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Envisaged Revision of Selected Auxiliary Indicators of the MIP Scoreboard

1. Background and motivation

The Macroeconomic Imbalance Procedure (MIP) aims to detect the emergence of imbalances. The detection under the MIP is built around a two-step approach where the first step is an alert mechanism, built around the economic reading of a scoreboard of macroeconomic indicators (the MIP scoreboard), that works as a filter to select countries for which a more in-depth assessment is warranted to assess macro stability risks and the existence of macroeconomic imbalances.

This staff working document presents a number of selected envisaged changes to the auxiliary indicators of the MIP Scoreboard used in the Alert Mechanism Report (AMR). The changes would be implemented with the forthcoming AMR-2019.

The scoreboard consists of 14 headline indicators with thresholds, and is complemented by auxiliary indicators with no thresholds (see Table 1). The economic reading of the scoreboard in the AMR is based not only on these headline indicators, but also on additional relevant data and information as specified by the Regulation. This includes 28 auxiliary indicators without thresholds that are regularly published in the AMR. These indicators are not foreseen in the MIP regulation (Regulation 1176/2011), do not bind the Commission in its analysis and play no direct role in the assessment of which countries are to be selected for in-depth reviews (IDRs) or in IDR analyses (see Table 2).

By Regulation 1176/2011, the Commission is responsible for maintaining and revising the MIP scoreboard. The Commission is bound to regularly review and update the scoreboard, also to reflect improvements in data quality (Art. 4.7 of Regulation 1176/2011). In revising the scoreboard the Commission consults Parliament and Council.¹

Since its introduction, the AMR scoreboard underwent a number of revisions. In 2012 a headline indicator for the financial sector was added (total financial sector liabilities, % y.o.y change). In 2013, the statistical definition of a number of headline scoreboard variables was revised (definition of the REER indicator, private sector debt and credit flow) and some auxiliary indicators were added (including a set of social and employment indicators). In 2015, headline employment indicators were added. At technical level the Commission received feedback on proposed revisions from Council expert committees. The European Parliament and the Council were consulted on all occasions.

The currently envisaged revisions are parsimonious, and avoid the proliferation of new variables, while permitting to benefit from improvements in available statistics and ensuring the pertinence of the indicators. Keeping a broad stability of the scoreboard is of value. Nevertheless, the selected revisions in the set of auxiliary indicators presented in this note aim at taking advantage on improved statistics on balance of payments and banking sectors data (notably Non Performing Loans), and to update the scoreboard in such a way to include variables that are already widely used in AMR analysis and in the IDRs.

¹ "The Commission should closely cooperate with the European Parliament and the Council when drawing up the scoreboard and the set of macroeconomic and macrofinancial indicators for Member States. The Commission should present suggestions for comments to the competent committees of the European Parliament and of the Council on plans to establish and adjust the indicators and thresholds. The Commission should inform the European Parliament and the Council of any changes to the indicators and thresholds and explain its reasons for suggesting such changes.", Recital 12 of Regulation (EU) 1176/2011. The MIP regulation refers only to the headline indicators of the scoreboard, as auxiliary indicators without indicative thresholds were added only after the regulation was published. For the current scoreboard revision, which is the first to concern only auxiliary indicators, an analogous consultation process is carried as those of previous revisions that concerned also headline indicators.

2. Envisaged revisions of auxiliary indicators

Re-definition of an indicator of external stocks to obtain a less narrow representation of external stocks carrying risks and address interpretation shortcomings.

- The **Net External Debt (NED)** is envisaged to be replaced with "**NIIP excluding non-defaultable instruments (% of GDP)**" – NENDI - that focuses on the NIIP components that may be subject to default or partly be used as collateral. The inclusion of NED was motivated by the need of a complementary variable to the Net International Investment Position (NIIP, included in the headline indicators) restricted to financial instruments carrying default risk (notably debt as opposed to equity). Both the NED and the NENDI incorporate net bonds, deposits, loans, and most exchange reserves. Compared with NED, NENDI: (i) *excludes net intra-company FDI debt*, which in some cases can account for a large share of cross-border debt without representing solvency concerns; (ii) *includes mutual fund shares*, which are sometimes very relevant item and are mostly backed by bonds; and (iii) *includes net financial derivatives*. Seen from a different perspective, NENDI is a subset of the NIIP that abstracts from its pure equity-related components, i.e. foreign direct investment (FDI) equity and equity shares, and from intracompany cross-border FDI debt, i.e., it represents the NIIP excluding instruments that cannot be subject to default. This revision has become possible after the revision of the presentational basis for Balance of Payment statistics (from BPM5 to BPM6), that permits a finer breakdown on net foreign assets and liabilities.

Re-definition of an indicator of financial sector leverage to address interpretation shortcomings:

- **The non-consolidated financial leverage from national accounts is replaced with "Consolidated banking leverage, domestic and foreign entities (asset-to-equity multiple)"** from ECB consolidated banking data.² The previous indicator provides the ratio of debt over equity, based on the overall financial sector (including banks, insurers, pension funds, mutual funds, and other financial institutions) on a non-consolidated basis. Its use has shown a number of drawbacks: (i) *non-consolidated data* complicates the reading of the indicator as lending among banks and financial institutions considerably affects the figures and comparisons across countries since the relevance of that lending may vary across countries; (ii) the economic *interpretation of leverage for mutual funds and other financial institutions* (OFI) is problematic, as mutual funds do not have debt liabilities in the proper sense, and OFIs engage heavily in notional debt-equity transformation across borders; and (iii) it is based on *market values*, which induces cyclicalities in the indicator as market values tend to rise in booms and to fall in downturns. The leverage indicator based on ECB data implies a narrowing of the scope since the indicator does not cover the entire financial sector but the banking sector only. However, the new indicator addresses the drawback of the previous indicator listed above as it allows for a more straightforward economic interpretation, is comparable across countries, and is consistently based on book values which are not affected by swings in market valuations.

Addition of two indicators that are already regularly used in MIP analysis

- **Adding "Household debt, consolidated (including NPISH, % of GDP)" to complement the headline indicator on private-sector debt.** The inclusion of this variable helps distinguishing between the debt of households and that of non-financial corporations (which together yield total private debt, already included among the indicators of the headline MIP scoreboard). Such a distinction helps interpreting and assessing debt developments and is already regularly applied in AMR and IDR analysis.

² Note that 'domestic and foreign entities' expresses the notion that this indicator combines leverage not only of domestic banks, but also that of foreign-owned subsidiaries and affiliates operating within a country.

- **Adding "*Gross non-performing loans, domestic and foreign entities (% of gross loans)*" reflect its routine use in MIP assessments.** The indicator is already regularly used in MIP-related analysis. The addition of this variable to the scoreboard auxiliary indicators has become possible by the introduction of cross-country-comparable data in the ECB's consolidated banking statistics in 2015. Although Non Performing Loans net of provisions is more informative on the implications of NPL for banks, and therefore appropriate for banking sector surveillance, the gross indicator is consistent with the macro-financial focus of MIP surveillance and provides complementary information to assess private debt, which features among the variables in the headline scoreboard.

In order to keep the scoreboard not only relevant, but also parsimonious (no variable proliferation), the total number of auxiliary indicators would remain unchanged. Streamlining avenues were identified by means of no longer including **two auxiliary indicators as follows:**

- **Ten-year change of nominal unit labour cost**, as it overlaps with data on ULC already contained in the headline scoreboard (while the auxiliary indicators contain information on the ten year change in ULC growth compared with euro area);
- **Non-consolidated private-sector debt**, which has been superseded by the headline indicator on consolidated private-sector debt for the reasons set out above.

Table 2 and 3 report, respectively, values for 2016 for the current set of auxiliary indicators and for the set of auxiliary indicators after the revisions presented above. The annex summarises the statistical definitions of the indicators.

Table 1: MIP Scoreboard, data for year 2016

| Year 2016 | External imbalances and competitiveness | | | | | Internal imbalances | | | | | | Employment indicators | | |
|------------|---|--|---|--|---|--|---|--|--|------------------------------------|--|--|---|---|
| | Current account balance - % of GDP (3 year average) | Net international investment position (% of GDP) | Real effective exchange rate - 42 trading partners, HICP deflator (3 year % change) | Export market share - % of world exports (5 year % change) | Nominal unit labour cost index (2010=100) (3 year % change) | House price index (2015=100), deflated (1 year % change) | Private sector credit flow, consolidated (% of GDP) | Private sector debt, consolidated (% of GDP) | General government gross debt (% of GDP) | Unemployment rate (3 year average) | Total financial sector liabilities, non-consolidated (1 year % change) | Activity rate - % of total population aged 15-64 (3 year change in pp) | Long-term unemployment rate - % of active population aged 15-74 (3 year change in pp) | Youth unemployment rate - % of active population aged 15-24 (3 year change in pp) |
| Thresholds | -4/6% | -35% | ±5% (EA) ±11% (Non-EA) | -6% | 9% (EA) 12% (Non-EA) | 6% | 14% | 133% | 60% | 10% | 16.5% | -0.2 pp | 0.5 pp | 2 pp |
| BE | -0.3 | 51.2 | -0.4 | -2.3 | -0.6 | 1.0p | 13.3 | 190.1 | 105.7 | 8.3 | 1.2 | 0.1 | 0.1 | -3.6 |
| BG | 1.8 | -47.0 | -4.7 | 8.2 | 9.5p | 7.1p | 4.0 | 104.9 | 29.0 | 9.4 | 11.1 | 0.3 | -2.9 | -11.2 |
| CZ | 0.5 | -24.6 | -3.7 | 2.9 | 2.9 | 6.7p | 4.4 | 68.7 | 36.8 | 5.1 | 14.5 | 2.1 | -1.3 | -8.4 |
| DK | 8.4 | 54.8 | -1.5 | -4.2 | 3.4 | 4.2 | -10.4 | 210.7 | 37.7 | 6.3 | 3.3 | 1.9b | -0.4b | -1.0 |
| DE | 8.1 | 54.4 | -2.6 | 2.8 | 5.2 | 5.4 | 3.8 | 99.3 | 68.1 | 4.6 | 5.2 | 0.3 | -0.6 | -0.7 |
| EE | 1.4 | -37.1 | 4.5 | -0.7 | 13.4 | 3.8 | 5.9 | 115.4 | 9.4 | 6.8 | 7.2 | 2.4 | -1.7 | -5.3 |
| IE | 5.5 | -176.2 | -6.6 | 59.8 | -20.5 | 6.6p | -19.0 | 278.1 | 72.8 | 9.5 | 2.5 | 0.7 | -3.6 | -9.6 |
| EL | -1.0 | -139.4 | -3.9 | -19.0 | -3.3p | -2.0e | -1.7p | 124.7p | 180.8 | 25.0 | -16.6 | 0.7 | -1.5 | -11.0 |
| ES | 1.4 | -83.9 | -4.3 | 2.2 | 0.4p | 4.7 | -1.0p | 146.7p | 99.0 | 22.1 | 0.9 | -0.1 | -3.5 | -11.1 |
| FR | -0.7 | -15.7 | -3.1 | -2.4 | 1.4p | 1.0 | 6.2p | 146.9p | 96.5 | 10.3 | 4.3 | 0.7 | 0.2 | -0.3 |
| HR | 2.9 | -70.1 | 0.1 | 8.1 | -5.9d | 2.1 | -0.1e | 106.1e | 82.9 | 15.6 | 2.5 | 1.9 | -4.4 | -18.1 |
| IT | 2.1 | -9.8 | -3.4 | -2.8 | 1.9 | -0.8p | 0.6 | 113.6 | 132.0 | 12.1 | 3.2 | 1.5 | -0.2 | -2.2 |
| CY | -3.6 | -127.8 | -6.5 | -3.0 | -6.2p | 1.6 | 10.2p | 344.6p | 107.1 | 14.7 | 0.7 | -0.2 | -0.3 | -9.8 |
| LV | -0.3 | -58.9 | 4.9 | 9.3 | 16.5 | 7.4 | 0.3 | 88.3 | 40.6 | 10.1 | 5.8 | 2.3 | -1.7 | -5.9 |
| LT | -0.3 | -43.2 | 5.4 | 5.4 | 14.7 | 4.5 | 4.3 | 56.2 | 40.1 | 9.2 | 16.3 | 3.1 | -2.1 | -7.4 |
| LU | 5.0 | 34.7 | -1.5 | 26.2 | 2.5 | 5.9 | 1.5 | 343.6 | 20.8 | 6.3 | 7.5 | 0.1 | 0.4 | 2.2 |
| HU | 3.6 | -65.0 | -5.0 | -0.4 | 3.3 | 13.6 | -3.6 | 77.0 | 73.9 | 6.5 | 19.5 | 5.4 | -2.5 | -13.7 |
| MT | 6.7 | 47.6 | -2.5 | 8.7 | -0.1 | 4.8p | 11.1 | 128.4 | 57.6 | 5.3 | 1.7 | 4.1 | -1.0 | -2.0 |
| NL | 8.8 | 69.1 | -2.3 | 0.1 | -1.1p | 4.4 | 1.5p | 221.5p | 61.8 | 6.8 | 5.3p | 0.3 | 0.0 | -2.4 |
| AT | 2.2 | 5.6 | 1.0 | -4.0 | 5.8 | 7.2 | 3.2 | 124.0 | 83.6 | 5.8 | -2.4 | 0.7 | 0.6 | 1.5 |
| PL | -1.0 | -60.7 | -5.0 | 18.1 | 2.1p | 2.5 | 4.7 | 81.6 | 54.1 | 7.6 | 8.9 | 1.8 | -2.2 | -9.6 |
| PT | 0.3 | -104.7 | -1.9 | 5.8 | 0.9p | 6.1 | -2.2p | 171.4p | 130.1 | 12.6 | -0.2 | 0.7 | -3.1 | -9.9 |
| RO | -1.3 | -49.9 | -2.5 | 23.6 | 6.0p | 6.5 | 0.6p | 55.8p | 37.6 | 6.5 | 7.6 | 0.7 | -0.2 | -3.1 |
| SI | 5.1 | -36.9 | -0.5 | 4.0 | 0.7 | 3.6 | -0.8 | 80.5 | 78.5 | 8.9 | 3.2 | 1.1 | -0.9 | -6.4 |
| SK | -0.7 | -62.4 | -1.6 | 7.3 | 3.5 | 7.0 | 9.2 | 94.7 | 51.8 | 11.5 | 8.5 | 2.0 | -4.2 | -11.5 |
| FI | -1.2 | -2.3 | 0.5 | -14.1 | 2.1 | -0.3 | 2.2 | 149.3 | 63.1 | 9.0 | 4.5 | 0.7 | 0.6 | 0.2 |
| SE | 4.6 | 11.2 | -9.2 | -7.9 | 2.0 | 7.6 | 7.6 | 188.5 | 42.2 | 7.4 | 9.0 | 1.0 | -0.1 | -4.7 |
| UK | -5.5 | -1.1 | 0.2 | -0.1 | 3.1 | 5.5 | 8.2 | 168.1 | 88.3 | 5.4 | 11.6 | 0.9 | -1.4 | -7.7 |

Flags:b:Break in series. e:Estimated. p:Provisional.

1) For the employment indicators, see page 2 of the AMR 2016. 2) House price index e = source NCB for EL. 3) For NULC HR, d: employment data use national concept instead of domestic concept. 4) Private sector debt, private sector credit flow: the decline for IE relative to 2015 predominantly reflects restructuring and re-domiciling activities of large multinational companies.

Source: European Commission, Eurostat and Directorate General for Economic and Financial Affairs (for Real Effective Exchange Rate), and International Monetary Fund data, WEO (for world exports series)

Table 2: Auxiliary indicators in use so far, data for year 2016

| Year 2016 | Real GDP (1 year % change) | Gross fixed capital formation (% of GDP) | Gross domestic expenditure on R&D (% of GDP) | Current plus capital account (Net lending-borrowing) (% of GDP) | Net external debt (% of GDP) | Foreign direct investment in the reporting economy - flows (% of GDP) | Foreign direct investment in the reporting economy - stocks (% of GDP) | Net trade balance of energy products (% of GDP) | Real effective exchange rate - Euro Area trading partners (3 year % change) | Export performance against advanced economies (5 year % change) | Terms of trade (5 year % change) | Export market share in volume (1 year % change) | Labour productivity (1 year % change) | Nominal unit labour cost index (2010=100) (10 year % change) | Unit labour cost performance relative to EA (10 year % change) | House price index (2015=100) - nominal (3 year % change) | Residential construction (% of GDP) | Private sector debt, non-consolidated (% of GDP) | Financial sector leverage, non-consolidated (% debt-to-equity) |
|-----------|-------------------------------|---|--|--|---------------------------------|--|---|--|--|--|-------------------------------------|--|--|---|---|---|--|---|---|
| BE | 1.5 | 23.4 | 2.5p | 0.2 | -26.6 | 8.0 | 214.5 | -2.2 | 2.1 | -5.0 | 2.0 | 5.2 | 0.2 | 17.6 | 1.5 | 3.8p | 5.9 | 225.5 | 192.6 |
| BG | 3.9 | 18.6 | 0.8p | 7.5 | -9.5 | 2.2 | 88.3 | -2.4 | -4.6 | 5.1 | 3.0 | 5.8 | 3.4p | 77.5p | 52.1 | 11.6p | 2.7 | 117.0 | 475.6 |
| CZ | 2.6 | 25.0 | 1.7p | 2.2 | -13.5 | 3.3 | 75.0 | -2.1 | -3.6 | -0.0 | 3.6 | 2.2 | 1.3 | 17.0 | -0.9 | 14.2p | 3.7 | 77.5 | 530.0 |
| DK | 1.7 | 20.1 | 2.9e | 7.3 | -7.3 | 2.1 | 52.5 | 0.0 | -0.2 | -6.9 | 2.6 | 0.2 | 0.0 | 20.9 | 4.4 | 16.2 | 4.4 | 221.3 | 158.9 |
| DE | 1.9 | 20.0 | 2.9e | 8.4 | -14.6 | 1.5 | 41.7 | -1.5 | 0.4 | -0.1 | 6.6 | 0.3 | 0.6 | 19.0 | 3.2 | 14.5 | 5.9 | 105.9 | 367.2 |
| EE | 2.1 | 22.3 | na | 3.0 | -11.7 | 3.2 | 99.8 | -1.0 | 0.4 | -3.5 | 3.0 | 1.8 | 1.8 | 64.4 | 38.6 | 27.3 | 4.8 | 126.6 | 359.1 |
| IE | 5.1 | 31.8 | 1.2e | 2.3 | -368.6 | 25.8 | 503.3 | -1.1 | -0.9 | 55.3 | 0.4 | 2.3 | 2.3 | -23.6 | -28.8 | 39.6p | 2.1 | 300.2 | 72.3 |
| EL | -0.2p | 11.7p | 1.0p | -0.5 | 137.5 | 1.6 | 16.0 | -1.7p | -3.2 | -21.2 | 6.1p | -4.1p | -0.7p | 1.9p | -11.5 | -14.2 | 0.6p | 124.7p | 1354.2 |
| ES | 3.3p | 20.0p | na | 2.2 | 88.8 | 2.6 | 59.7 | -1.5p | -2.2 | -0.7 | 0.0p | 2.5p | 0.7p | 5.9p | -8.4 | 8.7 | 4.6p | 165.8p | 452.0 |
| FR | 1.2p | 22.0p | na | -0.9 | 37.5 | 1.7 | 44.8 | -1.4p | 0.1 | -5.1 | 6.0p | -0.5p | 0.5p | 15.9p | -0.1 | -2.0 | 6.0p | 188.7p | 347.5 |
| HR | 3.0e | 19.9e | 0.9p | 3.5 | 40.9 | 3.7 | 57.7 | -2.7e | -1.0 | 5.1 | 1.7e | 3.3e | 2.7d | 4.3d | -5.1 | -3.6 | na | 130.6e | 375.9 |
| IT | 0.9 | 17.1 | na | 2.6 | 55.1 | 1.0 | 25.9 | -1.6 | -0.7 | -5.5 | 7.5 | 0.1 | -0.3 | 16.4 | 0.6 | -7.6p | 4.4 | 116.5 | 751.4 |
| CY | 3.0p | 17.5p | na | -4.7 | 152.0 | 13.0 | 1061.6 | -3.4p | -3.3 | -5.7 | 0.0p | 1.6p | -0.1p | 3.0p | -7.9 | -2.9p | 4.6p | 345.6p | 76.3 |
| LV | 2.1 | 18.2 | 0.4p | 2.4 | 28.8 | 0.9 | 58.1 | -2.3 | -0.1 | 6.2 | -0.1 | 1.8 | 2.4 | 56.6 | 27.2 | 11.1 | 2.0 | 96.9 | 643.0 |
| LT | 2.3 | 18.9 | 0.7p | 0.4 | 24.7 | 2.3 | 41.3 | -2.6 | -0.7 | 2.4 | 5.6 | 1.2 | 0.4 | 28.0 | 5.3 | 16.3 | 3.0 | 63.3 | 547.5 |
| LU | 3.1 | 17.2 | na | 4.4 | -1875.5 | 23.2 | 8938.5 | -2.5 | -0.2 | 22.7 | -1.0 | 0.4 | 0.0 | 28.4 | 7.8 | 16.6 | 3.2 | 410.1 | 54.0 |
| HU | 2.2 | 19.2 | 1.2 | 6.2 | 9.5 | 55.6 | 260.8 | -3.2 | -5.1 | -3.2 | 2.6 | 1.1 | -0.4 | 23.2 | 9.1 | 33.6 | 2.4 | 92.5 | 75.8 |
| MT | 5.5 | 23.8 | 0.6p | 7.4 | -222.0 | 22.3 | 1736.5 | -9.0 | 2.1 | 5.6 | 1.4 | 1.2 | 1.8 | 22.1 | 6.9 | 14.6p | 3.9 | 194.8 | 35.4 |
| NL | 2.2p | 19.9p | na | 8.8 | 43.7 | 19.6 | 598.9 | -0.7p | -0.4 | -2.7 | 1.8p | 2.0p | 1.1p | 14.7p | 1.7 | 9.9 | 4.0p | 231.3p | 119.8p |
| AT | 1.5 | 23.1 | 3.1p | 2.0 | 19.5 | -7.8 | 66.6 | -1.9 | 2.4 | -6.7 | 2.1 | -0.4 | 0.2 | 24.1 | 4.8 | 17.8 | 4.2 | 142.2 | 191.0 |
| PL | 2.9 | 18.1 | na | 0.8 | 32.1 | 3.6 | 50.2 | -1.4 | -5.5 | 14.8 | 4.9 | 6.5 | 2.3p | 21.1p | 2.3 | 4.4 | 3.0 | 86.4 | 321.0 |
| PT | 1.5p | 15.3p | 1.3p | 1.7 | 94.5 | 4.5 | 76.1 | -1.6p | 0.5 | 2.8 | 7.8p | 1.8p | -0.1p | 2.6p | -11.2 | 15.1 | 2.5p | 185.0p | 394.9 |
| RO | 4.6p | 22.7p | na | 0.4 | 22.5 | 3.3 | 44.8 | -0.9p | -2.6 | 20.1 | 4.8p | 6.0p | 5.5p | 44.0p | 20.3 | 6.7 | 2.5p | 57.2p | 406.7 |
| SI | 3.1 | 17.6 | na | 4.5 | 29.0 | 3.2 | 37.1 | -2.1 | -1.6 | 1.1 | 3.0 | 4.1 | 1.2 | 20.6 | 1.7 | -2.8 | 2.1 | 88.1 | 399.3 |
| SK | 3.3 | 21.2 | 0.8 | 0.5 | 28.4 | 4.0 | 65.6 | -2.6 | -2.0 | 4.3 | -2.2 | 3.9 | 0.9 | 16.1 | -1.7 | 14.0 | 2.4 | 92.6 | 571.6e |
| FI | 1.9 | 21.5 | 2.8 | -1.3 | 51.8 | -1.8 | 49.9 | -1.4 | 0.5 | -16.5 | 5.4 | -1.0 | 1.4 | 26.4 | 8.1 | 0.3 | 6.1 | 176.4 | 293.1 |
| SE | 3.3 | 24.0 | 3.3p | 4.4 | 45.6 | 2.9 | 80.3 | -0.8 | -7.7 | -10.5 | 1.8 | 1.0 | 1.6 | 25.0 | 8.4 | 34.4 | 5.1 | 231.6 | 185.3 |
| UK | 1.8 | 16.4 | na | -6.0 | na | 11.2 | 74.5 | -0.5 | 5.1 | -2.9 | 7.3 | -1.2 | 0.4 | 20.4 | 2.9 | 22.4 | 3.6 | 168.2 | 686.6 |

Indicators affected by revision highlighted in black font. Grey denotes indicators that the proposal leaves unchanged.

Flags:e:Estimated. p:Provisional.

1) House price index e = source NCB for EL. 2) Official transmission deadline for 2016 data on Gross domestic expenditure on R&D is 31 October 2017 while data were extracted on 24 October 2017. 3) Nominal unit labour cost and labour productivity for HR d: employment data use national concept instead of domestic concept. 4) Private sector debt, private sector credit flow: the decline for IE relative to 2015 predominantly reflects restructuring and re-domiciling activities of large multinational companies.

Source: Eurostat, Directorate General for Economic and Financial Affairs (for Real Effective Exchange Rate) and International Monetary Fund data, WEO (for world exports series)

Table 3: Proposed revision of auxiliary indicators, data for year 2016

| Year 2016 | Real GDP (1 year % change) | Gross fixed capital formation (% of GDP) | Gross domestic expenditure on R&D (% of GDP) | Current plus capital account (Net lending-borrowing) (% of GDP) | NIP excluding non- defaultable instruments (% of GDP) | Foreign direct investment in the reporting economy - flows (% of GDP) | Foreign direct investment in the reporting economy - stocks (% of GDP) | Net trade balance of energy products (% of GDP) | Real effective exchange rate - Euro Area trading partners (3 year % change) | Export performance against advanced economies (5 year % change) | Terms of trade (5 year % change) | Export market share in volume (1 year % change) | Labour productivity (1 year % change) | Gross non-performing loans, domestic and foreign entities (% of gross loans) | Unit labour cost performance relative to EA (10 year % change) | House price index (2015=100) - nominal (3 year % change) | Residential construction (% of GDP) | Household debt, consolidated (incl. NPISH, % of GDP) | Consolidated banking leverage, domestic and foreign entities (asset-to-equity multiple) |
|-----------|-------------------------------|---|---|---|---|---|--|---|---|---|-------------------------------------|--|--|--|--|--|--|---|---|
| BE | 1.5 | 23.4 | 2.5p | 0.2 | 48.6 | 8.0 | 214.5 | -2.2 | 2.1 | -5.0 | 2.0 | 5.2 | 0.2 | 3.2p | 1.5 | 3.8p | 5.9 | 59.2 | 14.2p |
| BG | 3.9 | 18.6 | 0.8p | 7.5 | 29.3 | 2.2 | 88.3 | -2.4 | -4.6 | 5.1 | 3.0 | 5.8 | 3.4p | 12.8p | 52.1 | 11.6p | 2.7 | 20.9 | 7.7p |
| CZ | 2.6 | 25.0 | 1.7p | 2.2 | 27.3 | 3.3 | 75.0 | -2.1 | -3.6 | -0.0 | 3.6 | 2.2 | 1.3 | 4.0p | -0.9 | 14.2p | 3.7 | 31.3 | 10.7p |
| DK | 1.7 | 20.1 | 2.9e | 7.3 | 14.8 | 2.1 | 52.5 | 0.0 | -0.2 | -6.9 | 2.6 | 0.2 | 0.0 | 3.3p | 4.4 | 16.2 | 4.4 | 129.2 | 16.7p |
| DE | 1.9 | 20.0 | 2.9e | 8.4 | 41.6 | 1.5 | 41.7 | -1.5 | 0.4 | -0.1 | 6.6 | 0.3 | 0.6 | 2.6p | 3.2 | 14.5 | 5.9 | 53.1 | 18.4p |
| EE | 2.1 | 22.3 | na | 3.0 | 19.8 | 3.2 | 99.8 | -1.0 | 0.4 | -3.5 | 3.0 | 1.8 | 1.8 | 1.7p | 38.6 | 27.3 | 4.8 | 41.4 | 7.7p |
| IE | 5.1 | 31.8 | 1.2e | 2.3 | -233.5 | 25.8 | 503.3 | -1.1 | -0.9 | 55.3 | 0.4 | 2.3 | 2.3 | 13.1p | -28.8 | 39.6p | 2.1 | 52.0 | 7.4p |
| EL | -0.2p | 11.7p | 1.0p | -0.5 | -128.9 | 1.6 | 16.0 | -1.7p | -3.2 | -21.2 | 6.1p | -4.1p | -0.7p | 46.3p | -11.5 | -14.2 | 0.6p | 60.7 | 10.1p |
| ES | 3.3p | 20.0p | na | 2.2 | -62.0 | 2.6 | 59.7 | -1.5p | -2.2 | -0.7 | 0.0p | 2.5p | 0.7p | 5.7p | -8.4 | 8.7 | 4.6p | 64.1 | 13.2p |
| FR | 1.2p | 22.0p | na | -0.9 | -32.1 | 1.7 | 44.8 | -1.4p | 0.1 | -5.1 | 6.0p | -0.5p | 0.5p | 3.6p | -0.1 | -2.0 | 6.0p | 57.2 | 16.0p |
| HR | 3.0e | 19.9e | 0.9p | 3.5 | -25.3 | 3.7 | 57.7 | -2.7e | -1.0 | 5.1 | 1.7e | 3.3e | 2.7d | 10.7p | -5.1 | -3.6 | na | 35.3 | 7.2p |
| IT | 0.9 | 17.1 | na | 2.6 | -10.4 | 1.0 | 25.9 | -1.6 | -0.7 | -5.5 | 7.5 | 0.1 | -0.3 | 15.0p | 0.6 | -7.6p | 4.4 | 41.5 | 14.2p |
| CY | 3.0p | 17.5p | na | -4.7 | -118.4 | 13.0 | 1061.6 | -3.4p | -3.3 | -5.7 | 0.0p | 1.6p | -0.1p | 35.4p | -7.9 | -2.9p | 4.6p | 120.6 | 10.7p |
| LV | 2.1 | 18.2 | 0.4p | 2.4 | -9.9 | 0.9 | 58.1 | -2.3 | -0.1 | 6.2 | -0.1 | 1.8 | 2.4 | 6.3p | 27.2 | 11.1 | 2.0 | 23.7 | 9.9p |
| LT | 2.3 | 18.9 | 0.7p | 0.4 | -13.9 | 2.3 | 41.3 | -2.6 | -0.7 | 2.4 | 5.6 | 1.2 | 0.4 | 4.0p | 5.3 | 16.3 | 3.0 | 22.8 | 11.6p |
| LU | 3.1 | 17.2 | na | 4.4 | -3802.0 | 23.2 | 8938.5 | -2.5 | -0.2 | 22.7 | -1.0 | 0.4 | 0.0 | 0.8p | 7.8 | 16.6 | 3.2 | 64.4 | 13.4p |
| HU | 2.2 | 19.2 | 1.2 | 6.2 | -12.2 | 55.6 | 260.8 | -3.2 | -5.1 | -3.2 | 2.6 | 1.1 | -0.4 | 11.9p | 9.1 | 33.6 | 2.4 | 20.3 | 9.9p |
| MT | 5.5 | 23.8 | 0.6p | 7.4 | 214.0 | 22.3 | 1736.5 | -9.0 | 2.1 | 5.6 | 1.4 | 1.2 | 1.8 | 4.1p | 6.9 | 14.6p | 3.9 | 51.9 | 15.7p |
| NL | 2.2p | 19.9p | na | 8.8 | -35.8 | 19.6 | 598.9 | -0.7p | -0.4 | -2.7 | 1.8p | 2.0p | 1.1p | 2.4p | 1.7 | 9.9 | 4.0p | 107.5 | 17.7p |
| AT | 1.5 | 23.1 | 3.1p | 2.0 | -8.5 | -7.8 | 66.6 | -1.9 | 2.4 | -6.7 | 2.1 | -0.4 | 0.2 | 5.1p | 4.8 | 17.8 | 4.2 | 51.3 | 12.5p |
| PL | 2.9 | 18.1 | na | 0.8 | -22.9 | 3.6 | 50.2 | -1.4 | -5.5 | 14.8 | 4.9 | 6.5 | 2.3p | 6.4p | 2.3 | 4.4 | 3.0 | 36.7 | 9.4p |
| PT | 1.5p | 15.3p | 1.3p | 1.7 | -65.8 | 4.5 | 76.1 | -1.6p | 0.5 | 2.8 | 7.8p | 1.8p | -0.1p | 17.2p | -11.2 | 15.1 | 2.5p | 72.4 | 12.9p |
| RO | 4.6p | 22.7p | na | 0.4 | -7.4 | 3.3 | 44.8 | -0.9p | -2.6 | 20.1 | 4.8p | 6.0p | 5.5p | 9.7p | 20.3 | 6.7 | 2.5p | 16.8 | 9.8p |
| SI | 3.1 | 17.6 | na | 4.5 | -22.1 | 3.2 | 37.1 | -2.1 | -1.6 | 1.1 | 3.0 | 4.1 | 1.2 | 12.3p | 1.7 | -2.8 | 2.1 | 27.3 | 8.0p |
| SK | 3.3 | 21.2 | 0.8 | 0.5 | -15.0 | 4.0 | 65.6 | -2.6 | -2.0 | 4.3 | -2.2 | 3.9 | 0.9 | 4.6p | -1.7 | 14.0 | 2.4 | 38.0 | 9.2p |
| FI | 1.9 | 21.5 | 2.8 | -1.3 | -0.9 | -1.8 | 49.9 | -1.4 | 0.5 | -16.5 | 5.4 | -1.0 | 1.4 | 1.4p | 8.1 | 0.3 | 6.1 | 67.1 | 17.7p |
| SE | 3.3 | 24.0 | 3.3p | 4.4 | -9.2 | 2.9 | 80.3 | -0.8 | -7.7 | -10.5 | 1.8 | 1.0 | 1.6 | 1.2p | 8.4 | 34.4 | 5.1 | 85.1 | 17.6p |
| UK | 1.8 | 16.4 | na | -6.0 | 0.9 | 11.2 | 74.5 | -0.5 | 5.1 | -2.9 | 7.3 | -1.2 | 0.4 | 1.9p | 2.9 | 22.4 | 3.6 | 86.2 | 15.1p |

Indicators affected by revision highlighted in black font. Grey denotes indicators that the proposal leaves unchanged.

Flags:e:Estimated, p:Provisional.

1) House price index e = source NCB for EL. 2) Official transmission deadline for 2016 data on Gross domestic expenditure on R&D is 31 October 2017 while data were extracted on 24 October 2017. 3) Nominal unit labour cost and labour productivity for HR d: employment data use national concept instead of domestic concept. 4) Private sector debt, private sector credit flow: the decline for IE relative to 2015 predominantly reflects restructuring and re-domiciling activities of large multinational companies.

Source: Eurostat, Directorate General for Economic and Financial Affairs (for Real Effective Exchange Rate) and International Monetary Fund data, WEO (for world exports series)

Annex: Details on the statistical sourcing of proposed indicators

NIIP excluding non-defaultable instruments (% of GDP)

The indicator is based on annual figures from the Eurostat balance of payments. It is defined as the Net international investment position (Eurostat code as of June 2018: `bop_iip6_q.MIO_NAC.FA.S1.S1.N_LE.WRL_REST.`³ minus net direct investment (`bop_iip6_q.MIO_NAC.FA_D_F.S1.S1.N_LE.WRL_REST.`) minus net portfolio equity (`bop_iip6_q.MIO_NAC.FA_P_F51.S1.S1.N_LE.WRL_REST.`), in national currency, as a % of latest Eurostat GDP figures (also expressed in national currency).

Household debt, consolidated (including NPISH, % of GDP):

The indicator is based on annual figures from the Eurostat sector accounts. It is based on the sum of gross consolidated liabilities of the household sector (including non-profit institutions serving households) over two instruments: securities other than shares (Eurostat code `nasa_10_f_bs.MIO_NAC.CO.S14_S15.LIAB.F3.`) and loans (`nasa_10_f_bs.MIO_NAC.CO.S14_S15.LIAB.F4.`). The resulting household debt in national currency is expressed as % of latest Eurostat GDP figures in national currency. Note that for the household sector, liabilities in securities other than shares are close to zero in most cases.

Gross non-performing loans, domestic and foreign entities (% of gross loans):

The indicator is defined as total gross non-performing loans and advances as % of total gross loans and advances (gross carrying amount), for the reporting sector "domestic banking groups and stand-alone banks, foreign controlled subsidiaries and foreign controlled branches, all institutions, FINREP". As of June 2018, the respective ECB code is `CBD2.A.W0.67.Z.Z.A.F.I3632.Z.Z.Z.Z.Z.Z.PC.`

Consolidated banking leverage, domestic and foreign entities (asset-to-equity multiple):

The indicator is defined as total assets divided by total equity, for the reporting sector "domestic banking groups and stand-alone banks, foreign controlled subsidiaries and foreign controlled branches, all institutions, full sample (all banking groups / stand-alone banks irrespective of their accounting /supervisory framework)". As of June 2018, the respective ECB code was `CBD2.A.W0.67.Z.Z.A.A.I3400.Z.Z.Z.Z.Z.Z.PN.`

³ Note: the code notation here refers to RESTful queries of the respective data providers, and details the required dimension element in the order these dimensions are defined within each dataset ("dataflow") by the data provider. Double dot (..) or trailing dot covers all elements of the country dimension.