



**STATISTICS**

# **CPI Manual Concepts and Methods**

**OCTOBER 2, 2019 – 13<sup>TH</sup> AEG MEETING**

# Background

- **Goal of the update:** to produce an update of the 2004 CPI Manual that includes more practical compilation advice for compilers
  - ▶ Relevant input from IWGPS and TEG-CPI
  - ▶ Extensive consultation with countries
- **IWGPS** (Intersecretariat Working Group on Price Statistics): endorsed and supported the update
  - ▶ Eurostat, ILO, IMF (lead agency), OECD, UNECE, and World Bank (chair)



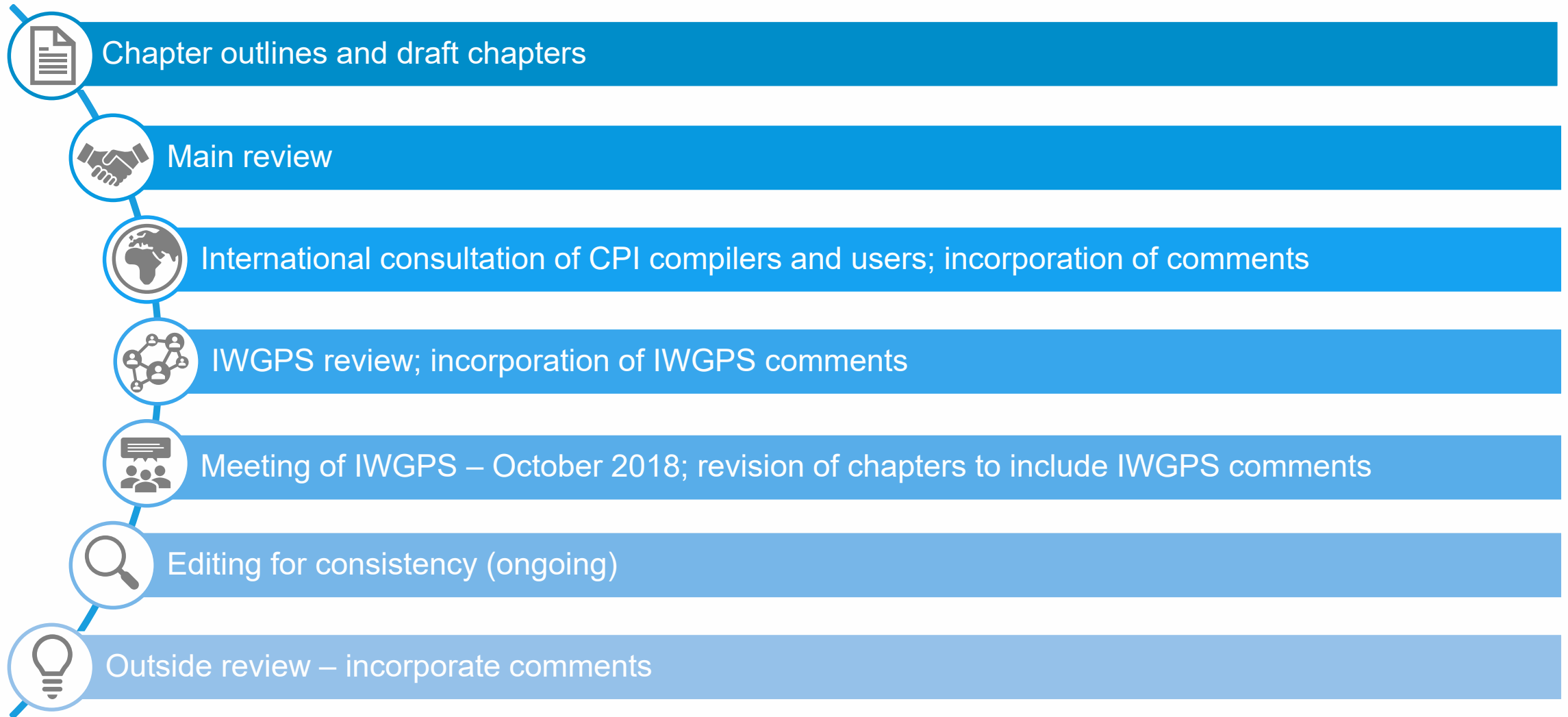
- **TEG-CPI:** a Technical Expert Group supervised the update
  - ▶ Members represent international price index experts and compilers from NSOs
- **Structure:** one manual – two volumes:
  - ▶ Practice: *CPI Manual: Concepts and Methods*
  - ▶ Theory: *CPI Theory*

<b><i>CPI Manual: Concepts and Methods</i></b>	<b><i>CPI Theory</i></b>
1. Introduction, Overview, and Basic Steps for CPI Development	1. Basic Index Number Theory
2. Uses, Concepts, Scope and Classifications of Consumer Price Indices	2. The Axiomatic and Stochastic Approaches to Index Number Theory
3. Expenditure Weights and Their Sources	3. The Economic Approach to Index Number Theory: the Single-household Case
4. Sampling	4. The Economic Approach to Index Number Theory: the Many-household Case
5. Price Collection and Validation	5. Elementary Indices
6. Temporarily and Permanently Missing Prices and Quality Change	6. Multilateral Index Number Theory and its Application to Scanner Data
7. Maintaining the Sample	7. Quality Change and Hedonics
8. Calculating Consumer Price Indices in Practice	8. The Treatment of Seasonal Products
9. Updating CPI Weights and Linking New to Previous CPI Series	9. Durables and User Costs
10. Scanner Data	
11. Selected Special Cases	
12. Errors and Bias	
13. Data Quality Management and Reporting	
14. Publication, Dissemination and User Relations	

# TEG Members and contributors

- **The Manual benefited from the experience of several individuals, as TEG-Members, contributors to the chapters and reviewers. Including, among others:**
  - ▶ Paul Armknecht (IMF-Retired); Corinne Becker (Swiss FSO); W. Erwin Diewert (University of British Columbia); David Fenwick (UK ONS-Retired); Jan de Haan (Statistics Netherlands); Brian Graf (IMF, editor of the Manual); Claude Lamboray (Eurostat); Maria Mantcheva (IMF Retired); Mick Silver (IMF Retired); Valentina Stoevska (ILO); Marcel von Kints (ABS); and Jan Walschots (Statistics Netherlands).
  - ▶ Badria AlAadi (NCSI, Oman); Carsten Boldsen (UNECE); Rob Cage (BLS, USA); Barra Casey (CSO, Ireland); Patrick Kelly (Statistics South Africa); Brent Moulton (Expert, external reviewer); Ragnhild Nygaard (Statistics Norway); Niall O'Hanlon (IMF); Federico Polidoro (ISTAT, Italy); Rafael Posse (INEGI, Mexico); Yunita Rusanti (BPS-Statistics Indonesia); and V. Thuy, GSO (Vietnam).
  - ▶ Members of the IWGPS: Carsten Boldsen (UNECE); Yuri Dikhanov (World Bank); Robert Dippelsman (IMF); Louis Marc Ducharme (IMF); Claudia Dziobek (IMF); Anne-Sophie Fraise (OECD); Nada Hamadeh (IWGPS Chair, World Bank); Francette Koechlin (OECD); Paulus Konijn (Eurostat); Claude Lamboray (Eurostat); Margarida Martins (IMF Secretariat); Pierre-Alain Pionnier (OECD); Valentina Stoevska (ILO); Gabriel Quiros-Romero (IMF); James Tebrake (IMF); and Peter van de Ven (OECD).

# Progress to date



# Currently...



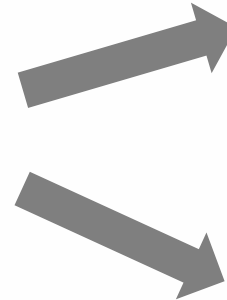
Formal consultation of Member States run by UNSD  
(until October 31, 2019)

<https://www.imf.org/en/Data/Statistics/cpi-manual>

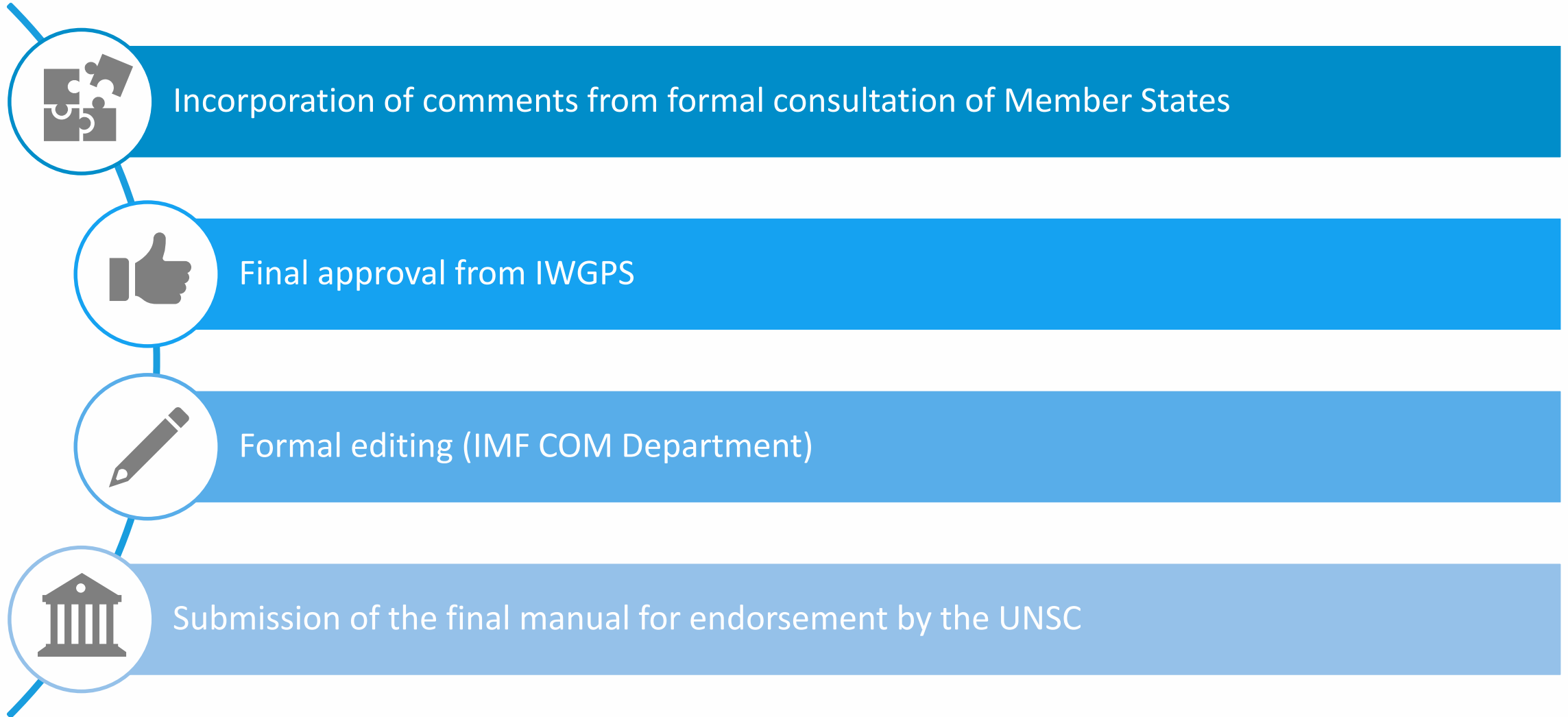
A screenshot of the IMF website page titled "UPDATE OF THE CONSUMER PRICE INDEX MANUAL". The page features the IMF logo and navigation menu at the top. The main content area includes a search bar, social media icons, and several text blocks. The first block discusses the "Quarterly National Accounts Manual- Concepts, Data Sources, and Compilation" and the "System of National Accounts 2008 (2008 SNA)". The second block, "Strengthening Sectoral Position and Flow Data in the Macroeconomic Accounts", includes a line graph showing economic data trends. The third block, "Guide to Analyze Natural Resources in the National Accounts", also includes a line graph. The main text block discusses the update of the 2004 Consumer Price Index (CPI) Manual, mentioning the 2014 UNECE-ILO CPI Experts Meeting and the Intersecretariat Working Group on Price Statistics (IWGPS). It states that the IWGPS is responsible for the overall management and final approval of the updated Manual, which is presented for consultation to relevant national statistical authorities and endorsed by the United Nations Statistical Commission. A "Technical Expert Group for the update of the CPI Manual (TEG-CPI)" was constituted with international price index experts and compilers from national statistical offices. The goal of the update is to produce a CPI Manual that includes more practical compilation advice for compilers. The main objectives of the update include: 1) Provide clearer and more prescriptive recommendations and guidelines in cases where research, methodological development and practical experience warrant such recommendations and guidelines, and where this is found useful.

**Consumer Price Index Manual:  
Concepts and Methods**

**CPI Manual: Concepts and Methods  
Summary of Main Changes**



# Next steps



# Key changes & updates

- **Reflect advances in technology, e-commerce and digital economy.**
- **More prescriptive:**
  - ▶ More practical, less repetition, more consistency between chapters, new detailed examples
  - ▶ Increase harmonization with national accounts concepts
  - ▶ Second and third-best option presented, wherever possible, to guide compilers
  - ▶ Key points and recommendations by chapter
- **Reflect improvements made to the concepts and methods used to compile CPIs, and evolving user needs.**
- **Standardizing terminology:**
  - ▶ Product, item, and variety
  - ▶ Elementary aggregate



# Key changes & updates

- **Increase harmonization with national accounts concepts – examples:**
  - ▶ References to the *2008 SNA* included across the Manual
    - ◆ Especially in Chapter 2 (*Uses, Concepts, Scope and Classifications of CPIs*)
  - ▶ Harmonization of concepts
    - ◆ Household Final Consumption Expenditure and Household Actual Final Consumption
    - ◆ Residency (domestic vs national concept)
  - ▶ Use of national accounts as a data source for CPI expenditure weights
  - ▶ Highlight differences in treatment between CPI and national accounts
    - ◆ Household own-account production

# Key changes & updates

- **Chapters - main changes:**
  - ▶ Two new chapters (scanner data; updating CPI weights and linking CPI series)
  - ▶ Two chapters rewritten (sampling; missing prices and quality change)
  - ▶ Chapter 1 redrafted (follows steps to develop and maintain a CPI as set out in the Manual)
- **Treatment of:**
  - ▶ Internet purchases and collection of online prices
  - ▶ Innovations in the collection of prices (web-scraping and hand-held computers/tablets)
  - ▶ Scanner data in the calculation of elementary aggregates
  - ▶ Data editing
- **Forward looking:**
  - ▶ **Research Agenda** identifies topics for further research and discussion
  - ▶ **Guidance Notes** to be issued as needed to ensure Manual remains current