DISCLAIMER: The risk dashboard is a set of quantitative indicators and not an early-warning system. Users may not rely on the indicators as a basis for any mechanical form of inference.
<table>
<thead>
<tr>
<th>Table of contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Interlinkages and composite measures of systemic risk</strong></td>
<td>3</td>
</tr>
<tr>
<td>1.1 Composite indicator of systemic stress</td>
<td>3</td>
</tr>
<tr>
<td>1.2 Probability of a simultaneous default</td>
<td>3</td>
</tr>
<tr>
<td>1.3 Cross-border claims of banks</td>
<td>4</td>
</tr>
<tr>
<td>1.4 MFI credits by counterpart sectors</td>
<td>5</td>
</tr>
<tr>
<td>1.5 MFI deposits by counterpart sector</td>
<td>5</td>
</tr>
<tr>
<td>1.6 MFI credits to general government</td>
<td>6</td>
</tr>
<tr>
<td>1.7 MFI loans for house purchase</td>
<td>6</td>
</tr>
<tr>
<td>1.8 Investment funds' holdings of debt securities by counterpart sector</td>
<td>7</td>
</tr>
<tr>
<td>1.9 Investment funds' holdings of equity and investment fund shares by counterpart sector</td>
<td>7</td>
</tr>
<tr>
<td><strong>2. Macro risk</strong></td>
<td>8</td>
</tr>
<tr>
<td>2.1 Current and forecast real GDP growth</td>
<td>8</td>
</tr>
<tr>
<td>2.2 Domestic credit-to-GDP gap</td>
<td>8</td>
</tr>
<tr>
<td>2.3 Current account balance-to-GDP ratio</td>
<td>9</td>
</tr>
<tr>
<td>2.4 Unemployment rate</td>
<td>9</td>
</tr>
<tr>
<td>2.5 Aggregate debt-to-GDP ratio</td>
<td>10</td>
</tr>
<tr>
<td>2.6 General government debt-to-GDP ratio</td>
<td>11</td>
</tr>
<tr>
<td>2.7 General government deficit-to-GDP ratio</td>
<td>11</td>
</tr>
<tr>
<td>2.8 CDS premia on sovereign debt</td>
<td>12</td>
</tr>
<tr>
<td>2.9 Government debt service</td>
<td>12</td>
</tr>
<tr>
<td>2.10 Household debt-to-gross disposable income ratio</td>
<td>13</td>
</tr>
<tr>
<td>2.11 NFC debt-to-GDP ratio</td>
<td>13</td>
</tr>
<tr>
<td><strong>3. Credit risk</strong></td>
<td>14</td>
</tr>
<tr>
<td>3.1 Annual growth rates of MFIs loans to households</td>
<td>14</td>
</tr>
<tr>
<td>3.2 Annual growth rates of MFI loans to NFCs</td>
<td>14</td>
</tr>
<tr>
<td>3.3 Cost of borrowing from MFIs for households (for house purchase)</td>
<td>15</td>
</tr>
<tr>
<td>3.4 Cost of borrowing from MFIs for NFCs</td>
<td>15</td>
</tr>
<tr>
<td>3.5 Lending margins of MFIs - loans to households (for house purchase)</td>
<td>16</td>
</tr>
<tr>
<td>3.6 Lending margins of MFIs - loans to NFCs</td>
<td>16</td>
</tr>
<tr>
<td>3.7 Changes in credit standards for loans to households (for house purchase)</td>
<td>17</td>
</tr>
<tr>
<td>3.8 Changes in credit standards for loans to NFCs</td>
<td>17</td>
</tr>
<tr>
<td>3.9 Option-adjusted spreads on euro area corporate bonds</td>
<td>18</td>
</tr>
<tr>
<td>3.10 Expected default frequency of the corporate sector</td>
<td>18</td>
</tr>
<tr>
<td>3.11 Foreign currency loans</td>
<td>19</td>
</tr>
<tr>
<td>3.12 Over/undervaluation of residential property prices</td>
<td>20</td>
</tr>
<tr>
<td>3.13 Change in nominal residential property prices</td>
<td>20</td>
</tr>
<tr>
<td><strong>4. Funding and liquidity</strong></td>
<td>21</td>
</tr>
<tr>
<td>4.1 Interbank interest rate spreads</td>
<td>21</td>
</tr>
<tr>
<td>4.2 Financial market liquidity indicator</td>
<td>21</td>
</tr>
<tr>
<td>4.3 EUR/USD cross-currency basis swap spreads</td>
<td>21</td>
</tr>
<tr>
<td>4.4 Banks’ funding by central banks</td>
<td>22</td>
</tr>
<tr>
<td>4.5 Money markets and the Eurosystem’s standing facilities</td>
<td>22</td>
</tr>
<tr>
<td>4.6 Maturity profile of Banks’ outstanding debt securities</td>
<td>23</td>
</tr>
<tr>
<td>4.7 Banks’ long-term debt securities issuance</td>
<td>23</td>
</tr>
<tr>
<td>4.8 Loan-to-deposit ratio</td>
<td>24</td>
</tr>
<tr>
<td>4.9 CDS spread between senior and subordinated debt</td>
<td>24</td>
</tr>
<tr>
<td><strong>5. Market risk</strong></td>
<td>25</td>
</tr>
<tr>
<td>5.1 Global risk aversion indicator</td>
<td>25</td>
</tr>
<tr>
<td>5.2 Price/earnings ratio of equity indices</td>
<td>25</td>
</tr>
<tr>
<td>5.3 Equity indices</td>
<td>26</td>
</tr>
<tr>
<td>5.4 Short-term interest rates - implied volatility</td>
<td>27</td>
</tr>
<tr>
<td>5.5 Long-term interest rates - implied volatility</td>
<td>27</td>
</tr>
<tr>
<td>5.6 Exchange rate volatility</td>
<td>28</td>
</tr>
<tr>
<td><strong>6. Profitability and solvency</strong></td>
<td>29</td>
</tr>
<tr>
<td>6.1 Banking groups’ profitability indicators</td>
<td>29</td>
</tr>
<tr>
<td>6.2 Banking groups’ solvency, liquidity and balance sheet structure indicators</td>
<td>30</td>
</tr>
<tr>
<td>6.3 Insurance groups’ profitability indicators</td>
<td>31</td>
</tr>
<tr>
<td>6.4 Insurance groups’ solvency indicators</td>
<td>32</td>
</tr>
<tr>
<td>6.5 Insurance groups’ Retention ratio</td>
<td>32</td>
</tr>
</tbody>
</table>
Table of contents - continued

7. Structural risk 33
   7.1 Banking sector size 33
   7.2 Banking sector leverage 33
   7.3 Growth of components of the EU financial sector 34
   7.4 Total assets of investment funds and OFIs 34
   7.5 Total assets of investment funds and OFIs in the EU 34
   7.6 Non-MMF investment funds ratio of short term assets to short term liabilities 35

General notes

The ESRB risk dashboard is a set of quantitative and qualitative indicators of systemic risk in the EU financial system. The composition and the presentation of the ESRB risk dashboard have been reviewed in the first quarter of 2016. Unless otherwise indicated, all EU indicators relate to the 28 Member States of the EU (the EU28). Unless otherwise indicated, all data series relate to the Euro 19 (i.e. the euro area including Lithuania) for the whole time series. For statistics based on the balance sheet of the MFI sector, as well as statistics on financial markets and interest rates, the series relate to the composition of the EU/euro area in the period covered (changing composition). Statistics based on the balance sheet of the MFI sector are unconsolidated.

Additional indicators to support the systemic risk assessment in the EU financial system are available in the Macroprudential Database: http://sdw.ecb.europa.eu/browse.do?node=9689391

List of countries and aggregates

<table>
<thead>
<tr>
<th>Continent</th>
<th>Country</th>
<th>Code</th>
<th>Contry</th>
<th>Code</th>
<th>Country</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>Austria</td>
<td>AT</td>
<td>France</td>
<td>FR</td>
<td>The Netherlands</td>
<td>NL</td>
</tr>
<tr>
<td>Europe</td>
<td>Belgium</td>
<td>BE</td>
<td>Greece</td>
<td>GR</td>
<td>Poland</td>
<td>PL</td>
</tr>
<tr>
<td>Europe</td>
<td>Bulgaria</td>
<td>BG</td>
<td>Croatia</td>
<td>HR</td>
<td>Portugal</td>
<td>PT</td>
</tr>
<tr>
<td>Europe</td>
<td>Cyprus</td>
<td>CY</td>
<td>Hungary</td>
<td>HU</td>
<td>Romania</td>
<td>RO</td>
</tr>
<tr>
<td>Europe</td>
<td>Czech Republic</td>
<td>CZ</td>
<td>Ireland</td>
<td>IE</td>
<td>Sweden</td>
<td>SE</td>
</tr>
<tr>
<td>Europe</td>
<td>Germany</td>
<td>DE</td>
<td>Italy</td>
<td>IT</td>
<td>Slovenia</td>
<td>SI</td>
</tr>
<tr>
<td>Europe</td>
<td>Denmark</td>
<td>DK</td>
<td>Lithuania</td>
<td>LT</td>
<td>Slovakia</td>
<td>SK</td>
</tr>
<tr>
<td>Europe</td>
<td>Estonia</td>
<td>EE</td>
<td>Luxembourg</td>
<td>LU</td>
<td>United Kingdom</td>
<td>UK</td>
</tr>
<tr>
<td>Europe</td>
<td>Spain</td>
<td>ES</td>
<td>Latvia</td>
<td>LV</td>
<td>Euro area</td>
<td>EA</td>
</tr>
<tr>
<td>Europe</td>
<td>Finland</td>
<td>FI</td>
<td>Malta</td>
<td>MT</td>
<td>European Union</td>
<td>EU</td>
</tr>
</tbody>
</table>

List of acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS</td>
<td>Bank for International Settlements</td>
</tr>
<tr>
<td>CDS</td>
<td>Credit Default Swap</td>
</tr>
<tr>
<td>CISS</td>
<td>Composite Indicator of Systemic Stress</td>
</tr>
<tr>
<td>COREP</td>
<td>Common Solvency Ratio Reporting</td>
</tr>
<tr>
<td>EBA</td>
<td>European Banking Authority</td>
</tr>
<tr>
<td>ECB</td>
<td>European Central Bank</td>
</tr>
<tr>
<td>EIOPA</td>
<td>European Insurance and Occupational Pensions Authority</td>
</tr>
<tr>
<td>EONIA</td>
<td>Euro OverNight Index Average</td>
</tr>
<tr>
<td>ESCB</td>
<td>European System of Central Banks</td>
</tr>
<tr>
<td>ICPF</td>
<td>Insurance Corporation and Pension Funds</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>IPD</td>
<td>Investment Property Databank</td>
</tr>
<tr>
<td>MFI</td>
<td>Monetary and Financial Institutions</td>
</tr>
<tr>
<td>MMF</td>
<td>Money Market Funds</td>
</tr>
<tr>
<td>NFC</td>
<td>Non-Financial Corporations</td>
</tr>
<tr>
<td>OFI</td>
<td>Other Financial Intermediaries</td>
</tr>
<tr>
<td>ITS</td>
<td>Implementing Technical Standards</td>
</tr>
<tr>
<td>SovCISS</td>
<td>Sovereign Composite Indicator of Systemic Stress</td>
</tr>
</tbody>
</table>

Cut-off date

Data available to the ECB by Tuesday, 6 December 2016 were taken into account in these statistics.

Contact

For enquiries regarding the risk dashboard and its contents, please contact: https://ecb-registration.escb.eu/statistical-information
1. Interlinkages and composite measures of systemic risk

1.1 Composite indicator of systemic stress

(Last observation: 25 Nov. 2016)

Sources: Thomson Reuters, ECB and ECB calculations.
Notes: The CISS is unit-free and constrained to lie within the interval (0, 1). See Hollo, D., Kremer, M. and Lo Duca, M., “CISS - a composite indicator of systemic stress in the financial system”, Working Paper Series, No 1426, ECB, March 2012. The Sovereign CISS applies the same methodological concept of the CISS.

1.2 Probability of a simultaneous default

(Percentages; last observation: 30 Nov. 2016)

Sources: Bloomberg, Thomson Reuters and ECB calculations.
Note: See Box 8, Financial Stability Review, ECB, June 2012.
1.3 Cross-border claims of banks

(Sample of EU countries; percentages; last observation: Q1 2015 for foreign claims, Q2 2014 for total consolidated capital)

- EU lenders and borrowers
- Other EU countries
- Non-EU countries

Sources: BIS, ECB and ECB calculations.
Notes: Data for foreign claims refer to claims on an immediate borrower basis. See Guidelines to the international consolidated banking statistics, available at http://www.bis.org. The size of the bubbles corresponds to the share of total foreign claims in the total equity of a country’s consolidated banking sector. The thickness of the arrows depends on the share of bilateral foreign claims (i.e. claims of banks in country A on borrowers in country B) in the total equity of the banking sector extending the loans. Arrows extend only from EU countries reporting to the BIS and where the share of bilateral foreign claims in total equity is more than 75%.
1. Interlinkages and composite measures of systemic risk

1.4 MFI credits by counterpart sectors

**a. Four-quarter cumulated flows**

(euro area; EUR billions; last observation: Q3 2016)

**b. Outstanding amounts**

(euro area; EUR trillions; last observation: Q3 2016)

Source: ECB.

Notes: MFIs excluding the Eurosystem. Credit comprises loans and holdings of securities. Eurosystem credit comprises only loans. Households include non-profit institutions serving households.

1.5 MFI deposits by counterpart sector

**a. Four-quarter cumulated flows**

(euro area; EUR billions; last observation: Q3 2016)

**b. Outstanding amounts**

(euro area; EUR trillions; last observation: Q3 2016)

Source: ECB.

Notes: MFIs excluding the Eurosystem. Households include non-profit institutions serving households.
1. Interlinkages and composite measures of systemic risk

1.6 MFI credits to general government

(EU; share of total assets; percentages)

Source: ECB.
Notes: Credit extended by MFIs excluding the ESCB to domestic general government. Credit comprises granted loans and holdings of debt securities issued. Total assets excludes remaining assets. For some countries, such as Italy and France, government-owned agencies mandated to finance primarily public administrations are listed as MFIs.

1.7 MFI loans for house purchase

(EU; share of credit to the private sector; percentages)

Source: ECB.
Notes: MFIs excluding the ESCB. Data refer to loans granted to domestic households for house purchase purpose. Credit comprises loans and holdings of debt securities.
1. Interlinkages and composite measures of systemic risk

1.8 Investment funds’ holdings of debt securities by counterpart sector

### a. Cumulated flows

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MFIs</td>
<td>-200</td>
<td>-100</td>
<td>0</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
</tr>
<tr>
<td>general government</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>-100</td>
</tr>
<tr>
<td>other financial institutions</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>-100</td>
</tr>
<tr>
<td>insurance corporations and pension funds</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>-100</td>
</tr>
<tr>
<td>NFCs</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>-100</td>
</tr>
</tbody>
</table>

### b. Outstanding amounts

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MFIs</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>general government</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>other financial institutions</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>insurance corporations and pension funds</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>NFCs</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
</tbody>
</table>

Source: ECB.

1.9 Investment funds’ holdings of equity and investment fund shares by counterpart sector

### a. Cumulated flows

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MFIs other than MMFs</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>-100</td>
</tr>
<tr>
<td>MMFs</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>-100</td>
</tr>
<tr>
<td>other financial institutions</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>-100</td>
</tr>
<tr>
<td>insurance corporations and pension funds</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>-100</td>
</tr>
<tr>
<td>NFCs</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>-100</td>
</tr>
</tbody>
</table>

### b. Outstanding amounts

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MFIs other than MMFs</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>MMFs</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>other financial institutions</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>insurance corporations and pension funds</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>NFCs</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
</tbody>
</table>

Source: ECB.
2. Macro risk

2.1 Current and forecast real GDP growth

(EU; percentage changes; year-on-year growth)

Sources: European Commission and the European Commission Autumn 2016 forecast.
Notes: The three-year historical average is the average of the year-on-year growth rates over the last 12 quarters. For BE, BG, CZ, EE, IE, HR, IT, CY, LV, LU, HU, MT, PL, PT, SI and FI, "last observation" refers to Q2 2016.

2.2 Domestic credit-to-GDP gap

(EU; percentages)

Sources: European Commission, BIS, ECB and ECB calculations.
Notes: See ESRB recommendation of 18 June 2014 on guidance for setting countercyclical buffer rates (ESRB/2014/1). ECB calculations and National calculations may differ. The credit gap and debt ratios of Belgian NFCs increased strongly starting 2016Q1. This increase can be attributed to financial activities (debt issuance) of a large Belgian non-financial corporation in the context of a takeover of a large foreign company.
2. Macro risk

2.3 Current account balance-to-GDP ratio

(EU; percentages)

![Chart showing current account balance-to-GDP ratio](chart)

last observation: Q2 2016
three-year average

Source: ECB and European Commission.
Notes: Quarterly data represent the sum of the four quarters up to and including the quarter of reference. The three-year average is compiled on the basis of the annualised ratio of the last 12 quarters.

2.4 Unemployment rate

(EU; percentage of labour force; seasonally adjusted)

![Chart showing unemployment rate](chart)

three-year average
2016 forecast

Sources: European Commission and the European Commission Autumn 2016 forecast.
Notes: For EE and HU, "last observation" refers to September 2016; for GR and UK, "last observation" refers to August 2016.
2. Macro risk

2.5 Aggregate debt-to-GDP ratio

a. Level

(EU; percentages; last observation: Q2 2016)

Sources: ECB and European Commission.
Notes: Debt-to-GDP ratios for NFCs are based on consolidated debt figures. Consolidated non-financial corporations’ debt not available for UK. Three year averages are not available for UK.

b. Year-on-year change

(EU; percentage points; year-on-year changes; last observation: Q2 2016)

Sources: ECB and European Commission.
Notes: Debt-to-GDP ratios for NFCs are based on consolidated debt figures. Data on changes of non-financial corporations’ debt are not available for the UK.
The decrease in the debt-to-GDP ratios for Ireland can to a great extent be explained by the large increase in the official Irish GDP in 2015 mainly due to the reallocation of global operators in Ireland. For more information see Eurostat’s explanatory note (http://ec.europa.eu/eurostat/documents/24987/6390465/Irish_GDP_communication.pdf).
The credit gap and debt ratios of Belgian NFCs increased strongly in 2016Q1. This increase can be attributed to financial activities (debt issuance) of a large Belgian non-financial corporation in the context of a takeover of a large foreign company.
2. Macro risk

2.6 General government debt-to-GDP ratio

(EU; percentages)

Sources: European Commission and the European Commission Autumn 2016 forecast.
Notes: Intra-general government transactions are consolidated. The black dashed line represents the threshold of 60% for the government debt-to-GDP ratio under the Stability and Growth Pact.

2.7 General government deficit-to-GDP ratio

(EU; four-quarter moving sum; percentages)

Sources: European Commission and the European Commission Autumn 2016 forecast.
Notes: The black dashed line represents the threshold of 3% for the budget deficit under the Stability and Growth Pact. For a number of countries, the figures include bank recapitalisation costs. Excluding these factors would in most cases lower the deficits.
2. Macro risk

2.8 CDS premia on sovereign debt

(Sample of EU countries; basis points; five-year maturities; last observation: 30 Nov. 2016)

Sources: Thomson Reuters Datastream and CMA.
Notes: Greek sovereign CDS were not traded between 9 March 2012 and 11 April 2012 following the decision by the ISDA that a credit event had occurred. Due to the lack of contributors, data were also not available between 1 March and 21 May 2013. For presentational reasons, this chart has been truncated.

2.9 Government debt service

(EU; percentage of GDP; Nov. 2016 to Oct. 2017)

Sources: ECB.
Notes: Debt service is a set of payments, including the principal amount and interest, to be made by the debtor over the life of a debt. Debt service is measured for the coming 12 months.
2. Macro risk

2.10 Household debt-to-gross disposable income ratio

(EU; percentages)

last observation: Q2 2016
three-year average

Sources: ECB and European Commission.
Notes: Data for BE and HR are based on Q1 2016. Data for BG and EE are based on annual ESA2010 series for 2014. Data for CY, HU, LT, LV, SK are based on annual ESA2010 series for 2015. Data for LU are based on annual ESA95 series for 2012. Data for MT are not available.

2.11 NFC debt-to-GDP ratio

(EU; percentages)

last observation: Q2 2016
three-year average

Sources: ECB and European Commission.
Notes: Debt-to-GDP ratios for NFCs are based on consolidated debt figures. NL data are consolidated at the level of the resident enterprise group. Data on consolidated NFC debt for UK are not available.
3. Credit risk

3.1 Annual growth rates of MFIs loans to households

(EU; percentages)

Source: ECB.
Notes: Loans extended by MFIs excluding the ESCB. Data for euro area Member States refer to loans granted to euro area households, while for non-euro area Member States to loans to domestic households. Euro area Member States data are adjusted for the derecognition of loans from the MFI statistical balance sheet due to their sale or securitisation. The figure is based on growth in the index of notional stocks.

3.2 Annual growth rates of MFI loans to NFCs

(EU; percentages)

Source: ECB.
Notes: Loans extended by MFIs excluding the ESCB. Data for euro area Member States refer to loans granted to euro area NFCs, while for non-euro area Member States to loans to domestic NFCs. Euro area Member States data are adjusted for the derecognition of loans from the MFI statistical balance sheet due to their sale or securitisation.
3. Credit risk

3.3 Cost of borrowing from MFIs for households (for house purchase)

(euro area; percentage points)

Source: ECB.
Notes: MFIs excluding ESCB. The cost of borrowing from MFIs is calculated as the weighted average of rates on short-term (i.e. initial period of interest rate fixation up to one year) and long-term (i.e. initial period of interest rate fixation over one year) MFI loans, weighted by the volumes of new business (smoothed by the moving average of the previous two years).

3.4 Cost of borrowing from MFIs for NFCs

(euro area; percentage points)

Source: ECB.
Notes: MFIs excluding ESCB. The cost of borrowing from MFIs is calculated as the weighted average of rates on short-term (i.e. initial period of interest rate fixation up to one year) and long-term (i.e. initial period of interest rate fixation over one year) MFI loans, weighted by the volumes of new business (smoothed by the moving average of the previous two years).
3. Credit risk

3.5 Lending margins of MFIs - loans to households (for house purchase)

(EU; percentage points)

Source: ECB.

Notes: Lending margins are measured as the difference between MFIs' interest rates for new business loans and a weighted average rate of new deposits from households and NFCs. For non-euro area countries, rates for loans and deposits in both euro and the national currency are taken into account. For euro area countries, rates refer to loans granted to euro area residents, whereas for non-euro area countries rates refer to loans granted to domestic residents.

For UK, "last observation" refers to December 2015.

3.6 Lending margins of MFIs - loans to NFCs

(EU; percentage points)

Source: ECB.

Notes: Lending margins are measured as the difference between MFIs' interest rates for new business loans and a weighted average rate of new deposits from households and NFCs. For non-euro area countries, rates for loans and deposits in both euro and the national currency are taken into account. For euro area countries, rates refer to loans granted to euro area residents, whereas for non-euro area countries rates refer to loans granted to domestic residents.
3. Credit risk

3.7 Changes in credit standards for loans to households (for house purchase)

(Sample of euro area countries; weighted net percentages; last observation: Q4 2016)

Sources: ECB.
Notes: Weighted net percentages of banks contributing to the tightening of standards over the previous three months. The last observation refers to the quarter in which the most recent BLS was published.

3.8 Changes in credit standards for loans to NFCs

(Sample of euro area countries; weighted net percentages; last observation: Q4 2016)

Sources: ECB.
Notes: Weighted net percentages of banks contributing to the tightening of standards over the previous three months. The last observation refers to the quarter in which the most recent BLS was published.
3. Credit Risk

3.9 Option-adjusted spreads on euro area corporate bonds

Source: Bank of America Merrill Lynch. Note: Spreads (in basis points) over German government bonds for both plain vanilla bonds and bonds with embedded options (for which the value of the option is stripped using proprietary models).

3.10 Expected default frequency of the corporate sector

Sources: Moody’s KMV and ECB calculations. Note: The weighted average is based on the amounts of non-equity liabilities. Model changed into EDF9 as of 1 June 2015.
3. Credit risk

3.11 Foreign currency loans

a. By currency

(EU; percentages; last observation: Q3 2016)

Source: ECB.

b. By sector

(EU; percentages; last observation: Oct. 2016)

Source: ECB.

c. Annual changes

(EU; percentage points; last observation: Oct. 2016)

Source: ECB.

Note to charts 3.11 - a, b and c: BG (currency board arrangement) and DK have a regime of fixed exchange rates vis-à-vis the euro.
3. Credit risk

3.12 Over/undervaluation of residential property prices

(EU; percentages)

Sources: Eurostat, national sources, ECB and ECB calculations.

Notes: Estimates based on four different valuation methods: price-to-rent ratio, price-to-income ratio, asset pricing approach and a Bayesian estimated inverted demand model. For further details see Box 3, Financial Stability Review, ECB, June 2011; and box 3, Financial Stability Review, ECB, November 2015. For each country, the blue bars represent the range of estimates across the four valuation methods. For CY and LT last observation refers to Q1 2016.

3.13 Change in nominal residential property prices

(EU; percentages; last observation: Q2 2016)

Sources: ECB, national sources and ECB calculations.

Notes: For CY, LT and HU "last observation" refers to Q1 2016.
4. Funding and liquidity

4.1 Interbank interest rate spreads
(basis points; three-month maturities; last observation: 30 Nov. 2016)

Sources: Thomson Reuters, Bloomberg and ECB calculations.
Note: Difference between interbank interest rates and overnight indexed swap.

4.2 Financial market liquidity indicator
(euro area; last observation: 6 Jun. 2016)

Note: See Box 9, Financial Stability Review, ECB, June 2007.
Indicator discontinued starting June 2016.

4.3 EUR/USD cross-currency basis swap spreads
(basis points; last observation: 1 Dec. 2016)

Source: Bloomberg.
Note: Data available since January 2008.
4. Funding and liquidity

4.4 Banks’ funding by central banks

(EU; share of total liabilities; percentages)

![Graph showing banks’ funding by central banks]

Sources: ECB, IMF and ECB calculations.
Notes: MFIs excluding the ESCB and Money Market Funds. Banks’ funding by central banks comprises all loans granted by the ESCB. Total liabilities exclude capital and reserves as well as remaining liabilities.

4.5 Money markets and the Eurosystem’s standing facilities

(euro area; EUR billions; last observation: 24 Nov. 2016)

![Graph showing money markets and Eurosystem’s standing facilities]

Sources: ECB and Bloomberg.
Note: Eurosystem’s current account includes minimum reserves.
4. Funding and liquidity

4.6 Maturity profile of Banks’ outstanding debt securities

(ESRB risk dashboard • December 2016)

4.7 Banks’ long-term debt securities issuance

Sources: Dealogic DCM Analytics, Dealogic CPWare and ECB calculations.
Notes: The maturity profile refers to the residual maturity of long-term and short-term debt securities issued by European banks. Banks’ long-term debt includes corporate bonds, medium-term notes, covered bonds, asset-backed securities and mortgage-backed securities with a maturity of more than 12 months. Banks’ short-term debt includes commercial papers certificates of deposits and short-term notes with a maximum maturity of 12 months. Data are based on amounts outstanding at the end of the corresponding year or month.

Source: Dealogic DCM Analytics.
Note: Debt issuance by EU public and private sector banks, excluding issuance of short term debt (i.e. with original maturity of below one year) and excluding ABS, MBS and agency related issuances.
4. Funding and liquidity

4.8 Loan-to-deposit ratio

(EU; percentages)

(last observation: Q3 2016)

Q3 2015

three-year average

Source: ECB.

Notes: MFI sector excluding the ESCB. Data refers to the ratio between total loans and total deposits vis-à-vis the domestic and euro area households, NFCs and non-MFI residents excluding the general government. Mortgage banks in Denmark, which represent around 55% of total MFI loans to domestic NFCs, are not allowed to take deposits owing to regulations, but must fund their lending through issuance of covered bonds only. Excluding mortgage banks from the indicator, the loan-to-deposit ratio for DK is equal to 0.77 for Q2 2016 and 0.81 for Q2 2015.

4.9 CDS spread between senior and subordinated debt

(EU; basis points; five-year maturities; last observation: 30 Nov. 2016)

Sources: Thomson Reuters Datastream, CMA and ECB calculations.

Notes: Data available for a sample of 39 large EU banks. Shift in data as of 22 September 2014 due to the implementation of the ISDA 2014 Credit Derivatives Definitions.
5. Market risk

5.1 Global risk aversion indicator

(Last observation: 6 Jun. 2016)

Sources: Bloomberg, Bank of America Merrill Lynch (BoA ML), UBS, Commerzbank and ECB calculations.
Notes: Constructed as the first principal component of five currently available risk aversion indicators, namely Commerzbank Global Risk Perception, UBS FX Risk Index, Westpac’s Risk Appetite Index, BoA ML Risk Aversion Indicator and Credit Suisse Risk Appetite Index. A rise in the indicator denotes an increase in risk aversion.
Indicator discontinued starting June 2016.

5.2 Price/earnings ratio of equity indices

(EU; last observation: 30 Nov. 2016)

Source: Thomson Reuters Datastream.
5. Market risk

5.3 Equity indices

a. By sector

(EU, index: 4 Jan. 1999 = 100; last observation: 30 Nov. 2016)

Sources: Bloomberg (Euro Stoxx 50) and Thomson Reuters Datastream (others).

b. Implied volatility

(Euro Stoxx 50 index; last observation: 30 Nov. 2016)

Source: Bloomberg.

Notes: Volatility is implied by at-the-money options observed in the market. The implied volatility is based on EURO STOXX 50 Volatility Index (VSTOXX) traded on Eurex. It measures implied volatility on options across all maturities. The blank spots in the plot of the index come from a lack of data series during public holidays when the financial markets are closed.
5.4 Short-term interest rates - implied volatility

(three months - one year; last observation: 1 Dec. 2016)

Source: Bloomberg.
Notes: Volatility is implied by at-the-money swaption prices observed in the market.

5.5 Long-term interest rates - implied volatility

(three months - ten years; last observation: 1 Dec. 2016)

Source: Bloomberg.
Note: Volatility is implied by at-the-money swaption prices observed in the market.
5. Market risk

5.6 Exchange rate volatility

(Last observation: 30 Nov. 2016)

Source: Bloomberg.
Note: Volatility is implied by at-the-money option prices observed in the market for major currencies, based on three-month maturity.
6. Profitability and solvency

6.1 Banking groups’ profitability indicators*

**a. Return on equity**

(EU; percentages; interquartile range and median; last observation: Q3 2016)

**b. Return on assets**

(EU; percentages; interquartile range and median; last observation: Q3 2016)

**c. Cost-to-income ratio**

(EU; percentages; interquartile range and median; last observation: Q3 2016)

**d. Net interest income to total operating income**

(EU; percentages; interquartile range and median; last observation: Q3 2016)

Source: EBA.

Note: Quarterly flows are annualised.

Quarterly data refer to cumulative flows over the corresponding year.

* The EBA data presented are subject to changes in the composition of the sample over time. The figures are subject to revision. Data are fully based on the EBA’s ITS on supervisory reporting. Further details on the main methodological aspects of the EBA’s ITS are available on EBA’s website: www.eba.europa.eu.
6. Profitability and solvency

6.2 Banking groups’ solvency, liquidity and balance sheet structure indicators*

[a. CET1 to risk weighted assets ratio]

(EU; percentages; interquartile range and median; last observation: Q3 2016)

[b. Non-performing loans to total gross loans and advances]

(EU; percentages; interquartile range and median; last observation: Q3 2016)

[c. Ratio of liquid assets to short term liabilities]

(EU; percentages; interquartile range and median; last observation: Q3 2016)

[d. Asset encumbrance ratio]

(EU; percentages; interquartile range and median; last observation: Q3 2016)

* The EBA data presented are subject to changes in the composition of the sample over time. The figures are subject to revision. Data are fully based on the EBA’s ITS on supervisory reporting. Further details on the main methodological aspects of the EBA’s ITS are available on EBA’s website: www.eba.europa.eu.
6. Profitability and solvency

6.3 Insurance groups’ profitability indicators

a. Return on equity
(EU; percentages; interquartile range and median; last observation: H2 2015)

Source: EIOPA.
Note: The return on equity is defined as the cumulated profit (loss) after tax and before dividends over the last four quarters, divided by the average solvency capital over the last four quarters.

b. Combined ratio - non-life insurance
(EU; percentages; interquartile range and median; last observation: H2 2015)

Source: EIOPA.
Note: The combined ratio is defined as net claims incurred and net operating expenses divided by net premium earned.

c. Gross premiums written - life insurance
(EU; percentages; interquartile range and median; last observation: H2 2015)

Source: EIOPA.

d. Gross premiums written - non-life insurance
(EU; percentages; interquartile range and median; last observation: H2 2015)

Source: EIOPA.
6. Profitability and solvency

6.4 Insurance groups’ solvency indicators

a. Solvency ratio - life insurance

(EU; percentages; interquartile range and median; last observation: H2 2015)

Source: EIOPA.
Note: The solvency ratio is defined as the available solvency capital divided by the required solvency capital.

b. Solvency ratio - non-life insurance

(EU; percentages; interquartile range and median; last observation: H2 2015)

Source: EIOPA.
Note: The solvency ratio is defined as the available solvency capital divided by the required solvency capital.

6.5 Insurance groups’ Retention ratio

(EU; percentages; interquartile range and median; last observation: H2 2015)

Source: EIOPA.
Note: The retention ratio is defined as net premiums written divided by gross premiums written.
7. Structural risk

7.1 Banking sector size

(EU; share of nominal GDP; percentages; last observation: Q2 2016)

Total consolidated assets of domestic banking groups
Total assets of foreign controlled branches and subsidiaries
three-year average

Sources: ECB and Eurostat.
Notes: Based on Consolidated Banking Data. Due to unavailability of quarterly data prior to 2015, the three-year average is based on semi-annual data.

7.2 Banking sector leverage

(EU; share of total assets in capital)

last observation: Q2 2016
Q2 2015
three-year average

Sources: ECB.
Notes: Share of total assets in capital for domestic banking groups and stand-alone credit institutions. Consolidated data. Due to unavailability of quarterly data prior to 2015, the three-year average is based on semi-annual data.
Data for CZ are not available.
7. Structural risk

7.3 Growth of components of the EU financial sector

7.4 Total assets of investment funds and OFIs as per cent of credit institutions’ total assets

7.5 Total assets of investment funds and OFIs in the EU

### a. Outstanding amounts

(EU; percentages of EU GDP; last observation: Q2 2016)

- total, non-euro area countries
- money market funds
- non-MMF investment funds
- financial vehicle corporations

### b. Cumulated flows

(EU; EUR billions; four-quarter cumulated flows; last observation: Q2 2016)

- OFIs other than financial vehicle corporations
- EU (total)
- euro area (total)

Sources: ECB and European Commission.
Note: Breakdowns are available only for euro area Member States.
7. Structural risk

7.6 Non-MMF investment funds ratio of short term assets to short term liabilities

(euro area; percentages; last observation: Sep. 2016)

Source: ECB.

Notes: Short-term assets include non-MMF investment funds' holdings of debt securities and loans and deposits with original maturity up to one year; short-term liabilities include open-ended fund units issued and loans received with original maturity up to one year. Maturity breakdowns for loans and deposits are available from 2014 Q4 and are estimated for prior periods based on the maturity breakdowns in 2015 for these instruments (for respective counterparty sectors).