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**СТАТИСТИЧЕСКАЯ КОМИССИЯ и  
ЕВРОПЕЙСКАЯ ЭКОНОМИЧЕСКАЯ  
КОМИССИЯ ОРГАНИЗАЦИИ  
ОБЪЕДИНЕННЫХ НАЦИЙ (ЕЭК ООН)**

**МЕЖДУНАРОДНАЯ  
ОРГАНИЗАЦИЯ ТРУДА (МОТ)**

**КОНФЕРЕНЦИЯ ЕВРОПЕЙСКИХ  
СТАТИСТИКОВ**

**Совместное совещание ЕЭК ООН/МОТ по индексам  
потребительских цен**  
(Женева, 4-5 декабря 2003 года)

## **ДОКЛАД**

### **I. ВВЕДЕНИЕ**

1. Совместное совещание ЕЭК ООН/МОТ по индексам потребительских цен состоялось в Женеве 4-5 декабря 2003 года. В его работе участвовали представители Австралии, Австрии, Андорры, Бельгии, Болгарии, Венгрии, Германии, Дании, Египта, Израиля, Исландии, Испании, Италии, Канады, Китая, Латвии, Литвы, Нидерландов, Новой Зеландии, Норвегии, Польши, Российской Федерации, Румынии, Сербии и Черногории, Словакии, Соединенного Королевства, Соединенных Штатов Америки, Турции, Филиппин, Финляндии, Франции, Хорватии, Швейцарии, Швеции, Эстонии, Ямайки и Японии. Европейские сообщества были представлены Евростатом. На совещании также присутствовали представители Организации экономического сотрудничества и развития (ОЭСР) и Международного валютного фонда (МВФ).

2. Председателем был избран г-н Карстен Болдсен Хансен (Дания), а заместителем Председателя - г-н Росмундур Гуднасон (Исландия).

### **ОРГАНИЗАЦИЯ РАБОТЫ СОВЕЩАНИЯ**

3. На совещании были обсуждены следующие основные темы:

- a) Занимаемое владельцами жилье;
- b) Семейства индексов, используемых в различных целях;
- c) Качество данных;
- d) Выборка и корректировка на качество;
- e) Сезонные колебания и поправка на них;
- f) Финансовые услуги (включая доклад о работе совещания Оттавской группы в мае 2003 года);
- g) Будущая работа.

Помимо обсуждения основных тем повестки дня участникам была представлена информация о следующих мероприятиях и событиях:

- Доклад МОТ, включая информацию о состоявшихся обсуждениях и решениях, принятых на семнадцатой МКСТ (ноябрь-декабрь 2003 года), и новая принятая резолюция по ИПЦ;
- обновленная информация о работе Оттавской группы;
- доклад МВФ;
- доклад Евростата;
- представление нового международного руководства "Руководство по индексам потребительских цен: теория и практика".

### **РЕЗЮМЕ ОБСУЖДЕНИЯ И ОСНОВНЫЕ ВЫВОДЫ, СДЕЛАННЫЕ В ХОДЕ СОВЕЩАНИЯ**

4. Ниже приводятся рекомендации в отношении будущей работы. Прочие выводы, сделанные участниками в ходе совещания по перечисленным выше темам, представлены

(только на английском языке) в приложении, подготовленном после совещания и распространенном среди участников.

## **РЕКОМЕНДАЦИИ В ОТНОШЕНИИ БУДУЩЕЙ РАБОТЫ**

5. Участники Совещания рекомендовали включить следующие мероприятия в программу работу Конференции европейских статистиков при условии их одобрения Конференцией и ее Бюро:

a) проведение следующего трехдневного Совместного совещания ЕЭК/МОТ в апреле 2006 года. В качестве представляющих наибольший интерес с точки зрения возможного включения в повестку дня следующего совещания по индексам потребительских цен были определены следующие темы:

i) охват ИПЦ:

- Системы индексов цен, область индекса, зависящая от его основного вида использования: учет занимаемого владельцами жилья и прочее производство для собственного потребления, выплаты натурой, индивидуальное потребление НКОДХ и органов управления, денежные операции в сопоставлении с совокупностью денежных и неденежных операций.

ii) Корректировка на качество: использование описаний продуктов для корректировки на качество, например структурированных описаний продуктов ИПЦ;

iii) Прочие, связанные с ИПЦ, вопросы:

- замечания пользователей в отношении Руководства по ИПЦ;
- политика пересмотра;
- индексы услуг;
- сезонные колебания и поправка на них;
- скрытая экономика;

- учет операций с бывшими в употреблении товарами в рамках сектора домашних хозяйств и между домохозяйствами и другими секторами;
- использование данных сканирования.

b) В связи со следующим Совместным совещанием ЕЭК/МОТ по ИПЦ будет организовано специальное заседание для стран с переходной экономикой.

c) Секретариат ЕЭК ООН в ходе 2004-2005 годов проведет следующую работу в области индексов потребительских цен. Она будет осуществляться под управлением руководящей группы по ИПЦ:

- проведение обследования для изучения охвата индексов потребительских цен в связи с основными видами их использования в странах региона ЕЭК и представление результатов в виде публикации или доклада на следующем Совместном совещании ЕЭК/МОТ по ИПЦ;
- проведение совместно с МОТ опроса пользователей относительно Руководства по ИПЦ: полезность, применимость и полнота Руководства.

## ANNEX

### SUMMARY OF DISCUSSION

#### Joint UNECE-ILO meeting on Consumer Price Indices (Geneva, 4-5 December 2003)

##### Information items:

1. Ms. V. Stoevska (ILO) informed participants about the outcome of the 17th International Conference of Labour Statisticians that took place in Geneva from 24 November to 3 December 2003. One of the two main topics discussed by this Conference attended by more than 300 participants was the revised international standards on CPI. She noted that the resolution had been developed in parallel with the preparation of the revised manual on CPI, had benefited from the work on the manual, and the two instruments were consistent with each other, and she thanked all those involved in the drafting of the manual and others who had made valuable contributions. The ILO also reported on the status of the revision process of the CPI manual. It was indicated that the amount of work involved in the finalisation of the manual has been underestimated. The printed version of the manual would be available early in 2004.
2. Mr. T. Lacroix (INSEE) informed participants about the outcome of the last Ottawa Group meeting that took place in Paris, 27-29 May 2003. He indicated that some 19 papers were presented for discussion with a further 3 papers submitted as room documents under the following sessions: financial and telecommunication services (complex products, packages), e-commerce, formula for calculating elementary and upper-level indices, substitutions and hedonic methods. Each session was ended up with a set of recommendations that is an important output of the work. In addition, a session was devoted to the ILO activities on CPI. The members of the Ottawa Group reviewed and gave their comments on the draft resolution on CPI that was adopted by the 17 ICLS. The last session on the future directions of the Ottawa group identified the need to standardise the classifications used for e-commerce. The complete documentation of the meeting is available on paper and on the web. Participants were also informed about the forthcoming Ottawa Group meeting, to be hosted by Statistics Finland, in Helsinki from 23 to 25 August 2004. Topics for this meeting include items such as: price indices for services, relationship between PPI's and CPI's, housing, health, sampling, quality assurance and automation of the production process.
3. Mr. K. Zieschang (IMF) reported on the IMF activities in the area of price statistics over the least two years, namely: (i) technical assistance to the countries, reports on observance of

standards and codes, (ii) coordination of revision of PPI manual whose final version is available on the IMF web site, (iii) development of the Export and Import Price Manual which has the same chapter structure as the CPI and PPI manuals, (iv) coordination of International Comparison Programme and development of Structured Product Descriptions and (v) real estate price indices as part of financial soundness indicators. He further informed participants about the IMF course on price statistics which was being held in IMF-Singapore training centre from 1 to 12 December 2003, as part of the efforts of his organisation to educate price statisticians around the world. He also mentioned the IMF work on real estate price index and stock market index that was developed jointly with the Bank for International Settlements.

4. Mr. J.C. Roman (Eurostat) gave a detailed account of Eurostat work and activities on HICP since the last Joint UNECE-ILO meeting (2001). The main priorities recognised by Eurostat and its main user, the European Central Bank, are owner occupied housing and quality adjustment. He mentioned that a pilot index for owner-occupied housing based on acquisition approach has been constructed. He further noted important work related to consolidation of all existing regulations covering the HICP into one regulation. Eurostat work in HICP area involves monitoring the compliance with the existing regulations by member states. Another important area involves technical assistance to candidate countries and their smooth integration into the HICP system. Treatment of seasonal items and temporal coverage will also be considered on future meetings.

5. The CPI manual was presented by Mr. Peter Hill and Mr. Erwin Diewert. Mr. Hill provided background information on the revision of the manual, explained the purpose of the manual, method of work and intended audience of the manual. It was pointed out that the users are increasingly interested in the CPI methodology and that considerable attention is paid to the accuracy and reliability of CPI estimates. The manual documents/elaborates on different practices currently that could be used depending on the resources available at country level but also points out alternatives to existing practices whenever possible, along with their advantages and disadvantages. It was also pointed out that the guidelines contained in the Manual are consistent with the recommendations on CPI adopted by the 17th ICLS. Structure and content of the first 14 chapters were then briefly presented and main issues in each chapter highlighted. It was stressed that although CPI has a longer history than any other statistics it should be regarded as a part of the overall statistical system and, as such, definitions and classifications used should be consistent with those used in other statistical areas. Attention was drawn to the new types of indices, like Lowe and Young index, introduced in the Manual and the differences between index, price and weight reference period. Finally, it was pointed out that cost-of-living, which most countries are aiming to, can be approximated by fixed basket indices.

6. The presentation of the Manual was continued by Mr. Diewert, who concentrated first on the major methodological problems with the traditional methods in use and then provided

general overview of chapters 15 to 23. Six main areas of concerns were identified, namely: (i) problem with the formula used for calculating aggregate indices. There is no single statistical agency that actually calculate its CPIs by implementing the true Laspeyres index; (ii) calculation of the lowest level indices as unweighted averages of prices or price relatives; (iii) treatment of quality changes and attrition of the sample in the context of a Laspeyres index that uses a fixed set of quantities; (iv) the treatment of seasonal products and use of annual fixed weights; (v) inappropriate treatment of services; and (vi) use of one single index for many different purposes. Chapters 15-19, and in particular Ch.15 were briefly presented. They provide a comprehensive overview of index number theory and discuss the index formula that is best suited to aggregate prices into measures of overall price changes. Then the theoretical basis for constructing elementary aggregate indices, treatment of quality changes, seasonally available items and durable goods discussed in chapters 20-23 were presented.

### **Owner occupied housing**

#### **Discussant: Ms. Diane Ramsay (New Zealand)**

7. Ms. Diane Ramsay, New Zealand noted that there is considerable variation in the methodologies employed to measure prices in owner occupied housing, more so than with any other CPI issue, depending in large part on the size of this type of housing in any particular country. The challenges are both of conceptual and practical nature. Three main issues for discussion were identified: how to evaluate the Eurostat pilot study on a harmonised price index: the geometric method of depreciation applied in Island user cost approach, and the relative advantages of the Swedish and Icelandic approaches.

8. The Eurostat paper presented the outcome of the pilot project on compilation of price index for owner occupied housing (OOH). At present Eurostat publishes the harmonised index of consumer prices (HICP) that excludes OOH. The pilot study covers Germany, Spain, Poland, Finland, Austria and the United Kingdom. The approach followed is based on net acquisition and on the exclusion of land. This issue will be further discussed at the December Working Group meeting after analysing the results of the pilot study.

9. The paper by Statistics Iceland described the user cost method used for the calculation of owner occupied housing. Countries apply different approaches to derive the weights for OOH: rental equivalence, user cost and net acquisition. Where strong rental markets exist the rental equivalent is the most convenient method. Other countries use net housing cost based on newly acquired houses adjusted for depreciated stock. The Icelandic CPI applies simple user cost approach based on long term real interest rate, depreciation and prices for all properties sold.

10. The paper from Statistics Sweden provided an overview of the present method for calculation of owner occupied housing index. Like in Iceland the estimate is based on user cost approach. Recently a Government Commission reconsidered the methods for calculation of the

entire CPI in Sweden. The commission devoted much of its work to the treatment of owner occupied housing. The presentation presented the advantages and disadvantages of the present approach together with an analysis of the improvements proposed by the CPI Commission. It was pointed out that the method developed for the Swedish CPI may not be suitable for countries where households move frequently from one own-house to another.

11. In the discussion that followed it was pointed out that there are dangers in the user-cost that include capital gains because it may result in both positive and negative expenditures. The capital gains could skew the results towards a negative housing cost. It was also stressed that real interest rates, on short-term basis, are very volatile and could be even negative, and as such not suitable for CPI. Calculating an average interest rate for owner-occupiers would also prove difficult in countries where mortgage rates differed for each individual household.

12. It was agreed that it is necessary to find a balance between what is theoretically desirable and what is practical for each country and acceptable to the public. The problem with negative interest rate could be solved by assuming that real interest rates are constant in the long term, using a 15-year moving average for instance. In Sweden the real interest rate is assumed to be constant during one year. Regarding the volatility of indices it was suggested that most of the volatility in house price indices came from the inclusion of land and therefore a construction price index may be more appropriate. Difficulties in getting good data were also mentioned as a problem.

13. Iceland stressed the importance of using market price information in the calculation of the index for OOH and agreed that in countries where a long-term real interest rate is not available (relying on variable rates) sampling could present a challenge. A suggestion was made that the acquisition of a house should be treated the same way as the acquisition of a car on credit, with the only difference being the length of the annuity period.

14. The necessity of ensuring consistency in the treatment of OOH between different areas of statistics (e.g. price statistics and national accounts) was noted. The OECD informed the participants that national accounts (the Canberra Group) experts are currently looking on how user costs can be implemented in national accounts.

15. The IMF stated that the house price index could be useful in carrying out monetary policy of a country although they are difficult to predict.

16. It was pointed out that in the Russian federation as in other transition economies the structure of the housing market includes municipal and cooperative housing and differs from that in developed countries. It has very specific features and therefore it is not possible to apply uniform method to get prices for real estate. Also there is no equivalent market for land as only

the house itself is sold on the market. A more specific method may be needed for transition economies.

17. In general, it was recognised that methodological and conceptual development is required in the area of owner occupied housing, and the different countries specifics should be taken on board. Delegates were also looking forward to an evaluation of the Eurostat pilot project. It was noted that the Swedish and Icelandic experiences with the user cost approach are very useful, and Iceland's suggestion of tackling varying mortgage interest rates by looking to household budget surveys provides a good way forward. A difference of opinion regarding the use of house prices in estimating depreciation was also noted.

### **Families of indices for different purpose**

**Discussant: Mr. Kimberly Zieschang (IMF)**

18. Mr. Zieschang opened the session and introduced the two invited papers that discussed the topic from two different perspectives. The Polish paper addressed the issues from the regional perspective while the Italian paper discussed the need of using different formula for different indices. Mr. Zieschang introduced also the Swiss paper, which described the compilation of different indices for different population groups.

19. The Polish paper described the relationship between the national and regional indices. Both are calculated according to the same formula, methodological basis, classification and a sample that is representative for the country as a whole and each of the 16 voivodships. The only difference is in the periodicity of publication: the regional CPIs, compiled to fulfil regional administrative requirements, are published only quarterly, while the national index is published with monthly periodicity. The presenters pointed out that for the calculation of the regional CPIs it was assumed that all households living in one voivodship make their purchases in the same voivodship. The question was made whether it is worth verifying this assumption. Polish experience with the CPIs for different regions or household groups shows that CPI is more sensitive to the price data collected than the weights used. It was emphasised that whatever assumptions are made it is important that the users are informed about the limitations and all procedures are transparent.

20. Mr. Biggeri noted that users needs and purpose of the index determine the concepts, definitions and formula to be used for actual computation of the price index numbers, and pointed out that different purposes would require different indices/formulae. The paper argues that each sub-population index should ideally be calculated with prices/price relatives for specific quality of goods, groups of goods, sold in distribution channels, municipalities and territorial areas that are representative for that group. In practice this is not possible because the

adequate and detailed statistical information is lacking. Most statistical offices that calculate CPIs for different sub-group of households assume that each sub-group of households faces the same price for each commodity, purchases commodities of same quality, in same outlets, etc. As a consequence the resulting indices are very similar which does not correspond to reality. Therefore it is necessary to conduct specific pilot surveys to find out the real differences in the consumer behaviour for various groups of households and prices they face. The results of such surveys could be used to make adequate assumptions to compute good estimates of the desired CPIs.

21. The Swiss paper presented the results of the first set of indices for different demographic and socio-economic groups of population. The indices produced for the period 2000- August 2003 have been very close to each other and had the same trend. The indices were calculated on basis of the same basket, prices and formula, but with different sets of weights.

22. There was a general agreement that it may be relevant to compute separate CPI for different population groups/ regions, because of the possibility that these groups may have significantly faster or slower growth in their cost of living than that recorded by changes in the general CPI. This could come from differences not only in expenditure patterns but also in changes to the prices paid. Also, the varieties and the qualities of the specific items consumed by the one particular group could be quite different from those consumed by another group. However observing the prices faced by each group could be difficult in practice, very costly and would require sample expansion. –Therefore compilers should do whatever possible to accommodate the users' needs within the limited resources available to them to produce indices for different population groups. Price compilers should either observe different price levels or accept the assumption that everybody is facing the same price. If the latter is chosen, it is important that all assumptions are explicitly stated and made available to the general public.

23. Opinion was expressed that the differences in CPIs for different population groups are much higher than believed, especially with respect to prices for services. It was emphasized that very often these differences are result of quality differences and that according to some studies it is the poor who pay more. Therefore, it is important to conduct pilot surveys from the research point of view in order to find out what are the price levels paid. It was pointed out that for certain purposes, like assessing the impact of price changes on the disposable incomes of sub-groups of population, it is the price levels and not price changes that matter and therefore analytical studies of the variation in prices paid were urged. A point was made that for the calculation of price indices what matters are the price changes, not the price levels and that price development could be similar even when there are different price levels.

24. The need of observing the differences between CPIs for different population groups in the periods of low inflation was also stressed, as, although often not visible, the differences might be substantial.

### **Data Quality: Weights**

#### **Discussant: Mr. Timo Koskimaki (Statistics Finland)**

25. The IMF paper focused on revisions of CPI related to the update of weights. Traditionally data necessary to derive CPI weights arrive with a lag. As a result the index is calculated with weights from a period earlier than the base period of the price relatives. It is possible to recalculate the index once the data become available. However, many statistical offices release price indices as non-revised series. The main reason is that updates can create problems with the administration of contracts linked to indexation of incomes. The US Bureau of Labour Statistics revision policy with respect to compiling its chained CPI for all Urban Consumers (C-CPI-U) was presented. The C-CPI-U is published in addition to the official Laspeyres index. The advantages of revisable CPI are that it keeps consistency with other macroeconomic indicators were highlighted together and sources for more timely information were indicated.

26. Mr. Prud'Hommes paper described the practice of constructing the expenditure weights used in the Canadian CPI. The Canadian CPI is calculated as a weighted arithmetic average of the indices for the basic classes. The update of the weight structure of the basket is done every four to five years, the last one being in 2001. The timeliness of incorporating the new expenditure weights into the index computation have improved significantly during the years, reaching a lag of only 12 months for the last two updates. The analysis conducted showed that the substitution bias could be reduced by frequent updating of weights and leads to the conclusion that the more dynamic is the nature of the economy more frequent updates are needed. Analysis also proved that increasing the sample does not substantially change the quality of weights. Future areas of work affecting the Canadian CPI are the possibility to start compiling a CPI based on COICOP commodity structure, to increase the frequency of the weights updates and to incorporate more timely data sources for the weights.

27. The paper from the National Bureau (NBS) of Statistics of China presented the data collection, the compilation and the methods for quality control of the Chinese CPI. Problems in China stem from large differences between urban and rural areas, the rapid development of a market economy, and a very large population. The NBS began to compile Laspeyres' fixed-based CPI using 2000 as a base year. Indices are calculated for provinces and then aggregated into national urban and national rural indices. The total national index is obtained as a weighted mean of the two. CPI is a major parameter for the macroeconomic analyses and therefore lots of efforts have been made to ensure its quality: improving the survey network and the legal basis,

training of interviewers, standardising the workflow of the survey. Consistency checks to evaluate the quality of the base data, the weights and the price indices are also carried out. In the future work will be undertaken to develop seasonally adjusted time series, special indices for different groups of families, etc.

28. Mr. Timo Koskimaki commented on the key points in the two invited papers and indicated that the bias in the index due to the weights is unclear. The upper level substitution bias mainly depends on the degree of substitution allowed in the design of elementary aggregates. The delegates were asked to consider several issues related to the quality of the weights: how appropriate is the superlative formulae for calculation CPI, what types of indices should price statisticians supply to the analytical users and what are the revision policies of the NSOs.

29. It was pointed out that the question of updating the weights is part of the broader issue of revisions of CPI due to different reasons: errors, data arriving with a lag, etc. Many participants pointed out that revisions are not desirable and that most of the users do not wish the index to be revised once it has been published. It would be interesting to analyse the differences between regular CPI and superlative CPI with respect to revisions and bias.

30. The importance of updating weights as quickly as possible was reaffirmed. In France annual weight updating and the availability of lots of data has led to improved estimation techniques. Several participants indicated that the annual household expenditure surveys and annual updating of weights could provide for calculation of a true Laspeyres index and therefore diminish the need of revising the index. The importance of annual updating of weights from the COLI perspective and problems with price-updated weights were also highlighted.

### **Sampling and quality adjustment**

#### **Discussant: Mr. Paul Haschka (Statistics Austria)**

31. Mr. Haschka introduced the two invited papers and the supporting paper dealing with sampling and related quality adjustment issues. He pointed that, depending on the type of product descriptions used, representativity of the sample could be maintained by (i) replacing old varieties and introducing new ones, using quality adjustment procedures or (ii) frequent re-sampling, and most likely the results of options (i) and (ii) would be quite different. The main characteristics and differences between the two methods were also noted. He also paid attention to the main characteristics of the procedures used in the US and in Japan.

32. The US paper addressed the issue of quality changes of apparel commodities and application of hedonic models in the apparel commodities index. The usage of the hedonic models has been increasing over time and the paper described the way hedonic models for

apparel items have evolved over time. Some of the improvements involved better brand and outlet category definitions and inclusion of country (or region) of origin variables in the model specification. The difficulty associated with determining the best set of regressors and formulating and maintaining of hedonic regressions were also discussed and the need for testing for stability was stressed. The paper concluded that models should be updated on a timely basis and as soon as possible if new features exist.

33. The paper from Japan examined how the representativity of the sample could be tested using scanner data. Comparative study for indices by three types of sampling was conducted: (1) by using scanner data for all items (all-items), (2) by using scanner data for only one item from each category that has the largest annual sale (top-item), (3) by using scanner data for 5 items from each category that have the highest sales (cut-off sampling).

34. The study showed that the best results are obtained by using scanner data for all items. The problems of new goods and quality adjustment, however, have to be solved. Using the data for one or more items may result in downward biased estimates of CPI. In some categories, cut-off index and sometimes even the top-item index, is quite similar to all-item index. The conclusion was that scanner data could be helpful in validating the selection of items in real CPI and thus contribute to the improvement of accuracy in real CPI.

35. The subsequent discussion focussed on the need to maintain and update the models on a timely basis. It was suggested that, in order to evaluate their validity, models should be checked regularly, at least once a year, and that some pre-specified limits should be set-up. It was, however, noted that this is very time and resources consuming exercise.

36. Questions related to the use of sale prices in the calculation of the index were also raised. The countries' practices vary a lot in this respect. It was mentioned it would be interesting to see the differences between an index including and an index excluding sale prices.

### **Seasonality and Seasonal Adjustment**

**Discussant: Mr. Thierry Lacroix (INSEE, France)**

37. Mr. Lacroix opened the session and introduced the two invited papers that discussed the methods for treating seasonal items and seasonal adjustment. He noted that seasonality is one of the most challenging issues in CPI compilation that has not been dealt with for a long time. The problems involved in using fixed basket for estimating short-term month-to-month price changes and the criteria for selecting one among many methods for treating seasonal items were mentioned and the need to reflect consumer perception and experience with volatile seasonal

item was stressed. The widespread use of seasonally adjusted CPI series in macroeconomic analysis and forecasting was also addressed.

38. Mr. Finkel focussed on the results of practical application of methods suggested in Chapter 22 of the CPI manual by using “real” market data from the Israeli CPI. The presentation included a short summary of Chapter 22, description of the methods used in the Israeli index to overcome seasonal fluctuations and finally the findings from the Israeli CPI using several methods proposed in the Manual.

39. Two categories of approaches are presented in Chapter 22 to deal with seasonality: the traditional approaches of computing month-to-month indices and annual approaches which take advantage of the fact that seasonal items usually appear in parallel months in consecutive years. It points out that month-to-month indices calculated by using traditional methods (Maximum overlap month to month price indices, Annual Basket indices with carry forward prices, Annual basket indices with imputation of missing prices, Rothwell indices) could result in biased estimates. Therefore the manual recommends calculation of year-on-year monthly indices in order to overcome the problems with large monthly fluctuations in prices and quantities. The month-to-month indices calculated by using fixed weights result in biased estimates. Unbiased estimates of month-to-month changes should be calculated by using seasonal adjustment factors derived from rolling year over year monthly indices. These additional year-on-year monthly indices and rolling year indices should be computed by national statistical agencies, at least as an analytical series alongside with the traditional month-to-month series.

40. Using real data from the Israeli CPI led to some interesting, and sometimes contradicting, results compared to the findings in Chapter 22 and showed that reality does not always follow theory. For example, the finding from Chapter 22 that the Rothwell indices exhibited smaller seasonal movements than the Lowe index and were less volatile did not prove in the experiment. Further empirical research is needed to assess the practicability of the methods recommended in the Manual.

41. The UK paper focused on different approaches used to estimate core inflation. The underlying price changes free of temporary disturbances are widely used by Central Banks as an input to economic analysis and more generally to forecasting. They have also been used to assess the effectiveness of past policy decisions.

42. There are two main approaches in the measurement of core inflation: (i) economic model-based estimates and (ii) statistical deconstruction methods that could be further categorized into two groups: (a) smoothing schemes and (b) exclusion or re-weighting schemes. Exclusion schemes are those that exclude the price changes, which are “different to average” or permanently exclude commodity components on a priori grounds. Re-weighting schemes are

those that apply a different weighting, typically in order to maximise its relevance in predicting future levels of inflation.

43. The UK RPI is adjusted to exclude price changes that are directly due to changes in mortgage interest payments and indirect taxation. Seasonal adjusted RPI and corresponding trend estimates are calculated each month by ONS. Seasonal adjustment identifies and then removes the regular patterns that some time-series follow from one month to the next in the same months over successive years. These “core” or “underlying” inflation measures are seen as providing more accurate representations of the general trend in consumer prices than “headline” measures. They can play an important role in creating monetary policy of a country. It is however important that users understand the conceptual basis of the different “core” inflation measures, their robustness in construction and how they inter-relate.

44. The Russian supporting paper was also briefly presented. A variety of methods for compiling seasonally adjusted indices were employed and tested in the Russian federation. Eventually a special method based on coefficients was developed. It gives results very close to those of X-12 ARIMA. The problem of separating the seasonality from the core inflation during the high inflation period in the middle 90s was also stressed.

45. In its closing remarks the discussant welcomed further empirical research and practical application of the theoretical methods developed for treating seasonal commodities. He also invited other countries to report on their practices regarding definition of underlying inflation, methods used for estimating it, item or group of items that are excluded from the all-items index to estimate it.

## **Financial Services**

### **Discussant: Mr. Peter Hill (UK)**

46. The ABS paper provided a review of the experiment on compilation of price indices for the financial services. The objective was to include in the CPI all the services acquired by households in relation to acquisition, holding and disposal of assets. Therefore an index that covers both direct fees and those paid indirectly (interest margins) had to be constructed. Constructing a price index that would reflect only direct fees and charges would be easy but was considered to overestimate the price change of financial services because of the lower rate of increase of the charges indirectly levied through differentials in interest rates. Though measuring changes in the total price of financial services was found to be quite difficult, the ABS now has experimental results for a 5-year period that appear to be plausible. They expect to be able to include financial services as a new group in the next update of the Australian CPI in 2005.

47. Mr. Thierry Lacroix informed the meeting about the outcome of the session devoted to financial services of the 7th meeting of the Ottawa Group. Two papers were presented under this session one dealing with treatment of insurance services taking into account excess and the second one dealing more broadly with conceptual and measurement issues related to financial services. Similar treatment of variation of excess in the form of quality adjustment is applied both in France and Sweden. Concerning prices and weights of insurance services a net approach to estimate the weights and a gross one for prices is suggested. Other issues discussed at the Ottawa Group meeting were whether FISIM should be covered in the scope of the national CPI or be excluded for practical reasons and the selection of the service unit in the case of transactions in financial securities.

48. Mr. Peter Hill pointed out that there are difficulties in measuring prices and quantities for services in general. These arise due to the difficulty of defining the unit being consumed by the user, and the counterpart transaction of the payment. It was also noted that many services are delivered over a long period of time. Other problem can be that some services may not be repeated and therefore cannot be matched to get the price changes or the fact that some services (e.g. banking services) are bundled together. For non-market services prices are not linked to the real market but generally this is not an issue related to financial services. It was also mentioned that sometimes the value of a unit of service has to be measured residually giving erratic results sensitive to errors. The meeting was asked to consider the feasibility of estimating prices for services with accuracy satisfactory enough to be included in CPIs.

49. In the discussion that followed the importance of the relationship between price and volume indices was stressed. Sometimes when price indices are smoothed, volume indices can become rougher. Therefore when experiments with the price index are carried out the underlying volume index should also be investigated. It was suggested however that underlying volumes were a lot smoother despite a volatile deflator.

50. The meeting highly appreciated the work undertaken by the ABS. It was agreed that the paper had shown that a systematic and logical approach could create the possibility of usable results. It was seen as useful to have reports on different countries' work on the frontiers of various areas of development.

51. For full documentation of the meeting see UNECE website (<http://www.unece.org/stats>).

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