduction in nominal interest flows paralleled that in inflation rates. Much the same applies to the government sector; whereas the large financial income flows that households thought they enjoyed – as the sector was a huge net creditor in the securities market – contained a fair amount of money illusion. The Banca d'Italia developed, published and analysed adjusted data, very much along the lines that Sándor suggests, to set right some of these misperceptions.¹¹ Table 2 shows the adjustment for 1976-84.

The question is to what extent this is relevant when inflation is moderate and stable. The answer is: surely it is not as relevant as in different circumstances; but neither is it irrelevant. Chart 2 shows the net financial balances of non-financial corporations and households in Italy for 1995-2000. At least since 1998, the year-on-year variations of the nominal series are similar to those of the series corrected for inflation; however, the levels do differ. For instance, in 2002 the net lending of the household sector was 6% of GDP in nominal terms, and 4% after correcting for inflation. As I have argued before, structural analysis is a key use of financial accounts – and for structural analysis, levels matter.

I am therefore convinced by Sándor's argument that this is a subject worthy of more methodological and analytical thought. On the other hand, I hesitate to endorse his suggestion that it should be made a part of the ESA. First of all, flexibility as in SNA 1993 (where every country does as it pleases) is, I think, out of the question; harmonisation is crucial to the construction of EU-wide aggregates and to meaningful intra-EU comparisons. Secondly, the inflation correction is not a straightforward matter. Methodological mousetraps abound. The choice of the deflator and other methodological choices have to be arbitrary to some extent; what is appropriate for certain sectors, instruments, countries or analytical uses may not be for other sectors, etc. Thirdly, and most importantly, nominal flows do represent reality in a non-trivial sense. To take again the example of non-financial corporations in 1980 in Italy: it is true that a large share of interest payments by firms were, really, an accelerated reimbursement of capital; however, firms did have to find the financial resources to honour in practice this legal commitment when nominal interest fell due. This fact had a bearing on firms' financial fragility. This would largely be concealed by Sándor's proposed treatment, whereby actual interest payments would appear as a tacit revaluation (extension) of credit.

¹¹ For a full account see Banca d'Italia (1985). An analytical treatment is presented in Rossi and Visco (1994).

In conclusion, I would support more methodological work at the ECB/ESCB level, with a view to at least partial harmonisation of concepts, and perhaps the eventual publication of corrected balances alongside official financial accounts. I would not support at this stage changing statistical standards.

I shall comment more briefly on Sándor's two other proposals. Concerning large-volume debt assumptions, Sándor's argument is that the underlying liabilities are likely to have accumulated over time, and therefore the recording of the transaction whereby the government takes on these liabilities should likewise be spread over several years (i.e. backdated to some extent). This does not appear to me very convincing either in principle or in practice. In principle, the time of recording a transaction should reflect the development of the transaction itself. In this case the relevant transaction is not the accumulation of debt by some entity in the past (which was appropriately recorded by the financial accounts at the time), but the legislative decision to pass on the debt to the government; the correct time for recording this new fact is when the debt is actually assumed. In practice, the proposed treatment would probably open the way for much arbitrariness, which I think would be inadvisable.

Concerning reinvested earnings, the reason for treating reinvested income from portfolio investment in a different way from foreign direct investment (FDI) income is that in the latter case the investor is assumed to be fully or partly responsible for an explicit decision to reinvest, whereas with portfolio income the investor is basically passive and takes the dividend policy as given. This still seems to me reasonable. The point is interesting, however, and one wonders how current balances would change if a different convention were in place. (Furthermore, one should bear in mind that in practice the distinction between FDI and portfolio investment is also partly conventional.) I asked colleagues in the Balance of Payments unit to give me a rough idea of the order of magnitude of the flows involved for the euro area. One natural way to do so is by assuming that the ratio of reinvested earnings to equity stocks is the same for FDI and portfolio equity. Of course this ratio is not constant, and for the euro area has oscillated in the past few years between approximately 1.5 and 3.5%. Applying the same ratio range to portfolio equity on both sides of the i.i.p. would yield, for 2001-2002, an estimated downward correction of the current account (income) balance of between EUR 7 billion and EUR 16 billion per year, and an opposite correction of the financial flows. The reason why the income correction is on balance negative is that more euro area equity is held as portfolio investment by non-residents than vice versa. This compares with a "net lending to the rest of the world" of EUR 79 billion in 2002, and with a gross flow of capital income totalling about EUR 250 billion. These are very much back-of-the-envelope calculations and are not meant to be quoted as data. However, they do give the impression that we are possibly not talking about peanuts, even at the euro area level. Whether it would be worthwhile going in this direction is an open question that I leave to the floor.

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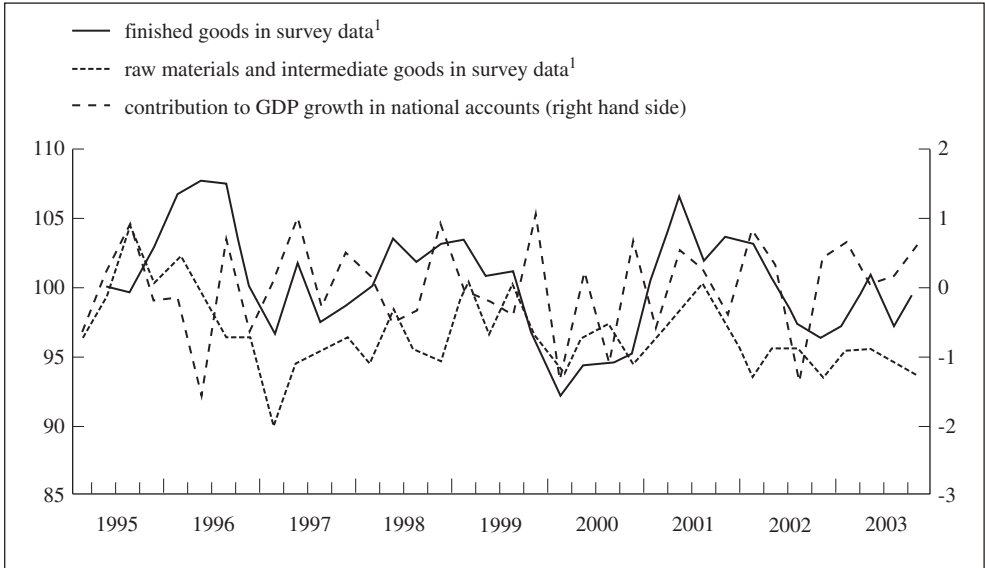
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Annex

Chart 1: Italy: Inventories 1995-2003



Sources: ISAE, ISTAT

¹ Survey of manufacturing firms; excess of firms responding “above normal” over firms responding “below normal”, as a percentage of all answers.

Chart 2: Italy: Net lending/net borrowing by sector 1995-2002

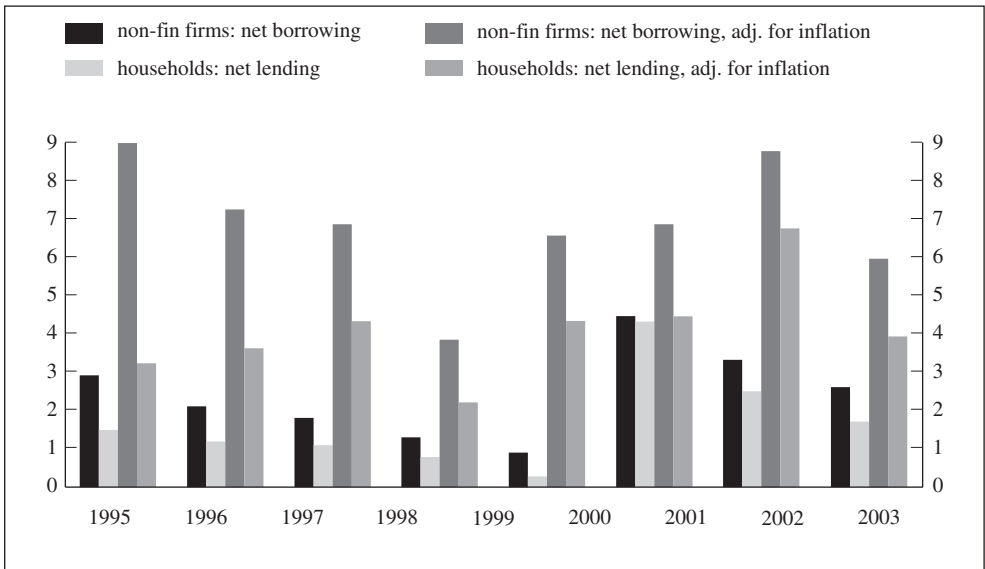


Table 1: EU Member States: discrepancy between c.a.b. and f.a.b. for households, 1995-2001
(% of net disposable income)

| Year | AT | BE | DE | DK | ES | FI | FR | IT | NL | PT | SE | UK |
|-------|-------|------|------|------|-------|-------|-------|-------|------|-------|------|-------|
| 1995 | - | 3.7% | 0.0% | 0.0% | 1.3% | 4.1% | 2.9% | -0.7% | 2.5% | 0.5% | 0.0% | 0.8% |
| 1996 | -0.6% | 7.6% | 0.0% | 0.0% | 0.4% | 7.2% | 3.6% | -4.7% | 2.2% | 1.1% | 0.0% | 1.3% |
| 1997 | -0.1% | 7.9% | 0.0% | 0.0% | 0.3% | 6.6% | 3.0% | -1.1% | 1.1% | 2.7% | 0.0% | 0.8% |
| 1998 | 2.4% | 7.7% | 0.0% | 0.0% | 0.3% | 9.6% | 1.5% | -1.7% | 1.3% | 0.1% | 0.0% | -0.2% |
| 1999 | 2.5% | 8.5% | 0.0% | 0.0% | -0.1% | 6.7% | 2.4% | 3.4% | 1.5% | 0.5% | 0.0% | 0.2% |
| 2000 | 1.1% | 7.1% | 0.0% | 0.0% | -0.3% | 7.4% | -1.3% | 6.0% | 0.4% | -0.5% | 0.0% | 0.9% |
| 2001 | -0.3% | 6.6% | 0.0% | 0.0% | 1.6% | 10.5% | 1.0% | 8.4% | 0.5% | 1.3% | 0.0% | -0.3% |
| Mean | 0.8% | 7.0% | 0.0% | 0.0% | 0.5% | 7.5% | 1.9% | 1.4% | 1.3% | 0.8% | 0.0% | 0.5% |
| Mean* | 1.2% | 7.0% | 0.0% | 0.0% | 0.6% | 7.5% | 2.2% | 3.7% | 1.3% | 0.9% | 0.0% | 0.7% |

Source: based on Eurostat. Newcronos

* absolute values.

Table 2: Italy: Net lending/net borrowing by sector 1976-1984
(% of GDP)

| Year | Households | | Non-financial corporations | | Government | |
|------|------------------------|------------|----------------------------|------------|------------------------|------------|
| | Adjusted for inflation | Unadjusted | Adjusted for inflation | Unadjusted | Adjusted for inflation | Unadjusted |
| 1976 | -0.6 | 13.9 | -1.3 | -8.3 | 2.1 | -10.0 |
| 1977 | 4.7 | 13.9 | 0.3 | -4.0 | -1.5 | -9.2 |
| 1978 | 7.6 | 15.6 | -0.3 | -3.6 | -3.6 | -10.3 |
| 1979 | 1.0 | 14.3 | 2.4 | -2.4 | 0.9 | -10.2 |
| 1980 | -2.1 | 12.2 | -2.5 | -7.6 | 1.9 | -10.1 |
| 1981 | 1.6 | 13.8 | -1.9 | -6.2 | -3.0 | -13.6 |
| 1982 | 3.1 | 14.6 | -0.2 | -3.9 | -4.1 | -14.7 |
| 1983 | 6.9 | 16.3 | -1.6 | -4.4 | -5.3 | -14.3 |
| 1984 | 9.2 | 16.7 | -1.9 | -4.0 | -8.3 | -15.6 |

Source: Banca d'Italia

Picture 1: Italy: National monetary balance sheets, 1946-1948
(reproduced from Banca d'Italia, 1949)

Bilancio monetario nazionale

(in miliardi di lire)

| | ANNO 1946 | | | ANNO 1947 | | | ANNO 1948 | | |
|--|------------------------------|--|------------------------------|--|------------------------------|--|-----------|--|--|
| | IMPRESSIONI per il Tesoro | Differenza tra impegni e rimborsi pubblici alla circolazione | IMPRESSIONI per il Tesoro | Differenza tra impegni e rimborsi pubblici alla circolazione | IMPRESSIONI per il Tesoro | Differenza tra impegni e rimborsi pubblici alla circolazione | | | |
| Banca d'Italia (operazioni dirette col pubblico ad effetti speciali) | | | | | | | | | |
| Anticipazioni a privati | 0,5 | | 3,8 | | 1,5 | | | | |
| Prorogati pagamenti a privati | 0,2 | | 3,2 | | | | | | |
| Finanziamenti diretti | 0,1 | | 3,3 | | | | | | |
| Finanziamenti garantiti e rimborsi al credito agrario | 13,4 | | 34,0 | | 3,4 | | | | |
| Banca d'Italia finanziamenti ai valori industriali | 1,8 | | 12,3 | | 1,2 | | | | |
| Depositi privati | 55,8 | | 59,8 | 4,8 | 29,8 | | | | |
| Vaglia, assegni ed altri impegni a vista | 1,7 | | 1,1 | | 1,7 | | | | |
| | 4,7 | 14,3 | 2,7 | 62,6 | 31,6 | 31,3 | | | |
| Attività di credito | | | | | | | | | |
| Investimenti in R.T.O. ai fini del risparmio: | | | | | | | | | |
| diretti | | | 30,5 | | 11,0 | | | | |
| tramite R.I. | | | 14,4 | | 51,9 | | | | |
| Altri investimenti in R.T.O. | 63,3 | | 3,7 | | 13,9 | | | | |
| Investimenti in altri titoli di stato | 4,4 | | 13,7 | | 33,8 | | | | |
| Depositi presso il Tesoro | 7,3 | | 6,7 | | 28,0 | | | | |
| | 74,8 | | 54,3 | | 83,1 | | | | |
| Impieghi commerciali | 360,8 | | 380,3 | | 343,1 | | | | |
| Risparmio delle partite varie attive sulle partite varie passive | 31,8 | | | | | | | | |
| | 392,6 | | 380,3 | | 343,1 | | | | |
| Depositi fiduciari e che corrispondono con clienti | 391,8 | | 318,8 | | 380,4 | | | | |
| Vaglia e assegni | 33,3 | | 31,3 | | 13,8 | | | | |
| Equivalenza delle partite varie passive sulle partite varie attive | | | 1,1 | | 5,4 | | | | |

| | | | | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Conto depositi e prestiti | | | | | | | | | | |
| che col Tesoro | 40,0 | | 39,5 | | 122,8 | | | | | |
| investimenti in titoli di stato | 8,2 | | 3,7 | | 30,8 | | | | | |
| Altri investimenti | 67,3 | 65,7 | 69,3 | 15,5 | 65,8 | 143,8 | 47,8 | 117,7 | | |
| Attività speciali e riserva finanziaria | | | | | | | | | | |
| Esclusione assegni e pagamenti | 8,0 | | 42,1 | | 30,8 | | | | | |
| Esclusione di altri gestioni industriali | 8,0 | | 2,2 | | 89,6 | | | | | |
| Esclusione di obbligazioni tecniche speciali | 15,0 | | 10,3 | | 43,2 | | | | | |
| | 36,7 | | 54,6 | | 163,4 | | | | | |
| Investimenti in titoli di stato (1) | 18,1 | | 5,1 | | 18,8 | | | | | |
| Investimenti in titoli di stato (2) | 13,0 | 15,0 | 72,4 | 33,4 | 18,8 | 109,7 | 109,7 | 109,7 | | |
| Investimenti del pubblico in R.T.O. | 11,7 | | 13,8 | | 108,1 | | | | | |
| Investimenti del pubblico in altri titoli di stato di R.T.O. | 61,1 | | 34,5 | | 8,0 | | | | | |
| Depositi di conti non bancari presso il Tesoro | 3,8 | | 5,7 | | 8,0 | | | | | |
| | 78,0 | 78,0 | 45,1 | 45,1 | 184,9 | | | 184,9 | | |
| Totale | 212,0 | 212,0 | 212,0 | 212,0 | 480,7 | 480,7 | 480,7 | 480,7 | 28,7 | |
| (1) del Tesoro con la Banca d'Italia | 19,4 | | 19,4 | | 87,3 | | | 78,8 | | |
| Anticipazioni e rimborsi di R.T.O. | 39,2 | | 39,2 | | 122,8 | | | | | |
| C/R R.T.O. e diverse norme della R.T.O. | 30,3 | | 30,3 | | 30,8 | | | 187,9 | 187,9 | |
| Altri investimenti (1) | 64,8 | 72,8 | 69,3 | 15,5 | 65,8 | 143,8 | 47,8 | 117,7 | | |
| Fondi comuni del bilancio della R.T.O. | 11,8 | | 11,8 | | 11,8 | | | 11,8 | | |
| Totale | 211,7 | 211,7 | 211,7 | 211,7 | 480,4 | 480,4 | 480,4 | 480,4 | 28,7 | |
| Interessi su R.T.O. e rimborsi (2) | 30,7 | | 30,7 | | 30,7 | | | 30,7 | | |
| Differenza tra rimborsi e pagamenti di conto (3) | 15,0 | | 15,0 | | 15,0 | | | 15,0 | | |
| (1) del Tesoro | 230,7 | | 230,7 | | 230,7 | | | 230,7 | | |
| (2) del Tesoro | 61,3 | | 61,3 | | 61,3 | | | 61,3 | | |

(1) In lire correnti sulla carta degli impieghi.
 (2) Interessi sui prestiti in R.T.O. e rimborsi su titoli in circolazione in lire correnti e in lire contanti, a P.A., C.R.T.O., A.T.O., Interessi, R.T.O.
 (3) di cui 10,0 del Tesoro e rimborsi corrispondenti in lire correnti e in lire contanti per il 1946, 17,0 per il 1947, del Tesoro e rimborsi per il 1948, e R.T.O. e rimborsi per il 1949.

Discussion summary

Otmar Issing (Member of the Executive Board of the ECB), Chairman of the session, made an introductory statement in which he highlighted the relevance of having good statistical information, both to assess correctly the economic situation prevailing at each moment in time, and to provide good insight into the structure of the economy. He congratulated European statisticians (at Eurostat, the ECB, NSIs and NCBs) for the quality of the European statistics, which can in many ways compete with those of other major economic areas. He nevertheless pointed out that this does not mean that our attention can wane, as the economy is constantly evolving and presenting new challenges for economists and statisticians. He also referred to the continuous cooperation between the two communities as the only way to ensure good quality and cost-effectiveness. In this respect, Mr Issing stated that such cooperation has worked very well up to now, and mentioned as an example the recent introduction of MFI interest rate statistics, which replaced the old retail interest rate statistics and introduced fully harmonised concepts and more detailed information. He added that the new statistics would allow a better assessment of the evolution of lending and deposit rates and a better understanding of financial market integration in the euro area.

Mr Issing's final introductory comments directly referred to economic and financial accounts, the subject of the discussion and an area in which further progress is expected. He mentioned that the full implementation of the "seven-sector approach" in quarterly financial accounts, and their integration, in the medium term, with non-financial accounts will help statisticians to assess the monetary policy transmission mechanism better as well as its effects on income and wealth. In this respect, he mentioned the importance of developing national quarterly sector accounts as an input for euro area accounts, and stated his own keen interest in progress in this area.

Before his presentation, **David Stockton** (Director of the Research and Statistics Division, US FRB) observed that this conference, apart from being a forum for the exchange of information between interested parties, also sends a signal to the outside world of the importance of statistics for policy-making, something that, although well understood within the central banking community, is not always appreciated outside it. He added that an obvious prerequisite for good policy-making is to get the facts right, i.e. to have good statistics.

After the contributions of the second speaker, **György Sándor** (Managing Director, MNB), and the discussant, **Luigi Federico Signorini** (Director of Statistics, Research Department, Banca d'Italia), **Mr Issing** briefly referred to a recent paper by Olivier Blanchard, mentioned by Mr Signorini when discussing Mr Stockton's contribution, which compares the productivity of the US and the European economy. Mr Issing drew on Blanchard's statement that the differences in productivity can be explained to a certain extent by a stronger preference for leisure in Europe compared with the United States. In turn, this would have severe consequences for the relative fiscal sustainability,

as leisure cannot be subject to taxation and social contributions. Europeans should either get used to the consequences in terms of the public budget, or change their current leisure/work balance.

In the first intervention from the floor, **Jean Cordier** (Chairman of the CMFB) said that he had missed, in the papers of the speakers and the discussant, a mention of the use of flow of funds for the analysis of financial intermediation. In particular, he referred to an assessment of how shocks in one financial market segment affect the other segments, in line with the pioneering work of Brunner and Meltzer or Tobin. He also stated that financial accounts allow a deeper analysis of developments in savings and wealth by providing information on their allocation to the different financial and non-financial investments. Finally, he pointed out that, although there are several European teams with experience of modelling and forecasting flow-of-funds tables along the lines touched upon by Mr Stockton and Mr Sándor, it must not be forgotten that in Europe we still need to improve the financial accounts statistics as such.

Reimund Mink (Adviser, ECB) asked Mr Stockton about the joint work between the BEA and the FRB to develop a complete set of SNA 1993 accounts for the United States and the intention to publish regularly the results of this work.

Mr Stockton replied to Mr Cordier on the use of flow of funds for financial intermediation by mentioning an example given in his contribution. During the second half of 2003, corporate borrowing declined in the United States, whereas the corresponding real investment increased. Flow of funds provided the information needed to reconcile these two apparently conflicting facts, as they made apparent that the surge in investment was financed by simultaneous accumulated cash flows. In response to Mr Mink's question on SNA 1993 accounts, Mr Stockton informed participants that preliminary results of an SNA-type accounting exercise had been presented at the NBER Conference on Research in Income and Wealth. No decisions have yet been taken on the future course of these efforts.

Mr Sándor referred to the use of financial accounts for structural studies and financial intermediation in Hungary, following related comments by Mr Signorini in his contribution and by Mr Cordier in his intervention. He pointed out that his country is still a newcomer in the compilation of financial accounts and said that he sees this kind of application as a task for the future. Mr Sándor also welcomed the fact that Mr Signorini shared his concerns about the direct use of nominal interest flows in a context of high inflation. He stated that he was ready to accept Mr Signorini's preference for not changing the ESA 95 in spite of the problems in interpreting nominal interest, but asked that satellite accounts be developed with harmonised operational deviations from the standard to correct the difficulties, so that the results are comparable across countries.

Mr Issing closed the discussion by reiterating the importance of good statistics for policy-making and stressed that the close cooperation between statisticians and economists should continue.

V International statistics: quality and policy issues

Statistics and politics

Michel Vanden Abeele

A year ago, the ups and downs of life in administration led to my taking on the responsibility of being head of Eurostat, the Statistical Office of the European Communities, in unexpected circumstances. As an official of the European Commission who has had the good fortune to participate actively in the great adventure of constructing Europe, I could not refuse this request, which came at a time when Eurostat was in a situation that I shall not dwell upon here.

My sense of the responsibility involved in governance and respect for the function of public service led me to accept my current duties.

Official statistics are in my opinion a public service. Once that principle is established, it has a whole series of consequences. First of all, the production of statistics must be governed by clear rules that ensure the results are reliable and independent. Next, the statistics must be useful, accessible and comprehensible, and not reserved for an inner circle of the initiated. They must also be comparable, which involves codification, as well as plausible, serving as a reference point for taking action.

These considerations may appear self-evident to professional statisticians; however, they are less so for someone who, like me, has exercised his dual role of official and academic with a certain impression that statistics are obvious, without ever wondering about the issues I have just raised.

Of course, we all know that there are numerous statistical illusions or falsehoods, and that giving valid interpretations to surveys depends on the representativeness of the sample and the ability of the person making the analysis. We can all think of examples of inappropriate generalisations or of the intentional or unintentional misreading of statistical series with little concern for honesty or accuracy.

It is not my intention here to comment further on the many studies, symposia and conferences that have been devoted around the world to the principles of the independence and reliability of statistics. I leave that to others who are far better qualified than myself. A year's experience in this field, however, leads me to note the scope, frequency and abundance of the discussions on this subject. I do however find them somewhat repetitive, the more so as – in my eyes – little major change seems likely to occur.

Instead, I would like to put forward a few thoughts drawn from my considerable administrative experience in managing European policies, in order to reflect on the relationships between politics and statistics and between politicians and statisticians.

Public administration and political responsibility, at whatever level, rely on information. It is sometimes said that holding information means holding power. The mayor of a town, an MP representing his or her constituency or a minister cannot consider what to do, how to act or take decisions without access to information. The information needed is diverse and multifaceted, and may be based on rumour or established facts, on raw data or on analyses, on personal contacts or on what is revealed in the media. Information is made up of truths and verifiable facts, but it is also based on impressions, the posing of problems, the unexpected and the uncertain. Numerical information plays an important role in this and comes in all sorts of forms: budgets, accounts, balance sheets and physical or geographical data. But for a politician, information often means statistics.

The politician's skill is to monitor information, analyse it and utilise it to draw up options and present choices to the electorate. It also consists of expounding, demonstrating and explaining on the basis of arguments that are, or claim to be, objective.

Nowadays, in a democracy, power means nothing without explanation and the ability to control the record. It is true that power is obtained by convincing people, through techniques of determination and seduction. But to stay in power, politicians have to justify themselves, explain their actions and document the results. Hence the importance of the message, of the media and of documentation, which ought to aim at being objective. Which brings us back to the major role of statistical information for politicians: to be used, overused – and sometimes abused – to support policies and arguments.

This link between statistics, the desire to inform and public administration is nothing new. Far from it: knowing the number, location and wealth of his or her citizens is an essential concern of any monarch or head of state.

Accounting, or in other words man's intellectual capacity to carry out and record inventory operations, predates writing. The Sumerians, who settled in Mesopotamia in 3,200 BC, invented writing to support the organisation of society in terms of an advanced bureaucracy that recorded increasingly complex commercial relationships.¹

Similarly, the appearance of hieroglyphic writing in Egypt served not only to glorify the successive dynasties of pharaohs but also to codify religious rites and beliefs, and it made it possible for scribes to draw up precise administrative inventories of products and populations, from which taxes were raised.² In the Mayan civilisation, the "dictatorship of the calendar" not only imposed itself on ceremonial practices, but was also used to draw up balance sheets, so useful for managing society, thanks to a sophisticated

¹ De Sumer à Babylone. Collection du Louvre. Catalogue de l'exposition au Crédit communal. Brussels, April 1983, p.23.

² Nicole Gumal. Histoire de l'Égypte ancienne. Fayart, Paris, 1988, p.4

accounting system based on simple symbols (a dot for one, a line for five, and the inspired use of zero).³

The history of Christianity is itself tied up with an encounter between politics and statistics: Mary and Joseph returned to Bethlehem to comply with the requirements imposed on them for the census.

It should be noted that modern censuses, standardised in line with UN criteria, no longer require people to return to their place of origin. Just imagine what effect a rule like that would have on the travel industry if it were applied nowadays! Present-day statisticians prefer to compile demographic series from periodic descriptions of the status quo, thus applying, perhaps unwittingly, the principle of *jus soli* rather than gathering information in accordance with the principle of *jus sanguinis*. The fact remains, however, that the compilation of consistent statistical series makes it possible to some extent to show the sources of migratory movements.

Power and statistics are thus interlinked. It is therefore no surprise if the legislator has entrusted the task of official statistical observation to a specific administrative body, or even that statistics are the subject of constitutional provisions. As we know, in the countries of the EU the role of compiling official statistics is devolved to the NSIs, to the respective national central bank or to specific administrative bodies that are often under the responsibility of the Ministry of Economic Affairs and Finance. The supervisory arrangements and the guarantees for the independence of the statistical body vary from country to country. In one country the statistical body reports to the Prime Minister, in another it comes under the authority of the Minister for Economic Affairs and Finance or the Minister for Justice and Home Affairs, while elsewhere specific administrative bodies or regional authorities exercise powers of a similar kind. However, in each case the independence of the statistical body is guaranteed. The common feature is that, either *de jure* or *de facto*, these bodies have a degree of independence in their operations: in principle they do not take instructions from their minister with regard to the compilation or production of the statistics for which they are responsible.

I must stress this principle of independence. Recent examples show, however, that there is never an absolute guarantee of independence, just as a state can never achieve absolute neutrality.

For the EU, Article 285 of the Treaty sanctions the existence of a statistical function, which is devolved within the Commission to Eurostat, the Statistical Office of the European Communities. The history of Eurostat⁴ shows that right from the start the statistical function was meant to be independent. In a memo of 30 March 1958, the President of the Commission spelled out, following the Commission's taking responsibility for the activities of the European Coal and Steel Community, the need to create an "external statistical service", which in the course of time became the present Eurostat.

³ A. Dorsin角度-Smets. *L'Amérique précolombienne*. Blond et Gay, Paris, 1964, p.71.

⁴ Alberto De Michelis and Alain Chantraine. *Memories of Eurostat*. European Commission, Opoce, Luxembourg, 2003, p.27

The recent discussions in connection with the preparatory work of the Convention in drawing up a draft European Constitution have revived the debate on the need to anchor this independence in an amended Article in the Treaty. As things stand at present in the discussions that resumed under the presidency of Ireland (following the failure of the European Council in Brussels in December 2003), I think it unlikely that anything like this could take shape, as the debate is now focusing on highly political questions in the search for a global compromise.

Whatever the future of the institutional question, it is important to acknowledge that there is at present a real and impressive consensus on the independent exercise of the statistical function in terms of what is known as the European statistical system, which brings together the NSIs, the NCBs and other specific bodies, on the one hand, and Eurostat, on the other.

The negative publicity from which Eurostat suffered in 2003 neither called into question nor detracted from the credibility of European statistics, which continued to be produced thanks to the partnership with the Member States' NSIs, the support of outside bodies such as the ECB and, above all, the professionalism of Eurostat's staff. I am glad to take this opportunity to express this thanks in public.

What does politics require of statistics? More precisely, what are the functions that the European statistical system must fulfil vis-à-vis the EU and its decision-makers?

First of all, statistics must be of use to decision-makers. After all, what is the point of devoting human and budgetary resources to drawing up statistical series that may well be of interest to researchers or econometricians, but of which the immediate usefulness is unclear? You will reply that it is never possible to foresee the political usefulness or the future uses of statistical series that are at first sight of purely scientific interest. This is true, for example, of long-term climatic data, from which lessons can be learnt for the conduct of environment policy. But we must be wary of information overload, which is liable to upset our view of what is useful. Too much information smothers useful information. A good illustration of this is the current debate on the number of structural indicators that are necessary for drawing up documents relating to the Lisbon strategy.

Raising the question of usefulness leads inevitably to that of the level of detail to which statisticians should confine themselves, since there are no limits as to what is possible or interesting to investigate.

Asking the views of colleagues who are responsible for drawing up common policies does little to reduce the demand for information or the required degree of precision, but, as we all know, the availability of resources and common sense dictate certain limitations and a certain self-restraint.

Statistics must be easy to grasp and comprehensible. Statisticians have to make constant efforts to ensure that statistics are available and accessible to those who need them. The major project we have undertaken in Eurostat to make the data we hold available free of charge on the internet from October 2004 meets this requirement. A further necessity is that not only must the data supplied in principle be available, but

access to them must be popularised – in the proper sense – by means of user-friendly tools. This is a great challenge, as I detect among professional statisticians, as in any specialist trade, a certain tendency to hermetic thought, compounded by the use of abbreviations and expressions to which they alone hold the key.

Geographical comparability and analysis over time are also important requirements for politicians, particularly nowadays when common economic policies are much better for being established under peer pressure, i.e. by reference to what is happening elsewhere. This, as we know, requires official statisticians in the European Union to harmonise their methods, to establish common rules for the compilation of statistics and to ensure and monitor compliance with these rules.

Furthermore, more than ever, European statistics must be organised together with those of its partner countries and play an active role in the relevant international bodies, in particular with the OECD.

An enlarged EU with 25 Member States, the world's leading trading power with a population of 455 million, has a right and a duty to make its views felt on questions of statistical cooperation. This involves drawing up a common strategy, adopted at political level, on the basis of the remarkable heritage that the existing partnership within the European statistical system represents. It is up to the European Commission and the ECB to work out the components of this common strategy, which must appear coherent from the outset. To this end, it should be clearly recognised in the international statistical community that the EU has a global responsibility with regard to its relations with third parties and international institutions. The responsibilities of the Member States and the EU should be clear to our international partners, who should recognise the areas of shared and exclusive competence.

The speed that information becomes available is another key feature for politicians. In a highly media-dominated society, whoever is the first to know or announce a piece of news has a definite advantage. Does this mean that statisticians have to rush in, even if the data provided are subject to revision, as is sometimes stated for the sake of honesty in footnotes that nobody ever reads? Can we persuade politicians to accept that it would be better to draw up a common timetable for compiling and publishing information, as is currently under discussion with the ECB for short-term statistical indicators? This is a far-reaching debate which touches on sensitive questions concerning the independence, responsibility and accuracy of statisticians' work, but statisticians cannot ignore the constraints of politics. If we tried to disregard these constraints, the need to be up to date is so pressing that other, quicker indicators would appear, based perhaps on unreliable methodologies.

The ability of statistics to adapt to new needs is also a growing requirement of society. Chance events or crisis situations require new information about the probability that events will occur or develop.

The BSE crisis, for example, led to a complete livestock census, each animal now being clearly identified, which allows incomparable statistical precision. Ironically enough, we should note in passing that, while we now know, at least in theory, the exact

number of cows, I am unable to tell you at this moment how many Europeans there are nor, a fortiori, the number of EU residents.

The tragic events of 11 September 2001 led to the precise identification of all non-residents entering the United States, which gives the American authorities access to a detailed database that is not intended for studies on demography or migration, but is the result of powerful political constraints in the field of security. While it is doubtful whether the number of foreigners registered in this way can reduce the likelihood of terrorist incidents or attacks, the individual and global information now available to the American authorities is certainly unparalleled.

The world of politics thus makes many demands on European statistics: usefulness, legibility, comparability, rapidity, adaptability are unavoidable obligations for the European statistical system, the members of which – and in particular Eurostat – must guarantee the independence and the quality of the statistics they produce.

Do we have the means to do this, in human and in budgetary terms? It is pointless, I believe, to cultivate illusory hopes of an increase in the means available, since both the state of public finances and the emergence of other priorities will not allow European statisticians to enjoy resources that match common ambitions.

We are already seeing certain national administrations faced with reductions in their budgets in real terms. The events that have affected Eurostat may, in a sense, be evidence of the failure to provide resources to match the demands or ambitions expressed.

The general environment warrants a radical re-examination of our statistical system. Indeed, it would be unhealthy to carry on as if statistics could enjoy an exceptional status and live in an ivory tower without contributing to a thorough reappraisal of priorities. Should we not, on the occasion of enlargement and the preparation of the future multi-annual action programme to start in 2007, undertake here and now a bold and determined analysis of what we can do, what we have to do, and what we have to remove from our programmes?

No reflection on the future can be made without an analysis of the usefulness of what now exists, and of the costs/benefits of maintaining certain recurrent programmes. At the risk of being provocative, why is it necessary to maintain series for the detailed analysis of trends in trade balances and balances of payments in a single market that is nearly complete and is moreover in a single monetary area?

Is the Community statistical programme linked indefinitely to existing common policies such as agriculture, or is possible to prioritise other fields that are at present somewhat neglected, such as health status, demographic trends, the age pyramid or migratory movements?

There is no avoiding these questions. It is better to raise them ourselves now, rather than be forced to do so by the budgetary structures.

However, this questioning process must proceed in terms of political choices. It is the unshakeable duty of any administration to prepare its work in an objective way, as only it has the necessary knowledge; only then is it its duty to involve the politicians.

That is why I propose that we should all reflect together on the preparation of a real statistics policy for the EU, and that in a year's time we should be in a position to put before the relevant Council authorities – probably the ECOFIN Council – a coherent action programme for European statistics. It is healthy and normal that choices should be made by those who bear the responsibility. I have already been surprised on several occasions that there are no discussions of this sort taking place in the Council of Ministers. My plan is to see that once a year the ECOFIN Council, in a fully informed fashion on the basis of the analysis and proposals put forward by the European Commission, discusses the constraints we are under and the future of the European statistical system.

In this way, I think, we will have made an important contribution to better understanding between statistics and politics, between statisticians and those with political responsibility.

The quality of international statistics: outstanding issues and proposals for improvement

Enrico Giovannini

1. Introduction

Statistics are a fundamental input for individual and collective decisions, both at national and at international levels. Unfortunately, as Donald J. Johnston, the Secretary-General of the OECD, pointed out in his opening address at the 50th anniversary of the Conference of European Statisticians, “Today, everybody agrees that good knowledge of the reality of markets, of economic and social developments, etc. is absolutely a critical element for the success of any policy of an enterprise, of a career, etc. On the other hand, because of the enormous amount of information available, the problem is not really to know, but it’s what to know and how to distinguish between good and bad information.”

In the context of the information society, substantial amounts of data are readily available (in the press, on the internet, etc.). New data providers now play a role in the “market of information” and compete daily with official sources to capture the attention of the media, businesses, households and individuals. In some cases, this competition is based on serious efforts to produce data unavailable elsewhere, but in other cases surveys carried out by private institutions on a handful of individual and/or econometric estimates are presented, and commented on, as indisputable “facts”.

Both national and international/supranational organisations (IOs) face such a challenge.¹ Academic and research institutions, private companies and NGOs publish international comparative studies quoting both official sources and statistics obtained by conducting direct surveys and/or merging data produced by unofficial sources. In addition, several international organisations disseminate data compiled by both statistics departments and research departments. In conclusion, both national and international organisations active in statistics must compete in an open and very difficult market, with a huge number of potential data providers, and where competition is not necessarily based on the technical quality of the statistical information provided.

¹ Henceforth we will use the term “international organisations” to include both international organisations in the strictest sense, such as the OECD and the United Nations, and supranational organisations, such as the European Commission and the ECB, which carry out statistical activities. According to the OECD definition, a statistical activity is “an activity that produces at least one statistical output, such as a dataset or database available to internal or external users through Internet, Intranet, CD-ROM, etc., or a publication that is statistical or is analytical but with extensive statistical content”.

Several papers have been written evaluating such issues and proposing possible strategies for national statistical institutes.² This paper aims to examine these challenges from an international organisation's viewpoint. Therefore, it deals with some outstanding issues that affect the quality of statistics disseminated by international organisations (henceforth referred to as "international statistics"), as well as their credibility. In particular, it will focus on economic statistics, analysing whether the current institutional set-up and the development of technical cooperation among IOs are adequate if the overall quality of international statistics is to be improved in the near future.

The next section of the paper will deal with the concept of quality for statistics, analysing in particular how IOs could adopt quality frameworks for statistics, as several NSIs have done over the last ten years. The third section highlights the most important concerns that users and national data providers frequently express about international statistics, and proposes some actions to improve the current situation. Finally, the fourth section presents a possible way forward to sustain the quality improvement of international statistics.

2. Quality and international statistics

2.1 Quality frameworks for national statistics

Quality is usually defined as "fitness for use" in terms of user needs. This definition is broader now than the one customarily used in the past, when quality was equated with accuracy. It is now generally recognised that there are other important dimensions. Even if data are accurate, they cannot be said to be of good quality if they are produced too late to be useful, cannot be easily accessed, or appear to conflict with other data. Thus, quality is viewed as a multifaceted concept. The most important quality characteristics depend on user perspectives, needs and priorities, which vary across groups of users.

Over the last ten years, several international organisations and national statistical institutes have paid special attention to the development and the implementation of quality frameworks for statistics. For example, the IMF, the Statistical Office of European Communities (Eurostat), Statistics Canada and other NSIs have identified various sets of data quality components and/or have adopted quality frameworks to improve their organisation and the quality of data produced. As a result, several NSIs currently use quality management approaches to continuously analyse and improve the quality of data they produce.

From an international point of view, the initiatives undertaken by the IMF and Eurostat are especially important. The former developed the DQAF to assess not only the quality of data produced by national statistical systems, but also the quality of institutional arrangements put in place to produce such statistics. For its part, Eurostat promoted the adoption of a "Quality declaration of the European Statistical System", and developed a framework to assess the quality of data produced by European countries.

² See for example the proceedings of the 86th DGINS Conference (Eurostat, 2000).

The two approaches have several similarities and important differences (Laliberté, Grünewald and Probst, 2003). The IMF framework views quality through a prism that covers governance of statistical systems, core statistical processes and observable features of the outputs. In particular, the DQAF addresses a broad range of questions that are captured through the *prerequisites* of quality and in five quality *dimensions*. The analysis of prerequisites is devoted to evaluating how the quality of statistics is affected by the legal and institutional environment and resources, and whether there is quality awareness in managing activities. The five quality dimensions are as follows:

- *Assurance of integrity*, i.e. features that support firm adherence to objectivity in the production of statistics, so as to maintain users' confidence;
- *Methodological soundness*, i.e. practices that relate to the internationally agreed methodological practices for specific datasets;
- *Accuracy and reliability*, i.e. adequacy of source data, statistical techniques, etc. capable of portraying the reality to be captured;
- *Serviceability*, i.e. the way in which users' needs are met in terms of timeliness of the statistical products, their frequency, consistency, and their revision cycle;
- *Accessibility*, i.e. the availability to data users of effective data and metadata and the assistance provided, where necessary, to users.

The Eurostat framework focuses on statistical outputs viewed from the user's perspective and only works its way back to the underlying processes where the outputs do not yield a direct measurement. It is based on seven dimensions: relevance (are the data what the user expects?), accuracy (is the figure reliable?), comparability (are the data in all necessary respects comparable across countries?), coherence (are the data coherent with other data?), timeliness and punctuality (does the user get the data on time and according to pre-established dates?), and accessibility and clarity (is the figure accessible and understandable?). According to this quality definition, Eurostat is also developing quantitative indicators to measure the quality of various statistical outputs (e.g. measurement errors, timeliness indicators, etc.). In addition, Eurostat regularly assesses how its internal processes impact on the overall quality of data it releases.³

Even though both the IMF and Eurostat approaches are very interesting and useful in improving national statistics, they are not readily applicable to IOs.⁴ For an international organisation, the quality of statistics disseminated depends on two aspects: the quality of national statistics received, and the quality of internal processes for the collection, processing, analysis and dissemination of data and metadata (see Holt, 2000). Therefore, any comprehensive quality framework for statistics produced by an IO has to take both aspects into account. On the other hand, the legal environment in which the international

³ This is known as the "Qualistat" initiative. It uses a wide range of tools, such as user satisfaction surveys, staff opinion surveys, process analysis, training, rolling reviews, etc.

⁴ It is also important to note that the IMF and Eurostat are working together to maximise the commonalities of their quality approaches.

organisation concerned operates can have an important impact on the design of the framework. For example, Eurostat has the authority to oblige national data providers to adopt methodological standards: therefore, its efforts are mainly directed at measuring the relative performances of national data providers and at pushing them to improve their performance over time.

An IO that does not have such regulatory power can only use moral suasion to push countries that are concerned to improve their statistical outputs. In this situation, the quality framework should mainly address internal processes adopted by the organisation itself in carrying out its statistical activities. This is precisely the choice made by the OECD, which in 2003 developed and implemented its QFOS.

2.2 The quality framework for OECD statistics

The QFOS benefits from the work undertaken by the above-mentioned national and international organisations. The OECD has therefore avoided reinventing the wheel by adapting existing definitions and approaches to its context. In particular, the QFOS focuses on improving the quality of data collected, compiled and disseminated by the OECD by improving the OECD's internal statistical processes and management, although initiatives to produce a positive spillover effect on the quality of national data are also envisaged (OECD, 2003a). The OECD quality initiative is similar to ones developed by Statistics Canada and other NSIs, and encompasses statistical, managerial and technical processes.⁵

The QFOS has four elements⁶: a definition of quality and its dimensions; a set of broad principles on which OECD statistical activities are to be conducted and quality guidelines covering all phases of the statistical production process; a procedure for assuring the quality of proposed new statistical activities; and a procedure for evaluating the quality of existing statistical activities on a regular basis. The OECD views quality in terms of seven dimensions: relevance; accuracy; credibility; timeliness; accessibility; interpretability; and coherence. Another factor is cost-efficiency, which, although not strictly speaking a quality dimension, is still an important consideration in the possible application of one or more of the seven dimensions to OECD statistical outputs (OECD, 2003).

In addition to quality dimensions, the following core values for OECD statisticians have been identified, using the UN Fundamental Principles of Official Statistics as the key reference⁷:

⁵ In 2004 the OECD will carry out 100 statistical activities. The organisation of statistical activities at the OECD is based on a decentralised model, which means that various statistics are developed both by the Statistics Directorate and by nine other Directorates responsible for analytical studies and policy analyses. For a general description of OECD statistical activities, see OECD (2003b) and (2004).

⁶ The Framework has been designed taking into account the decentralised model by which OECD statistical activities are organised, and through a wide consultation of statisticians working in various Directorates.

⁷ OECD statisticians are also committed to carrying out their work according to the International Statistical Institute's declaration on professional ethics.

- (a) OECD statistics are compiled and made available on an impartial basis, and are produced according to strictly professional considerations, including scientific principles and professional ethics with regard to methods and procedures used for the collection, processing, storage and dissemination of statistical data;
- (b) The OECD presents statistical information according to scientific standards on the sources, methods, and procedures adopted to produce its statistics;
- (c) Individual data collected by the OECD for statistical compilation are considered to be strictly confidential and used exclusively for statistical purposes. Specific measures are taken to ensure the full protection of confidential data from any potential disclosure;
- (d) The internal rules and measures under which the OECD statistical system operates are made public;
- (e) The OECD is committed to carrying out its statistical activities in coordination with national statistical institutes and with other international organisations;
- (f) The OECD is committed to developing bilateral and multilateral cooperation in statistics in order to contribute to the development of systems of official statistics in all countries;
- (g) Within the constraints of resource availability, OECD data products are of the best possible overall quality in terms of each of the seven quality dimensions outlined in the OECD Quality Framework. The effort involved in assuring quality is commensurate with the scale of the statistical activity, the purpose of the activity and its frequency (i.e. whether it is intended to be repeated regularly or occasionally, or is a one-off).

The definition of quality dimensions and of core values does not, by itself, change the quality of concrete statistical processes used by OECD statisticians to produce economic, social and environmental statistics. To produce such a change it is necessary to address simultaneously technical, organisational and human factors. Therefore, the design and the implementation of the QFOS have been sustained by:

- The development of corporate ICT tools for collecting, processing, storing and disseminating data and metadata, in the context of the OECD statistical information system⁸;
- The adoption of internal rules for reviewing the way in which individual activities are carried out and for strengthening the horizontal cooperation across Directorates in charge of statistical activities;

⁸ See Samuelson and Thygesen (2004).

- Investment in training for statisticians and initiatives aimed at reinforcing the sense of community for statisticians working in various Directorates (e.g. a general meeting of all OECD statisticians every six months; the first OECD Statisticians Satisfaction Survey carried out in December 2003 to provide a measure of how staff perceive their working conditions and the impact of a number of initiatives implemented over the previous 36 months, etc.).

Even if all OECD statisticians always devoted a large part of their time to improving the quality of the statistics they managed, the adoption of a formalised approach to quality for statistics would nonetheless bring three important benefits: first, it provides a systematic mechanism for the ongoing identification and resolution of quality problems, thereby maximising the interaction between experts in different fields (statisticians, ICT experts, final users, etc.); second, it gives greatly increased transparency to the processes used by the OECD to assure quality; and third, the process has promoted a common view among OECD statisticians of quality dimensions as well as a stronger sense of partnership between OECD statisticians.

The experience of 2003, when seven reviews of existing activities were conducted (ten are foreseen in 2004) and new activities were launched using new ICT tools, seems very encouraging. After a certain initial cautiousness, the attitude of statisticians involved in such reviews has been very positive.

2.3 Quality frameworks for international organisations: a key challenge

Comparing the attention paid by NSIs and IOs to the development of internal quality management approaches, it is quite evident that the latter lag behind the former. Over the last ten years, regular contacts have been established among NSIs to develop, compare and improve their quality management approaches. Quite often, such contacts have been promoted and facilitated through conferences and workshops organised by IOs, but only very recently have the latter started to apply to themselves the approaches they recommend to national agencies. Furthermore, it is paradoxical that IOs spend a large part of their resources on developing methodological standards to encourage national data providers to improve the quality of data they produce, yet collectively expend so little effort in adopting quality management approaches to improve their own statistical practices.

A possible explanation for this can be found in the way in which IOs regard themselves. Even though several IOs have a long and fruitful history of cooperation in developing standards and research activities, they have never felt a part of a system of international organisations. In other words, in the past they developed their activities mainly with their own constituencies in mind, trying to coordinate their actions as much as possible (to maximise effectiveness and minimise duplications, etc.), but without looking at other IOs as possible partners to improve their internal processes.

This institutional environment largely explains the difficulty of developing common solutions to quality management issues in IOs. Statistical departments have different roles and status in their own organisations, and their capacity for coordinating statistical activities carried out in other departments of the same organisation also varies substantially. In addition, IOs regularly compete among themselves, especially when the

international community expresses new statistical needs. Finally, the former UN body in charge of coordinating the statistical activities of IOs (created in the 1990s and suppressed in 2001) was very weak and never tried to develop a common strategy that would help IOs to manage their statistical activities.

On the other hand, as statistical activities are normally only a small part of the overall activities carried out by IOs, ICT solutions used by statistical divisions of IOs for collecting, analysing and disseminating statistics are frequently chosen in accordance with the requirements of other parts of their own organisations. Therefore, statistical divisions of IOs have generally never had the opportunity, unlike several NSIs over the past few years, to develop common platforms and software solutions for managing similar problems.

Fortunately, recent signals show a greater degree of awareness among IOs regarding the need to rethink their role and the organisation of their work. A new UN body, the CCSA, was established in 2002 to coordinate the statistical work of the IOs. Six organisations (IMF, UN, OECD, Eurostat, ECB and BIS)⁹ established a task force in 2001 to develop SDMX based on new technologies. Moreover, a few organisations planned major reorganisations of their ICT systems, developing and sharing new software solutions. Finally, IOs have set up an ambitious agenda for the next five years to develop new methodological standards, especially for economic statistics.

Bilateral and multilateral cooperation among IOs has improved over the past few years, mainly following a bottom-up approach, especially among the larger organisations. However, a more general strategy is now necessary to orient the activities of IOs and to benefit from the opportunities created by new institutional set-ups and technological changes, bearing in mind the final target of improving the quality of international statistics. The final part of this paper discusses some of the possible elements of such a strategy, but before that, and according to the fundamental idea that final users play the key role in evaluating the quality of statistics, the next section will look at the main quality challenges that IOs now face in the context of today's information society.

3. New (and old) quality challenges for international organisations

It is very difficult to analyse users' statistical needs without trying to identify more precisely to which category of users we are referring. Policy-makers, the media, academics, businesses and households express a wide range of needs and have different views about the relative importance of individual quality dimensions. However, looking at the OECD's experience on this issue and at the discussions that have taken place in various international conferences, it is possible to identify broad trends in the demand for international economic statistics that create new challenges for IOs or make old challenges even more relevant. This section will deal with four key challenges from the user's perspective with respect to the quality issues of improving international comparability, improving timeliness, increasing the length of time series, and expanding free access to statistical data. In addition, expectations about the activity of IOs from the national data providers' point of view will be examined.

⁹ The World Bank joined the group in 2003.

3.1 Improving international comparability

The first challenge, which is certainly not a new one, is the production of *internationally comparable data*. Notwithstanding the efforts made by IOs and national data providers, the actual comparability of key figures is still poor, even in those areas of economic statistics that have a long history of standards agreed to at the international level. Recent research carried out by the OECD (in cooperation with other IOs) on statistics on productivity, saving ratios, value added in the service sector, wages, industrial production, public debt and deficit and so on show quite poor comparability across countries.

This is indeed one of the most important priorities for all IOs, which spend a large part of their resources on improving, as much as possible, this quality dimension. As already underlined, the power that individual IOs have to force their constituencies to apply international norms and standards varies substantially. For example, Eurostat and the ECB have the regulatory power to oblige European countries to meet statistical requirements contained in regulations and other legal acts; the IMF has the possibility of using the ROSCs as a tool to scrutinise the degree of compliance of member countries with international standards for key economic statistics; while the OECD uses its policy committees to exercise moral suasion on national data providers.

Looking at the last ten years, it is absolutely clear that European countries have largely improved the comparability of the economic statistics they produce. Nevertheless, relevant differences still exist, especially because the general approach used by Eurostat (according to the principles governing the functioning of the EU) is based on “output harmonisation”. This means that each country is free to produce required statistics according to various methods and organisational structures, on condition that the final output meets the requirements (in terms of accuracy, timeliness, etc.) laid down in legal acts. Only in a few cases has the EU felt it necessary to specify with a higher degree of precision the methodological approaches to be followed to produce key figures for conducting European policies, using some sort of “input harmonisation”.

The OECD has also been very active in developing standards in new statistical domains (R&D, ICT statistics, education, health, etc.) and in assessing the way in which these are implemented by countries. In this case, the most important tool for improving comparability is the peer review process carried out by technical and policy groups. This approach has pushed countries into improving their statistical processes by adopting international standards and/or recalculating national figures according to the latter to meet OECD needs.

Nevertheless, comparability between the main economic areas (the EU, the US, Canada and Japan) is still unsatisfactory. On one hand, it is clear that the SNA 1993 is now considered the reference manual worldwide, which has indeed increased the pressure on all countries to follow the concepts, definitions and classifications contained in it. On the other hand, the way in which countries apply the SNA 1993 continues to create important comparability issues, and a similar conclusion can be drawn for other areas of economic statistics (e.g. industrial production, consumer and producer prices, services statistics, b.o.p., etc.).

As already mentioned, this is not a new problem, but it is quite clear that the establishment of the euro area (and the development of a single monetary policy) represents an important change in the way in which policy-makers and analysts look at the issue of comparability of international statistics. Ever more data concerning the euro area are now requested by users all over the world. In addition, globalisation trends and the development of new global players in the world economy (for example, the Russian Federation, China and India) make the issue of international comparability of key economic statistics even more challenging. This changed environment has made the life of statisticians more difficult than in the past: in fact, when national policy issues are discussed, policy-makers need to look at statistics based on national definitions, as they are the ones most frequently reported in the media. However, when they examine international trends, the same policy-makers require internationally comparable data. Unfortunately, this dilemma can only be solved in the long run, as both national and international users are only gradually becoming more interested in internationally comparable figures for national debates; in the short run, the two levels need to coexist.

To improve further the comparability of economic statistics, four main areas of work deserve special attention and joint investment by IOs:

- a wider and more continuous evaluation of comparability issues concerning key economic statistics for the main geo-economic areas of the world;
- the strengthening of multilateral surveillance on the implementation of international statistical standards. This also implies the availability of appropriate metadata for necessary comparisons;
- better coordination of activities carried out by IOs for those countries referred to above as global players in order to maximise the effectiveness of technical assistance and to exercise joint pressure to improve the overall quality of their statistics and of their national statistical systems;
- a stronger role to be played by IOs in harmonising data provided by national sources.

Concerning the first issue, IOs should jointly develop an international agenda to address the most important issues through the development of small international teams of experts, including people working in academic circles. For example, the OECD recently carried out a review of current practices used by member countries to estimate productivity figures: the results show that a significant part of the differentials observed in aggregate productivity growth over the last 15 years among the US, Japan and the European countries is most probably due to measurement issues. Severe comparability issues also affect measures of saving ratios currently used by international analysts, as well as measures of wage levels and growth.

The strengthening of multilateral surveillance on the adoption of international statistical standards is also very important. The SDDS and GDDS launched by the IMF in the 1990s are very important. They make the general public aware of the strengths and weaknesses of national statistical systems. Another good example in this respect is the monitoring carried out by Eurostat on the implementation of the EMU Action Plan: it

represents a good way of communicating to policy-makers and the public at large the degree of compliance of Member States with needs expressed by policy authorities, as well as putting pressure on national authorities to invest adequate resources to improve national and European statistics. These examples should be followed by all IOs. The publication of summary reports on the way in which Member States implement international recommendations could be an important way of putting pressure on national authorities to produce more comparable data.¹⁰

To improve the current capacity of assessing international comparability, adequate metadata on national practices have to be produced and disseminated. This is a very complicated issue, but good practices are already available. As already stated, the SDDS and GDDS provide an invaluable contribution towards increasing the interpretability of national statistics, but are not sufficiently detailed to enable an in-depth analysis of comparability issues. The difficulty in this area is due to the very heterogeneous metadata dissemination practices adopted by data providers. For this reason, the OECD has now undertaken work to develop recommendations for data and metadata presentation.¹¹

There is also a need to reinforce the pressure that the international community makes on the community of new global players: notwithstanding the effort that these countries have made over the last few years, much work has yet to be done, and the occasional cooperation developed between some IOs in a few domains is insufficient. The quality of data produced by such countries has to become a concern for all IOs. Special investment to assess the quality of key economic and social statistics more effectively is required. In similar fashion, better coordination of IO bilateral and multilateral activities is urgently required to assist these countries in their statistical developments, as well as to develop a policy dialogue on statistical issues. In 2003, the OECD, in cooperation with the IMF, organised a seminar on statistical quality management for such countries, with a follow-up event planned in 2004. Informal ongoing consultation should be organised amongst IOs involved in technical assistance with global players to exchange relevant information and identify a more efficient and effective division of labour among IOs.¹²

Finally, given the slowness of national data providers in adopting international standards, IOs are asked to play a greater role in harmonising *ex post* the data collected from national sources, investing more in methodological work and taking some risks in modifying original data to make them more comparable. There is a clear policy issue here, which concerns the relationships between IOs and national data providers, which are usually not very keen to see their data modified by another body. On the other hand, the demand from users is very clear and IOs cannot be held hostage by the limited

¹⁰ In this respect, it is also worthwhile to quote the recent survey carried out by the UN Statistics Division on the implementation of the Fundamental Principles of Official Statistics adopted by the UN Statistical Commission in 1994. The results of the survey should be brought to the attention of international public opinion and policy-makers for discussion and further action.

¹¹ The first draft of these recommendations will be available for comment in summer 2004.

¹² As a concrete follow-up to the Symposium held in Beijing in May 2004 on the achievements and challenges for Chinese statistics, OECD, the IMF and the statistical institutes of Canada, Germany and France agreed to establish an Electronic Discussion Group to exchange information and plan common activities on technical cooperation with China on national accounts.

willingness of individual countries to comply with international norms or by the limited resources available at national level to produce internationally comparable figures. As the experience of several IOs shows, it is possible to find the right balance between various needs, but the presence of adequate professionalism and technical skills in IOs is an unavoidable precondition for any fruitful agreement in this area, and building such preconditions requires adequate investment and resources.

In conclusion, the need to improve the international comparability of key economic statistics is a priority that IOs and their constituencies cannot ignore. Additional resources are necessary to address such concerns, but new institutional set-ups also have to be identified to improve the effectiveness and the efficiency of current and future activities in this area.

3.2 Improving the timeliness of international statistics

Nowadays, the improvement of the timeliness of economic statistics has become a must for both national and international organisations. Release calendars of key macroeconomic statistics that until very recently were considered fully satisfactory by users are now considered largely inadequate. Therefore, all NSIs are making special efforts to shorten the time interval between the reference period and the release date of such statistics.

It is also true that the very well-known trade-off between timeliness and accuracy has been interpreted in different ways in OECD countries over the last 20 years. For example, 20 years ago the US BEA was releasing a flash estimate of quarterly GDP even before the end of the quarter, whereas European countries were releasing their first estimates between 90 and 100 days after the end of the quarter. Since then, the BEA has suppressed its flash estimate, whereas European countries have started releasing preliminary estimates 30-40 days after the end of the reference period.

European countries have invested substantially in order to improve the timeliness of their key economic statistics, especially over the last few years, under pressure from the ECB. Working groups have been established by Eurostat as well as by the OECD. Following the example of the US, the development of the list of PEEIs, the adoption of the principle “First for Europe”, investments made in Member States to improve the timeliness of various indicators, and the dissemination by Eurostat of preliminary estimates for some PEEIs have partially reduced the existing gap between the EU and the US in terms of timeliness.

On the other hand, the establishment of the OECD Short-term Statistics Expert Group (to which representatives from Russia, China, Brazil, India, Indonesia and South Africa are regularly invited) has improved the exchange of experience among European and non-European countries. One of the three task forces created on approaches to improve timeliness is expected to issue draft recommendations by July 2004. The OECD has also established, with DG-ECFIN of the European Commission, an Expert Group on business and consumer tendency surveys, whose aim is to improve the quality and the international comparability of indicators derived from these sources, which are frequently used to develop early estimates of key economic indicators. Finally, the

Journal of Business Cycle Measurement and Analysis has been created by the OECD and the CIRET to promote scientific research in this field.

Equally important is the work that the IMF has recently undertaken to issue recommendations on revision policies for releasing key economic statistics, based on the findings of ROSCs carried out over the past few years. This activity is especially important as IOs have become increasingly involved in making autonomous estimates of missing data in order to produce more timely data for relevant economic areas.

In conclusion, it seems that IOs are doing their best to support NSIs in their efforts to release more timely statistics. On the other hand, they could do much more to improve the timeliness of data they themselves collect and release. Data transmission between NSIs and IOs is still largely based on files sent by e-mail. Once received, the data contained in such files are read, checked, stored in internal databases, reformatted and disseminated. This procedure is cumbersome, time-consuming and resource-intensive, and obliges each organisation to duplicate the work of other IOs.

However, a different approach is possible based on the concept of data sharing, in which the original data provider (for example, an NSI) disseminates data and metadata according to a certain format on its website which all IOs can access in real time. The same model could also be applied to data exchanges among IOs, avoiding duplication of work, and minimising mistakes. The OECD is particularly active in this field. After having developed procedures for collecting data using so-called web queries (through which data available on the internet are regularly collected at just one click), it launched the NAWWE project, based on a common questionnaire agreed by the OECD and Eurostat for the collection of annual national accounts data. The idea behind the NAWWE project is to establish a web-based mechanism to ease country reporting of these common data. If this can be done, each international organisation involved could then use the same mechanism and would access the subset of the common data pool relevant to it.¹³

Independently from the technicalities required to implement such an approach¹⁴, it is important to note that a cultural change in IOs and NSIs is required. In particular, the adoption of the data sharing model represents a shift away from the current paradigm (which obliges each organisation to be part of a sequential process with its pros and cons) towards a new paradigm, in which the information provided by the original source is shared with all parties concerned at the same time. This issue will be referred to again in the final part of this paper, but it is quite clear that this approach, together with the autonomous production of estimates for missing data, seems the most promising area of work for improving the timeliness of data released by IOs.

¹³ Data are not necessarily transferred across organisations but rather published on the web in such a form that users can extract them by simply using the country and variable references. As a proof of the concept, two member countries, Australia and Canada, have agreed to pilot the suggested mechanism for a subset of the national accounts tables.

¹⁴ Standards for data and metadata exchanges under development by the SDMX initiative will provide NSIs and IOs with new and effective tools for developing a new cooperation model.

3.3 Increasing the length of time series

Coherence over time of time series for the most important economic indicators is an issue for users of international statistics. The quality of new estimates can be improved by improving the accuracy of estimates through the adoption of more sophisticated methodologies, as well as by the modification of classifications to capture a quickly changing reality, the replacement of statistical surveys with the use of administrative sources to minimise the burden on respondents, and the implementation of new international recommendations and standards.¹⁵ At the same time, these changes can limit the availability of long time series.

In general, only a few NSIs actually reconstruct homogeneous time series. This is due both to the lack of resources and to the tendency of NSIs to consider that such exercises cannot produce backward estimates as accurate as the most recent series. A similar policy can be found in several IOs. In general, statisticians working in statistical departments of IOs are very cautious in producing backward estimates, whereas economic research departments often produce them on their own and disseminate the results of their work externally. The outcome of this dichotomy is that users tend to use databases released by research departments and not those produced by statistical departments of IOs, which can lessen the relevance of the latter and/or lead to possible inconsistencies across databases released by the same organisation.

The absence of international recommendations in this field is an important weakness that should be addressed as soon as possible, and the OECD will submit a proposal to its Expert Group on Short-term Statistics to work on this issue in 2005.¹⁶ Moreover, because of their relevance, any recommendations formulated by the Group in this area should be widely discussed with heads of NSIs.

A particular problem arises with data concerning EU and euro area aggregates. The first issue will become extremely relevant in May 2004, when ten new Member States join the EU. Notwithstanding the efforts made by these countries to meet EU statistical standards, the availability of long time series for the most important economic statistics is still very limited and in many cases series will only date back to the mid-1990s. Eurostat has just developed its policy for calculating EU25 aggregates. This entails the publication of both EU15 and EU25 aggregates for reference periods before 1 May 2004 and only series for EU25 afterwards. For reference periods after 1 May 2004, EU15 aggregates will be updated until end-2004 for monthly data, and until end-2005 for quarterly and annual data. After that, only EU25 aggregates will be published.

Unless a special effort is made by Eurostat and the ECB to reconstruct quickly long time series for EU25 totals, there is a real risk that over the next two years each IO will make its own estimates, with the likely result that different time series will be disseminated. A special problem will be faced by the OECD, as six of the new EU

¹⁵ This is particularly relevant for European countries, as the coverage of regulations and other legal acts concerning statistics increases over time.

¹⁶ The participation of as many IOs as possible in this effort would be highly appreciated.

Member States (Slovenia, Lithuania, Estonia Latvia, Cyprus and Malta) are currently not OECD members. Therefore, in order to calculate EU totals, the OECD will need to rely on Eurostat and ECB data – leading to some inconsistencies in OECD publications and databases if the data collected by these organisations for the other 19 EU countries are not fully coherent with those currently available in OECD databases.

The issue of data for euro area statistics is much more complicated, particularly concerning the reconstruction of time series for the euro area before January 1999. Various IOs adopted heterogeneous approaches to deal with this, leading to the availability of different series (Schreyer, 2001; OECD, 2002). This problem will reoccur as new countries join the euro area over the next few years. Therefore, a new round of consultations on this issue should be organised among IOs in the near future, with a view to finding a common solution based on the experience made over the past five years.

In conclusion, IOs should be more active both in developing international recommendations to national data providers on how to deal with series breaks, and in enhancing their role in producing long time series, while adopting approaches jointly defined and agreed with NSIs.

3.4 Expanding free access to statistical data and metadata

Official statistics are considered a public good in several OECD countries. In this context they are disseminated free on the internet, while users only have to pay for paper-based publications and customised statistics. This approach is being implemented by an increasing number of OECD countries, all of which disseminate free basic data, i.e. key macroeconomic, social and environmental aggregate figures. In a few countries, the loss of revenues owing to the free dissemination of data that were previously sold has been compensated by governments, as part of their investment in e-government initiatives (see Finn and Giovannini, 2003).

IOs present a less clear picture, and some relevant changes have recently been observed in their dissemination strategies. For example, in the context of the OECD Statistics Strategy, the OECD is now disseminating free, on the Statistics Portal of its website, several databases, all methodological publications, and approximately 10% of data contained in the other databases. There is also a plan to disseminate for free old issues of various statistical publications.¹⁷ In the meantime, Eurostat has recently announced its intention to move towards free electronic dissemination of all data.

For organisations such as the OECD, which has very tight budget constraints and which collects from its statistical products one-third (more than 4 million euro) of its total revenues from publications, the movement towards free dissemination of all its statistics is not feasible at this stage. Investments in new dissemination platforms and software, as well costs incurred in the involvement of specialised companies to make products available to specific audiences (academics, private companies, the media, etc.),

¹⁷ All statistical products and databases are freely accessible to officials in member countries' governments and NSIs, as well as to other international organisations, under the condition of reciprocity.

somehow need to be financed. However, it is clear that, as national data providers move towards free dissemination of their data, there is a real risk that IOs which do not apply a similar approach will be crowded out and will see their revenues inevitably decline.

There are two ways of facing this challenge and both should be followed: first, as is already the case in a few countries, IO constituencies should change their policy and make larger transfers to IOs, thereby compensating for the loss of revenues owing to free dissemination, as well as making necessary investments to improve dissemination tools. Second, IOs should invest resources in increasing the value added of their products in comparison with those disseminated by national authorities. This investment should be made to improve the accessibility and interpretability of statistics, offering more precise metadata and navigation tools across countries and domains. In this respect, organisations that carry out both statistical and analytical work, or cover a wider range of topics, are in better shape than others, as they can offer integrated access to statistics, analyses and policy recommendations, as well as develop new tailored products to be sold to specialised users.

Until now, IOs have not been able to develop effective strategies. All of them are still developing their own dissemination solutions and relationships with resellers of statistical data, without trying to identify cooperative approaches to reduce development or distribution costs. This is a clear signal that they still see each other as competitors and not as possible partners, although such a view is not necessarily due to the lack of cooperation between units within IOs responsible for statistical activities, but perhaps more to those areas responsible for implementing marketing strategies. An initiative aimed at encouraging top managers of the most important IOs to identify common goals and to find possible solutions would be highly desirable. NSIs and central banks could play a major role in pushing IOs in this direction.

3.5 Reducing the burden on national data providers

The challenge of minimising the burden that IOs impose on national data providers is also very important. According to a recent survey made by the Australian Bureau of Statistics (ABS, 2004), such offices are asked to report to ten IOs, using 34 different questionnaires, with a total of 108 data transmissions per year. Notwithstanding the development of ICT and efforts made by several IOs to eliminate duplications in data collections, the number of data transmissions from national data providers to IOs is not declining, as the demand from IOs is steadily increasing every year.

Owing to resource constraints in both national data providers and IOs, there is a risk that such trends will result in an overall reduction in the accuracy and comparability of data disseminated by IOs. Several NSIs and other data providers conceive data transmission to IOs as a pure cost, without any payoff. This is especially true for those NSIs that do not use international standards for national purposes and/or are not involved in analytical studies based on international data. Therefore, several national data providers do not pay sufficient attention to the preparation of data for IOs, which are then obliged to spend a considerable amount of time contacting the original sources and correcting wrong data.

On the other hand, when the same data are transmitted to several IOs, they each process and edit them, making their own changes and estimates, and disseminating final statistics to internal and external users. The end result of this process is that, in the large majority of cases, users find significant differences between data concerning the same variable disseminated by different IOs. In a few instances, such differences can also be detected when comparing data concerning the same variable but issued by different departments of the same IO. This unfortunate situation poses considerable risks for the overall credibility of IOs and is no longer acceptable in a world where users increasingly have access to multiple sources and where the need for conducting “horizontal studies” covering economic, social and environmental phenomena is increasing.

Nowadays, thanks to recent ICT developments, IOs have powerful tools to minimise the burden on data providers and to remove inconsistencies. The adoption of such tools requires an initial investment on both technical and organisational aspects, but the payoff in terms of efficiency and credibility is quite remarkable. The SDMX initiative was launched to support such an effort (see www.sdmx.org), but even now it is possible to improve on the current situation. As already mentioned, possible solutions require a cultural change on both sides: NSIs are especially asked to change the way in which they look at international requests, paying more attention to the accuracy of data transmitted; while IOs have to minimise their requests and improve the efficiency of transmission channels, signing data-sharing agreements with other IOs and developing common platforms for data and metadata collection.

The OECD has been very active in this area over the past two years, promoting projects with Eurostat, the IMF, DG-ECFIN of the European Commission and the UNSD to minimise the duplication of work in the field of economic statistics. The cooperation with Eurostat has already allowed the OECD to suspend data collections from European countries on structural business statistics, general government accounts and financial accounts. In addition, the OECD is working with Eurostat to compare short-term economic statistics contained in the Eurostat New Cronos database and those stored in the OECD Main Economic Indicators database, with the view of minimising direct data collection from European countries. The project with DG-ECFIN has already allowed the OECD to suspend (since January 2004) the collection of business tendency and consumer opinion survey data for European countries, relying instead on data collected by the European Commission. Furthermore, since February 2004 the OECD has been providing indexes of industrial production for its countries to the IMF in lieu of directly collecting them from OECD countries. Finally, the OECD and UNSD are developing a joint database for international trade data which will be updated daily by both organisations, according to a division of labour that sees the OECD providing data for its member countries, and the UNSD dealing with the others.

All these projects show the possibility of applying a new approach to data sharing: this has significantly reduced OECD costs associated with data collection, verification and management, freeing resources now dedicated to research activities.

4. Towards a common strategy for improving the quality of international statistics

As shown in this paper, institutional, organisational and technical constraints limit the overall capacity of IOs to improve the current quality of international statistics. In addition to the proposals already mentioned, IOs need to develop a more comprehensive strategy built on a strong partnership, especially among those most active in statistics. Such a strategy should identify concrete and measurable targets over the next five years, potentially based on three main pillars: a new institutional set-up, a cultural change in statistical quality management, and reinforced technical cooperation.

The institutional component is fundamental to the development of a statistical system of international organisations that is both linked and complementary to existing national statistical systems.¹⁸ The system should have in common a few core principles, i.e. a culture of quality and common technical infrastructures. It could comprise as many organisations as possible, although it is not necessary that all IOs active in statistics join the system from the beginning.

The first step towards developing such a system is to agree on a few core principles, similar to those contained in the Fundamental Principles of Official Statistics. The CCSA is now working in this direction and a first draft of such principles should be discussed in September 2004. Once agreed by the international community of statisticians, these principles should be officially endorsed by the heads of IOs. The principles will provide the heads of IOs and statistical senior managers with guidance in organising their statistical services and activities.

To minimise the implementation costs of such principles, IOs need to identify good practices already available and study new technical and organisational solutions together. In addition, the development of quality frameworks for statistical activities carried out by IOs should be promoted. Therefore, the second step for developing a system for IOs would be to establish a forum where the latter can discuss these issues. The UN database on practices followed by NSIs in implementing the Fundamental Principles could be expanded to include experiences in IOs¹⁹, while the first CCSA meeting on “Statistical Quality for International Organisations” (to be held in Mainz in May 2004), should become an ongoing initiative. These initiatives will hopefully produce a progressive cultural change in IOs in favour of the adoption of quality management approaches and the improvement of the quality of statistics they disseminate.

The experience of the IMF with SDDS and GDDS shows the key role that a public evaluation of data quality can have in pushing data providers to improve their production processes. The third step in the proposed process is thus the establishment of International Data Dissemination Standards, which would be subscribed to on a voluntary basis by IOs carrying out statistical activities. This initiative would speed up

¹⁸ On this topic, see H. Brünger (2003).

¹⁹ Only Eurostat and the ISI are currently included in the database.

the convergence of IOs towards higher quality standards and improve their accountability vis-à-vis final users.

The development of a statistical system of international statistics also requires a cooperative effort to build common infrastructures for data and metadata exchange. As already mentioned, the SDMX initiative can play a fundamental role in this respect. New ICT approaches (such as those based on extensible mark-up language – XML – and web services) make it possible to integrate decentralised and heterogeneous systems. In addition, a joint effort by IOs on developing solutions for data collection, management and dissemination could reduce the overall costs of carrying out statistical activities and influence the main software vendors' policies, with a positive spillover onto national agencies dealing with statistical activities. Therefore, the fourth step is to make the SDMX initiative the engine for fostering, in close cooperation with national data providers (NSIs, central banks, etc.), the technical development and integration of international organisations' IT solutions for statistical production processes.

Finally, the establishment of a programme for staff exchange and common training initiatives could help IOs develop a common culture of quality management and foster the cross-fertilisation of ideas across their statistical divisions.

In conclusion, such a strategy should encompass institutional, cultural, technical and managerial aspects, ideally allowing IOs to enhance their reputation as producers of high quality international statistics in the context of a globalised information society. As we know, the reputation of any institution is built over time through a continuous effort to improve the efficiency and the effectiveness of its behaviour. While it is very difficult to achieve such a reputation, it can however be rapidly destroyed. This is especially true in international statistics, and even more nowadays than in the past.

The quality of international statistics is a global policy issue that requires a coordinated approach. For an international organisation, the factors that most influence its credibility as a worldwide statistical source are the professionalism of its statisticians, the transparency of the procedures used to run statistical activities, continuous dialogue with its constituency and users to produce relevant statistics, and the timeliness, accuracy, coherence, accessibility and interpretability of the data it disseminates. These goals have to be pursued by each organisation, but a joint effort in the same direction would greatly help statistical divisions of international organisations to achieve their goals and push their stakeholders to invest in improving the quality of international statistics.

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Comment

“International statistics: quality and policy issues”

Gert Jan Hogeweg

The two papers I have been asked to discuss from a user’s perspective are very different in scope and nature. I initially attempted to combine them into one story, but in the end decided to treat them separately. My comments are selective, but I have tried to emphasise some common themes.

M. Vanden Abeele (Eurostat): Statistics and politics

This paper addresses a number of topics, including (1) guiding principles which should underlie official statistics as a public service, (2) the relationship between statisticians and politicians, (3) the ESS, (4) the need for strategic direction and prioritisation, and (5) the role of official statisticians in what he calls today’s “market for information”.

In relation to the principles that should underlie official statistics, it is difficult to argue with the ones mentioned by the author. He states that first the production of data should be governed by clear rules that ensure the results are reliable and independent. Furthermore, the statistics themselves should be useful, accessible and comprehensible, as well as comparable. Lastly, he argues they must be plausible, serving as a reference point for action.

The way the author puts official statistics into historical perspective works very well, as he cites the Sumerians, the Egyptians and of course Joseph and Mary, whose story also illustrates how far we have progressed in the field of census techniques. Maybe the author could even have gone back much further in history: at the time of Adam and Eve, somebody must have been counting apples, in order to know whether one was missing...

Much emphasis, perhaps too much, is put on the direct link between politicians and statisticians. For example, the role of analysts and forecasters is not considered. As most policy-makers receive and interpret data via these channels, this is perhaps a point that could have been usefully made. For example, the author could have borne this in mind when he argues that what might be of interest to researchers or econometricians may not be useful for decision-makers and hence should not receive the highest priority.

The author is correct about the immense importance of statistics in the political arena. The data underlying the implementation of the SGP represent one obvious example in the European context. Data reliability in this area is of the greatest importance for the functioning of the institutional framework of EMU.

The importance of Eurostat's role as an arbiter and guardian of data quality can not be overemphasised.

Another example of the considerable importance of statistics in the political arena is the HICP, which is the official series used to gauge monetary policy. Regrettably we cannot take its credibility for granted: since the introduction of euro banknotes and coin in 2002, consumers' perception of inflation is often at odds with reality as measured by the HICP. It is very important that consumers are convinced of the accuracy of the HICP series.

The author emphasises the essential issue of independence. However, he mentions that "recent examples show that there is never an absolute guarantee of independence." While it may be a regrettable fact of life that statisticians can never be completely independent, I nevertheless believe that it is extremely important that the principle of independence is stressed as much as possible and enshrined in law where feasible.

The author uses the term ESS in a wide sense to refer to Eurostat, the national statistical institutes, the national central banks and other specific bodies. However, I associate this term with the narrow concept of Eurostat and the NSIs, which also allows comparisons between the role of Eurostat in the ESS and the role of the ECB within the ESCB. We tend to characterise the role of the ECB as the "captain of the team". Of course, it must be admitted that the relationship of Eurostat vis-à-vis the NSIs is different to that of the ECB vis-à-vis the NCBs. But as in the Eurosystem, the distribution of tasks within the system needs to be developed.

Linked to the point made above concerning the role of Eurostat as the "captain" of the ESS, the paper stresses the need for **strategic thinking** and **prioritisation**, particularly in the face of tightening budget constraints. The paper also states that enlargement and the preparation of the multi-annual action programme (due to start in 2007) offer an excellent opportunity in this regard. Furthermore, the paper suggests that a statistical policy for the EU should be put before the ECOFIN Council and discussed regularly thereafter. While I welcome the emphasis on the need for clear strategic thinking and prioritisation with respect to European statistics, and while of course it is up to politicians to make choices, I would be somewhat more cautious about proposing an annual role for politicians to review priorities, as this could make the statistical policy agenda more prone to the vagaries of politics, which is the opposite of what is intended. The author neatly illustrates this risk with his examples of sudden user wishes in response to specific events such as BSE.

In relation to today's market for information, an issue also taken up by Giovannini, the paper also mentions the important point that with data being requested on an ever more timely basis, unofficial indicators may step in to fill the perceived gap if official statistics do not do so, but could potentially be based on unreliable methodologies. The ECB

recognises this issue, and would argue that it supports the argument that statisticians sometimes have to decide between providing data on a more timely basis or over a longer time-span, even if the data are not 100% perfect. There is a clear trade-off here. However, at the same time official statisticians should not provide these data if they believe they do not fulfil certain quality criteria.

E. Giovannini (OECD): The quality of international statistics: outstanding issues and proposals for improvement

The paper addresses the issue of quality of international statistics from the viewpoint of international organisations. Although this is a very complex issue, the author does much to reduce this complexity:

- He points out how quality is a multidimensional concept and comprises much more than the average user might immediately think of – which is mostly the aspect of accuracy;
- He explains that a meaningful quality framework comprises both the guidelines that govern statistical production and the procedures that govern quality evaluation;
- He stresses the fact that the challenge of ensuring quality in international statistics comprises more than the production of internationally comparable data; and
- He devises a useful road map whereby a system of international organisations can arrive at a common strategy for improving the overall quality of international statistics.

Overall, the paper does what it sets out to do, leaving very few unfulfilled expectations on the part of the reader. Indeed, the inclusion of additional issues or a deeper examination of the issues covered would have exceeded the scope of the paper. However, two aspects where the reader might have wanted more information could be mentioned.

The first aspect is that of the specific viewpoint of international organisations. What makes this viewpoint so special? The paper gives some indications at various points in the paper, but a more in-depth separate discussion early in the paper might have helped in terms of clarity. A few questions in this regard would be:

- Are international organisations such as the OECD and the ECB special disseminators of statistics in that their users are both external and internal? Does this imply a fundamentally different role compared with other data providers in devising quality frameworks?
- Can international organisations be conveniently grouped together under one heading, or do we need more differentiation between types of organisations according to the different degrees to which they produce, disseminate or use statistics? The author contrasts the quality dimensions of the IMF, Eurostat and the OECD, but there is no conclusive assessment of these differences with regard to their suitability for the respective institutions.

- Do the statistics disseminated by international organisations have similar user groups? If not, would the fact that different user groups attach different importance to the different dimensions of quality imply different quality frameworks for different organisations and a lower probability of devising a “system of international organisations”? How are, for instance, the specific user groups of the OECD reflected in the prioritisation of quality dimensions and the design of the quality framework?
- To what extent does the quality of national statistics received by international organisations remain “weakly exogenous” within a system of international organisations that includes institutions like Eurostat which have more direct influences on NSIs? What exactly is the experience of the OECD with the effectiveness of moral suasion to improve the quality of national statistics?

A second aspect that could have been elaborated in more detail is the issue of official versus unofficial data available on the market and the competition among data providers to attract the attention of the media.

- From the ECB’s point of view, the use of official statistics is clearly preferable; however, there may be areas where official statistics provide no data and some recourse to market data is unavoidable.
- An interesting question would of course be why official statistics are not directed into areas for which there is obviously demand among users.
- Whatever the reason, it is clear – as the OECD states – that surveys carried out by private institutes on a few individual and/or econometric estimates cannot be taken as indisputable facts, as is the case with official statistics.
- In this context, it is important to stress the trade-offs between timeliness and accuracy that the author mentions, which may differ between official data and market data.

Let me now reiterate a few points that I think are correctly stressed in the paper.

- The first relates to the importance of compiling internationally comparable data. This seems to be an area where international organisations have a comparative advantage in guiding quality improvements. The issue of productivity comparisons, for instance, has featured prominently in the policy debate in recent years. Over time, both users and producers should become increasingly interested in internationally comparable statistics and singular definitions with regard to the same issue. Looking at the maintenance of specific national definitions or the co-existence of different definitions in many countries, we have not been terribly successful so far in fostering this process.
- The author also rightly stresses the issue of timeliness. The ECB has greatly emphasised this quality dimension in the context of the EMU Action Plan, and is pleased to see improvements in this area over the past few years.

- A third point is the aspect of long time series needed for analytical, in particular econometric work. On this aspect the OECD seems to have a more user-oriented view than Eurostat, which seems to downplay the role of long time series as “only” relevant for modellers. Modelling is an important aspect for economic analysis, and it may be argued that the best foundation for a forward-looking perspective is a good, comprehensive knowledge of the economic history.
- The aspect of long time series has special relevance with regard to the construction of consistent series for economic entities such as the EU and the euro area, especially in view of changing geometries and the back data problem that this causes. These data are needed, and if they are not provided by official sources, then the users will inevitably construct them themselves. This represents another trade-off that we should all be aware of.

Finally, let me end on a personal note. When I started at the EMI, and stayed on at the ECB, it was essentially because of my interest in international issues. However, within the ECB I am regarded as a “domestic” economist. Similarly, we should realise that euro area data, which tend to be seen as international statistics, are essentially domestic data and should be recognised as such.

Discussion summary

The session dedicated to Theme V, “International statistics: quality and policy issues”, was chaired by **Steven Keuning** (Director General of Statistics at the ECB). The first contributor was **Michel Vanden Abeele** (Director General of Eurostat) with his paper on “Statistics and their use for monetary and economic policy-making”. The second contribution was a presentation by **Enrico Giovannini** (Chief Statistician of the OECD) entitled “The quality of international statistics: outstanding issues and proposals for improvement”. The discussant was **Gert Jan Hogeweg** (Director General of Economics at the ECB).

After the discussant’s contribution, the Chairman of the session opened the floor.

Evangelos Pantelidis (Bank of Greece) thanked the participants for their brilliant papers and remarked on the effects that globalisation had had on the statistical framework of balance of payments as discussed on the first day of the conference. He advocated a standardisation of the new methodology based on surveys, as otherwise the quality of the new balance of payments statistics might not be appropriate.

Mr Vanden Abeele addressed Mr Giovannini’s wish to improve international statistics, indicating the need to involve the political bodies that can make the appropriate provision of resources. He observed that developing a coherent statistical programme would not be fully efficient if it is not accompanied by planning and the development of a statistical policy. The inclusion of the statistical requirements in the decision-making process will reduce the risk that the ESS is confronted with infinite demands without having the necessary means and resources.

Mr Giovannini addressed the specificity of international organisations in the statistical field, as they are simultaneously users and producers of statistics, and looked at the statistics from an international perspective.

Concerning the differences among international organisations (quality being an exogenous variable for international organisations with no regulatory power, while it becomes endogenous for those with it), **Mr Giovannini** proposed to make them work as a system. This would help the statistical community to address similar needs and would channel the input of international organisations without regulatory power in an appropriate framework.

On the demand for long time series, **Mr Giovannini** called attention to all the work that has already been done by many economists in their own research. He said that it would be very useful to assess the quality of those series. In this respect, he announced that in the next Short-term Economic Statistics Working Group of the OECD, the creation of a small task force to compare methods used to build long time series will be discussed. The idea will be to propose a common methodology, leaving, of course, the decision on whether or not to publish such series up to each international organisation.

Statistics and their use by central banks: closing remarks

Eugenio Domingo Solans

It is my pleasure to participate in this 2nd ECB Conference on Statistics. As the Executive Board member of the European Central Bank (ECB) in charge of the DG-S, I should like to begin by thanking the organisers and all the participants in this conference for their valuable contributions.

With the end of my term as Executive Board member drawing near, allow me to use this opportunity to repeat some views that I have formed from my experience at the ECB.

Statistics independence

The business area in charge of statistics at a central bank – the DG-S, in the case of the ECB – should be responsible for the statistics relevant to all functions and tasks of the central bank. Besides monetary policy, which is certainly our main “customer”, the statistical department should also provide services to other areas within the central bank (financial stability and banking supervision, payment systems, international, etc.) and to users outside the central bank (market players, researchers, the general public).

The different functions and tasks of a central bank are clearly related, and the statistical information required for policy actions in these different areas has related or even common sources, requires similar methodological treatments and benefits from an integrated communication network.

This point concerns an important principle: the independence of statistics and statisticians from policy-makers. Independence and fairness in providing data must not only rely on the professionalism of the experts but should also be based on an appropriate organisational framework. Statistical information is so powerful that regardless of the good will of the people involved – which I take for granted – institutional arrangements should make it impossible to speculate on what, how much and when statistical information is disclosed. Standardisation is the specific name that fairness takes when it comes to considering the appropriate treatment that statistical information should receive to combat speculation. Independence does not, of course, mean isolation, lack of communication. Statisticians need a good understanding of and cooperation with other central bank business areas, market players, policy-makers and other users.

The business area in charge of statistics at a central bank should have an appropriate organisational level to fulfil the requirement of independence and to allow it to interact and cooperate on a level playing field with other business areas of the bank and with its counterparties at other institutions with responsibilities in the area of statistics, such as

the European Commission (i.e. Eurostat), the OECD, the IMF or other central banks. It was with this idea in mind that the Executive Board of the ECB decided that Statistics should be a directorate general of the ECB and not a directorate or a division as it was in the times of the EMI.

Minimising the reporting burden

Let me now turn to what I think is the main trade-off faced by statistics: the trade-off between the quality of statistical information and the reporting burden. As statisticians we are obliged to minimise the reporting burden, subject to the satisfaction of statistical needs. There are many ways to comply with this requirement: by assessing the merits and costs of any new statistical development, by setting clear priorities in the development of statistics, and by improving the coordination between the institutions with responsibilities in the area of statistics, etc. Let me elaborate on these points.

There is a balance to strike between the merits and costs of both new and already available statistics. Official statistics cost taxpayers money. Their production also requires resources from reporting agents. However, the unavailability of required statistics, their late provision, or insufficiently accurate statistics can have significant costs. It is therefore of the utmost importance to establish a procedure according to which the merits and costs for users, producers and reporting agents are weighed up when deciding whether or not to introduce new statistics. It is even more important to review the existing statistics from time to time and to decide whether to discontinue any of them. In general, I have the feeling that some of the statistics we have are not always in line with what our priorities should be.

While there are many national and international users, the most important users must be actively involved in this decision-making process. Users should have to justify their requirements for new statistics, to confirm their requirements for existing ones and to rank both. The production of official statistics which are only very occasionally used must be reconsidered. Users must also be made aware that new economic and financial statistics need several years of lead time before reliable results can be disseminated. Producers must develop and publish a more integrated set of statistics. Not every new policy issue requires new statistics designed to respond to a specific question. Moreover, producers must be given a higher degree of flexibility to respond to new and substantial political priorities, such as the single monetary policy. This also implies a sufficient degree of flexibility in human resource management. In the future, the development, cost-efficient compilation and dissemination of official statistics for a global economy will require not more staff but a large proportion of highly specialised staff.

The ECB has established an internal merit and cost procedure for deciding whether or not to introduce new financial statistics. Similarly, the EU ministers for economic and financial affairs support a re-balancing of the programme for the transmission of data to the European Union, involving users and producers of statistics. I am confident that these procedures will improve the availability of the statistics required and will phase out past priorities.

Need for better coordination

I shall now move to the need for a better coordination of economic statistics in a united Europe. The more we progress in European economic and monetary integration, the more we need to move the focus from national statistics to euro area statistics. From a monetary policy perspective, M3 or credit developments for the whole euro area, for example, are much more important than national M3 or credit figures – although they are not the only relevant information. From a policy perspective, the data from Eurostat's HICP are more relevant than the national measures of inflation and, to a certain extent, the same is true for other statistical data such as the balance of payments and the international investment position of economies.

Of course, I do not deny the relevance of measuring particular national characteristics both for policy and for information purposes. However, it is important to consider is the emphasis placed on European figures compared with national figures and the methodology used to obtain both European and national data. In some cases it would be advisable to obtain national breakdowns of the aggregate European data rather than harmonise and consolidate national data at European level.

In this context, the idea of the ESS and the development of the Principal European Economic Indicators, as well as the First for Europe Principle, are certainly crucial issues.

This leads me to the notion of having greater consistency between European and national data and, therefore, a better coordination between Eurostat, the Eurosystem and the national statistical offices.

Within the Eurosystem, institutional coordination is highly satisfactory, thanks to the outstanding work undertaken by the Statistics Committee.

This is perhaps the point at which I should stress the close cooperation between the DG-S of the ECB and Eurostat, which – although their statistical responsibilities extend to all areas of Community policy – give the highest priority to the statistical requirements of EMU. The division of responsibilities in statistical matters between the ECB and Eurostat works well, avoids any duplication of effort and helps to keep down the cost of producing European statistics. We greatly value the cooperation with Eurostat, without which it would be impossible to satisfy all the statistical needs of the ECB. The signature of the Memorandum of Understanding between Eurostat and the ECB a year ago was a milestone on our path towards closer cooperation.

In spite of many efforts, there are still many statistical areas for which enhanced coordination is needed between national and European statistical institutions in order to provide better information to policy-makers, markets and to the general public. As an example, I could mention the dichotomy between comparable, harmonised HICPs and national, non-harmonised CPIs, which is increasingly hard to justify.

Sooner rather than later, a further shift of emphasis, methodology and therefore resources from national statistics to European statistics will be needed in line with the

increasing economic and monetary integration in Europe. It is of the utmost importance that the long-term map of the European economic statistical system is drawn up now in order to ensure that we head in the right direction and avoid a false move, especially since the accession countries are obliged to prepare themselves to adopt euro area statistical standards well in advance.

Alignment with accounting standards

Let me now briefly address another important point: the alignment between accounting standards and statistical standards. The higher the demand for official statistics for a global economy, the more important international statistical standards become. A tighter alignment between the international accounting standards and the international statistical systems is very desirable. Despite some differences, there are clear advantages in ensuring that international statistical and accounting standards are harmonised to the fullest extent possible. Such harmonisation would enable the same source data to be used for several purposes, increasing the reliability of macroeconomic statistics and reducing the reporting burden for corporations. Similar consistency and efficiency gains are possible for the government sector. In this respect the DG-S of the ECB is participating in an international initiative to align government accounting practices with international statistical standards. In general, statisticians should be closely involved in discussions on accounting standards in order to avoid unnecessary discrepancies between these standards and statistical requirements.

Universities and researchers

My next topic relates to universities and researchers. Economic and financial statistics, and in particular national accounts, are an integral part of economic studies, just as business accounting is an integral part of business administration studies. It is astonishing that in Europe, at least, the number of graduates and post-graduates with an advanced education in economic and financial statistics is not only insufficient, but is actually decreasing. There is a need to better reflect the growing importance of official statistics for a global economy in university courses. Similarly, researchers may find it attractive to contribute to the further development and application of international statistical standards and their alignment with the international accounting rules, to a better presentation of statistics including the development of quality indicators or to a more efficient compilation of euro area data. The DG-S of the ECB would be happy to cooperate closely with a select group of interested researchers at the forefront of research into official statistics for a global economy.

Concluding remarks

Ladies and gentlemen, I conclude. The development of European economic and financial statistics has been remarkable in the past years. I once called it a “silent revolution”. I would even say that EMU itself would not be possible without the developments in the statistical field. However, this silent revolution must now continue at an international level. The ultimate goal would be to reach a similar degree of harmonisation among large economic areas as there is within them.

The ECB’s DG-S has made an effort to contribute to the development of European economic and financial statistics. Of course, at the ECB we are fully aware that our statistics are far from being perfect. We certainly do not have perfect statistics, we simply have good statistics, i.e. statistics which enable us to conduct our monetary policy properly and to provide the outside world with an acceptable level of information on monetary, banking and financial developments.

The ECB’s DG-S is prepared to move from our “good” statistical system to a “better” one. We have the basis and the means to do so in terms of human and technical resources, support and cooperation. Compared with the past, I have noticed that criticism regarding the quality of Eurosystem statistics has decreased. This could mean that we have made certain improvements, but it could also mean that we are now more prepared to agree on what I said six years ago, namely that we do not need a scalpel to cut a slice of bread – a sharp knife will do. And the statistical knife of the ECB is accurate enough.

Discussion summary

The keynote speech on “Statistics and their use by central banks” by **Eugenio Domingo Solans** (Member of the Executive Board of the ECB) was followed by a question- and- answer session chaired by **Steven Keuning** (Director General Statistics, ECB).

Aurel Schubert (Oesterreichische Nationalbank) referred to the silent revolution through which, in Mr Domingo’s words, statistics had undergone. Some contributions, and the conference itself, made it clear that statisticians should not always be silent. Statistics have to be communicated to the general public at large, something that Mr Domingo had been mentioned in Mr Domingo’s speech. Mr Schubert expressed an interest in knowing Mr Domingo’s thoughts and experience on how to communicate better not only with the general public at large, but also with analysts and with users outside the Eurosystem.

Mr Domingo made it clear that he applies the idea of being silent only to (statistical) revolutions. Typically, statisticians are discreet, but being discreet is different from being silent. He stressed the importance that of communication and dissemination have for statistical work. He pointed out that while producing nice and good, useful statistics is important, they also need to be effectively disseminated. Mr Domingo indicated that the DG-S at the ECB devotes special attention and efforts to improving the dissemination of statistics through the ECB’s website, with the aim of trying to reaching as many people as possible. Furthermore, Mr Domingo stated that disseminating statistics is a core function of statisticians and that it is a service that needs to be provided. In his view, all statistical players in the Eurosystem should make an effort to improve the quality of their statistical dissemination, using different channels, in order to reach as wide an audience as possible.

Michel Vanden Abeele (Director-General of Eurostat, European Commission) paid tribute to the excellent cooperation between Eurostat and DG-S at the ECB. He was grateful for, noting in particular Mr Domingo’s reference to the “Memorandum of Understanding on economic and financial statistics between the DG-S of the ECB and the Statistical Office of the European Communities (Eurostat)”, a formal agreement reached on top of the cooperation efforts, meetings and other agreements between both institutions. He noted that, like Mr Keuning, he had had the pleasure of working for a Spanish boss, which made things even easier. He, in Mr Vanden Abeele’s case, worked for one year with Pedro Solbes (Commissioner, European Commission), who has now taken up other responsibilities, and on whose behalf he wished Mr Domingo all the best for the future.

He thanked Mr Domingo for his cooperation and for the help received from him and the ECB, especially in the past year.

Mr Domingo thanked Mr Vanden Abeele and said that he would transmit his kind words to Mr Solbes. With him as the Commissioner, cooperation between the ECB's DG-S and Eurostat has been extremely fruitful. Mr Domingo was sure that this cooperation would continue with the new Commissioner. He stressed how much the ECB appreciates the work carried out by Eurostat.

Enrico Giovannini (Chief Statistician, OECD) stated that, in his view, the conference sent a strong signal about the ECB's commitment to contributing to the improvement of European statistics. He expressed great interest in the role of the ECB as a global player in the international context, in particular when it comes to the development of statistical standards and the improvement of the comparability of statistics for European countries, the euro area and other parts of the world. He emphasised the obvious interest that the OECD has in the ECB playing such a role, and asked Mr Domingo for his opinion on this matter.

Mr Domingo replied by pointing out that there is no doubt about the ECB's commitment to improve statistics. In that respect, he favoured widening the perspective and moving from just the euro area to encompass a much wider area, i.e. thinking in terms of the global economy. He mentioned that globalisation is a fact and that the ECB cannot restrict itself to merely the euro area or even the EU. In his opinion, all parties involved should try to develop common standards that apply to the global economy.

Mr Keuning closed the session by thanking Mr Domingo for his participation at the conference. Mr Domingo asked Mr Keuning to take note of the commitments that he had made on behalf of ECB's DG-S at the ECB, and expressed his support for future developments going along the lines suggested at the conference.

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Abbreviations

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| ACI | Financial Markets Association |
| AKK | Government Debt Management Agency |
| AEA | American Economic Association |
| BEA | Bureau of Economic Analysis |
| BIS | Bank for International Settlements |
| BLS | Bureau of Labor Statistics |
| b.o.p. | balance of payments |
| BPM | Balance of Payments Manual |
| BPM5 | Balance of Payments Manual, 5th edition (IMF, 1993) |
| BSI | Balance Sheet Items |
| CBSO | Central Balance Sheet Offices |
| CCSA | Committee on Co-ordination of Statistical Activities |
| CMFB | Committee on Monetary, Financial and Balance of Payments Statistics |
| CIRET | Centre for International Research on Economic Tendencies |
| CPI | Consumer Price Indices |
| CSDB | Centralised Securities Database |
| DG-ECFIN | DG Economic and Financial Affairs (European Commission) |
| DG-S | Directorate General Statistics (ECB) |
| DQAF | Data Quality Assurance Framework |
| ECB | European Central Bank |
| ECOFIN | Economic and Finance (Ministers) |
| ECON | Committee on Economic and Monetary Affairs |
| ECS | European Company Status |
| EDP | Excessive Deficit Procedure |
| EFRAG | European Financial Reporting Advisory Group |
| EMI | European Monetary Institute |
| EMU | Economic and Monetary Union |
| ESA | European System of Accounts |
| ESCB | European System of Central Banks |
| ESS | European Statistical System |
| EU | European Union |
| FASB | Financial Accounting Standards Board |
| FATS | Foreign Affiliated Trade Statistics |
| FDI | Foreign Direct Investment |
| FFA | Flow of Funds Accounts |
| FOMC | Federal Open Market Committee |
| FRB | Federal Reserve Board |
| FSI | Financial Soundness Indicators |
| GAAP | Generally Accepted Accounting Principles |
| GDDS | General Data Dissemination System |
| GDP | gross domestic product |
| HICP | Harmonised Index of Consumer Prices |
| IAS | International Accounting Standards |
| IASB | International Accounting Standards Board |
| ICT | Information and Communication Technology |

| | |
|--------|---|
| IFRS | International Financial Reporting Standards |
| IO | international organisations |
| i.i.p. | international investment position |
| IMF | International Monetary Fund |
| ISI | International Statistical Institute |
| MFI | Monetary Financial Institutions |
| MIR | MFI interest rate statistics |
| MNB | Magyar Nemzeti Bank |
| NAWWE | National Accounts World Wide Exchange |
| NBER | National Bureau of Economic Research |
| NCB | National Central Banks |
| NIPA | National Income and Product Accounts |
| NSI | National Statistical Institutes |
| OECD | Organisation for Economic Co-operation and Development |
| PEEI | Principal European Economic Indicators |
| QFOS | Quality Framework and Guidelines for OECD Statistics |
| R & D | Research and development |
| ROSC | Reports on the Observance of Standards and Codes |
| SBS | Structural Business Statistics |
| SCF | Survey of Consumer Finances |
| SDDS | Special Data Dissemination Standards |
| SDMX | Standards for Data and Metadata Exchange |
| SGP | Stability and Growth Pact |
| SNA | System of National Accounts |
| SPE | special purpose entity |
| SPF | Survey of Professional Forecasters |
| STEP | Short Term European Paper |
| TFHPSA | Task Force on the Harmonization of Public Sector Accounting |
| UN | United Nations |
| UNSD | United Nations Statistics Division |
| XML | Extensible Markup Language |

