IRVING FISHER COMMITTEE
ON CENTRAL-BANK STATISTICS

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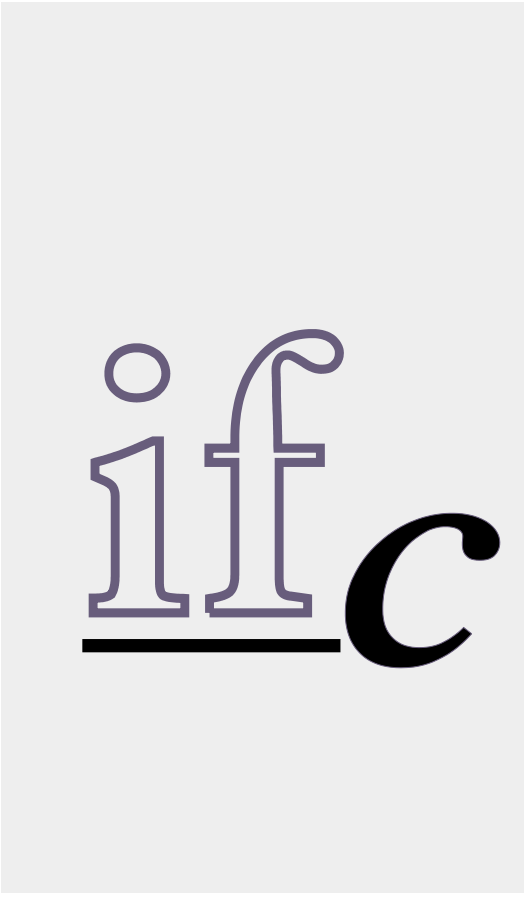

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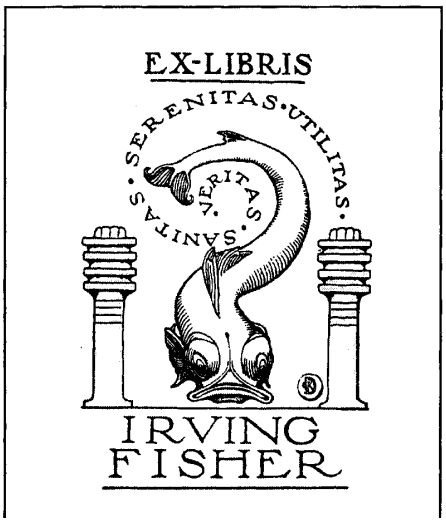
IFC Conference in Basle

Fisher's "Short Stories on Wealth"



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on Central-Bank Statistics

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What is the IFC?

The Irving Fisher Committee (IFC) is a forum for discussion on statistical issues that are of interest to central banks. The Committee, which derives its name from the great American economist and statistician Irving Fisher, is part of the International Statistical Institute (ISI).

Objectives

By providing a forum for discussion, the IFC aims at:

- participating in the discussion on adapting statistical systems to changing requirements;
- promoting the adoption of international statistical standards and methodologies;
- sharing experience on the development of new statistics and the implementation of new methods of collecting, compiling and disseminating statistical information;
- exchanging views between central bankers and academics on statistical methods and techniques;
- facilitating personal contacts between central-bank statisticians.

Strategy

To achieve its objectives, the IFC organizes conferences, which take place both inside and outside the framework of the ISI's biennial Sessions. The first "outside" conference – on the challenges to central bank statistical activities – is scheduled for summer 2002 at the Bank for International Settlements in Basle.

The conferences are supported by the publication of the IFC Bulletin, which contains the conference papers and other articles.

The IFC has a Web site (http://www.ifcommittee.org), on which an electronic version of the IFC Bulletin can be found.

What kind of topics are discussed?

Any kind of theoretical or practical statistical subject that has a relationship with the activities of central banks can be considered for discussion. The subjects will mostly be in the area of monetary, financial and balance of payments statistics.

Membership and Structure

In principle, the IFC has no personal members. Central banks and other institutions interested in statistical systems and statistical techniques that have a bearing on the collection, compilation and distribution of central-bank statistics can become members by simple application. So far, more than 60 central banks and a number of other institutions have applied for membership. Members are entitled to appoint delegates to participate in the IFC's activities and to contribute to its conferences by presenting papers.

The prime decision-taking body is the assembly of members' delegates at the "administrative meetings" that are organized during the conferences. Here the IFC's strategy is determined. At these meetings an Executive Body is elected, which is charged with the committee's day-to-day business and with the preparation of the "administrative meetings". Likewise, at the "administrative meetings" topics are proposed for future conferences, and a Programme Committee is elected to choose from these topics and to organize the conferences.

A Short History

The Irving Fisher Committee (IFC) was established on the initiative of a number of central banks statisticians who were attending the ISI Corporate Members Meeting at the 1995 ISI Session in Beijing.

In 1997, during the 51st ISI Sessions in Istanbul, the IFC held its inaugural meeting. At the "administrative meeting" held during that Session an Executive Body was established and it was decided to start publishing the IFC Bulletin devoted to the activities of the IFC. Two years later, at the 52nd ISI Session in Helsinki, the IFC's presence was further strengthened. Here a new Executive Body was elected and a Programme Committee was instituted.

In 2001, at the 53rd ISI Session in Seoul, the IFC presented a programme comprising an invited papers meeting on "Financial Stability Statistics" and several contributed papers meetings, at which more than 20 papers were presented. Each of these meetings was attended by 30-60 persons.

IFC Bulletin

The IFC Bulletin is the official periodical of the Irving Fisher Committee. The Bulletin contains articles and the text of papers presented within the framework of the ISI Conferences. It also sees as its task the recording of interesting events concerning Fisher's life. Institutions and individuals active in the field of central-bank statistics can subscribe to the Bulletin free of charge.

Basle and Berlin

Preparations are going on for two conferences:

Independent IFC Conference, 20-22 August 2002, Basle
"Challenges to Central Bank Statistical Activities"

IFC Conference within the framework of the 54th ISI Session, 13-20 August 2003, Berlin.

Independent IFC Conference, 2002

"Challenges to Central Bank Statistical Activities"

(with the co-operation of the BIS)

Programme

An updated, though still preliminary, programme of this conference is to be found on pages 8-11.

In recent months, major attention has been given to selecting and inviting chairpersons. With the effective assistance of the BIS, this procedure was recently concluded successfully: prominent experts from different continents have committed themselves to give guidance to the various sessions and workshops. Meanwhile, some 120 persons from a great number of countries have registered their interest in attending the conference; more than a third of them have notified to have the intention of presenting a paper or giving an oral presentation. This means that the number of participants is rapidly approaching the limit set by the capacity of the conference hall. A special reason for satisfaction is the world-wide attendance.

Meanwhile, registered participants have received detailed information from the conference secretariat.

During the IFC Conference , an Administrative Meeting (General Assembly) of the Irving Fisher Committee will be held. During this meeting administrative matters relating to the future of the IFC will be discussed (eg: the IFC sessions within the framework of the ISI Conference in Berlin (2003), the status of the IFC within the ISI, the composition of the IFC Executive Body and the IFC Programme Committee, the setting up of an active network amongst central bank statistical experts). The IFC Secretary would be pleased to receive any suggestions on additional topics to be discussed. Further information on this meeting will be published in due course on the IFC web site.

Publication of papers in the IFC Bulletin and on the IFC Web site

Authors are requested to send their papers as soon as possible to the conference secretariat (paul.van-den-bergh@bis.org). **Abstracts** of papers and outlines of presentations are published in the present issue of the IFC Bulletin and are also accessible on the IFC web site. **Complete versions of papers** will be posted on the web site, and will be reprinted in a special issue of the IFC Bulletin to be published after the conference.

IFC Conference Berlin, 2003

Programme

The Executive Body and the IFC Programme Committee have also started preparations to ensure a strong presence of the IFC at the 54th ISI Session in Berlin to be held from 13-20 August 2003. The IFC has been assigned an Invited Papers Meeting on:

"The use of hedonic methods for quality-adjusted prices" *(IPM52)*.

Furthermore, central bankers should take an interest in the following two Invited Papers Meetings:

"Use of statistics in developing monetary policy" *(IPM85)*

and

"Use of statistics in the financial markets" *(IPM80).*

The IFC will be involved in the organisation of the first of these two meetings. As regards any contributions to the second meeting, the IFC will make certain that its own identity can be preserved.

Contributed Papers Meetings will be organised on the following topics:

"Trade in services - a challenge to statisticians"
"The sectoral and geographical allocation of negotiable instruments holdership"
"The use of surveys in financial statistics"

At the moment that this Bulletin went to press, the time-schedule of the Berlin Conference was not yet available. We advise you to regularly visit the web site of the conference (www.isi-2003.de) to acquire the necessary information.

Call for papers

Any persons who want to contribute to the Berlin Conference by presenting a paper should inform the Secretary of the IFC as soon as possible. (Please use the enclosed form.)

In accordance with the rules of the ISI, papers should not exceed 4 pages (invited papers) or 2 pages (contributed papers). All papers will be published as part of the ISI's Proceedings.

Publication of papers in IFC Bulletin and on the IFC Web site

Papers presented on behalf of the IFC qualify for publication in the IFC Bulletin. However, authors are encouraged to submit a more comprehensive version of their papers, which will be published in the IFC Bulletin instead of the restricted official ISI version.

Likewise, the IFC would be pleased to receive abstracts of the papers – comprising 150-300 words – at an early stage. These abstracts will be published in the IFC Bulletin at the end of 2002 or in the first half of 2003.

For publication in the IFC Bulletin, final versions of papers and abstracts should be sent, preferably by e-mail, to the Editor of the IFC Bulletin (wucwo@wxs.nl):

- Abstracts of papers must be made available not later than 15 November 2002.
- Final versions of papers must be put at the Editor's disposal immediately after the conference, at the latest.

Papers contributed to the IFC sessions will also be published on the IFC web site.

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Challenges to Central Bank Statistical Activities

Preliminary Programme

Tuesday, 20 August 2002

13:30 **Welcoming and Opening Remarks**

14:00 **Session 1: *Central Bank Statistics and Monetary Stability***

Chair: Jack Selody, Head of the Monetary and Financial Analysis Department, Bank of Canada
Secretary: Gert Schnabel (BIS)

Papers:
- Banco de Mexico's experience in measuring the risk position in Mexican pesos of foreign investors and its relevance for monetary policy *(Samuel Alfaro*)
- Transaction technology innovation and overnight deposits demand in Italy (*Francesco Columba)*
- Euro-conversion in international data banks (*Henk Lub)*
- The value of discrepancies *(Grazia Marchese)*
- Financial Accounts for the Euro Area (*Reimund Mink)*
- International Investment Position: Measurement aspects; usefulness for monetary policy and financial stability issues (*Françoise Drumetz, Frédéric Lambert and Laurent Paul)*
- Statistical implications of the chosen monetary policy strategy: the Czech case (*Petr Vojtisek)*
- Gathering predictive information for implementing inflation targeting: the case of Peru (*Richard Webb)*

16:30 **Administrative meeting (General Assembly) of the IFC**

18:00 **Reception**

Wednesday, 21 August 2002

09:00 **Keynote address**

by :
A D Crockett, General Manager, BIS or
W R White, Economic Adviser and Head of the Monetary and Economic Department, BIS

09:45 **Session 2: *Central Bank Statistics and Financial Stability***

Chair: Paul Tucker, Deputy Director, Financial Stability, Bank of England
Secretary: Blaise Gadanecz (BIS)

Papers:
- The use of central registers for statistical activities in the light of financial stability (*Orlando Caliço)*
- The use of macro-prudential indicators – the case of Costa Rica (*William Calvo)*
- Compiling financial stability indicators from National Accounts and prudential data: a central bank's practical experience *(Simon Debbage)*
- Early warning indicators of financial crises (*John Hawkins)*
- The use of supervisory or other micro-prudential information *(Rangachary Ravikumar)*

14:00 **Parallel workshop A: *Constraints on Central Bank Statistical Activities***

Chair: Kenneth Coates, Director CEMLA
Secretary: Karsten von Kleist (BIS)

Papers:
- Selective editing as a tool to increase efficiency in survey data processing – An application to the Bank of Italy's Business Survey on Industrial Firms *(Paola Battipaglia)*
- E-standards for statistical data and metadata exchange *(Gabriele Becker and Stuart Feder)*
- The establishment of balance of payments statistics in the CBBH: Current source data for BoP purposes / Proposal for the development of BoP statistics (*Snežana Janjić and Danica Lučić*)
- Central bank data challenges: an Antipodean perspective *(Clive Thorp)*

Presentation:
- Sample survey design and maintenance: a new challenge to central bank statistical activities? *(Paola Battipaglia)*

Parallel workshop B: *Cooperation with National Statistical Offices*

Chair: Bart Meganck
Secretary: Gert Schnabel (BIS)

Papers:
- The Central Bank of Tunesia statistics: methodology and compilation *(Rekaya Ben Youssef)*
- The Centralised Securities Database (CSDB) *(Jean-Marc Israël)*
- Co-operation between central bank and national statistics office as a prerequisite of statistics development in transitional economies (Russia as a Case Study) *(Ekaterina Prokounina)*
- Co-operation with national statistical offices: achieving international comparability in general economic and financial statistics *(Richard Walton and Andrew Kanutin)*

Presentation:
- The role of Eurostat in the exchange of statistical knowledge between statistical offices and central banks: the CMFB experience *(Bart Meganck)*

16:30 **Session 3: *Improving the Use(fulness) of Central Bank Statistics (panel discussion)***

Chair: Carol Carson, IMF
Secretary: Karsten von Kleist (BIS)

19:30 **Official dinner**

Thursday, 22 August 2002

09:00 **Session 4:** ***Developments with respect to Statistical Analysis at Central Banks***

Chair: Richard D Porter, Deputy Associate Director, Division of Monetary Affairs, Board of Governors of the Federal Reserve System
Secretary: Karsten von Kleist (BIS)

Papers:
- Forecasts of economic indicators for monetary policy in India: an assessment *(Radha Binod Barman)*
- The NAIRU in Israel: an unobserved components approach *(Tanya Suchoy and Amit Friedman)*
- Economic forecasting in emerging economies *(John Hawkins and Marc Klau)*
- Efficiency of banks in Croatia: a DEA approach *(Igor Jemric and Boris Vujcic)*
- Tramo Seats Quality Control *(Augustin Maravall)*
- Forecasting Swiss inflation with a structural macromodel: the role of technical progress and the "mortgage rate – housing rent" link *(Peter Stalder)*

11:30 **Session 5:** ***Central Bank Cooperation on Statistical Issues (panel discussion)***

Chair: Paul Van den Bergh, Head of Information, Statistics and Administration, Monetary and Economic Department, BIS
Secretary: Gert Schnabel (BIS)

Papers:
- Statistical preparation and harmonisation for the West African Central Bank: Main difficulties *(Richard Walton)*

14:00 **Parallel workshop C:** ***Issues relating to Balance of Payments Compiling***

Chair: François Renard, Bank of France
Secretary: Blaise Gadanecz (BIS)

Papers:
- Changeover from settlement reporting to direct BoP reporting – Implications for Danish financial statistics *(Jens Hald)*
- How to survey the enterprise sector to fulfil the ECB BoP statistics requirements *(Jorma Hilpinen and Heikki Hella)*
- Use of a harmonised model for BOP reporting by multinationals *(Peter Hofman)*
- Setting up an alternative data collection system for the balance of payments *(Evelyn R Santos)*

Presentations:
- Organization of data collection process in a new environment for balance of payment statistics *(Janez Fabijan)*
- Liberalisation and the challenges for balance of payments compilation *(Frederica Robinson)*

Parallel workshop D: ***Monetary and Financial Statistics and International Accounting Standards***

Chair: Michel Stubbe (ECB)
Secretary: Gert Schnabel (BIS)

Papers:
- Eurostat activities on International Accounting Standards. Special focus on Balance of Payments *(Elena Caprioli)*

Parallel workshop E: ***Deriving Information from Financial Market Data***

Chair: Leon Taub, Senior Vice President, Statistics Function, Research and Market Analysis Group, Federal Reserve Bank of New York
Secretary: Blaise Gadanecz (BIS)

Papers:
- Do syndicated credits anticipate BIS consolidated banking data? *(Blaise Gadanecz and Karsten von Kleist)*
- Incorporating equity market information into supervisory monitoring models *(John Krainer and Jose A. Lopez)*
- The use and availability of financial markets statistics for the euro area *(Per Nymand-Andersen and Michel Stubbe)*
- Extracting information from currency option prices: some preliminary results for Hong Kong *(Ip-Wing Yu)*

Presentation:
- Using foreign currency and BOP data for analyzing FX market developments Analytical framework and implementation to Israel *(Yair Haim)*

16:30 **Concluding Remarks**

by:
Marius van Nieuwkerk, Deputy Director, Directorate Monetary Affairs, De Nederlandsche Bank
and
Paul Van den Bergh, Head of Information, Statistics and Administration, Monetary and Economic Department, BIS.

Challenges to Central Bank Statistical Activities

(Reprint of information contained in the Brochure announcing the Conference)

Taking up the Challenge…

The collection, processing, analysis and dissemination of economic and financial statistics is an important function of central banks around the world. These tasks have gained in importance in recent years as a result of:

- requirements for improved data quality to support monetary policy decisions;
- the need to develop indicators and measures in the context of central bank activities relating to financial stability;
- requirements for improved transparency of central bank activities, including those in the statistical area;
- international efforts to promote financial stability through enhanced disclosure by public and private sector organisations;
- international initiatives to harmonise statistical methodologies;
- increased regional and global cooperation with an associated need to exchange information with partners in other parts of the world;
- changes in technology, particularly the Internet, which have resulted in expectations of better and more adequate information on the part of the domestic and international users.

… by Sharing Experience

As a result, the central banking community globally is facing a number of challenges to improve and adapt its statistical activities. A good understanding of the nature and severity of these challenges is a prerequisite for the formulation of an appropriate strategy to adapt business objectives and work plans in individual central banks. Sharing experiences with other central banks and with regional and international organisations, as well as improving the communication with users of statistics, with the academic world and with market participants should allow central banks to achieve a better understanding of the challenges that lie ahead.

The Initiative of the IFC

The Irving Fisher Committee on Central Bank Statistics (IFC), set up in 1997 within the framework of the International Statistical Institute, has become a significant platform for central bank statistical experts to meet and discuss issues of common concern. More than 60 central banks from all regions of the world have signed up to become members of the IFC. The Committee has organised a number of sessions as part of the ISI biennial conferences, most recently in Seoul 2001, and publishes a regular bulletin. The Committee is now organising for the first time a conference independently from the biennial ISI conferences. Recognising the value of the IFC and the importance of the issues this committee is addressing, the Bank for International Settlements has offered to co-sponsor this independent conference and to host it in Basle from 20-22 August 2002.

The programme and the themes of the various sessions have deliberately been kept broad. Indeed the overall objective of the conference is not to enter into technical issues but to allow a broad exchange of views amongst participating central banks with the aim of collectively identifying the major challenges that central banks face with respect to their statistical activities. The conference should also indicate which key statistical areas could benefit from strengthened regional or international central bank cooperation and what role the IFC could play in this respect in the future. The active participation of central banks from developed and emerging market countries should contribute to a truly global discussion.

Who Should Participate?

The IFC and BIS hope to attract to the conference senior representatives of the various areas in central banks concerned with the issues mentioned above. These could come from the Research and Statistics departments (e.g. those involved in monetary statistics and monetary analysis), the International department (e.g. those involved with Balance of Payment Statistics), the departments involved with Financial Markets or Financial Stability, the departments of Banking Supervision or Information Technology (e.g. those involved in data exchange issues). The organisers are also seeking to associate selected representatives of national statistical institutes, the academic world, market participants and the financial press with the event and would welcome suggestions in this respect.

How to Contribute?

There are various ways in which participants can contribute to the conference. Firstly, by submitting a paper that relates to one or more themes proposed for the different sessions or workshops. The programme indicates a number of topics that could be addressed but there may be others that might be relevant. It should be noted that papers presented or published elsewhere will be accepted. Secondly, participants can volunteer to share their views at the conference by making an oral presentation in one of the sessions or workshops. This can be based on a submitted paper or, more generally, on experiences with ongoing work in central banks in various statistical areas. Thirdly, participants can engage actively in the discussions in the plenary sessions or workshops. The organisers will develop the final programme on the basis of the proposed contributions and through contacts with registered participants. The aim will be to ensure contributions from different geographical areas around the world.

Practical Information

Thanks to the kind support of the Bank for International Settlements, participation in the Conference is free of charge. Participants are supposed to arrange their accommodation. Hotel and tourist information is available on the following web sites: www.baseltourismus.ch and www.swisshotels.ch. The BIS will assist with the logistics, including hotel reservations. However, costs relating to travel and accommodation will be borne by participants themselves. As the tourist infrastructure of Basle and Switzerland is excellent, no special programme will be organised for accompanying persons. It should be noted that the working language of the conference will be English.

SESSION 1

Central Bank Statistics and Monetary Stability

Banco de Mexico's experience in measuring the risk position in Mexican pesos of foreign investors and its relevance for monetary policy

Samuel Alfarol (Bank of Mexico)

Ever since Mexico liberalized its financial sector, in 1990, the activity of foreign investors has played a significant role in the foreign exchange market. Given the importance of the actual and prospective exchange rate behavior in attaining Banco de Mexico's objectives, there has been a concern to maintain under a detailed surveillance the risk positions in Mexican pesos taken by foreigners. Up until the 1995 crisis, this surveillance process was facilitated by the regulatory framework that restricted some investment opportunities to market participants. The predetermined exchange rate regime that prevailed until December, 1994 also provided the Central Bank with timely information on the foreign exchange transactions conducted by foreign residents.

After the 1995 crisis it has been more difficult to obtain reliable data on foreign investors' risk positions in Mexican pesos. This difficulty arises because there are no regulatory constraints for market participants to conduct operations in specific instruments, so that it has been complicated to follow the strategies taken by foreign investors as they have been operating with new instruments, mainly derivatives. The free floating exchange regime has also implied that there are no incentives for market makers to convey information to the Central Bank on their clients' foreign exchange operations, in view of the fact that direct interventions are uncommon.

The objective of the paper is to present the methodologies that have been assembled by Banco de Mexico during the last ten years to measure foreign investors' risk position in Mexican pesos. These methodologies are applied to analyze the behavior of foreign investors under different events such as: the 1994 speculative attack against the Mexican peso predetermined exchange rate regime, the 1997-1999 staggered crisis in South-East Asia, Russia and Brazil, and the recent improvement of Mexico's risk evaluation by the credit rating agencies. Special attention is focused on the limitations of these statistics as indicators of the factors that determine the financial markets' trends.

Transaction technology innovation and overnight deposits demand in Italy

Francesco Columba (Banca d'Italia)

The objective of this paper is to analyse the effect of transaction technology innovation on the demand for overnight deposits in Italy. The rapid diffusion of ATM and POS during the last decade may have contributed to change money demand patterns, so standard time series analysis not accounting for these developments may suffer from an omitted variable problem. Using data on 95 Italian provinces from 1991 to 1999, I find that transactions technology innovation has a positive effect on overnight deposits. Accounting for that in the regressions, estimated income elasticity is reduced.

Euro-conversion in international data banks

Henk Lub (De Nederlandsche Bank)

The paper deals with two issues:

1. The pitfalls of the euro-conversion. The introduction of the euro as a common currency in the euro area leads to problems with respect to the presentation of economic time series. Statisticians should explain to users of statistics how they have solved these problems and they should provide guidance on the use of statistics. The paper makes a distinction between a *temporal* aspect: how to avoid a break in time series due to the introduction of a new unit of account, and a *geographical* aspect: this relates to the comparability of data between countries. A special case of the latter is the construction of aggregates for the euro area. National accounts data are used as an illustration.

2. Euro-conversion in international data banks. Unfortunately, international data banks have chosen different solutions to the euro-conversion. The paper critically reviews how Eurostat, ECB, BIS, OECD and IMF have dealt with the euro-conversion. In particular, it assesses the quality of the information to users of statistics. It points to mistakes and makes recommendations with respect to the presentation of data.

The value of discrepancies

Grazia Marchese (Banca d'Italia)

The SNA93 and its European derivation – the ESA95 Manual – place the theoretical equivalence between the institutional sectors' capital and financial account balancing items at the centre of the system of national accounts. However, as the ESA95 Manual itself acknowledges, in practice a discrepancy will usually be found between the two, because they are calculated on the basis of different source data. The paper attempts a review of the amount of discrepancies that appear in the EU countries' national accounts by sector, with the aim of discussing whether is it appropriate to force capital and financial balances to be equal through the use of statistical methods to spread discrepancies, or rather to show the amount of discrepancies – which represent useful indicators of the

overall consistency and soundness of methods and sources used to compute the various components of the system – and, at the same time, progressively refine input data and methodologies in order to reduce observed discrepancies to acceptable amounts. The differences between capital and financial accounts balancing items by sector for the major EU countries are represented and analysed under several perspectives, by looking at their amount before and after the implementation of the ESA95 Manual, comparing cross-country their overall magnitude, evaluating the degree of distortion to sectors' accounts for the whole set of countries and over time. The conclusion is that ESA95 accounts by sector, while showing signs of better consistency over the most recent years, still have a long way to go to reach full maturity, with improvements to be hoped for especially in the split between Households' and Non-financial corporations' transactions and in the quality of Financial corporations' and Rest of the world's accounts. It is argued that, under the present circumstances, the discrepancies between capital and financial accounts have an informative value which could be very useful in fostering a genuine progress in methodologies: hence they should not be sacrificed to the attractiveness of a purely cosmetic equivalence of the two balancing items.

Financial accounts for the euro area

Reimund Mink (ECB)

Quarterly financial accounts for the euro area follow closely an integrated approach as reflected in the System of National Accounts (SNA 93) and in the European system of national and regional accounts in the Community (ESA 95).[1] Drawing on relevant euro area statistics – money and banking, balance of payments, securities issues – and, so far as possible, on national financial accounts, including data of general government, the ECB is preparing to compile quarterly financial accounts covering the euro area, to complement monetary analysis and economic research. The time series derived from this framework provide a consistent system for recording financial relationships among institutional sectors.

Quarterly financial accounts for the euro area cover transaction accounts and financial balance sheets. Transactions keep track of the financial instruments as they move from those sectors that serve as financing sources, directly or through financial intermediaries, to those sectors that invest them in financial assets. Financial balance sheets provide an overview of the stocks of financial assets held and of the liabilities incurred by the institutional sectors and the rest of the world at the end of each quarter.

International Investment Position: Measurement aspects; usefulness for monetary policy and financial stability issues

Françoise Drumetz, Frédéric Lambert and Laurent Paul (Banque de France)

The international investment position (IIP) is the balance sheet of a country's external assets and liabilities. It can be used to measure the degree of financial openness of a country and to provide in-

1 *Commission of the European Communities – Eurostat, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank (1993): System of National Accounts 1993 (SNA 93), Brussels, Luxembourg, New York, Paris, Washington, D.C. and Council Regulation (EC) No 2223/96 of June 1996 on the European system of national and regional accounts in the Community (ESA95).*

dications on the sustainability of its external debt. As such it is a helpful tool to monitor financial stability. Whereas studies on IIP are fairly new, we review some mechanisms through which it can impact variables of interest for monetary policy, such as interest rates and exchange rates in a medium to long-term perspective. These variables may in turn explain shifts in the external balance sheet, due in particular to revaluation changes, that may lead to wealth effects at a macroeconomic level. As an illustration we present case studies where IIP analysis helps to better understand economic developments. We conclude by suggesting ways of improvement for the compilation of external balance sheets statistics.

Statistical implications of the chosen monetary policy strategy: the Czech case

Petr Vojtisek (Czech National Bank)

The Czech National Bank (CNB) had maintained a kind of monetary targeting strategy from the beginning of the transitional period. In spite of the fact that some direct instruments were used at the beginning of the nineties, there were a fixed exchange rate regime and monetary aggregate targets in the strategy for several years. In the mid-nineties a wide range of liberalisation of capital flows both inwards and outwards were introduced. These three features of the monetary policy became incompatible. The exchange rate regime was eased to a fluctuation band and in May 1997 after a period of monetary turbulence the maintenance of any commitment concerning the level of the exchange rate was completely abolished. The loss of the nominal anchor was one drawback of this decision. Therefore the CNB decided to change its monetary policy regime and at the start of 1998 it switched to inflation targeting. This strategy has continued to be used since that time. In order to meet its inflation target the central bank exercises its monetary policy through its major instrument – the Repo rate.

Gathering predictive information for implementing inflation targeting: the case of Peru

Richard Webb (Central Reserve Bank of Peru)

1. Peru has adopted an inflation targeting regime with an inflation target of 2.5 percent (within a two-percent band) since January 2002. Peru is the first partially dollarized country adopting this framework, and it is the first case in which inflation targeting is gearing to avoid deflation. Under the inflation targeting scheme, monetary policy decisions will not longer rely on an intermediate target of base money growth, but on a set of indicators of future inflation.
2. The new strategy has created a need for new and improved statistics:
   a. The inflation target is defined as a range of changes in the headline CPI, in order to accommodate the effects of supply or terms of trade shocks in the price index. However, since these shocks can exceed the rates contemplated in the target range, the Central Bank elaborates and publishes a measure of core inflation.
   b. In order to track expectations of inflation and other macroeconomic variables, the Bank began to produce and release surveys carried out among analysts of the private sector, and treasurers of financial institutions.
   c. An important component of the forecasting process is the development of a set of indicators of economic activity, disposable income and domestic demand. Special attention is paid to the seasonal adjustment process of the variables and to the attainment of their trends. These

calculations include not only information of output by sectors, but also indicators of domestic demand and disposable income, constructed using data of international trade, terms of trade, and public sector expenditure, among other.

d. Partial dollarization of financial assets and liabilities explains additional transmission mechanisms of the monetary policy. For example, the balance-sheet effect is referred to the effect of exchange rate movements on aggregate expenditure. This feature gives a different view of the pass-through effect on inflation from exchange rate movements.

e. Other financial data used in the forecast process are mainly yield curves in the domestic market, spreads of the sovereign debt, and implicit exchange rate expectations in the forward markets.

3. Implementing an inflation targeting framework in Peru is having a positive gain in the preparation of statistics and on the policy analysis based on this data.

SESSION 2

Central Bank Statistics and Financial Stability

The use of central registers for statistical activities in the light of financial stability

Orlando Caliço (Bank of Portugal)

Over the past few years the role of Central Banks has been focused on the attention of macroeconomic determinants to the stability of the banking system. The changes in the environment and the vulnerability to structural changes in the financial markets are some of the factors that support this kind of interest. This presentation intends to be a contribution to the role of the statistical information and especially of the credit registers as micro-prudential information to the macro-prudential analyses.

It will be presented in four main sections. The first section deals with the relevance of macroeconomic information as an instrument to support measures in the context of financial stability.

The legal framework of credit registers and its integration in the statistical system, as well as the value of the data produced, that should be based on quality principles, is presented in the second section.

The third section shows the present activity of the credit registers in Portugal and gives some data about the importance of this kind of activity.

We conclude examining the possible evolution of the central registers under the necessity of interaction between the banking system and the financial and real spheres of the economy.

The use of macro-prudential indicators the case of Costa Rica

William Calvo (Central Bank of Costa Rica)

Microeconomic and macroeconomic aspects of financial stability are receiving special attention nationally and internationally. Central Banks and governments are paying increasing attention to monitoring the health and efficiency of financial institutions and markets and macroeconomic developments that pose potential risks to financial stability because their soundness is an important key for strong macroeconomic performance and effective monetary policy.

Macroprudential analysis is a methodological tool that helps to quantify and qualify the soundness and vulnerabilities of financial systems. The methodology develops a group of indicators or variables that are relevant for assessing financial soundness.

Before the 80s the Costa Rican banking industry was dominated by four state banks and de private banking was practically nonexistent. During the first years of the 80 decade, it was an increase in the number of private banks in the country. These banks appear with a clear orientation toward the services, specially those relate with the international trade and lend to some activities like trade, services and consumption, activities which the state banks consider unimportant.

The sharp increase in the private banks share is evident if you compare the number of banks in operation: in 1980 there were five private banks and in 2002 there are sixteen. These banks have now the 40% of the total assets and the 50% of the total credit.

Following a rapid liberalization of the capital account in 1992, Costa Rica has been following a process of financial sector reform. These reforms have involved some reductions in the preferences enjoyed by the state-owned banks, operational strengthening of the state banks, improvement in the organization framework for supervision of financial institutions and markets, and strengthening of prudential regulations and supervisory procedures.

The develops of the financial systems in Costa Rica has implicated the necessity to monitor very carefully the health and efficiency of the financial institutions. On that sense in the last years the Superintendency for Banks and Financial Institutions in Costa Rica (SUGEF) has adopted the CAMELS methodology to analyze the banks behavior and their vulnerabilities. Corresponding to macro prudential indicators, the Central Bank of Costa Rica has a group of macroeconomic data to help set the analysis in the context of broader economic and financial trends.

The purpose of this paper is describing the use of the CAMELS methodology in Costa Rica and makes a short description of the indicators used by SUGEF. Also the paper describes the set of macroprudential indicators of the Central Bank of Costa Rica and their correspondent trend in the last three years..

Compiling financial stability indicators from national accounts and prudential data: a central bank's practical experience

Simon Debbage (Bank of England)

The international financial crises of the 1990s provided a catalyst for further and more detailed research on the potential threats to global financial stability. Within the field of statistics, this led to an increased demand for a wider range of data to aid the assessment of financial stability risks, and a desire to further develop the statistical frameworks within which the data are analysed.

There have been numerous international initiatives to expand the compilation of financial stability statistics, and to promote the dissemination of these data in an internationally recognised framework. The Bank of England has contributed to these efforts to develop statistics on an international level, and has applied some of the concepts and measures to the use of statistics for its analysis of the stability of the UK financial system.

This paper describes some of the experiences of the Bank in using data primarily designed for national accounts or prudential supervisory purposes in the assessment of threats to financial stability. It discusses the practical experiences of the Bank in developing statistics for financial stability; the uses to which these data have been applied within the Bank's analytical areas; and the limitations and potential pitfalls of datasets derived from national accounts or prudential returns.

Early warning indicators of financial crises

John Hawkins (BIS)

Recent financial crises have led to increased interest in constructing early warning signals for financial crises. A survey of the literature suggests crises are usually preceded by overvalued exchange rates, inadequate international reserves, recessions and excessive credit growth, but there are difficulties in the statistical measurement of all these factors. Particularly since the Asian crisis, there has been more attention paid to short-term external debt as a source of vulnerability and BIS international banking data is very useful in assessing this. Some simple vulnerability indices prepared within the BIS are used as an example of the use and limitations of early warning indicators.

The use of supervisory or other micro-prudential information

Rangachary Ravikumar (Reserve Bank of India)

Regulators and supervisors world over are concerned about the financial soundness of the individual institutions regulated by them so as to ensure financial stability. They use a mix of both on-site examinations and off-site monitoring and supervision, though different regulators use different mix. In India, the regulation and supervision was mainly based on on-site examinations. However, in early 1990s it was felt that information on regulated entities is needed more frequently so as to enable the central bank to build a memory on the supervised institutions and to take immediate corrective action.

A fully computerised, state of the art system with a built-in data-warehouse capability has been put in place to process the off-site data and enable bank analysts to use the information. Thus, the off-site function serves to set priorities for the allocation of scarce supervisory resources. The scope and coverage of the off-site data has been enhanced over time to capture emerging concerns. The data is used for generating early warning signals on the basis of select parameters, arriving at bank specific supervisory concerns and preparing focused analysis on areas of supervisory interest.

A strong off-site monitoring and surveillance system would help the bank in moving towards risk-based supervision. With the ongoing review of financial health, we can detect when an individual institution shows first sign of weakness and assess the potential impact on the system in the event the situation becomes worse. By heeding to these "early warning signals" the concerned entity with appropriate advice from regulators can take timely action. Similarly, at the macro level, we can assess the financial sector soundness by aggregating these micro indicators and decide on the appropriate intervention as evident from the policy initiatives by our bank during last couple of years on the issues such as banks' exposure to capital markets, norms governing investments in securities, private placement of debt, etc.

WORKSHOP A

Constraints on Central Bank Statistical Activities

Sample survey design and maintenance: a new challenge to central bank statistical activities?

Paola Battipaglia (Banca d'Italia)

In the light of the challenges posed by increasing demands on scope, quality and timeliness of Central Banks' output statistics, maximising effectiveness of information processing with respect to cost has become of utmost importance. Sample surveys can be viewed as a possible means to cope with this challenge, but of course they pose some new problems in terms of design, maintenance, estimation, as well as response burden control.

This presentation will first describe the Bank of Italy's experience with sample surveys; it will then focus on the most recently developed strategies to increase efficiency, especially at the stage of quality control and processing of survey data. Here, by means of selective editing procedures, we have managed to reduce the amount of checks and follow-ups of survey returns without compromising the quality of the final output statistics. This goal is achieved by targeting controls where the largest gains in the quality of final statistics are expected, on the basis of model-predicted values and accounting for sample expansion weights.

Finally, strategies to pursue efficiency gains will be discussed with reference to the new challenge posed by the ECB requirements for the sample-based harmonised interest rate statistics.

Abstract of background paper

Selective Editing as a tool to increase efficiency in survey data processing – An application to the Bank of Italy's Business Survey on Industrial Firms

Editing survey returns requires a multi-stage, labour intensive activity which ends up with re-contacts of a few respondents for follow-up of suspicious items. Recently, many statistical agencies have devoted considerable attention to increasing the efficiency of their production process, improving the quality of their end products, and reducing respondent burden. Selective editing attempts to rationalise quality control activity by concentrating respondent follow-ups to suspicious units that may have an important impact on the estimates.

The method is based on a score function that predicts the effect on the survey estimates of resolving the edit queries for each unit. Both the distance between the observed and the expected value (under a model) and the sample grossing up weight contribute to the scoring. This strategy can be particularly effective with data sets where a relatively small number of units contributes a large percentage of the total estimate, like in business survey returns.

The main goal of this paper is to trace the development of selective editing applied to the Bank of Italy's annual survey on industrial firms. A more efficient data processing and a reduced total respondent burden are the gains from the new approach. Moreover, highlighting the most influential observations can help in the interpretation of the survey results.

E-standards for statistical data and metadata exchange

Gabriele Becker and Stuart Feder (BIS)

International organisations such as the BIS, the ECB, the IMF, the OECD, Eurostat and the UN Statistical Division are jointly working in a task force to discuss standards and business practices that would allow for more efficient exchange and sharing of statistics and metadata. This Statistical Data and Metadata exchange (SDMX) initiative covers many of the core business issues relating to the exchange of socio-economic data within the collective activities of these institutions.

Two distinct paradigms for the exchange of data, identified respectively as the partner-hub model and the dissemination model, are being discussed. A further distinction is made between time series data and tabular (multi-dimensional) data. The SDMX sponsors endeavour to support the creation of common standards that will facilitate not only their own work but also that of member states and data user communities. These will include XML based implementations.

Statistical Activities in the Central Bank of Bosnia and Herzegovina

Snežana Janjić and Danica Lučić (CBBH)

Part I: Monetary Statistics

Monetary statistics are compiled monthly by the Central Bank of Bosnia and Herzegovina (CBBH) and analytically presented in accordance with the IMF Monetary Financial Statistics Manual:

- Central Bank Survey (CBS) is an analytical presentation of the assets and liabilities of the balance statement of the CBBH. The data source is the balance statement of the CBBH.
- Other Depositary Corporations Survey (ODCS) is an analytical overview of all commercial banks, including foreign banks which do business in BH.
- The Depository Corporations Survey (DCS) presents the unified and consolidated CBS and ODCS (data) and emphasizes the following important categories: broad money – within which framework are the categories of money in a narrower sense (M1) and quasi money (QM) – credits and the foreign assets and liabilities of the complete banking sector at the level of BH.

Since the founding of the Bank in 1997, monetary statistics have reflected the institutional changes of the banking sector in the country, so that certain periods were characterized by particular features:

- The data on balance sheets of commercial banks, collected for monetary statistics, contain a currency break-down specifying the Convertible Mark, the YU Dinar, the Croatian Kuna, the German Mark and others, while from 2002, the EUR has been included.
- There is no legal regulation in BH which would determine the interest rate at the state or entities level; decisions on interest rates are the responsibility of each commercial bank, depending on its business policy. Up to the end of 2001, the data compiled related to the full range of interest rates applied by commercial banks, ranging from the lowest to the highest ones. From January 2002, following an instruction given by the IMF Mission, there has been significant progress in collecting data on weighted interest rates on short-term and long-term loans for private enterprises and cooperatives and weighted average interest rates on demand deposits and on time and saving deposits of households.
- Monetary statistical data, which are published by BH, show certain discrepancies when compared to the data published by the IMF. One of the larger banks in the Federation BH, Privredna

Banka Sarajevo (Economic Bank of Sarajevo), used to record a significant amount of off-balance foreign obligations inherited from pre-war guarantees during the process of the privatization of banks, following the Law on the starting balance sheet of enterprises and banks from 1998. In CBBH publications, data are shown as received from the source, the commercial banks, that is, without the foreign obligations being written off, while the IMF, in its publications, executes adjustments by adding the amounts of the written-off obligations to the data series. The Government of the Federation of BH has adopted the bank privatization programmes. Through a special-purpose vehicle, established by the International Finance Corporation, these obligations towards foreign creditors have now been settled. In accordance with that, there should soon be full harmonization of data between the monetary statistics of the Central Bank and IFS.

- Since 1999, monetary statistical data is published quarterly via the CBBH Internet web site.

Part II: Experiences and problems in developing a balance of payments statistics data base in BH

Tremendous efforts have been made to develop a Balance of Payments. At the beginning of its operations, the CBBH had no statistics in this field. With the assistance of the IMF representative, activities were started. Initially, because of the lack of relevant data, only reports on exports and imports were made. In 1999, when the system of collection, processing and analysis of statistical data was improved, and statistical estimation and correction of existing data methods had been developed, we started producing annual reports on the BoP of BH. Existing source data for BoP statistics were not sufficient, so it was necessary to upgrade, develop and improve the BoP database.

Main problems with respect to source data for BoP purposes are: (1) Lack of authority of the central bank to require data from local, foreign, and government organizations and institutions. (2) The Law has not defined sanctions for non-reporting of data. (3) Poor coverage and poor quality of data in existing surveys. (4) Most of the sources do not report in a timely manner, especially as far as quarterly reports are concerned.

The basis for the BoP statistics is the IMF Balance of Payments Manual 5. The compilation and publication of BoP statistical reports is done in accordance with the IMF methodology.

It is estimated that it takes time for BH to get comprehensive, timely and quality BoP statistics. There are three government statistical agencies, but the CBBH is in the best position to organize BoP statistics. All agencies use different methodologies, and face certain difficulties in collecting data. For most data sources (private enterprises, commercial banks, government institutions, embassies and international organizations in BH) the CBBH, as a state institution, is a trustworthy partner, which will enable full confidentiality and usage of its data, because the Law defines that data will be used, in an aggregated form, for statistical purposes only. The CBBH staff collects data directly from the above-mentioned institutions by forms and instructions which are in accordance with the IMF methodology.

Estimation methods for non-recording and undervaluation of the foreign trade turnover, foreign aid to BH, services to non-residents, compensation to employees and workers remittances are in progress.

Central bank data challenges: an Antipodean perspective

Clive Thorp (Reserve Bank of New Zealand)

The Reserve Bank of New Zealand comprehensively revised its financial sector data compilations in 1987, and made further significant changes in the nineties. The RBNZ is a small central bank, facing a number of challenges related to data collection and dissemination in financial markets. First, this paper explains the Bank's "data strategy", and briefly describes its main data series outputs, in the context of the uses for which they are derived. The advantages and disadvantages of the

RBNZ data collection framework, and those associated with New Zealand's small, concentrated market, are discussed.

Secondly, the paper raises several contemporary data issues relevant to central banks. These include how to respond to the desire for inter-country comparability "templates", while retaining the integrity of domestic data. We are not comfortable with the trend in international practice in this area. What data challenges are occurring for which we need to plan strategic responses? These include disintermediation, requiring more use of surveys other than regular institutional questionnaires, extra-territorial reporting issues, and how to cope with changing market practices and accounting rules that are capable of significantly modifying underlying data trends.

WORKSHOP B

Cooperation with National Statistical Offices

The Central Bank of Tunisia statistics: methodology and compilation

Rekaya Ben Youssef (Central Bank of Tunisia)

I'll begin my presentation by giving an overview on the financial and monetary statistics elaborated and published by the Central Bank of Tunisia, the compilation methodology and the channels and sources used for this purpose.

My presentation is divided into four parts as following:

I Statistics statements elaborated at the Central Bank of Tunisia
  a Statistics related to currency banks and credit
  b Statistics related to external finance
II Compilation procedure
  a Information sources
  b Information collection procedure
III Compilation methodology
  a General rules of compilation
  b Monetary statistics
  c Balance of payment statistics
IV Outlook for development of statistics
V Outlook for development of Central Bank statistics

The Centralised Securities Database (CSDB)

Jean-Marc Israël (ECB)

Securities are the most important class of financial instruments in the euro area (some EUR 8 trillions of issues of euro area residents are outstanding). Yet statistics on them have many deficiencies. The CSDB will be a comprehensive reference database with a range of statistical applications and also much relevance for financial stability issues and operations (eligible assets, risk management). The availability of information on equity and debt securities would greatly contribute to overcome shortcomings in the quality of financial statistics.

This paper provides an examination of the increasing importance of information on a security-by-security basis for accurate and timely (monetary, securities issues, balance of payments and flow-of-funds) statistics and, to some extent, it may foster transparency and efficiency of the markets. It entails a broad description of the present difficulties, potential sources of statistical inconsistencies and deficit of accuracy.

The development and set-up of the CSDB within the institutional framework of the European System of Central Banks (ESCB) showed some complexity, which is reflected in the duration of the preparation phase of the project. This phase contained the identification of the requirements of users within the ESCB, the identification of potential data sources (their data limitations, and the legal and commercial aspects) as well as the design of the technical infrastructure of the CSDB.

From June 2002, the CSDB project enters its implementation phase, which will see the implementation of its technical infrastructure as well as the set-up of a "CSDB-network". The cooperation may take the form of "clearing-house", "network" or centralised approach; the paper discusses each and explains why the second was chosen; it stresses the importance of cooperation between the ECB, the EU – and "Accession Countries" – National Central Banks (NCBs) and the BIS while defining and implementing the CSDB. In the "CSDB network" the NCBs will have the responsibility of monitoring the coverage and quality of information on the issues by residents of their jurisdictions, while the ECB and BIS, using authoritative and commercial sources, will ensure overall consistency and contribute on issues by residents of countries outside the EU which are internationally traded, held by euro area residents or denominated in euro.

The experience to be derived from the "CSDB network" may benefit in due course to other areas – prudential supervision, risk and operational management – and may lead to an expansion of the network to other statistics compilers (central banks and national statistical offices) and further cooperate with international organisations (in particular the IMF and BIS) in the future, perhaps in the form of a Global Securities Database (GSDB).

Cooperation between central banks and statistical offices at supranational level

Bart Meganck (Eurostat)

The signing of the Treaty of Maastricht in February 1992 set Europe on the road to monetary union by the end of the century. Eurostat was keen to anticipate the new statistical needs which monetary union would give rise to, in terms of both the economy "proper" (essentially the responsibility of the statistical offices) and the financial sphere (basically the jurisdiction of the central banks). The Statistical Programme Committee (SPC), which was created in 1988 and brings together the Directors-General of the national statistical offices, was able to meet many of those needs, particularly those relating to the economy "proper". Others, however, could only be met with the help of the central banks. The European Commission was all too aware that central banks were accustomed to deciding for themselves what information they required for policy purposes, and that it would not be easy to persuade them to take part in constructive cooperation if their own interests could not be guaranteed. A committee on which only the central banks were represented was liable to take decisions which conflicted with those of the SPC. It was therefore important for that Committee to include representatives of the statistical institutes. Eurostat undoubtedly played a pioneering role by setting up the CMFB (Committee on Monetary, Financial and Balance of Payments Statistics) in April 1991, bringing together senior statisticians from the statistical offices and top-level representatives of the central banks.

The CMFB has been in existence for 10 years now, and an assessment of its work thus far is undoubtedly in order. Can it be regarded as a success story? Is it just another talking shop, with precious little to show in the way of action? Or is it the other way round? Certainly, its first few years were less than a dazzling success: the gulf between the central banks and the statistical offices was simply too great. Most of the national representatives of the two sides had never even met until the Committee's inaugural session in Luxembourg in April 1991. The Committee spent its first years in search of an identity, defining its role and trying to resolve conflicts of competence. Gradually, however, the two groups got to know and appreciate each other, and the Committee's "political" importance quickly became apparent, which certainly helped to foster a spirit of cooperation.

A major breakthrough occurred when it was decided that the Committee should no longer operate solely on behalf of the European Commission (its original purpose had been to advise the Commission on the integration of monetary, financial and balance-of-payments statistics in the European Statistical System), but should also advise the forerunner of the European Central Bank on

statistical cooperation. Once that decision had been taken, the Committee was in a position to reconcile central bank autonomy with the aim of creating a genuinely European statistical system.

The following events have been milestones in the history of the CMFB:

Its role in coordinating the compilation and use of statistics by the European System of Central Banks and the European Statistical System (via a network of European statistical institutes);

The compilation of an inventory of requirements for the future European Central Bank;

Its role in the process of harmonising European statistics, which has led, in some cases, to European standards becoming world standards;

Its role as quality watchdog for Maastricht-related statistics, which were crucial for deciding whether the member states had passed or failed their EMU "entrance exam", and which were therefore politically extremely sensitive;

Its part in securing greater independence for the producers of statistics vis-à-vis their respective governments, which were keen to apply creative accounting techniques to their own advantage in their national data;

The development of a new approach to collecting balance-of-payments data: the advent of monetary union meant that transactions which had previously been recorded as foreign transactions suddenly became internal ones; new payment systems will no longer be unable to provide the necessary information;

Lastly, the CMFB has not confined itself to giving advice in the statistical fields which feature in its name, but has consciously extended its field of activity to include any statistical topic which interests the European Commission, the statistical institutes, the ECB or the central banks.

Conclusion

Statistical offices and central banks tend to be the biggest producers of economic and financial statistics in their respective countries. Even now, the two types of institution often work in isolation from each other. That may have been acceptable many years ago, but more recently, and certainly in the present, growing importance attaches to integration and the production of coherent statistics (eg SNA 93 and BoP statistics). The European Commission, in the guise of Eurostat, faced three problems in its attempt to harmonise statistical systems and make them more consistent. Firstly, it had to deal with two sets of institutions which enjoyed a degree of independence and could look back on a long history. Secondly, there are major differences between the various national systems. Thirdly, the distribution of tasks between statistical offices and central banks varies considerably from one country to the next. In order to meet the greatly increased requirements associated with monetary union, it was essential to combine forces, rather than using them haphazardly, especially as the member states' governments, in their drive to meet the Maastricht deficit criterion (a maximum of 3% of GDP), were not averse to squeezing their budgets for statistical purposes. In response, Eurostat brought together senior officials responsible for statistics at the central banks and senior statisticians at the statistical offices, in order to foster consultation and cooperation in areas where there could be an overlap between the two groups.

Co-operation between Central Bank and National Statistics Office as prerequisite of statistics development in Transitional Economies (Russia as a case study)

Ekaterina Prokounina (Central Bank of the Russian Federation)

The report presents an overview of the joint efforts made by the Bank of Russia and Goskomstat to create and promote the development of statistics that would correspond to the state of the Russian economy during its transition to market relations.

The first part of the report contains information on the applicable laws and regulations establishing the rights and duties of Russia's National Statistics Office (Goskomstat) and the Bank of Russia in conducting statistical activities. It describes the three main spheres of interest and responsibility of the Bank of Russia in developing national statistics and the forms of their implementation through granting to the Bank of Russia the legislative power to obtain the necessary information and set data compilation and presentation rules for credit institutions.

The second part of the report describes the process of the establishment and development of relationship between Goskomstat and the Bank of Russia and the results achieved. It presents a detailed overview of the existing co-operation between the two organisations in the following areas: (1) exchange of statistical and analytical data; (2) the creation and introduction in statistical practice of national classifications of technical, economic and social information; (3) co-operation in developing statistical methodologies (the Methodological Council, seminars, joint management meetings, etc.).

The third part of the report deals with issues relating to the effect of international organisations' initiatives in developing statistical standards on broadening co-operation and describes experience in organising work to assess compliance of the existing Russian practice of disseminating major macroeconomic data with the IMF's SDDS.

The fourth part of the report charts new promising areas of co-operation between the Bank of Russia and Goskomstat in developing national statistics and harmonising these with international statistics standards. It describes the Bank of Russia's approaches to the development of monetary and financial statistics and shows the role played by the Bank of Russia in the development of the System of National Accounts (SNA) in the Russian Federation. Some problems of compiling data on the financial sector of the economy are also dealt with. Emphasis is placed on the Bank of Russia's interest in broad discussions under the aegis of the I. Fisher Committee on the methodological problems that face central banks and national statistics offices, especially in transitional economies, in the process of developing macroeconomic statistics.

Outsourcing Central Bank operational tasks to a National Statistical Office – the Swedish case study

Jan Schüllerqvist (Sveriges Riksbank)

The Riksbank has in many areas separated its policy tasks from its operational tasks. Sometimes this separation is between departments within the central bank, sometimes between the central bank being responsible for the policy tasks and another institution responsible for the operational tasks.

The money and banking statistics function of the Riksbank needed for various reasons to be enhanced. A cost-efficient solution was to discuss an outsourcing of the production of the money and banking statistics with the national statistical office, Statistics Sweden.

The Riksbank will continue to be responsible for providing money and banking statistics to its international counterparties, eg ECB, BIS and IMF. The Riksbank will also continue to be the regulatory authority within Sweden for money and banking statistics.

Statistics Sweden will present why they were ready to in-source the production of the money and banking statistics, and what challenges it gives to their organisation.

Co-operation with national statistical offices: achieving international comparability in general economic and financial statistics

Richard Walton (Bank of England) and Andrew Kanutin (ECB)

Central bank responsibilities to help the market allocate financial resources depends on the transparency of our macro-economic policies and in particular on the provision of accurate, consistent and timely data with long time series. Central bank responsibility for the stability of the financial system requires consistent data for the structural analysis of the economic sectors and for the monitoring of possible threats to financial stability. In the case both of general economic statistics and financial statistics, this depends on co-operation with national statistical offices. The new challenge of meeting new data requirements requires a greater focus on setting priorities for developing further the present set of economic and financial statistics and concentrating on the production of timely and quality statistics for a narrower range of indicators. The aggregation of a significant dataset with international definitions provides an opportunity to publish consistent and timelier macro-economic and financial data.

SESSION 4

Developments with respect to Statistical Analysis at Central Banks

Forecasts of economic indicators for monetary policy in India: an assessment

Radha Binod Barman (Reserve Bank of India)

The overall stance of monetary and credit policy in India is to provide adequate liquidity to meet credit requirement and support investment demand in the economy while continuing a vigil on movements in the price level to keep inflation within limits. In the pursuit of non-inflationary growth and stability and efficiency of the financial system, and in the context of the recent moderation in economic activity in India, the current policy preference is towards softer interest rates while imparting greater flexibility to the interest rate structure in the medium term. This stance is set against the backdrop of domestic and external macroeconomic developments and the overriding objective of maintaining internal and external balance in the medium and long run.

The Reserve Bank of India presently operates with a broad-based multi-indicator approach for assessing the environment and conducting its policy. The approach is different from any intermediate targeting (like broad money or exchange rate targeting) or any targeting of final policy objective (like inflation targeting), but it essentially takes into consideration the important elements of both forms of targeting while operating with its multiple indicator approach. The growth in money supply, GDP, deposits, credit, market borrowing requirement of the Government, money market interest rates, exchange rate, foreign exchange reserves and the overall liquidity condition are the main indicators which are generally watched and assessed for building alternative scenarios for the year ahead. Model estimated forecasts of output, inflation and liquidity comprise important elements of the information set used by the policy makers in the conduct of monetary policy. These forecasts are generated by structural models, time series models and industrial outlook surveys. The short-term liquidity forecast is a more complex area and the appropriate approach and method for generating liquidity forecasts is being explored in India. The paper discusses these issues and highlights the problems that often warrant methodological refinements.

The NAIRU in Israel: an unobserved components approach

Tanya Suchoy and Amit Friedman (Bank of Israel)

The Non Accelerating Inflation Rate of Unemployment (NAIRU) is estimated for the post-stabilization period as an unobserved stochastic variable, using state-of-the-art State Space Models. The NAIRU is identified by a Phillips curve equation, and is assumed to follow a random walk. The basic model is augmented by an equation that captures the persistence of the unemployment gap. The

joint system that was first introduced by Apel and Jansson (1999) is also estimated, in order to generate potential output and the NAIRU simultaneously. Confidence intervals around the NAIRU were computed by jackknife technique. The results point out that actual variation of unemployment has only minor effect on the NAIRU. The NAIRU is pro-cyclical but remained relatively stable throughout the sample period. The state variables have sufficiently stable characteristics to be successfully predicted, at least one step ahead. However, policy implications that may be derived are sometimes limited, as the uncertainty around the estimated NAIRU is substantial.

Economic forecasting in emerging economies

John Hawkins and Marc Klau (BIS)

Most discussions of the performance of economic forecasters have concentrated on advanced economies. This paper will look at the performance in emerging economies: how much harder does their greater exposure to external shocks make the process? The role of central banks in forecasting will be a particular focus; eg how (if at all) are their forecasts presented to the public? Two recent challenges to be addressed are the common under-prediction of inflation, partly attributable to low exchange rate pass-through, and the question of whether the "new economy" is making a significant difference to established relationships on which forecasts are based.

Efficiency of banks in Croatia: a DEA approach

Igor Jemric and Boris Vujcic (Croatian National Bank)

An understanding of a bank's relative performance compared to the market over a period of time is important for analysts, practitioners and policymakers alike. In this paper we analyze bank efficiency in Croatia between 1995 and 2000 by using the Data Envelopment Analysis (DEA). We find that foreign-owned banks are on average most efficient; that new banks are more efficient than old; and that smaller banks are globally efficient, but large banks are efficient when we allow for variable-returns-to-scale. We also find strong equalization in terms of average efficiency in the Croatian banking market, both between peer groups and within peer groups of banks.

A method for error detection in large sets of time series

Augustin Maravall (Banco de España)

A methodology is presented for detecting possible errors in data reported to (perhaps very large) sets of time series. The methodology is based on Regression-ARIMA models. Some observations in the series may be missing, and the series may be contaminated by outliers and affected by calendar-type effects. The procedure is applied in a fully automatic manner. In short, after the model

has been identified and estimated, the series corrected for outliers and adjusted for calendar effects, and the missing values interpolated., forecasts are computed.When the new data is reported, it is compared with the forecasts: if the difference is abnormally large, the new observation is considered a possible error. A program (TERROR) that enforces the methodology will be made available.

Forecasting Swiss inflation with a structural macromodel: the role of technical progress and the "mortgage rate – housing rent" link

Peter Stalder (Swiss National Bank)

As of the year 2000, Swiss monetary policy will be based on a new concept. On the one hand, inflation forecasts will play a central role for the orientation of monetary policy. On the other hand, monetary policy will be implemented and communicated to the public in terms of a desirable range of short-term interest rates. In view of this new concept, a sound foundation of monetary decisions requires deeper insights into the economic process generating future inflation in general and the transmission mechanism from short-term interest rates to long-term interest rates, exchange rates, real economic activity and inflation in particular.

Ideally, an econometric model should be available that produces reliable inflation forecasts conditional on short-term interest rates and other factors, thus showing how short-term interest rates have to be adjusted in order to keep inflation in conformity with the notion of price stability. In addition, this model should also analyze the side-effects of such policy actions on other macroeconomic variables like GDP, consumption, investment and employment. Recently, two research projects in this direction have been undertaken at SNB. A first investigation follows the VAR approach and identifies the variables that are most relevant for future inflation in Switzerland (Jordan, 1999). A second study develops a small structural model for the Swiss economy. This model consists of five equations and is centered on a Phillips-curve and an IS-relationship (Zurlinden/Lüscher, 1999). In both studies the forecasting performance is evaluated by means of out-of-sample simulations.

The aim of the present project is to develop a model of the second structural variety. As a complement to the two aforementioned approaches, this model – henceforth referred to as SNB-Macromodel – should provide more detailed insights into the monetary transmission mechanism. Besides inflation forecasts, the SNB-Macromodel should convey a consistent picture of the future course of the various components of aggregate demand, interest and exchange rates as well as the developments on the labor market. Furthermore, the model should be designed in such a way that it is suited not only for forecasting but also for policy simulations. To serve all these purposes best, the model should have a clear theoretical basis and be of medium size, i.e. large enough to show the relevant aspects of the monetary transmission mechanism but still transparent for the user with respect to the involved relationships and hypotheses.

Estimation and identification of VARs using high-frequency futures data

Eric Swanson, Jonathan Wright and Jon Faust
(Fed, Board of Governors)

We show how very high-frequency data from futures markets can be used to improve estimation and identification of econometric models, such as a monetary policy VAR. In particular, we use the high-frequency reaction of markets to Federal Reserve FOMC announcements as structural measures of monetary policy shocks and their effects. We reject the standard recursive identification of Christiano, Eichenbaum, and Evans (1995, 1999), but we nevertheless agree with these authors' finding that only a small fraction of the variance of output and inflation is due to monetary policy shocks.

We also present empirical results on whether the Fed possesses inside information about the U.S. macroeconomy, discuss weak identification, and show that efficient futures market data can reduce coefficient standard errors by 20-50%.

SESSION 5

Central Bank Cooperation on Statistical Issues

Statistical preparation and harmonisation for the West African Central Bank: Main difficulties

Richard Walton (Bank of England)

The West African Monetary Zone has been established by six countries-Nigeria, Ghana, Sierra Leone, Liberia and the Gambia as an embryo central bank for a second monetary union, just as the EMI in Europe was the forerunner of the ECB. Statistics are to be harmonised to cover the West African Monetary Zone. Such aggregation requires harmonisation of country data and common minimum statistics and metadata. The standards for the supply of data are to include frequency, timeliness, quality and availability. The IMF GDDS framework has been identified as starting point for harmonising data. Progress is hampered by a lack of funds and also needs co-operation of NSIs.

WORKSHOP C

Issues relating to Balance of Payments Compiling

Organization of data collection process in a new environment for balance of payment statistics

Janez Fabijan (Bank of Slovenia)

Slovenia, as a candidate country to EU, has recently adopted a regulation that liberalizes its economy also on the capital account of the Balance of Payments. For a small and open economy timely and accurate information on the BoP is of high importance for decision-making on the monetary as well as on the economic policy level. The importance of having timely and reliable information of BoP statistics gets even more weight by the prospect of joining the EU and staying two years in the exchange rate mechanism ERM 2. A recently adopted EU regulation on a threshold for collecting data from ITRS from banks created the need to search and develop direct reporting systems as an alternative.

The paper is therefore describing a project of implementing a direct reporting system with segments corresponding with the items on the Balance of Payments (commercial credits, foreign direct investments, accounts abroad). By the time of running and implementing the new data collecting system, the decision-making process was supported by a simulation technique also focusing on possibilities to develop similar systems for other, even more important, items of the BoP. The results give us hope to find an alternative way of collecting data by using high technologies without the need for additional human work. On the other hand, the level of knowledge in the phase of collecting statistical data should be significantly higher in future. Compared to current or former data sources, some doubt remains whether the quality of reported data meets the requirements of BoP compilation purposes.

Changeover from settlement reporting to direct BoP reporting – Implications for Danish financial statistics

Jens Hald (National Bank of Denmark)

Methods for collecting Balance of Payments (and International Investment Position) data has changed from settlements to surveys in Finland and the Netherlands. A number of other continental European countries have also decided to change – among them Denmark.

Why and how is one of the subjects in the paper. Another subject is the link between existing financial statistics for government and monetary financial institutions (MFIs) and statistics for

BoP/IIP. In the last part of the paper, it is discussed whether the changeover in the BoP collection system has created a good opportunity to develop – in coordination with financial accounts – new financial statistics for the rest of the financial sector and insurance companies and pension funds.

The paper concludes that creation of a security database and expansion of the financial statistics to other financial institutions than MFIs and insurance and pension funds are an appropriate way forward.

How to survey the enterprise sector to fulfil the ECB BoP statistics requirements

Jorma Hilpinen and Heikki Hella (Bank of Finland)

The paper discusses the collection and compilation practices of timely, monthly and quarterly balance of payments statistics in view of customer (ECB) needs for data. The paper describes the monthly collection and compilation practices for the BoP statistics as prevailing in Finland, and discusses how well the ECB high frequency requirements for the BoP statistics can be fulfilled. Finally, a comparison with other EU-regulated monthly statistics is provided as a benchmark.

The monthly BoP data on enterprises are based on a non-probability sample selected from a frame continuously monitored. The maintenance of the frames of various BoP surveys can be considered the key task in the survey work. The enterprises surveyed on a monthly frequency are determined by their overall importance in the balance of payments; the most important agents in each item must be included, the total coverage must be high enough but in details the coverage may vary. It is important that the survey design process is performed in an appropriate manner but the population size and distribution imply that respondent selection and quality control solutions must be practical and pragmatic. Risks for bias are present in small surveys, and quality control procedures are impeded by the increased volatility of the data during the last few years. The analysis aims to identify different sources of variation and their quality control implications employing a combined cross-sectional and time-series approach. In a smaller country the possibility to use censuses and cut-offs rather than regularly sampled data is a merit rather than a weakness.

Structure of the paper:

1. Introduction
2. Current ECB needs for high frequency data
3. Registers, frames and frame surveys
4. The 2001 design of the high-frequency BoP surveys, the supporting IT and current experiences
5. Coverage by items and by frequencies in the 1999, 2000 and 2001 data
6. Quality issues: risks for bias, volatility of data by items, between enterprises and within enterprises
7. Benchmark comparison
8. Summary and future work

Use of a harmonised model for BoP reporting by multinationals

Peter Hofman (De Nederlandsche Bank)

My contribution regards the subject of investigation of possibilities to implement in future common balance-of-payments (BoP) reporting rules for multinational companies in the EMU/EU area. These are companies with operations in several member states. Nowadays, data collection and reporting requirements for BoP differ among member states (the use of different codes, different formats etc are an irritant to multinational companies). For multinational companies, required to report for BoP purposes in each member state, harmonisation would substantially increase reporting efficiency. A harmonisation of reporting would fit in with the trend towards centralisation of treasury activities and other operations of multinational companies. Apart from gains to the companies in reporting burden, efficiency and fairness (level playing field), a common reporting model for multinational companies would probably result in a better quality of data. The elements just mentioned will be part of an introductory chapter.

In my contribution I shall describe in a methodological/technical chapter the main elements of the proposed draft design of a common reporting format for multinationals (comprising a common sub-format for the reporting of international trade in services and a common sub-format for the reporting on foreign financial assets and liabilities). This chapter will also focus on the technical aspects of how to fit the common format for multinationals with other reporting arrangements if applicable, and on what cross-border business should be reported, as well as on aspects like timeliness required, possible consequences for the reporting burden, IT aspects, the possible influence of the European Company Statute, the significance of International Accounting Standards (IAS), valuation of participations in unlisted companies, the moment of recording of transactions, etc.

A third chapter will be dedicated to the results of tests carried out by six European multinationals during the first half of 2002 on the basis of data of an agreed recent period (mostly 4th quarter 2001). These enterprises were requested to both complete a (verbal) feasibility questionnaire and carry out as a second step a test completion of the complete set of forms designed. The six enterprises – belonging to a first wave of test companies – were visited between November 2001 and January 2002. Test results of the first wave with regard to the reporting model will become available in the course of June at the latest. In this third chapter, thus, a picture of the test will be presented. Meanwhile, a second wave of tests by multinational enterprises in other member states have been initiated and will be carried out during the 2nd half of 2002.

In a final chapter, conclusions will be drawn and possibly some expectations for the future may be formulated.

Liberalisation and the challenges for balance of payments compilation

Frederica Robinson (Bank of Jamaica)

Up until 1992, Jamaica operated an exchange control payments system. Under this system all foreign exchange payments by residents to non-residents had to be approved by the authorities based on the availability of foreign exchange and the importance of the transactions to the smooth operations of the economy. Similarly, funds flowing into the country from non-residents, especially those that would imply subsequent foreign exchange outflows eg investment income, profits etc had to be registered with the Exchange Control Department. Primary Balance of Payments data for services, transfers and private capital flows were obtained from these approvals/disbursements/registration records duly classified on a monthly basis.

Following liberalisation, Jamaica, like most other countries lost significant portions of its database, especially flows relating to services (and income), transfers and financial transactions, primarily those relating to the private sector. Balance of payments compilers were challenged to find alternative sources of data and alternative ways of collecting data. In the early years of liberalisation heavy emphasis was placed on surveys as the new method of data collection but non-response and the lack of the proper legislation authorising the statistical authorities, in this case, The Bank of Jamaica, to collect the relevant data raised more questions than there were answers. Moral suasion was widely used to encourage responses until the Banking Act could be changed and or other methods of data collection were finalised. At the same time that data sources were being lost new transactions were coming into the market that needed new methods of tracking and recording.

Jamaica, like many other country that liberalised, had gaps in its database, which it attempted to fill with estimates. However, in an environment where settlements could be done more freely, using a variety of payment modes and where business transactions no longer required approvals and new financial and service transactions were coming on the market then it was difficult to make estimates in that changing environment. Balance of Payments data changed frequently as new data sources came on stream and was applied retroactively. This helped to guide the estimation/projection process while at the same raised red flags about the authenticity of the published data.

Subsequent to liberalisation a number of new data sources have been identified and old ones have been modified to adapt to the changing environment. A number of challenges still remain and we hope that through this forum we will be able to identify possible solutions to overcoming them.

Section two of this paper looks at liberalisation and the implications for Balance of Payments data collection. Section three identifies the alternative approaches taken by Jamaica to deal with the loss of significant portions of its primary database following the removal of exchange controls. Section four identifies the challenges that still remain, while section five looks at the way forward and identifies strategies that are to be/being adopted to improve the database including keeping abreast of new transactions that have come on stream following financial liberalisation.

Liberalisation and the challenges for Balance of Payments Compilation

1. Introduction
2. Implications of liberalisation for BoP data collection
3. Alternative approaches to data collection
4. Challenges remaining
5. The way forward

Setting up an alternative data collection system for the balance of payments

Evelyn R. Santos (Central Bank of the Philippines)

The compilation of the balance of payments in the Philippines had relied largely on an information system provided by banks' foreign exchange monitoring reports. However, external transactions have grown in volume and complexity following the foreign exchange liberalization. As a result, there is the acute need to strengthen the monitoring system to ensure a comprehensive data capture.

Cognizant of the limitations of the bank reporting system, the BSP is now developing alternative mechanisms to improve the coverage of data. The BSP has introduced a survey on cross border transactions settled through accounts abroad and intercompany offsetting accounts. It has recently strengthened the monitoring of transactions that are settled through the domestic banking system but are not reported for statistical compilation. This includes transactions through foreign exchange corporations (FOREX), thrift banks, and offshore banking units (OBUs).

Though the present reporting system for commercial banks has undergone several revisions to conform to the requirements of BoP compilation, there are still much to be done in terms of improving the coverage and quality of data. One major challenge to compilers is how to acquire accu-

rate information on transactions via the foreign currency deposit units (FCDUs) of banks. Transactions coursed through FCDUs cannot be allocated correctly into the appropriate BoP components because of the secrecy of deposits followed strictly by Philippine banks in accordance with the law on bank deposits. In this regard, the BSP is setting up a combination of direct reporting system and use of administrative reports as alternative sources of data. The consolidation of transactions from different monitoring reports and the avoidance of double counting will be a big challenge that BoP compilers will have to hurdle once all the alternative monitoring systems have been operationalized.

WORKSHOP D

Monetary and Financial Statistics and International Accounting Standards

Eurostat activities on International Accounting Standards. Special focus on Balance of Payments

Elena Caprioli (Eurostat)

The European Commission has placed great emphasis on accounting harmonisation. The Internal Market Directorate General's aim is to improve the quality, comparability and transparency of financial information provided by companies.

According to the present proposal of the Regulation on the application of International Accounting Standards (IAS), publicly traded companies will be required to apply from 2005 a single set of internationally agreed standards for the preparation of their consolidated financial statements. This will contribute to harmonise financial reports thus enhancing comparability across the European Union.

At Eurostat, Working Groups have been set up with participation of member states and Eurostat representatives working in different statistical fields. Close working relationships have been established with the unit in charge of accounting policy in DG Internal Market and contacts have also been taken with the Central Balance Sheet Data Offices (CSBO).

Work is mainly directed towards the identification of the impact of the introduction of the IAS in the various statistical fields. Two main aspects are being analysed. The first is the level of detail of the information that will be disclosed; this is of particular relevance when data are taken directly from company accounts. The second issue relates to the comparison between accounting and statistical definitions and classifications; general principles such as the introduction of the "fair value" concept and specific accounting standards are being thoroughly analysed.

In the field of Balance of Payments, Eurostat and National BoP compilers have started an in depth investigation on the links between accountancy and statistics. This issue is becoming of increasing importance for statisticians as data collection procedures are developing towards systems where companies become an increasingly important source of statistical information.

A "European Steering Group for Multinationals" has been created to promote the testing of a harmonised BoP reporting format for multinational enterprises. The exercise aims at assessing the feasibility of common forms with a close link with the accounting systems, in order to foster efficiency and quality of reporting across Europe. Special attention is also given to IT aspects, which are considered to have a significant impact on statistical work. The results of the first contacts with major European multinationals indicate that common understanding of information needs and data availability goes to the benefit of both statisticians and enterprises, by offering a better correspondence between statistical requirements and the companies' accounting.

WORKSHOP E

Deriving Information from Financial Market Data

Do syndicated credits anticipate BIS consolidated banking data?

Blaise Gadanecz and Karsten von Kleist (BIS)

This article examines the extent to which commercially provided data on syndicated loans anticipate movements in BIS consolidated banking statistics. While figures on announced syndicated credit facilities are available three months earlier than the BIS data, the latter have the advantage of reflecting actual loan drawdowns and early repayments. Syndicated loans seem to account for a significant part of actual international bank claims and could thus contain information that anticipates the BIS data.

The authors show that comparing one data set with the other leads to a better understanding of both the nature of the consolidated claims reported to the BIS and the way syndicated facilities are used. Moreover, they find that, under certain conditions and for certain classes of borrowers, the more timely syndicated credits can provide useful advance information about the consolidated data.

Using foreign currency and BoP data for analyzing FX market developments: Analytical framework and implementation to Israel

Yair Haim (Bank of Israel)

1. The Conceptual framework

To measure net purchases and sales of foreign currency in the NIS-forex market by the sectors that operate in it, we use Israel's balance of payments as a point of departure and modify its components. The goal is to obtain a closed system of data that reflects nothing but the activity that influences, and is influenced by, the exchange rate. It is especially important to recompose the balance of payments because NIS exchange rate affects, and is affected by, not only the deficit on current account and movements in the financial account ("capital movements") of the balance of payments, but also internal activity in foreign currency among various domestic sectors, such as foreign-currency credit and the public's deposits with domestic banks and NIS/forex forwards. Furthermore, several components of the balance of payments are irrelevant to the NIS-forex market because activity in them does not take place in the market and has no direct bearing on the exchange rate. Furthermore, the accepted classification of the balance of payments disregards the

most important thing in analysis of the NIS-forex market: the currency – NIS or forex – in which the activity takes place. Below are the main differences between the two forms of reportage:

- *Activity included in the balance of payments but not included in the NIS-forex market* – internal activity between government and nonresidents, because the government neither buys nor sells foreign currency in the local market. For the same reason, transactions related to the foreign reserves are not included in the NIS-forex market.
- *Activity included in the NIS-forex market but not included in the balance of payments* – Internal activity in foreign currency among residents, such as forex-denominated or -indexed credit and deposits and forwards for the purchase and sale of forex against NIS. Forex-indexed government bonds acquired by residents and forwards transactions between residents and banks are not included in the balance of payments.
- *Activity included in both forms of reportage but classified differently* – The classification in the balance of payments is based on the assets side (of residents and nonresidents) irrespective of the currency of activity. In the NIS-forex market, in contrast, the classification is currency-based. Thus, activity in Israel assets (in NIS and foreign currency) is attributed to nonresidents whereas activity in foreign assets (in whatever currency) is attributed to residents. The activities that are classified differently due to this principle are credit from nonresidents (including bond issues), nonresident foreign-currency deposits, and NIS credit from banks to nonresidents.

Importantly, measurement of activity in the market is not done as a technical exercise of cash conversion of NIS to foreign currency and vice versa; instead, it gauges the exposure of the asset acquired/sold to exchange-rate changes. This method of measurement creates a connection between each sector's net sales or purchases of foreign currency and the change in the sector's exposure to exchange-rate risk – a change that affects and is affected by the exchange rate. When a nonresident buys an NIS bond, for example, the transaction is recorded in the balance sheet of the NIS-forex market as the acquisition of an NIS asset, for which, accordingly, the nonresident sold foreign currency against NIS – whether he paid in NIS, after converting the foreign currency into NIS or borrowing NIS from the Bank of Israel, or whether he paid in foreign currency (even if the seller of the bond did not convert the forex obtained into NIS). This is because the acquisition of the NIS bond in such a case has changed the purchaser's exchange-rate position. Similarly, the purchase of foreign currency by residents – the nonbanking private sector or the banks – is recorded on the basis of the form of payment.

Net sales of foreign currency by the nonresident sector, in which the underlying currency is a foreign currency, are measured by means of nonresidents' net activity in NIS assets and liabilities. Within this construct, shares of Israeli firms, including those traded abroad, are considered NIS assets for the purposes of the NIS-forex market, just as foreign shares are considered assets denominated in foreign currency. The practical way to classify shares as NIS or forex assets – a classification that one must make to implement the method of measurement explained above – is by identifying the shares on the basis of the issuing company: NIS assets if issued by Israeli firms and foreign assets if issued by foreign firms. It would be more correct to classify shares by the currency in which the issuing company manages its cash flows, but that is impractical. In any case, the currency and location of trade are not appropriate criteria for the requisite classification of the shares.

Net foreign-currency sales by the nonbanking private sector – the underlying currency of which is the NIS – are measured by calculating the net activity of individuals, financial institutions, and companies in assets and liabilities denominated in or indexed to foreign currency, in Israel and abroad.

Net sales of foreign currency by the banking sector – the underlying currency of which is the NIS – is measured by calculating the net activity of banks in Israel in assets and liabilities denominated in or indexed to foreign currency. All activity in Israel and abroad, both on the balance sheet and in forwards, is included in forex assets and liabilities.

Additional components included in the NIS-forex market are the current-account surplus of the private sector, capital transfers from abroad to the private sector (mainly transfers by immigrants), sales of foreign currency for NIS by the Bank of Israel in the market, and issues of Gilboa bonds by the Government (less the portion purchased by nonresidents).

2. The Model[1]

The NIS-forex market model developed by the Controller of Foreign Exchange analyzes the various market players' capital movements and the exchange rate at equilibrium. The model provides a

1 *Y. Hecht, Y. Haim, and B. Schreiber (2002), "A Foreign-Currency Market Model: Application for Israel," Issues in Foreign Currency 1/02, Bank of Israel, Controller of Foreign Exchange.*

framework for the analysis of developments in the NIS-forex market, using sales and purchases of foreign exchange by various sectors, as explained below.

The model presumes that the impact of financial and nonfinancial variables on the exchange rate is transmitted by means of their differential effects on the various market sectors' demand for and supply of foreign currency. The model, tested on monthly market data for the April 1995–February 2001 period, contains several equations that describe the supply/demand of the sectors that are active in NIS-forex market and another equation for the behavior of the exchange rate. Both variables – forex supply/demand and the exchange rate – were explained in all equations by a single set of return-risk and income variables. The coefficients of the variables, estimated simultaneously as a system of equations, were found statistically significant.

The main variables on which the empirical estimation of the model focuses belong to the financial domain – variables that affected the relative profitability of an investment in NIS assets/liabilities as against forex assets/liabilities. This profitability was affected by the composition and size of the sectors' assets portfolio. The composition of the portfolio was affected by interest spread, exchange-rate risk, and country risk, whereas portfolio size was affected mainly by developments in the American capital market, as reflected in the Nasdaq index. These variables also affected the supply/demand of the sectors in the market and the exchange rate. The focus on financial activity was chosen because in Israel, as in other developed countries, financial activity has become a main factor in matters related to the exchange rate. However, the general phrasing of the model allows us to expand its estimation to nonfinancial activity and additional financial variables.

The main sectors on which the model focuses are the nonbanking private sector, nonresidents, and the banking sector. These sectors are singled out for two reasons: (1) most financial activity in the market takes place among them, and (2) the data available at the time the model was developed did not allow us systematically to isolate the activity of additional subsectors, such as households and firms. Another sector made up of additional players and components, called "Others," was inserted into the model estimation. The sectors were chosen on the basis of the characteristics of their activity. Nonresidents, for example, manage a global portfolio of assets and liabilities, in which Israel and the NIS are only one small component, whereas the nonbanking private sector has mainly a domestic portfolio with an insignificant component of "external activity" and a meaningful component of forex in Israel. The banking sector serves as a financial intermediary and keeps the currency makeup of its assets portfolio and its liabilities portfolio in correspondents; thus, its currency position is limited either by the regulatory authorities or by the banks' managements.

The results of the estimation corroborate the model and its premises and, in particular, reflect the differential effect of the exogenous variables on the players involved. The interest spread, for example, affected the nonbanking private sector (Figure 2 in the box) and the domestic banks but did not affect nonresidents; the Nasdaq index affected the nonbanking private sector and nonresidents (Figure 3 in the box) but not the banks; and exchange-rate risk affected all sectors but in different intensities and in different directions. The results also support the structure of the exchange-rate equation at the point of equilibrium.

The exchange-rate change at equilibrium equation is dependent on the supply/demand functions of each player, and these, in turn, are dependent on the main variables. Therefore, the equation of exchange-rate change at equilibrium was affected indirectly by the same main variables.

Incorporating equity market information into supervisory monitoring models

John Krainer and Jose A. Lopez (Federal Reserve Bank of San Francisco)

We examine whether equity market variables, such as stock returns and equity-based default probabilities, are useful to bank supervisors for assessing the condition of bank holding companies. Using an event study framework, we find that equity market variables anticipate supervisory ratings changes by up to four quarters and that the improvements in forecast accuracy arising from conditioning on equity market information are statistically significant. We develop an off-site

monitoring model that easily combines supervisory and equity market information, and we find that the model's forecasts also anticipate supervisory ratings changes by several quarters.

While the inclusion of equity market variables in the model does not improve forecast accuracy by much relative to simply using supervisory variables, we conclude that equity market information is useful for forecasting supervisory ratings and should be incorporated into supervisory monitoring models.

The use and availability of financial markets statistics for the euro area

Per Nymand-Andersen and Michel Stubbe (ECB)

The planned title of our paper would be "The use and availability of financial markets statistics for the euro area". The paper would identify the main categories of euro area users and cover the user requirements for euro area financial markets statistics, in terms of coverage, timeliness, consistency and reliability.

The types of statistics covered include value added indicators, tick/high frequency and daily observations and historical information. The paper would also briefly review the current availability of such euro area statistics from the different sources involved, and identify any important gaps. The question of aggregation and consolidation, in particular from national to euro area financial market data, will also be addressed.

The recommendations of the paper would focus on the need for more comparable data and better data coverage. Moreover, the nature and potential benefits of co-operation would be highlighted. Finally, some areas for further statistical work would be tentatively outlined, in order to better fulfil the user needs and provide more timely information of a better quality.

Extracting information from currency option prices: Some preliminary results for Hong Kong

Ip-Wing Yu (Hong Kong Monetary Authority)

Risk-neutral probability density functions (PDFs) implied from currency option prices have been gaining interest among central banks for monitoring purposes. In the case of fixed exchange rate regimes, information derived from the PDF can help assess the market sentiments regarding the devaluation risks. This paper derives the PDFs from the currency options during episodes of severe selling pressure on the Hong Kong dollar during the Asian financial crisis in 1997-1998. The increase in both devaluation risk and uncertainty regarding the future level of Hong Kong dollar exchange rate during these episodes were evidenced by the shifts in the PDFs. The limitation of the use of option prices for the extraction of market expectation is also discussed.

Fisher's Short Stories on Wealth 65-70: A Remedy for Unstable Money

Arthur Vogt

"Stabilizing the Dollar" is the title of Fisher's Short Story No 67, and it is also the title of a book he wrote in 1920 (Fisher 1920). This book starts with the following observation (page 1):

> "A great teacher once said to his students:
> Divide the study of a social situation into four questions:
> What is it?
> Why is it?
> What of it?
> What are you going to do about it?
> Accordingly I shall take up, in successive chapters,
> (1) the actual facts to be explained:
> (2) the chief causes which explain them;
> (3) the resultant evils which make a remedy desirable; and
> (4) the remedy."

This method is reflected in the titles of four chapters of "Stabilizing the Dollar":

> The facts
> The causes
> The evils
> A remedy.

There is one further chapter, the 5th chapter: "Conclusions".

To the above range of terms, indicating the four stages of solving a problem, Fisher, in his Short Stories, has added another one, inspired by medicine. He summarizes it in the last, 86th Story. It was quoted in the introduction to the first batch of Stories reprinted in this Bulletin (IFC Bulletin No. 2, p. 7):

> anatomy,
> physiology,
> pathology, and
> therapeutics.

We have arranged the numbers of all Short Stories in the table below, according to the stages of problem solving, using the alternative indications as column headings.

Fisher's Short Stories

	Stages of Problem Solving			
	Anatomy	Physiology	Pathology	Therapeutics
	Facts	Causes	Evils (consequences)	Remedy
	What is it?	Why is it?	What of it?	What to do?
Number of Story	1-7	8-55 59, 61	56-58 62-64	65-70 (present batch) 71-84

The Stories of the present batch, dealing with inflation and deflation, are classified as belonging to the stage of therapy. This batch is a continuation of the previous batch (Nos. 59-64), which concerned the physiology and pathology of inflation and deflation. The best therapy against inflation and deflation is, according to Fisher, the use of a constant unit of measurement for the purchasing power of money:

> We have a gold dollar of constant weight and varying purchasing power; we need a dollar of constant purchasing power and, therefore, of varying weight. (Fisher 1920:xxvii).

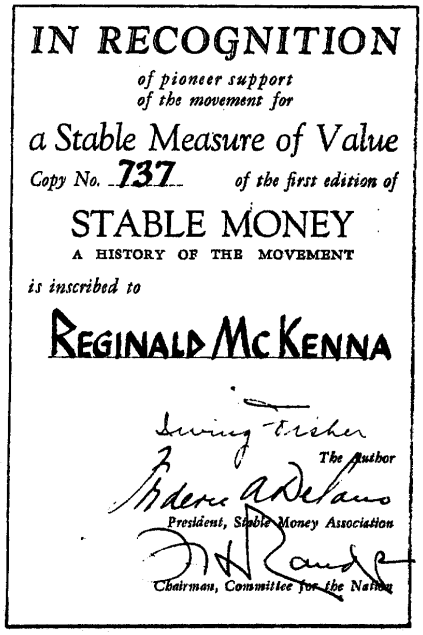
Fisher strongly emphasises that the problem of an unstable purchasing power of money is interrelated with the problem of a wrong distribution of income and wealth, as inflation and deflation tend to end up with disturbing that distribution. Various aspects of a wrong distribution were the subject of a good many of his earlier Stories. Therefore, an attempt has been made to place the Stories on the two subjects in the following table, which is an extract of the one above.

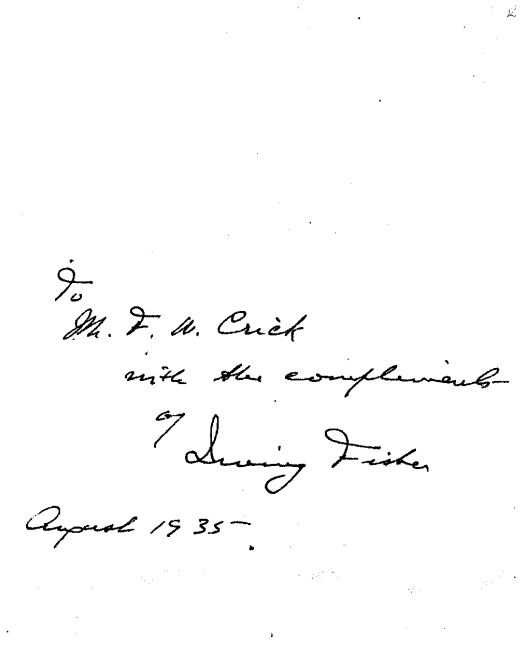
The close relation between unstable money and distortions in the distribution of income and wealth finds also expression in several of Irving Fisher's books. On pages 50 and 51, facsimiles of the title pages of eight of his books are shown:

1. "*Mathematical Investigations in the theory of value and prices"* is the 1926 reprint of his 1891 thesis. It contains the hydrostatical device shown in IFC Bulletin No. 4, p. 84.

2. "*Die Kaufkraft des Geldes"* is the German translation of the 1911 "The purchasing power of money". It was called the old testament of price index theory. By analogy, "The Making of Index Numbers" (Fisher 1922) was called the new testament (Vogt and Barta 1997:viii, Dimand 1997:1).

3. The copy of "*Stable Money"* used for the facsimile contains an inscription by the Movement for a Stable Measure of Value, signed, besides Fisher, by the president and the chairman of this


IN RECOGNITION
of pioneer support
of the movement for
a Stable Measure of Value
Copy No. 737 of the first edition of
STABLE MONEY
A HISTORY OF THE MOVEMENT
is inscribed to
REGINALD McKENNA
Irving Fisher
The Author
President, Stable Money Association
Chairman, Committee for the Nation


To
M. F. W. Crick
with the compliments
of Irving Fisher
August 1935

Movement . Co-author of the book is Hans Cohrssen (1905-1997). The present author had the good luck to meet Mr. Cohrssen. He told that he had been the personal assistant of Fisher for ten years, from 1932 to 1942. He was not paid by the university but from Fisher's private means! These means getting exhausted, this assistance came to a natural end. When Cohrssen started working in the library on "Stable Money", students mocked: "Once again an assistant writing a book for his professor, who subsequently will pretend that it is his own". That, however, was not Fisher's stile! Cohrssen was pleased that Fisher honoured him as co-author. After Cohrssen had been working for two weeks on the book, Fisher inquired about the progress made. Cohrssen re-

Stories on the Purchasing Power of Money and on the Distribution of Income and Wealth

	Stages of Problem Solving			
	Anatomy	Physiology	Pathology	Therapeutics
	Facts	Causes	Evils (consequences)	Remedy
	What is it?	Why is it?	What of it?	What to do?
	The Purchasing Power of Money			
Stories	5 Money 6 Money 7 Credit	8 Some mathematics 9 Equation of exchange 10 Quantity of money 11 Velocity of money 12 Gold bullion market 59 Money illusion	56 Inflation/deflation 57 Unstable dollar 58 Evils of inflation 61 Consequences for investors 62 Consequences for employment 63 Consequences for labour 64 Worse than unjust zero-sum-game	65 Remedy for businessmen 67 Remedy by central banks 68 Purpose agreement between public and government 69 "Compensated dollar" 70 Summary of Stories 65-69
	Distribution of Income and Wealth			
Stories	33 – 55			79 Social Insurance 80 Minimum standards 82 Socialism and Communism
	83 Inequality of distri bution			84 Remedies for Wrong Distribution

plied that he reached Confucius. Fisher was perplexed. I asked Cohrssen if Fisher had been angry. Cohrssen: "He was not angry but frightened". Her felt frightened because he had a political mission, a "crusade" (Allen 1993) in mind and did not want to lose time.

4. The copy of "*100% Money"* used for the facsimile contains a personal dedication by Fisher (above to the right). Fisher very often dedicated his books in this manner.

5. "*Stabilizing the Dollar"* (1920) has the same title as Story 67 of July 1931.

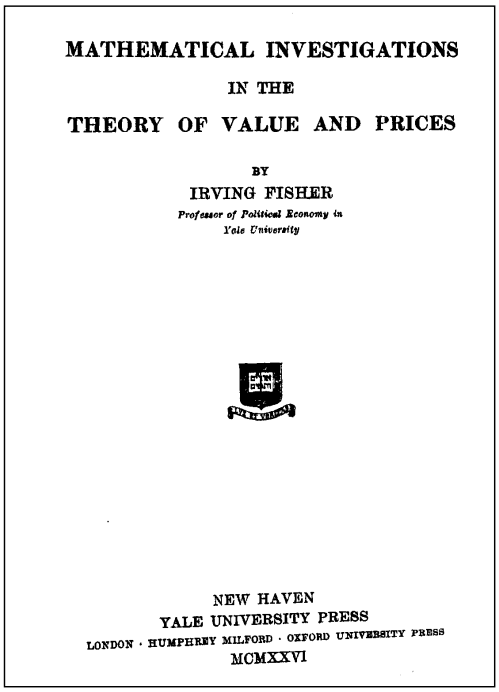
6. "*L'illusion de la Monnaie stable"* is the 1929 French translation of the 1928 original.

7. "*Inflation?"* Belongs to the rare category of books with a question mark in its title. In this book Fisher introduces the term reflation to indicate a corrective of previous price changes. Its aim is to minimize injustice to debtors and creditors. In this 1933 book, Fisher writes (p. 87):

> "… two necessities now call for action:
> The first is IMMEDIATE REFLATION;
> The second, PERMANENT STABILIZATION."

From 1920 to 1933 the USA suffered a period of deflation. If the price level was put back, by reflation, to that of 1920, injustice would be done to creditors who had lent money since that year. Fisher, in 1933, solves the problem of minimizing injustice to debtors and creditors simultaneously. He calculates that the price level should be raised by 70% above the level of March 1933. Taking account of some other factors, like taxes, etc., Fisher concludes that reflation should ideally restore the price level of 1926.

8. The translation of the title "*Moral bei der Geldausgabe and beim Gelrückzuge durch unsere nationalen Notenbanken!"* is: "*Ethics in Currency Management by Central Banks!"* (the exclamation mark is part of the title!) It is noteworthy that Fisher in a book he wrote in 1933 (Fisher 1933) refers again to ethics in national bank policy; its final chapter is dedicated to this subject.



MATHEMATICAL INVESTIGATIONS
IN THE
THEORY OF VALUE AND PRICES

BY
IRVING FISHER
Professor of Political Economy in Yale University

NEW HAVEN
YALE UNIVERSITY PRESS
LONDON · HUMPHREY MILFORD · OXFORD UNIVERSITY PRESS
MCMXXVI

1

Die
Kaufkraft des Geldes

Ihre Bestimmung und ihre Beziehung zu
Kredit, Zins und Krisen

von

Irving Fisher
Professor der Nationalökonomie an der Yale Universität
New Haven, Connecticut

Unter Mitwirkung von HARRY G. BROWN, Dozent
der Nationalökonomie an der Yale Universität

Aus dem Englischen übersetzt von IDA STECKER,
durchgesehen von Professor Dr. ST. BAUER in Basel

Berlin 1916
Druck und Verlag von Georg Reimer

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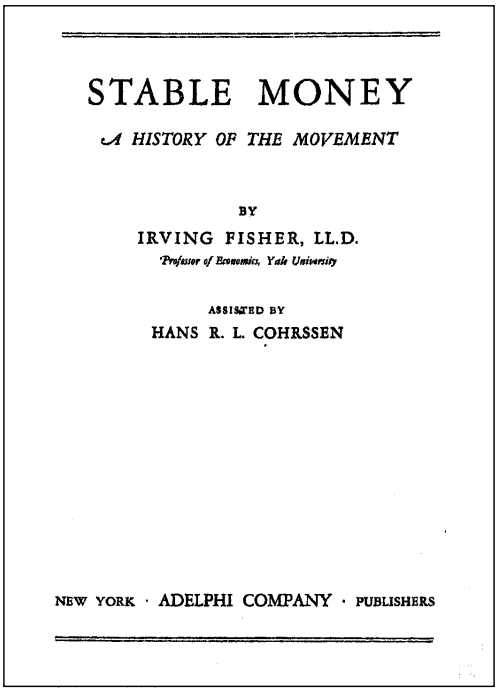

STABLE MONEY
A HISTORY OF THE MOVEMENT

BY
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ASSISTED BY
HANS R. L. COHRSSEN

NEW YORK · ADELPHI COMPANY · PUBLISHERS

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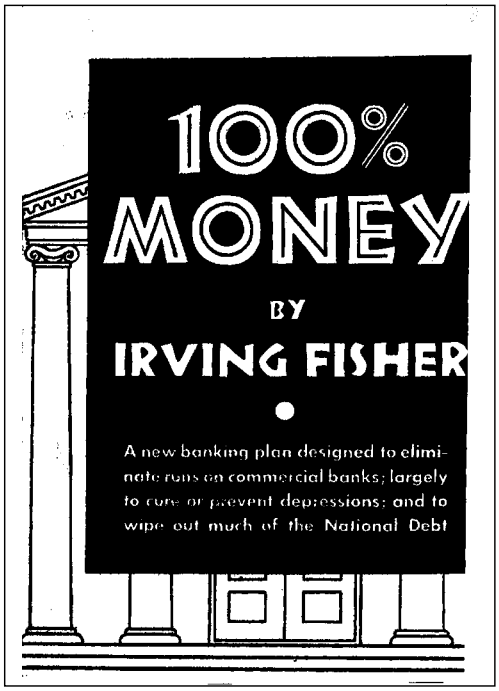

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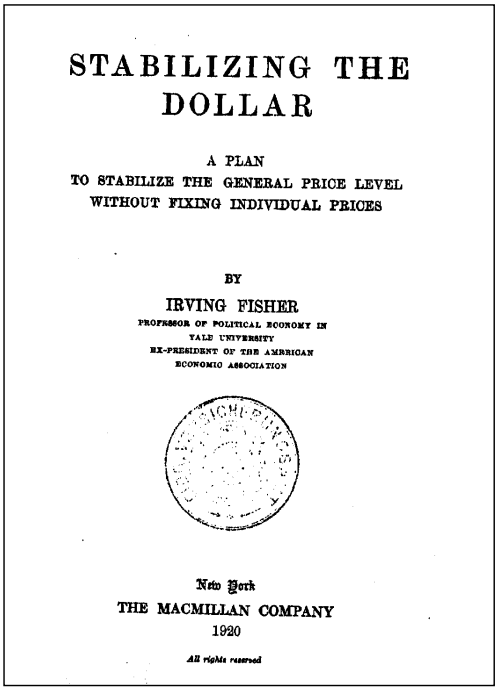

STABILIZING THE DOLLAR

A PLAN
TO STABILIZE THE GENERAL PRICE LEVEL
WITHOUT FIXING INDIVIDUAL PRICES

BY

IRVING FISHER
PROFESSOR OF POLITICAL ECONOMY IN YALE UNIVERSITY
EX-PRESIDENT OF THE AMERICAN ECONOMIC ASSOCIATION

New York
THE MACMILLAN COMPANY
1920

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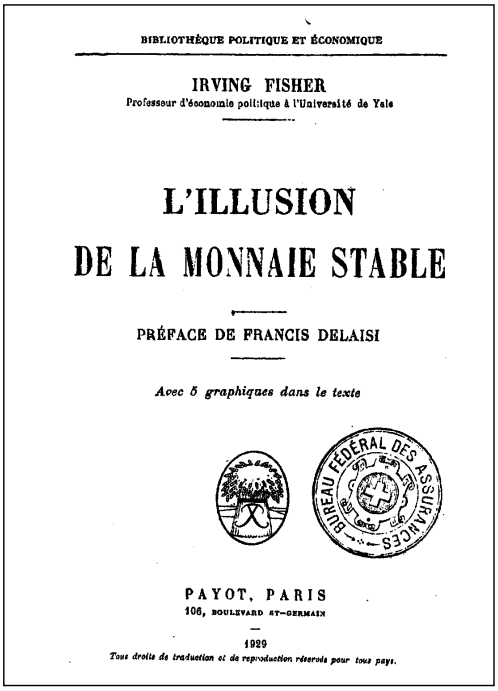

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IRVING FISHER
Professeur d'économie politique à l'Université de Yale

L'ILLUSION
DE LA MONNAIE STABLE

PRÉFACE DE FRANCIS DELAISI

Avec 5 graphiques dans le texte

PAYOT, PARIS
106, BOULEVARD ST-GERMAIN

1929

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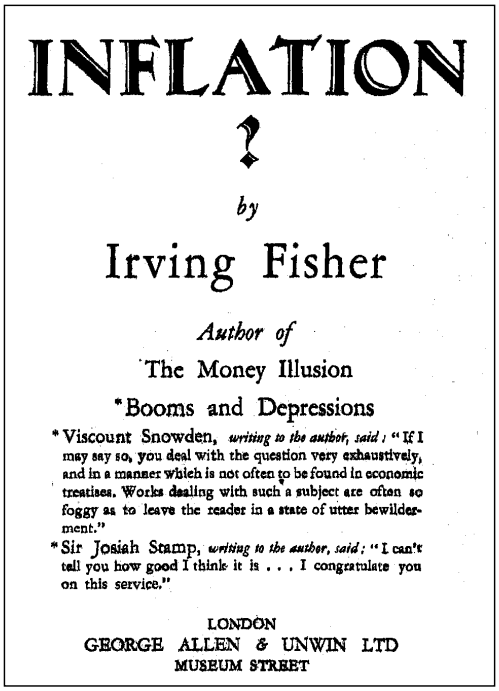

INFLATION
?

by

Irving Fisher

Author of

The Money Illusion

*Booms and Depressions

*Viscount Snowden, *writing to the author, said:* "If I may say so, you deal with the question very exhaustively, and in a manner which is not often to be found in economic treatises. Works dealing with such a subject are often so foggy as to leave the reader in a state of utter bewilderment."

*Sir Josiah Stamp, *writing to the author, said:* "I can't tell you how good I think it is . . . I congratulate you on this service."

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7

Moral

bei der

Geldausgabe und beim Geldrückzuge

durch unsere

Nationalen Notenbanken!

Von
Irving Fisher
Professor der Nationalökonomie an der Yale-Universität.
(Verfasser von: Die Kaufkraft des Geldes, und:
Die Stabilisierung des Dollars.)

Mit einem Gutachten von
Charles Gide
Professor der Nationalökonomie an der Universität von Paris
und einem Schlußwort von
Guglielmo Ferrero
Professor der Geschichte an der Universität in Turin.

P. F. H.

Bern, 1925, Verlag des Pestalozzi-Fellenberg-Hauses.

8

65. How business men can safeguard against unstable money

In this Story, published in June 1931, Fisher focuses mainly on measures business people can take to defend themselves against the consequences of unstable money. He gives practical advice for investing money in such a way that investors can cope with the instability of the purchasing power of the dollar. He also recommends to use his price index, published weekly in the Monday newspapers (Vogt 2001: 269), to overcome the various problems that are related to the instability of money. One purpose for which this index is appropriate is the indexation of contracts. It is, however, a bit astonishing that Fisher foresees that price indices will never "be applied to the great bulk of contracts, both because it is too much trouble and because the money illusion prevents most people from seeing the need of it". Anyway, in our time it is a matter of course that many contracts are index-linked. We owe this, last but not least, to Fisher. He was pioneer in both reducing the difficulties of index calculation and fighting against the money illusion. In this Story, Fisher calls this kind of actions, which are intended to compensate for the changes in purchasing power, "mending the dollar from the outside".

… the missing story…

Fisher promises to show, in the next (66th) Story, what can be done to safeguard the position of labour against the evil of inflation and deflation. However, this Story now seems to be inexistent! Either it has never been written or it has gone lost. The Story published after No. 65 is No. 67 (July 1931). One might write a political detective story about this mystery…

67. Stabilizing the dollar

In the previous (65th) Story, Fisher explained how the price index can be used to mend unstable money "from the outside", putting people in a position to cope with the fluctuations of the purchasing power of money. In Story No. 67, he notes that the same price index can also be used in order to mend money "from the inside". By this, he means taking actions that prevent fluctuations instead of merely compensating them. This can be done by central banks and governments (see next Story). Although the concept of a stable purchasing power of money had already existed for some time, this concept had hitherto been too vague to form a concrete basis for stabilization. But the advent of index numbers, to which Fisher himself had contributed so much, has made it possible to conduct such a stabilization policy in an efficient way.

68. Banks and Governments can help stabilization

Contrary to all other Stories, no printed version of Story No. 68 is available in the Library of Yale University. We used the manuscript kept in the archives of the Library.

In this Story, Fisher continues his crusade for a constant unit of measurement of the purchasing power of money. One of the chief ways of stabilizing the level of commodity prices is through an active monetary policy of the Federal Reserve System. The Fed has the power to put money into circulation or to take it out, by buying and selling securities and by varying the interest or discount rates. In addition to the duty of the Federal Reserve System, Fisher identifies a task for the government. He emphasises that the government should be supplied with the means of controlling the stock of monetary gold ("gold control") in order to prevent that industries and their millions of workers the world over will be subjected to violent booms and depressions caused by a plethora or a scarcity of gold. Fisher notes that some people are hostile to the ides of a "managed currency". But a kind of "managed currency" already exists. Therefore, the proper question is not any longer *if* the currency should be managed, but *how* it should be managed.

In fact, already since the early 1920s, the Federal Reserve System had been experimenting with an active monetary policy, i.e. influencing the money supply with discretionary measures to achieve domestic objectives instead of passively and mechanically adjusting the money stock to any gold inflows or outflows. The first instances of such a policy were the compensation of gold inflows in 1921 and 1922 by diminishing the amount of Federal Reserve credit to the banks. Though in this way inflationary pressures were reduced, the policy had a drawback by rendering more difficult the generally aspired restoration of the international gold standard, which had been suspended by most countries during the World War. In 1924, during a minor recession in the USA, the Federal Reserve reversed this deflationary policy and started to increase bank liquidity by a mas-

sive use of the new instrument of open-market transactions in government securities. Though basically in conformity with "the rules of the international gold standard", the essence of this policy was not any more a mechanical adjustment to gold flows but the combat of the cyclical downturn in the domestic economy. Anyway, the measures also facilitated a world-wide return to gold: after a long adjustment process, Britain managed to re-establish the gold standard in 1925, and other countries followed suit. In 1927, the Fed repeated its policy of replenishing bank liquidity. Once more, while contributing to the proper functioning of the international gold standard, it was mainly directed at giving a stimulus to the domestic economy. In 1931, however, when the credibility of the gold standard – which had developed into the more vulnerable gold exchange standard – was dwindling and the pound sterling was becoming the object of speculative attacks, the Fed refrained from an aggressive counter-cyclical policy and gave first priority to a reinforcement of the dollar in exchange markets. In September, at the time Fisher wrote the last Stories of the present batch, the USA saw a heavy speculative outflow immediately after Great Britain was forced off the gold. Now, in accordance with "the rules of the gold standard", the Fed raised the discount rate, refrained from attempts to offset the drain on bank reserves and accepted a contraction of the money supply.

Box

Ethics in the Monetary System!

A Pamphlet by Irving Fisher on Central Bank Policies

The title of this note has been borrowed from an address Irving Fisher delivered, some 6 or 7 years before writing his Short Stories 65-70, to the Society for Ethical Culture in Boston. This talk shows us that it was a hard job to shake the public's belief in the quality of its currency. Apparently, even the extreme inflationary disturbances that hit a number of Central and Eastern European countries could not bring most people to the conclusion that general changes in the price level had to be attributed to an inappropriate money management. Rather, people blamed their misfortune to dark manipulations by capitalists and speculators. In response to the feeling of being cheated, all kinds of ethical movements had come up. The Society for Ethical Culture, founded by the social critic and religious leader Felix Adler, was a case in point. Another example was the Free Economy League (Freiwirtschaftsbund), founded by the politician and economist Silvio Gesell, the Swiss branch of which published in 1925 a German translation of Fisher's talk in a pamphlet, entitled *"Moral bei der Geldausgabe und beim Geldrückzuge durch unsere Nationalen Notenbanken!"* ("Ethics in Currency Management by Central Banks!").

The talk has the structure Fisher generally recommended in solving social and economic problems; successively he treated facts, causes, consequences and remedies.

Fisher devotes much space to the *"facts"*. He notes that an unstable currency creates a social environment for a passive, formalistic kind of behaviour ("a dollar is a dollar"), which may be called neither egoistic nor altruistic. Nobody seems to feel responsible for the apparent injustices that harm economy and society. Fisher writes: "What seems to be everybody's job, seems to be nobody's today". He attributes this passivity to a phenomenon for which he has coined the term "money illusion", i.e. the persistent and general conviction that the national currency is a stable and incorruptible unit of measurement in which the value of goods and services can be reliably expressed The intensity with which people "believed" in their money reminds us of the attitude of Germans in the post-war period with respect to their Central Bank: "Not every German believed in God but every German believed in the Bundesbank". Fisher compares the money illusion with the illusion experienced when an airplane changes height: When it goes up, passengers come to think that the ground goes down. Fisher, being a gifted writer, used sometime the term "the dancing dollar" to characterise the currency's instability. It is tempting to combine the two word pictures to: "Riding the dancing dollar".

The "facts" have not only to be stated, they have also to be measured. In the present context, price indices are the suitable means of measurement. Fisher, as pioneer in this domain, notes that price index calculations in various countries have demonstrated that no country

can claim to have a truly stable currency, which can act as the ultimate standard for all other currencies.

About the *"causes"* Fisher is very brief. He restricts himself to the statement that the changing quantity of money and its changing velocity of circulation are the main causes of instability.

Fisher clarifies the *"consequences"* of unstable money by giving a number of examples. Very instructive is the example of a firm that has financed itself by 50% in obligations and by 50'% in stock. Initially, both obligations and shares yield 5%. Then prices are assumed to double. Ceteris paribus, the firm's profits, in nominal terms, may be expected to double too, though they will not change in real terms. Since the yield on obligations is fixed in nominal terms, dividends to shareholders will not double but treble. In real terms, the yield on obligations will fall by 50% and the yield on shares will rise by 50%. In a nutshell, this outcome may be expressed as follows: The shareholders have won what the owners of obligations have lost. The qualification "gilt-edged" (in German: "mündelsicher") of obligations is highly misleading. Fisher opposes the view that inflation and deflation, being merely a kind of zero-sum game, do not harm society. They are a social evil because they transfer real income and wealth from one pocket to another, but they may also have disruptive consequences in the economic field as they tend to lower productive activity. Therefore, they ma y turn out to be indirectly harmful to debtors and creditors alike. Furthermore, they may cause social instability. Fisher quotes the French saying that the money printing press is the forerunner of the guillotine.

Turning to the *"remedies"*, Fisher notes that the Federal Reserve System had started two years earlier a prudent policy of credit control, which had prevented an expansion of the money supply following an heavy inflow of gold. This, in turn, had safeguarded price stability. Fisher emphasises that the Federal Reserve, by conducting this policy, had voluntarily accepted less than maximum profits. He observes that the banking system or the government could hitherto not be made responsible for the evils of inflation and deflation. This should be remedied, and therefore he urges new legislation explicitly charging the Federal Reserve with the appropriate money management for the maintenance of stable purchasing power. To bring this about and to come to some kind of political "purpose agreement" on the achievement of stable money, the public should insistently bring home to civil servants and legislators the passage from the Bible: "Shall I count pure those with the wicked balances, and with the bag of deceitful weights?" (Micah 6.11). Fisher used this scriptural quotation as motto for his book "Inflation?" (Fisher, 1933)

Modern readers, who are accustomed to the fact that money management has become an instrument to achieve a variety of potentially conflicting objectives (full employment, price stability, stable exchange rates etc.) may feel surprised by the strong ethical scope of Fisher's address. In fact, Fisher and many of his contemporaries were both economists and ethicists. It could be argued that at present the choice of remedies for social problems is too much determined by considerations of economic efficiency and that the voice of ethicists has become too weak.

A.V.

The outflow of gold stopped temporarily, but early in 1933 it resumes massively. In March, the crisis was stopped when President Franklin D. Roosevelt decided to suspend gold exports. From that moment on, the problem of conflicting policy ends could be solved in favour of reflating the American economy.

The advent of an active monetary policy has often been attributed to the vision of Benjamin Strong, the Governor of the Federal Reserve Bank of New York. After Strong's death, in 1928, the Fed's policy became less marked. Wheelock (1992) records that Irving Fisher, in a testimony for Congress, observed in 1933 that the Depression was severe because "Governor Strong had died and his policies died with him… I have always believed, if he had lived, we would have had a different situation." Wheelock continues by referring to Friedman and Schwarz (1963). These authors agreed with Fisher that Strong's death caused monetary policy to change significantly. They argued that Strong's aggressive open-market purchases and discount rate reductions in 1924 and 1927 had quickly alleviated recessions, but that his death produced a sharply different policy during the Depression.

It is, however, doubtful if Strong would have advocated a different policy. He was aware of the strong potency of monetary policy to influence the domestic economy, but he was also convinced

of the importance of the gold standard. On the basis of his own statements, it seems reasonable to assume that Strong would only avail himself of an active monetary policy for internal purposes as long as the survival of the gold standard was not put into grave jeopardy.

69. How to stabilize

Fisher proposes, in analogy with the compensated pendulum in physics, a "compensated dollar". The physical compensated pendulum is used for exact time measurement: The pendulum of an ordinary pendulum clock changes its length with the temperature. Time would go slower when it is warm and quicker when its is cold. To prevent this, the pendulum is compensated using different metals with different heath expansion factors yielding altogether a constant length of the pendulum. As the compensated pendulum indicates constant time intervals, the compensated dollar would have the same purchasing power at all times: the cost of living would not rise or fall. This could be achieved by changing periodically the gold content of the dollar. In this Story, Fisher noted that it might be necessary to give up the gold standard. He wrote this just after Britain had already taken this step. By the events of 1933, the most radical of Fisher's proposals on "gold control", namely abandonment of the gold standard, was put into practice in the USA too. But Fisher had added a further recommendation, which as yet has not been followed in any country, namely to define the dollar as a basket containing different goods. "And this composite goods-dollar is not altogether a joke" (Fisher 1920: 87).

70. Summary on unstable money

In this Story, Fisher summarizes his ideas on unstable money. The editor in 1931, possibly under the impression of the instability that characterised the monetary climate at that time, emphasised – a bit improperly for a mere summary:

> This article is regarded as the most important thus far contributed to this publication by Prof. Fisher. Its careful perusal and study is urged.

In insurance terminology (Lange 1979:105), three measures dealing with damage can be distinguished:elimination of the damage, compensation of the damage and paying insurance benefits. Accordingly, the damage of unstable purchasing power of money could be:

- Prevented "from the inside", by eliminating the instability of the purchasing power of money (Story 67);
- Compensated "from the outside", e.g. by clever money investment (Story 65) or by putting index clauses into contracts relative to income flows or capital stocks.
- Or – which is not treated in the Stories – by insurance. Fisher (1925:25) mentions in this context a philantropic alms-house which offers housing to victims of the "unjust money", to the "new poor". He also (1925:19) states that bonds are not "sure" if only the capital is paid off and interest is paid. The purchasing power of the money has to be insured, in-sure-d, too. This implies the involvement of a third party (an insurer, a philanthropic institution, etc.) that bears the risk. It needs no explanation that only the State can assume a fully fledged role of insurer of the risk of instability of the purchasing power of money (social insurance), the more so as it is mostly the government that is responsible for this instability.

The difference between compensation and insurance may not be quite obvious. One might say that compensating works with the two parties directly involved whereas insurance needs a third party – the insurer. E.g. employer and employee may agree upon an indexed wage (compensation). The old age pension of the employee may be paid by the pension fund of the employer on a nominal base whereas the indexing of the pension may be financed by a superposed insurance pool (third party).

Fisher's summary on actions to stabilize the currency contains twelve points. The last one reads "bills on the subject will soon be before the congress". Exactly one year later, in December 1932, a translation of "What can the Congress do – a way to raise the credit of consumers" (Fisher 1932) was published on the front page of the journal of the Swiss Free Economy League. Congress was then a "lame duck", assembling for the last session of its legislative period. In his article, Fisher urged "stamp scrip", by means of which hoarded money would periodically lose a part of its value, as originally proposed by Silvio Gesell in 1890 (Gesell 1911:135f). Fisher notes that the official measures for reflation, by acting on the producer, operated on the wrong end of the chain between

producer and consumer. Stamp scrip, however, would directly affect the consumer.

At that time, a few German municipalities (Schwarzenkirchen, Wörgl) and some towns in the Midwest of the USA had already adopted stamp scrip, and a great number of communities and states in de USA wanted to follow suit. Fisher received many requests for advice and he felt that a handbook was needed. He wrote such a book, which answered frequently asked questions, with the help of H. Cohrssen (Fisher and Cohrssen 1933). Early March 1933, everything was ready to bring stamp scrip in circulation. But on March 4, in his Inaugural Address, President Roosevelt closed the banks and forbade the issue of money substitutes. This put an end to the experiment. For Fisher, this chapter was closed, too. He had many other crusades to fight for, which he treats in the subsequent stories (Cohrssen 1991).

Throughout his life Fisher considered instability of the value of money as a major social and economic evil (Van Wijk 1997:8). In the remaining three batches (Stories 71-86), Fisher enters upon matters that, for our time, are of even greater importance than stable money. Among these are:

- world peace
- conservation
- social insurance
- health and work.

Bibliography

Allen, R., L., 1993 Irving Fisher. A Biography, Blackwell, Oxford.

Cohrssen, H., 1991, Working for Irving Fisher, Cato Journal, 10. 825-833.

Cohrssen, H., 1996, Einer der auszog die Welt zu verändern, Erinnerungen eines Jahrhundertzeugen, Verlag Josef Knecht, Frankfurt.

Dimand, R., W., 1997, Editorial introduction to: The works of Irving Fisher, vol. vii: The making of index numbers, Pickering & Chatto, London.

Fisher, I., 1891, Mathematical investigations in the theory of value and prices, thesis. The reprint of New Haven, Yale University Press, 1925 was used.

Fisher, I., 1906, The Nature of Capital and Income, Macmillan Compamy, New York and London. Facsimile edition of 1991 by Verlag Wissenschaft und Finanzen, Düsseldorf.

Fisher, I., 1910, Elementary Principles of Economics, The Macmillan Company, New York.

Fisher, I., 1911, The purchasing power of money, German translation: Die Kaufkraft des Geldes

Fisher, I., 1920, Stabilizing the dollar, Macmillan New York.

Fisher, I., 1922, The Making of Index Numbers, Reprint, Augustus M. Kelley, 1967, New York.

Fisher, I., 1925, Moral bei der Geldausgabe und beim Geldrückzuge durch unsere nationalen Notenbanken!, Verlag des Pestalozzi-Fellenberg-Hauses, Bern.

Fisher, I., 1928, The Money Illusion, Adelphi, New York, French Translation: Payot, Paris 1929.

Fisher, I., 1932, Was kann der Kongress tun – ein Weg um den Kredit des Verbrauchers zu erhöhen, Freiwirtschafrliche Zeitung, December. ("What can the Congress do – a way to raise the credit of consumers".)

Fisher, I., and H. Cohrssen, 1933, Stamp Scrip, Adelphi Publication, New York.

Fisher, I., 1933, Inflation? George Allen LTD, London.

Fisher, I.,1934, Stable money, Adelphi Publication, New York.

Fisher, I.,1935, 100% money, Adelphi Publication, New York.

Fisher, I., 1946, The Irving Fisher Foundation, an address at its first meeting, Sept. 11, in the Fisher Papers, Yale University Library.

Fisher, I., 1947, My Economic Endeavers, Manuscript, in the Fishers Papers, Series III, Box 26, Folder 414-417, Yale University Library.

Friedman, M., and Anna J. Schwarz, 1963, A Monetary History of the United States, 1867-1960, Princeton University Press.

Gesell, S, 1911, Die neue Lehre vom Geld und Zins, Physiokratischer Verlag, Berlin.

Lange, O., 1970, Einführung in die ökonomische Kybernetik, Mohr, Tübingen.

Van Wijk, H,H., 1997, Scholar in pursuit of the common good, IFC Bulletin, 1, 5-10.

Vogt, A, 2001, Irving Fisher, in: Heyde, C, C, Senta, Editors, 2001, Statisticians of the Centuaries, Springer, N.Y. etc.

Vogt, A. and Barta, J., 1997, The Making of Tests for Index Numbers, Mathematical Methods of Descriptive Statistics, Physica-Verlag, Heidelberg.

Wheelock, David C., 1992, Monetary Policy in the Great Depression: What the Fed Did, and Why, Federal Reserve Bank of St. Louis, March/April.

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Short Stories on Wealth

Irving Fisher

65. How Business Men Can Safeguard Against Unstable Money[1]

WE have seen the great harm done by unstable money. But can anything be done about it?

Must we accept these evils as dispensations of Providence or Fate, as we accept earthquakes and tornadoes? Many things can be done. First let us see what can be done by businessmen for themselves. In the next story I shall show what can be done for labor.

One of the most obvious measures to take is to watch the quotations of the dollar's buying power and to use these figures for translating business accounts into a uniform standard. For this purpose, among others, I compute such an index weekly and publish it in the Monday newspapers.

Another use to be made of these indexes is to help, with other evidence, in forecasting business conditions. Any pronounced or prolonged fall in the price level usually foreshadows depression, while any pronounced or prolonged rise in the price level usually foreshadows improved conditions, from the businessmen's point of view. Of course, there are many other facts and figures, not related to unstable money, equally helpful in forecasting.

Another protection against unstable money consists in obtaining professional advice and warning as to the probable fluctuations in business conditions. We have had, in America, during the last two decades an increasing number of agencies for this purpose with an increasing number of clients, subject only to setbacks when the forecasts were especially mistaken. These agencies afford statistical and, in some cases, forecasting services to businessmen in order to enable them, among other things, to provide against the evil consequences of inflation and deflation.

Sometimes we can foresee clearly what will happen to the buying power of money. Then there is a rare opportunity to "make money." Anyone versed, even a little, in economics and acquainted with the German situation after the war, had a golden opportunity to make a fortune. Many in fact did, including Hugo Stinnes.

When as is usually the case, there is no telling which way the price level will go, some degree of safety may be found by investing in well diversified securities, including common stocks, with some preferred stocks and bonds as well. Such an investment is usually safer than investments in bonds alone, since the bondholder is really speculating on the future value of the dollar. If the dollar goes down he loses, while the diversified investment, on the other hand, is safeguarded. Since this diversification requires care and constant revision, the recent demand for diversified investments, as an escape for the investor from the unstable dollar, has led to the development of what is really a new profession – that of "Investment Counsel."

Besides investment counsel, for advising the investor how to diversify, there is a rapidly growing list of "investment trusts," many of which do the diversifying themselves and give the investor a certificate entitling him to a share in the composite thus created.

In times of extreme monetary instability in one's own country, while a neighboring country has comparative stability, individuals may partially escape by "contracting out" of the wildly fluctuating money by making home contracts payable in foreign currency. In extreme cases the investor sells his own country's securities, and invests the proceeds abroad. This was what the French investors did in their "flight from the franc," just as had been done a few years earlier by German investors in their "flight from the mark." Contracts in foreign money as Swiss francs or American dollars, were also made without actually sending capital abroad. Some German life insurance companies, in justice to their policyholders, converted their contract obligations into American dollars.

1) *The Lather, Cleveland, Vol. XXXI, No. 10, June 1931, pp. 27-29.*

Contracting out was also practiced in America during our greenback period, contracts being then made in terms of gold. In particular many bonds were made payable in gold dollars of the authorized weight and fineness. This proviso was revived about 1896, after a long fall of prices (1865-1896) had brought the subject into politics and Bryan had proposed silver inflation as a supposed antidote to gold deflation. Contracts were then made in anticipation of a possible debasement of the dollar in the event Bryan should be elected.

67. Stabilizing the Dollar[1]

IN the last short story I tried to show how the index number of the cost of living can be used to mend the unstable dollar by, so to speak, putting a patch on it from the outside. It has never been, and probably never will be, applied to the great bulk of contracts, both because it is too much trouble and because the Money Illusion prevents most people from seeing the need of it.

But instead of thus using index numbers for mending the dollar from the outside to counteract its fluctuations, they may be used for mending it from the inside so as to prevent those fluctuations.

To stabilize the buying power of monetary units has long been a dream of economists. And, after the World War, with its new lessons in monetary instability, this dream has, to some extent, approached realization.

Some economists, bankers and statesmen have come to recognize that nearly all inflation and deflation are man-made, and have asked why we should not have a man-made stabilization.

Progress toward stable money is now easier than ever before, because of the advent of index numbers. Only in the last generation has the Index been available as a tell-tale of the fateful fluctuations in money units. Just as we could not get a stable unit of weight until the instrument of measure, the weighing scale or balance was developed, and just as we could not get stable units of electricity until suitable electric instruments were developed, so we could not get a stable dollar until the instrument called an index number was developed. Prior to the advent of the index number as an instrument for measuring, even the concept of a stable buying power of money was too vague to form the basis of reform. The problem underlying the stabilizing of the dollar is to get a better correspondence between the two great streams, the circulation of money and the circulation of goods. This correspondence will not fully take care of itself. The money stream is under the control of. the issuers of money. The great issuers of money today are the central banks. They are properly expected to provide money and credit to expand or shrink with the expansion or shrinkage of the business to be done by it. The main trouble with business and employment today is that credit has shrunk too much relatively to business.

Credit currency has grown to be a larger part of our money than the gold stock into which it is redeemable. In England and America, the proportion of credit currency to gold is about seven to one; the tail now wags the dog. Today, then, instead of saying that the paper dollar or the credit dollar derives its value from the gold dollar into which it is convertible, it would be truer to say that the gold dollar derives its value from the credit dollar into which it is convertible. And since the volume of circulating credit is controllable and controlled, we have already a managed currency in spite of ourselves. If we insure good management we shall thereby, attain stabilization.

At several international conferences following the World War the question of stabilizing the buying power of money was discussed. Finally, at the Economic Conference at Genoa in 1922, an epoch was marked by the unanimous adoption, by the representatives of more than 30 nations, of resolutions favoring such stabilization and indicating some of the methods to be employed. These included cooperative action among the great central banks of the world concerning the use to be made of gold reserves and as to the discount policy to be pursued. These economic experts, at the Genoa Conference, recommended:

"The essential requisite for the economic reconstruction of Europe is the achievement, by each country, of stability in the value of its currency."

They then proceeded to outline the specific steps which should immediately be taken.

Still more epoch-making was the inauguration of actual efforts in this direction by the Federal Reserve System in 1922. Officials of the Federal Reserve Board and Banks realized that in America, with huge gold reserves threatening inflation, all possible steps should be taken to prevent it. Then was born into the world a new policy, almost unnoticed and scarcely self-conscious, yet des-

1) *The Lather, Cleveland, Vol. XXXI, No. 11, July 1931, pp. 26-27.*

tined, I believe, to replace the traditional policy of drifting helplessly and hopelessly on the supposedly inevitable tides of money.

The dollar, in short, has been partially safeguarded against wide fluctuations ever since the Federal Reserve System finally set up the Open Market Committee in 1922 to buy and sell securities, especially government bonds for the purpose of influencing the credit situation. This committee was reorganized in.1923 "with primary regard to the accommodation of commerce and business, and to the effect of such purchases or sales on the general credit situation." The Federal Reserve System thereby tacitly recognized its duty to control or influence credit, and seemed astonished, even a bit frightened, to discover that it possessed the tremendous power over credit which it has. This power, rightly used, makes the Federal Reserve System the greatest public service institution in the world.

68. Banks and Government Can Help Stabilization[1]

I HAVE been speaking of stabilizing the level of commodity prices. One of the chief ways of doing this is through the policies of the Federal Reserve System. It has the power to put money into circulation or to take it out. It may put money *in* to stop falling prices and to take it *out* to stop rising prices.

The huge stock of gold and holdings of securities of the twelve Federal Reserve Banks enable them, in their dealings with the thousands of member banks, to buy or sell large quantities of securities in the open market, thus either increasing or decreasing the loanable funds of the member banks. When they buy securities the gold reserves of the member banks and other banks are increased. The banks invest their surplus reserves in bonds or loans to customers thereby putting money into circulation. (It is true that it tends to flow back to the Reserve Banks again if this new money is used by the member banks to liquidate debts to the Federal Reserve Banks. But this can be partially prevented by lowering the Federal Reserve discount rates so as to make such loans easier to carry.) When the Reserve Banks sell securities the procedure is reversed. Reserves are brought down, obliging the banks to contract loans and thus money is withdrawn from circulation. (It is true that it tends to flow into circulation again through loans made to member banks by the Federal Reserve Banks. But this may be partially prevented by raising the Federal Reserve discount rate so as to make such loans unprofitable).

Because of the reactions just mentioned – making or paying loans – there is closely associated with the Federal Reserve policy the further policy, mentioned above, of controlling the interest or discount rates. The thousands of member banks can lend to their customers the more freely the more easily they themselves can borrow of the Federal Reserve Banks; and the Federal Reserve Banks can make easy or hard terms by lowering or raising their rates of discount to the member banks, or rate of "rediscount" as it is called – according as circumstances justify. Thus they can make the money we all use easy or hard to get. By timing these operations wisely, the Federal Reserve System could control and thereby largely prevent inflation and deflation of the price levels.

These two methods – buying and selling in the security market and the influences upon the discount or interest rate – give the Federal Reserve System a powerful control over loans, prices and prosperity. There are other methods too.

Some people are hostile to all "managed currencies". They do not realize that our own currency is today largely a "managed currency". The question at issue is not: Shall we adopt a "managed currency"? The question is: How shall our "managed currency" be managed? The Federal Reserve System does and should safeguard the country, to some extent, against serious inflation and deflation.

A stable price level is the chief basis of prosperity and an unstable price level is often the chief reason for depression. The MacMillan Committee of England has recently reported that to cure the present depression we need stabilization of the price level, that is stabilization of the purchasing power of money.

Stabilization should be the conscious aim of the great central banks of the world.

Besides credit control we need gold control. The means for credit control has been created by the Federal Government and lodged in the Federal Reserve System. The means for the control of monetary gold, must be created so that industries and their millions of workers the world over will

1) *Typescript with manual corrections, originally dated August 1, 1931.*

not be subjected to violent booms and depressions caused by a plethora or a scarcity of gold. There is no function of government more obviously proper than to keep stable the units by which we measure. We have a Bureau of Standards which fixes the units of lengths, weight, volume, electricity, and of every other unit employed in commerce, except the most important and universally used unit of all, the dollar, or unit of value. Our Federal Constitution authorizes Congress to "coin money and regulate the value thereof, and of foreign coin, and fix the standard of weight and measures."

Only by the exercise of discretion, duly safeguarded, can we really expect some day fully to stabilize the dollar. When therefore the public understands the nature of the problem, the government will be compelled to do its part in safeguarding the dollar as it does in safeguarding the yard.

69. How to Stabilize?[1]

IN previous short stories we have seen that the purchasing power of the dollar has never been stable. Although it had been nearly so for the seven years ending in 1929 there loomed then the danger of a gold shortage with deflation and depression. How can the dollar be kept stable? The answer is: Through credit control and gold control. We have already discussed credit control.

The most easily understood plan which has been suggested for gold control is one which has been proposed by several economists but especially by the late Professor R.A. Lehfeldt of South Africa. This plan provides simply an international governmental control of the gold mines, through, say, the League of Nations. A policy would be instituted such that when there is too little gold to support the credit structure required by the business of the world gold should be produced even if at a loss; while, on the other hand, when there is too much gold its production should be curtailed.

It is certain that an institution having the attributes of an International Federal Reserve Board could determine much more accurately the real need of gold for business than can the owners and operators of gold mines, actuated only by the motive of profits.

Another plan has been proposed by several economists, including myself in my book, Stabilizing the Dollar. According to this plan we would let gold production alone and merely change, from time to time, the weight of the dollar. Gold would then be left to follow its natural value so far as it does today, but the dollar would be preserved constant in buying power. Gold would circulate only in the form of gold bullion dollar certificates. A hundred-dollar certificate would be redeemable in a hundred dollars of gold bullion at whatever the legal weight might be at the time of redemption. Periodically this weight would be changed, as prescribed by an index number, to make the buying power of the dollar always the same. Such a plan is called a "compensated dollar" on the analogy of a compensated pendulum.

This plan has been proposed in Congress through the Goldsborough Bill. Extensive hearings were held on this bill. It makes little difference which of the two plans, the Lehfeldt plan or the compensated dollar plan, as in the Goldsborough Bill, is selected or whether some other plan, more readily acceptable, shall be brought forward, so long as we obtain our object, stabilization of the dollar.

The only alternative to gold control seems to be to abandon the gold standard altogether as has been done in England. We should then have to stabilize entirely by a "managed currency," as proposed by Keynes and others, or else by providing for redemption of all money in commodities. The latter plan has been worked out by Professor Gilbert Lewis of the University of California.

In at least three ways, then, we may meet the inevitably impending gold problem: (1) We may control the gold mines, operating them, as central banks are being operated, for public service instead of for private profit; (2) We may vary the weight of the gold dollar, or other monetary unit, in such a w ay as to compensate for the variation in the value of gold per grain thus making the value of the dollar stable; (3) We may give up the gold standard altogether, either substituting redemption in commodities or relying on a managed currency. Any one of these three methods would require government action to effect.

If we can place the responsibility for our unstable dollar anywhere it rests on the government, not only in the sense of its neglect to stabilize but also even in the sense of its complicity in destabilizing.

1) *The Lather, Cleveland, Vol. XXXII, No. 3, November 1931.*

No new principle is involved. We have stabilized every other unit as fast as we have devised instruments for measuring and fixing them. There is now no excuse for failing to stabilize the one unit left, the unit of money; for now we have the instrument for measuring and fixing it, in the index number.

70. Summary on Unstable Money[1]

NOTE: This article is regarded as one of the most important thus far contributed to this publication by Prof. Fisher. Its careful perusal and study is urged.—Editor.

I HAVE discussed through several of these short stories the problem of unstable money. What has been said may now be summarized:

(1) The problem of what to do about our unstable money is one of supreme importance, and especially at this time. It is the chief problem of this depression.

(2) It has been almost overlooked because of the "Money Illusion," the notion that money never changes, that a "dollar is a dollar."

(3) This illusion is the more serious because every man finds it harder to free his mind of this illusion as to the money of his own country than of foreign money.

(4) This illusion so distorts our view that commodities may seem to be rising or falling when they are substantially stationary, wages may seem to, be rising when they are really falling.

(5) The present fixity of weight of our dollar is a very poor substitute for a fixity of value, or buying power.

(6) By actual index number measurement our dollar rose nearly fourfold and fell back to the starting point again between 1865 and 1920. Since that time it has twice risen suddenly, namely, 1920-21 aid 1930-31. Every dollar owed today is a third greater burden than two years ago.

(7) The main cause of a falling or rising dollar is monetary and credit inflation or deflation.

(8) The tremendous fluctuations of money produce tremendous harm analogous to what would result if our physical yardstick were constantly stretching and shrinking, but it is far greater.

(9) This harm includes a constant robbery of Peter to pay Paul – amounting often to many billions of dollars in a single year, producing depression, bankruptcy, unemployment. At this very moment unstable money lies at the bottom of, and partly explains the problem of the world's present depression, including the problem of farm relief from the farm deflation and the great problem of Labor, the problem of unemployment.

(10) The solution is to be found in credit control and gold control.

(11) Credit control has been practiced by our Federal Reserve System as to buying and selling securities and adjusting its rediscount rates. But latterly the system has let opportunities pass.

(12) Bills on the subject will soon be before Congress.

The problem is one which applies to everyone, to you who read these lines, especially when you save, borrow or lend, insure your life, or contract for wages. Every time you agree to give or receive a future dollar you stand to lose if the dollar meanwhile changes in buying power. If the dollar swells up, as in the last two years, some in debt cannot pay or cannot make their business pay: They shut down. It may mean the loss of your job.

It is no exaggeration to say that stable money will, directly or indirectly, accomplish much social injustice and go far toward the solution of our industrial, commercial and financial problems. There are, I believe, few other reforms more important.

1) *The Lather, Cleveland, Vol. XXXII, No. 4, December 1931, p. 27.*