ESS – ESCB

quality assessment report

on statistics underlying the Macroeconomic Imbalances Procedure

24 August 2015

Contents

EXECUTIVE SUMMARY

Annual report on the main characteristics and quality aspects of the statistics underlying the MIP.

European macroeconomic statistics are developed, produced and disseminated within their respective spheres of competence by the European Statistical System (ESS) and the European System of Central Banks (ESCB). The ESS, composed of Eurostat and the national statistical institutes (NSIs), and the ESCB, composed of the ECB and the national central banks (NCBs), operate under separate legal frameworks reflecting their respective governance structures and cooperate closely when designing their respective statistical programs. Starting in 2015, an annual report with the objective of a fully transparent description and assessment of the quality of the statistics underlying the Macroeconomic Imbalances Procedure (MIP) indicators will be prepared by the two statistical systems. The report –whose first release is the present one- is a joint responsibility of the ESS and the ESCB,and benefits from comments of the Committee for Monetary, Financial and Balance of payment statistics[1] (CMFB).

The report stresses that the macroeconomic statistics produced by the two statistical systems are of sufficient coverage, quality and timeliness to ensure an effective macroeconomic surveillance and therefore are key to support the MIP. Because the indicators for the *MIP are derived from available macroeconomic and financial statistics*, such as balance of payments statistics, international investment position, national non-financial and financial accounts and also prices and labour statistics, this report will focus on the quality of these statistics. Accordingly, the report also outlines areas of the underlying statistics that may need further quality enhancements[2].

Statistics are both principle-based and rule-based in the ESS and the ESCB

The assessment presented in this ESS-ESCB Quality Assessment Report reflects *essential quantitative and qualitative information from the comprehensive quality assurance frameworks for macroeconomic statistics of the ESS and the ESCB,* in particular from domain-specific quality reports.

Securing the *quality of macroeconomic and financial statistics* is a central contribution of the *ESS and the ESCB,* since the two statistical systems share similar principles referring to the quality of statistical processes and outputs as well as the institutional environment. These principles are reflected in the *European Statistics Code of Practice* and the *ESCB Public Commitment on European Statistics*, respectively. These principles are very similar to those instituted on a global basis by the UN, the IMF and the OECD.

The majority of the macroeconomic statistics underlying the MIP indicators are also *regulated* including in most cases procedures for *quality assurance* and monitoring. For balance of payments statistics, international investment position, national non-financial and financial accounts, EDP and government finance statistics, prices and labour 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.*

[1] The CMFB was instituted by EU Council Decision of 13 November 2006 (published by the UEOJ of 30.11.2006).

[2] Within the reporting structure monitoring the quality of statistics underlying the MIP the ESS-ESCB Quality Assessment Report is accompanied and complemented by domain specific quality reports prepared on national level by the Member States and on EU level by Eurostat and the ECB.

The purpose of the current report is to present in an orderly and principle-oriented manner both common and diverse quality issues related to all statistics underlying the MIP. To this end, it contains two parts: a synthetic and general issue part, underlining aspects that cut across the diverse statistical domains; and a statistical domain-specific part, which focuses the analysis on the quality criteria most relevant for the MIP process: (i) *institutional issues*, (ii) the *compilation process*, and (iii) the *quality of the statistical output* focusing on its accuracy and comparability across countries and across time.

By focusing the quality assurance on the macroeconomic and financial statistics that are used for many purposes rather than only on the MIP indicators, statisticians mitigate the risk of undue focus on these indicators and their target values. Moreover, if the quality assurance is based on the underlying statistics, the quality assurance is ensured independently of possible adjustments in the scoreboard indicators, which is both secure and efficient.

High quality and costs of macro-economic statistics

Under the ESS-ESCB quality standards, statistics must in particular be reliable and timely without overburdening respondents or be excessively costly. Statisticians have therefore to strike the right balance between timeliness, reliability and costs. Obviously, these necessary trade-offs are made on the basis of experience, expertise and adaptation to local specificities, some activities being more predominant in certain countries than in other ones[3]. Available resources on statistics play also a role in this regard.

The frequency of the statistical production, which is in most cases regulated, has also to be taken into account: high frequency statistics are generally compiled with less detail, not to overburden respondents. Another usual arbitrage is between the degree of reliability and accuracy on the one hand, and timeliness of publication on the other hand: the shorter the time length for collecting and controlling the numbers before publication, the less strong the reliability will be.

Moreover, the quality is also linked to the compilation methods that are available and used: an accounting basis or an administrative source for primary data provide in principle the most solid means of raw data; surveys are by definition less exhaustive, though the risk error is mitigated by statistical techniques to the largest extent possible; other variables need even more expert judgement or even modelling. As an example, while a more extensive use of censuses instead of sample surveys may enhance the reliability of the statistics, it would also increase the costs and the reporting burden inflicted to the economy, in particular to small and medium-sized enterprises.

It is not for statisticians to decide in general on the best trade-off for the society between the costs for the economy or part of it - e.g. the small and medium-sized enterprises- and the final quality of statistics, but to enlighten the decision making by a transparent presentation of the cost-benefit analysis and explanations on the pros and cons of different solutions. This report will contribute to this permanent task, to begin with by enhancing the awareness of the statistical challenges that have to be addressed.

Accordingly, quality improvements suggested in this report would need to undertake a '*merit and cost evaluation'* considering the *trade-offs* between the timeliness, reliability, detail, needs of users and cost of macroeconomic statistics. Except in cases of urgency, where new requests have to be fulfilled in a very timely manner –for instance in crisis times-, it could be therefore recommended to generalize impact studies or case studies before making new statistical requests compulsory.

Main observations

[3] A country where tourisms represents a significant part of its GDP should devote efforts to collect robust source data to measure accurately tourism activity in their macroeconomic statistics whereas model-based estimation methods to measure tourism activity could be sufficient to produce accurate macroeconomic statistics in countries where tourism has a negligible weight on overall economic or cross-border activity.

EU Member States produced for the first time in autumn 2014 macroeconomic statistics aligned to the new standards for National Accounts (ESA 2010) and Balance of Payments (BPM6).

Most of the statistics underlying the MIP indicators are based on these two frameworks that guarantee a high level of comparability across EU Member States, which is an important development to support multilateral surveillance under the MIP.

However, at the very beginning of the implementation of the new standards, the statistics may result in more pronounced, in comparison with the regular practices, revisions to the earlier data. This has to be taken into account when assessing the quality of the data produced according to the new statistical standards.

National Statistical Institutes and National Central Banks will have to deploy necessary resources to step up efforts for consolidating the compilation of national accounts, balance of payments and international investment position. More specifically, when looking at the quality of the statistics for the current cycle, the following main features are worth highlighting.

The quality of **GDP statistics** is crucial in this context as many of the MIP indicators are computed in the form of ratios to GDP. The statistical changes introduced in 2014 have increased the size of the revisions of the GDP data. These changes are expected to reinforce the consistency of GDP numbers with the international standards on GDP statistics, hence improving the comparison between countries also on a global basis.

The compilation of **Balance of Payments (BOP) and International Investment Position (IIP) statistics** in EU Member States is methodologically sound and overall BOP/IIP data comparability across the EU is high. However, the gradual move to survey-based systems and the adoption of the new edition of the IMF Manual (BPM6), that ensures a much better consistency between the GDP and the BOP ones –that are now both based on the concept of economic ownership- have led to breaks in some time series and/or to temporary (back) data unavailability. It can also be underlined that large parts of BOP statistics, as all statistics from various data collection, are based on surveys that by definition cannot capture perfectly the reality of all cross-border transactions and positions, even if the control of possible asymmetric numbers between countries may mitigate this risk.

Data used in the compilation of the **nominal unit labour costs** are seen as being robust and harmonised across the EU, due to the use of a common national accounts framework, in particular at the aggregate economy level. Data coverage is less complete, comparable and accurate with regard to more detailed data on some sectors, where measuring output is more complicated.

The quality of **house price statistics** was positively affected by the adoption of a new Commission legal framework in 2013 when Eurostat started its official publication of the house price indexes. This new legal framework accompanied by intensive harmonization efforts regarding the used methodology and benchmarking against the ESCB data by the ECB ensures that the accuracy, reliability and comparability of the data among Member States is broadly satisfactory. The ongoing efforts will continue to further improve the quality.

Financial accounts statistics are computed integrating statistical data coming from several sector- and instrument-specific collections and sources. While the data for financial corporations (e.g. MFIs, Insurance Corporations, Investment Funds, Financial Vehicles Corporations,..) and general government are mostly based on statistical Regulations directly addressed to the reporting agents and therefore use direct statistical sources which produce high quality and largely harmonized data within the EU, the financial accounts data for the non-financial corporation sector and the household sector rely less on directly collected raw data and more on information available to the compiler from their (financial) counterpart sectors and from financial market information. Additionally, for securities issues and holdings, data from the CSDB and securities holdings statistics provide direct data source for all sectors. The changes introduced in 2014 to implement the new statistical standards for financial accounts statistics, in particular on the recording of holding companies and special purpose vehicles, have increased the cross-country comparability of the data but also led in several EU Member States to sizable revisions of the

data. Full awareness of the changes is recommended when assessing the derived MIP indicators such as the private indebtedness indicator.

The quality of the **government finance statistics**, which are used also in MIP, is reinforced by an enhanced quality assurance mechanism around the EDP process based on well-defined legal framework which gives the Commission the power and possibility for detailed quality checks of the data including on-site visits to the Member States. In 2014 in its report to the European Parliament the Commission noted the good overall quality of the reported fiscal data.

Labour market statistics used in the MIP are based on the EU Labour force survey (EU-LFS) data. The overall accuracy of EU-LFS statistics is currently considered as high and data are broadly comparable among Member States. The revisions of the data in 2014 for several Member States were affected by the use of the results of the Population Census 2011.

LIST OF ABBREVIATIONS

BIS	Bank of International Settlements
BOP	Balance of payments
BPM6	IMF Balance of Payments and International Investment Position Manual 6th Edition
CDIS	IMF Coordinated Direct Investment Survey
CPIS	IMF Coordinated Portfolio Investment Survey
CSDB	Centralised securities database
ECB	European Central Bank
EDP	Excessive deficit procedure
EICP	European Index of Consumer Prices
EMU	Economic and Monetary Union
ESA95	European System of national and Regional Accounts 1995
ESA 2010	European System of National and Regional Accounts 2010
ESA2010 TP	Transmission Programme under the ESA 2010
ESCB	European System of Central Banks
ESRB	European Systemic Risk Board
ESS	European Statistical System
EU	European Union
EUROSTAT	Statistical Office of the European Commission
FVC	Financial Vehicle Corporations engaged in securitisation transactions
GDP	Gross domestic product
GNI	Gross national income
HPI	House Price Indices
IIP	International investment position
ILO	International Labour Organization
MFI	Monetary financial institution
MIP	Macroeconomic Imbalances Procedure
MUFA	Monetary Union Financial Accounts
MUICP	Monetary Union Index of Consumer Prices
NCB	National Central Bank
NSI	National Statistical Institutes
OECD	Organisation for Economic Cooperation and Development
OJ	Official Journal (of the European Union)
REER	Real Effective Exchange Rate
SNA 08	System of National Accounts 2008
SPE	Special purpose entity

INTRODUCTION

As part of the 2011 six-pack legislation, Regulation (EU) No 1176/2011[4] sets out detailed rules for the detection, prevention and correction of macroeconomic imbalances (MIP). A Scoreboard of eleven headline indicators (see annex) is used as a tool for the early identification and monitoring of the imbalances supporting multilateral policy recommendations. An additional set of twenty eight indicators is also compiled and published without indicative thresholds.

On three occasions (November 2011, 2012 and 2013), the ECOFIN Council invited the European Statistical System (ESS) and the European System of Central Banks (ESCB) to work together on improving the statistics underlying the MIP and to ensure their comparability[5]. These macroeconomic statistics underlying the MIP have been already used for many years, for supporting the economic and monetary policy decision making in the European Union. So, 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 two 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 underlying the MIP indicators.

[4] 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.

[5] Council Conclusions of ECOFIN Council meeting, 9 November 2011, 13 November 2012 and 15 November 2013
http://register.consilium.europa.eu/pdf/en/11/st15/st15781-re02.en11.pdf
http://ue.eu.int/uedocs/cms_data/docs/pressdata/en/ecofin/133462.pdf

I. GENERAL CONSIDERATIONS ON THE QUALITY OF THE STATISTICS UNDERLYING THE MIP

I.1 Macroeconomic statistics – at the core of MIP indicators

The MIP headline indicators are derived from macroeconomic and financial statistics produced by the European Statistical System (ESS) and the European System of Central Banks (ESCB), such as balance of payments statistics, national non-financial and financial accounts and also prices and labour statistics. They are mostly based on data collected under European legislation.

The two systems[6] have been producing 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 EU 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.

I.2 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 European Statistics Code of Practice 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, national non-financial and financial accounts, EDP/ government finance statistics, labour 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 a summary report is produced by ESCB or ESS for the domain summarising the main findings for the euro-area or the EU Member States. 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, their legal basis and their robustness considering whether the important parts of the statistics are supported by comprehensive collection of raw data or with sound estimation methods provided through expert judgement. It also evaluates the comparability of the statistics produced by EU 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.

A quality assessment reflects comprehensive expert assessments on whether the statistics are fit for each of the broader purposes for which they are used. Because all the MIP indicators are based on usual macroeconomic statistics, it seems more relevant to focus the quality assessment on these latter.

I.3 High quality and cost-effective macroeconomic statistics

[6] 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 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 **less frequently** and with a **longer time-lag**. To compile some monthly balance of payments data, surveys may be confined to reporting agents of a certain size. The statistical compilation process combines information collected from reporting agents via statistical surveys, administrative data and necessary estimations with statistical techniques and expert judgement. While a more extensive use of censuses instead of sample surveys may enhance the reliability of the statistics, it could substantially increase the cost of the reporting burden inflicted to the economy in particular to small and medium-sized enterprises. For example, the reporting obligations on cross-border transactions (for balance of payments purposes) should only be imposed when above certain thresholds to contain reporting burden; while this is expected to affect 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 the quality checks for the given statistics require contacting the reporting entities in order to verify the provided statistical information, the lack of resources may enable to do it on limited scale only. This may affect the reliability of the statistics.

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 must be 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

I.4 Modernisation of the statistical frameworks

In autumn 2014, new international standards were implemented in European macroeconomic and financial statistics. This was part of a coordinated international process that will enable economic activity to be measured more accurately in a world economy which is increasingly interconnected and knowledge-based. The updated "System of National Accounts" (2008 SNA) was adopted by the United Nations as the new international standard for national accounts and the sixth edition of the International Monetary Fund's "Balance of Payments and International Investment Position Manual" (BPM6) was adopted as the new reference publication for the compilation of cross-border statistics.

National accounts and balance of payments statistics in the EU will follow from 2014 the new European System of National and Regional Accounts (ESA 2010), which is consistent with the 2008 SNA, and the BPM6, respectively. In addition, most statistical institutes and central banks in the EU have also taken the opportunity provided by the revision of the methodological standards to simultaneously upgrade their statistical compilation processes.

As a consequence of this, in the first years of implementation of the new standards, the statistics may thus result in more pronounced, in comparison with the regular practices, revisions to the earlier data. Moreover, it can be expected that during the transition period also the future revisions of the data might be in some EU Member States and for some of the statistics relatively higher before the data production systems based on the new statistical standards and other data compilation changes settle down and are fully implemented. This has to be taken into account when assessing the quality of the data produced according to the new statistical standards.

II. KEY FEATURES OF THE QUALITY ASSESSMENT OF THE 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 European Statistics Code of Practice and the ESCB Public Commitment on European Statistics, namely **(i) institutional environment, (ii) statistical / compilation process;** and **(iii) statistical output**, 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 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 **statistical / compilation process;** analysing whether the important parts of the statistics are supported by comprehensive *collection of raw data* or by sound estimation 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 and reliability**[7] are 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)[8] 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**[9] may result in final values of the indicators diverging substantially from the value reported when the policy assessment of imbalances was undertaken.

7 Reliability is defined in principle 12 of the European Statistics Code of Practice and ESCB Public Commitment on European Statistics.

8 Coherence and comparability are defined in principle 14 of the European Statistics Code of Practice and ESCB Public Commitment on European Statistics.

9 Revisions are defined in principle 12 of the European Statistics Code of Practice and ESCB Public Commitment on European Statistics.

II.1 Gross domestic product

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

(A) Institutional issues

(i) 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 ESA 2010 Regulation (549/2013 of the European Parliament and the Council on the European system of national and regional accounts in the European Union)[10]. The ESA 2010 also includes the Transmission Programme (Annex B), a set of tables specifying which data, at what detail, should be provided by which timeliness, subject to temporary derogations[11].

(ii) Quality assurance mechanisms

As Gross National Income (GNI)[12] 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[13] and are therefore included in the Inventories of data sources and methods, thus being a source for assessing GDP quality. The Inventories are accompanied by Eurostat's missions to Member States to ensure the legitimacy of the calculations. Experts from other EU Member States attend the GNI mission as observers. Recently, the country monitoring of compliance with the requirements of the transmission programme has been launched as well. Eurostat's GNI verification activities are checked annually by the European Court of Auditors. 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.

(iii) Policy uses

As GDP is the key variable for the economic development it is also used in policy decision making at the European Commission, ECB and for budgetary policy purposes in the Member States. The GDP and GNI are used in the European Union for various administrative uses. The GNI forms the basis for the 4th source of the European Union own recourses. In addition, Member States' GDP 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

[10] The ESA 2010 Regulation can be found on: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R0549&from=EN

[11] The ESA 2010 temporary derogations can be found on: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014D0403&from=EN

[12] Council Regulation No 1287/2003 on the harmonisation of gross national income at market prices (GNI Regulation): http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003R1287&rid=5

[13] 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.

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 defined by national and European regulations, by using both statistical 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, in some cases, using the production, expenditure and income approaches.

(C) Quality assessment of output

(i) Accuracy/Reliability

The GNI has a comprehensive system for validation of GNI data and the annual GNI quality reports are available for all countries. 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 sent by 22 September each year to Eurostat is presented each year in October 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. In 2015, Eurostat in close cooperation with the Member States implemented an extensive exercise with the objective of lifting the existing reservations on GNI data.

(ii) Comparability

The statistical changes introduced in 2014 have further improved the comparability between the Member States in particular including the estimates of illegal economic activities and R&D as GFCF activities. Comparability is also insured by the application of common definitions and requirements (European System of Accounts ESA 2010). While the main aim is to improve the quality of statistics, the level of comparability between Member States however may depend on the comparability/level of development in the basic data used as input for the GDP compilation.

(iii) Revisions

Member States may have routine revisions of GDP data every year when the preliminary annual surveys or administrative data become available. When the final annual source data of the reference year are available and GDP calculations are based on the balanced supply and use tables by the product groups, the revisions in the annual GDPs of the Member States are generally small.

In 2014 the revisions were affected by both the implementation of the ESA 2010 as well as by statistical improvements. It can be expected that in the near future revisions might also be affected by this major change in the statistical accounting standards.

II.2 External Imbalances and competitiveness

Macroeconomic imbalances remain a serious concern and underline the need for decisive, comprehensive and coordinated policy action. For a better analysis of the country's economic external and domestic situation the MIP indicators for this purpose are grouped into: i) external imbalances and competitiveness and ii) internal imbalances. The first group covers MIP indicators calculated from the balance of payments and other **external statistics** and the indicator **Nominal unit labour costs** derived from the National accounts data.

II.2.1 Balance of payments and other external statistics

There are several indicators in the MIP scoreboard derived from balance of payments and other external statistics:

- **3-year average of Current account balance as % of GDP (CA);**
- **Net international investment position as % of GDP (NIIP);**
- **% change (5-years) in Export market shares (EMS);**
- **% change (3-years) in Real effective exchange rates (REERs) with HICP deflators.**

II.2.2 Balance of payments and international investment position indicators

(A) Institutional issues

(i) Legal basis

BOP/IIP are provided to the ECB on the basis of 'Guideline ECB/2011/23 on the statistical reporting requirements of the ECB in the field of external statistics (recast)' (as amended by Guideline ECB/2013/25; hereafter "BOP/IIP Guideline") and 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', as amended by Commission Regulation (EU) No 555/2012.

These legal acts do not impose back data requirements in compliance with the BPM6 statistical standard. Therefore, the time series provided on a voluntary basis by Member States are in some cases still too short.

(ii) Quality assurance mechanisms

An annual report from the Executive Board of the ECB to the Governing Council on quality of the external statistics data is required by Article 6 of Guideline ECB/2011/23. In practice this report follows the basic principles of the "Public commitment on European Statistics by the ESCB"[14] and includes an extensive quantitative assessment of the statistical output. The European Commission (Eurostat) also produces an annual quality report on the basis of Article 4(3) of Regulation (EC) No 184/2005. This report is reviewed with the assistance of the Balance of Payments Committee. 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 European Statistics Code of Practice and the Regulation on European statistics (Regulation (EC) No 223/2009, Article 12(1)), namely: relevance, accuracy, timeliness, punctuality, accessibility and clarity, comparability and coherence. Such report is a condensed analysis of the results of national quality reports pre-filled by Eurostat and completed by Member States and presented to the BoP Working Group.

(iii) 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. In particular, these data are used to explain changes in the money supply, contributing to the determination of monetary policy. BOP/IIP statistics are also broadly used in the European Systemic Risk Board (ESRB)

[14] Available on the ECB's website at http://www.ecb.europa.eu/stats/html/pcstats.en.html.

Dashboard, by the EU Commission as part of the 4th own resource and by the IMF in the context of Article IV visits, External Imbalances assessment and ROSC missions.

(B) Compilation process

At national level the compilation of BOP/IIP is usually a matter of shared competence between the NCB and the NSI. The introduction of the BPM6 provided the perfect opportunity for a large group of countries to move into survey based systems, and 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). National compilation systems also make use of worldwide exercises, such as the IMF CPIS and CDIS surveys. Several statistical methods and compilation assumptions are used, including the derivation of transactions from adjusted differences of stocks.

(C) Quality assessment of output

(i) Accuracy/Reliability

The compilation of BOP/IIP in EU Member States is methodologically sound and based on the sixth edition of the IMF Balance of Payments Manual (BPM6). 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 affect the accuracy and comparability of some details. In the short-term, the accuracy and reliability of BOP/IIP data may be somehow reduced because statistical compilers are still getting acquainted with the new methods and practices and because several data sources are new.

(ii) Comparability

Overall, the data comparability across the EU is quite high, not only because of the harmonised methodology (BPM6), 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). While there was not yet time to make an in-depth assessment of the impact of the new statistical standards on the overall data consistency, 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).

In the context of the introduction of BPM6, the existing treatment of EUR banknotes in national BOP/IIP statistics of euro area countries has been reviewed. The objective was twofold: i) achieve coherence between national BOP/IIP and other statistical domains (namely euro area financial accounts); ii) improve the accuracy and economic significance of the BOP/IIP.

The revised treatment of EUR banknotes in national BOP/IIP statistics were gradually implemented by EU Member States from September 2014 with a final deadline by end-March 2015. This flexibility has temporarily affected data comparability, which is expected to be restored in the BOP/IIP data reported in the course of 2015.

(iii) Revisions

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

The cumulated burden on national compilers of moving to a new methodological standard and collection system may in the next few years lead to routine revisions slightly larger than usual.

II.2.3 Real effective exchange rate statistics

(A) Institutional issues

(i) Legal basis

The real effective exchange rates (REERs) data used in the MIP are compiled by the European Commission on the basis of a standard methodology implemented by DG ECFIN (Quarterly Reports on effective exchange rates evolutions, together with the underlying data, are published on the EU's website). REER are not directly based on a legal act, but do rely on national (exchange rate fixings, trade data and deflators) data mostly compiled and collected on the basis of specific legal acts. REERs are derived indicators the quality of which is mostly a function of the underlying data sets.

(ii) Quality assurance mechanisms

All source data underlying the calculation of REER are collected from reliable institutional sources, notably the ECB, the IMF and Eurostat. Exchange rates, trade data and deflators are subject of quality reporting in their respective domains. There are however currently no regular quality reports or reviews on the accuracy and reliability of derived indicators of the kind of REER.

(iii) Policy uses

Both nominal effective exchange rate (NEER) and REER are widely used measures of price and cost competitiveness.[15] NEERs describe changes in the average overall value of a currency with reference to a given base period and a given group of reference countries. The REERs identify relative evolutions in the prices or production costs of domestically produced goods compared 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 weighted geometric averages of the bilateral exchange rates against the currencies of competing countries. The real effective exchange rates (REERs), or the "relative price and cost indicators" are calculated as the adjusted NEERs with trade-weighted price or cost deflators.

(C) Quality assessment of output

(i) Accuracy/Reliability

The quality of the REER indicators depends on the quality of the underlying sources, in particular those used for constructing export weights and deflators.

The REERs used in the MIP are based on a harmonised index of consumer prices (or national CPI where appropriate) relative to a panel of the most important trading partners of each European Union Member State. Since 2013 the REER used in the MIP exercise has been extended and it is now computed against a panel of 42 other countries, in order to further improve coverage of trading partners and therefore representativeness. The basket of trading partners now includes China, Brazil, Russia, South Korea and Hong-Kong in addition to the previously used composition of 37 industrial countries. This allows for a better accounting of the increasing role of some emerging economies when measuring competitiveness. The Commission will consider extending the basket of trading partners further when data of sufficient

[15] See e.g. the European Commission's quarterly reporting on price and cost competitiveness data at http://ec.europa.eu/economy_finance/db_indicators/competitiveness/index_en.htm

quality for additional emerging countries become available**.** The calculation of additional REER series, alternatively deflated, is also possible.

(ii) Comparability

Due to use of index numbers vis-à-vis a base period, caution must be used for any geographical comparison. Although the comparability over time of the data can be considered as very high, methodological changes occur and have a limited effect on the overall pattern of REER indicators. Each time these occur, recalculations under the new definitions are performed for the whole time series, safeguarding time series without break. The changes are mainly the result of including new trading partners in the trade-weighted index, and/or new countries in the euro area.

(iii) Revisions

As a general rule, the full series is updated once a quarter and/or at the time of European Economic Forecast publication. Changes in methodology may occur, in particular the addition of new countries in the compilation process.

II.2.4 Nominal unit labour costs (NULC)

(A) Institutional issues

(i) Legal basis

There is no specific legal basis for the calculation of unit labour costs *per se*, but it is derived from several components which themselves are collected under the overarching framework of the national accounts. According to the Eurostat MIP Scoreboard presentation,[16] "Nominal unit labour cost compares remuneration (compensation per employee) and productivity (gross domestic product (GDP) in volume 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".

(ii) Quality assurance mechanisms

Quality is assured by strict application of ESA 2010 concepts and thorough validation of country data. Data are collected from reliable sources applying high standards to methodology and ensuring high comparability. In addition, Eurostat conducts an annual compliance exercise for all Member States. Further, Council Regulation No. 1287/2003 on the harmonization 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 like compensation of employees, but not employment data.

(iii) Policy uses

Unit labour cost, which is defined as the cost of labour per unit of output, is a common measure of the external competitiveness of a country. Labour being a major input of production, its compensation directly affects the costs and prices of outputs, thus having a bearing on export market share and growth potential. It allows the comparison and analysis of cost competitiveness across countries. The data are widely used for many purposes and publications such as the assessment by the Commission of the functioning of the labour market within the Europe 2020 Joint Assessment Framework or the annual Competitiveness report, 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

[16] See http://ec.europa.eu/eurostat/web/macroeconomic-imbalance-procedure/methodology.

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 = Gross Domestic Product at market prices, chain-linked volumes reference year 2005**/** number of people in employment (or total number of hours worked), domestic concept.

The MIP indicator on ULC is currently still published only based on persons, since data coverage in terms of hours worked is not yet complete.

(C) Quality assessment of output

(i) 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 can be compiled using available data on gross-value added, employment and compensation of employees by industries, but data coverage is less complete, comparable and accurate related to 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.

(ii) Comparability

Cross-national comparability is very high due to the use of a common national accounts framework and the standardized formulae to derive the statistics, but also owing to continuous efforts to enhance harmonization of the definition, coverage, and methodological treatment of the components comprising this labour cost indicator. The prevalence of this approach has been sought in due consideration of the use of different sources for the primary data of labour input (household surveys, business surveys, administrative records, etc.), the importance of adjustments for alignment with national accounts concepts, and statistical conversion techniques (e.g., from jobs to persons and to full-time equivalents).

(iii) Revisions

Nominal unit labour cost data are usually revised to reflect data changes in its components, which are derived from the introduction of new compilation standards (e.g. ESA 2010), periodic benchmarking on population census results, and improvement of labour force survey methodology. These methodological and statistical modifications may lead to some break in the data series if back estimations are not done for all underlying series.

II.3 Internal Imbalances

The internal imbalances cover MIP indicators derived from the price statistics as **% y-o-y change in deflated house prices**, underlying statistics from the national financial accounts (**Private sector credit flow as % of GDP,** consolidated; **Private sector debt as a % of GDP**, consolidated; **% y-on-y change in Total financial sector liabilities**, non-consolidated), the indicator from government finance statistics (**General government sector debt as % of GDP**) and the **Unemployment rate** (3 year average) from labour market statistics.

II.3.1 House price statistics

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

- **% y-o-y change in deflated house 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.

(A) Institutional issues

(i) Legal basis

At EU level, House Price Indices are compiled under the framework of the Harmonised Indices of Consumer Prices (HICPs). Harmonised Indices of Consumer Prices (HICPs) are harmonised inflation figures required under the Treaty on the Functioning of the European Union. Council Regulation (EC) No 2494/95 of 23 October 1995 (OJ L 257/1) sets the legal basis for establishing a harmonised methodology for the compilation of the HICPs, the MUICP and the EICP.

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.

(ii) Quality assurance mechanisms

Eurostat and National Statistical Institutes are working to ensure that the statistical practices used to compile national HPIs are in compliance with HPIs methodological requirements and that good practices in the field of house price indices are being followed, according to the methodology in the Technical Manual and the Handbook on Residential Property Prices Indices.

Eurostat has developed together with the EU Member States a framework to assess the quality of the HPIs, where the concepts in the Technical Manual are combined with the European Statistical System (ESS) quality dimensions. This harmonised framework aims to maintain and, where necessary, improve current practices, taking into account the country-specific conditions.

(iii) 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 ECB Executive Board and its Governing Council.

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.

(B) Compilation process

The HPI data are compiled at national level by the National statistical institutes. NSIs collect data from administrative sources on dwelling transactions and from other sources on real estate. Adjustments for differences over time in the characteristics of the dwellings transacted are made according to a common statistical methodology[17]. Since HPI time series start in most cases in the year 2005 or later, the estimation of back data is considered important for cyclical analyses. This however remains a challenge, since the collection of data and the compilation of indicators were typically conducted outside the area of official statistics. In 2012, Eurostat created a technical group of experts with the ECB, the BIS and the OECD for agreeing, where possible, on a common set of country back data and metadata. 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 with additional explanation given in metadata. Back data are generally of significantly lower statistical quality than HPIs.

For some countries the missing annual figures were back-casted by Eurostat, using econometric techniques and proxy data series resulting from the technical group mentioned in the paragraph above.

(C) Quality assessment of output

(i) Accuracy/Reliability

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

The accuracy of source data is monitored by assessing the methodological soundness of price and weight sources and the adherence to the methodological recommendations. There is a variety of data sources both for weights (National Account data, Household Budget Survey data, Construction Statistics, etc.) and prices (administrative data, bank (mortgage) data, construction companies, real estate agents, etc.).

(ii) Comparability

The comparability is ensured by the application of common definitions (European System of Accounts ESA 2010, Harmonized Indices of Consumer Prices (HICPs)).

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 or twice a year in ESS working groups or workshops.

(iii) Revisions

HPI series are revisable under the terms set in Commission Regulation (EC) No 1921/2001 of 28 September 2001. The published HPI data may be revised for mistakes, new or improved information, and changes in the system of harmonised rules. The HPI data is released quarterly, and they may include some provisional data for the latest quarter. These are usually confirmed or revised to the final figures the following quarter. Major revisions are normally released with explanatory notes.

[17] See the Methodological manual referred to in Commission Regulation (EU) No 93/2013.

II.3.2 Financial accounts statistics

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

- **Private sector credit flow as % of GDP,** consolidated;
- **Private sector debt as a % of GDP,** consolidated;
- **% y-on-y change in total financial sector liabilities,** non-consolidated.

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

(A) Institutional issues

(i) 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/2013/24) (henceforth the "MUFA Guideline").[18]

Annual financial accounts are compiled according to the requirements of the Regulation (EU) No 549/2013 of the European Parliament and of the Council on the European system of national and regional accounts in the European Union (the ESA 2010). Annual financial accounts data are transmitted to Eurostat in the framework of the ESA transmission programme (Annex B of the ESA 2010).

(ii) 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)[19] 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 and balance of payments statistics).

The ESA 2010 sets requirement for Member States to provide a self-prepared report on the quality of transmitted data (Article 4(2)).

(iii) 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 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).

[18] Guideline of the European Central Bank of 25 July 2013 on the statistical reporting requirements of the European Central Bank in the field of quarterly financial accounts (recast) (ECB/2013/24), OJ L 2, 7.1.2014, p. 34.

[19] http://www.ecb.europa.eu/pub/pdf/other/ecbstatisticsqualityframework200804en.pdf.

Private debt indicators allow for an assessment of the private sector vulnerability to changes in the business cycle, inflation and the interest rate. Large credit fluctuations are often associated with: potential banking system vulnerabilities, boom and bust cycles in asset markets, house price bubbles, current account imbalances. Practice suggests that high credit flows are one of the best indicators to predict crisis incidence early on. It is widely used by the Commission in the economic analysis of the EU Member States.

Annual financial accounts are most appropriate for the type of structural analysis needed in the MIP, where a long-term perspective is required. Several key indicators published by Eurostat are based on annual financial accounts, including debt-to-income ratios, return on capital employed, and net financial wealth.

(B) Compilation process

While annual and quarterly financial accounts are produced in most EU Member States by the NCBs , there is generally a close collaboration between the NCBs and NSIs, to integrate the quarterly and the annual financial accounts with the non-financial accounts mostly produced by NSIs in the EU into a joint exercise showing close institutional cooperation. 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 remains however. The change-over in both reporting requirements to ESA 2010 occurred in September/October 2014. The reporting time lag for the annual data remains officially 9 months (although some countries report much earlier), while it has been reduced to 100 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 sectors 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

(i) Accuracy/Reliability

Financial account data for the financial corporations (e.g. MFIs, Insurance Corporations, Investment Funds, Financial Vehicles Corporations,..) and general government sectors are based on statistical Regulations[20] directly addressed to the reporting agents and therefore use direct statistical sources which produce high quality and largely harmonized data within the EU. Financial accounts data for the **"**private**"** sectors, i.e. the non-financial corporation sector and the household sector do less rely on directly collected raw data but on information available to the compiler from their (financial) counterpart sectors and from financial market information. However, information on securities issues and holdings for all sectors,

[20] ECB Regulations impose statistical reporting obligation on MFIs, Investment funds, Financial vehicle corporations engaged in the securitisation of assets (FVCs) and Insurance corporations resident in the euro area:

- Regulation (EU) No 1071/2013 of the ECB of 24 September 2013 concerning the balance sheet of the monetary financial institutions sector (recast) (ECB/2013/33), OJ L 297, 7.11.2013, p. 1
- Regulation (EU) no 1073/2013 of the ECB of 18 October 2013 concerning statistics on the assets and liabilities of investment funds (recast) (ECB/2013/38), OJ L 297, 7.11.2013, p. 73
- Regulation (EU) no 1075/2013 of the ECB of 18 October 2013 concerning statistics on the assets and liabilities of financial vehicle corporations engaged in securitisation transactions (recast) (ECB/2013/40), OJ L 297, 7.11.2013, p. 107
- Regulation (EU) No 1374/2014 of the ECB of 28 November 2014 on statistical reporting requirements for insurance corporations (ECB/2014/50), OJ L 366, 20.12.2014, p. 36.

including for non-financial corporations, are also collected by means of statistical legal acts, including Regulations addressed directly to custodians and end-investors, and therefore provide high quality information for these entries in the financial accounts statistics.

(ii) 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. This report identified the new classification of holding companies as the most important methodological change introduced by ESA 2010. It became also apparent that there were still differences as to the recognition of entities with little physical presence ("brass plates", "SPEs") in their country of incorporation. In 2013, a joint ECB/Eurostat/OECD Task Force provided methodological guidance to classify holding companies, head offices and SPEs according to the new statistical standards (ESA 2010 and BPM).

Generally while financial accounts data for the "private" sectors are less comparable than those for the financial sectors, the comparability of the financial accounts data underlying the MIP debt indicators benefitted from the implementation of the ESA 2010 and BPM6 and the additional guidance by the ECB/Eurostat/OECD Task Force.

(iii) Revisions

In 2014 the change-over to the ESA 2010 led to substantial revisions in most countries, in particular due to the reclassification of holding companies and the recording of additional SPEs in the financial corporation sector. The size of these revisions differ between countries which reflects however different economic realities and in some cases different statistical practices before the change-over to ESA 2010. The routine revision of annual financial accounts data has an impact on the latest 1-3 years statistics.

II.3.3 Government finance statistics

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

- **General government sector debt as % of GDP.**

(A) Institutional issues

(i) Legal basis

For the purpose of the Excessive Deficit Procedure (EDP) in the Economic and monetary union (EMU), as well as for the Growth and Stability Pact, the current Protocol 12, annexed to the 2012 consolidated version of the Treaty on the Functioning of the European Union, provides a complete definition of government debt: "debt means total gross debt at nominal value outstanding at the end of the year and consolidated between and within the sectors of general government". This definition is supplemented by Council Regulation (EC) No 479/2009, as amended by the Commission Regulation (EU) No 220/2014, the latter specifying the components of government debt with reference to the definitions of financial liabilities in ESA 2010.

In this context, the stock of government debt in the Excessive Deficit Procedure (EDP debt) is equal to the sum of liabilities, at the end of year N, of all units classified within the general government sector (S.13) in the following categories:

AF.2 (currency and deposits) + AF.3 (debt securities) + AF.4 (loans).

The Council Regulation requires all EU countries to report EDP data 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.[21]

(ii) Quality assurance mechanisms

Council Regulation (EC) 479/2009, as amended 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.'*

(iii) Policy uses

The general government 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 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 within the published EDP inventories.[22]

(C) Quality assessment of output

(i) Accuracy/Reliability

In the report that was sent to the European Parliament on the fiscal data reported by Member States in October 2014, Eurostat noted the good overall quality of the reporting of fiscal data in 2014. Improvement is still expected with respect to the information on trade credits and to the consistency with the quarterly financial accounts for general government.

(ii) Comparability

In general, Member States keep providing good 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).

---

[21] The so-called EDP inventories are available on the Eurostat website.

[22] http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/excessive_deficit/edp_inventories

Eurostat introduced reservations, in the April 2015 EDP notifications, on the data reported by Bulgaria and Portugal.

(iii) Revisions

Besides the revisions due to the changeover to ESA2010 methodology, a number of countries reported other statistical revisions, not related to ESA 2010, impacting the government deficit/surplus and/or the debt. These largely related to new data sources and compilation methods, as well as improved source data (which is a normal feature of EDP data revisions).

II.3.4 Labour market statistics

The MIP scoreboard covers the following indicator:

- **3-year average unemployment rate.**

(A) Institutional issues

(i) Legal basis

The unemployment rate is the number of unemployed persons as a percentage of the labour force based on the International Labour Organization (ILO) definition. The labour force is the total number of people employed and unemployed. Unemployed persons comprise persons aged 15 to 74 who: - did not 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 data used to calculate the 3-annual averages of the unemployment rate are the Unemployment - LFS adjusted series. This series form a collection of monthly, quarterly and annual series that are benchmarked on the quarterly results of the EU Labour Force Survey (EU-LFS) and, where necessary, adjusted for breaks in the series. The MIP scoreboard indicator is the three-year backward moving average, i.e. the data for year Y is the arithmetic average of data for years Y, Y-1 and Y-2. It is calculated: [URt + URt-1 + UR t-2] /3.

The principal legal act governing the EU-LFS implementation is the Council Regulation (EC) No. 577/98[23]. The implementation rules are specified in the successive Commission regulations. This is the main regulation with provisions on design, survey characteristics and decision making processes.

(ii) Quality assurance mechanisms

The Labour Force Survey legislation requires a regular report from the Commission to the European Parliament and the EU Council on its implementation to be prepared every three years. To monitor the quality of the EU Labour Force Survey (EU-LFS) there are the following reports: Description of the characteristics of national surveys (annual), Quality report (annual) and Commission report to the Council and the Parliament (triennial)[24]. Reports are public and available on Eurostat website. 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.

(iii) Policy uses

The EU-LFS is the most important source of official statistics on labour markets in the European Union. Some key EU policy initiatives rely on EU-LFS data to monitor progress. For example two of the five

[23] Council Regulation (EC) No 577/98 of 9 March 1998 on the organisation of a labour force sample survey in the Community: http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:31998R0577

[24] All these reports are available at http://ec.europa.eu/eurostat/web/lfs/publications/quality-reporting

Europe 2020 headline targets are monitored with LFS and many other LFS-based indicators are used under the Europe 2020 Joint Assessment Framework. The LFS-based monthly unemployment rate is an important short-term economic indicator.

(B) Compilation process

The EU LFS is a quarterly survey. The method used in order to produce monthly unemployment rates is: for all countries, the non-seasonally adjusted quarterly averages of the monthly series are benchmarked to the quarterly LFS figures. The way the figures for the individual months as well as the provisional figures (for the period when LFS data are not yet available) are calculated depends on the availability and specific characteristics of the sources available in individual Member States. Eurostat aims at harmonizing the calculation process as much as possible. Apart from quarterly figures, in some Member States monthly and/or 3 month moving averages are produced from the LFS as well. Registered unemployment data which come for administrative sources are used for many Member States as auxiliary source.

Annual averages of the quarterly data are produced as simple averages of the quarterly results. Before 2004 the LFS was not a continuous survey in all European countries, but was conducted once or twice a year. For the period when the survey was run annually (in spring) or biannually (in spring and autumn), Eurostat calculates annual averages as follows: first, the annual or biannual results are disaggregated into quarterly results, by interpolation of the spring data; then the annual averages are obtained from those quarterly estimates. In general, the LFS detailed survey results and the LFS adjusted series are consistent from 2005 onwards. For a few countries the figures in the two collections diverge also for years after 2005. This is due to the need to correct for breaks in time-series introduced by incorporating the 2011 Census results into the weighting of the LFS series. The normal situation is that NSIs recalculate the most recent part of the time-series, while Eurostat recalculates the older parts. When NSIs transmit break-free series for quarterly LFS data only, Eurostat recalculates the monthly series so that they match the revised quarterly figures. The end of Eurostat's recalculated period for the monthly, the quarterly and the yearly data is reported (flagged with "i" in Eurobase).

(C) Quality assessment of output

(i) Accuracy/Reliability

The overall accuracy of EU-LFS is considered as high. The LFS covers persons living in private households to ensure a comparable coverage for all countries. The sampling designs in the LFS are chosen on a country by country basis. Regardless of the sampling method or which age groups are interviewed, the data records at Eurostat are representative for the population aged 15-74 (16-74 in Iceland, Norway, the United Kingdom, Italy and Spain).

The results are based on a sample of population and they are subject to the usual types of errors associated with sampling techniques and interviews. Sampling errors, non-sampling errors, measurement errors, processing errors and non-response are calculated for each country and documented in the Quality Report of the European Union Labour Force Survey. Figures on unemployment fulfil the Eurostat requirements concerning reliability.

(ii) Comparability

A Council regulation[25], common variable definitions[26], common explanatory notes[27] and a Commission regulation regarding the operational definition of unemployment and the twelve principles of questionnaire construction[28] ensure comparability of the statistics across countries.

While harmonization could be improved further across countries, the unemployment data are regarded as being of high quality and are broadly comparable.

(iii) Revisions

The complete time series are re-calculated with every data transmission. There are transmissions 12 times a year for monthly data, and 4 times a year for quarterly and annual data. In each one of those releases previously released data could be revised. Every month new figures from the public employment offices' administrative registers or from the EU-LFS are added into the process and new estimates are calculated. This might cause a slight revision in the past figures due to the re-execution of the seasonal adjustment procedure. Occasional revisions may be caused by methodological changes in the production of the monthly data.

Compared to the 2014 Statistical Annex, for several Member States the results of Population Census 2011 are now included in their revised unemployment time series. The unemployment rate of France has been revised downwards. This revision is mainly due to the changes in questionnaire.

[25] Council Regulation (EC) No 577/98 of 9 March 1998 on the organisation of a labour force sample survey in the Community: http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:31998R0577

[26] Commission Regulation (EC) No 377/2008 of 25 April 2008 implementing Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community as regards the codification to be used for data transmission from 2009 onwards, the use of a sub-sample for the collection of data on structural variables and the definition of the reference quarters http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32008R0377

[27] http://ec.europa.eu/eurostat/documents/1978984/6037342/EU-LFS-explanatory-notes-from-2014-onwards.pdf

[28] Commission Regulation (EC) No 1897/2000 of 7 September 2000 implementing Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community concerning the operational definition of unemployment http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32000R1897

ANNEX 1

MIP SCOREBOARD INDICATORS

Indicator	Statistical domain
3 year average of Current account balance as % of GDP	BoP/IIP
Net international investment position as % of GDP	BoP/IIP
% change (3 years) of Real effective exchange rate	
% change (5 years) Share of world exports	BoP/IIP
% change (3 years) of Nominal unit labour cost	NA
% change (1 year) of House prices - deflated	Housing Price Stat/NA
Private credit flow as % of GDP	FA
Private debt as % of GDP	FA
General government gross debt (EDP) as % of GDP	EDP/GFS
3 year average of Unemployment rate	LFS
% change (1 year) of Total financial sector liabilities	FA

Note: NA- National Accounts; BoP/IIP – Balance of Payments and International Investment Position; FA – Financial Accounts; EDP/GFS – Excessive Deficit Procedure/Government Finance Statistics; and LFS – Labour Force Survey/Labour Market Statistics

ANNEX 2

MIP AUXILIARY INDICATORS

% change (1 year) of Real GDP
Gross Fixed Capital Formation as % of GDP
Gross Domestic Expenditure on R&D as % of GDP
Net Lending/Borrowing as % of GDP
Net External Debt as % of GDP
Inward FDI Flows as % of GDP
Inward FDI Stocks as % of GDP
Net Trade Balance of Energy Products as % of GDP
% change (3 years) of Real Effective Exchange Rates - EA trading partners
% change (5 years) of Share of OECD exports
% change (5 years) of Terms of Trade
% change (1 year) of Export Market Shares - in volume
% change (1 year) of Labour Productivity
% change (10 years) of Nominal Unit Labour Cost
% change (10 years) of Unit Labour Cost Performance Related to EA
% change (3 years) of Nominal House Price Index
Residential Construction as % of GDP
Private Debt as % of GDP - non consolidated, % of GDP
Financial Sector Leverage (debt to equity), %
% change (1 year) of Employment
Activity Rate (15-64 years) - (% of total population in the same age group)
Long-term Unemployment Rate (% of active population in the same age group)
Youth Unemployment Rate (% of active population in the same age group)
Young People not in Education, Employment or Training (15-24 years) - (% of active population in the same age group)
People at Risk of Poverty or Social Exclusion (% of total population)
People at Risk of Poverty after Social Transfers Rate (% of total population)
Severely Materially Deprived People (% of total population)
People Living in Households with Very Low Work Intensity (% of population aged 0-59)