

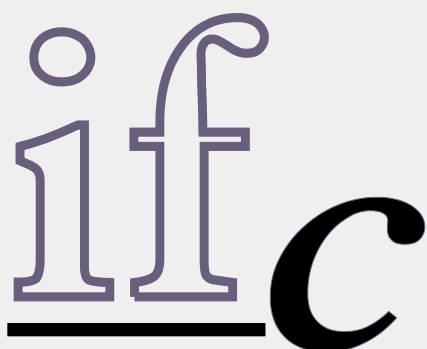
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IRVING FISHER COMMITTEE  
ON CENTRAL-BANK STATISTICS

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*ifc Bulletin*

No. 15 • May 2003



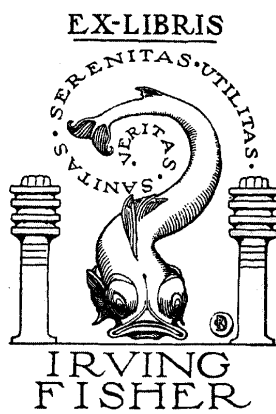
The Irving Fisher Committee is part  
of the International Statistical Institute

Contents

Berlin meeting 2003

Application for ISI Section Status

Fisher's "Short Stories on Wealth"



## Irving Fisher Committee on Central-Bank Statistics

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### IFC-Bulletin

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# ifc Bulletin

No 15 – May 2003

## Content

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EVENTS .....	5
54th ISI Session, Berlin, 2003 .....	5
Preliminary Programme .....	6
IFC NEWS .....	9
Application for ISI Section Status .....	9
IFC Conferences in 2004 and 2005.....	9
ABSTRACTS .....	16
The use of hedonic methods for quality-adjusted prices.....	16
Use of statistics in developing monetary policy .....	18
The sectoral and geographical allocation of holdership of negotiable instruments.....	21
Trade in services – a challenge to statisticians.....	25
Part I: The GATS-agreement and the four modes of supply.....	25
Part II: The Manual on Statistics of International Trade in Services and its implementation.....	27
Part III: Methodological and analytical aspects of trade in services .....	29
The use of surveys in financial statistics.....	31
FISHER'S SHORT STORIES .....	37
Fisher's Short Stories on Wealth 75-79:	
Economic Policy and Social Insurance.....	37
Short Stories on Wealth.....	45

## 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. 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.

In 2002, a conference on "Challenges to Central Bank Statistical Activities" was organised in co-operation with the Bank for International Settlements, which hosted it at its premises in Basle. 160 statisticians representing 73 countries participated. Some 50 papers were presented.

## 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.



## 54th ISI Session, Berlin, 2003

The contribution of the IFC to the 54th ISI Session, to be held in Berlin from 13 to 20 August 2003, will basically be structured along the same lines as in Istanbul (1997), Helsinki (1999) and Seoul (2001), which means that a number of meetings will be organized by persons representing our Committee. A preliminary list of the contributions on behalf of the IFC is presented on the next pages. This list will be regularly updated on the IFC web site. From this web site papers can be downloaded.

The ISI Session's Information Bulletin No 2 contains tentative time schedules of the Invited Papers Meetings and the Administrative Meetings. From these schedules the following information relevant for the Irving Fisher Committee can be derived:

Invited Papers Meeting 85 "Use of statistics in developing monetary policy"	Friday, 15 August, 9:00-11:15
Invited Papers Meeting 52 "The use of hedonic methods for quality-adjusted prices"	Friday, 15 August, 15:15-17:30
Administrative Meeting of the Irving Fisher Committee	Friday, 15 August, 11:15-13:00

When this issue of the IFC Bulletin went to press (end of April), information concerning the time schedule of the Contributed Papers Meetings was not yet available. The IFC Executive Body has requested the ISI Local Programme Committee to cluster CPMs 79, 91 and 98 around August 15.

To remain informed about time schedules, we advise you to regularly visit the web site of the ISI Session (<http://www.isi-2003.de>), which also contains general information. Any new important information will also be posted on the IFC web site (<http://www.ifccommittee.org>), section "Latest News".

### Publication of papers in the IFC Bulletin

While, according to the ISI rules, papers should not exceed 4 pages (invited papers) or 2 pages (contributed papers), the IFC encourages authors to submit a more **comprehensive version** of their papers for publication in the IFC Bulletin and on the IFC Web site.

Extended versions of your invited or contributed paper will be published in the IFC Bulletin before the ISI Conference, if they are in the possession of the Editor ([wucwo@wxs.nl](mailto:wucwo@wxs.nl)) **before the end of May 2003**. Contributions received after that deadline will be published after the ISI Conference.

To facilitate reproduction in the IFC Bulletin, any documents should be made available as Microsoft Word files, with tables and graphs in the Excel format; use of colours, particularly in graphs, should be avoided.

# Meetings of the IFC at the 54th ISI Session, Berlin, 13-20 August 2003

## Preliminary Programme

### Invited Papers Meetings (IPMs)

**Friday, 15 August, 09:15-11:00**

**IPM 85: “Use of statistics in developing monetary policy”**

Organiser: *Armida San José (IMF)*

- The Role of statistics in the conduct of monetary policy in Albania  
*Governor Shelquim Cam and Gramos Kolasi (Bank of Albania)*
- Use of statistics in the monetary policy of the Czech National Bank:  
The case of a country in transition  
*Ivan Matalik (Czech National Bank) and Josef Arlt (Czech National Bank,  
University of Economics, Prague)*
- Labour market indicators and macroeconomic modeling in the UK  
*Craig Lindsay and Robin Lynch (UK Office for National Statistics)*
- Development and use of statistics in monetary policy in Cambodia  
*Phousnith Khay (Central Bank of Cambodia)*
- Statistics on euro area banks’ deposit and lending rates – analytical use, concept and  
implementation at the Bundesbank  
*Stefan Brunken, (Deutsche Bundesbank)*

Discussant: to be announced

**Friday, 15 August, 11:15-13:00**

**Administrative Meeting of the Irving Fisher Committee**

**Friday, 15 August, 15:15-17:30**

**IPM 52: “The use of hedonic methods for quality-adjusted prices “**

Organiser: *Bart Meganck*

- Conceptual and measurement issues relating to hedonic methods of quality  
adjustment of prices: the UK experience and some practical proposals  
*David Fenwick (Head of price statistics, ONS, UK)*
- Quality adjustment of euro area price data : Assessing the hedonic methodology  
*Kenny Geoff and Ahnert Henning (European Central Bank)*
- Comparison of hedonic functions for PCs across EU countries,  
*P. Konijn, D. Moch, and J. Dalen (Eurostat, Germany, Sweden)*
- Important considerations concerning the measurement of price levels  
that have not been taken into consideration  
*Othmar W. Winkler (Georgetown University, USA)*

Discussant: *John Astin*

## Contributed Papers Meetings (CPMs)

### **CPM 79: “The sectoral and geographical allocation of holdership of negotiable instruments”**

Organiser: *Gunter Kleinjung (Deutsche Bundesbank)*

- Impacts of securities transactions on the statistical presentation of the money stock development in the euro area  
*Stefano Borgioli (European Central Bank)*
- Reliable statistical recording of negotiable instruments holdership as a precondition for the compilation of money stock and its counterparts  
*Stefan Brunken (Deutsche Bundesbank)*
- Derivation of geographical and sectoral holdership structures for negotiable instruments by use of periodical reports of securities settlement systems  
*Frank Mayerlen (European Central Bank)*
- Recording cross-border holdings of securities in the framework of Balance of Payments statistics – the envisaged role of the ECB’s Centralised Securities Database (CSDB)  
*Peter Neudorfer (European Central Bank)*
- Possibilities of and limits to identifying final holders of negotiable instruments by reporting institution within the monthly balance sheet statistics framework  
*Beatriz Sanz and Miguel Angel Menéndez (Banco de Espana)*
- Calculation of holdership structures for money market paper (and other issued bank bonds) by applying estimation procedures  
*Richard Walton (Bank of England)*
- Recording of cross-border transactions in money market paper and other negotiable instruments by sector within the bop statistics framework and derived geographical holdership structure  
*Beatrice Timmermann (Deutsche Bundesbank)*
- The means of estimating the negotiable instruments in the Japanese Money Stock Statistics  
*Mayuko Yasui (Bank of Japan)*

### **CPM 91: “Trade in services – a challenge to statisticians”**

Organiser and Chair: *Almut Steger (Deutsche Bundesbank)*

#### ***Part I: The GATS-agreement and the four modes of supply***

- The GATS-agreement and the four modes of supply – a statistical challenge  
*Guy Karsenty (World Trade Organisation)*
- Cross-border transactions in the field of services – the example of Canada  
*Art Ridgeway (Statistics Canada)*
- Measuring tourism in the context of International Trade in Services  
*Antonio Massieu and Shaila Nijhowne (World Tourism Organisation)*
- Analytical value and limitations of FDI statistics: a user’s perspective  
*Masataka Fujita and Katja Weigl (U.N. Conference on Trade and Development)*
- FATS data: Lessons from the French experience  
*Francois Renard and Frédéric Boccara (Banque de France)*
- Temporary movement of natural persons under the GATS  
*Jolita Butkeviciene (U.N. Conference on Trade and Development)*

**Part II: The Manual on Statistics of International Trade in Services and its implementation**

- Implementing the Manual on Statistics of International Trade in Services: Are we progressing?  
*William Cave (Organisation for Economic Co-operation and Development)*
- Trade in services – a challenge to statisticians: the Czech case  
*Petr Vojtisek (Czech National Bank)*
- Evolution of data collection system on services in Russia – from surveys to an international transaction reporting system  
*Sergey Shcherbakov (Bank of Russia)*
- Japan's implementation of the recommendation of the MSITS  
*Eika Yamaguchi (Bank of Japan)*
- Compiling trade in services in a fully liberalised developing country: the case of Uganda  
*Michael Atingi-Ego and Kenneth Egesa (Bank of Uganda)*

**Part III: Methodological and analytical aspects of trade in services**

- Enhancements on the services and the current transfers' data for the balance of payments  
*William Villegas Calvo (Central Bank of Costa Rica)*
- Italian business travellers abroad: a multidimensional perspective  
*Giovanni Giuseppe Ortolani and Andrea Alivernini (Ufficio Italiano dei Cambi)*
- Travel in balance of payments statistics  
*Branimir Gručić and Igor Jemrić (Croatian National Bank)*

**CPM 98: "The use of surveys in financial statistics"**

Organiser: *Jorma Hilpinen (Bank of Finland)*.

- Redesign of the statistics on insurance corporations and pension funds  
*Abraham J. de Boo (Statistics Netherlands)*
- Surveying issuing and paying agents (IPAs) of securities in the UK  
*Bruce Devile (Bank of England)*
- Utility of surveys undertaken by the Reserve Bank of India for collection of financial statistics  
*K.S. Ramachandra Rao (Reserve Bank of India)*
- The surveys for the MFI interest rate statistics: Minimum standards for sampling procedures  
*Daniela Schackis (European Central Bank)*
- The implementation of the new ECB interest rate statistics in Austria – a pragmatic approach to a survey  
*Aurel Schubert and Gunther Svoboda (National Bank of Austria)*
- Sample design and implementation of the Italian survey on harmonised interest rate statistics  
*Paola Battipaglia and Fabio Bolognesi (Banca d'Italia)*
- Performance Evaluation Model for Primary Non-Agricultural Credit Societies  
*Y.S.P. Thorat, Maria Pardeep and Praggya Das (Reserve Bank of India)*

# Application for ISI Section Status

## IFC Conferences in 2004 and 2005

As you recall from the IFC-Conference held in Basle last summer, IFC has applied for Section status within ISI (see next page). The Executive Committee of ISI has formulated a positive advice to that demand. The ultimate decision will be taken by the ISI Council and the General Assembly of ISI in August 2003 at the ISI Session in Berlin.

One of the requests made by the ISI Executive Committee dealt with the enlargement of the fields of interest. IFC should broaden its scope beyond the purely central bank statistics by including also insurance, financial brokerage, ... This might imply a change in the name of our Committee. Therefore all members are invited to provide suggestions (*by mid June*) for a new name of IFC, once it should become an ISI Section.

\* \* \*

### 2004

There is a good chance that IFC will organise for the second time an independent Conference, as it was the case in August 2002. All suggestions on themes for that conference are welcome (*by mid June*). Potential candidates include

- “Financial sector assessment”,
- “Financial Stability Indicators” and
- “IAS and effects on Statistics”.

\* \* \*

### 2005

ISI organises in 2005 its Session in Sydney. IFC should submit, by May 13th 2003, proposals for Invited Paper Meetings. Potential subjects are

- “Accounting Systems and their impact on Statistics”,
- “Statistical Impact of Basle II” and
- “The rest of the world in real and financial national accounts”.

Members are invited to do more suggestions by the *end of April 2003*.

*Rudi Acx*  
IFC Secretary





## IRVING FISHER COMMITTEE ON CENTRAL-BANK STATISTICS

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### IFC demand to become ISI Section

From: *Irving Fisher Committee on Monetary and Financial Statistics*  
To: *ISI Executive Committee*  
Subject: *Application for Section status*  
Date: *20 January 2003*

The **Irving Fisher Committee on Monetary and Financial Statistics, IFC (working title)**, introduces an application to become an independent ISI Section and presents this document to the ISI Executive Committee of the International Statistical Institute for this purpose.

The request follows the template according to the criteria for becoming an ISI Section set out by a decision of the ISI Executive Committee. The list of criteria were set at our disposal by the Director of ISI Permanent Office, Dr. M. van den Broecke.

### 1. Core Objectives

The Irving Fisher Committee on Monetary and Financial Statistics is a forum for reflection, discussion and the development of statistical issues that are world-wide of interest to experts working on monetary and financial statistics. In providing that forum, the **mission statement** of IFC is:

- identifying key statistical issues in the monetary and financial domain;
- exchanging views between experts on monetary and financial statistics representing monetary and financial institutions, national statistical institutes and the academic world;
- facilitating personal contacts between its members;
- participating actively in the discussion on adapting statistical systems to changing requirements;
- sharing experience on the development of new statistics and the implementation of new methods of collecting, compiling and disseminating statistical information;
- promoting effectively the adoption of international statistical standards and methodologies.

By acting in this manner, IFC contributes to the increase and transfer of statistical knowledge in the community of experts working on monetary and financial statistics and through its openness also to the academic community and national statistical institutes. IFC forms an informal channel through which ideas are spread, which lead to new insights and statistical projects on approaches and methods. IFC is not aiming at inventing new statistical theory as such, at least not initially, but rather offers possibilities which can trigger fundamental research leading to new theories. On the other hand, in the field of statistical application, the promotion of innovative statistical approaches does form part of the IFC objectives. Subjects discussed within IFC, and research carried out within the framework of IFC, can and will lead to developments which will be taken on board afterwards by statistical authorities. In that respect, IFC contributes to an improved quality of statistics and an increased number of statistical data publicly accessible.

The **areas of statistical interest** of IFC related to the sphere of central banks, including supervisory authorities, and all financial institutions are of major importance, and are not adequately covered by any other ISI Sections. The main areas of interest for IFC can be summarised as follows: statistics on money and banking, balance of payments, financial markets, monetary and financial stability, and international monetary and financial cooperation. Given the growing integration of banks with other financial institutions its field of interest has increasingly embraced statistics on insurance companies, pension funds, investment firms, securities dealers etc. As these domains of interest are actually not the first priority of other ISI Sections nor of any other existing statistical societies, the activities of IFC are supplementary to those of the other existing Sections of ISI. From this point of view, the upgrading of IFC to Section status could also be broadening the scope of the International Statistical Institute as a whole. Within the wider IFC area, central bank statisticians are working in a well defined domain, the specific application of which is determined by the independent policy decision process at national and international level.

The interests of IFC, as mentioned above, create ample opportunities for cooperation with other ISI Sections on grounds of equal treatment. IFC and IAOS already cooperated in the past in the field of conferences and there is a mutual exchange of information on their respective activities. Depending on the subjects treated, IFC will extend its cooperation with other ISI Sections and Committees. IFC aims to develop extensive communication with the ISI Sections, to the benefit of ISI as a whole. IFC fully accepts to act as a loyal partner within ISI. If any overlaps in the areas of interest might manifest themselves, IFC will consult with the ISI Sections involved.

## 2. International Leadership

IFC is actually composed of delegates (cf. *infra*) from central banks all over the world. These persons are in charge of statistics and/or research within their institutions. The specialisation in part of these institutions guarantees a high level of intellectual leadership within the financial community and also outside that community since an important number of delegates also have responsibilities in the academic world.

Most of the persons involved in IFC represent their institution at a high level in international and regional organisations dealing with statistics, such as IMF, BIS, OECD, ECB, CEMLA, ADB, and the European Commission, which gives IFC serious opportunities to discuss items which are important to these organisations. These contacts can put IFC on the edge of developments in the domains put forward in its mission statement.

The firm aim of IFC is to extend actively its network in such a way that all regions and sub-regions of the world are represented by highly qualified people. Under that regime IFC will also establish close contacts with international fora organised by the financial community of the private sector.

IFC will also act as a discussion forum and a platform for the statistical experts from monetary and financial institutions where new ideas, concepts and measurement issues can be put to test for wider acceptance. This will create an additional dynamic within IFC.

## 3. Membership

IFC has, at least for the moment, only institutional membership. Currently, 75 central banks and monetary authorities and 3 international organisations are represented (membership list is attached as Annex 1). The international character of IFC is proven by the broad coverage of membership. Though the geographical breakdown of membership still shows a preponderant presence of European institutions (some 45 percent), Africa, Asia and Australia together represent 40 percent and the Americas 15 percent of the membership. The membership rate of countries outside Europe has been increasing over the last years and it is the firm aim of IFC to stimulate that evolution.

The number of persons designated (the so-called delegates) by the institutional members to participate in IFC amounts actually to more than 130 persons. Only a few of them are member of ISI or its Sections. Due to an active policy in recruiting new members and as a result of the organisation of special IFC-meetings/conferences attracting many non member participants, that number shall increase in the coming years to attain, in the short term, over 150 persons. This number can be increased to 400 persons, within 4 years, by allowing personal membership, as decided by the IFC.

The prime decision-making body of IFC is the assembly of delegates at the Administrative Meeting, during which the Executive Committee – in charge of day-to-day business and of selecting proposals made by the delegates for future conferences/activities and the organisation of these – are elected for two years. The present composition of Executive Committee is listed in [Annex 2](#).

## 4. Sustainability

The elements on international leadership and membership were dealt with in the above paragraphs. Below, the financial elements and the activities of IFC are described.

### 4.1 Finance

IFC has no legal status and, as yet, no membership fee is charged. The functioning of IFC is, at the present juncture, sponsored by the institutional members of the persons represented in the IFC Executive Committee. This means that costs incurred by meetings of the Executive Committee are covered by the institutional members they belong to. Organisational tasks, secretarial work and publication costs are borne by some institutional members. IFC secretarial work and publication costs of the IFC Bulletin (cf. *infra*) are financed by the National Bank of Belgium. The organisational, infrastructural and hosting costs for the first IFC Conference in August 2002 (cf. *infra*) were paid by the Bank for International Settlements (BIS). For this first IFC conference no participation fee was charged. The IFC website (cf. *infra*) is hosted by the BIS.

In the present constellation, there are no annual accounts of the IFC. This will change when the IFC becomes an ISI Section. A more structural approach to finances will be required. Sponsorship, in the forms of funds or partial support of personnel, will be enlarged on the basis of medium term contracts and it will be considered to introduce a membership fee. Consultations with the ISI Permanent Office will begin regarding the administrations of IFC membership records and financial accounts.

Currently the costs involved for the functioning of IFC, excluding the costs generated by the above mentioned IFC Conference, amount to some N50.000 a year. This can roughly be broken down into: direct office costs (use of stamps, paper, all kind of telecom facilities,...) N5.000, publications N10.000, secretarial staff N25.000 and time invested by members of the Executive Committee N10.000. The costs due to the first IFC Conference were a multiple of the yearly budget.

### 4.2 Summarized history and activities

The short history on IFC contains information on the **activities** of the Irving Fisher Committee. IFC was established on the initiative of a number of central bank statisticians who were attending the ISI Corporate Members Meeting at the **1995** ISI Session in Beijing.

During all of the ISI Sessions since 1995, IFC members participated actively in presenting papers to the conference.

Two years later in **1997**, during the 51st ISI Session in Istanbul, the IFC held its inaugural Administrative Meeting in the presence of Dr. Zoltan Kenessey, who strongly supported the new Committee. An Executive Body was established and it was decided to start the publication of the IFC Bulletin, devoted to the activities of IFC.

In **1999** at the 52nd Session of the ISI Session, in Helsinki, a Programme Committee was instituted with the aim of channelling the ideas held in central banks all over the world into activities of IFC.

At the 53rd session of the ISI, held in Seoul in **2001**, IFC organised both an Invited Papers session on 'Financial Stability Statistics' and Contributed Papers sessions on 'The Measurement of External Debt and External Reserves', 'Collection of Financial Data from Companies: Statistics and International Accounting Standards' and on 'The Relationship between Central Banks and Statistical Institutes'. Over 20 papers were presented, from both IFC members and non-members of IFC. Each of the meetings, including the administrative meeting, were attended by 30 to 60 persons. Also for the 54th Berlin ISI Session in **2003**, IFC is engaged in the organisation of two Invited Papers Sessions: 'The Use of Hedonic Methods for Quality-adjusted Prices' and 'Use of Statistics in Developing Monetary Policy', and in three Contributed Papers Sessions: 'Trade in Services – a

Challenge for Statisticians’, ‘Sector and Geographical Allocation of Negotiable Financial Instruments’ and ‘The Use of Surveys for Financial Statistics’ (see annex 3).

In between two successive ISI Sessions the IFC will hold **conferences**. The first conference of that kind was organised in August **2002** in cooperation with the BIS on ‘Challenges to Central Bank Statistical Activities’. The issues of the conference focus on ‘Central Bank Statistics and Monetary and Financial Stability’, ‘Improving the Use(fulness) of Central Bank Statistics’, ‘The Development with Respect to the Statistical Analysis at Central Banks and ‘Constraints on Central Bank Statistical Activities’. The concept of the conference was a mix of presentations and workshops. For each of the themes speakers with recognised international intellectual leadership had accepted to participate. The programme is attached as **Annex 4**. Over 160 participants, from over 70 countries, were present and participated actively. This conference served also as the vehicle to promote the ideas of IFC.

IFC publishes also the **IFC Bulletin**; the first issue dates from November 1997, and issue N°13 has been published in December 2002. The IFC Bulletin is the official periodical of the Irving Fisher Committee and contains articles in the domains covered by the mission statement of IFC. Papers from ISI Sessions by IFC delegates and those presented in session organised or co-organised by IFC are reprinted or printed in an extended version. A series of articles written by Irving Fisher in the 1920s and 1930s and never reprinted ever since, were also published. Institutions and individuals active in the field of interest to IFC can subscribe to the IFC Bulletin free of charge. A set of the numbers issued since the start has been communicated to the ISI Secretary; all issues can be consulted on the website of IFC.

For the last two years IFC has maintained a **website** (<http://www.ifcommittee.org>), which is regularly updated and disseminates information on its activities, all numbers of the IFC Bulletin and relevant information on IFC and related activities including those originally from ISI.

## **5. Business Plan**

In the seven years of experience acquired since its constitution in 1995, IFC has learned a lot about organisational aspects, and about the way it has to communicate its ideas and to select members.

With this experience, IFC is ready to work on the future development of IFC. Some central directives run as follows:

### ***5.1 Objective in terms of number and composition of membership***

The IFC opts for a system of both institutional membership and membership for individuals. The relative weight of both membership types can evolve over time. For the time being, special attention remains on institutional membership as this forms an important guarantee for further sustainable growth. The objective in terms of number of persons involved – either as individual members or as the delegates of an institutional member – is set at 400 by the end of 2006, while observing a sufficient world wide geographical spread.

A primary objective is to continue the involvement of competent persons, who must be well placed to spread the ideas of IFC and to stimulate the sustainable growth of IFC. Monetary and financial institutions will be contacted via high level members of IFC to persuade them to subscribe to the mission statement of IFC and to participate actively in IFC. The intermediate aim is to reach 100 institutional members and 250 delegates/individual members by end 2004. The rise in the number of institutional members will have a very important positive impact on the further development of IFC.

Given the international character of ISI, which is fully subscribed by IFC, special efforts will be carried out to increase the number of members from Latin America and, more generally, from all regions outside Europe. This is also reflected in the composition of the Executive Committee, which was enlarged with persons from South America and Asia.

### 5.2 *Finances*

When IFC will develop as an independent ISI Section, it will, on the one hand, be in a position to rely on the knowledge and the logistic assistance of the ISI Secretariat. On the other hand, an independent Section requires more day-to-day management than is actually available in IFC. This will increase the need for more financial resources.

A campaign will be started to invite the institutional members to participate in a sponsorship plan. Besides this, the introduction of a membership fee is considered. Fees for individual members will be lower than for institutional members. The sponsorship can also take the form of acting as host for a conference. The ability to access such financial resources will clearly be facilitated by attracting institutions as members.

Monetary and financial institutions can also contribute in the form of partial support of staff for the benefit of IFC. This doesn't mean that people have to be pooled in one geographical location. Official permission to spend part of their working time for IFC is preferred.

In order to inform members in full transparency about revenue and expenditure, annual accounts – approved by an auditor – will be presented to the Administrative Meeting.

### 5.3 *Activities*

IFC continues its contributions to the biennial ISI Session in organising Invited Papers sessions and Contributed Papers meetings as it has done over the last seven years and as it will do for the Berlin Session in 2003. To intensify the link with the ISI Sessions, IFC will, as a structural measure, nominate a person (by preference someone participating in the national organisation committee) of the country hosting the next following ISI Session in the Executive Committee.

In between two consecutive ISI Sessions, IFC will organise a conference within its fields of interests, of which the Basle Conference of August 2002 has been the first one. IFC also foresees the organisation of regional workshops/seminars as a potential extension.

For both activities IFC will, after consulting ISI, cooperate with and inform ISI Sections.

Special attention will be devoted to the promotion of the IFC Bulletin as a full-fledged statistical bulletin in the fields forming part of the mission statement. Contributions will be actively selected from statistical experts from monetary and financial institutions.

IFC will present itself to the international organisations dealing with statistical matters as a representative group of the global monetary and financial community. The existing and future representatives in those organisations who are member of IFC will form an excellent channel to initiate and develop this process.

Signed  
*Prof. Dr. R. Acx*  
IFC Secretary  
*Dr. A. Steger*  
IFC Chairperson

*Annex 1:* IFC - Membership List as of end December 2002 \*)

*Annex 2:* Composition of IFC - Executive Committee as of end December 2002 \*)

*Annex 3:* IFC participation in ISI Berlin 2003 \*)

\*) Annexes have not been reproduced in this Bulletin, but are available on the IFC web site (<http://www.ifcommittee.org>), section "Latest News".

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# The use of hedonic methods for quality-adjusted prices

## Conceptuals and measurement issues relating to hedonic methods of quality adjustment prices: The UK experience and some practical proposals

*David Fenwick (Office for National Statistics, UK)*

The measurement of the change in cost of a fixed basket of goods and services raises important practical issues when set against the background of a dynamic market place where new outlets open and old ones close and where items frequently disappear from the shop shelves only to be replaced by new ones which may have radically different features. Yet this is typical of the situation that faces compilers of consumer price indices. Similarly for compilers of producer price indices. How do compilers keep the basket fixed whilst at the same time ensuring it is up-to-date and representative? This paper attempts to provide some answers based on the results of ONS's on-going research programme into quality adjustment methods and its collaboration with other statistical offices. It takes a critical look at the conceptual and measurement issues which arise and makes practical proposals on the evaluation of alternative approaches and the criteria that could be used by national statistical offices to help determine work priorities.

## Quality adjustment of euro area price data: assessing the hedonic methodology<sup>1</sup>

*Geoff Kenny and Henning Ahnert (European Central Bank)*

In this paper, we review the well-known problem of how to measure price developments when the quality of the underlying goods and services is changing over time. The importance of appropriate methods to take account of quality change is highlighted from the perspective of monetary policy. In particular, we highlight the need for credible and transparent price indicators. In this context, we review the hedonic approach to calculating quality-adjusted price indices and assess the available information on their effects as well as their potential for improving comparability. Some of the current alternative practices as regards quality adjustment in the European Union are also discussed. Finally, we suggest some answers to the question why progress in the field of quality adjustment has been limited despite the apparent EU-wide agreement on the need for improvements.

<sup>1</sup> *The views expressed in this paper are those of the authors and do not necessarily reflect the views of the ECB.*

## Comparison of hedonic functions for PCs across EU countries

*Paul Konijn (Eurostat), Dietmar Moch (ZEW, Germany)  
and Jörgen Dalén (Sweden)*

Hedonic functions for PCs of different countries are difficult to compare since different countries use different data sources. In this paper, hedonic functions for several EU countries are compiled from one and the same data source. This enables a direct comparison of these functions and thus an analysis of similarities and differences in consumer preferences. If similarity of consumer preferences can be shown, there is a strong case for estimating the hedonic function at EU level. Provisional results show that the same functional form with the same variables included give a good fit (around 0.8) in the hedonic functions for the countries investigated, but that certain individual regression coefficients are quite different.

## Important considerations concerning the measurement of price levels that have not been taken into consideration

*Othmar W. Winkler (Georgetown University, USA)*

This paper addresses major areas concerning the measurement<sup>1</sup> of Prices:

*1. The historical context.* Index numbers to determine changes in the general price level may have made sense when the western economies were small, growing slowly, with a limited number of products on the market, products that hardly changed for decades. Index makers used the “price-per-unit” of a few representative products. The fixed weights needed to restore the proper importance of the unit-prices of the index served a variety of different purposes.

*2. The nature of price.* Price is a social phenomenon, the most important part of the business transaction, involving cultural and personal factors of the contracting parties. *Price is not a physical or technical feature* of the merchandise or service.

*3. Analyzing the end product* Index numbers really are large statistical monetary (price) aggregates. The loss of meaning in large statistical aggregates is not recognized today<sup>2</sup> The large price aggregates (totals), far removed from the daily reality, have a very limited informative value. Their vagueness makes the strict comparability over time of the priced items, an illusion.

*4. A more realistic proposal to measure price levels.* Modern market economies have become very complex. The statistical capture and presentation of prices requires a bold new and flexible approach. Proposed are simple ratios between the “average prices-per-transaction” for industries, regional groupings, for groups of related products, and for the entire economy.

<sup>1</sup> *I would like to suggest to stop using the word “measuring” when referring to price levels. Measurements are the manner of observing accurately in the natural sciences. By borrowing this term from the exact natural sciences, a higher degree of precision and sophistication is implied when reporting on price levels and their changes. It would be better to tone down the language from “measuring prices” to the less presumptuous and more realistic “reporting of prices”.*

<sup>2</sup> *BLS Handbook of Methods, Chpt. 15 International Price Indexes, and Chpt.17 Consumer Price Indexes, US Department of Labor, Washington, D.C., 1997*



# Use of statistics in developing monetary policy

## The role of statistics in the conduct of monetary policy in Albania

*Governor Shelqim Cani and Gramos Kolasi (Bank of Albania)*

The paper will discuss the statistics currently available in Albania and how they are used in the conduct of monetary policy. Given the level of development of macroeconomic statistics in Albania, the paper will describe how monetary statistics offer consistently the more reliable and timely indicators for use in the current monetary aggregate targeting regime in Albania. The weaknesses of the different macroeconomic statistics will be briefly discussed along with the reasons of how these weaknesses diminish the value of these statistics for policy purposes. With the goal of moving towards an inflation targeting regime, the need for other macroeconomic statistics, particularly real sector statistics, will expand and these needs will be described. The paper will emphasize how statistical considerations play an important role in a country's decision to shift to an inflation targeting regime as well as the pace of the shift to the new regime.

## Use of statistics in the monetary policy of the Czech National Bank: The case of a country in transition

*Ivan Matalik (Czech National Bank) and Josef Arlt (Czech National Bank,  
University of Economics, Prague)*

The Czech Republic is one of the transition countries that achieved a substantial progress in economic transformation. The specific transition period has been connected with many crucial changes in different areas. The main focus of the paper will be an analysis of changes in the use of statistics in the Czech monetary policy process during the whole period of transformation from 1990 up to now. The attention will be especially devoted to the Czech monetary policy and its statistical needs in individual periods of the economic transformation as well as the view on possibilities and limits in exploitation of Czech statistical data for standard analyses.

The paper will be split into four main parts. In the first part the authors will concentrate on general importance of the statistics in the context of the central bank's targets. The second part of the paper will be focused on the definition of the main Czech National Bank's target and the monetary policy in the transition period. The progress in economic transformation and the shift from monetary targeting to inflation targeting in the Czech Republic will be presented as the most important argument for changes in the use of statistics. In part three the authors will examine the impact of changes in the Czech economy and monetary policy on statistical needs in different periods of economic transformation. The changes of statistics from the early stage of transformation until the present will be described. The authors will concentrate particularly on the decline in importance of monetary aggregates and the growing exploitation of financial market data. The possibilities and limits in using Czech statistical data for the standard analyses from 1990 up to now will be evaluated in the last part of the paper. In this connection, the suitability of statistical data for analyses of

the monetary transmission mechanism, for construction of econometric, macro-econometric and macro-economic models and for different statistical and econometric analyses will be examined.

The general message of the proposed material will consist of the evaluation of changing statistical needs in the last twelve years from the point of view of the Czech National Bank's monetary policy development. In this process two factors played an extremely important role, namely the Czech economic transformation and the world economic changes. Owing to these factors the Czech National Bank's statistics nearly reached the standard level of the most developed countries in the fields of statistical data collection and processing.

## Labour market indicators and macro-economic modeling in the UK

*Craig Lindsay and Robin Lynch (Office for National Statistics, UK)*

Aim of the paper is to look at labour market statistics in the UK, their significance to monetary policy, and their use in macro-economic modeling.

The paper will look at:

- the UK monetary policy framework, e.g., the role of the MPC;
- why labour market statistics are important in monetary policy theory; the role of labour markets in the transmission of monetary policy;
- the use of labour market indicators by the Bank of England e.g.: the main Macroeconomic Model (MM); Phillips Curve models, and optimizing models designed to look at specific issues.
- implications of monetary policy for statistical priorities, user needs e.g.: data timeliness, quality, coverage, sources
- areas for future statistical development.

## Development and use of statistics for monetary policy in Cambodia

*Phousnith Khay (National Bank of Cambodia)*

For a decade, ending in 1989, Cambodia maintained a centrally-planned economy. During this period, Cambodia's statistics were designed to guide the formulation and implementation of the state plan, and in general did not conform to the international standards. The development of the statistical systems based on the international methodology was started in the early 1990s. Since the early 1990s, there was an urgent need for statistics in order to assess the country's economic conditions and for the preparation of financial assistance programs. In particular, macroeconomic statistics were needed for the formulation of financial programs and monetary policy.

There were many deficiencies in Cambodia's statistics at the early stage. To meet the need for reliable statistics, wide-ranging external technical assistance was provided to Cambodia for establishing statistical systems that meet the international standards. Despite significant progress, there are still challenges facing Cambodia that relate to the provision of the appropriate and reliable statistics for policy purposes. They include issues relating to institutional coordination in collection, compilation, and dissemination of statistics, legal framework, capacity building, and implementation of the international methodologies.

In Cambodia, the use of statistics for monetary policy has been in the context of the IMF's financial programming framework, where monetary targets are determined and agreed by Cambodian authorities and the IMF. The financial reforms undertaken by Cambodian authorities are expected to contribute to the development of several market-based monetary instruments. In light of these financial market developments, the paper will discuss the evolving statistical needs and applications for formulating monetary policy and monitoring its effects.

Statistics on euro area banks' deposit  
and lending rates –  
analytical use, concept and implementation  
at the Bundesbank

*Stefan Brunken (Deutsche Bundesbank)*

The national central banks of the euro-area started data production for the new harmonised statistics on banks' deposits and lending rates in February this year. These new statistics now enable the European Central Bank to compile euro-area interest rate indicators using a consistent methodology.

The aim of this paper is to introduce the methodological concept behind this new survey and to highlight possible points of departure for the analytical use of these statistics. In doing so, the first part of the paper sets out the object of reporting and examines the methodology, including the derivation of euro-area indicators from raw country results, the type of interest to be calculated as well as and the selection of the actual reporting population. The second and final part looks at the analytical use of the interest rate indicators. Attention is drawn to the important role the new indicators will play in the analysis of how the monetary policy transmission mechanism operates in the euro area as a whole and in the individual member states. The paper also highlights how the data can assist the interpretation of monetary developments in the context of monetary analysis. Last but not least, the paper mentions some possible applications relating to the supply side, i.e. the banking business itself, which might be useful both for monetary policy and for financial market stability purposes.

# The sectoral and geographical allocation of holdership of negotiable instruments

## Impact of securities transactions on the statistical presentation of money stock developments in the euro area

*Stefano Borgioli (European Central Bank)*

The broad monetary aggregate M3 comprises, among other negotiable instruments, debt securities with an initial maturity of up to two years issued by the euro area Monetary Financial Institutions (MFIs). M3 should only measure money holdings of euro area residents. In practice, it is not straightforward for the MFIs to identify the residency of the holders of the short-term securities.

From a quantitative point of view, external holdings of short-term debt instruments issued by euro area MFIs are sizeable and, moreover, they have substantially increased since the start of Monetary Union.

The ECB adjusts its monetary statistics to exclude the holdings of securities by residents outside the euro area since late 2001. This contribution focuses on the quantitative impact of these holdings on the net external position of the euro area banking system and on the importance of the adjustment for the accuracy of the euro area monetary aggregates.

## Reliable statistical recording of negotiable instruments holdership as a pre-condition for the compilation of the money stock and its counterparts

*Stefan Brunken (Deutsche Bundesbank)*

The first pillar of the monetary policy strategy of the European Central Bank (ECB) is a prominent role for money, which is signalled by the definition of a reference value for the growth of the broad monetary aggregate M3, currently set at 4.5%. Hence, it is necessary to calculate the M3 stock and its changes (as well as the balance sheet counterparts of M3) in a statistically accurate fashion.

M3 includes, amongst other components, short-term debt securities issued by monetary financial institutions (MFIs). The paper will show that, since M3 refers solely to holdings of these instruments by euro area non-MFIs (excluding central governments), identifying these balances separately is crucial for the correct measurement of M3. Attention will be drawn, however, to the practical difficulties in obtaining such information: MFIs are normally not in a position to deliver a sectoral and geographical holder split for debt securities as these instruments are usually traded on secondary markets potentially involving a frequent change in holdership.

The paper will conclude with a brief reference to the initiatives of the ECB and of some national central banks in tackling these measurement issues by developing techniques that allow the amounts of debt securities held by euro-area non-MFIs to be estimated by drawing on alternative sources.

## Deriving geographical and sectoral holdership structures for negotiable instruments from periodical reports of security settlement systems

*Frank Mayerlen (European Central Bank)*

Short-term debt securities issued by euro area monetary financial institutions (MFIs) and held by the euro area money holding sector form a component of the broad euro area monetary aggregate M3. Holdings of these instruments by non-euro area residents are not considered as a monetary liability but as an external liability of the euro area MFI sector. The correct geographical allocation of these holdings inside or outside the euro area is therefore a prerequisite for the accurate calculation of M3, its counterparts and the respective growth rates. However, because these are tradable instruments and may be marketed via third countries, issuing MFIs are not usually in a position to determine the geographical distribution of investors in the paper. Instead, account holder data provided by international securities settlement systems and processed on a security-by-security basis provide a reliable and timely source of information for deriving the geographical holdership structure.

## Recording cross-border holdings of securities in the framework of balance of payments statistics – the envisaged role of the ECB's Centralised Securities Database (CSDB)

*Peter Neudorfer (European Central Bank)*

In the context of balance of payments (b.o.p.) and international investment position (i.i.p.) statistics the holdership of negotiable instruments focuses on the residency, i.e. on the asset side holdings by residents of the reporting economy of negotiable instruments issued by debtors resident of other countries/zones, and on the liability side holding by non-residents of instruments issued by residents. To enhance the value for analysis, both the assets and liabilities may be broken down by counterpart countries/zones, i.e. by debtor/creditor counterparts.

While data are generally accurate and reliable on the asset side, the portfolio investment (PI) liabilities are more difficult to compile, owing to the rather long chain through which most end-investors can buy or sell securities. The issue has gained additional complexity with the need to compile analogous statistics on the PI liabilities of the euro area.

The paper will in a first section briefly recapitulate the state-of-the-art in compiling PI liabilities. The second part will highlight that the Centralised Securities Database (CSDB) will become a pivotal tool for the quality of the information on outstanding (and recently redeemed) negotiable instruments by allowing to derive in various statistics consistent breakdowns, e.g. on the residency and sector classification, or the maturity or type of instruments. On the debtor side (securities issues and redemptions), much information is readily available.

This is not the case on the creditor side. Hence the third and final section will discuss the availability of information on actual holdership of negotiable instruments through specific surveys based on security-by-security reporting and its storage in the CSDB. Whether the CSDB will be an adequate instrument for the regular derivation of holdership structures in the area of negotiable instruments will strongly depend on the potential agreement among compilers feeding data into the CSDB on their ability to contribute in a joint data quality management.

## Possibilities of and limits to identifying final holders of negotiable instruments by reporting institution within the monthly balance sheet statistics framework

*Miguel A. Menéndez and Beatriz Sanz (Banco de España)*

The growing importance of securities statistics has led to increasingly detailed information being obtained from the different available sources, which include those relating to reporting institutions' balance sheets. Since these institutions usually have internal security-by-security data on both their issued securities and their securities portfolios, national central banks and supervisory authorities have progressively requested information complementary to that habitually provided by the reporting institutions with their balance sheets. This has been the case of the Banco de España and other supervisory institutions in Spain, and the result to date has been extensive information on reporting institutions' securities (issues and portfolios). However, there are some limitations to this information, e.g. in the case of bearer issues, the different valuations applied and the non-existence of ISIN codes for certain securities.

## Recording of cross-border transactions in money market paper and other negotiable instruments by sector within the b.o.p. statistics framework and derived geographical holdership structure

*Beatrice Timmermann (Deutsche Bundesbank)*

B.o.p. data on cross-border transactions in negotiable instruments can be used to derive stocks of these instruments with a sectoral and geographical holdership structure by means of a perpetual inventory method. In the balance of payments and international investment position statistics framework of the Deutsche Bundesbank this method – combined with information from supplementary data sources – is used to estimate overall stocks of cross-border assets and liabilities of negotiable instruments by resident sector and their geographical allocation. The paper addresses some of the shortcomings of the method that are mainly related to gaps in capturing cross-border transactions and problems in identifying creditors of those negotiable instruments. The paper also gives some indications on possible ways forward to improve the quality of the estimates, emphasising in particular the need for exchanging partner country information on third party holdings.

## Calculation of holders of marketable securities: UK approach

*Richard Walton (Bank of England)*

The broad monetary aggregate of the UK M4 comprises amongst other components marketable sterling debt securities issued by Monetary Financial Institutions (MFIs) of up to and including five years' original maturity. M4 includes only the holdings by the UK private sector. To identify these holdings, the Bank of England uses data collected for financial accounts to estimate the sector breakdown.

## The means of estimating the negotiable instruments in the Japanese money stock statistics

*Mayuko Yasui (Bank of Japan)*

Among Japanese money stock statistics, aside from the representative indicator M2+CDs, Broadly-defined Liquidity also attracts a great deal of attention. In addition to deposits and money trusts, Broadly-defined Liquidity includes negotiable instruments such as Government Bonds, Bank Debentures, Commercial Paper issued by Financial Institutions, and Foreign Bonds.

Among the negotiable instruments, the balances held by money holders of items such as Bank Debentures and Commercial Paper issued by Financial Institutions can be specified utilizing the financial institutions' balance sheets, and estimates prepared using the formula "[total amount issued] – [amount held by financial institutions and the central government]."

Meanwhile, the balances of Government Bonds held by money holders, for which there are established registration and book-entry systems, can be directly specified.

Comparing both estimation methods, the latter one, specifying directly, is more accurate. The balances of instruments included in Broadly-defined Liquidity aside from Government Bonds cannot be estimated in the same manner as Government Bonds, since there is no registration or book-entry system data for these instruments. From this spring, however, an electronic payment and settlement system was launched for CP transactions, so in the future it should become possible to estimate the balances of CP following the same approach used for Government Bonds. Overall, the money stock negotiable instruments data is expected to become more accurate in the future as the data handling for the various instruments is expanded and improved.

# Trade in services – a challenge to statisticians

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## Part I: The GATS-agreement and the four modes of supply

### The GATS Agreement and the four modes of supply – a new ground for statisticians

*Guy Karsenty (World Trade Organization)*

The broad definition of services trade and the complex architecture of countries' commitments under the GATS has posed a difficult statistical challenge. Basic requirements would help the assessment of trade in services that is called for by the GATS. Statisticians have started to meet these requirements by developing relevant concepts, definitions, and classifications, and by starting implementation, but further work is needed on developing compilation guidelines and supporting national implementation, especially for countries lacking expertise and resources. Further requirements, in the longer-term, would allow a systematic use of statistics in the negotiating context, where data are needed by origin and destination and by modes of supply for each detailed service category. Hopefully, we may expect continuous improvements of statistics on trade in services due to the pressure from services trade negotiations, as has been the case for merchandise trade statistics during more than 50 years of trade negotiations.

### Measuring Tourism in the context of International Trade in Services

*Antonio Massieu (World Tourism Organization)*

The Balance of Payments is the most important information source with respect to the international trade in services. Data collected on « Travel », after adjustment for differences between the definitions of “visitors” (TSA), “travellers” (BOP) and Passengers transportation, are important for the measurement of expenditure of international “visitors” for the analysis of Tourism. The convergence between the concepts of the BOP and the EBOPS and those of the TSA allow to improve the quality of the data and to answer the GATS's needs of data on the mode of supply. The item “Travel” is the major component of mode 2 or “consumption abroad” and “Passengers transportation” corresponds with mode 1 or “cross-border supply”.



## Analytical value and limitations of FDI statistics: a user's perspective

*Masataka Fujita and Katia Weigl (UN Conference on Trade and Development)*

Statistics on foreign direct investment (FDI) and on the operations of transnational corporations (TNCs) are a vital means to analyze the phenomenon of globalization of economic activities. Governments, business and academics are interested in comprehensive, timely and internationally comparable data on FDI and TNCs for analytical purposes and for policy formulation. Examples show that, when making cross-country comparisons, differences in definitions and divergent national data compilation methodologies could influence the analysis and resulting policy recommendations. Consequently, availability of statistics compiled according to internationally-recommended guidelines as well as capacity-building related to the understanding and implementation of such guidelines, are of importance for analytical purposes and for policy formulation.

## FATS data: Lessons from the French experience

*François Renard (Banque de France) and Frédéric Boccara (INSEE)*

FATS: what are they?

Statistics on sales of foreign affiliates, related to the liberalization of trade in services.  
Activity and structural enterprise statistics crossed with inward and outward FDI stocks.

FATS: who compile them?

Various patterns combining Central Banks and Statistical Institutes, or specific institutions.

FATS: how are they made?

The limited role of a particular collection system; Combination of various sources.

- The shift to a longitudinal and individual database.

FATS: what do they say?

Foreign resident affiliates and services markets, French multinationals.

- How to interpret the evolutions?

FATS: what for?

Measuring services market opening and/or foreign affiliate performances?

- From sales to economic weight and contribution to GDP/Gross National Income.

Future of FATS: what should they be?

Integration of indirectly controlled companies.

Reporting of mother (resident) companies.

- FATS or Activity of Multinational Firms?

Future: what implications for the statistical tool?

Collection, Compilation, Name and Scope.

Concluding remarks: economic and institutional implications.

For balance of payments analysis and for macroeconomic analysis.

For normalization and for cooperation, both (intra)national and international.

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## Part II: The Manual on Statistics of International Trade in Services and its implementation

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### Implementing the Manual: Are we progressing?

*William Cave (OECD)*

Although only published very recently, pressures from data users are helping to ensure that progress in implementing the Manual on Statistics of International Trade in Services is monitored. A toolset for assessing progress is outlined. Important progress is being made in implementing the core recommendations of the Manual. Much, but certainly not all, of the current progress is occurring among OECD countries. Important progress is being made on BOP services; on FATS and in both cases with partner country data. The monitoring tools described above on country reporting and data quality will be essential in highlighting priorities for further improvement.

### Trade in services – a challenge to statisticians: the Czech case

*Petr Vojtisek (Czech National Bank)*

The collection of data for trade in services used to be based (almost) solely on the settlement system. Since the drawbacks of the settlement system are widely known the Czech National Bank has been gradually introducing various surveys for the collection of data for trade in services. Direct reporting of transport services from selected respondents, surveys of cross-border movement of individuals are examples. The reporting from insurance companies in the sphere of insurance services is the most recently introduced survey. Nevertheless, it seems that the best way of creating a more comprehensive system of direct reporting in the sphere of trade in services is to co-operate with the national statistic institute. The central bank would play the role of the methodological consultant, at least when the system is introduced and the national statistics institute would incorporate this area into its set of surveys. The main reason for shifting these activities to the national statistics institute is the fact that a threshold of 12 500 EUR will be applied to the Czech Republic after accession to the European Communities (EC regulation 2560/2001).

### Evolution of data collection system on services in Russia: from surveys to international transactions reporting system

*Sergey Shcherbakov (Bank of Russia)*

At the moment of introduction of a trade-in-services reporting system preference was given to the survey system, which, along with evident advantages, has noticeable shortcomings, the main of which is incomplete coverage. Consequently, it was necessary to count-up the data to the full

range, thus losing the possibility to disaggregate them by service type.

The new report form on each transaction in services of banks' clients and of banks themselves introduced in 2001 made it possible to overcome the weak points of the survey system, thus retaining the latter as a source of data for specific services (transportation, construction, and partly other services not paid for directly). Hence, the problem of inadequate coverage of respondents has been settled. The statistics on services has improved on the whole and separately by service type; comparative analysis of the two reporting systems (excluding count-ups) has demonstrated a double increase in export indicators and fourfold in imports.

Analyzing payments for the services available through the international transactions reporting system permitted for the first time to identify residents' transactions of fictitious nature. Because the effective controls exist in other areas, in the absence of foreign exchange controls in trade-in-services, sizeable funds are transferred onto nonresidents' accounts under the cover of services imports. In the balance of payments, such phenomenon is classified as a capital outflow and recorded under the financial account.

## Japan's implementation of the recommendation of the MSITS

*Eika Yamaguchi (Bank of Japan)*

As suggested in the Manual on Statistics of International Trade in Services (MSITS), which was published last year, Foreign Affiliates Trade in Services (FATS) statistics complement conventional Balance of Payments (BOP) statistics. BOP compilers in some countries produce FATS statistics as well, but the Bank of Japan, responsible for compiling BOP, does not take charge of FATS. On the other hand, the Ministry of Economy, Trade and Industry (METI) has conducted an annual survey on multinational enterprises for years. In Japan, FATS variables including such as sales, value added, employment and R&D expenditure are inspected in METI's survey to some extent, but these statistics do not cover banking and insurance sectors, nor do they necessarily meet the standards of FATS in details. And accordingly, it is worth clarifying the difference between FATS and METI's statistics and what could be a first priority to improve both the data quality and current data collection system.

## Compiling trade in services statistics in a fully liberalized developing country: the case of Uganda

*M. Atingi Ego and K.A. Egesa (Bank of Uganda)*

Following the freeing of both the current and capital accounts in 1993 and 1997 respectively, Uganda like most developing countries lost readily accessible data sources on foreign exchange transactions involving the private sector with non-residents. The loss of these data sources together with the need to conform to new international standards (BPM5 and IIP), which called for different and, in most cases, detailed data posed a challenge for balance of payments statisticians. The response to some of these problems has been to develop new data compilation methodologies and to opt for alternative sources of data. While this response has been slow, a number of challenges have been dealt with and new lessons have been learnt. This paper identifies some of these challenges, steps taken and lessons learnt with specific reference to compilation of trade in services statistics.

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## Part III: Methodological and analytical aspects of trade in services

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### Costa Rica: Enhancements on the services and the current transfers' data for the balance of payments

*William Villegas Calvo (Central Bank of Costa Rica)*

The global approach for the real and financial transactions has made, among others, an ever increasing participation of the tradable services in the economic activity and in the country's total exports. This growing interdependence of the worldwide economy has made more evident the necessity of relying on statistics that reflect the new tendencies toward the trends on liberalization and integration of the markets in order to generate recommendations of economic policies much more in concordance with the reality of the country.

The output of the research carried out by the Central Bank has put into evidence that the net contribution of the services has strengthened until it represented close to 1% of the GDP for the year 2001. Any way, there is left a lot of work to do in this field, and the efforts of the Balance of Payments Area will continue until they generate a more representative measure of the net contribution of the group of services in the future.

It is a fact the increasing significance of the services within the total exports of goods and services in the balance of payments of the country. That is the case of the services related to transportation, tourism, call centres, business centres, software development and workers' remittances. In this context, the Balance of Payments Area has begun to work on several items in order to improve the accuracy and reliability for the figures of the tradable services. These activities were part of the recommendations of the Mission of Statistics of the Balance of Payments of the International Monetary Fund, that took place between July 19 and August 21, 1999.

### Trade in services: Travel in balance of payments statistics

*Branimir Gruić and Igor Jemrić (Croatian National Bank)*

In this paper, the Survey on expenditures of foreign travellers in Croatia and Croatian travellers' abroad is shortly presented. A stratified sample is used in the Survey, whose strata are based on type of border crossing and type of day. Final products of the Survey are estimates of total revenues and expenses needed for the Balance of Payments compilation.

The text deals with data on revenues for 2002, and shows that selection of weights and sampled travellers, together with the lack of data on the distribution of population (by country, type of accommodation, motive etc), produce great variations in our estimates. Having in mind the importance of tourism revenues for Croatia, it is crucial to identify the best possible estimates. Finally, changes in methodology, that are expected to result in improved quality of estimates, were introduced.

## Italian business travellers abroad: a multidimensional perspective

*Giovanni Giuseppe Ortolani and Andrea Alivernini*  
*(Ufficio Italiano dei Cambi)*

Business tourism is a relevant segment of Italy's – as well as of many developed countries' – outbound tourism.

The numerous studies on the characteristics and behaviour of international leisure travellers led to the development of some generally shared findings. On the contrary, the segment of international business travellers, despite its importance, has not yet received analogous consideration in the scientific community.

This paper attempts to outline the fundamental features of Italy's outbound business travel by exploiting the potentialities of statistical tools for multidimensional analysis. The lack of a theoretical framework suggested the adoption of exploratory – rather than explanatory – statistical tools. The source of data is constituted by the results of the extensive UIC (Ufficio Italiano dei Cambi) in-bound-outbound border survey on international tourism.

In the first part of the paper, data are submitted to a multiple correspondence analysis, whose most typical feature is the production of a low-dimensional graphical representation of the large number of available qualitative and quantitative attributes. This allows the identification of the essential features of the phenomenon, by highlighting most relevant relationships between the attributes describing travellers' characteristics (e.g. sex, age, profession) and behaviour (e.g. length of stay, accommodation used, countries visited, Italian area of origin, level of expenditure). The analysis leads to the conclusion that the multidimensional structure of the Italian outbound business travel market can be efficiently summarised in its fundamental features by a single variable: the length of stay.

The second part aims at identifying homogeneous groups of travellers according to the countries of destination. To this end, Ward's hierarchical clustering technique is used (the application of other clustering methods verifies the robustness of the results). The analysis confirms that the duration of the stay is the key variable of the phenomenon.

# The use of surveys in financial statistics

## Redesign of the statistics on insurance corporations and pension funds

*Abraham J. de Boo (Statistics Netherlands)*

Dutch insurance corporations and pension funds are important actors on financial markets. So reliable figures for this group of institutions are essential for the quality of the financial accounts. This applies certainly for the subsector insurance corporations and pension funds itself but also for other sectors. There the information about financial transaction or positions is often lacking, so the information from the insurance corporations and pension funds is used.

Statistics Netherlands makes quarterly an annual statistics for insurance corporations and pension funds. The quarterly figures are based on a sample survey among the 1350 Dutch insurance corporations and pension funds. The annual figures are based on the information that is received from the Dutch Supervisory Authority of Pensions and Insurance.

Until recently the quarterly and the annual figures were produced more or less in an isolated way. Also the quarterly and annual statistics were not completely compatible. Triggered by the obligation to produce quarterly sector accounts for the European Commission and the conversion to a Windows 2000 environment a redesign of the statistics on insurance corporations and pension funds was started. This redesign resulted in an integrated production process for the quarterly and annual surveys that is more efficient and produces statistics with higher quality.

The redesign process was started with a new questionnaire for the quarterly survey in order to gather the necessary information for the new quarterly sector accounts. The old questionnaire was enlarged to include all items of the balance sheet according the ESA definitions. Also the sectoral breakdown of the balance sheet items was made compatible with the ESA institutional sectors. On the questionnaire now also some questions are asked about the current account. To improve the reliability of the sectoral breakdown of the balance sheet items the sample was enlarged by nearly 50 %. The production software now includes modules to communication by email and to use electronic questionnaires.

The annual survey is based on the figures Statistics Netherlands receives from the pensions and insurance supervisory authority of the Netherlands. Part of these figures are gathered by the authority for its supervisory task. Supplementary data are gathered on request of Statistics Netherlands to reduce survey pressure. Within Statistics Netherlands these administrative data are checked and completed. Next, the data is translated into macro-economic categories. This time-consuming translation process has two main parts. On the one hand a translation of the administration items is made into ESA categories. On the other hand the assets and liabilities are broken down into institutional sectors. For this sectoral breakdown there is no equivalent in the administration of insurance corporations and pension funds to start the translation process with. So Statistics Netherlands categorises all the assets and liabilities of a part of the population asset by asset.

At first it was thought to develop a computer routine that could categorise the assets item into institutional sector by name recognition. The prototype succeeded in recognizing 80 % of the assets. Although this would have meant a considerable efficiency gain, the routine was not implemented because research into the relation between quarterly and annual figures showed a considerable resemblance in the sectoral breakdown of both surveys. So it was concluded to use the sector specification of the quarterly survey for the annual survey.

In the past, rules for the translation of the running account translation had been developed with in Statistics Netherlands. These were however never implemented in the production software so until now the translation is done manually. For the new production software a translation module has been build. The automatic translation to ESA categories introduces however inconsistencies in

both the individual and the aggregated data. Since inconsistencies in the aggregated data are unacceptable the data should be edited. Editing on an individual level is very labourious while editing on an aggregated level introduces inconsistencies on the individual level. The solution to this dilemma should have been a computer program that guides the editor to an optimal quality regarded the available time. Although much research has been done within Statistics Netherlands into reliable quality indicators, it appeared difficult to implement them successfully in production situations. So the new production software for insurance corporations and pension funds will initially be based on rather primitive edit indications. These should be improved gradually.

In the end the redesign of the statistics about insurance corporations and pension funds will result in a reduction of the production capacity of the primary process with 30 %. While at the same time there will be resemblance between the quarterly and annual figures and transparency in the translation and editing processes. For the near future it will be investigated whether it is possible to integrate the quarterly surveys of Statistics Netherlands and that of the supervisory authority. Until now this was not possible because both institutions had their own specifications which were hard to match in one questionnaire.

## Surveying issuing and paying agents (IPAs) of securities in the United Kingdom

*Bruce Devile (Bank of England)*

This paper looks at the history of the introduction of a (statutory) monthly survey of Issuing and Paying Agents (IPAs) of securities by the Bank of England to assist it in its calculation of total securities issuance statistics. The Bank believes it may be unique in using IPAs to collect securities statistics.

The paper looks at why the survey was introduced and explores the experiences the Bank has had from the survey both good and bad. It highlights the limitations, possible future drawbacks and improvements than the Bank plans to make.

## Utility of surveys undertaken by the Reserve Bank of India for the collection of financial statistics

*K.S. Ramachandra Rao (Reserve Bank of India)*

The paper attempted to describe various surveys undertaken by the Reserve Bank of India (RBI) in the Department of Statistical Analysis and Computer Services. The RBI has been conducting various surveys in the fields of banking, corporate and external sectors to supplement the data collected by it through various statutory and non-statutory returns. These data provide inputs to its policy formulations while some surveys provide inputs in the compilation of saving and investment estimates of the household sector. The surveys like Debt and Investment, and Banking and Corporate sectors are useful in the compilation of national accounts. In particular, it may be mentioned that financial flow of funds accounts, one part of the system of national accounts, present the inflow and the outflow of funds "from whom to whom" basis. The surveys of "ownership of deposits", "capital of non-financial companies" provide the details on institutional source of these funds. These accounts form the base for obtaining the estimates of financial savings of the household sector. In the case of data collected on the external sector, they are utilized in providing addi-

tional break-up details in the presentation of balance of payments statistics. The surveys in the field of corporate sector, *viz.*, the industrial outlook survey, provide inputs to the RBI in assessing the credit requirements of the private industry, which can be tuned to the availability of resources with the banking sector and the requirements of the private industry, to the extent possible.

## Performance evaluation model for primary non-agricultural credit societies

*Y. S. P. Thorat, Maria Pardeep (Reserve Bank of India, Mumbai)  
and Praggya Das (Reserve Bank of India, New Delhi)*

The Co-operative Movement in India did not originate voluntarily but as a government policy. The government perceived co-operatives to be the principal financial institutions for rural development. It felt that impact of co-operatives would be negligible until the state partnership is introduced in them. In spite of the financial and administrative state partnership, for the most part, the experience of rural co-operatives has been very different from expectations. In many cases the co-operatives have neither been successful as financial intermediaries nor have they led to an effective promotion of their members' interests. In contrast to the general experience of co-operatives in India, the growth of non-agricultural credit societies in the state of Maharashtra indicates a movement, which in the main is neither state driven nor state supported but is based on local initiative and also appear to be financially successful. This paper intends to assess the performance of such primary non-agricultural credit societies called Path Sansthas located in the Kolhapur district in Western Maharashtra.

In the present paper, it has been attempted to create a Performance Evaluation Model which classifies these Path Sansthas as good, satisfactory or poor performers and tries to assess if there is a conflict among them for meeting their co-operative/social values as against their financial standing on various profitability and efficiency parameters. A set of 31 parameters was chosen capturing the social, co-operative, governance and economic/financial aspects. The data was collected as a part of the larger work of the first author. The *Path Sansthas* were selected on the basis of stratified purposive sampling. The technique suggested by Rao, Bhat and Bhatta (1991) has been used to build the models.

Separate models were developed and the *Sansthas* were classified into three categories (good, satisfactory and poor performers) for the economic, co-operative, social and governance parameters, for the social-cooperative-governance parameters taken together and also for all parameters taken together.

On comparing these classifications, it is observed that:

- Social/co-operative objectives are achieved at the cost of economic/financial goals, i.e. at the cost of its efficiency/profitability. Thus there was a clear trade off between the social/co-operative goals and the economic goal.
- Good governance/better management leads to better economic goals. Thus vigilance of the members or the responsibility and accountability of management helps in the *Path Sansthas'* economic performance. The *Path Sansthas* where Board participation or members' involvement is good do better economically. It may imply that the members/board follow the *Path Sansthas'* performance and examine the same in economic terms and not in terms of their co-operative or social parameters.

• The *Path Sansthas* that are good in co-operative/social terms may be providing facilities with lower interest margin, i.e. they are giving credit at lower cost to borrowers and providing high interest on deposits.



## Selection of reporting agents for the survey on MFI interest rate statistics

*Daniela Schackis (European Central Bank)*

In 2003, the European Central Bank (ECB) will publish for the first time euro area statistics on interest rates applied by monetary financial institutions (MFIs) to deposits and loans vis-à-vis households and non-financial corporations (hereinafter “MFI interest rate statistics”). For the selection of the reporting agents, National Central Banks (NCBs) of the euro area have the choice between implementing a census of all resident (mainly) credit institutions or an approach based on stratified sampling. The ECB has imposed minimum standards for the national samples. These leave to the NCBs sufficient flexibility to reflect within their respective national sample the particular features and structure of their national banking sectors. At the same time, the comparability and reliability of the national data and the euro area statistics is ensured.

## The implementation of the new ECB interest rate statistics in Austria – a pragmatic approach to a survey

*Aurel Schubert and Gunther Swoboda (National Bank of Austria)*

In December 2001, the Governing Council of the European Central Bank (ECB) adopted the new regulation (EC) No 63/2002 of the ECB concerning statistics on interest rates applied by monetary financial institutions (MFIs) to deposits and loans vis-à-vis households and non-financial corporations. This regulation entered into force on 31 January 2002 and the first data shall be reported by MFIs in February 2003. This regulation is the first ECB statistics regulation in which the national central banks are allowed to select the actual reporting population for the survey following a sampling approach.

In Austria, the initial situation for the transfer of this regulation into national reporting requirements was the following:

- In Austria more than 800 MFIs do exist and about 600 of them can be described as rather small. That is why a census is certainly not the adequate method for getting a high quality interest rate statistics with a reasonable effort of costs and OeNB therefore decided to go for a sample approach.
- In Austria most of the MFIs (more than 700) are members of one of three large banking sectors which are all very homogenous from their type of business.
- The implementation of the new data requirement is rather costly for MFIs and therefore the chosen sample shall remain stable over time.

These were the premises from which we started in a pragmatic way to find the appropriate sample for the survey on interest rate statistics.

## Sample design and implementation of the Italian survey on harmonised interest rate statistics

*Paola Battipaglia and Fabio Bolognesi (Banca d'Italia)*

Harmonised interest rate statistics have been monthly collected in the Euro area since January 2003. In Italy, as well as in the vast majority of the Euro zone countries, data collection is sample based. This paper briefly describes the methodological steps undertaken to select the Italian sample and gives a few hints on how the main implementation issues have been addressed.

### ***Data availability – Proxies for establishing the sample***

*Loans:* quarterly statistics on interest rates and amounts of new business are collected from all credit institutions for supervisory purposes; these data provided proxies for 8 types of instruments.

*Deposits:* data on 6 types of instruments were available from a voluntary 10-day sample survey.

*Outstanding amounts:* data were taken from MFI balance sheets, which are monthly available for the whole population.

### ***First level stratification: selection according to size***

Amounts of new business and stocks intermediated by each reporting MFI play the role of weights in the calculation of interest rates at the national level. These volumes of activity show very skewed distributions in the population; that is, only a very small number of intermediaries account for a large percentage of total volumes of both new business and outstanding amounts. We thought we could gain efficiency from this feature by building a stratum of “large items” and designating it for selection with certainty. This strategy, which is widely used in business surveys, eliminates that large contributing stratum as a source of sampling errors and allows control over a significant part of the survey variables. “Large items” identification was made by looking at individual volumes of activity for each of the proxy variables separately. We thus ensured participation of big universal banks as well as of relevant intermediaries with specific domain of activity. Stratum boundaries were defined on the basis of a quadratic efficiency gain function.

### ***Second level stratification: geographic location***

Geographic stratification is often used in sample surveys: it is justified by the homogeneity shown by units belonging to the same area and it is also pursued in order to ensure coverage control over geographic domains.

Italian interest rates show regional differences, as it has been highlighted by several pieces of research. This is especially true for loans, reflecting geographic differences in the level of credit risk. For this reason, we introduced a second level stratification variable by splitting the population – not allocated to the first stratum according to a 3 level geographic variable. Bank location was defined according to a prevalence criterion; very scattered banks, not complying with this criterion, were selected as a purposive component of the sample and allocated to the previously defined stratum of “large items”. From each area a number of units proportional to the relative weight of the area in the population was drawn. To avoid imposing relatively high reporting costs on small credit institutions, the principle of non-random selection of the largest units was applied to each geographic stratum.

### ***Overall size and representativity of the sample***

ECB/2001/18 Regulation establishes coverage-based transitional criteria and a probabilistic maximum random error criterion – which will be enforced starting from January 2007, to define minimum national sample sizes.

Based on proxies available prior to the start of the new survey, we checked compliance with both the empirical and the probabilistic criteria. 75 per cent coverage required by the Regulation was ensured for each of the examined deposit and loan categories. Average random error for loans was estimated as aligned with the Regulation ceiling of 10 basis points – at a 90 per cent confidence

level. For deposits, it is expected to be much lower, essentially because of the lower variance of these types of interest rates.

### *Implementation issues*

The sample selected for reporting on the new harmonised interest rate statistics is only partially overlapping with the voluntary sample of the 10-day survey. Assistance to the MFIs selected for the new survey has been provided during the implementation phase through meetings and technical documentation distributed by a working group of intermediaries, co-ordinated by the Bank of Italy. Since the start of the survey, functional e-mail and telephone assistance are available to all reporting agents, in addition to the usual on-line first level quality checks.

## Fisher's Short Stories on Wealth 75-79: Economic Policy and Social Insurance

*Arthur Vogt*

In the present batch of Short Stories on Wealth, Irving Fisher deals, on the one hand, with a number of policies mainly directed at improving the efficiency of production and thereby raising the per capita income and, on the other hand, measures, in the context of a social security scheme, to alleviate the social repercussions of increased efficiency. In these introductory notes, we will focus on the latter issue, to which Fisher devoted Story No 79 (see below). Prior to his recommendations in this field, Fisher had already shown a strong interest in another social measure – the prevention of illness by persuading life insurance companies to provide free medical check-ups for their policy-holders (see Story No 73 in IFC Bulletin No 12).

Fisher had a rich correspondence with economists, scientists and politicians, many of them very famous, e.g. no less a man than Einstein. He met Einstein and afterwards, Einstein wrote him on February 10, 1933 a letter in which he disagreed with him on unemployment insurance:

I disagree with you, however, on one point: that you compare the present situation equal to previous crises... I am convinced that we are facing a new situation: a fraction of previous working hours suffices to produce today all consumer goods that are necessary and desirable for all. Therefore, I am firmly convinced that without legal measures the economy will not be able to absorb all available manpower and thus produce a fairly

### *Fisher's Short Stories on Wealth, 1926-1933*

*Dr. Arthur Vogt has drawn our attention to a series of simple explanations of elementary principles of economics which Fisher wrote in an agreement with the Worker's Education Bureau. Fisher called them "Short Stories of Wealth". The bureau issued them monthly for publication in any union newspaper that desired to print them. They appeared in the "Brotherhood of Locomotive Firemen and Enginemen's Magazine", "Trade Union News", "Labor Herald" etc.*

*The stories had never been reprinted and had not been included in "The Works of Irving Fisher" (General Editor W.J. Bates, Consulting Editor J. Tobin), which was published in 1997. However, the Stories are worth to be read up to the present day. Besides the scientific and historical interest they are of didactical use as they are models of explaining economic phenomena to the public. The IFC Bulletin decided to publish all these "Short Stories of Wealth"*

1) Professor George W. Fisher, the grandson of Irving Fisher, kindly granted the IFC Bulletin the right to quote from his grandfather's manuscripts (Fisher 1911, 1946, 1947).

equal buying power of all consumers... I don't think as many liberal theoretical thinkers do, that creating new (superfluous) branches of industry will automatically correct the evil.

I do not maintain that an excessive supply of labor is virtually something new. But previously this was based upon wrong distribution of the soil and other abuses, but not on fundamental conditions of the economy.

Lord Beveridge's proposals for Social Insurance in Britain was a model worldwide. Also for Switzerland. When, in the early 1940s, the Swiss government looked for an actuary to prepare the social insurance bill, they urged him to learn English – in order to be able to read the original version of Beveridge's report (Beveridge 1942). Professor Ernest Kaiser (1907-1978) was elected as chief social insurance actuary. He entered the Swiss office of social insurance in 1943. He turned out to become the mathematical father of Swiss Social Insurance (Vogt 1997a,b,c). Figure 1 shows the cover page of his thesis.



Figure 1: Ernest Kaiser's thesis

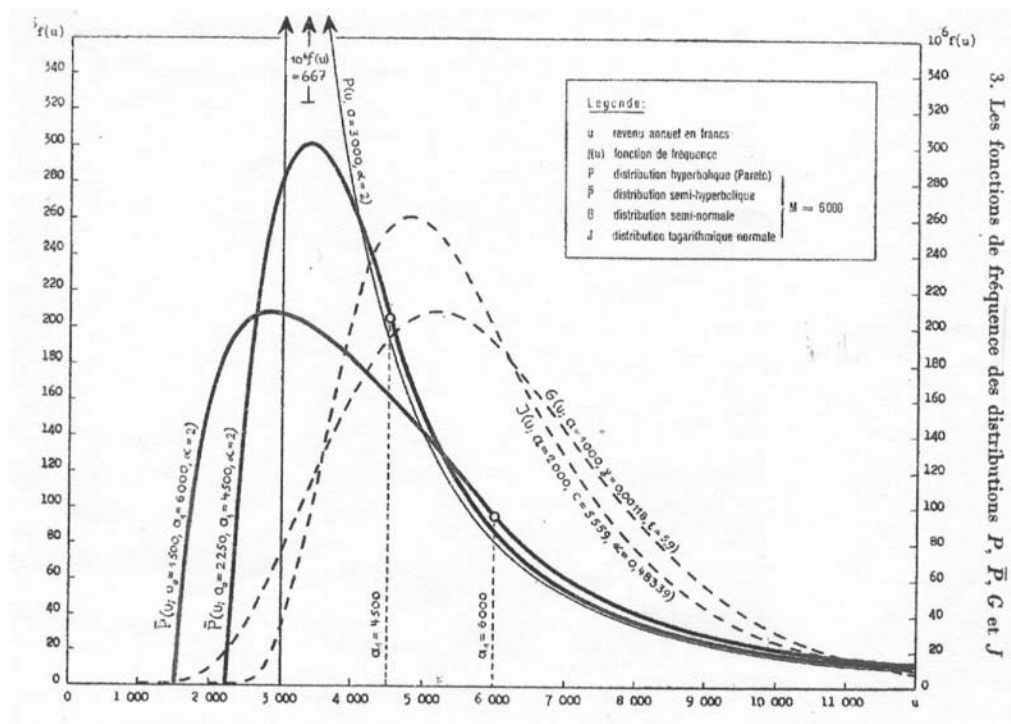


Figure 2: Income distribution curve used by Kaiser (1950)

The subject of income distribution will be treated in the next batch (Stories 83 and 84). The income distribution displayed in Figure 2 was used when calculating the financial forecasts of Old Age and Survivors Insurance in Switzerland. The resulting expenditure and income curves calculated in 1945 (!) for 1948 to 2003 are presented as well (Figure 3). This time span would correspond, now in 2003, to a forecast up to 2063!

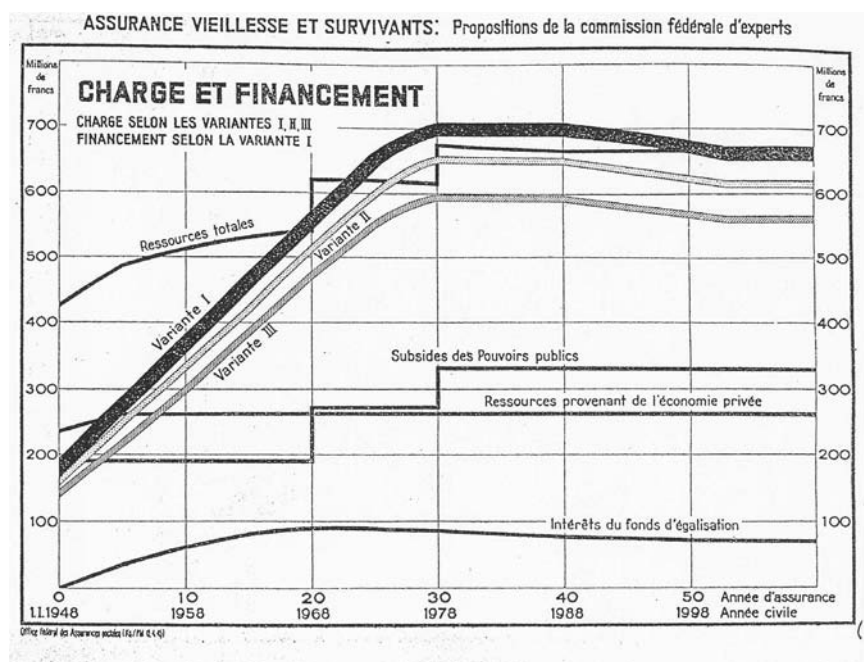


Figure 3: AHV forecast 1948-2003

**The absolute and relative key functions in Social Insurance**

We want to introduce the three absolute financial key functions of social insurance.

- Total expenditure A
- Total non-capital-income B
- Capital C.

A, B and C are regarded as continuous functions of time t. Derivatives according to t are marked by an apostrophe, e.g. C' for the derivative of C. With the interest rate i(t)

$$B(t) = A(t) - i(t)C(t) + C'(t) \tag{1}$$

holds. The income equals expenditure minus interest plus capital accumulation. The three key functions are divided by

the wage sum W(t),

yielding the relative financial functions:

- the expenditure ratio  $a(t) = A(t)/W(t)$
- the contribution ratio  $b(t) = B(t)/W(t)$
- the capital ratio  $c(t) = C(t)/W(t)$ .

The contribution ratio of a pay-as-you-go system equals its expenditure ratio a.

In the following we use the (continuous) growth rate of the wage sum

$$\omega(t) = \frac{d}{dt} \log(W(t)) = \frac{W'(t)}{W(t)}$$

Then the relative financial equation presented by Kaiser (1974) and Vogt (2001) is obtained, corresponding to a defined benefit plan:

$$b(t) = a(t) + (\dot{u}(t) - i(t))c(t) + c'(t) \quad (2)$$

Analogously, for a defined contribution plan:

$$a(t) = b(t) - (\dot{u}(t) - i(t))c(t) - c'(t) \quad (3)$$

The equations (1) to (3) are not only valid for social insurance systems but for any financial unit. The excess of mere capitalising over the wage growth rate, the real interest rate,

$$i(t) - \omega(t),$$

is important when assessing a social insurance system. When the wage sum is constant, i.e.  $\dot{u}(t) = 0$ , the full nominal interest can be used to finance the social insurance unit.

The capital factor  $c$  is multiplied by the negative real interest rate  $\dot{u}(t) - i(t)$ . When the wage growth rate  $\dot{u}$  equals the interest rate  $i$ , i.e. when  $\dot{u}(t) = i(t)$ , they cancel each other. When, furthermore, the capital factor  $c$  is constant (its derivative being 0, i.e.  $c'(t) = 0$ ), the funded system contribution rate is equal to the pay-as-you-go contribution rate ( $b = a$ ). When  $c$  is constant and when  $\omega(t) < i(t)$ , a funded system is cheaper than a pay-as-you-go system; conversely, when  $\omega(t) > i(t)$ , a pay-as-you-go system is cheaper than a funded system.

The excess of costs of a funded system over a pay-as-you-go system is

$$(\omega(t) - i(t))c(t) + c'(t).$$

When  $\omega(t) < i(t)$ , the excess goes the other way.

		$\omega(t) - i(t)$		
		$>0$	$=0$	$<0$
$c=0$	$c'=0$	$b>a$ pay-as-you-go system cheaper than funded system	$b=a$ pay-as-you-go system requires same premium as funded system	$b<a$ funded system cheaper than pay-as-you-go system
	$c'>0$	start of a funded system, beginning the capital accumulation process		
	$c'<0$	start of an exotic funded system, beginning with a negative capital accumulation process		
$c>0$	$c'=0$	stable system		
		$b>a$ Useless capitalisation when $b>a$ is permanent $c = \frac{b-a}{\omega-i}$	$b=a$	$b<a$ Capital is the third contributor, besides workers and employers $c = \frac{a-b}{i-\omega}$
	$c'>0$	growing funded system		
	$c'<0$	diminishing funded system		
$c<0$ is not treated, as it would be very untypical for an insurance system				

**Analogy between private households, ecology and Social Insurance**

In Story 28, Fisher noted, in the context of his interest theory, that “love for one’s children” is an influence tending to reduce the rate of interest. In an address, Fisher (1911) stated: “As I understand it, the idea of conservation has its centre of gravity in our love for posterity”. – These two streams of thought are united in the notion that a low interest rate favours ecological practice (cf. comment to Story 74). They may be completed with a third stream, Social Insurance, as in the table below.

We consider the two variables:

- population size and growth measured by the (average) family size, and
- (real per capita) production level and growth.

It has to be understood that the following table holds under the ceteris paribus assumption.

**Economy and demography as key factors for ...**

<i>scenarios</i>	economy +		economy -	
	population +	population -	population +	population -
	<b>... individual solidarity : family solidarity</b>			
Individual <b>solidarity from old to young</b> “love for one’s children”, cf. Story 29	tending to decrease interest rate	small influence: the effects of economy and demography cancel each other	tending to increase interest rate	
Individual <b>solidarity from young to old</b> (African type of solidarity)	Converse of line above			
	tending to increase interest rate	small influence: the effects of economy and demography cancel	tending to decrease interest rate	
	<b>... collective solidarity : ecology</b>			
Love for posterity <b>conservation</b> , cf. Story 74	Society goes on consuming tending to increase interest rate		Society holds down consumption in favour of posterity tending to decrease interest rate	
	<b>... collective solidarity : social insurance</b>			
<b>Pay-as-you-go system</b>	$c \approx 0$ (by definition of a pay-as-you-go system)			
demographically unstable, economically stable	As a pay-as-you-go system works without capital accumulation, it has no (direct) influence on the capital market. Indirectly, it does encourage less saving and has the same impact on interest as “solidarity from young to old”.			
<b>Funded system</b>	$c' > 0$	$c' \approx 0$	$c' < 0$	
demographically stable, economically unstable	the supply of capital by social insurance tends to decrease the interest rate.	small influence: the effects of economy and demography cancel each other	the demand of capital by social insurance tends to increase the interest rate.	
	has the same impact on interest as “solidarity from old to young”.			



The Swiss Social Insurance system<sup>1</sup> has from the very start been based on three pillars:

- 1<sup>st</sup> pillar – pay-as-you-go compulsory state system (for which the AHV forecast, referred to in Figure 3, was made);
- 2<sup>nd</sup> pillar – funded compulsory system, organised by employers;
- 3<sup>rd</sup> pillar – individual provisions, contracted by individuals themselves.

### **Brief description of the Stories 75-79**

Finally, we will give an impression of the contents of the five Short Stories of the present batch.

#### **75. *Science and invention***

This Story follows immediately on the Story on ecology, which was the last of the previous batch. In the present Story, Fisher makes an alliteration to Malthus' race between the stork and the plough: If population increases in geometric progression, it cannot be avoided that production increases brought about by inventions will at last be overtaken by population growth, but invention will put off the evil day. A scientific discovery is like the discovery of a new continent.

Theoretically, patents are for the purpose of encouraging inventors. Besides this extrinsic, monetary, motivation, there is an intrinsic motivation: the creative instinct, which is the chief stimulus of the inventor.

Fisher foresaw the importance of information in economic behaviour before management science made it a commonplace.

#### **76. *Saving waste in industry***

In this Story, Fisher treats modern themes such as rationalising, standardising, organising, inter-connecting processes as well as his favourite subjects, hygiene preventing illness, deaths and industrial accidents. By these means, waste in industry can be reduced. Analogously, in Stories 71-74 he had treated the waste caused by war, disease and destruction of natural resources.

Fisher, having the common well-being in mind, postulates the axiom (sic!) that every labourer replaced by a new device should be reimbursed out of the profits accruing from that device. Employment insurance and employment agencies are needed. As an optimist, he states that the automobile has enabled the labourer to find a new job without shifting residence and occupation.

Waste-saving, in Fisher's view, includes also merging and in general increasing the size of industrial units. In this context he sees, however, the need for controlling trusts – again a modern theme.

#### **77. *The tariff***

Fisher compares tariff protection with patent protection. The tariff protects small firms, "infant industries", helping them to become big. However, he warns for abuse; protective tariffs are often maintained indefinitely. He favours the free trade as a labour-saving machinery. He mentions a project for a United States of Europe without tariff barriers between the states.

#### **78. *The "single tax"***

The subject of tax was treated e.g. in Fisher (1942). According to him, only spending should be taxed, because income tax is unfair (double taxation by taxing savings and their fruits) and because the producers of the nation's wealth are taxed more heavily than those who merely spend.

"Single tax" means taxation of land rent fully and only. Saint Thomas rejected *interest* with the argument that it constituted a payment for *time*, and that time was a free gift from the Creator to which everybody has a natural right. This thinking is not unlike that of the single-tax advocates, namely that *land-rent* should be taxed since *space* is a free gift of nature (Fisher 1907:4).

Fisher mentions the "window tax" according to which a house-owner is taxed on the base of the number of windows of his house. This is a bad taxation criterion: to this very day one may see in some countries unfinished buildings already lived in. They are not finished in order to save taxes...

1) *In Switzerland, the creation of a Museum of Social Insurance is planned. In this museum, "Social Insurance" is understood in a wider sense, comprising, for example, also health and life insurance organised by guilds in the Middle Ages.*

**79. Social Insurance**

In this Story, Fisher propagates Social Insurance as a means to protect people against the risk of losing their jobs or becoming unable to work. Social Insurance is an efficient way of raising the minimum economic standing of a population – much more efficient than raising the average income. In the last paragraph of this Story, he lists four kinds of risk to be covered by Social Insurance: (1) unemployment; (2) illness; (3) old age and other disability; and (4) death.

In the context of this Story, Fisher gives mainly attention to the risk of unemployment and disability to work. He does not explicitly treat the risk of death (loss of income to survivors).<sup>1</sup> He did so, for example, in Stories 29 and 73.

It is noteworthy that (the optimist) Fisher uses the term *employment* insurance. He already mentions “technological unemployment”. He proposes measures by which rationalizing is not bad but good for workers (cf. Story 76). He also refers to depression-unemployment, which best is relieved by solving the problem of depression. Fisher holds out the prospect of a Story treating this subject; unfortunately it has never been published.

Fisher regards disability insurance halfway between health insurance and old age insurance. Actually, he denies the need for old age insurance: people should work as long as they can, and afterwards the disability insurance should pay for everybody.

It is not clear if, in the context of this Story, health insurance is only seen as protection against loss of income or also as protection against the cost of medical treatment. Anyway, Fisher was among the first to recognize the importance of insurance against large medical expenditures, coupling, as he did, his interest in maintaining and improving peoples’ health with his interest in financial matters. He strongly favoured health insurance and foresaw the day when insurance would cover most medical costs (Fisher (1917), Vogt and Barta (1997:7)).

Story 70 presented three levels of measures to deal with any damage: elimination, compensation and insurance. This scheme is applied here to the risks covered by Social Insurance:

<i>measure</i> <i>risk</i>	<b>elimination</b>	<b>compensation</b>	<b>insurance</b>
<b>unemployment</b>	by appropriate macroeconomic politics	by regularizing employment	by (un)employment insurance
<b>illness</b>	by public hygiene (Story 73)	by individual hygiene (Story 73)	by health insurance
<b>old age (and other disability)</b>	-	3 <sup>rd</sup> pillar of social insurance	1 <sup>st</sup> and 2 <sup>nd</sup> pillars of social insurance
<b>death</b>	-	3 <sup>rd</sup> pillar of social insurance	1 <sup>st</sup> and 2 <sup>nd</sup> pillars of social insurance

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1) *In Europe, at an early stage, insurances covering funeral cost were introduced. Premiums for the so-called “popular insurance” (with small sums) were collected on a very frequent basis (e.g. each two weeks) to prevent policy holders to spend their money on other, less essential, purchases, like alcohol (cf. Fisher 1926). In Switzerland, the agents were called “money hunters”. Although not administered by the government, such policies with small insurance sums could be considered as precursors of social insurance.*

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### **Collected Stories by Irving Fisher**

The present batch of Stories is the second last one.

The last batch, Stories 80-86, will be published in the next issue of IFC Bulletin.

### **Fisher's Stories on internet**

In IFC Bulletin 2, June 1998, pages 17-19, a list of the titles of the 86 Stories was presented.

The Stories have been reprinted in successive issues of the IFC Bulletin in 12 clusters.

They are available on the IFC web site [www.ifcommittee.org](http://www.ifcommittee.org).

- |       |   |
|-------|---|
| 1- 7  | IFC Bulletin 2, June 1998, 17-34: Capital and Income                          |
| 8-12  | IFC Bulletin November 1998, 23-38: Price indices                              |
| 13-21 | IFC Bulletin 4, June 1999, 71-86: Supply and demand                           |
| 22-32 | IFC Bulletin 5, October 1999, 110-129: Interest                               |
| 33-39 | IFC Bulletin 6, April 2000, 13-20: Division between production factors        |
| 40-48 | IFC Bulletin 7, October 2000, 20-30: Distribution, poverty and wealth         |
| 49-55 | IFC Bulletin 8, March 2001, 42-52: Distribution, inequality                   |
| 56-64 | IFC Bulletin 10, October 2001, 70-83: Purchasing power, inflation / deflation |
| 65-70 | IFC Bulletin 11, July 2002, 47-62: Monetary policy                            |
| 71-74 | IFC Bulletin 12, October 2002, 222-232: Prevention of economic waste          |
| 75-79 | IFC Bulletin 15, May 2003, Economic Policy and Social Insurance               |
| 80-86 | IFC Bulletin, to appear, Health, socialism, concluding summary.               |

# Short Stories on Wealth

*Irving Fisher*

## 75. Science and Invention <sup>1</sup>

WE turn now to the problem of science and invention as a means toward enrichment.

In view of the fact that our civilization is really based on science and invention it is rather curious that until recently there has been so little definite promotion of science and invention. What would our civilization be without the inventions which, as Macaulay said, "abridge distance" — whether in transportation or communication? Banish the railway and automobile, the telegraph and radio, telephone, the newspaper and books, and we go back to the middle ages. Banish the alphabet and printing press, the wheel and a few other elementary inventions and we get back to barbarism. Banish stone implements and we get back to the jungle.

Inventions have the most profound effects on wealth and welfare. It makes a great difference whether the state of the arts is fixed or progressive. For instance, we economists say increase of population tends to increase rent; but this is true only "at a given stage of the arts." A scientific discovery is like a discovery of a new continent. Just as the discovery of America reduced land rent in England, so agricultural science and invention reduce farm rents.

Of course, if population increased in geometric progression, it would always overtake, in the end, any improvement in the arts; for this earth cannot have infinite capacity for population, no matter what great discoveries are made. But invention puts off the evil day and enables us to cope with the problem of population by itself. In the interim inventions certainly increase the per capita well-being.

Until recently science and invention have been left more or less to grow of themselves. For generations the only important step that has been taken to promote science and invention has been the establishment of patent offices. Theoretically patents are for the purpose of encouraging inventors; practically they operate more to protect the manufacturer than the inventor. Undoubtedly they help to introduce inventions. For, without the patent protection many inventions, even after they were made, would not be developed. But so far as encouraging inventing itself is concerned, patents haven't succeeded very well, and one reason is that the inventor isn't interested in money so much. That's one thing people forgot when they established the patent office. They thought it would bribe inventors to invent. This is almost like bribing a landscape or portrait painter to paint, or a poet to write.

It is the creative instinct which is the chief stimulus of the inventor, and he will invent better if he has a fixed salary than if he depends on invention itself for profit. The real stimulus must come not from money profit, but in some other way. Recognition or fame is a stimulus, and we are gradually coming to grant that. Today great inventors like Edison and Marconi are international heroes. But a generation or two ago inventors were regarded as "cranks." Even Langley, though the head of the most dignified scientific organization in the world, the Smithsonian Institution, was laughed at when he sought to invent a flying machine. The ridicule to which he was subjected probably shortened his life.

But today we are glorifying science as never before. One reason is that people are now appreciating certain recent fruits of science such as the automobile, the airplane, the automatic washing machine, the artificial ice refrigerator, the Victrola, the radio, the movies, the talkies, television. They realize that it took brains to invent such things, and they respect inventing brains as they did not before. Now there are great laboratories of big industrial concerns to utilize inventors and get a maximum of invention. Now even big progressive business employs inventors on salary and it is often their best investment. The result is that we are making far faster progress in invention now than ever before in the history of civilization.

1) *The Lather, Cleveland, Vol. XXXII, No. 9, May 1932, pp. 27-28.*

The present is an age of rapid invention, especially since the World War. President Hoover's Committee on Recent Economic Changes found the rate of improvement in industrial arts one of the most striking characteristics of our times.

Besides those already mentioned, some outstanding examples of recent inventions which greatly increase production and consumption are: the applications of electric power in factories and on the farm; the long distance telephone, which has finally solved the problem of sending messages across the ocean; the utilization of cellulose in the manufacture of building materials, paper, and rayon textiles; the use of cotton seed for oil and fertilizer; the pulverization of coal by which its fuel value is greatly increased; the liquefaction of coal which gives added supplies of much-needed gasoline; the innumerable chemical and dye products made from coal.

New discoveries and inventions, by utilizing wastes from forests, fields, and mines, and increasing the output of labor have greatly advanced the scale of living in America.

Furthermore, the use of a new invention spreads with lightning rapidity in this age of high speed and intercommunication, and, as it spreads, it leads to further inventions. This quick spreading is a chief reason why the present age is increasingly one of invention. Nations like Great Britain, the United States, Germany and France lead in civilization by taking the greater advantage of this self-propagating principle of invention. Nations like China and India, so long as they give it little attention, will lag behind.

Improvements in transportation developed the world granaries of Argentina, Canada and the Mississippi Valley. The acreage of cotton was increased to supply the New England and British mills from the Southern and Gulf States, from Egypt and India. The investments in mining stretched over continents. Chilean nitrates were brought to American farms, and fresh investments were made in works that extracted nitrogen from the air. The coal deposits of the world were made to release solar energy stored up for millions of years, and the oil wells of Oklahoma, Mexico and Baku became sources of new wealth and investment to supply a motor-driven age. Investments in machines, factories, railways, highways, pipe lines, warehouses, sewers, and in the ramifications of urban and suburban development enlarged the opportunities for surplus funds to an almost unbelievable extent. Reconstruction of devastated countries after the World War gave opportunity for the investment of billions of American dollars abroad, with flotations of foreign loans in the United States, in 1927 and 1928, averaging a billion and a half each year.

Today millions are spent on research where thousands were spent a generation ago. And inventors are thus led not only to more intensive effort, but to co-operate and to pool their ideas.

During 1929, the Engineering Foundation launched a drive for five million dollars to aid scientific research. Major General George O. Squier reported in the Nation's Business for January, 1929, that in the laboratory of the American Telephone and Telegraph Company alone, \$15,000,000 yearly were being devoted to the work of research which employed four thousand specialists. With respect to research General Squier added:

"We hear of expenditures by the millions – \$200,000,000 a year by some estimates, \$70,000,000 through commercial firms. Any comprehensive inventory of our research resources would include the bulky items of plant and equipment, and the incalculable intangibles reposed in the 300,000 physicists, chemists, engineers, mathematicians, and trained technicians. As for suggesting the substance of this tremendous adventure, we may turn to the structures erected by the General Electric Company, the United States Steel Corporation, General Motors and the United States Rubber Company."

A survey by the National Bureau of Economic Research revealed, in its announcement of May 4, 1929, the extent to which industrial research prevailed as a new trend in manufacturing progress in the United States. Of 599 manufacturing concerns supplying information, the report stated that 52 per cent recorded the carrying on of research as a company activity. Testing laboratories were conducted by 7 per cent, leaving a minority in which no research work was being done. Some 29 per cent reported that they were supporting co-operative research conducted through trade associations, engineering societies, universities or endowed fellowships. Especially in cement manufacture, leather tanning, and gas and electric utilities, co-operative research was highly developed.

It was largely the over-enthusiastic investment in invention which led to the boom of 1927-29 and so indirectly contributed to the crash and depression which followed. It is also true that we may look largely to new inventions and the better utilization of old ones to pull us out of the depression.

## 76. Saving Waste in Industry <sup>1</sup>

AFTER the business depression in 1920-1921, Herbert Hoover's engineering committee on Elimination of Waste in Industry reported some of the causes of that depression. The committee had found throughout industry a faulty control of material and design, as well as of production and costs. It was found, that standardization of the thickness of certain walls might mean a saving of some six hundred dollars in the cost of the average house. There were six thousand brands of paper, of which half were more or less inactive, and the duplication of brands tied up money in unnecessary stock. The loss from idleness in shoemaking occasioned by waiting for work and material amounted to about 35 per cent of the time. A shoe factory with capacity of twenty-four hundred pairs a day had shortage of needed racks, reducing output to nineteen hundred pairs daily. Most plants were found with no cost systems, or with incomplete knowledge of general costs; and for this reason most of them lost money. A multitude of shops lacked modern personnel relations with their employees; the workers had no unbiased means of approach to employers, while employers lacked the means of treating with their own men. Few plants had effective employment records; the turnover of labor was high and expensive. Sales policies were defective. There were cancellations for purchases on long-term contracts ranging up to 14 per cent, and returns of goods up to 11 per cent in so-called normal years. Lack of waste saving and of scientific forms of organization found production restricted by both employers and men. Maintenance of high prices, collusion in bidding, and unfair practices contributed to limit output, as well as did the practice of "ca' canny" by workers and the restrictive rules of the unions. It was also found that eighteen hundred million dollars a year might be saved in preventing illness and deaths among American workers, and eight hundred and fifty million dollars more in preventing industrial accidents.

With the publication of this report, and of the succeeding Hoover report on unemployment and business cycles, American industrial management awoke to the possibilities of economic savings and higher organization, and American investment management found its opportunities correspondingly enhanced. Loans were supplied by the banks in measured volume, according to the needs of industry. The vast American market, blessed with free trade between 48 State jurisdictions, was thoroughly surveyed, and the wonders of technique and research were systematically evoked in the large scale as well as in the smaller but rapidly merging industries.

But this very rapidity makes problems of its own. One such problem is unemployment. One of the very biggest problems of distribution is to arrange some scheme by which those who are injured by labor-saving devices will be taken care of. It really is outrageous that innocent laborers should be thrown out of jobs, even temporarily, because of something that is for the good or mankind generally. We couldn't do better than devise a system – governmental or some other collective way – by which the people are provided for – given work temporarily at least, and an opportunity to get back into the great industrial machine somewhere else. Employment insurance and employment agencies are of course intended as means to that end. We need these the more rapid progress is. Of course, the automobile has helped enormously, enabling the laborer to scour the country to find his chance, instead of taking one hundred times as long tramping here and there.

But despite the comparative ease of readjustment today the readjustments are painful and they are more often required than before the days of rapidly improving machinery. In this age of mechanization it ought to be an axiom that every laborer replaced by a new device should be reimbursed out of, or in contemplation of, the profits to accrue from that device. Pending any systematic solution compulsory insurance, far-sighted and progressive employers should take the lead themselves. This is already being done to some extent. It is reported that certain employers, notably Hart, Schaffner & Marx and the Standard Oil Companies, are providing employees who lost their jobs through labor saving machines with a large dismissal wage and the chance of another job elsewhere.

So-called "scientific management," a term introduced by Frederick Taylor, has been both abused and misunderstood. Taylor himself did not abuse it and he warned employers against its abuse. He had in fact no definite "Taylor System" in mind. People are wrong in thinking of the Taylor System as a definite task and bonus system with stop watches, job analyses, etc. All he really meant was, as he said, to show each manager how to find out "the one best way" and find it by experimentation.

He did this himself in many cases. For instance, he discovered that there were many different sizes of shovels. So he began to take up the subject of shoveling coal. What was the best size of a shovel? He found if you took a little shovel you could shovel faster, but the littleness of the shovel

1) *The Lather, Cleveland, Vol. XXXII, No. 10, June 1932, pp. 27-28.*

was a deterrent more than the rapidity was a speeder up. On the other hand, if you had too big a shovel, you would shovel more in each shovelful, but you would do it slower. Evidently there is a maximum in between.

He found this maximum was different for different materials. In one case the best shovel holds 28 pounds – several times as big as most people imagine. Of course he had to find strong men to use it – men adapted to that work.

In this way he would work out problem after problem, finding what was the one best way to get the maximum result.

Of course waste-saving consists very largely in articulating these things together so that there will be no hitch. The belt system or the verticle system by which different processes are interconnected, with no hitch between, are steps in waste saving.

There is today a general spirit of studying the methods that are best, and this spirit is gradually spreading over the whole earth. Many have recently become enthusiastic about it abroad, and even idealize it or still think of it as something peculiar – more than we do here in America.

We are still so far away from the ideal even now that, through saving waste, we could enormously raise the average per capita income in the United States.

Of course waste-saving also includes the matter of merging – and in general of increasing the size of industrial units. The whole question of controlling trusts should be taken up anew and the old laws made obsolete – the Sherman Act and Clayton Act. We could then start all over with a system more like railroad control, which the Interstate Commerce Commission seems to have worked out.

## 77. The Tariff <sup>1</sup>

THERE is one more branch of taxation which I would like to mention, and that is the tariff. Of course the tariff is primarily a tax. The fact that it taxes the foreigner to some extent doesn't make it anything else. I regard the tariff as it now exists in this country as something that was – I will not say “put over” on the American people – for I am not impugning motives, but secured by special interests. The tariff was secured by the producer. The consumer had no representation. You and I, for instance, as consumers of sugar, haven't enough interest in our purchases of sugar to spend two or three months lobbying in Washington, but the men who produce sugar have a concentrated interest, and tell Congress what they want, and that if Congress will not come across they won't contribute to the campaign funds.

Protection started with Alexander Hamilton. We got thereby a diversity of industries. There is some truth in the theory. Tariff protection is a little like patent protection. But it is a highly theoretical doctrine.

Theoretically there was a complete and logical program to be followed. We were to put up the tariff on, say, steel, or aluminum, or woolen cloth so that we could get some steel mills or other manufactures established, small at first, and then, after these “infant industries” got big and strong enough not to need more protection we were to take the tariff off. But unfortunately for this beautiful theory, when the infants did get big they used their size and influence to keep the tariff on. They said: “Don't take that tariff off,” and invented fine spun arguments to show that to do so would injure the whole county.

Europe suffers from high tariffs more than we do. Recently the project for a United States of Europe without tariff barriers between states, like the United States of America without tariff barriers between the 48 states, was approved by distinguished statesmen all over the world, including our own ex-Secretary Mellon, who, in consequence, was hard put to it to justify a high American tariff.

It should not be forgotten that America is the largest free trade area in the world. This free trade between the 48 states has been one cause of our prosperity. Without it, we could not have mass production. If every state tried to protect its own automobile production, for instance, against competition of other states, we could have no Ford car or Chevrolet. We might have some 48 kinds of cars in 48 separate markets at prices many times what the price is now when millions of cars of one model can be turned out. Free trade is thus like labor-saving machinery. Its final effect is to reduce the cost of living and to increase real wages.

When we extend the benefits of freer commerce between all nations the whole world will benefit, and America not the least. So tariff reform is one of the most important tax reforms needed throughout the world.

1) *The Lather, Cleveland, Vol. XXXII, No. 11, July 1932, p. 27.*

78. The "Single Tax" <sup>1</sup>

WE come next to the so-called single tax proposal. The single tax would (1) tax land rent, as an "unearned increment," (2) tax nothing else than land rent, and (3) tax that rent nearly 100 per cent. Although I believe there is a good deal of truth in the proposal to tax the so-called "unearned increment," instead of taxing land improvements, there seem to be two chief objections to the single tax as it is proposed by the orthodox single taxers.

One is that it involves confiscation. It is true that many single taxers have now given that idea up. Yet it was the idea of Henry George, the originator of the single tax. He said that land was analogous to stolen goods. If you steal my automobile and someone else buys it of you, it is still mine; I can reclaim it. Any person who buys it from you has no right to keep it, even if he bought it in good faith.

But there must be a time limitation; and when you come to land, the analogy is especially foolish. It may be that men did originally get land by seizing it. We know that gold claims originally were staked out. Sometimes the Government held it first, and on a certain day allowed the public to rush for it and take it. This is "seizing" if you like.

But does this show that you had no right to it and that therefore none of your successors have a right to it? It may well be that the land on which you now stand was taken from the Indians by fraud or force some day in the dim and distant past; but if we should now try to find the heirs of the Indians and restore that land to them it would be impossible, or if possible, such "justice" would be silly. The original injustice, if any, would not be corrected; but a new injustice, to the present holder, would be committed.

And so if a person owns a house and lot and has a title deed which is legal, bought in good faith, the fact that it was originally gotten by a process that Henry George doesn't approve of doesn't invalidate the title today in any sensible scheme of things. So I can't believe that we ought suddenly and completely to confiscate economic rent. But I do believe, with Henry George, that we can't take the opposite extreme. We can't say that there is a vested right in land such that, since you never taxed certain land before you can't tax it in the future. We have to use common sense.

In addition to the objection of confiscation, there is a second objection. This is that the single taxer – the orthodox single taxer – doesn't want to tax anything else than land. That is why the plan is called a single tax.

Such a rent tax is to him a natural tax. According to this doctrine we must use that one tax and no other. We must make our expenditures fit exactly what that one tax will yield.

Now look at what this means. We know that the rent of any land is due to the difference between productivity of that land and the productivity of the worst land in use. If land rent is very great because of a big difference between the most fertile and the least fertile land the Government will have more money than it needs and will waste it. But if you happened to live in a country where all pieces of land were equally productive you would have no land rent at all and the Government would, under the single tax, have no funds at all! What would you do then?

Clearly taxation should be based primarily on what is needed by the Government. Taxes must be made to correspond to needed expenditures, instead of expenditures being made to correspond to accidental land differences. So a mixed system of taxation, such as we have – or rather, not such as we have, but such as it might be after certain conservative tax reforms – is, correct.

There are other arguments against the single tax. The increment of rent is not always unearned. Sometimes, as is the water front, land is manufactured, so to speak. Then the increment is not altogether "unearned," but comes about through the same profit motive as any other increment.

Yet we should work in the direction of taxing the land rather than the improvements on land, for the simple reason that when you tax the land the tax cannot be shifted. It does not reduce productivity. But when you tax the building on the land it does discourage the improvement.

The best example of this reaction to a tax on improvements is in the window tax, the famous example in France. There the Government has tried to assess the size of a man's house by the number of windows. The result was that people were having fewer and fewer windows until some people had only one window in the entire house. The tax resulted in less, not more, revenue and discouraged sanitary building.

1) *Land and Freedom*, Vol. XX, 1932, p. 116.



## 79. Social Insurance <sup>1</sup>

I HAVE now finished discussing the various practicable ways of increasing per capita prosperity and now turn to its distribution. A complete program for improving the distribution of wealth should aim at limiting the minimum and maximum and otherwise reducing the present great inequalities. Practically speaking, whenever we raise the average economic well-being, we usually also raise the minimum economic standing of people in a country, even though theoretically this may not be a necessary result.

But there are special measures for raising the minimum in addition to merely raising the general average.

One is employment insurance, or other ways of diminishing unemployment.

Unemployment is an evil particularly for the people with the smallest income – those near the bottom of the economic scale. For those half-way up, or at the top, it is not so much an evil.

I believe that one of the very greatest needs of our civilization is a workable scheme for insuring employment, by which I mean insuring the opportunity for employment. Unemployment is a crying evil even in “good times.” Every time there is a new invention it throws someone temporarily out of work even though it also makes work for someone else. It is always hard for a man to shift his residence and occupation – and especially if he has acquired skill.

But it ought to be possible to contrive a scheme to reduce unemployment almost to zero. There ought to be unemployment insurance, and a complete mechanism by which anyone who is in involuntary unemployment may be given an opportunity; even if it be an inferior one, to earn his living.

I don’t mean that “the world owes everyone a living” if a person isn’t able or willing to earn it. But we may, I think, say that it owes him a reasonable opportunity.

Fortunately the problem is already beginning to get attention. Some employers are planning their work so as to regularize employment all the year round instead of having seasonal lay-offs or discharges. Others have a large dismissal wage to help finance the employee while seeking another job. Many make a special effort to retain those displaced by any labor-saving machinery.

I hope the time will come when an employee will not only not dread labor-saving machinery, but be given an actual premium or other incentive to improve the machine he is working on so that every labor-saving device will bring to the displaced laborer a gain and not a loss.

Unless industries themselves solve the problem, as Gerald Swope and the electrical industry are attempting, some governmental agency should be set up by which all forms of unemployment shall be reduced. This agency should seek to induce employers to “regularize” and “dovetail” their jobs and, as to any remaining unemployment, to use Government work and Government money to give opportunities to work even if at a loss to the Government. This loss spread over the whole country’s taxpayers is well worth paying as an insurance fund. The same agency beside taking care of this problem of seasonal unemployment should, in a similar way, take care of technological unemployment.

There is left depression-unemployment, the chief economic evil today. That is best solved by solving the problem of depressions. I shall expect to speak of this in another Short Story.

Then there should be likewise, health insurance, and old-age insurance – which is really a special kind of health insurance, namely, disability insurance.

There are two kinds of disease – temporary and chronic – and we think of health insurance as applying to temporary insurance – giving a relief while a person is recovering.

Disability insurance is half-way between life insurance and health insurance. Disability insurance which includes “old age” insurance is getting to be a matter of great importance today. Without our tuning up of industrial progress and efficiency, we are constantly tending to eliminate the old man.

Even if the old man has to get smaller pay, he ought to be able to get a job, provided he is still able to do anything at all. I haven’t much sympathy with kidding him, paying him for doing practically nothing, but I do believe that as long as a man is able to work, his work ought to have a market, and it ought to be possible, with a little contrivance, to accomplish that.

Of course, we can never get rid of unemployment absolutely. If a man is thrown out of one job and then goes into another, it will always take time to make the change, even if only the time needed to walk from the one job to the other. But the time of this transition, as it now is, can certainly be reduced and reduced greatly.

So we have, in all, four kinds of insurance which can be used to help raise the minimum well-being, namely, insurance against unemployment, illness, old age or other disability, and death.

1) *The Lather, Cleveland, Vol. XXXIII, No. 1, September 1932, p. 26.*