



**CMFB Task Force on the quality of the statistics  
underlying the MIP indicators**

**Final Report to the CMFB**

**24 February 2014**

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<sup>1</sup> Please refer to the continuous page numbering, centred at the bottom of each page.

24 February 2014

## **CMFB Task Force on the quality of the statistics underlying the MIP indicators**

### **Final Report to the CMFB**

#### **1. Introduction**

##### ***A. Context***

As part of the 2011 Six-Pack legislation, Regulation (EU) No 1176/2011 sets out detailed rules for the detection, prevention and correction of macroeconomic imbalances (MIP). A Scoreboard of currently eleven headline indicators is used as a tool for the early identification and monitoring of the imbalances. An additional set of twenty-eight indicators is also compiled and published without indicative thresholds.

The ECOFIN Council of 8 November 2011 and of 13 November 2012 underlined the importance of having timely statistics of high quality to underpin indicators included in the MIP Scoreboard. As the statistics underlying the MIP indicators are produced by the European Statistical System (ESS) and the European System of Central Banks (ESCB), the Council requested the ESS and the ESCB to continue work together on improving their quality and ensuring their comparability.

##### ***B. General features of the Task Force***

At its plenary meeting, 4 July 2013, the Committee on Monetary, Financial and Balance of Payments (CMFB) agreed to set up a Task Force on the quality of the statistics underlying the MIP indicators ('the Task Force'). The Task Force was co-chaired by Eurostat and the ECB and included 23 high level members from 17 Member States, representing 13 NSIs and 10 NCBs. The Task Force had two physical meetings (1-2 October and 2-3 December 2013).

The Task Force has completed its work and submits its report to the CMFB.

##### ***C. Objectives of the Task Force***

The CMFB Task Force was mandated to work on the following deliverables:

1. A proposal for the framework and contents of a *quality assessment report on MIP statistics* communicating key messages to policy makers such as the European Parliament and the ECOFIN

Council as well as the public at large and taking into account the discussion of the CMFB at its meeting on 4 July 2013;

2. Proposing *priorities*, based on established principles, *to enhance the quality management* of the statistics underlying the MIP indicators, including reference to their main policy uses;
3. An *overview of the existing inventories and statistical domain quality reports* of the ESS and ESCB, as far as relevant for the statistics underlying the MIP indicators;
4. A contribution to setting up a *quality monitoring framework in areas where the compilation of statistics for MIP is based on inputs by both the ESS and the ESCB*.

In this report of the Task Force, the deliverables are discussed in a sequence that reflects the logic of the Task Force's analysis rather than in the order of the Mandate as reflected above.

**Annex 1a:** Mandate of the CMFB TF on the quality of the statistics underlying the MIP indicators

**Annex 1b:** List of participants of the CMFB TF on the quality of the statistics underlying the MIP indicators

## **2. Proposing priorities, based on established principles, to enhance the quality management of the statistics underlying the MIP indicators, including reference to their main policy uses (deliverable # 2)**

The CMFB requested the Task Force to propose priorities for enhancing the quality management of the MIP relevant statistics. The Task Force was of the opinion that the quality management framework should consist of two elements: reporting on and monitoring of the quality of MIP relevant statistics, and quality improvement actions leading to improved MIP statistics over time. The two elements are closely interrelated since the monitoring and reporting component enables to identify areas for improvement.

The Task Force agreed that quality management for MIP statistics should make reference to the principles laid down in the ESS Code of Practice and the ESCB Public Commitment. It was acknowledged that the principles laid down in the ESS Code of Practice and the ESCB Public Commitment are virtually identical and differences mainly reflect the differences in governance structure of the two systems<sup>1</sup>. The Task Force considered the following principles particularly relevant for MIP purposes:

- Principles 12 on *Accuracy and Reliability*, and
- Principle 14 on *Coherence and Comparability*, as well as
- Principles 7 and 8 on *Sound Methodology and Appropriate Statistical Procedures*
- Principles 2 and 4 on *Mandate for data collection and Commitment to quality*.

<sup>1</sup> See "*The new legislative framework for European statistics: Towards implementation in the areas of quality and confidentiality*", European Conference on Quality in Official Statistics, Helsinki, Finland 4-6 May 2010.

The Task Force recognised the value of several other principles defined in the CoP and the PC, for example the use of standards for documenting metadata.

Based on these considerations, the Task Force explored practical operational arrangements for cooperation between the ESS and the ESCB aiming to enhance the quality management of MIP relevant statistics and agreed to pursue a "*three level approach*" containing (top-down):

- *level 1*: an ESS-ESCB quality assessment report on MIP statistics prepared by Eurostat and the ECB;
- *level 2*: a closer alignment of the quality assurance procedures applied across domains and systems by progressively aligning and harmonising domain specific quality reports<sup>2</sup> produced by the ESS and the ESCB in their fields of competence and partly regulated in Union statistical legislation by taking account of the quality principles particularly relevant for MIP purposes;
- *level 3*: quality work under the responsibility of the national statistical institutes (NSIs) and the national central banks (NCBs) including
  - development of condensed country templates on statistical processes for statistics underlying the MIP indicators based on the principles laid down in the ESS Code of Practice and the ESCB Public Commitment. They have to be prepared by the institution (NCB/NSI) responsible for the statistics underlying the respective indicators. The content should be easily understood by users and should provide the basis for assuring comparability among countries.
  - Country specific quality reports prepared by the institution (NCB/NSI) responsible for the statistics underlying the respective indicators.

Some of these initiatives, e.g. the preparation of a regular quality assessment report on the quality of the statistics underlying the MIP, and other practical arrangements strengthening the cooperation between the two systems may need some degree of formalisation. This is further elaborated in section 5 of this report.

**Action:** *The Task Force invites the CMFB a) to discuss whether the ESS Code of Practice and the ESCB Public Commitment principles mentioned are adequate, b) to consider whether the proposed initiatives are sufficient for the quality management of the MIP relevant statistics, and c) to reflect on formalising some of these ESS-ESCB cooperation initiatives.*

**Annex 2:** “Reflections on the assessment of quality in MIP: the Role and Structure of Quality Reports in MIP - Building upon Existing Frameworks and Information” (G. Eding, M. Pfeiffer, S. Sabine and L. Storgårds)

<sup>2</sup> Reports covering the quality of the domain statistics supporting one or more MIP headline indicators.

**Annex 3:** “First ideas for a template for a quality declaration/inventory for statistics underlying MIP headline indicators” (K. Wismer, J. Cadete De Matos, A. Cristobal and J. Fournier).

### **3. Proposal for the framework and contents of a quality assessment report on MIP statistics (deliverable # 1)**

In line with the so-called “three level approach<sup>3</sup>”, the Task Force developed a sample Quality Assessment Report on MIP Statistics (“level 1” in the 3-level approach) communicating key messages on the reliability and comparability of the statistics underlying the MIP indicators and outlining actions at national and EU level to address quality issues. This Quality Assessment Report on MIP Statistics (“level 1”) should be written in a clear, crisp and unambiguous language suitable for a readership by non-statisticians.

The Task Force agreed that a ‘fit-for-purpose’ quality assessment report on MIP statistics should focus on the quality criteria, which are most relevant for a global assessment of the MIP statistics. According to the Task Force, these criteria, which are part of the quality principles of the ESS Code of Practice of European Statistics and the ESCB Public Commitment on European Statistics, are

- (i) *institutional issues* (principles 2 and 4 of Code of Practice) supporting the compilation of MIP statistics, such as the legal basis, the quality assurance mechanisms and the policy uses,
- (ii) the *compilation process* (principles 7 and 8 of the Code of Practice) analysing whether the important parts of the statistics are supported by comprehensive collection of raw data or with sound estimation methods based on expert judgement; and
- (iii) *the quality of the statistical output* (principles 12 and 14 of the Code of Practice), focusing on the accuracy and the comparability of the underlying statistical output across countries and across time (revisions).

Given that domain specific quality reports as referred to in level 2 of the previous section are in most cases regulated in Union statistical legislation, are often accompanied by country specific quality reports and/or inventories of sources and methods referred to in level 3, and contain essential quantitative and qualitative information needed for assessing the quality of the statistics, the Task Force concluded that a Quality Assessment Report on MIP Statistics would build on them.

This Quality Assessment Report on MIP Statistics would then conclude with a concrete set of actions (defined in a precise manner) to enhance the quality in a number of statistical domains supporting MIP that are also reflected in the specific domain quality reports. Examples of such concrete actions for a number of statistical domains have been reflected in the last section (section III) of the sample Quality Assessment Report on MIP Statistics developed by the Task Force (annex 4). Some of these concrete actions are to be implemented at national level by the relevant statistical authorities to address weaknesses

<sup>3</sup> MIP Statistics Quality Report; Statistical Domain Quality Report; Statistical Domain Databases and Inventories, see page 8.

in the statistics supporting the MIP indicators. Other actions are to be undertaken at European level, such as more detailed methodological guidelines, clarification of statistical concepts and definitions, practical recording conventions, etc. The Task Force also discussed to which extent concrete country specific actions should be mentioned in the report, coming to the view that this should be possible provided these country specific actions have also been communicated in specific domain quality reports.

To monitor their implementation, the Task Force noted that these concrete actions should be included in the work programmes of the ESS and ESCB statistical bodies in their respective fields of competence. Actions that require cooperation between the ESS and the ESCB should be included in the work programme of the CMFB following a request by the European Statistical Forum (ESF). To ensure that the necessary resources for implementation are available, the inclusion of the actions in the work programmes of the different bodies should be subject to rigorous priority-setting.

Finally, the Task Force was open regarding the frequency for such regular Quality Assessment Reports on MIP Statistics. If the reports would be prepared on an annual basis, then the successive editions of the report may be slimmed down substantially by eliminating the structural parts of the assessment, which do not change from year-to-year in order to focus on monitoring the progress on the concrete actions.

**Action:** *The Task Force invites the CMFB to comment and further develop the sample Quality Assessment Report on MIP Statistics and submit the sample to the European Statistical Forum (ESF) for consideration.*

**Annex 4:** “ESS-ESCB Quality Assessment Report on MIP Statistics” - Sample report by the CMFB TF

## **4. Overview of the existing statistical domain quality reports and inventories (deliverable # 3)**

The Task Force appreciated the stock-taking exercise (survey) carried out by Eurostat during summer 2013 to establish an overview of existing information on Inventories of Sources and Methods and Quality Reports in MIP relevant domains (annex 5). The survey showed that some quality information exists for all domains but the situation is heterogeneous across domains.

In particular, the survey demonstrated that the existing *quality assurance processes of statistical outputs* currently applied by the ESCB and the ESS are very rich:

- The ECB produces<sup>4</sup>, as a part of its Statistics Quality Framework (SQF), annual quality reports and output quality indicators. The ECB, assisted by the NCBs, conducts annual assessments of the availability and quality of all statistics covered by the ECB’s legal framework. The results are set out in four separate reports, one for each main statistical field. The main objectives of the quality

<sup>4</sup> "Quality assurance of European Statistics", ECB, presented at the 1<sup>st</sup> Meeting of the European Statistical Forum, 15 November 2013 (available on request).

reports are (i) to provide a good overview of the availability of all euro area statistics compiled and disseminated by the ECB; (ii) to assess the quality of euro area statistics (and the national contributions to the euro area aggregates) in terms of punctuality, timeliness, methodological soundness, reliability and stability; (iii) to report on the state of affairs concerning the implementation of enhanced or new statistical requirements in the Member States; (iv) to provide information on possible further improvements to data collection and compilation methods and the level of detail and/or frequency of input data.

- Traditionally, the ESS quality assurance has been focusing on the quality of Member State statistics. For example for BoP Eurostat pre-fills quality reports for all Member States with factual information about timeliness, revisions, consistency with other statistics. These reports may include recommendations for improvement actions, and NSIs review the draft. Based on the reports for all Member States, Eurostat prepares a global assessment report, which is transmitted to the Council. In other domains, the assessment is based on a combination of inventories of sources and methods (to name some examples: EDP, GNI, LFS, External Statistics, etc.) and quality reports. Some assessments are submitted to the Council of the EU for information. Generally, the format of ESS quality assurance shows some diversity across domains.

Moreover, the comprehensive overview of existing domains specific quality reports highlighted the *importance of clarifying terminology and concepts* to ensure a common understanding, as there are different types of reports on quality:

- *Quality Reports (level 3)* prepared by the national statistical compilers of the statistics with reference to the production of the statistics in the national institution may contain information on changes to inputs (e.g. sources or response rates) and analysis of the quality of outputs (e.g. revision analysis). They are following standards as for example the ESS Standard for Quality reports in some domains. The target audience is the management level in the Statistical Systems. National expert users may also benefit from such reports.
- *Quality Reports (level 2)*, also in some cases referred to as Quality Assessment Reports, are prepared by the ESS and ESCB in their respective fields of competence and provide an expert judgment of the quality of the statistics and the challenges/weaknesses for a specific statistical domain or area, including proposals for improvement actions at the level of Member States as well as for the domain as a whole (“*output-oriented*”). The target audience is the management level in the Statistical Systems and expert users. Non-technical summaries of such reports can also be used to address policy-makers and high-level users.

The overview revealed a common understanding that there is a need for documentation on the methodology and the statistical procedures used for the compilation of the statistics. This documentation is partly described in the existing quality reports and inventories prepared by the compilers of the statistics. Such documentation has sometimes the form of *inventories*; *in other cases it is contained in quality reports* as defined in the basic legislation (nationally, other terminology, such as *quality declaration*, is also occasionally used). Due to severe resource restrictions an overwhelming majority of the Task Force



members stressed the fact that building up such documentation – in case it is not yet available – has low priority in the short run. It should be done only in exceptional cases and on a demand-driven basis when severe problems have been spotted in the quality assessment. Nevertheless, in the long run this form of documentation should be developed for all statistical domains.

The Task Force stressed the need for appropriate standards for the compilation of documentation across all statistical areas in the statistical programme for both NSI's and NCB's, since that could enhance the reuse of information and reduce the burden on Member States. This would require a close cooperation between the parties involved to achieve the best solution. The Task Force proposed to use the Single Integrated Metadata Standard (SIMS) as a starting point taking into consideration that a guide for this standard is still lacking.

Task Force members suggested considering a list of specific questions or concise templates that would focus on the main criteria for a quality assessment (smart questions) as this would also help the longer term process of compiling inventories. They also stressed the need to focus on quality issues and whether quality requirements as defined by the ESS Code of Practice and the ESCB Public Commitment were met.

The Task Force noted that resources of national statistical authorities would be largely consumed in 2014 by the implementation of ESA 2010 and BPM6. The Task Force agreed that documentation of processes is a necessary part of quality assessment, but given the 2014 resource constraints the Task Force was of the view that during 2014 work should focus on developing the relevant templates (for balance of payments based indicators). The templates should aim at gathering the core elements of the statistical compilation processes and the main underlying sources and be concise (e.g. 5 pages) not to overburden the members of the two statistical systems with administrative tasks that could put too much strain on already limited human and IT resources.

**Action:** *The Task Force suggests to the CMFB the development of templates needed for level 3 and invites the CMFB to express a view on the timetable for completing the templates taking into account the resource constraints related to the current implementation of ESA2010 and BPM6 in 2014.*

**Annex 5:** “Background document on Survey of existing inventories of sources and methods and quality reports” (Eurostat)

## **5. A contribution to setting up a quality monitoring framework in areas where the compilation of statistics for MIP is based on inputs by both the ESS and the ESCB (deliverable # 4)**

The CMFB requested from the Task Force a contribution to setting up a quality monitoring framework in areas where the compilation of statistics for MIP is based on inputs by both the ESS and the ESCB. While recognising the role and responsibility of the Commission in the MIP process and that the responsibilities for the production of some of the statistics underlying the MIP indicators are shared between the ESS and

the ESCB, the Task Force identified a number of issues where an alignment of the two statistical systems would facilitate the quality monitoring of the statistics underlying MIP indicators.

Moreover, in its Opinion of November 2013, the Economic and Financial Committee (EFC) “*invited<sup>5</sup> the ESS and the ESCB to continue this close cooperation, including through the preparation of a work programme*” to ensure the reliability and comparability of the statistics underlying the MIP. The ESF emphasized at its first meeting on 15 November 2013 the need to develop a work programme.

Thus, the Task Force reflected on the main messages that could be included in such a work programme to be presented to the ESF. The sample draft of the joint ESS/ESCB work programme could include the following *general considerations*:

1. MIP indicators are derived from macroeconomic and financial statistics (e.g. balance of payments, national and financial accounts, government finance statistics, prices statistics,...) that are themselves based on comprehensive data collection or on surveys and expert judgment;
2. Macroeconomic and financial statistics serve multiple purposes;
3. The majority of the statistics underlying the MIP indicators produced by the ESS and ESCB are regulated including, in most cases, the related procedures for quality assurance and monitoring;
4. The quality assurance mechanisms applied by the ESS and the ESCB are reflected in the ESS Code of Practice of European Statistics and the ESCB Public Commitment on European Statistics;
5. MIP is a new and additional purpose served by macroeconomic and financial statistics;
6. Enhancements to the macroeconomic and financial statistics underlying the MIP indicators have to follow a merits and cost procedure taking into account relevant trade-offs and that the statistics need to remain fit for their main purposes.

Furthermore, the joint ESS/ESCB work programme could include the following *specific messages*:

7. Enhancing the quality of statistics underlying MIP requires a further alignment of the quality monitoring frameworks between the two systems in order to avoid duplication and to reduce the burden on the compilers of the statistics underlying the MIP. Quality monitoring should build on existing structures to the extent possible and foster further harmonisation of the existing quality assurance and monitoring processes.
8. These initiatives could be structured around the so-called “three level approach” (see graph):

<sup>5</sup> Please refer to paragraph 24 of the EFC Opinion: “*The EFC welcomes the cooperation of the ESS and the ESCB on the framework and contents of a quality assessment report on MIP statistics, on priorities to enhance the quality management of the statistics underlying the MIP indicators, while limiting the additional burden on statistics, on an overview of existing inventories and statistical domain quality reports and on the quality monitoring framework in areas where the compilation of statistics for MIP is based on inputs by both the ESS and the ESCB. The EFC invites the ESS and the ESCB to continue close cooperation and to use existing fora to ensure the reliability of the statistics underlying the MIP and their comparability in response to the Council requests of 2011 and 2012 to work together in this direction, including through the preparation of a work programme.*”

- 8.1 a regular *Quality Assessment Report on MIP Statistics drafted along the lines proposed in annex 4*; this report would communicate key messages on the reliability and comparability of the statistics underlying the MIP indicators derived from the quantitative and qualitative information on the quality of macroeconomic statistics and outlining actions at national and EU level to address quality issues. Therefore, it should be written in a clear, crisp and unambiguous language suitable for a readership by non-statisticians;
- 8.2 initiate work for *progressively achieving a closer alignment and harmonisation of domain specific quality reports* produced by the ESS and the ESCB in their fields of competence and partly regulated in Union statistical legislation;
- 8.3 initiate work for progressively achieving a closer alignment and harmonisation of the *national domain specific reports*. Among other tools, templates needed for level 3 could be developed in cooperation with the responsible teams for developing the guidelines for SIMS. In other cases, documentation on the methodology and statistical procedures is contained in quality reports. Furthermore *reference databases* to monitor updates and revisions and store relevant metadata supporting the MIP exercise should be established. Process documentation of the compilation processes assists the evaluation of the comparability of Member States' statistics. However, this kind of documentation should be on a demand-driven basis and should refer to the statistical domain and not the MIP indicator. Cross-references may be needed for indicators that make use of data from several domains. The initial process documentation should be short, about 5 pages.

The usage of common standards is necessary for assuring comparability among countries. A better exchange of meta-information between the two systems, and especially between the ECB and Eurostat, could help to avoid duplication of quality reporting work requested within the two systems. In this context, the Task Force acknowledged that issues related to the exchange of confidential (or restricted) data and metadata information needs to be addressed.

These initiatives and any other concrete actions to improve the quality of the statistics supporting the MIP can only be implemented if they are included in the *work programmes of the ESS and ESCB statistical bodies* and their sub-structures in their respective fields of competence. Actions that require *cooperation* between the *ESS and the ESCB* should be included in the work programme of the *CMFB* upon request by the *ESF*. To ensure that the necessary *resources* for implementation are available, the inclusion of the actions in the work programmes of the different bodies should be subject to rigorous priority-setting.

**Action:** *The Task Force invites the CMFB to reflect on the proposed messages and initiatives in the sample draft for a joint ESS-ESCB work programme, with a view to further enriching it and then submit it to the European Statistical Forum (ESF) for consideration.*

**Annex 6:** “Quality assurance of the statistics underlying the MIP - ESS/ESCB work-programme” -  
Sample draft by the CMFB TF

**Annex 7:** “Overview of the statistics underlying the MIP indicators”

## ESS-ESCB Work-programme on quality assurance of MIP

### 3 – Level Approach

Enhancing ESS-ESCB Communication on quality assurance on MIP

MIP Quality Assessment Report

Closer alignment of Domain Specific Quality Reports

NA & FA

BOP

GFS

LFS

REER

RPPI

GDP

Development of inventories of sources and methods & Databases for MIP

Standardised templates

Data, Metadata & Revision Databases



2 August 2013

## **CMFB Task Force**

### **on the quality of the statistics underlying the MIP indicators**

#### **Mandate**

##### **Introduction**

As part of the 2011 Six-Pack legislation, **Regulation (EU) No 1176/2011** sets out detailed rules for the detection, prevention and correction of macroeconomic imbalances (MIP). A Scoreboard of eleven headline indicators is used as a tool for the early identification and monitoring of the imbalances. An additional set of indicators is also compiled and published without indicative thresholds in the context of the Alert Mechanism Report (AMR).

The **ECOFIN Council** of 8 November 2011 and of 13 November 2012 underlined the importance of having timely statistics of high quality to underpin indicators included in the MIP Scoreboard and requested the European Statistical System (ESS) and the European System of Central Banks (ESCB) to continue work together on improving their quality and ensuring their comparability.

As the statistics underlying the MIP indicators is compiled by both members of the ESS and the ESCB, the CMFB discussed at its plenary meeting on 4 July 2013 how it could support the process. The CMFB decided to set up a **Task Force on the quality of the statistics underlying the MIP indicators** ('the Task Force'). As the MIP is already in place and the indicators are being used, the CMFB response needs to be prepared without delay in the light of the new cycle of the MIP Scoreboard in November 2013 and the next Alert Mechanism Report (AMR). To the extent possible, the Task Force should therefore consider the re-use of already produced materials to help its work.

##### **Objective**

The CMFB Task Force on the quality of the statistics underlying the MIP indicators is mandated to work on the following deliverables:

- A proposal for the framework and contents of a **quality assessment report on MIP statistics** communicating key messages to policy makers such as the European Parliament and the

ECOFIN Council as well as the public at large and taking into account the discussion of the CMFB at its meeting on 4 July 2013;

- Proposing **priorities**, based on established principles, **to enhance the quality management** of the statistics underlying the MIP indicators, including reference to their main policy uses;
- An **overview of the existing inventories and statistical domain quality reports** of the ESS and ESCB, as far as relevant for the statistics underlying the MIP indicators;
- A contribution to setting up a **quality monitoring framework in areas where the compilation of statistics for MIP is based on inputs by both the ESS and the ESCB.**

### **Composition and timetable**

The Task Force will be co-chaired by Eurostat and the ECB and the secretariat will be jointly provided by the ECB and Eurostat. Given the high EU policy relevance, the members of the Task Force will be preferably members of the CMFB from the EU NSIs and NCBs. While most of the work will be done electronically the Task Force will aim at having at least one physical meeting.

The proposal for a quality assessment report for communication purposes should become available in the first part of September 2013.

The Task Force will be subject to a sunset provision and dissolved at the next CMFB plenary meeting in January 2014. In the course of the intervening months, the CMFB and its Executive Body will keep under review how the Committee can best contribute to this key agenda.

## CMFB Task Force on the quality of the statistics underlying the MIP indicators List of participants

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## **Reflections on the assessment of quality in MIP. Input for the 2nd meeting of the taskforce**

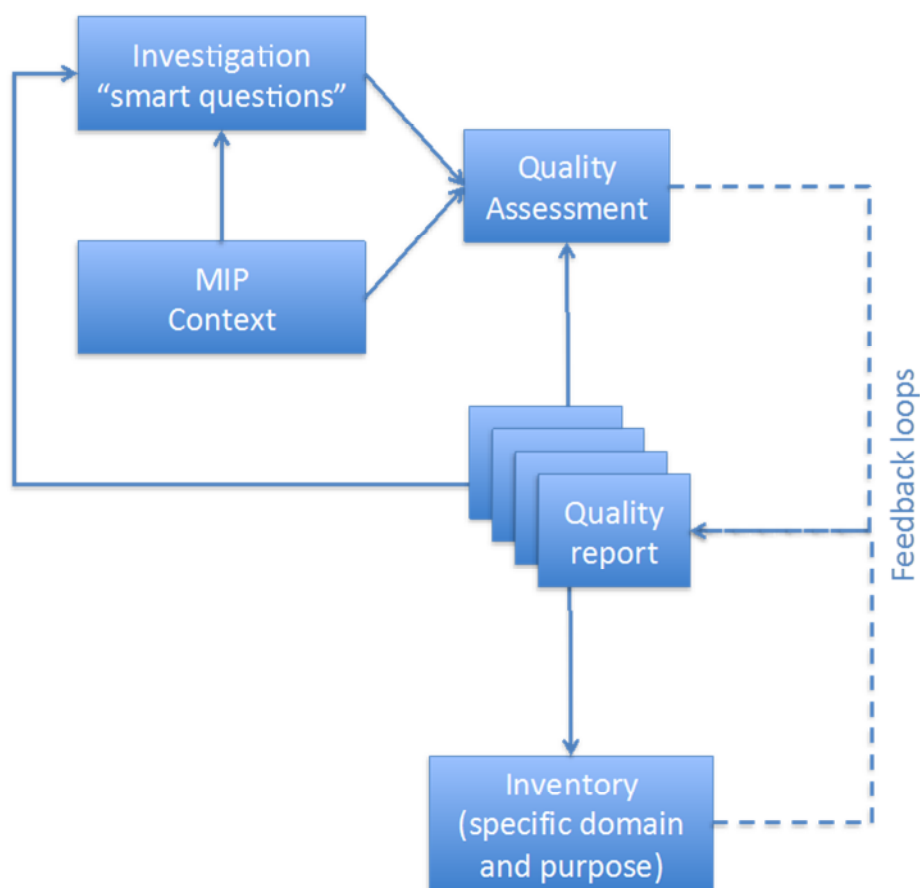
### *Introduction*

1. Following up on the first meeting of the CMFB taskforce on Quality of MIP a subgroup of 4 members (Leena Störgards, Stephen Sabine, Michael Pfeiffer and Gerard Eding) volunteered to take the issue of quality assessments and reporting a step forward and to prepare a short discussion document for the second meeting of the taskforce
2. The subgroup collected several quality reports, quality assessments, inventories and quality frameworks already available in the various statistical domains. In the EU as well as in the rest of the world.
3. The group e.g. looked at:
  - ECB QUARTERLY FINANCIAL ACCOUNTS ANNUAL QUALITY REPORT 2012
  - OECD QUALITY FRAMEWORK AND GUIDELINES FOR OECD STATISTICAL ACTIVITIES
  - Eurostat's assessment of the BoP Quality Report 2010
  - QUALITY REQUIREMENTS/ STANDARDS QUALITY REPORTING (QR), Eurostat (website)
  - COMMISSION WORKING DOCUMENT assessing the quality of data reported by Member States in 2012 on balance of payments, international trade in services and foreign direct investment
  - EURO AREA BALANCE OF PAYMENTS AND INTERNATIONAL INVESTMENT POSITION STATISTICS MARCH 2012 2011 QUALITY REPORT (ECB)
  - ESS Quality Glossary, Developed by Unit B1 "Quality, Methodology and Research" (website)
  - Implementation of the recommendations of the Sponsorship on Quality concerning quality reporting, 19th Meeting of the European Statistical System Committee Luxembourg, 14th November 2013
  - Eurostat, "European Statistics Code of Practice", Luxembourg,
  - COMMISSION WORKING DOCUMENT assessing the quality of data reported by Member States in 2011 on balance of payments, international trade in services and foreign direct investment Brussels, 20.11.2012 COM(2012) 674 final
  - 2012 QUALITY ASSESSMENT OF THE COUNTRY CONTRIBUTIONS TO THE EURO AREA B.O.P. AND I.I.P. Approved by the Statistics Committee (STC) 27 March 2013, ECB-RESTRICTED STC/2013/019.1
  - EURO AREA MONETARY AND FINANCIAL STATISTICS 2012 QUALITY REPORT, ECB-RESTRICTED, 27 March 2013 DRAFT- mfs13.09 STC/2013/036.1
  - ECB STATISTICS QUALITY FRAMEWORK (SQF)
  - IMF, data quality assessment framework (DQAF)
  - ESCB's public commitment with respect to its statistical function
  - Various documents on MIP of the DMES.

4. The group had only one face-to-face meeting of 6 hours in Amsterdam to discuss and exchange their ideas on quality frameworks, quality report, quality assessments and inventories. Time and capacity constraints unfortunately did not allow a more in-depth analysis.
5. The views expressed in this paper are thus a resemblance of that one day discussion and can and should be seen as a first draft/exchange of ideas to be discussed with the taskforce.

*Quality: role of frameworks, reports, assessments and inventories?*

6. One of the first issues that emerged in the discussion was the fact that the concept of quality in the context of MIP is now being discussed at various levels, which of course interact with each other. And more importantly that there seems to be some kind of confusion of tongues when discussing the various concepts of quality in the context of MIP (and also other contexts).
7. Especially the 'confusion' on the difference between quality reports and inventories seems to be and/or could become a persistent issue and/point of discussion. In many cases the discussion on quality reports automatically seems to trigger the notion that quality reports are equal to extensive, sizeable, large-scale inventories, consisting of hundreds of pages of text to be written by member states.
8. The group agreed that it therefore seems to be a sensible next step for the taskforce to define the various parts of the needed quality framework in MIP in unambiguous way. For that purpose the group proposes to use the schematic representation in figure 1
9. Figure 1 shows that quality reports form the heart of a quality framework and therefore should also be the heart of the MIP quality needs. Quality reports are in this respect documents which contain information (per statistical domain) regarding the various elements of quality as defined in the European quality framework(s). *Each statistical domain has its own report and can entail one (or more) indicators used in the MIP. They are generic in nature and can and will be used for various purposes (of which MIP can be one)*
10. The quality reports are the primary input for a quality assessment, as well as the context in which a quality assessment will be written (in this case the MIP) and any possible extra information. In the figure above the latter is labelled as investigation with "smart questions", by which we imply a process in which the quality assessor uses the information from the quality reports, the context in which the assessment report has to be written and the possibility/ability of the assessor to use a condensed set of extra question to pinpoint in an efficient and systematic way possible quality risks and/or points of particular interest.



11. The quality assessment itself is addressed to the main (high level) users of MIP and provides an overview of the overall quality of the MIP, presents the results of the investigation by the assessor and may pinpoint possible quality risks and/or points of particular interest for the users of MIP.
12. From the quality assessment there is a feedback loop to the quality reports. If e.g. in an assessment report a serious issue regarding the quality of one of the MIP indicator is identified and agreed upon, the quality reports might be altered to include information on this issue in future quality reports for that specific statistical domain.
13. In addition to quality reports and quality assessments, a quality framework *may* consist of inventories. In principle it is agreed that inventories fulfil a useful function in the statistical compilation process. If available they can assist in evaluating specific quality features, but they do not build a necessary precondition for the establishment of quality reports in the short- and medium term.  
 Only in cases where there is a serious indication for quality problems, the investigation of this specific issue may trigger the necessity of building up so far non-existing inventories in a specific sub-domain and/or process step concerning the questioned statistics. The purpose of these inventories is then to provide **extra** and obviously much more detailed information on quality - if and only if deemed absolutely necessary. The role of inventories has, thus, expressly to be seen as demand driven.. Therefore, while not neglecting the generally desirable features of

- inventories, their building up is subject to time constraints and other more urgent priorities in the MIP quality process.
14. Detailed information on e.g. compilation methods, data sources, methodology, etc. which is not necessarily relevant/mentioned in the context of the quality assessment may and of course will be nationally available at member states (in their own language). But putting all that information in a single package should in our view not be the purpose of inventories in the quality framework for MIP. As said, additional inventories should be demand driven in content by the conclusions of the quality assessment.
  15. Once an inventory has been written it of course may have a feedback loop to future quality reports (e.g. after the investigation of the inventories it may seem sensible to information on certain aspects to foster quality improvements and reflect this in the quality reports and quality assessment).

*Basic principles of a quality framework in the context of MIP*

16. A second step to bring forward the discussion on the quality in the context of MIP should in our view be to agree on the basic principles for such a framework. Apart from the above presented schematic presentation of the various elements in a quality framework, their mutual relations and its coherence, we discussed this issue to see which basic principles we could identify
17. In our view we may/can agree on the following 10 basic principles of quality in MIP:
  - A. The code of practice of the ESS and the ESCB Statistical principles are essentially exactly the same. In our discussion we looked in detail at the resemblances and difference between the two systems (see annex I) and concluded that the code of practice and the ESCB statistical principles show (not surprisingly) no significant differences and thus form a perfect joint basis for the MIP quality framework. Both are also in line with other internationally agreed principles, such as DQAF by the IMF.
  - B. Quality reports should always be a generic heart of the European quality framework in all statistics, both in the ESS and the ESCB. As presented above the quality reports for all statistical domains should be generic, so they can and should be used for various purposes. This is an effective and efficient way forward for the entire statistical system in the Union. These quality reports have of course a solid basis in the quality principles of the code of practice of the ESS and the statistical principles of the ESCB. In that respect they contain the majority of all essential information needed for quality assessments. This is irrespective of the fact whether such an assessment will be in the context of MIP or in the context of any

other (policy) use of statistical information. A number of quality reports already exist in both systems. Given the convergence of the underlying principles between the 2 statistical systems, we can build upon existing frameworks to a high degree.

- C. We have to take into account new developments in the area of quality in the ESS and ESCB. As already mentioned in several areas well-developed frameworks for quality reports exist in both systems with current initiatives, like the SIMS-initiative in the ESS. The main purpose of these initiatives is to introduce a generic quality framework and quality reporting in all statistical domains, which is in line with the basic principle mentioned under B. It will of course take some years before all statistical domain are covered. We could (and perhaps should) ensure that the MIP relevant domains lead the field. In this way we harmonise the joint work to improve the common quality standards in statistics.
- D. There is absolutely no need for/ we should not introduce MIP specific quality reports. Given B and C we can and should conclude that even if we still might consider introducing MIP specific quality reports in the short run this will be a duplication of information (in the future), which is not an effective and efficient way forward. The generic quality reports can and in our view will contain the necessary information for a fit for purpose quality assessment in the context of MIP. MIP should always be based upon these generic reports. We could (and perhaps should) ensure that the MIP relevant domains lead the field and information needed for MIP becomes the first priority in Member states. In any case the main target should remain to concentrate all activities first on improving underlying statistics wherever necessary. Irrespective of the (individual) use of a statistic. It might be desirable that Statistics underlying the MIP indicators play a prominent role in that respect.
- E. The quality report should provide qualitative and quantitative information to be used in the quality assessment report. As the generic quality report is at the heart of the quality framework and the most important input for the quality assessment, it should contain quantitative as well as qualitative information. We should also realise that not all information in the quality report needs to be relevant for the MIP quality assessment (to be elaborated)
- F. The findings of the quality report can/should be enriched by "smart questions". By which we imply a process in which the quality assessor uses the information from the quality reports, the context in which the assessment report has to be written and the possibility/ability of the assessor to use a condensed and limited set of extra question to pinpoint in an efficient and systematic way possible quality risks and/or points of particular interest. They are a potential part of the whole process and eventually influence the conclusions of the quality report. These questions should have an empirical basis and not be based on a presentiment or assumptions. The number of question should be limited, it may

not be used as an inventory. Member states are obliged to provide this information within an agreed upon timeframe, etc... (to be elaborated)

- G. The MIP quality assessment should first of all assess quality per country and not by indicator. The quality assessment report for MIP should be tailored the way the MIP is used. MIP is nowadays mainly used for the AMR, which is an assessment of countries with respect to their macroeconomic instabilities, measured by 11 (18) indicators. Hence the QA report should assess quality per country. Conclusion and recommendations are therefore also country specific, but should – where necessary and adding to the understanding of the assessment–incorporate cross-country comparisons. Thus it may occur that a certain quality risk or point of particular interest may be valid for several member states. In that case the assessment should also contain more generic conclusions and recommendations.
- H. If the main users of MIP also need/want an overall assessment of MIP quality per indicator and over countries or for the EU/Euro area a separate QA report will be written. Should be demand driven and can be based upon available information in Q report and QA under G.
- I. Inventories in the context of MIP can be introduced but only demand driven from the quality assessment. Besides quality reports and quality assessments, a quality framework may consist of inventories. The purpose of these inventories is to provide extra information on quality if and only if deemed absolutely necessary. The role of inventories has expressly to be seen as demand driven. Inventories should thus only be additionally written if the quality assessment concludes that a serious quality problem exists, which should be investigated at such a detailed level that it cannot be tackled in future quality reports. Additional inventories and the questions to be addressed in the inventory should in this line of reasoning also be limited to the strict minimum and thus only address the quality/methodological issues identified in the quality assessment. As said they should only be introduced in the context of MIP in areas where there are serious doubts on used methodologies, definitions, data coverage, etc. If no serious doubt is raised by MIP users or academic research, then inventories can and should only be done according to basic statistical legislation.
- J. Quality reporting is an obligation of Member states, and will be organised in each Member state according to its own national institutional arrangements. The MIP contains indicators of both the ESCB as well as the ESS. The production, publication, quality reporting, division of tasks between the NSO and NCB, etc of these indicators in a member state is in that respect the responsibility of the member state itself. For MIP purpose it might be relevant to include information on these institutional arrangements in member states (to be elaborated..)

18. Building on these basic principles we then can then draw up a quality report and assessment for MIP purpose which is fit or purpose.

*The quality report: possible contents and link with quality principles and the QA report*

19. In the code of practice and the ESCB statistical principles 15 principles of quality have been distinguished

- Independence
- Mandate
- Resources
- Quality systems (monitoring, planning, policy)
- Confidentiality
- Impartiality
  
- Methodology
- Procedures
- Administrative burden
- Effectiveness
  
- User needs
- Accuracy
- Timeliness
- Coherence
- Accessibility

20. If we solely look at MIP and the QA report for MIP we can cluster them into 3 major block, see also annex II (see annex)

- i. *Institutional*. 1-6 are institutional issues, they are not specific for MIP purpose. Except perhaps for information on the division of tasks and responsibilities between the NSI and the NCB in a member state regarding the MIP relevant statistical domains. These issues can for MIP purposes in our view be usually described in one paragraph in very general terms, we can also decide not to include them and link to national websites where this information is available. Nevertheless, if some institutional issue should have been spotted, it should still be mentioned.
- ii. *Process*. 7-10 are issues relating to processes, most of them are relevant to MIP and to include in the quality assessment, descriptions are mainly qualitative and descriptive by nature. They describe whether or not certain (international) standard are met in the production of statistics. Given the fact that most of the standards relevant for MIP indicators are also included in regulations in the EU, this block will normally not contain the most relevant information in the context of MIP (to be elaborated..)

- iii. *Products*, 11-15 are issues relating to specific products/statistical domains. Most of them are highly relevant to describe in the context of MIP and to include in the quality assessment. But some of them can be labelled as “irrelevant,” such as users need (as the statistical domain described is already used for MIP, so it goes without saying that it is relevant for user) and accessibility (all information needed for MIP is withdrawn for various publicly available data warehouses (Eurostat, ECB, individual member states, etc.)
21. Based on the discussion, the basic principles and the studied material under 3, we somehow feel that for the MIP quality assessment we, at this point in time, only have/need to focus on 3 aspects of the quality framework. With this limited number of aspects, we are also trying to manage the trade-off between demonstrating to readers that (i) the authors of the quality assessment have done a thorough job and (ii) the assessments are focussed on the key points to provide assurance or warnings (as appropriate) to a busy and non (statistical) expert readers.
22. For those 3 we have to decide what quality dimensions we want to use/need to produce a first edition of a MIP quality assessment. These dimensions should be equally applicable to the underlying statistical domains. As far as possible they should either be measurable in a quantitative way or be subject to clearly structured qualitative descriptions. Usable sub dimensions are already largely available in existing frameworks of both systems and just have to be selected according to the specific MIP requirements. (see annexed table).
23. This first is Accuracy. The quality reports provide information about data sources, data collection, revisions, impact of major events, etc. For MIP indicators on the size of revisions (benchmarked to?) and the directional reliability seem to be the most important for the perspective of a policy maker/user to include in a first edition of the quality assessment. But it has to be mentioned that certainly not all kinds of revisions currently investigated in existing QR are relevant in the MIP context. A special focus has to be put on the MIP revision cycle, e.g. t+9 months, t+21 months, etc. (to be elaborated..)
24. The second is timelines. Timeliness is to be understood in a twofold sense: In a broader understanding the timely delivery of MIP underlying statistics is a quality criterion per se (meaning that e.g. persistent late delivery shades a certain light). But more importantly, like in case of revisions, the timeliness has to be predominantly focussed on MIP assessment cycles. (to be elaborated..)
25. The third is Coherence. Coherence depends on the kind of the underlying Statistics. In this context it can be distinguished between consistency across statistical domains (e.g. current account balance – RoW account ) and internal consistency (e.g. errors and omissions in BoP). Another important issue is the comparability across countries (e.g. harmonisation of statistical standards and methods). (to be elaborated..)
26. If the taskforce can agree that these aspect of quality are the most import for a first edition of the quality assessment on MIP, the information



Member States have to provide may relatively low. The table below gives an impression of the information needed. (to be elaborated...)

	<b>Current Account Balance</b>	<b>Net IIP</b>	<b>...</b>	<b>....</b>	<b>Change in financial sector liabilities</b>
<b>Accuracy</b>					
Average revision					
Directional accuracy					
<b>Timelines</b>					
....					
<b>Coherence</b>					
....					

*Towards a first edition of a quality assessment for MIP*

27. Based on this information the quality assessor can then investigate the quality of MIP per member state, identify issues on which he or she may want to address some extra questions to member states (see point 18.F) and draw up the conclusions and write the 1st edition of the MIP quality assessment
28. The structure of the report (see also the ECB proposal) may be
- i. Introduction
  - ii. General considerations, reference to existing quality framework, regulations, etc. (summary from work Eurostat)
  - iii. Assessment of MIP quality per Member State/indicator
  - iv. Conclusions and recommendations to improve quality
  - v. Per member state if any
  - vi. Possible per statistical domain, valid for all or several member states
  - vii. Recommendations to improve the quality reports or in exceptional cases to start a (limited) inventory for a specific statistical domain.
  - viii. The appendices may contain data per member state
29. Finally, as said these ideas can and should be seen as a first attempt to sort out our thoughts from the discussion we had as a subgroup in a relative short time span. It is our strong belief/hope that these ideas may help further the discussion in the 2nd meeting of the taskforce. Looking forward to the discussion and your response to our ideas.

*Encore....*

30. As a last number of 'our show' : in the discussion we had, we also identified a few extra questions we didn't had time to discuss, but we think they might be relevant for the work of the taskforce so we would like to share them with you:

- Who does the QAssessment in the end? What is a proper procedure, is it in line with AMR and EDP legislation, what is role of EFC/Ecofin in final conclusion/recommendations, etc.
- Are there limits to the conclusion and recommendations in the Quality assessment (also depending on who does the QA in the end), e.g. a conclusion of non-compliance can that be a QA conclusion or should that always be another procedure?
- What about the tool and use of self-assessments? Can be useful and in many countries already good practice.
- Is there a policy need in the context of MIP for comparing quality per indicator across member states? Or is MIP just assessment per country in line with current AMR procedures?



## **First ideas for a template for an quality declaration/inventory for statistics underlying MIP headline indicators**

*Prepared by Jacques Fournier, João de Matos, Alfredo Cristobal and Kirsten Wismer*

In working with quality assessment on statistics underlying MIP we have to build on the work already done in quality assurance in the statistical world.

### **Overall quality frameworks**

There is a common quality framework in ESS. The legal base is 223/2009, where the quality criteria are defined. Eurostat and Member States have developed Code of Practice which in 15 principles describes the principles to follow in ESS regarding institutional framework, statistical processes and output. In order to be able to follow up on these principles, a Quality Assurance Framework (QAF) has been developed, and it will be used for the coming Peer Reviews.

The ECB has established and published Quality insurance procedures – see document “Quality insurance procedures Within the ECB Statistical Function”. The framework encompasses the following aspects: governance issues, strategy, work programme and procedures to identify new user’s requirements, procedures to protect statistical confidentiality, collection of data, compilation and statistical analysis, data accessibility, dissemination policy, monitoring and reporting, assessing and enhancing stakeholder satisfaction.

Without prejudice to the Protocol on the Statute of the European System of Central Banks (ESCB) and of the European Central Bank, the ESCB collaborates with the European Statistical System (ESS) and takes account of the principles laid down in the European Statistics Code of Practice for the National and Community Statistical Authorities.

It is worth recalling that the IMF has developed a comprehensive set of data quality assessment frameworks, in relation to the SDDS. Five dimensions - assurances of integrity, methodological soundness, accuracy and reliability, serviceability, and accessibility-of data quality and a set of prerequisites for data quality are the center of the IMF Data Quality Assessment Framework (DQAF). The DQAF, which is used for comprehensive assessments of countries' data quality, covers institutional environments, statistical processes, and characteristics of the statistical products. There are seven dataset-specific frameworks National accounts, consumer price index, producer price index, government finance and public debt statistics, monetary statistics, balance of payment and international investment position statistics.

The purpose of the IMF DQAF is to provide a flexible structure for the qualitative assessment to be used in a variety of contexts, including the following:

- Reviews performed in the context of IMF country work,
- Self-assessment performed by national statistical offices, central banks and other data producing agencies,
- Assessments by other group of data users, such as financial market participants.

## **Standards for quality reports and inventories**

In ESS a standard for Quality Reports has been developed and is used for many statistics. The report covers the quality dimensions defined in 223/2009 (CoP 11–15) plus confidentiality and transparency (CoP 5–6) and finally respondent burden and cost effectiveness (CoP 9-10)

Unfortunately quality reports in GNI are of a different nature, since these are yearly updates to the GNI-inventory. They are not at all related to CoP.

In 2011, the Sponsorship on Quality (ESS) called for rationalization and harmonization of quality reporting in the ESS by using the existing metadata environment and by creating a “once for all purposes” reporting strategy. In November 2013 ESSC endorsed the Single Integrated Metadata Structure, SIMS, as a dynamic inventory and conceptual framework for reporting on quality and reference metadata in ESS. Some definitions on concepts are shown in Annex 1.

SIMS covers all items concerning the statistical process, and is in that way a gross list of items, that ideally could be included in a documentation of the content and processes in a statistical production. SIMS is actually itself an inventory: a detailed list of the elements in a statistical production. However one thing that is still missing: recommendations concerning the level of detail. Depending of the degree of detail a report based on SIMS could be from 1 page to more than 100 pages. Therefore a handbook describing different levels of details is still missing.

There are already some examples of inventories and more are being developed. It started in GNI, and after some years this instrument was also developed in edp-statistics. These 2 inventories are developed, respectively, for the specific use of these statistics as tax base for the countries contribution to EU and as an absolute benchmark for the edp. They are concentrating on the variables, and are very detailed in the description of these.

In prices a new inventory is being developed. Some part of this are following the standard SIMS, but the report has been developed with very detailed description of different variables. In this way consistency with other statistics is not ensured.

In the field of BoP/IIP, the ECB presents two pieces of information: the annual Quality Report and the European Union Balance of Payments/International Investment Position Statistical Methods. The first is a regular publication which carries out an assessment of statistics published by euro area countries. The report goes through the following quality dimensions of the statistical output: accuracy and reliability (stability), consistency and comparability of the statistical output, timeliness (and punctuality) of the statistical output, accessibility and clarity of the statistical output. The report on euro area aggregates is made public and published on the internet while a country level analysis is only circulated among the ESCB members.

The second is a thorough document on the sources, methods and agreed practices of all the EU Member States. It provides a structured and exhaustive overview of compilation processes in each country and could therefore be the basis for an inventory. This is not a regular product and it is only updated when substantial changes are implemented.

By endorsing SIMS, a total frame for inventories in ESS is defined, and the ESS standard for quality reports covers several elements in SIMS. However the quality reports does not cover all processes, so an quality declaration/inventory report concerning MIP-data should concentrate on information related to sound methodology (CoP 7) and appropriate Statistical Procedures (CoP 8).

The inventories of GNI and EDP are covering these aspects, but as they are developed in their specific stovepipes. Therefore the structure of these reports is not useable as a common template for MIP statistics. A framework built on SIMS has to be established.

### First elements for a common template for an MIP quality declaration/inventory

Most statistical offices are using the GSBPM model for the quality management in our offices. This model describes the different steps in a statistical production from defining the needs for a new statistics, to design, building, collecting, processing, analysing, disseminating, archiving and at last evaluating the results.

#### Processes in a statistical production



While a quality report both in ESS and ESCB is **mainly** concentrated on the processes concerning analysis and dissemination they include also information on data collection and the process of calculation. However several of the other processes are not covered in these reports. In principle all the processes should be included in a total documentation. But some of the processes are more im-

portant in assessing the overall quality than others. Therefore it seems that the the design process will be a good place to start in broadening the documentation of the statistics used for MIP headline indicators. In a more detailed version of the model, the design phase is classified in 6 groups. The first elements in an documentation of the design phase may on this basis have the following elements which all are inside SIMS:

#### Documentation of a design process

Output	<ul style="list-style-type: none"> <li>• Reference area</li> <li>• Time coverage, base period and reference period</li> <li>• Unit of measure</li> <li>• Format (XBRL or other systems)</li> </ul>
Variable Description (output)	<ul style="list-style-type: none"> <li>• Classification system</li> <li>• Statistical concepts and definition</li> <li>• Source data</li> </ul>
Data collection	<ul style="list-style-type: none"> <li>• Frequency of data collection</li> <li>• Technicalities for Data collection</li> <li>• Unit of measure</li> <li>• Legal framework</li> </ul>
Frame and sample	<ul style="list-style-type: none"> <li>• Sector coverage</li> <li>• Statistical unit</li> <li>• Statistical population</li> </ul>
Methods	<ul style="list-style-type: none"> <li>• Data validation</li> <li>• Data compilation</li> </ul>
Workflow	<ul style="list-style-type: none"> <li>• Data revision</li> </ul>

#### Proposal for a structure of future MIP quality management

The structure of the future quality reports/inventories must take into account the communication strategy with both the public at large and users with more specific needs. A layer approach would be ideal. One option would be to start with a comprehensive MIP Statistics Quality Report, which should cover the statistics needed to compile the scoreboard indicators in a non-technical manner. This first level of quality assurance should be complemented with a second level, a Statistical Domain Quality Report. These should spell out a detailed quality framework for each statistical domain and assess compliance. Finally, in a third level, supplementary tools for data quality assessment (such as inventories of sources and methods) should be provided.

The third level could be named Quality Declarations. They will consist of the quality reports which are already produced and as a starting point the documentation of the design process as described above. Later the quality declaration may be expanded to cover more processes if necessary.

The next step is to decide the level of detail for the quality declaration/inventory for the design process. This decision will have to be taken on basis of a commonly agreed guidance note to ensure consistency between subjects and countries and to ensure the degree of details. It could be helpful to include questions in the sub concepts in order to have precise information. Free texts should be avoided. Both for the workload in MS and the possibility to use the information properly the first template should be limited to max 5 pages.

Documentation is only useful if it always is updated, and it is therefore important to think of the procedures for updating the information. The only way forward for an always updated documentation is that it is the people who are responsible for the statistics who also are responsible for the documentation. While the first and second layer may be the responsibility of Eurostat and ECB they will have the responsibility of drafting these reports. The member states have the responsibility for the statistics used in MIP and therefore the responsibility for drafting the reports concerning country specific documentation. In order to facilitate the work Eurostat and ECB could pre-fill the concepts where they have information.

The timespan for developing this work was discussed at the first TF-meeting, and it is clear that MS will be very busy in 2014 introducing the new statistical standards. Therefore a commonly agreed road map for this part of the work could have the aim to ensure that during 2015 the new elements of an MIP-Quality Declaration will be produced for all statistics for all countries. But the first steps will be the common agreement of the elements and then an agreement on a written guidance to ensure consistency between subjects and countries. This could be done in 2014.

## Annex 1

### Definitions

The **Single Integrated Metadata Structure** is the dynamic inventory of statistical concepts used for quality and metadata reporting in the ESS

The **statistical concepts** are units of knowledge which are created by a unique combination of characteristics. The statistical concepts (headings) used in this list are all part of the list of the standard SDMX cross-domain concepts and are therefore fully SDMX compliant. In SIMS, there are 22 statistical concepts used. A **sub-concept** is a breakdown of a statistical concept.

A **quality report structure or a metadata report structure** can be derived from the Single Integrated Metadata Structure inventory.

**Reference metadata** describes the contents and the quality of the statistical data.

The **National Reference Metadata Editor** (NRME) is part of the ESS Metadata Handler and the tool for the production, exchange and dissemination of reference and quality related metadata within the ESS. It allows for an online production and transmission as well as the re-use of the information, for having more harmonised and available metadata on quality for both the users and producers of European statistics.

Source: Technical Manual of the Single Integrated Metadata Structure (SIMS).





**ESS – ESCB**  
**QUALIY ASSESSMENT REPORT**  
**ON MIP STATISTICS**

**18 December 2013**

**Disclaimer: this sample report has been prepared by the CMFB Task Force as a sample for the framework and contents of a quality assessment report on MIP statistics. It is not intended to be an evaluation of all MIP relevant statistics for the 2013 release of the MIP scoreboard.**

## EXECUTIVE SUMMARY

### Macroeconomic statistics – at the core of MIP indicators

The European Statistical System (*ESS*) and the European System of Central Banks (*ESCB*) underline the importance of *ensuring reliable statistical data* for the macroeconomic imbalances (*MIP*) procedures established for the early identification and monitoring of the imbalances supporting multilateral policy recommendations.

The indicators for the *MIP* are derived from available macroeconomic and financial statistics, such as balance of payments statistics, national and financial accounts. The *ESS* and the *ESCB* have been producing these macroeconomic and financial statistics for many years within their respective spheres of competence and they are the basis for *economic and monetary policy decisions of the Union* since many years and are also used by international organisations such as the *IMF* and the *OECD* in their surveillance reports.

### Quality assurance of macroeconomic statistics underlying the MIP

Securing the *quality of macroeconomic and financial statistics* is a central contribution of the *ESS* and the *ESCB*. The two statistical systems share similar principles referring to the quality of statistical processes and outputs. These principles are reflected in the *ESS Code of Practice of European Statistics* and the *ESCB Public Commitment on European Statistics*, respectively.

The majority of the macroeconomic statistics underlying the *MIP* indicators are themselves *regulated* including in most cases procedures for *quality assurance* and monitoring. For balance of payments statistics, financial accounts, national accounts, government finance statistics and price statistics the statistical legislation in force already provides for *regular domain specific quality reports* on the statistical data which often accompany *inventories containing a description of the sources and methods* applied in the collection of the statistics.

These domain specific quality reports produced by the *ESS* and the *ESCB* assess the underlying *compilation process, its legal basis and its robustness* and evaluate whether the statistics are in line with *international statistical standards*. They reflect comprehensive expert assessments on whether the statistics are fit for each of the broader purposes for which they are used.

By focusing the quality assurance on the macroeconomic and financial statistics that are used for a range of purposes rather than on the *MIP* indicators themselves, statisticians mitigate the risk that these

indicators become less reliable as political pressure piles up geared to skew the values to meet administrative targets. Moreover, if the quality assurance is based on the underlying statistics, statistical authorities do not need to amend their compilation processes and their quality assurance arrangements whenever the scoreboard is adjusted.

### **High quality and cost-effective macroeconomic statistics**

By *striking the right balance between timeliness, reliability and detail*, the ESS and the ESCB *produce fit for purpose* macroeconomic and financial statistics in a *cost-effective manner*. To strike this balance, statisticians have to undertake a '*merit and cost evaluation*' considering the *trade-offs* between the timeliness, reliability, detail and cost of macroeconomic statistics.

*High-frequency statistics* are compiled with *less detail* to ensure the appropriate *timeliness*, while *more detailed statistics* become available with a *longer time-lag*. By way of example, to compile some monthly balance of payment data, surveys may be confined to reporting agents of a certain size.

Moreover, the *statistical compilation process combines information collected from reporting agents* via surveys, administrative data and necessary estimations *with statistical techniques and expert judgement*. While a *more extensive use of censuses* instead of surveys may enhance the *reliability* of the statistics, it would *also increase the costs and the reporting burden* inflicted to the economy in particular for small and medium-sized enterprises.

Given the weight of expert judgement in the compilation of macroeconomic statistics, the *quality is also influenced by the number of qualified human and financial resources involved in the statistical work*.

### **A 'fit-for-purpose' quality assessment report on MIP statistics**

A '*fit-for-purpose*' *quality assessment report on MIP* statistics should focus on scrutinising the quality criteria which are most relevant for the MIP process. These criteria, which are part of the quality principles of the ESS Code of Practice of European Statistics and the ESCB Public Commitment on European Statistics, are (i) *institutional issues* supporting the compilation of the MIP statistics, such as the legal basis, the quality assurance mechanisms and the policy uses, (ii) the *compilation process*; and (iii) the *quality of the statistical output*, focusing on the accuracy and the comparability of the underlying statistical output across countries and across time (revisions).

Given that the *domain specific quality reports* prepared by the ESS and the ESCB contain *all essential quantitative and qualitative information* needed for assessing the quality of the statistics, they also contain the necessary information for completing a fit-for-purpose quality assessment in the context of the MIP.

**Way forward – enhancing the quality of the statistics underlying the MIP**

The corollary of this quality assessment on MIP statistics is a *set of concrete actions to enhance the quality of MIP statistics* in a number of *statistical domains* also reflected in the specific domain quality reports. Some of these concrete actions are to be implemented at *national level* by the relevant statistical authorities to address weaknesses in the statistics supporting the MIP indicators. Other actions are to be undertaken at *European level*, such as more detailed methodological guidelines, clarification of statistical concepts and definitions, practical recording conventions, etc.

To direct and monitor their implementation, these concrete actions are *included* in the *work-programmes* of the European Statistical System Committee (*ESSC*) and its substructures and of the Statistics Committee (*STC*) and its substructures in their respective field of competence. Actions that require *cooperation* between the *ESS and the ESCB* are included in the work programme of the Committee on Monetary, Financial and Balance of Payments (*CMFB*) statistics upon by the European Statistical Forum (*ESF*). To secure that the necessary *resources* for implementation are available, the inclusion of the actions in the work programmes of the different bodies follows a rigorous priority-setting.

*For 2014, the main milestone in enhancing the statistical basis underlying the MIP will be the implementation of the revised EU statistical legal acts for balance of payments and international investment position statistics and national and financial accounts to align them to the new international statistical standards (the BPM6 and the ESA2010 respectively) by September 2014. This work will bring them more in line with the needs of users and will make them more comparable across EU Member States, while requiring the investment of significant resources by national statistical authorities.*

## LIST OF ABBREVIATIONS

BOP	Balance of payments
BPM6	IMF Balance of Payments and International Investment Position Manual 6 <sup>th</sup> Edition
CDIS	IMF Coordinated Direct Investment Survey
CPIS	IMF Coordinated Portfolio Investment Survey
CSDB	Centralised securities database
COFER	Currency composition of Official Foreign Exchange Reserves
DGI	G-20 Data Gaps Initiative
ECB	European Central Bank
EMU	Economic and Monetary Union
ESA 10	European System of National and Regional Accounts 2010
ESA2010 TP	Transmission Programme under the European System of National and Regional Accounts 2010
ESCB	European System of Central Banks
EU	European Union
EUROSTAT	Statistical Office of the European Commission
FSB	Financial Stability Board
FDI BD4	OECD Benchmark Definition of Foreign Direct Investment
FVC	Financial Vehicle Corporations engaged in securitisation transactions
GFSM2001	IMF's Government Finance Statistics Manual 2001
HPI	House Price Indices
IAG	Inter-Agency Group on Economic and Financial Statistics
IIP	International investment position
IF	Investment fund
MFI	Monetary financial institution
MFSM	IMF's Monetary and Financial Statistics Manual
MMF	Money market fund
NCB	National Central Bank
NSI	National Statistical Institutes
OFC	Other (non-monetary) financial corporations
OJ	Official Journal (of the European Union)
OOHI	Owner Occupied Housing Indices
PSDSG	Public Sector Debt Statistics Guide 2011
SDDS (Plus)	IMF's Special Data Dissemination Standard (Plus)
SDMX	Statistical data and metadata exchange
SDR	Special drawing right
SNA 08	System of National Accounts 2008

## **INTRODUCTION**

As part of the 2011 Six-Pack legislation, Regulation (EU) No 1176/2011<sup>1</sup> sets out detailed rules for the detection, prevention and correction of macroeconomic imbalances (MIP). A **Scoreboard of eleven headline indicators**<sup>2</sup> is used as a tool for the early identification and monitoring of the imbalances supporting multilateral policy recommendations. An additional set of eighteen indicators<sup>2</sup> is also compiled and published without indicative thresholds.

The ECOFIN Council of 8 November 2011 and of 13 November 2012<sup>3</sup> underlined the importance of having **timely statistics of high quality** for inclusion in the MIP Scoreboard. The macroeconomic statistics underlying the MIP exercise are **multi-purpose**. They capture the essence of economic and financial developments which they seek to depict, and over the past decades this statistical picture has been successfully supporting the economic and monetary policy decision making in the European Union. Reliable macroeconomic statistics are also essential for supporting the MIP and efforts to monitor and enhance their quality must be sought within this overall multi-purpose framework.

This report assesses the quality and comparability of the respective statistics included in the MIP scoreboard. It is organised in three sections: **Section I** briefly explains the processes for the production of macroeconomic statistics underlying the MIP indicators and presents some general considerations on quality in that context; **Section II** summarises the key features on the quality assessment of each of the individual macroeconomic statistics (e.g. balance of payments, financial accounts, GDP,..) supporting the MIP indicators; and finally **Section III** proposes some actions directed to address weaknesses identified in the quality of each of the underlying statistics of the MIP indicators.

## **SECTION I: GENERAL QUALITY CONSIDERATIONS ON THE QUALITY OF THE STATISTICS UNDERLYING THE MIP**

### **Macroeconomic statistics – at the core of MIP indicators**

The **MIP indicators are derived from macroeconomic and financial statistics**, such as balance of payments statistics, financial and national accounts. By way of example, the “*3-year average of the current account balance as a % of GDP*” is calculated by combining the current account balance reported in balance of payments statistics with the GDP derived from the national accounts.

<sup>1</sup> Regulation (EU) No 1176/2011 of the European Parliament and of the Council of 16 November 2011 on the prevention and correction of macroeconomic imbalances.

<sup>2</sup> Annex I presents the eleven headline indicators and the additional set of eighteen indicators for the in-depth reviews that are included in table A1 and table A3, respectively, of the 2013 Alert Mechanism Report published on 28.11.2012 by the European Commission [http://ec.europa.eu/europe2020/pdf/amreport2013\\_en.pdf](http://ec.europa.eu/europe2020/pdf/amreport2013_en.pdf).

<sup>3</sup> [http://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/ecofin/133470.pdf](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/133470.pdf)

The European Statistical System (**ESS**) and the European System of Central Banks (**ESCB**)<sup>4</sup> have been **producing** these **macroeconomic and financial statistics** for many years within their respective spheres of competence and continuously apply statistical quality assurance mechanisms to ensure that they are in line with international statistical standards and reliable and comparable across Member States. They are the basis **for economic and monetary policy decisions of the Union** since many years and are also **used by international organisations such as the IMF and the OECD** in their surveillance reports.

### **Quality assurance of macroeconomic statistics underlying the MIP**

The **quality assurance of macroeconomic and financial statistics is secured by the ESS and the ESCB**. The two statistical systems share similar principles referring to the quality of statistical processes and outputs. These principles are reflected in the **ESS Code of Practice of European Statistics** and the **ESCB Public Commitment on European Statistics**, respectively.

The macroeconomic statistics underlying the MIP indicators are themselves regulated including in most cases procedures for quality assurance and monitoring. For balance of payments statistics, financial accounts, national accounts, government finance statistics and price statistics **the statistical legislation** in force already encompasses **regular quality reports** on the statistical data which are often complemented by **inventories** containing a description of the **sources and methods** applied in the collection of the statistics. Depending on the domain, the quality reports are produced by the institution compiling the national statistics or an summary report is produced by ESCB or ESS for the domain summarising the main findings for each Member State. The quality assessment would be based on the input coming from these quality reports.

A typical **quality assessment summarises** whether the **statistics** are **reliable** by analysing the underlying compilation processes, its legal basis and its robustness considering whether the important parts of the statistics are supported with comprehensive collection of raw data or with sound estimation methods provided through expert judgement. They also evaluate the **comparability** of the statistics produced by Member States judging whether the statistics abide to the methodological guidance of international or European statistical standards or regulations and identifying major deviations. In addition, they study whether the statistics are also consistent over time and whether **revisions** may result in final values of the statistics diverging substantially from the initial values.

They reflect comprehensive expert assessments on whether the **statistics are fit for each of the broader purposes** for which they are used. Overall, these quality assurance arrangements have produced **high quality statistics** over the past decades supporting the economic and monetary policies of the EMU and the Union.

<sup>4</sup> The institutional framework for the production of European statistics is set out in the Treaty of the European Union (TFEU) and in Regulation (EC) No 223/2009 of the European Parliament and of the Council on European statistics, and Council Regulation (EC) No 951/2009 amending Regulation (EC) No 2533/98 concerning the collection of statistical information by the European Central Bank.

By **focusing the quality assurance on macroeconomic and financial statistics** that are used for a range of purposes rather than on the MIP indicators themselves, statisticians **mitigate the political pressure** or user bias coming from the MIP exercise. As soon as indicators are subject to an administrative process with potentially important implications, these indicators tend to become less reliable as indicators of economic trends, as political pressure piles up geared to skew the values to meet the administrative target (“Goodhart’s Law<sup>5</sup>”). Moreover, the **indicators** included in the MIP scoreboard can be **adjusted or modified** on a regular basis by the Commission according to Article 5 of Regulation (EU) No 1176/2011. If the quality assurance is based on the underlying statistics, statistical authorities do **not** need to amend their compilation processes and their quality assurance arrangements whenever the scoreboard is adjusted. Finally, many indicators refer to balancing items which are the result of adding up or subtracting several or many components. The quality assurance can only assess the reliability of the components.

### **High quality and cost-effective macroeconomic statistics – striking the right balance between the trade-offs through a ‘merit and cost’ evaluation**

By **striking the right balance between timeliness and detail**, the ESS and the ESCB produce fit for purpose macroeconomic and financial **statistics in a cost-effective manner**. To strike this balance, statisticians have to undertake a **‘merit and cost evaluation’** considering the **trade-offs** between the timeliness, reliability, detail and cost of macroeconomic statistics.

For example, high-frequency statistics are compiled with **less detail** to ensure the appropriate **timeliness**, while **more detailed statistics** become available with a **longer time-lag**. To compile some monthly balance of payments data, surveys may be confined to reporting agents of a certain size. Moreover, the **statistical compilation process combines information collected from reporting agents** via surveys, administrative data and necessary estimations **with** statistical techniques and **expert judgement**. While a **more extensive use of censuses** instead of surveys may enhance the **reliability** of the statistics, it could **substantially increase the cost** of the reporting burden inflicted to the economy in particular for small and medium-sized enterprises. For example, the reporting obligations on cross-border transactions may only be imposed for balance of payments purposes when above certain thresholds to contain the reporting burden while affecting only marginally the reliability of the statistics. Given the weight of expert judgement in the compilation of macroeconomic statistics, their **reliability is also influenced by the number of qualified human and financial resources involved in the statistical work**. For example, if a fixed coefficient is a crucial factor in the compilation of GDP but is only recalibrated every 5 years because of lack of resources to do it at annual frequency, the reliability of GDP may suffer.

<sup>5</sup> Goodhart, C.A.E. (1975). "Problems of Monetary Management: The U.K. Experience". Papers in Monetary Economics (Reserve Bank of Australia).



In short, the **quality framework must take account** of the wider statistical context in which these data are produced; a context in which **timeliness, reliability, accuracy, and other quality parameters are carefully balanced in the choice of collection and compilation methods**. Otherwise, Member States could be obliged to adjust their collection and compilation methods in a manner which can no longer be considered balanced or cost-effective for the wider set of statistics from which the MIP relevant data are derived.

### **‘Fit-for-purpose’ quality assessment of macroeconomic statistics underlying the MIP**

A quality assessment supporting the MIP exercise should focus on scrutinising the **relevant quality criteria** for the MIP process. These criteria should be embraced in the **three main blocks** clustering the quality principles of the ESS Code of Practice of European Statistics and the ESCB Public Commitment on European Statistics, namely **(i) institutional, (ii) compilation process; and (iii) output quality**, and be equally applicable to all the MIP underlying statistical domains.

Given that the MIP indicators are designed to **‘identify imbalances’** and to develop **‘multilateral policy recommendations’**, a ‘fit-for-purpose’ quality assessment for the MIP should give pre-eminence to the quality criteria assessing:

- the **institutional issues**, such as the *legal basis* supporting the collection of the statistics, the *quality assurance mechanisms* in place and the *policy uses* of the underlying statistics;
- the robustness of the **compilation process** analysing whether the important parts of the statistics are supported with comprehensive *collection of raw data* or with sound estimations methods based on *expert judgement*;
- and the **quality of the statistical output** focusing on the accuracy and the comparability of the underlying statistical output across countries and across time. **Accuracy/reliability**<sup>6</sup> is relevant because policy makers would need an assessment on whether the reported value portrays the reality by applying the concepts and rules defined in international statistical standards. **Comparability** (and coherence)<sup>7</sup> requires judging whether the statistics for all 28 EU Member States *abide to the international statistical standards* or European regulations and identifying major deviations. In addition, it needs to be assessed whether the statistics are also consistent over time or whether **revisions**<sup>8</sup> may result in final values of the indicators diverging substantially from the value reported when the policy assessment of imbalances was undertaken.

<sup>6</sup> Reliability is defined in principle 12 of the ESS Code of Practice of European Statistics and ESCB Public Commitment on European Statistics.

<sup>7</sup> Coherence and comparability are defined in principle 14 of the ESS Code of Practice of European Statistics and ESCB Public Commitment on European Statistics.

<sup>8</sup> Revisions are defined in principle 12 of the ESS Code of Practice of European Statistics and ESCB Public Commitment on European Statistics.

## **SECTION II: KEY FEATURES ON THE QUALITY ASSESSMENT OF THE MACROECONOMIC STATISTICS UNDERLYING THE MIP**

### ***II.1 EXTERNAL STATISTICS***

There are several indicators in the MIP scoreboard derived from external statistics:

- 3-year average current account balance as % of GDP;
- Net investment position as a % of GDP;
- % change in export market shares;
- % change (3-years) in real effective exchange rates (REERs) with HICP deflators.

These are complemented by seven additional external statistics' indicators used in the economic reading of the MIP. Overall, external statistics is the domain which contributes the most to the MIP assessment.

Three sets of statistics can be identified:

- Balance of payments and international investment position (BOP/IIP);
- Effective exchange rate statistics.

#### ***Balance of payments and international investment position (BOP/IIP)***

##### **(A) Institutional issues**

###### *(a) Legal basis*

BOP/IIP are provided to the ECB on the basis of 'Guideline ECB/2004/15 on the statistical reporting requirements of the ECB in the field of balance of payments and international investment position statistics, and the international reserves template' (as amended by Guideline ECB/2007/3; hereafter "BOP/IIP Guideline"). Similarly, BOP (not IIP) are provided to Eurostat on the basis of 'Regulation (EC) No 184/2005 of the European Parliament and of the Council on Community statistics concerning balance of payments, international trade in services and foreign direct investment'.

###### *(b) Quality assurance mechanisms*

The EU Commission (Eurostat), with the support of the Balance of Payments Committee, also produces an annual quality report for information of the European Parliament on the basis of Article 4(3) of Regulation (EC) No 184/2005. This quality assessment is conducted in accordance with the principles established by Commission Regulation (EU) No 1227/2010 of 20 December 2010 amending Regulation No 1055/2008. It verifies compliance of the BOP data reported by EU Member States with all the quality criteria laid down in the Regulation on European statistics (Regulation No 223/2009, Article 12(1)), namely: relevance, accuracy, timeliness, punctuality, accessibility and clarity, comparability and coherence. An annual quality report on balance of payments and international investment position

statistics is required by Article 6 of Guideline ECB/2004/15. The report follows the basic principles of the “Public commitment on European Statistics by the ESCB”<sup>9</sup> and includes quantitative indicators.

*(c) Policy uses*

BOP/IIP data are broadly used for monetary and economic analysis throughout the world, i.e. not only for European policy purposes, but generally by all economic analysts looking into external imbalances/relationships and competitiveness in a world of increasingly mobile financial flows. BOP statistics are also used to explain changes in the money supply, contributing to the determination of monetary policy. In addition to the MIP, BOP/IIP statistics are broadly used in the European Systemic Risk Board (ESRB) Dashboard, by the EU Commission as part of the 4<sup>th</sup> resource and by the IMF in the context of Article IV visits and External Imbalances assessment.

**(B) Compilation process**

At national level the compilation of BOP/IIP is usually a matter of shared competence between the NCB and the NSI. Over the last few years, there has been a gradual move into survey based systems, away from the old settlement based systems. However, BOP/IIP statistics are rather eclectic as regards data sources, relying on micro (e.g. the CSDB) and macro data sets on direct reporting and counterpart information on statistical surveys and administrative data sets (e.g. for general government). It also relies on data sources, such as trade statistics. Several statistical methods and compilation assumptions are used, including the derivation of stocks from the accumulation of flows and vice versa (derivation of transactions from adjusted differences of stocks). More recently, national aggregates also make use of worldwide exercises, such as the IMF CPIS and CDIS surveys, to derive counterpart information.

**(C) Quality assessment of output** [*SAMPLE BASED ON ECB QUALITY REPORT ON BOP*]

*(a) Accuracy/Reliability*

The compilation of BOP/IIP in EU Member States is **methodologically sound** and based on the fifth edition of the IMF Balance of Payments Manual (BPM5). However, there are quite some challenges in the measurement of some components, namely reinvested earnings on foreign direct investment and the valuation of unquoted equity, which may have a negative impact on the accuracy of some details.

*(b) Comparability*

Overall, the data **comparability across the EU is quite high**, not only because of the harmonised methodology (BPM5/6), but most importantly because of specific EU efforts to find common best practices (e.g. valuation of FDI unquoted equity) and tools (e.g. the CSDB and the FDI Network). The remaining cross-country comparability issues are expected to vanish with the introduction of BPM6, namely as regards the coverage and accounting of Special Purpose Entities (SPEs).

*(c) Revisions*

<sup>9</sup> Available on the ECB’s website at <http://www.ecb.europa.eu/stats/html/pcstats.en.html>.

As explained above, in the last few years there has been a gradual move into survey based systems, which may have contributed to **some breaks in some time series**; this will be also visible in the near future with the introduction of the methodology of the new edition of the IMF Manual (BPM6).

## *Effective exchange rate statistics*

### **(A) Institutional issues**

#### *(a) Legal basis*

The real effective exchange rates (REER) data used in the MIP are compiled by the European Commission on the basis of a methodology developed by DG ECFIN. These data are not directly collected on the basis of a legal act, but rely on national (trade and HICP) data collected on the basis of specific legal acts. REERs are derived indicators, which the quality is mostly a function of the underlying data sets.

#### *(b) Quality assurance mechanisms*

There are currently no quality reports or reviews on the accuracy and reliability of these indicators.

#### *(c) Policy uses*

Nominal effective exchange rates (NEERs) describe changes in the average value of a currency with reference to a given base period and a given group of reference countries. The REERs attempt at showing the movement in the prices or costs of production of domestically produced goods relative to the prices or costs of goods produced by competitor countries, when expressed in a common currency.

### **(B) Compilation process**

Nominal effective exchange rates (NEERs) are calculated as a weighted geometric average of the bilateral exchange rates against the currencies of competing countries. The real effective exchange rate (REER), or the “relative price and cost indicators” are calculated as the sum of the nominal rate and a trade-weighted price or cost deflator.

### **(C) Quality assessment of output [SAMPLE ASSESSMENT]**

#### *(a) Accuracy/Reliability*

A quality assessment of the REERs needs to evaluate the appropriateness in providing a measurement of national competitiveness. This should, in particular, **ensure a minimum coverage of trading partners, e.g. above 80% of external trade.**

The REERs used in the MIP are based on a harmonised index of consumer prices relative to a panel of the 35 most important trading partners. Among the EU trading partners, some emergent countries have not been taken into account so far, namely, China, Brazil, Russia, South Korea and Hong-Kong. The use of 35 partners only, rather than a wider set of trading partners, was at the time of the development of the initial scoreboard related to the availability of data. Having overcome these data issues, **the number of trading partners of each Member State will soon be extended to 41, which will cater for the increasing role of these emerging economies.**

#### *(b) Comparability*

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(c) *Revisions*

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## **II.2 FINANCIAL ACCOUNTS STATISTICS**

Three of the MIP headline indicators are based on financial accounts data:

- a) Private sector credit flow as % of GDP;
- b) Private sector debt as a % of GDP;
- c) Total financial sector liabilities.

These are complemented by additional financial accounts based indicators: consolidated private sector debt transactions and consolidated private sector debt and financial sector leverage (debt-to-equity ratios).

Financial accounts are an area of shared responsibility between the ESS and the ESCB.

### **(A) Institutional issues**

(a) *Legal basis*

Quarterly financial accounts are mostly compiled by NCBs and transmitted to the ECB based on the ‘Guideline on the statistical reporting requirements of the European Central Bank in the field of quarterly financial accounts’ (ECB/2002/7 as amended. A recasted Guideline was approved by the Governing Council in July 2013; hereafter “MUFA Guideline”). Annual financial accounts are a requirement of the European Transmission programme (currently Annex of the ESA 1995, from September 2014 of the ESA 2010).

(b) *Quality assurance mechanisms*

An annual quality report on the quarterly financial accounts is required by Article 7 of the MUFA Guideline. It follows the basic principles of the ECB Statistics Quality Framework (SQF)<sup>10</sup> and includes a quantitative analysis of revisions and consistency. It includes sections on coverage and changes in sources and methods as well as on quality assurance procedures. While it is focused on the quality of the contributions to the euro area aggregate it also includes country specific assessments and recommendations. The quarterly national financial accounts data transmissions are regularly checked for completeness, internal consistency, as well as for external consistency with related statistics (e.g. non-financial sector accounts, money and banking statistics, investment funds statistics, government finance statistics and balance of payments statistics).

(c) *Policy uses*

Quarterly financial accounts are used to supplement the monetary policy analysis of the ECB, as in particular for households and non-financial corporations no alternative comprehensive, timely data sources exist. In addition the financial crisis has greatly increased the analytical interest from users in particular

<sup>10</sup> <http://www.ecb.europa.eu/pub/pdf/other/ecbstatisticsqualityframework200804en.pdf>.

for national data for financial stability and macro-prudential analysis for individual Member States. This has resulted in the inclusion of financial accounts data, in particular of comprehensive debt measures similar to those of the MIP in the European Systemic Risk Board (ESRB). These indicators can be published on a quarterly basis as almost all euro area countries and most other EU countries have made the core set of quarterly national financial accounts available for publication. Further demands are part of the G-20 Data Gaps Initiative (in particular Recommendation 15) and the G-20 Mutual Assessment Process (MAP).

### **(B) Compilation process**

While annual accounts are transmitted by the NSI to Eurostat in most countries, there is generally a close collaboration between NSIs and NCBs and in most countries the quarterly and the annual financial accounts are compiled in a single compilation system. This has been reflected in a close alignment of the new quarterly (the recasted MUFA Guideline) and annual (the ESA 2010 Transmission Programme) data requirement in terms of financial instrument and sector detail. The difference in timeliness will remain however. The reporting time lag for the annual data remains 9 months while it is being reduced to 97 days for quarterly national data and to 85 days for partial “supplementary” financial accounts data for the compilation of the euro area accounts (to be reduced to 82 days by 2017).

The compilation of financial accounts data differs substantially between the sector for which source data are generally directly available – that is the government sector and the financial corporation sectors on the one hand, and on the other hand the sectors for which no direct source data are available - the household (and NPISH) sector and the non-financial corporation sector. For the latter sectors timely and comprehensive data are generally available from (financial) counterpart sector information and from financial market information (e.g. security issuance).

### **(C) Quality assessment of output** [SAMPLE BASED ON ECB QUALITY REPORT ON QFA]

#### *(a) Accuracy/Reliability*

Financial account data for the **financial sectors** are harmonized within the EU as they are largely based on statistical Regulations directly addressed to the relevant reporting agents. Financial accounts data for the “**private**” (non-financial, non-government) sectors have to be compiled combining information from various data sources but for the sub-set of financial instruments selected for the **MIP private debt indicators**, in particular for loans and debt securities, the source data availability is **good**.

#### *(b) Comparability*

The adherence to the international statistical standards is regularly evaluated and dedicated sub-groups are set up to focus on difficult items. In 2012 a subgroup on private debt drafted a report on the **comparability of debt for non-financial corporations**. In 2013, a joint ECB/Eurostat/OECD Task Force provided methodological guidance to classify holding companies, head offices and SPEs.

Generally **financial accounts data for the private sectors are thus less comparable than those for the financial sectors**. The data situation for **financial derivatives** as liabilities of these sectors is however

generally **poor**, a reason argued to exclude this financial instrument in the definition of the MIP debt indicator.

*(c) Revisions*

Generally financial accounts data for the private sectors are subject to **more revisions** than those for the financial sectors.

### ***II.3 LABOUR STATISTICS***

Two sets of labour market statistics are covered in the MIP:

- the (3 years) % change in nominal unit labour costs;
- the 3-year average unemployment rate.

Besides the 3 years % change in nominal unit labour costs, the 10 years transformation is also used as an additional indicator. Furthermore an effective ULC deflator indicator versus the rest of the euro-area countries is also included among the additional indicators<sup>11</sup>

The 3-year average unemployment rate is also supplemented by the year on year average growth in employment.

#### ***Nominal Unit Labour Costs (ULC)***

##### **(A) Institutional issues**

*(a) Legal basis*

There is no legal basis for the calculation of unit labour costs. The phenomenon is typically seen as a derived statistic calculated from other inputs which themselves are collected under a legal framework. According to the Eurostat MIP Scoreboard presentation<sup>12</sup> “Nominal unit labour cost compares remuneration (compensation per employee) and productivity (gross domestic product (GDP) per employment) to show how the remuneration of employees is related to the productivity of labour. An increase means that the average compensation per employee grew more than the labour productivity. The employment data covers both employees and self-employed while remuneration covers wages and salaries and employers’ social contributions. The unit labour cost indicator is compiled using national accounts data”.

*(b) Quality assurance mechanisms*

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<sup>11</sup> The latter is compiled by DG- ECFIN with a methodology similar to the one used for the Effective exchange rates (see section II.1). For some details, see also footnote 40 in the Occasional paper on the “Scoreboard for the surveillance of macroeconomic imbalances”: [http://ec.europa.eu/economy\\_finance/publications/occasional\\_paper/2012/pdf/ocp92\\_en.pdf](http://ec.europa.eu/economy_finance/publications/occasional_paper/2012/pdf/ocp92_en.pdf)

<sup>12</sup> See [http://epp.eurostat.ec.europa.eu/cache/ITY\\_PUBLIC/MIP\\_NOV\\_2012/EN/MIP\\_NOV\\_2012-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/MIP_NOV_2012/EN/MIP_NOV_2012-EN.PDF).



*(c) Policy uses*

The data are widely used for other publications such as the ECBs Monthly Bulletin, Statistics Pocket Book and Annual Report and by other International Organisations such as the IMF and the OECD (the latter uses ECB data for the publication of whole economy European ULCs). ULCs are mentioned explicitly as “other factors” which need to be analysed in the assessment of Convergence in the EU.

**(B) Compilation process**

Among different stakeholders there are often differing methods of calculation albeit that the differences between them are generally small. The Commission and the ECB have agreed on a single calculation method by applying the following formulae:

ULC = Compensation per employee (or per actual employee hour worked) / (Hourly) labour productivity

Compensation per employee (or per actual hour worked) = compensation of employees / number of employees (or number of employees’ hours worked), domestic concept

(Hourly) labour productivity = GDP and value added volumes / number of people in employment (or total number of hours worked), domestic concept

**(C) Quality assessment of output** [SAMPLE ASSESSMENT]*(a) Accuracy/Reliability*

Overall the **underlying data used in the compilation of the ULC can be seen as being robust and harmonised across the EU**, particularly at the whole economy level. Breakdowns by economic activity may be somewhat less accurate in line with the problems measuring output in some sectors. The possibility of variants of calculation methods could be a concern but only if this is not clearly documented by the publishing organisation.

*(b) Comparability*

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*(c) Revisions*

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***Unemployment rate*****(A) Institutional issues***(a) Legal basis*

The unemployment rate is the number of unemployed persons as a percentage of the labour force based on the International Labour Office (ILO) definition. The labour force is the total number of people employed and unemployed. Unemployed persons comprise persons aged 15 to 74 who: - are without work during the reference week; - are available to start work within the next two weeks; - and have been actively seeking work in the past four weeks or had already found a job to start within the next three months. The relevant



survey data are collected on the basis of Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community (OJ No L 77/3).

*(b) Quality assurance mechanisms*

The Labour Force Survey (LFS) legislation requires a quality report to be prepared every third year. This is considered by Eurostat as one of the best examples of quality reports, including both inventory of methodologies and analysis of the quality and comparability of the data.

*(c) Policy uses*

The LFS data are also the basis of the monthly frequency unemployment rates which are published by Eurostat and used in ECB conjunctural analysis as well as in many international fora.

**(B) Compilation process**

The data are collected on a continuous survey basis rather than at one particular date or period in the quarter. Eurostat compensates for possible breaks due to improvements in labour force survey methodology or sample design in order to ensure consistent time series.

**(C) Quality assessment of output** [SAMPLE ASSESSMENT]

*(a) Accuracy/Reliability*

While across countries there are some deficiencies in harmonisation (e.g. not all Member States use the same age range to measure unemployed persons) the **unemployment data are regarded as being of high quality and are broadly comparable**. Registered unemployment figures, which are often quoted as an alternative measurement, are not at all harmonised and also suffer time inconsistency (significant revisions).

*(b) Comparability*

-

*(c) Revisions*

-

**II.4 PRICE STATISTICS**

The following headline indicator based on price statistics is included in the MIP scoreboard:

- % y-o-y change in house prices.

**(A) Institutional issues**

*(a) Legal basis*

The primary use of price statistics in the MIP Scoreboard is to identify excessive inflation of residential property prices. Changes in dwelling prices are measured by Eurostat's (nominal) house price indices (HPIs), which are for MIP-Scoreboard purposes, deflated by private consumption deflators. The nominal HPIs of EU countries are compiled by national statistical institutes, applying a harmonised statistical

approach in terms of measurement target, coverage and index calculation. Compilation and publication of these indices are conducted according to Commission Regulation (EU) No 93/2013.

*(b) Quality assurance mechanisms*

A Technical Manual, the so-called “Handbook on Residential Property Prices Indices”, provides detailed guidelines for the index calculation. The Handbook can be referred to for putting HPIs in a broad statistical and international context, also addressing main uses of HPIs.

*(c) Policy uses*

HPIs are primarily important for financial-stability related purposes and for macroeconomic analyses and forecasting. Reports about house price developments in the euro area are regularly provided to the Executive Board and the Governing Council and published twice every year in a Monthly bulletin Box.

Since Eurostat started its official publication of HPIs in January 2013, the ECB is benchmarking Eurostat’s data set against an ESCB collection of residential property price indicators which started already in the year 2000. While in most cases, the NSI’s indices are already considered as the best available statistics, a few cases remain in which NSI indices could be improved, e.g. in terms of coverage or type of price information used in the index.

**(B) Compilation process**

NSIs collect data mainly from administrative sources. The mix of dwelling characteristics is dealt with via sampling and/or quality adjustment methods. Since HPI time series start in most cases in the year 2005 or later, the identification of back data is considered important for cyclical analyses, but remains a challenge, since the collection of data and the compilation of indicators was typically conducted outside the area of official statistics. Currently, the BIS, DG ECFIN, Eurostat, the OECD and the ECB are cooperating on putting together a common set of back data for those EU countries for which such data can be found. Due to the scarcity of information about house price changes in past periods and its lack of statistical harmonisation, statistical quality issues have to be accepted for back data and will be addressed in form of metadata. Back data are generally of significantly lower statistical quality than HPIs.

**(C) Quality assessment of output [SAMPLE ASSESSMENT]**

*(a) Accuracy/Reliability*

Overall, the level of **statistical quality of HPIs can be considered to be broadly satisfactory**, mainly resulting from the **coordinated development of HIPs in an EU-wide pilot study**.

*(b) Comparability*

Current **HPIs are sufficiently accurate and broadly comparable across countries**, with a few issues remaining relevant. Existing issues are addressed by Eurostat, and, more widely, once a year in an ESS workshop.

*(c) Revisions*

-

## ***II.5 GOVERNMENT FINANCE STATISTICS***

The following headline indicator based on government finance statistics is included in the MIP:

- Public sector debt as % of GDP.

### **(A) Institutional issues**

#### *(a) Legal basis*

Public sector debt as a percentage of GDP as defined as “general government gross debt” in Council Regulation (EC) No 479/2009 is also known as Maastricht debt or EDP debt:

- consolidated liabilities of the general government sector;
- in the instruments: currency and deposits, securities other than shares excluding financial derivatives, and loans
- measured at “nominal value” – further defined in the Regulation as “face value”. This means, in particular, that government debt is not affected by changes in market interest rates, and excludes unpaid accrued interest.

The Council Regulation requires all EU countries to report EDP debt twice a year (before 1 April and 1 October to Eurostat). The Council Regulation also requires that Member States transmit to Eurostat inventories to describe the sources and methods used for compiling the reported data.<sup>13</sup>

#### *(b) Quality assurance mechanisms*

Council Regulation (EC) 479/2009 stipulates that the 'Commission (Eurostat) shall regularly assess the quality both of actual data reported by Member States and of the underlying government sector accounts compiled according to ESA 95' and that the 'Commission (Eurostat) shall report regularly to the European Parliament and to the Council on the quality of the actual data reported by Member States. The report shall address the overall assessment of the actual data reported by Member States as regards to the compliance with accounting rules, completeness, reliability, timeliness, and consistency of the data.'

#### *(c) Policy uses*

Public sector debt plays an important role in the framework of the Stability and Growth Pact (SGP). The SGP contains two arms – the preventive arm and the corrective arm. The preventive arm seeks to ensure that fiscal policy is conducted in a sustainable manner over the cycle. The corrective arm sets out the framework for countries to take corrective action in the case of an excessive deficit.

The corrective arm is made operational by the Excessive Deficit Procedure (EDP), a procedure to correct excessive deficits that occur when one or both of the rules - that the deficit must not exceed 3% of GDP and public debt must not exceed 60% of GDP (or at least diminish sufficiently towards the 60%) defined in the Treaty on the Functioning of the EU - are breached. Non-compliance with either the preventive or corrective arms of the Pact can lead to the imposition of sanctions for euro area countries. In the case of

<sup>13</sup> The inventories are available on the [Eurostat website](#).

the corrective arm, this can involve annual fines for euro area Member States and, for all countries, possible suspension of Cohesion Fund financing until the excessive deficit is corrected.

### **(B) Compilation process**

The data are compiled from public accounts, administrative data, and questionnaires. The detailed sources and methods for each Member State can be found on the Eurostat website.<sup>14</sup>

### **(C) Quality assessment of output [SAMPLE FROM THE QUALITY REPORT OF EUROSTAT TO THE EUROPEAN PARLIAMENT]**

#### *(a) Accuracy/Reliability*

In the report that was sent to the European Parliament on the fiscal data reported by Member States in 2012 Eurostat acknowledges overall **improvements** in the **consistency and completeness** of the reported data. Nevertheless, some issues persist, and Member States should step up efforts in order to **improve the coverage and quality** of the **trade credits** reported and the **completeness of data on the sub-national government levels**. Overall, Eurostat concludes that the **progress on the quality of the reporting of fiscal data continued in 2012**.

#### *(b) Comparability*

In general, Member States have **provided better information**, both in EDP notification tables and in other relevant statistical returns. Moreover Eurostat is closely monitoring the system for the **reporting by autonomous regions** and the **recording of interventions** undertaken by government in the context of the financial crisis (**bank recapitalisations**).

#### *(c) Revisions*

An important dimension of the quality assessment is the analysis of the revisions of the EDP deficit and debt figures, as notified to Eurostat in the Spring and Autumn notifications. Frequent and/or sizeable revisions raise questions on the reliability of the statistics at stake. For the most recent years (2008-2011), **significant revisions in the debt to GDP ratios** were observed for **country X** and **country Z**.

## **II.6 GDP**

Given that many of the MIP indicators are compiled in relation to GDP, it is also important to assess the quality of GDP to ensure the quality of MIP indicators compiled by relating domain specific statistics or indicators to GDP.

### **(A) Institutional issues**

#### *(a) Legal basis*

GDP and all the European national accounts are compiled according to the harmonised accounting concepts, definitions, classifications, methodology and calculating rules described in the ESA95

<sup>14</sup>[http://epp.eurostat.ec.europa.eu/portal/page/portal/government\\_finance\\_statistics/excessive\\_deficit/edp\\_inventories](http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/excessive_deficit/edp_inventories)

Regulation<sup>15</sup>. The ESA 95 also includes the Transmission Program, a set of tables specifying which data should be provided by which timeliness.

*(b) Quality assurance mechanisms*

There are no legally based public quality reports directly on country GDPs. However, as GNI is used for administrative purposes, the countries are obliged to give detailed GNI inventories on their compilation process to the Commission. GDP and the transaction flows in it form a major part of GNI and are therefore included in the inventories. The inventories are accompanied by country missions to ensure the legitimacy of the calculations. Recently, the country monitoring of compliance with the requirements of the transmission program has been launched as well.<sup>16</sup> The above mentioned administrative and policy uses already force both the European Union and the member states themselves to validate the GDP and GNI calculations.

*(c) Policy uses*

As GDP is the key variable for the economic development it is also used in monetary policy decision making at the ECB and for budgetary policy purposes in the member states. The data are used in the conjunctural analysis and published in various ECB publications. The GDP and Gross National Income (GNI) are used in the European Union for various administrative uses. The GNI forms the basis for the 4<sup>th</sup> source of the European Union own recourses. In addition, member state GDPs are also used for administrative purposes in the Excessive Deficit Procedure (EDP) as general government debt and deficit are proportioned to GDP in the EDP criteria. Furthermore, in the decisions for the funding from the European Union Structural Funds to the regions of the member states, regional GDP per capita is used.

**(B) Compilation process**

GDP is compiled in the member states using all available basic data sources. The national statistical institutes collect themselves the majority of the basic data, the quality of which is ensured by national and European regulations, by using both surveys and administrative records (such as taxation records), bookkeeping data from both governmental bodies and enterprises. The data consistency is ensured at the economy wide level by the fact that the same GDP is calculated with the production, use and income approaches.

**(C) Quality assessment of output [SAMPLE ASSESSMENT]**

*(a) Accuracy/Reliability*

The GNI inventories with country missions already ensure the **appropriate quality of the GDP figures**.

<sup>16</sup> With respect to the compliance of the Member States with the legal obligations, corrective actions (“EU Pilots”) were launched due to lack or late delivery of required data by some Member States and these have already lead to further improvements.

<sup>16</sup> With respect to the compliance of the Member States with the legal obligations, corrective actions (“EU Pilots”) were launched due to lack or late delivery of required data by some Member States and these have already lead to further improvements.

*(b) Comparability*

Based on the above, particularly the formal economy **GDP is largely comparable** between the Member States.

*(c) Revisions*

When the final annual source data of the reference year are available and GDP calculations are based on the balanced supply and use by the product groups, the **revisions in the annual GDPs of the member states are generally small.**<sup>17</sup>

SAMPLE

<sup>17</sup> After three years, when the countries have to submit the supply and use tables, it is mainly the revisions in the international guidelines that cause revisions in the annual back data.

## **SECTION III: ACTIONS ADDRESSING QUALITY ISSUES OF THE MACROECONOMIC STATISTICS UNDERLYING THE MIP [SAMPLE]**

### ***III. WAY FORWARD – ENHANCING THE QUALITY OF THE STATISTICS UNDERLYING THE MIP***

The **quality assessment** on the statistics underlying the MIP included in Section II of this report is largely **based** in the domain specific quality reports prepared by the **ESS** and the **ESCB** for most statistics supporting MIP indicators.

These **domain specific quality reports** have a **solid basis** in the **quality principles** of the Code of Practice of the ESS and the Public Commitment on Statistics of the ESCB, which are essentially the same. As a result, these domains specific quality reports **contain** all essential **quantitative and qualitative information** needed for a **quality assessment**, irrespective of whether such assessment will be in the context of the MIP or in the context of any other policy use of the statistical information. In other words, when the MIP indicators are based on European statistics produced by the ESS and the ESCB, the specific domain quality reports contain the necessary information for a **fit-for-purpose quality assessment** in the context of the **MIP**.

The corollary of the quality assessment is a **set of concrete actions** to enhance the quality of MIP statistics in a number of statistical domains also reflected in the specific domain quality reports. Some of these concrete actions are to be implemented at **national level** by the relevant statistical authorities to address weaknesses in the statistics supporting the MIP indicators. Other actions are to be undertaken at **European level**, such as more detailed methodological guidelines, clarification of statistical concepts and definitions, practical recording conventions, etc.

To direct and monitor their implementation, these concrete actions are **included** in the **work-programmes** of the European Statistical System Committee (**ESSC**) and its substructures and of the Statistics Committee (**STC**) and its substructures in their respective field of competence. Actions that require **cooperation** between the **ESS and the ESCB** are included in the work programme of the Committee on Monetary, Financial and Balance of Payments (**CMFB**) statistics upon by the European Statistical Forum (**ESF**). To secure that the necessary **resources** for implementation are available, the inclusion of the actions in the work programmes of the different bodies follows a rigorous **priority-setting**.

#### ***III.1 NATIONAL LEVEL ACTIONS***

- The **implementation** of the revised EU statistical legal acts for balance of payments and international investment position statistics and national and financial accounts to align them to the new international statistical standards (the **BPM6** and the **ESA2010** respectively), scheduled for **September 2014**, will bring them more in line with the **needs of users** and will make them **more**



**comparable** across EU Member States, while requiring the investment of **significant resources** by national statistical authorities.

- **Cross-country comparability** of balance of payments and international investment position statistics and national and financial accounts is also expected to improve with the introduction of BPM6 and ESA2010, in particular because of the clear **rules** for **coverage** and **accounting** of **Special Purpose Entities** (SPEs). In 2013, a joint ECB/Eurostat/OECD Task Force provided methodological guidance to classify holding companies, head offices and SPEs. Adherence to these new guidance is necessary to improve the **comparability of debt of non-financial corporations**. For this reason, **country A** and **country B** will have to **undertake efforts** and dedicate resources to ensure that information on **SPEs** located in their jurisdictions is captured and reflected in the relevant items of their balance of payments and international investment position statistics to be reported in **September 2014**.
- **During 2014**, all Member States should step up efforts in order to **improve the coverage** and **quality** of the **trade credits**, which may become a compulsory memorandum item for regular transmission of **EDP debt** under the amended Council Regulation 479/2009.
- Finally, in **country X** significant revisions to the **EDP debt** to GDP ratio are related to weaknesses of the statistical system and therefore **country X** should strictly **implement the Action Plan on statistics to avoid such systematic revisions of its fiscal statistics** in the future.

### **III.2 EUROPEAN LEVEL ACTIONS**

- In the area of **balance of payments** and international investment position, the ECB (i) will monitor the implementation of the recommendations on **valuation of FDI unquoted equity**, (ii) will continue enhancing the quality of the **Centralised Securities Database (CSDB)** as a pivotal tool for the compilation of income, transactions and positions in cross-border securities; and (iii) will promote the active participation of compilers in the **FDI Network**.
- Regarding **government finance statistics**, Eurostat will be published a new version of the "**Manual of Government Deficit and Debt** and will also lead an **amendment to Council Regulation 479/2009** adapted to the new ESA 2010 in **2014**. Eurostat will also explore during 2014 the possibility of **advancing the time table** of the Autumn notification of the **EDP**. Finally, Eurostat will continue investigating the feasibility for establishing and implementing EU-harmonised **accrual based** public sector accounting standards (**EPSAS**) for EU general government entities.
- **Eurostat** and the **ECB** will closely cooperate to ensure that the balance of payments and national and financial account statistics to be reported by **September 2014** abide to the **new requirements and methodologies** laid down in the relevant **EU statistical legislation**, ensuring the timely availability of the required **high quality** and **comparable statistics**.



- Finally, the ESS and the ESCB have to jointly promote that **statistical experts** are **involved** whenever policy makers consider **changes** to the composition and methodology of the **MIP indicators**. Statistical experts may explain whether the selected indicators are available in existing statistics with the appropriate level of detail and comparability or, on the contrary, increases in the reporting burden are needed to develop or enhance these statistics. The outcome of this **dialogue** will facilitate striking the **right balance** between the **policy relevance** of the **MIP** indicators and the **costs** associated with their reliable and comparable compilation.

SAMPLE

## ANNEX I

### MIP INDICATORS AND UNDERLYING MIP STATISTICS

The tables below summarise the **MIP indicators** that are currently reflected in the Scoreboard used by the European Commission to capture the major sources of macroeconomic imbalances in the EU Member States. Table A1 includes the **11 headline indicators** and table A3 shows the **18 additional indicators** that are looked at in the in-depth reviews to see whether early indications from the headline indicators regarding macroeconomic imbalances are confirmed. The annual values of the indicators are reported to the Commission at the beginning of each MIP cycle to compute the thresholds and prepare the Alert Mechanism Report (AMR).

#### MIP Scoreboard headline indicators

	External imbalances and competitiveness					Internal imbalances					
Indicator	3-year average of current account balance as a % of GDP	Net International Investment Position as a % of GDP	% change (3 years) of Real Effective Exchange Rate, HICP deflators relative to 35 industrial countries (a)	% change (5 years) in export market shares	% change (3 years) in nominal unit labour cost (b)	y-o-y % change in deflated house prices (c)	private sector credit flow as % of GDP (d), (e)	unemployment rate - 3-year average	private sector debt as % of GDP (d), (e)	general government debt as % of GDP (f)	y-o-y % change in Total Financial Sector Liabilities, non-consolidated data

#### Additional set of MIP Scoreboard indicators

% y-o-y growth of real GDP	Gross fixed capital formation as % GDP	Gross domestic expenditure on R&D as % GDP	Current Account balance as % of GDP, BoP data	Net lending / borrowing % GDP, BoP data	Net external debt as % GDP	foreign direct investment Inflows as % GDP	Net Trade Balance of energy products as % GDP	% Change (3 years) in real effective exchange rate vs. EA (17)	% y-o-y change in Export Market Shares, volumes	% y-o-y growth of Labour Productivity	% y-o-y growth of Employment	% Change (10 years) in Nominal unit labour cost	% Change (10 years) in Effective unit labour cost vs. EA (17)	% Change (3 years) in Nominal house Prices	Residential Construction as % GDP	Private Sector Debt as % GDP, consolidated data	Financial sector leverage (debt to equity)
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To compute all 29 indicators, a comprehensive set of comparable and harmonised national statistics from different domains are necessary. This set of statistics forms the **underlying MIP statistics** and they will be the focus of the MIP Statistics Quality Report. The underlying MIP statistics comprise the following national datasets (in a degree of detail still to be defined): (a) balance of payments statistics and international investment position; (b) effective exchange rates; (c) financial accounts; (d) labour statistics; (e) price statistics; (f) EDP statistics; (g) GDP level; and (h) GDP growth rates (the latter two are required to derive most of the indicators).

These underlying national MIP statistics for all EU Member States would have to be reported and stored in **Statistical Domain Reference Databases** which will provide the foundations on which the quality assessment for the MIP Statistics Quality Report will be conducted to ideally ensure comparability of the data across countries, statistical domain and time.



EUROPEAN COMMISSION  
EUROSTAT

Directorate C: National Accounts, Prices and Key Indicators

DMES/2013/09-04b

**7<sup>TH</sup> MEETING OF THE  
DIRECTORS OF MACRO-ECONOMIC STATISTICS  
LUXEMBOURG, 16 – 17 SEPTEMBER 2013**

**BACKGROUND DOCUMENT ON SURVEY OF  
EXISTING INVENTORIES OF SOURCES AND  
METHODS AND QUALITY REPORTS**

**ITEM 3.2 B ON THE AGENDA**

## OVERVIEW OF EXISTING QUALITY INFORMATION

This background document provides an overview of the existing quality information. Further details are found in the annex.

In general, inventories of sources and methods have a similar structure and content across statistical domains whereas the quality reports or similar information produced by Member States are much more diverse. In some cases, the quality report provides a detailed and complete inventory of sources and methods.

### **Balance of Payments/International Investment Positions, Share of world exports**

**1.1.** The inventory of data sources and methods for the compilation of **external statistics** by Member States participating in the euro area had been endorsed by the European Monetary Institute (EMI) Council in July 1996 and in the Guidelines of the ECB of 1 December 1998 on the statistical reporting requirements of the European Central Bank in the field of balance of payments and international investment position statistics (ECB/1998/17) and introduced as the ‘BOP book’. Later, the Annex V of Guideline (ECB/2004/15) stressed that the ‘BOP book’ contains detailed descriptions of data compilation methods and of the concepts and definitions applied, as well as information on departures from the agreed methodologies for the balance of payments and international investment position statistics for all EU Member States. The most recent ‘BOP book’ (9<sup>th</sup> edition) was released in 2007. As requested by the most recent ECB Guideline (ECB/2011/23), an update is planned for 2015 after the introduction of BPM6.

**1.2.** For **Balance of payment statistics** the list of legal requirements on quality reporting is relevant for EU Member States when submitting data on balance of payments to Eurostat. According to these requirements, every year, by the end of the first quarter, the Commission (Eurostat) shall supply the Member States with draft documents for the quality reports, based on data sent the previous year, partially pre-filled with most of the quantitative indicators and other information available to the Commission (Eurostat). Every year, within two months of receiving the pre-filled quality report and not later than 31 May, Member States shall supply the Commission (Eurostat) with the completed quality report.

In addition, the ECB also monitors on an annual basis the quality of the balance of payments data provided by euro area Member States. While these reports focus on the quality of euro area aggregates, it draws extensively on the quality of national contributions to euro area aggregates. A summary version of these reports is published every two years in the ECB website; the quality review for 2011 data was published in March 2012<sup>1</sup>.

### **Nominal unit labour cost**

**2.1.** The ESA95 does not set any requirements for the production of inventories for GDP components (e.g. **compensation of employees** – D.1) and **employment** data. However, Council Regulation No 1287/2003 on the harmonisation of gross national income at market prices (GNI Regulation) has a comprehensive system for validation of GNI data, which implicitly covers GDP and its main aggregates. This includes extensive inventories of sources

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<sup>1</sup> Download under:

<http://www.ecb.europa.eu/pub/pdf/other/euroareabalanceofpaymentsiipstatistics201203en.pdf>.

and methods, which are available for all countries. GNI Committee is responsible for assessing the quality of the GNI. The GNI Inventories typically are updated when major revisions take place or every five years.

**Employment** data were surveyed once via joint OECD/Eurostat questionnaire on national accounts employment and hours worked, which presents a good inventory of data sources and methods used by countries compiling these data. Description is available from all EU Member States (except Croatia) and EFTA countries.

**2.2.** The quality reporting of GDP and its main aggregates (e.g. the compensation of employees) is available for all countries in the GNI quality reports. The GNI Committee assesses annually the quality of the GNI data transmitted by 22 September.

Quality assessment procedures are not established for the employment data in the national accounts.

### **Private sector debt, private sector credit flow, total financial sector liabilities**

**3.1.** The ESA95 does not set any requirements for production of inventories for the **financial accounts** data as well. The formal decision to produce a Manual with description of the new national sources and methods according to the ESA95 methodology was taken by Eurostat and agreed at the Financial Accounts Working Party in March 2000 before it having been endorsed by the Committee of Financial, Monetary and Balance of Payments Statistics (CMFB). The first edition of the Manual on sources and methods for the compilation of the ESA95 financial accounts was issued in 2002 including also information from the Candidate countries.

In the context of further progress made, the Manual was updated. Moreover in addition it offered much more detailed information by country, particularly on sources and methods used for each institutional sector and all financial instruments. Second edition was released in 2011. Unfortunately the description currently is available only for 17 EU Member States and Switzerland.

**3.2.** There are no requirements for the quality reporting on **annual** financial accounts data. As indicators *Private sector debt*, *Private sector credit flow* and *Total financial sector liabilities* have been compiled only since the introduction of the MIP scoreboard (2012) therefore quality reports on the defined indicators are currently not available for the annual data.

**3.3.** The quality of **quarterly** financial accounts of **euro area** is assessed in an annual quality report, as required by Article 7 of the ECB Guideline on reporting requirements in the field of quarterly financial accounts. The report is based on the basic principles of the ECB Statistics Quality Framework and includes, inter alia, a quantitative analysis of revisions and national accounting consistency. The report is currently not published. However, since data sources and methods may be different for the compilation of quarterly and annual financial accounts, a legal framework to analyse the quality of the latter is needed.

### **General government gross debt**

**4.1.** Concerning **General government gross debt** the Article 9 of the Council Regulation (EC) No 479/2009, as amended, obliges Member States to provide the Commission (Eurostat) with a detailed inventory of the methods, procedures and sources used to compile actual deficit and debt data and the underlying government accounts. The inventories shall be prepared in accordance with guidelines adopted by the Commission (Eurostat) after consultation of the CMFB. According to the Article 9(3) of the above mentioned Regulation

the inventories shall be updated following the revisions of the methods, procedures and sources adopted by Member States to compile their statistical data. The previous versions were updated by all Member States in the course of 2012-2013 (will be published in December 2013).

**4.2.** According to Article 8(2) of the Council Regulation (EC) No 479/2009, as amended, the Member States are obliged to provide the Commission (Eurostat), as promptly as possible, with the relevant statistical information requested for the needs of the data quality assessment.

Eurostat has defined the questionnaire after consultation of the CMFB. It is a set of tables relating to the EDP notification tables providing information on revisions, adjustments, financial transactions including the application of specific Eurostat Decisions. The supplementary tables on the financial crisis provide the opportunity to check the recording of government interventions.

This information has to be reported together with EDP notification twice per year: before 1 April and 1 October.

Moreover, during each EDP notification round, Eurostat and the Member States engage in a *clarification exercise which implies* sending written requests to Member States (possibly in several rounds) and receiving answers with corrected/reviewed tables within next three weeks.

### **Deflated house price index**

**5.1.** The **House Price Index** (HPI) was recently established by the Commission Regulation No 93/2013 which entered into force from February 2013. The description of data sources and methods used for HPI data are not required by any legal act, apart from the draft MIP Regulation and the new HICP legal framework (currently under elaboration). Therefore the structure and periodicity will be defined in the forthcoming new HICP legal framework.

**5.2.** The Article 6 of Regulation 93/2013 requires Member States to provide Eurostat with quality reports on HPI data one year after the entry into force of the regulation, namely in February 2014. Further reports will be defined within the new HICP legal framework.

**5.3** The deflator used to deflate the HPI to produce the MIP indicator “Deflated house price index”, the final consumption deflator is derived from national accounts in the framework of the ESA95 (implicitly derived from the ESA95 transmission programme). The ESA95 does not set any requirements for the production of inventories for GDP components (e.g. final consumption expenditure of households and NPISHs). However, Council Regulation No 1287/2003 on the harmonisation of gross national income at market prices (GNI Regulation) has a comprehensive system for validation of GNI data, which implicitly covers GDP and its main aggregates (but only at current prices). This includes extensive inventories of sources and methods, which are available for all countries. GNI Committee is responsible for assessing the quality of the GNI. The GNI Inventories typically are updated when major revisions take place or every five years.

### **Unemployment rate**

**6.1.** The MIP scoreboard indicator **Unemployment rate** is based on the EU-LFS. Council Regulation (EC) No 577/98 provides the main requirements for the organisation of the labour force sample survey in the Community (EU-LFS).

Within the EU legal framework, Member States can develop their national surveys. Article 3(6) of the above mentioned Regulation stipulates that Member States shall provide the Commission (Eurostat) with whatever information is required concerning the organisation and methodology of the survey, and in particular, they shall indicate the criteria adopted for the design and size of the sample. Member States report that information in annual quality reports (see next item 6.2).

**6.2.** On the basis of obligation according to the Article 3(6) of the Council Regulation (EC) No 577/98 the Eurostat established a system of quarterly and annual quality reports from the Member States to Eurostat. Detailed yearly quality reports compliant with the Code of Practice, covering yearly and quarterly data, available from 2002 for all Member States except Croatia, for which it is available from 2004.

Quarterly accuracy reports including the main quantitative accuracy indicators (i.e. CVs and non-response rates) are provided on regular basis together with transmission of the quarterly EU-LFS micro data.

## **PUBLICATION OF INVENTORIES AND QUALITY REPORTS**

**7.** The practices for the publication of inventories and quality reports is different across domains. For the government finance statistics (EDP Inventories) the inventories prepared by Member States are published both on Eurostat's and Member States' websites. For Balance of Payments and International Investment Positions, the 'BOP book' published on the website of the ECB contains country specific chapters. The Eurostat Manual on sources and methods for the compilation of the ESA95 financial accounts contains limited information.

The ECB does not publish the annual quality report on quarterly financial accounts, but a handbook on sources and methods for the euro area aggregate also contains information on national practices<sup>2</sup> relevant to the overall assessment of the quarterly financial accounts.

The Eurostat publication "Labour force survey in the EU, candidate and EFTA countries - Main characteristics of national surveys" provides the essential information for the LFS. Eurostat publishes GNI Inventories of the Member States on CIRCABC with a very restricted access. Only a small number of Member States publish GNI Inventories on their websites. Finally, the joint OECD/Eurostat questionnaire on national accounts employment and hours worked provided by countries is published on the Eurostat website.

**8.** Quality reports transmitted by Member States are usually not published in their original form with some exceptions (e.g. Luxembourg published the quality report on BOP data).

The Eurostat quality reports on the balance of payments data are presented to the BOPCOM (available on the restricted CIRCABC site). An annual quality report is prepared by Eurostat for the European Parliament is published as a Commission working document.

The GNI quality reports provided to Eurostat and opinion of the GNI Committee are not public. The opinion of the GNI Committee is annexed to the minutes of the Committee meeting and together with Member States' quality reports are uploaded on CIRCABC with a very restricted access.

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<sup>2</sup> Handbook on quarterly financial accounts for the euro area sources and methods, download under [http://www.ecb.europa.eu/stats/pdf/eea/Handbook\\_on\\_quarterly\\_financial\\_accounts.pdf?56b1ded3817a6ac8a689323260cd2201](http://www.ecb.europa.eu/stats/pdf/eea/Handbook_on_quarterly_financial_accounts.pdf?56b1ded3817a6ac8a689323260cd2201).

Country documentation on quality information for EDP issues is not public. However Eurostat is obliged to report annually to the European Parliament and to the Council on EDP matters (Council Regulation (EC) No 479/2009, as amended). The report addresses the overall assessment of the actual data reported by Member States as regards to the compliance with accounting rules, completeness, reliability, timeliness, and consistency. This report is published on the Government finance statistics dedicated page on Eurostat website. Additionally, a bi-annual reporting is done to the EFC (Economic and Financial Committee). Furthermore, specific information is available on the Eurostat website.

Eurostat publishes every year on its website the publication "Quality report of the European Union - Labour Force Survey" providing quantitative information on the relevance, accuracy, accessibility and clarity, timeliness and punctuality, comparability, and coherence of the EU-LFS data by countries.



## SURVEY OF EXISTING INVENTORIES OF SOURCES AND METHODS AND QUALITY REPORTS

### Balance of Payments/International Investment Positions, Share of world exports)

#### MIP scoreboard indicators:

- *Current account balance*
- *Net international investment position*
- *Share of world exports*

#### 1. Composition of the indicators

The MIP scoreboard headline indicators include three indicators from the balance of payments domain:

- **Current account balance**

This indicator is calculated as 3 year backward moving average of the current account balance as percentage of GDP. The basic components are exports minus imports of goods and services, net factor income (such as interest and dividends) and net current transfer payments (such as international cooperation). Data for the current account are based on the balance of payments statistics.

- **Net international investment position**

The MIP scoreboard indicator net international investment position (IIP) is expressed as total net international investment position at end of the year in percentage of GDP. The net IIP statistics record the net financial position (assets minus liabilities) of a country vis-à-vis the rest of the world. Data cover stocks of direct and portfolio investments, financial derivatives and other investments and reserve assets. The net IIP is the stock counterpart to the current plus capital account balance and therefore allows for a stock-flow analysis of external positions. Changes in the IIP during a period are results of transactions, other changes in volume changes or revaluation due to exchange rate changes or other price changes.

- **Share of world exports**

This indicator is calculated as a 5-year change of national exports as a percentage of world exports. The share of world exports ('export market share') captures the value of exports of goods and services of a country compared to the value of total world exports.

#### 2. Data transmission

##### a. Legal requirements or agreements

##### i. Legal requirements

The legal basis for the submission of (BPM5) data on the **current account** and the **share of world exports** to Eurostat are Regulation (EC) N° 184/2005 of the

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European Parliament and of the Council of 12 January 2005.<sup>3</sup> In addition, for the **share of world exports** the source of total world exports is the International Monetary Fund.

Reporting requirements in the field of BOP and IIP are also set out in the ECB Guideline of 16 July 2004 on the statistical reporting requirements of the ECB (**ECB/2004/15**) – and the amending ECB Guideline of 31 May 2007 (**ECB/2007/3**) – addressed to the national central banks of participating Member States.<sup>4</sup> The methodological framework is based on the fifth edition of the IMF Balance of Payments Manual (BPM5).

The reporting requirements for balance of payments statistics and international investment position under the new BPM6 are:

- for the data transmission to Eurostat the **Commission Regulation (EU) No 555/2012** of 22 June 2012 amending Regulation (EC) No 184/2005 of the European Parliament and of the Council on Community statistics concerning balance of payments, international trade in services and foreign direct investment, as regards the update of data requirements and definitions;
- for the data transmission to the ECB the Guideline **ECB/2011/23** of 9 December 2011 on the statistical reporting requirements of the European Central Bank in the field of external statistics, both of which will apply from 1 June 2014.

ii. Memorandum of understanding between Eurostat and the ECB

The ECB compiles and disseminates monthly and quarterly BOP and IIP statistics for the euro area, whereas Eurostat focuses on quarterly and annual BOP aggregates for the EU.<sup>5</sup>

According to a Service Level Agreement (SLA) on Data Exchanges between the Directorate General Statistics of the European Central Bank (DG Statistics) and the Statistical Office of the European Communities (Eurostat) annexed to the “Memorandum of Understanding on economic and financial statistics” between Eurostat and DG Statistics of February 2008, the ECB transmits (among others) data on monthly and quarterly BOP, capital account, financial account (and components) for the euro area aggregate and individual EU countries, quarterly and annual IIP for the euro area aggregate, annual IIP for the individual EU countries.

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<sup>3</sup> The former (Regulation (EC) N° 184/2005) did not include requirements on international investment position, which was formally collected by the ECB.

<sup>4</sup> The ECB Guideline makes reference to other relevant legal documents, mainly (i) the Statute of the European System of Central Banks (ESCB) and of the European Central Bank and (ii) Council Regulation (EC) No 2533/98 of 23 November 1998 concerning the collection of statistical information by the European Central Bank.

<sup>5</sup> Memorandum of understanding on economic and financial Statistics between the Directorate General Statistics of the European Central Bank (DG Statistics) and the Statistical Office of the European Communities (Eurostat), Brussels, 10 March 2003 and

Annex 1 Share of responsibilities in the field of balance of payments and international investment position statistics to the Memorandum of understanding on economic and financial Statistics between the Directorate General Statistics of the European Central Bank (DG Statistics) and the Statistical Office of the European Communities (Eurostat), Brussels, 10 March 2003.

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b. Periodicityi. Data transmission by EU Member States to Eurostat (until 2014)

Regulation (EC) No 184/2005 requires as follows:

Quarterly BOP euro indicators (current account and services) to be transmitted t+2 months;

quarterly BOP to be transmitted t+3 months.

Eurostat produces annual BOP data: quarterly BOP data are added up to annual BOP data.

The source for quarterly and annual IIP for all EU Member States is the ECB (see below).

ii. Data transmission by euro-area Member States to the ECB (until 2014)

Monthly BOP to be transmitted with a deadline t+30 days;

Quarterly BOP to be transmitted t+3 months after the end of the reference quarter;

Quarterly IIP are transmitted t+3 months after the end of the reference quarter;

Annual IIP to be transmitted within 9 months of the end of the year to which the data relate (ECB/2004/19). Quarterly BOP data add up to annual BOP data.

## iii. As from 1 January 2014 (Commission Regulation (EU) No 555/2012 and ECB Guideline ECB/2011/23) onwards, monthly BOP to be transmitted with a deadline t+44 days; quarterly BOP and quarterly IIP to be transmitted t+85 from 2014 to 2016; t+82 from 2017 to 2018; t+80 from 2019.

**3. Inventory of data sources and methods**c. Legal requirements or agreements

The initiative for the European Monetary Institute (EMI) to compile a description of BOP statistical data and collection methods for the capital and financial account in the Member States of the European Community was agreed upon by the Committee of Governors of the Central Banks of the Member States of the European Economic Community in April 1993 and carried out by the former EMI Working Group on Statistics. The aim was to describe the content and structure of the statistical data which, according to the views of the users, should be delivered in a regular and timely fashion and should provide a basis for the evaluation of the available data and collection methods used. This was also set out in the report entitled “Statistical Requirements for Stage Three of Monetary Union – Implementation Package” and endorsed both by the EMI Council in July 1996 and in the Guideline of the ECB of 1 December 1998 on the statistical reporting requirements of the European Central Bank in the field of balance of payments and international investment position statistics (**ECB/1998/17**). In its Annex V, the ECB Guideline states that the ECB

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monitors the compilation methods used for the reporting on the balance of payments and international investment position statistics, as well as the concepts and definitions applied on a regular basis by the Member States participating in the euro area. The monitoring will be carried out in connection with updating and maintaining of the document entitled 'European Union Balance of Payments (Capital and financial account) Statistical Methods ('BOP book')<sup>6</sup>.

d. Coverage

Annex V of Guidelines **ECB/2004/15** and **ECB/2011/23** stress that the 'BOP book' contains detailed descriptions of data compilation methods and of the concepts and definitions applied, as well as information on departures from the agreed methodologies for balance of payments and international investment position statistics for all EU Member States. The 'BOP book' is updated in close cooperation between the ECB and all EU Member States.

e. Periodicity/frequency

It was announced in the 9<sup>th</sup> edition of the 'BOP book' to update it at most once every two years, and to replace outdated chapters (e.g. because of the introduction of a new data collection system) in the meantime.

In view of the shared responsibility for balance of payments data between Eurostat and the ECB the 'BOP book' will be updated in close cooperation between the two European Institutions and the EU Member States in 2015.

f. Publication by the ECB

The most recent 'BOP book' (9<sup>th</sup> edition) available was published by the ECB in May 2007<sup>7</sup>.

The EU Member States do not publish inventories as part of a coordinated procedure.

## 4. Quality reports

### 4.1. Quality reports prepared by Eurostat

a. Legal requirements

In particular the following legal requirements are relevant for EU Member States when submitting data on balance of payments to Eurostat:

- Regulation (EC) No 184/2005 of the European Parliament and of the Council of 12 January 2005 on Community statistics concerning balance of payments, international trade in services and foreign direct investment.
- Commission Regulation (EC) No 1055/2008 of 27 October 2008 implementing Regulation (EC) No 184/2005 of the European Parliament and of the Council, as regards quality criteria and quality reporting for balance of payments statistics.

<sup>6</sup> See also a similar statement in Annex V of the Guideline of the European Central Bank of 9 December 2011 on the statistical reporting requirements of the European Central Bank in the field of external statistics (recast) (ECB/2011/23).

<sup>7</sup> The BOP book is available on the ECB's website under [http://www.ecb.europa.eu/pub/pdf/other/bop\\_052007en.pdf](http://www.ecb.europa.eu/pub/pdf/other/bop_052007en.pdf).

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- Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics and repealing Regulation (EC, Euratom) No 1101/2008 of the European Parliament and of the Council on the transmission of data subject to statistical confidentiality to the Statistical Office of the European Communities.
- Council Regulation (EC) No 322/97 on Community Statistics, and Council Decision 89/382/EEC, Euratom establishing a Committee on the Statistical Programmes of the European Communities.
- Commission Regulation (EU) No 1227/2010 of 20 December 2010 amending Regulation (EC) No 1055/2008 implementing Regulation (EC) No 184/2005 of the European Parliament and of the Council, as regards quality criteria and quality reporting for balance of payments statistics.

b. Periodicity/frequency

## Annually

Every year, by the end of the first quarter, the Commission (Eurostat) shall supply the Member States with draft documents for quality reports, based on data sent the previous year, partially pre-filled with most of the quantitative indicators and other information available to the Commission (Eurostat).

Every year, within two months of receiving their pre-filled quality reports and not later than 31 May, Member States shall supply the Commission (Eurostat) with the completed quality report.

c. Coverage

All Member States shall supply a completed quality report.

d. Publication

Quality reports are pre-filled by Eurostat and sent to countries for validation/comments. The quality reports are presented to the BOPCOM (available on the restricted CIRCABC site). An annual quality report is prepared by Eurostat for the European Parliament and published as a Commission working document. The most recent document is 'Commission working document assessing the quality of data reported by Member States in 2011 on balance of payments, international trade in services and foreign direct investment' of 20 November 2012<sup>8</sup>.

There is no general publication scheme for EU Member States. Some countries publish them on their websites, e.g. Luxembourg<sup>9</sup>.

**4.2. Quality reports prepared by the ECB**a. Legal requirements or agreements

The balance of payments quality reports, which focus on euro-area aggregates, are prepared by the ECB according to Article 6 of the Guideline of the European Central Bank of 16 July 2004 on the statistical reporting requirements of the

<sup>8</sup> Available under: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0674:FIN:EN:PDF>.

<sup>9</sup> Available under: <http://www.statistiques.public.lu/fr/methodologie/methodes/economie-finance/Bop/bop/qualite2011.pdf>.

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European Central Bank in the field of balance of payments and international investment position statistics, and the international reserves template (ECB/2004/15).

Article 6 states that the ECB assesses data relating to the euro-area balance of payments, international investment position statistics and international reserves. The assessment shall be carried out in a timely manner. The Executive Board of the ECB shall report yearly to the Governing Council on the quality of the data. The ECB prepares this own quality report on the basis of data compiled by its own.

Euro-area Member States do not prepare quality reports for this exercise; however, the ECB quality reports have a detailed analysis of the impact on quality of national contributions to euro area aggregates.

b. Periodicity/frequency

Annually

c. Coverage

The quality reports consider national contributions to and respective euro-area aggregates.

d. Publication

A summary version of these reports (without national references) was last published by ECB: Euro area balance of payments and international investment position statistics, March 2012.<sup>10</sup>

## 5. Main shortcomings re quality information in a MIP context:

Balance of Payments and IIP depend on a complex accounting framework and several sources of statistical or administrative nature. In comparison with National Accounts, the inventories of sources and methods seem less complete and could be developed further to support the necessary quality assessment.

Moreover, 2014 will see the publication of data according to BPM6; progress in its adoption at Member States level has to be monitored together with the availability of back data.<sup>11</sup>

## Nominal unit labour cost

### MIP scoreboard indicator: Nominal unit labour cost (NULC)

#### 1. Composition of the indicator

Nominal unit labour cost compares changes in remuneration (*compensation per employee*) and productivity (*gross domestic product (GDP), chain-linked volumes, per*

<sup>10</sup> The quality report is available on the ECB's website under <http://www.ecb.int/pub/pdf/other/euroareabalanceofpaymentsiipstatistics201203en.pdf>.

<sup>11</sup> The ECB has a dedicated webpage with information on the change-over process <http://www.ecb.europa.eu/stats/external/bpm6/html/index.en.html>

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*total employment*) to evaluate if the remuneration of employees rises faster than the productivity of labour. Total employment data covers both employees and self-employed (in persons) while remuneration covers wages and salaries and employers' social contributions. The NULC is calculated by the formula: (total compensation of employees D.1 in national currency / total employees in persons) / (GDP in market prices in CLV05 in national currency / total employment in persons).

NULC is expressed as the percentage change of indexes over three years.

## 2. Data transmission:

### a. Legal requirements or agreements

The nominal unit labour cost indicator is compiled by Eurostat based on Member States' official transmissions of national accounts data. Data on compensation of employees, employment (both in persons and hours worked) and GDP are collected according to the ESA95 transmission programme of the ESA95 Regulation No 2223/96<sup>12</sup> (up until September 2014) and ESA 2010 Regulation No 549/2013 (starting from September 2014).

### b. Periodicity

The MIP scoreboard indicator on NULC is based on annual aggregates, but respective quarterly series and/or breakdowns by industry are also requested by the ESA95 TP. While coverage in terms of annual aggregate figures is nearly complete (with DG ECFIN forecasts used to fill some gaps when necessary), hours worked are still not transmitted by some Member States and more gaps exist for quarterly data, or more detailed industry breakdowns.

## 3. Inventory of data sources and methods:

### a. Legal requirements or agreements

ESA95 does not set any requirements for production of inventories. However, Council Regulation No 1287/2003 on the harmonisation of gross national income at market prices (GNI Regulation) has a comprehensive system for validation of GNI data, which implicitly covers GDP and its main aggregates<sup>13</sup>. This includes extensive inventories of sources and methods, which are available for all countries, a Committee responsible for assessing the quality of the GNI, and a system for improvement actions.

Employment and population have traditionally been considered auxiliary variables in national accounts, aimed to calculate ratios like value added, output, or labour costs per inhabitant or per employed person. There is therefore an entire chapter of ESA95 devoted to population and employment.

<sup>12</sup> The original programme is annex B of Council Regulation 2223/96. It has been amended in the EP/Council Regulation 1267/2003. The ESA95 transmission programme has been further amended by Regulation 1392/2007 of the European Parliament and of the Council of 13 November 2007 with respect to the transmission of national accounts data which came into force in December 2007.

<sup>13</sup> Since GNI equals GDP minus primary income payable by resident units to non-resident units plus primary income receivable by resident units from the rest of the world (GDP + net primary income received from RoW = GNI), the GNI validation procedures will, by default, cover the validation of GDP and all its components as e.g. the compensation of employees – D.1.

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Joint OECD/Eurostat questionnaire on national accounts employment and hours worked presents an inventory of data sources and methods used by countries compiling these data. Description is available from all EU Member States (except Croatia) and EFTA countries.

b. Periodicity/frequency

GNI Inventories typically are updated when major revisions take place or every five years. Joint OECD/Eurostat questionnaire on national accounts employment was collected once so far.

c. Publication (by Eurostat/MSs)

Eurostat publishes GNI inventories of the Member States on CIRCABC with a very restricted access.

Only a small number of Member States publish GNI inventories on their websites.

Joint OECD/Eurostat questionnaire on national accounts employment is available on the National accounts (including GDP) dedicated page on Eurostat website<sup>14</sup>.

Some (incomplete) information on sources and methods on quarterly national accounts is also available on Eurostat website<sup>15</sup>.

#### 4. Quality reports prepared by Member States:

a. Legal requirements or agreements

The GNI quality reports are available for all countries. ESA95 does not set any requirements for quality reporting. However, Council Regulation No 1287/2003 on the harmonisation of gross national income at market prices (GNI Regulation) has a comprehensive system for validation of GNI data. This includes a Committee assessing annually the quality of the GNI data.

Article 5(2) of the GNI Regulation provides for the GNI Committee to examine the data transmitted by the Member States each year and to give an opinion on the appropriateness of the data for own resource purposes with respect to reliability, comparability and exhaustiveness. A document that includes the transmitted data and Quality reports as well as comments on the revisions is presented in September of each year to the GNI Committee for a full discussion and examination. The annual GNI data and the opinion of the GNI Committee are then transmitted to DG BUDG for the purpose of budgetary calculations.

The quality assessment procedures are not established for the employment data in the national accounts.

b. Periodicity/frequency

Quality reports on GDP/GNI data are updated annually by all Member States by 22 September.

c. Publication (by Eurostat/MSs)

The GNI quality reports provided to Eurostat and opinion of the GNI Committee are not public. The opinion of the GNI Committee is annexed to the minutes of the Committee

<sup>14</sup> [http://epp.eurostat.ec.europa.eu/portal/page/portal/national\\_accounts/methodology/employment](http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/methodology/employment)

<sup>15</sup> [http://epp.eurostat.ec.europa.eu/portal/page/portal/national\\_accounts/methodology/quarterly\\_accounts](http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/methodology/quarterly_accounts)



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meeting and together with Member States' quality reports are published on CIRCABC with a very restricted access.

## 5. Future requirements

The Article 4 of ESA 2010 (Regulation (EU) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union) specifies the following with respect to quality assessment<sup>16</sup>:

1. For the purpose of this Regulation, the quality criteria set out in Article 12(1) of Regulation (EC) No 223/2009 shall apply to the data to be transmitted in accordance with Article 3 of this Regulation.
2. Member States shall provide the Commission (Eurostat) with a report on the quality of the data to be transmitted in accordance with Article 3.
3. In applying the quality criteria referred to in paragraph 1 to the data covered by this Regulation, the modalities, structure, periodicity and assessment indicators of the quality reports shall be defined by the Commission by means of implementing acts. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 8(2).
4. The Commission (Eurostat) shall assess the quality of the data transmitted.

## 6. Main shortcomings re quality information in a MIP context:

The comprehensive GNI inventories and quality reports provide relevant information on compensation and GDP. However, the NULC components related to employment/employees are not documented systematically in the GNI inventories and quality reports.

## Private sector debt, private sector debit flow, total financial sector liabilities

### MIP scoreboard indicators:

- *Private sector debt*
- *Private sector credit flow*
- *Total financial sector liabilities*

### 1. Composition of the indicators

The MIP scoreboard provides 3 indicators which are compiled from the components of the annual financial accounts in the framework of ESA 95:

- The **private sector debt** is the stock of liabilities held by the institutional sectors *Non-financial corporations (S.11)* and *Households and Non-profit institutions serving households (S.14\_S.15)*. The instruments taken into account are *Securities other than shares (F.3)* and *Loans (F.4)*. No other instruments are added to calculate the private sector debt. Data are presented both in consolidated and non-consolidated terms. The difference is that consolidated data do not take into

<sup>16</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:174:0001:0727:EN:PDF>, L147/5

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account positions within the same sector. This indicator is expressed as the percentage of GDP.

- The **private sector credit flow** represents the net amount of liabilities in which the sectors *Non-financial corporations (S.11)* and *Households and Non-profit institutions serving households S.14\_S.15* have incurred along the year. The instruments taken into account are *Securities other than shares (F.3)* and *Loans (F.4)*. No other instruments are added to calculate the private sector credit flow. Data are presented both in consolidated and non-consolidated terms. This indicator is expressed as the percentage of GDP.
- The **total financial sector liabilities** measure the evolution of the sum of all liabilities (which includes *currency and deposits, securities other than shares, loans, shares and other equity, insurance technical reserves and other accounts payable*) of the total *financial sector (S.12)*. The indicator is expressed in % as a year over year growth rate.

## 2. Data transmission:

### a. Legal requirements or agreements

Data of financial accounts are transmitted to Eurostat under the ESA95 transmission programme (Regulation (EC) N° 1392/2007 of the European Parliament and of the Council of 13 November 2007 amending Council Regulation (EC) N° 2223/96 with respect to the transmission of national accounts data).

The ECB also collects national financial accounts data however on a quarterly basis, which serve as the basis for the compilation of euro area aggregates. Comprehensive quarterly MUFA datasets are transmitted by all euro area countries on the basis of an ECB Guideline (ECB/2005/13). Although not bound by this Guideline, most non-euro area EU countries also contribute to this data transmission.

### b. Periodicity

Financial accounts data are transmitted to Eurostat by countries annually with a deadline t+9 months after the end of reference year.

Quarterly data are collected by ECB with a deadline t+110 days (t+85 days from 2014).

## 3. Inventory of data sources and methods:

### a. Legal requirements or agreements

ESA95 does not set any requirements for production of inventories. However over time it became clear that it would be valuable to have a Manual with the description of the new national sources and methodologies according to ESA95 methodology. There were also a number of issues on which some further guidance would be helpful. Having been endorsed by the Committee of Financial, Monetary and Balance of Payments Statistics (CMFB), the formal decision to produce such a Manual was taken by Eurostat and agreed at the Financial Accounts Working Party in March 2000. Manual on sources and methods for the compilation of ESA95 financial accounts became an indispensable complement to ESA95 in 2002. At that time the ambitious decision was taken to include Norway and Candidate Countries from the beginning of the project.

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In the context of further progress made on general methodological issues and after major changes in national compilation practices have occurred, the Manual was not only updated of the first edition but also offered much more detailed information by country, particularly on sources and methods used for each institutional sector and all financial instruments. Second edition was released in 2011. Unfortunately the description currently is available only for 17 EU Member States (BG, CZ, DK, DE, IE, ES, LV, LT, HU, MT, NL, AT, PL, PT, RO, SI, FI) and Switzerland.

The ECB compiles a Handbook on quarterly financial accounts for the euro area – Sources and Methods. This contains detailed information per Member State which is relevant to the overall assessment of the quarterly financial accounts.

b. Periodicity/frequency

First edition of the Manual on sources and methods for the compilation of ESA95 financial accounts was issued in 2002 and the second – in 2011.

The ECB handbook on the euro area is updated in irregular intervals (last update 2012).

c. Publication (by Eurostat/MSS)

Both editions of the Manual are published on the Government finance statistics dedicated page on Eurostat website<sup>17</sup>.

The ECB handbook is published.<sup>18</sup>

#### **4. Quality reports prepared by Member States:**

a. Legal requirements or agreements

ESA95 does not set any requirements for the quality reporting. As these three indicators were compiled only since the MIP scoreboard was introduced therefore no any quality reports on the defined indicators currently available.

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#### **b. Quality reports prepared by the ECB**

a. Legal requirements or agreements

At Eurosystem level, the annual quality report of quarterly financial accounts follows the basic principles of the ECB Statistics Quality Framework and includes a quantitative analysis of revisions and national accounting consistency with a focus on euro area countries. This report is prepared by the ECB according to Article 7 of the “ECB Guideline on reporting requirements in the field of quarterly financial accounts” of 21 November 2002, as amended.

Article 7 states that the ECB assesses data relating to the euro-area financial accounts. The assessment shall be carried out in a timely manner. The Executive Board of the ECB shall report yearly to the Governing Council on the quality of the data. The ECB prepares this own quality report on the basis of data compiled by the ECB.

<sup>17</sup> [http://epp.eurostat.ec.europa.eu/portal/page/portal/government\\_finance\\_statistics/methodology/ESA\\_95](http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/methodology/ESA_95)

<sup>18</sup>

[http://www.ecb.europa.eu/stats/pdf/ea/Handbook\\_on\\_quarterly\\_financial\\_accounts.pdf?d14427409147c0d88ef6c0f7952cc7f](http://www.ecb.europa.eu/stats/pdf/ea/Handbook_on_quarterly_financial_accounts.pdf?d14427409147c0d88ef6c0f7952cc7f)

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b. Periodicity/frequency

Annually

c. Coverage

The quality reports consider only euro-area aggregates

**5. Future requirements**

The Article 4 of ESA 2010 (Regulation (EU) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union) specifies the following with respect to quality assessment<sup>19</sup>:

1. For the purpose of this Regulation, the quality criteria set out in Article 12(1) of Regulation (EC) No 223/2009 shall apply to the data to be transmitted in accordance with Article 3 of this Regulation.
2. Member States shall provide the Commission (Eurostat) with a report on the quality of the data to be transmitted in accordance with Article 3.
3. In applying the quality criteria referred to in paragraph 1 to the data covered by this Regulation, the modalities, structure, periodicity and assessment indicators of the quality reports shall be defined by the Commission by means of implementing acts. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 8(2).
4. The Commission (Eurostat) shall assess the quality of the data transmitted.

**6. Main shortcomings re quality information in a MIP context:**

Inventories on sources and methods are not produced or updated regularly. Quality reports (MIP sense) are not yet produced. The ECB annual report on quarterly financial accounts and the publication of sources and methods provide relevant information, although focused on the needs for the euro area aggregate.

**General government gross debt****MIP scoreboard indicator: General government gross debt****1. Composition of indicator**

The **general government gross debt** is defined as the total consolidated gross debt outstanding at the end of the year at nominal value/ at face value. It consists of the following categories of general government liabilities (as defined in ESA95): *currency and deposits (AF.2)*, *securities other than shares excluding financial derivatives (AF.33)*, and *loans (AF.4)*. At the national level, data for the general government sector are consolidated between subsectors. The general government debt of the Euro area and EU is consolidated by deducting data on government loans to other EU governments.

<sup>19</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:174:0001:0727:EN:PDF>, L147/5

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This indicator is expressed as a percentage of GDP. For annual debt, GDP as supplied by Member States in the context of the Excessive Deficit Procedure is used. For quarterly debt, GDP as supplied by MS in the context of the Excessive Deficit Procedure (possibly complemented by quarterly rolling-year GDP in October) is used in April and October. For quarterly debt, quarterly rolling-year GDP is used in January and July.

## 2. Data transmission:

### a. Legal requirements or agreements

The Protocol on the excessive deficit procedure (EDP) annexed to the Maastricht Treaty requires that EU Member States report government debt data related to EDP for the preceding four calendar years and a forecast for the current year. The application of the Protocol is made operational by Council Regulation (EC) No 479/2009, as amended<sup>20</sup>. The data are reported in harmonised tables. These tables are designed specifically to provide a consistent framework, with a link to national budgetary aggregates as well as a link between the deficit and changes in debt, thus further ensuring the consistency and plausibility of annual and quarterly general government gross debt data. They should be fully consistent with the GFS data delivered to Eurostat in the ESA95 transmission programme, as far as differences are not explained by differing valuations and differences in definition.

Council Regulation (EC) No 1222/2004<sup>21</sup> concerning the compilation and transmission of data on the quarterly government debt sets up the transmission of quarterly general government gross debt.

### a. Periodicity

Annual EDP data have to be reported twice per year: before 1 April and 1 October.

Quarterly data should be transmitted at the latest three months after the end of the quarter to which the data refer.

## 3. Inventory of data sources and methods:

### a. Legal requirements or agreements

Article 9 of the Council Regulation (EC) No 479/2009, as amended, obliges Member States to provide the Commission (Eurostat) with a detailed inventory of the methods, procedures and sources used to compile actual deficit and debt data and the underlying government accounts. The inventories shall be prepared in accordance with guidelines adopted by the Commission (Eurostat) after consultation of CMFB.

### a. Periodicity/frequency

According to the Article 9(3) of the Council Regulation (EC) No 479/2009, as amended, the inventories shall be updated following revisions in the methods,

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[http://epp.eurostat.ec.europa.eu/portal/page/portal/government\\_finance\\_statistics/documents/council\\_reg\\_479-2009](http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/documents/council_reg_479-2009)

<sup>21</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:233:0001:0002:EN:PDF>

## Survey of Existing Inventories of Sources and Methods and Quality Reports

procedures and sources adopted by Member States to compile their statistical data. The previous versions by all Member States were updated in the course of 2012-2013.

b. Publication (by Eurostat/MSs)

According to the Article 9(4) of the Council Regulation (EC) No 479/2009, as amended, the Member States shall make their inventories public.

Eurostat publishes the EDP Consolidated Inventories of sources and methods transmitted by Member States to Eurostat on the Government finance statistics dedicated page on Eurostat website<sup>22</sup>.

The updated EDP Inventories by Member States will be published on Eurostat website in December 2013.

#### 4. Quality reports prepared by Member States:

a. Legal requirements or agreements

According to Article 8(2) of the Council Regulation (EC) No 479/2009, as amended, the Member States are obliged to provide the Commission (Eurostat), as promptly as possible, with the relevant statistical information requested for the needs of the data quality assessment.

Eurostat has defined the format of the questionnaire after consultation of the Committee for Monetary, Financial and Balance of Payments Statistics (CMFB).

The questionnaire relating to the EDP notification tables, made up of a set of individual tables, is a formalised source of information on revisions, adjustments, financial transactions including the application of specific Eurostat Decisions. Information on revisions is derived automatically from the comparison of government data reported in the latest EDP notification and the previous one. Both the size of revisions (by sub-sectors) and the reasons (due to updated data sources, methodological changes, correction of errors, etc.) are provided.

The supplementary tables on the financial crisis provide the opportunity to check the recording of government interventions.

Moreover, during each EDP notification round, Eurostat and the Member States engage in a *clarification exercise which implies* sending written requests to Member States (possibly in several rounds) and receiving answers with corrected/reviewed tables.

a. Periodicity/frequency

The questionnaire and other supplementary information have to be reported together with the EDP notification twice per year: before 1 April and 1 October.

b. Publication (by Eurostat/MSs)

Country documentation on quality information is not public. However, under Council Regulation (EC) No 479/2009, as amended, Eurostat is obliged to report to the European Parliament and to the Council on EDP matters. This is undertaken annually.

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[http://epp.eurostat.ec.europa.eu/portal/page/portal/government\\_finance\\_statistics/excessive\\_deficit/edp\\_inventories](http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/excessive_deficit/edp_inventories)

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The report addresses the overall assessment of the actual data reported by Member States as regards to the compliance with accounting rules, completeness, reliability, timeliness, and consistency. This report is published on the Government finance statistics dedicated page on Eurostat website<sup>23</sup>.

Additionally, a bi-annual reporting is done to the EFC (Economic and Financial Committee).

As mentioned above, although country quality information is not wholly public, the consistency of the annual and quarterly data with other indicators and other data sets is thoroughly checked prior to validation and publication. For annual data, this is done in the context of the formalised procedure, the requests for clarification, for quarterly data this is done in a less formal way. However, in both cases full consistency and plausibility is expected prior to publication. If necessary, retransmissions are requested.

### 5. Main shortcomings re quality information in a MIP context:

The quality information on government debt is very comprehensive.

## Deflated house price index

### ***MIP scoreboard indicator: Deflated House Price Index***

#### 1. Composition of the indicator

The **deflated house price index** (or real house price index) is the ratio between the house price index (HPI) and the national accounts deflator for private final consumption expenditure (households and NPISHs).

The **HPI** measures the price developments of all residential properties purchased by households, both newly built and existing, independently of their final use and independently of their previous owners.

The national accounts private final consumption deflator measures the price developments of households and NPISH final consumption expenditure.

The Member States' HPIs are compiled by the National Statistical Institutes. The euro area and the EU aggregate HPIs are compiled by Eurostat. The scoreboard indicator is the year-on-year growth rate of the deflated house price index.

#### 2. Data transmission:

##### a. Legal requirements or agreements

The HPI data production falls under the HICP legal framework. In particular the Commission Regulation (EU) No 93/2013 of 1 February 2013 implementing Regulation 2494/95<sup>24</sup> provides the main references.

<sup>23</sup> [http://epp.eurostat.ec.europa.eu/portal/page/portal/government\\_finance\\_statistics/publications/quality\\_reports](http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/publications/quality_reports)

<sup>24</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:033:0014:0016:EN:PDF>

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The national accounts private final consumption deflator falls implicitly under the ESA95 legal framework (Council Regulation (EC) No 2223/96 as amended).

b. Periodicity

HPI data collection is quarterly and annual.

The private consumption deflator data collection (its components) is quarterly and annual.

**3. Inventory of data sources and methods:**

a. Legal requirements or agreements

The description of data sources and methods for HPI data are not required by any legal acts, apart from the draft MIP regulation and the new HICP legal framework. Nevertheless, Member States are obliged to provide information to Eurostat upon request (Reg. 93/2013 Article 3 and Reg. 2494/95 Article 12).

The description of data sources and methods for the private consumption deflator falls partially under the GNI requirements (current prices aggregates).

b. Periodicity/frequency

For HPI: to be defined in the forthcoming new HICP legal framework.

For the private consumption deflator, it falls under the national accounts framework.

c. Publication (by Eurostat/MSs)

For the HPI, the detailed descriptions in the inventories will be provided by the MSs to Eurostat, and may be made public in future.

**4. Quality reports prepared by Member States:**

a. Legal requirements or agreements

Article 6 of Regulation 93/2013 requires Member States to provide Eurostat with quality reports on HPI data one year after the entry into force of the regulation, namely in February 2014.

b. Periodicity/frequency

One-off HPI Quality Report foreseen for February 2014, thereafter within new HICP legal framework.

**5. Main shortcomings re quality information in a MIP context:**

Since the domain is relatively new, inventories and quality reports are not yet available for the HPI component.

Furthermore, the denominator (deflator for final consumption expenditure of households and NPISHs) is derived from national accounts in the framework of the ESA95. Council Regulation No 1287/2003 on the harmonisation of gross national income at market prices (GNI Regulation) has a comprehensive system for validation of GNI data, which implicitly covers GDP and its main aggregates but only at current prices.



## Unemployment rate

### **MIP scoreboard indicator: Unemployment rate**

#### **1. Composition of indicator**

The **unemployment rate** is the number of people unemployed as a percentage of the labour force. The labour force is the total number of people employed and unemployed. This indicator is expressed in % as a 3 year rate average.

The 3-year moving averages of the unemployment rate are calculated on the basis of the Eurostat dataset published as Unemployment - LFS adjusted series. This series form a collection of monthly, quarterly and annual series based on the quarterly results of the EU Labour Force Survey (EU-LFS), which are, where necessary, adjusted for breaks in the series and enriched in various ways, in accordance with the specificities of an indicator. In this framework, Member States transmit EU-LFS quarterly micro-data. Eurostat calculates the quarterly unemployment rates from the micro-data, corrects breaks in time series and calculates 3-year moving averages.

The unemployment rate used in the context of the MIP scoreboard only refers to persons from 15 to 74 years of age.

#### **2. Data transmission:**

##### **a. Legal requirements or agreements**

The definition of unemployment is established in Commission Regulation 1897/2000. The definitions of employment and unemployment are based on the standards of the International Labour Organisation.

The EU-LFS implementation is governed by legislative acts of the Council and the Parliament, as well as of the Commission. The principal legislation is the Council Regulation (EC) No 577/98 of 9 March 1998 on the organisation of a labour force sample survey in the Community (OJ No L 77/3)<sup>25</sup>. This is the main regulation with provisions on design, survey characteristics and decision making processes.

##### **b. Periodicity**

The series underlying the MIP scoreboard unemployment indicator are monthly, quarterly and annual.

#### **3. Inventory of data sources and methods:**

##### **a. Legal requirements or agreements**

The MIP scoreboard unemployment is based on the EU-LFS. Council Regulation (EC) No 577/98 provides the main requirements for the organisation of the EU-LFS. This regulation stipulates minimum EU requirements regarding the frequency of the survey, units and scope of the survey, observation methods, representativeness of the sample and list of (minimum) survey characteristics.

Within the EU legal framework, Member States can develop their national surveys. Article 3.6 of the above mentioned Regulation stipulates that Member States shall provide

<sup>25</sup> [http://eur-lex.europa.eu/LexUriServ/site/en/oj/1998/l\\_077/l\\_07719980314en00030007.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/oj/1998/l_077/l_07719980314en00030007.pdf)

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the Commission (Eurostat) with whatever information is required concerning the organisation and methodology of the survey, and in particular, they shall indicate the criteria adopted for the design and size of the sample. Member States report that information in annual quality reports (see item 4 below).

b. Periodicity/frequency to update the information

Annually

c. Publication (by Eurostat/MSs)

Eurostat publishes every year the publication "Labour force survey in the EU, candidate and EFTA countries - Main characteristics of national surveys" summarising the national quality reports as regards the technical features of the Labour Force Surveys carried out in these countries <sup>26</sup>.

#### 4. Quality reports prepared by Member States:

a. Legal requirements or agreements

Council Regulation 577/98 stipulates in article 3.6 that Member States shall provide the Commission (Eurostat) with whatever information is required concerning the organisation and methodology of the survey. This is the legal basis for a system of quarterly and annual quality reports from the Member States to Eurostat, as follows:

- Detailed yearly quality reports compliant with the Code of Practice, covering yearly and quarterly data, available from 2002 for all MS except HR, for which it is available from 2004. These reports were in Word until 2003 and in Excel from 2004. In 2013 these have been implemented in NRME;
- Quarterly accuracy reports including the main quantitative accuracy indicators (i.e. CVs and non-response rates).

b. Periodicity/frequency

Quality information is collected on quarterly (quarterly accuracy report are provided on regular basis together with transmission of the quarterly EU LFS micro data) and annual (summer delivery after the end of reference year) basis.

c. Publication (by Eurostat/MSs)

Eurostat publishes every year the publication "Quality report of the European Union - Labour Force Survey" providing quantitative information on the relevance, accuracy, accessibility and clarity, timeliness and punctuality, comparability, and coherence of the EU-LFS data. <sup>27</sup>

Member States' individual reports are not published because the Eurostat publication has additional value added.

#### 5. Main shortcomings re quality information in a MIP context:

The content and structure of the LFS quality information (inventories and quality reports) is based on the experience gained over many years. In general, this information on the quarterly surveys is rather complete but for the purposes of the MIP the inventory

<sup>26</sup> [http://epp.eurostat.ec.europa.eu/portal/page/portal/product\\_details/publication?p\\_product\\_code=KS-RA-12-025](http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-RA-12-025)

<sup>27</sup> [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-RA-13-008/EN/KS-RA-13-008-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-13-008/EN/KS-RA-13-008-EN.PDF)

Survey of Existing Inventories of Sources and Methods and Quality Reports

information (MIP sense) should be separated from the quality report information (MIP sense). Furthermore, transformation(s) made from quarterly LFS data to the time series used for the MIP indicator should be documented.

21 January 2014

## **Quality assurance of the statistics underlying the MIP**

### **- ESS-ESCB Work programme –**

*for the attention of the European Statistical Forum*

### **sample draft**

#### ***Context***

The CMFB requested in the mandate of the Task Force on the Quality of the Statistics Underlying the MIP Indicators "*a contribution to setting up a quality monitoring framework in areas where the compilation of statistics for MIP is based on inputs from both the ESS and the ESCB*". While recognising the role and responsibility of the Commission in the MIP process and that the responsibilities for the production of some of the statistics underlying the MIP indicators are shared between the ESS and the ESCB, the Task Force identified a number of issues where an alignment of the two statistical systems would facilitate the quality monitoring in an MIP context. In addition, the European Statistical Forum (ESF) emphasized at its first meeting on 15 November 2013 the need to develop a work programme presenting joint ESS/ESCB initiatives. Thus, the Task Force reflected on the main messages that could be included in such a work programme to be presented to the ESF. This sample draft of a joint ESS/ESCB work programme is the result of these reflections by the Task Force.

#### **Macroeconomic statistics – at the core of MIP indicators**

The European Statistical System (ESS) and the European System of Central Banks (ESCB) underline the importance of ensuring reliable statistical data for the macroeconomic imbalances procedure (MIP) established for the early identification and monitoring of imbalances and supporting multilateral policy recommendations.

The indicators for the *MIP* are derived from available macroeconomic and financial statistics, such as balance of payments statistics, national and financial accounts. By way of example, the “3-year average of the current account balance as a % of GDP” is calculated by combining the current account balance reported in balance of payments statistics with the GDP derived from the national accounts.

The ESS and the ESCB have been producing these macroeconomic and financial statistics for many years within their respective spheres of competence and continuously apply statistical quality assurance mechanisms to ensure that they are in line with international statistical standards and as much as possible reliable and comparable across Member States. They are the basis for *economic and monetary policy decisions of the Union* and are also used by international organisations such as the *IMF and the OECD* in their surveillance reports.

## **Quality assurance of macroeconomic statistics underlying the MIP**

Assuring the *quality of macroeconomic and financial statistics* is a central contribution of the *ESS and the ESCB*. The two statistical systems share similar principles with regard to the quality of statistical processes and outputs. These principles are reflected in the *ESS Code of Practice of European Statistics* and the *ESCB Public Commitment on European Statistics*, respectively. The principles related to Accuracy and Reliability, Coherence and Comparability, Sound Methodology, Appropriate Statistical Procedures, Mandate for Data Collection and Commitment to Quality are particularly relevant for MIP purposes.

The majority of the macroeconomic statistics underlying the MIP indicators are *regulated* including, in most cases procedures for *quality assurance* and monitoring, and the legislation in force already provides for *regular domain specific quality reports* on the statistical data which often accompany *inventories containing a description of the sources and methods* applied in the collection of the statistics. These quality assurance frameworks are not fully aligned across statistical domains.

It is the responsibility of the NSIs and NCBs as statistical producers to ensure that the statistics are compliant with the legal requirements and meet the quality criteria as defined in the ESS CoP and the ESCB PC.

Quality reports and assessments produced by the ESS and the ESCB cover the quality of a domain statistics supporting one or more MIP headline indicators. Such reports scrutinise the underlying compilation process and compliance with the legal basis. They may also review the relevance of the statistics, its robustness, and whether the statistics are in line with the international statistical standards. The *domain specific quality reports contain essential quantitative and qualitative information* needed for assessing whether the statistics is harmonised and comparable, and whether the quality of the *statistics are fit for each of the broader purposes for which they are used*.

By *focusing the quality assurance on the macroeconomic and financial statistics* that are used for a range of purposes rather than on the MIP indicators themselves, statisticians mitigate to a great extent the risk that these indicators become less reliable as political pressure piles up geared to skew the values to meet administrative targets. Moreover, as long as the quality assurance is based on the

underlying statistics, statistical authorities will not need to amend their compilation processes and their quality assurance arrangements whenever the MIP scoreboard is adjusted.

### **Trade-offs for the production of macroeconomic statistics**

*By striking the right balance between timeliness, reliability, and detail, the ESS and the ESCB produce fit for purpose macroeconomic and financial statistics in a cost-effective manner. To strike this balance, statisticians have to undertake a ‘merit and cost evaluation’ considering the trade-offs between the timeliness, reliability, detail and cost of macroeconomic statistics.*

By way of example, *early estimates* for monthly and quarterly European statistics may require that surveys are confined to a small sub-set of the reporting population to meet the necessary timeliness, whereas *more detailed statistics* based on a wider data collection only become available with a *longer time-lag*.

Moreover, the *statistical compilation processes frequently combine information collected from reporting agents* via surveys, administrative data and necessary estimations *with statistical techniques and expert judgement*. While a *more extensive use of censuses* may enhance the *reliability* of the statistics, it would *also increase the costs and the reporting burden* inflicted to the economy in particular for small and medium-sized enterprises.

Given the weight of expert judgement in the compilation of macroeconomic statistics, the *quality is also influenced by the number of qualified human and financial resources involved in the statistical work*.

### **Enhancing quality of macroeconomic statistics underlying the MIP**

An enhanced quality assurance for macroeconomic statistics underlying the MIP indicators would take account of the policy use of the statistics in the MIP and would be based on better aligned and harmonized quality reporting and monitoring.

Since the responsibilities for the production of some of the statistics underlying the MIP indicators are shared between the ESS and the ESCB, the *ECOFIN Council requested the ESS and the ESCB to continue working together on improving the quality of the statistics underlying the MIP scoreboard and on ensuring their comparability*. Moreover, in its Opinion of November 2013, the Economic and Financial Committee (EFC) “*invited the ESS and the ESCB to continue this close cooperation, including through the preparation of a work programme*” to ensure the reliability and comparability of the statistics underlying the MIP. The ESF emphasized at its first meeting on 15 November 2013 the need to develop a work programme.

Enhancing the quality of statistics underlying MIP requires a further alignment of the quality monitoring frameworks between the two systems in order to avoid duplication and to reduce the burden on the compilers of the statistics underlying the MIP. Quality monitoring should build on existing structures to the extent possible and foster further harmonisation of the existing quality assurance and monitoring processes.

In addition, the outcome of the quality and monitoring would be reflected in a concrete set of actions to enhance the quality of the statistics supporting the MIP. These actions would be included in the work programmes of the ESS and ESCB or the CMFB to be implemented according to a rigorous prioritisation.

### **Enhancing quality reporting and monitoring for MIP relevant statistics**

Initiatives to enhance the quality monitoring and reporting system could be structured around a so-called “three level approach” (see annex 1 for details):

#### **Level 1: Enhancing the communication on Quality Assurance on MIP Statistics**

- An *Annual Quality Assessment Report on MIP Statistics* communicating to the European Parliament, the Council, policy makers and the public at large key messages on the reliability and comparability of the statistics underlying the MIP indicators and outlining actions at national and EU level to address most relevant quality issues. This report draws on the information gathered in the next two levels.

#### **Level 2: Closer alignment and harmonisation of domain specific quality reports produced by the ESS and the ESCB**

- The ESS and ESCB will explore whether the domain specific quality reports<sup>1</sup> produced by the ESS and the ESCB and regulated in Union statistical legislation could be progressively aligned and harmonised, taking account of MIP requirements, which are related to the individual Member State (not EU aggregates), and given that the quality assurance principles of the two statistical systems are essentially the same.

#### **Level 3: Development of inventories of sources and methods for MIP relevant statistics by Member States and of the Reference Databases supporting the MIP**

- The ESS and ESCB will develop *standardised templates for inventories of sources and methods* for all statistical domains (not the MIP indicators), encompassing all relevant elements of the statistical processes and including specific sub-sections for elements which

<sup>1</sup> Reports covering the quality of the domain statistics supporting one or more MIP headline indicators.

may be relevant for MIP related purposes. NSIs and NCBs will then complete the templates as an integral part of the quality assurance framework. The initial inventories should be short, about 5 pages, but may grow as different issues will need to be defined and documented

- The statistical data on which the assessment reflected in the Quality Reports must be available in *reference databases* which should be the result of an organised process designed also to monitor updates and revisions and store relevant metadata supporting the MIP exercise.

### ***Outcome - Actions on quality of the statistics underlying the MIP***

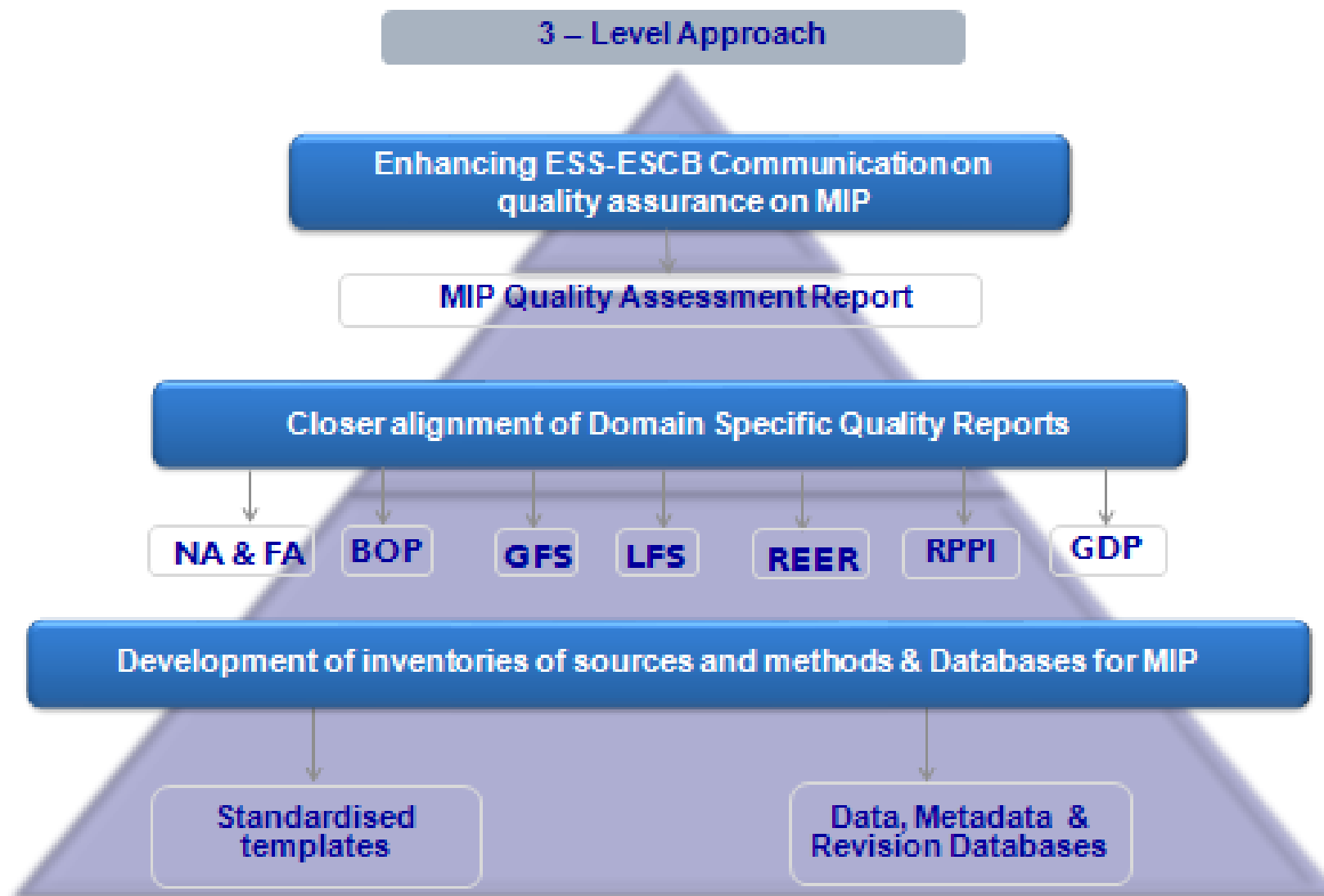
The outcome of the “three level approach” will be a *concrete set of actions to enhance the quality of the statistics supporting the MIP*. Some of these concrete *actions* are to be implemented at national level by the relevant statistical authorities to address weaknesses in the statistics supporting the MIP indicators (e.g. new sources, better checking and validation of the data, enhanced methodological work,...). Other *actions* are to be undertaken *at European level*, such as more detailed methodological guidelines, clarification of statistical concepts and definitions, practical recording conventions, etc.

In addition, the usage of common standards, such as the Single Integrated Metadata Structure (SIMS), would be welcome. A *better exchange of confidential (or restricted) data and meta-information* between the two systems, and especially between the ECB and Eurostat, could help to avoid duplication of quality reporting work requested within the two systems.

The concrete actions to improve the quality of the statistics supporting the MIP can only be implemented if they are included in the *work programmes of the ESS and ESCB statistical bodies* and their sub-structures in their respective fields of competence. Actions that require *cooperation between the ESS and the ESCB* should be included in the work programme of the *CMFB* upon request by the ESF. To ensure that the necessary resources for implementation are available, the inclusion of the *actions in the work programmes* of the different bodies should be *subject to rigorous priority-setting and careful assessment of the costs and benefits* of the each enhancement.



## ESS-ESCB Work-programme on quality assurance of MIP



No	Scoreboard Indicators	Measure unit	Legal basis for data	Quality report - by regulation or voluntary*	QR publicly accessible	Inventory - by regulation or voluntary*	Inventory publicly accessible
0	<b>Gross Domestic Product</b>	EUR billions	Council reg 2223/96 on ESA95 and EP on transmission of NA dat and C reg 1287/2003 on GNI				
1	<b>Current Account Balance</b>	3 year average as % of GDP	Regulation (EC) 184/2005: Regulation (EC) 555/2012; ECB guidelines (ECB/2007/3) and (ECB/2011/23)	Quality Reports: Regulation (EU) 1227/2010 - QR by MSs by 31 May; Quality criteria: Regulation (EC) 223/2009; ESTAT assessment in BOPCOM; ECB SQF	ESTAT - Yes MSs (LU) - yes ECB QR - Yes for euro area No for individual countries	ECB guidelines 'BOP book' (2007); EU27	'BOP book'
2	<b>Net International Investment Position</b>	as % of GDP	Regulation (EC) 184/2005: Regulation (EC) 555/2012; ECB guidelines (ECB/2007/3) and (ECB/2011/23)	Quality Reports: Regulation (EU) 1227/2010 - QR by MSs by 31 May; Quality criteria: Regulation (EC) 223/2009; ESTAT assessment in BOPCOM; ECB SQF	ESTAT - Yes MSs (LU) - yes ECB QR - Yes for euro area No for individual countries	ECB guidelines 'BOP book' (2007); EU27	'BOP book'
3	<b>Real Effective Exchange Rate (REER) based on harmonised index of consumer prices</b>	% Change (3 years) of REER with HICP deflators					
4	<b>World Export Market Shares</b>	% Change (5 years)	Regulation (EC) 184/2005: Regulation (EC) 555/2012; ECB guidelines (ECB/2007/3) and (ECB/2011/23) IMF WEO	Quality Reports: Regulation (EU) 1227/2010 - QR by MSs by 31 May; Quality criteria: Regulation (EC) 223/2009; ESTAT assessment in BOPCOM; ECB SQF	ESTAT - Yes MSs (LU) - yes ECB QR - Yes for euro area No for individual countries	ECB guidelines 'BOP book' (2007); EU27	'BOP book'
5	<b>Unit labour cost (ULC)</b>	% Change (3 years)	Council reg 2223/96 on ESA95 and 1287/2003 on GNI; Employment - ?	Quality report on GNI by MSs and by ESTAT; Employment - not	ESTAT - ? MSs - only few	Inventories of GNI sources and methods; Employment - ?	ESTAT - ? MSs - only few
6	<b>House Prices</b>	% y-o-y change	Commission Regulation (EU) No 93/2013 of 1 February 2013 concerning harmonised indices of consumer prices, as regards establishing owner-occupied housing price indices Text with EEA relevance	One-off HPI quality reporting foreseen for 2014 within the new HICP legal framework. Detailed report available for Greece	NO	?	NO
7	<b>Private Sector Credit Flow</b>	as % of GDP	Council reg 2223/96 on ESA95 and EP and C reg 1392/2007 on transmission of NA data; ECB guideline (ECB/2007/2)	Quality Reports: art X ECB Guideline ECB/2007/2	NO	Manual on sources and methods of FA*; MUFA Handbook	ESTAT GFS website; ECB website
8	<b>Private Sector Debt</b>	as % of GDP	Council reg 2223/96 on ESA95 and EP and C reg 1392/2007 on transmission of NA data; ECB guideline (ECB/2007/2)	Quality Reports: art X ECB Guideline ECB/2007/2	NO	Manual on sources and methods of FA*; MUFA Handbook	ESTAT GFS website; ECB website
9	<b>General Government Debt</b>	as % of GDP	Council reg 479/2009 on EDP and 2223/96 on ESA95	Council reg 479/2009; MSs - Questionnaire to EDP notif. and other questionnaires; ESTAT provides quality reports to EFC and to the European Parliament and Council	ESTAT GFS website	Council reg 479/2009; Inventory of data sources and methods	ESTAT GFS website; MSs
10	<b>Unemployment rate</b>	3 year average	Council reg 577/98 on LFS as amended later	Quality report by MSs and by ESTAT*	<a href="#">ESTAT-yes MS yes for all on ESTAT website as methological paper</a>	Council reg 577/98 on LFS (art.3.6 with reference to methods)	ESTAT (partly in the same QR)
11	<b>Total Financial Sector Liabilities</b>	% y-o-y change, non-consolidated	Council reg 2223/96 on ESA95 and EP and C reg 1392/2007 on transmission of NA data; ECB guideline (ECB/2007/2)	Quality Reports: art X ECB Guideline ECB/2007/2	NO	Manual on sources and methods of FA*; MUFA Handbook	ESTAT GFS website; ECB website