ESRB
European Systemic Risk Board
European System of Financial Supervision

Methodological Annex

1. Interlinkages and composite measures of systemic risk

1.1 Composite indicator of systemic stress

Sources: Thomson Reuters, ECB, and ECB calculations

The CISS comprises 15 raw, mainly market-based raw financial stress measures that are split equally into five categories, namely the financial intermediaries sector, money markets, equity markets, bond markets and foreign exchange markets. The raw stress indicators are homogenised by replacing each individual observation with its function value from the indicators' empirical cumulative distribution function. The five segment-specific sub-indices of financial stress are computed as averages of their three constituent transformed stress measures. The CISS aggregates the five sub-indices based on portfolio theoretical principles, i.e. by taking into account the time-varying cross-correlations between the sub-indices. The CISS thus places relatively more weight on situations in which stress prevails simultaneously in several market segments. It is unit-free and constrained to lie within the interval (0, 1). For further details 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. It comprises a total of 6 raw stress indicators for national sovereign bond markets: the yield spread against the euro swap interest rate of comparable maturity, the one-week realised volatility of daily yield changes, and the bid-ask bond price spread as a percentage of the mid-price, all computed for sovereign bonds of 2-year and 10-year maturity, respectively. These 6 indicators are transformed and aggregated into country-specific and euro area-wide composite stress indicators (SovCISSes) based on portfolio-theoretic principles, i.e. based on time-varying cross-correlations between them. As for the euro area-wide indicator, two different country-weighting schemes are applied: equal weights and GDP-weight.

1.2 Probability of a simultaneous default

Sources: Thomson Reuters and ECB calculations

An estimate of the probability of a systemic event, i.e. a simultaneous default by two or more large and complex banking groups within a period of one year, as measured by the systemic risk measure (SRM). The SRM covers a sample of 15 banks. For further details on the indicator, see Box 8 in Financial Stability Review, ECB, June 2012.

The estimated probability of a simultaneous default of two or more EU sovereigns reflects the markets' assessment of the risk to default within one year. Country-specific risks are derived from the CDS spreads for 14 EU countries (i.e. Austria, Belgium, Germany, Spain, France, Ireland, Italy, the Netherlands, Portugal, Sweden, Poland, Denmark, Czech Republic and United Kingdom).

1.3 Cross-border claims of banks

Sources: BIS international banking statistics and ECB consolidated banking statistics

The size of the bubbles corresponds to the share of total foreign claims (BIS data) in the total equity (ECB data) 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 banks and other borrowers in country B) in the total equity of the banking sector extending the loans. Arrows extend only from EU countries reporting consolidated banking statistics to the BIS (marked as lenders and borrowers, EU only) and only where the share of bilateral foreign claims in total equity is more than 75%. Data for foreign claims refer to claims on an immediate borrower basis; for more details, see "Guidelines to the international consolidated banking statistics", available at http://www.bis.org.

1.4 MFI credits by counterpart sector

Source: ECB

Credit extended by monetary financial institutions (MFIs), excluding the European System of Central Banks (ESCB), to counterpart sectors (excluding general government); credit comprises loans and holdings of securities. See ECB manual on MFI balance sheet statistics.[*]

1.5 MFIs deposits by counterpart sector

Source: ECB

Deposits placed at MFIs, excluding the European System of Central Banks (ESCB). See ECB manual on MFI balance sheet statistics.[*]

1.6 MFI credits to general government

Source: ECB

Credit extended by monetary financial institutions (MFIs), excluding the European System of Central Banks (ESCB), to counterpart sector general government; credit comprises loans and holdings of securities. See ECB manual on MFI balance sheet statistics.[*]

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[*] https://www.ecb.europa.eu/pub/pdf/other/manualmfibalancesheetstatistics201204en.pdf?426543c0dbb56bb78f5afd978b44db17

1.7 MFI loans for house purchase

Source: ECB

Loans extended by monetary financial institutions (MFIs), excluding the European System of Central Banks (ESCB), to counterpart sector households. See ECB manual on MFI balance sheet statistics. [*]

1.8 Investment funds' holdings of debt securities by counterpart sector

Source: ECB

Money Market Funds' and other Investment Funds' holdings of debt securities issued by counterpart sector.

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

Source: ECB

Money Market Funds' and other Investment Funds' holdings of equity and investment fund shares issued by counterpart sector.

2. Macro risk

2.1 Current and forecast real GDP growth

Source: European Commission

Latest actual year-on-year growth, three-year historical average and Commission forecast for all 27 countries of the EU. The three-year historical average is the simple average of year-on-year growth rates over the last 12 quarters. Real GDP growth is calculated using seasonally and working-day adjusted data.

2.2 Domestic credit-to-GDP gap

Sources: BIS, European Commission, ECB and ECB calculations

Credit-to-GDP gap (the deviation of the ratio of credit to GDP from its long-term trend) is calculated as the deviation of the ratio of total credit to nominal GDP from its recursive one-sided Hodrick-Prescott trend (see Annex-Part I, ESRB Recommendation ESRB/2014/1). The smoothing parameter lambda is set to 400,000. BIS data for the broad measure of credit to the domestic non-financial private sector is used where available; where not available ECB Euro Area Accounts credit data is used instead. GDP is the four-quarter cumulated flow.

2.3 Current account balance-to-GDP ratio

Sources: European Commission and ECB

Quarterly data represent the sum of the four quarters up to an 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

Source: European Commission

Latvia: quarterly data for all series. Croatia, Cyprus, Romania and Slovenia: quarterly data for youth unemployment.

2.5 Aggregate debt-to-GDP ratio

Sources: ECB and European Commission

The total aggregated debt as percentage of GDP represents the sum of the consolidated debt-to-GDP ratio of NFCs and government sectors, as well as the non-consolidated debt-to-GDP ratio of households. The change represents the percentage point change in debt-to-GDP ratio over the last four quarters.

2.6 General government debt-to-GDP ratio

Sources: European Commission and ECB

The official debt (latest observations plus forecasts) reported in the context of the excessive deficit procedure (EDP) was used as a source of data on general government debt. Intra-general government transactions are consolidated (netted out). The line represents the 60% Stability and Growth Pact threshold for the government debt-to-GDP ratio.

2.7 General government deficit-to-GDP ratio

Sources: European Commission and ECB

The line represent the 3% is Stability and Growth Pact threshold for budget deficit.

2.8 CDS premia on sovereign debt

Sources: Thomson Reuters Datastream and CMA

Sovereign credit default swaps (CDSs) spreads for a sample of EU sovereign countries. The CDS spreads are expressed in basis points and refer to 5-year maturity contracts.

2.9 Government debt service

Sources: ECB and ECB calculations

Debt service is broken down into the principal amounts (face value) to be disbursed and the interest expenditure to accrue in the coming one year.
The scheduled (future) redemptions are calculated based on the maturity date for each debt security. The scheduled redemptions only take into consideration the maturity date of the current existing and outstanding debt securities. It does not include any possible early redemption of debt securities and/or redemptions of debt securities that will be issued in the future (i.e. debt securities that did not exist at the point in time to which the debt service refers to).
Finally, the interest to accrue in a given future period is calculated by applying the observed coupon rate to the current outstanding amounts. This measure does not take into account any re-fixing of the coupon rate

for floating rate debt securities and index linked securities or any future change in the coupon rate of fixed rate debt securities (e.g. step-up coupons). The issuance of debt securities at discount/premium is reflected in the face value of the debt securities, and not as interest, as it is recommended by the international statistical standards.

The debt service for debt securities denominated in foreign currency assumes no change in the exchange rate vis-à-vis the euro.

Ratios to GDP for non-euro area Member States are calculated using nominal debt redemptions and GDP (the latter as forecast by the European Commission), both denominated in national currency.

2.10 Household debt-to-gross disposable income ratio

Sources: ECB and European Commission

Household's outstanding loans as a ratio of gross disposable income. All three-year average values are calculated over a three year period up to the end date applicable for the given country, if enough back data was available.

2.11 NFC debt-to-GDP ratio

Sources: ECB and European Commission

Stock of NFCs' debt (defined as debt securities, loans and pension scheme liabilities) in each EU Member State. Data for loans are taken on a consolidated basis from the national accounts. Non-financial corporations' debt excludes financial derivatives due to lack of comparability across countries. All three-year average values are calculated over a three year period up to the end date applicable for the given country, if enough back data was available.

3. Credit risk

3.1 Annual growth rates of MFI loans to households

& 3.2 Annual growth rates of MFI loans to NFCs

Source: ECB

Loans extended by MFIs, excluding the European System of Central Banks (ESCB); data for euro area Member States refer to loans granted to euro area households and NFCs, while for non-euro area Member States to loans to domestic households and 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 (data for Belgium and Italy are not adjusted for this effect). See ECB manual on MFI balance sheet statistics.[*]

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[*]https://www.ecb.europa.eu/pub/pdf/other/manualmfibalancesheetstatistics201204en.pdf?426543c0dbb56bb78f5afd978b44db17

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

& 3.4 Cost of borrowing from MFIs for NFCs

Source: ECB

The cost-of-borrowing is a measure used to assess borrowing costs for non-financial corporations and households; they further enhance cross-country comparability. They are calculated on the basis of MFI interest rates statistics by aggregating the interest rates provided for the various maturities and sizes of new business loans granted by MFIs to non-financial corporations and households using their respective volumes as weights and smoothing them using a 24-month moving average. For more information on the calculation, please see: http://www.ecb.europa.eu/stats/pdf/MIR-Costofborrowingindicators-methodologicalnote.pdf

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

& 3.6 Lending margins of MFIs – loans to NFCs

Source: ECB

Lending margins are measured as the difference between MFIs' interest rates for new loans to households for house purchase (new business loans to non-financial corporations excluding revolving loans and overdrafts, convenience and extended credit) and a weighted average rate of new deposits with agreed maturity from households and non-financial corporations.

For non-euro area countries, rates for loans and deposits in both euro and the national currency are used; the spread is calculated as the difference between the average lending rates and the average deposit rate, where average rates are calculated using the business volumes in both euro and national currency as weights.

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

& 3.8 Changes in credit standards for loans to NFCs

Sources: ECB and Bank of England

Weighted net percentage of banks contributing to the tightening of standards over the past three months.

3.9 Option-adjusted spreads on euro area corporate bonds

Sources: Bank of America Merrill Lynch

Bank of America Merrill Lynch Bond Index for the euro area non-financial corporate sector, broken down by rating class (AA and BBB) and high yields.

3.10 Expected default frequency of the corporate sector

Sources: Moody's KMV and ECB calculations

Averages weighted by non-equity liabilities based on the Moody's EDF data for financial and non-financial companies.

3.11 Foreign currency loans

Source: ECB

Loans extended by MFIs, excluding the European System of Central Banks, to domestic non-MFIs (excluding general government) in foreign currency as a share of total loans to domestic non-MFIs.

3.12 Over/undervaluation of residential property prices

Sources: ECB and ECB calculations

The methodology applied for estimating the over/undervaluation of residential property prices is 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.

3.13 Change in nominal residential property prices

Sources: ECB and ECB calculations

Residential property price indicators differ in terms of: (i) geographical coverage (with some referring only to property transactions in larger cities); (ii) property-type coverage (with some excluding new dwellings); (iii) the types of price observation collected (e.g. transaction prices obtained from land registries or notaries or values as assessed by professional property values); (iv) the time at which a price observation enters the index; and (v) quality adjustment (i.e. how the observed prices are adjusted for changes in the quality or composition of the observed properties).

4. Funding and liquidity

4.1 Interbank interest rate spreads

Source: Thomson Reuters

Difference between the overnight interbank rates and the overnight indexed swap (OIS) rates, for the euro area, the United States, and the United Kingdom.

4.2 Financial market liquidity indicator

Sources: ECB, Bank of England, Bloomberg, JPMorgan Chase & Co., Moody's KMV, and ECB calculations

This composite indicator is calculated by the ECB as an overall measure of liquidity, based on two components: money market liquidity risk and equity, bonds and foreign currency liquidity risk. The composite indicator comprises unweighted averages of individual liquidity measures, normalised over the period 1999-2006 for non-money market components. The data shown have been exponentially smoothed.

4.3 EUR/USD cross-currency basis swap spreads

Source: Bloomberg

The indicators show the cost of swapping euro into US dollars with a one-year or three-month tenor. The lower the spread, the more expensive it is to swap euro into US dollars.

4.4 Banks' funding by central banks

Sources: IMF, ECB and ECB calculations

Liabilities of credit institutions (i.e. monetary financial institutions (MFIs) excluding the European System of Central Banks (ESCB) and money market funds) vis-à-vis the Eurosystem (for euro area countries) or the national central bank (for other EU countries) as a share of the sector's total liabilities (excluding capital and reserves and remaining liabilities). ESCB funding comprises loans to other MFIs and excludes holdings of securities other than shares issued by other MFIs.

4.5 Money markets and the Eurosystem's standing facilities

Sources: ECB and Bloomberg

The chart shows the evolution of the Eurosystem current account (including minimum reserves) and the marginal lending/deposit facility (for overnight lending/deposits), and the volume of euro-denominated transactions in the interbank overnight market (EONIA volume).

4.6 Maturity profile of Banks' outstanding debt securities

Sources: Dealogic and ECB calculations

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.

4.7 Banks' long-term debt securities issuance

Sources: Dealogic DCM analytics

Debt issuance by EU public 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.

4.8 Loan-to-deposit ratio

Sources: ECB

Data refers to the ratio between total loans and total deposits vis-à-vis the domestic and euro area non-financial private sector and vis-à-vis non-banks (excluding general government) from other jurisdictions.

4.9 CDS spread between senior and subordinated debt

Sources: Thomson Reuters Datastream, CMA and ECB calculations

Median of the difference between CDS spreads on senior and subordinated debt respectively for a sample large EU banks.

5. Market risk

5.1 Global risk aversion indicator

Sources: Bloomberg, Bank of America Merrill Lynch, UBS, Commerzbank, and ECB calculations

The indicator is 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.

5.2 Price/earnings ratio of equity indices

Sources: Thomson Reuters Datastream

The indices used are: EU non-financial corporations; Price-Earnings Ratio, EU main index; Price-Earnings Ratio, EU banking sector; Price-Earnings Ratio, EU insurance sector; Price-Earnings Ratio.

5.3 Equity indices

Sources: Bloomberg and Thomson Reuters

The equity indices displayed are EU Banks Datastream Index, EU Insurance Datastream Index, EU Building Materials and Fixtures Datastream Index and EU Diversified Industrials Datastream Index. Volatility is implied by at-the-money options observed in the market. The VSTOXX Index is based on a new methodology jointly developed by Deutsche Börse and Goldman Sachs to measure volatility in the euro area. VSTOXX is based on the EURO STOXX 50 Index options traded on Eurex. It measures implied volatility on options across all maturities.

5.4 Short-term interest rates – implied volatility

Source: Bloomberg

The indicators reflect the volatility of short-term interest rates implied by at-the-money swaptions prices observed in the market.

5.5 Long-term interest rates – implied volatility

Source: Bloomberg

The indicators reflect the volatility of long-term interest rates implied by at-the-money swaptions prices observed in the market.

5.6 Exchange rate volatility

Source: Bloomberg

The indicators reflect the volatility of foreign currency interest rates implied by at-the-money options prices observed in the market for the major currencies, based on a three-month maturity.

6. Profitability and solvency

6.1 Banking groups' profitability indicators

a. Return on equity

Source: EBA

The data is based on the EBA's implementing technical standards (ITS) on supervisory reporting (EU Regulation No 680/2014 and it subsequent amendments). Data refer to group consolidated data. The indicator is based on a sample of 194 EU banks (the list of the banks can be found under the link http://www.eba.europa.eu/risk-analysis-and-data). Data are subject to changes in the composition of the sample over time. The indicator is based on the ratio between *profit and loss for the year* (Template F02.00; Row 670 670; Column 10) and *total equity* (Template F01.03; Row 300; Column 10). Quarterly flows are annualised.

b. Return on assets

Source: EBA

The data is based on the EBA's implementing technical standards (ITS) on supervisory reporting (EU Regulation No 680/2014 and it subsequent amendments). Data refer to group consolidated data. The indicator is based on a sample of 194 EU banks (the list of the banks can be found under the link http://www.eba.europa.eu/risk-analysis-and-data). Data are subject to changes in the composition of the sample over time. The indicator is based on ratio between *profit and loss for the year* (Template F02.00; Row 670; Column 10) and *total assets* (Template F01.01; Row 380; Column 10). Quarterly flows are annualised.

c. Cost-to-income ratio

Source: EBA

The data is based on the EBA's implementing technical standards (ITS) on supervisory reporting (EU Regulation No 680/2014 and it subsequent amendments). Data refer to group consolidated data. The indicator is based on a sample of 194 EU banks (the list of the banks can be found under the link http://www.eba.europa.eu/risk-analysis-and-data). Data are subject to changes in the composition of the sample over time. The indicator is based on the ratio between *administrative and depreciation expenses* (Template F02.00; Row 360,390; Column 10) and *total net operating income* (Template F02.00; Row 355; Column 10). Quarterly data refer to cumulative flows over the corresponding year.

d. Net interest income-to-total operating income ratio

Source: EBA

The data is based on the EBA's implementing technical standards (ITS) on supervisory reporting (EU Regulation No 680/2014 and it subsequent amendments). Data refer to group consolidated data. The indicator is based on a sample of 194 EU banks (the list of the banks can be found under the link http://www.eba.europa.eu/risk-analysis-and-data). Data are subject to changes in the composition of the sample over time. The indicator is based on the ratio between *net interest income* (Template F02.00; Row 010, 090; Column 10) and *total net operating income* (Template F02.00; Row 355; Column 10). . Quarterly data refer to cumulative flows over the corresponding year.

6.2 Banking groups' solvency, liquidity and balance sheet structure indicators

a. CET1 to risk weighted assets ratio

Source: EBA

The data is based on the EBA's implementing technical standards (ITS) on supervisory reporting (EU Regulation No 680/2014 and it subsequent amendments). Data refer to group consolidated data. The indicator is based on a sample of 194 EU banks (the list of the banks can be found under the link http://www.eba.europa.eu/risk-analysis-and-data). Data are subject to changes in the composition of the sample over time. The indicator is based on the ratio between *common equity TIER 1 capital* (Template C01.00; Row 20; Column 10) and *total risk exposure amount* (Template C02.00; Row 10; Column 10). .

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

Source: EBA

The data is based on the EBA's implementing technical standards (ITS) on supervisory reporting (EU Regulation No 680/2014 and it subsequent amendments). Data refer to group consolidated data. The indicator is based on a sample of 194 EU banks (the list of the banks can be found under the link http://www.eba.europa.eu/risk-analysis-and-data). Data are subject to changes in the composition of the sample over time. The indicator is based on the ratio between *non-performing loans and advances* (Template F18.00; Row 070,250; Column 60) and on *total gross loans and advances* (Template F18.00; Row 070,250; Column 10).

c. Ratio of liquid assets to short term liabilities

Source: EBA

The data is based on the EBA's implementing technical standards (ITS) on supervisory reporting (EU Regulation No 680/2014 and it subsequent amendments). Data refer to group consolidated data. The indicator is based on a sample of 194 EU banks (the list of the banks can be found under the link http://www.eba.europa.eu/risk-analysis-and-data). Data are subject to changes in the composition of the sample over time. The indicator is based on the ratio between *liquid assets* (Template C51.00; Sheet Total;

Row: 010-390 excl. 030; Column: 020 & 040 (if not available 030, if not available 040)) and *total items providing stable funding in less than 12 month* (Template 61.00; Sheet Total; Row: 010-250; Column: 010-040).

d. Asset encumbrance ratio

Source: EBA

The data is based on the EBA's implementing technical standards (ITS) on supervisory reporting (EU Regulation No 680/2014 and it subsequent amendments). Data refer to group consolidated data. The indicator is based on a sample of 194 EU banks (the list of the banks can be found under the link http://www.eba.europa.eu/risk-analysis-and-data). Data are subject to changes in the composition of the sample over time. The indicator is based on the ratio between *total encumbered assets and collateral* (Template F32.01; Row 010,030; Column 010) and total assets and collateral (Template F32.01; Row 010; Column 010, 060; and Template F32.01; Row 130; Column 010,040).

6.4 Insurances groups' profitability indicators

a. Return on equity

Source: EIOPA

The indicator is based on the data available for a sample of 27 EU-headquartered insurance groups and is subject to changes in the composition of the sample over time. The list of groups reporting quarterly fast-track data can be found on the EIOPA website under this link (see annex 2). 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 available solvency capital over the last four quarters.

b. Combined ratio – non-life insurance

Source: EIOPA

The indicator is based on the data available for a sample of 25 EU-headquartered insurance groups and is subject to changes in the composition of the sample over time. The list of groups reporting quarterly fast-track data can be found on the EIOPA website under this link (see annex 2). The combined ratio is defined as net claims incurred and net operating expenses divided by net premiums earned. Semi-annual data refer to cumulative flows over the corresponding year.

c. Gross premiums written – life insurance

Source: EIOPA

The indicator is based on the data available for a sample of 25 EU-headquartered insurance groups and is subject to changes in the composition of the sample over time. The list of groups reporting quarterly fast-track data can be found on the EIOPA website under this link (see annex 2). The chart refers to the annual percentage change in the gross premiums written for life insurance business. Semi-annual data refer to cumulative flows over the corresponding year.

d. Gross premiums written – non-life insurance

Source: EIOPA

The indicator is based on the data available for a sample of 25 EU-headquartered insurance groups and is subject to changes in the composition of the sample over time. The list of groups reporting quarterly fast-track data can be found on the EIOPA website under this link (see annex 2). The chart refers to the annual percentage change in the gross premiums written for non-life insurance business. Semi-annual data refer to cumulative flows over the corresponding year.

6.5 Insurances groups' solvency indicators

a. Solvency ratio – life insurance

Source: EIOPA

The indicator is based on the data available for a sample of 25 EU-headquartered insurance groups and is subject to changes in the composition of the sample over time. The list of groups reporting quarterly fast-track data can be found on the EIOPA website under this link (see annex 2). The solvency ratio is defined as the available solvency capital divided by the required solvency capital for life insurance business.

b. Solvency ratio – non-life insurance

Source: EIOPA

The indicator is based on the data available for a sample of 25 EU-headquartered insurance groups and is subject to changes in the composition of the sample over time. The list of groups reporting quarterly fast-track data can be found on the EIOPA website under this link (see annex 2). The solvency ratio is defined as the available solvency capital divided by the required solvency capital for non-life insurance business.

6.6 Insurances groups' Retention ratio

Source: EIOPA

The indicator is based on the data available for a sample of 27 EU-headquartered insurance groups and is subject to changes in the composition of the sample over time. The list of groups reporting quarterly fast-track data can be found on the EIOPA website under this link (see annex 2). The retention ratio is defined as net premiums written divided by gross premiums written. Semi-annual data refer to cumulative flows over the corresponding year.

7. Structural risk

7.1 Banking sector size

Source: ECB and Eurostat

The indicator is calculated as the total assets of domestic banking groups and total assets of foreign banking groups as a percentage of GDP.

7.2 Banking sector leverage

Source: ECB

The indicator is calculated as the total assets divided by total equity.

7.3 Growth of components of the EU financial sector

Source: ECB

Growth rates derived from flows. OFI, ICPF and non-MMF investment funds data based on financial accounts combining (as available) ESA 2010 and ESA1995 data. MFI data based on monetary statistics. MMFs data based are proxied by MMF shares/units issued by the MFI sector.

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

Source: ECB

OFI and non-MMF investment funds data based on financial accounts combining (as available) ESA 2010 and ESA1995 data. MFI data based on monetary statistics. MMFs data based on total assets for euro area countries and are proxied by MMF shares/units issued by the MFI sector for non-euro area countries.

7.5 Total assets of investment funds and OFIs in the EU

Source: ECB

Investment funds balance sheet data are missing for the UK (total assets are estimated from the financial sector balance sheet).

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

Source: ECB

The indicator shows ratio of non-MMF investment funds' short term assets (deposit and loan claims and debt securities with original maturity up to one year) to short term liabilities (loans and deposits received with original maturity up to one year and Investment fund shares/units of open-end funds). Maturity breakdowns for loans and deposits are available only from 2014 Q4 and are estimated for prior periods based on the maturity breakdowns in 2015 for these instruments (for the respective counterparty sectors).