The systemic risk buffer: indicators, definitions, data sources and time-series keys

1 Introduction

This memorandum specifies the official risk indicators for the systemic risk buffer (SyRB), their definitions, statistical data sources used in the calculation of the indicators and time-series keys for the data. The memorandum is updated on a regular basis in case of, for example, detected inaccuracies or errors, possible adjustments to the risk indicators or their definitions, or changes in the availability of statistical data or data sources.

In line with the dedicated Ministry of Finance Decree, the indicators and their measures are primarily based on public statistical data required by the European Central Bank (ECB). These data are available at the ECB Statistical Data Warehouse (http://sdw.ecb.europa.eu/). This memorandum specifies for each indicator the series keys which can be used to find the time series.

The risk indicators are used in assessing structural vulnerabilities in the Finnish financial and banking system, the existence of which can increase the probability and scale of financial crises and other severe financial disruptions and lead to contagion within the domestic financial system. As the indicators are used in assessing the risk resilience of the domestic financial system as a whole, they are based on aggregate statistical data on the credit institutions sector and on lending and debt levels. Consequently, the risk indicators presented here differ from the O-SII risk indicators capturing the systemic importance of individual credit institutions and computed based on credit institution-specific data. The O-SII indicators are used for identifying individual systemically important credit institutions (O-SIIs) and calibrating their additional capital requirements.

2 Risk indicators

Housing loans granted to domestic households as a share of total loans granted by the credit institutions sector to the private sector

Risk factor – The credit institutions sector's risk concentrations in lending, funding and other key banking functions

Frequency: Monthly
Source: European Central Bank

Numerator = Housing loans granted by MFIs* to domestic households**
Denominator = Credit*** granted to the domestic private sector****

Series key: RAI.M.%.LC1DHHS.Z01.BSI.Z

* Comprises all monetary financial institutions (MFIs) operating in the respective country, incl. foreign subsidiaries and branches, excl. the Eurosystem / national central banks. Non-consolidated data.
** Incl. non-profit institutions serving households.
*** Credit refers here to loans and debt securities issued.
**** Private sector refers here to households and non-financial corporations.
% = AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK (the group of countries may change due to changes in the number of euro area or EU Member States, or for statistical reasons (e.g. confidentiality)).

Justification: Large amounts of housing loans on credit institutions' balance sheets expose the institutions to credit losses from mortgage lending. Sharp fluctuations in the housing markets and mortgage lending have been among the factors underlying many financial crises.

Credit institutions’ claims on construction and real estate companies as a share of credit institutions’ total assets

Risk factor – The credit institutions sector’s risk concentrations in lending, funding and other key banking functions

Frequency: Annual
Source: European Central Bank

Numerator = Loans granted by credit institutions* to industries ‘construction’ and ‘real estate activities’
Denominator = Credit institutions’ total assets

Series keys: CBD2.A.%.W0.11.S11.F.A.F.A1100._X.ALL.GC._Z.LE._T.EUR + CBD2.A.%.W0.11.S11.L.A.F.A1100._X.ALL.AI._Z.LE._T.EUR / CBD2.A.%.W0.11._Z._Z.A.A.A0000._X.ALL.CA._Z.LE._T.EUR

* Domestic credit institutions. Consolidated data.

Justification: Sharp housing market downturns have in many crisis situations caused large credit losses to banks from loans granted to non-financial corporations in the construction and real estate industries. Hence, in times of crises, concentration of lending on these firms may, in the worst case, significantly weaken credit institutions’ capital adequacy and lending.

Credit institutions’ domestic government bond assets relative to credit institutions’ total assets

Risk factor – The credit institutions sector’s risk concentrations in lending, funding and other key banking functions

Frequency: Monthly
Source: European Central Bank

Numerator = MFI* holdings of debt securities** issued by domestic general government
Denominator = Total assets of MFIs – MFIs' remaining assets***

Series keys: BSI.M.%.N.A.A30.A.1.U6.2100.Z01.E
/
(BSI.M.%.N.A.T00.A.1.Z5.0000.Z01.E - BSI.M.AT.N.A.A7C.X.1.Z5.0000.Z01.E)

* Comprises all monetary financial institutions (MFIs) operating in the respective country, incl. foreign subsidiaries and branches, excl. the Eurosystem / national central banks. Non-consolidated data.
** Refers here to bonds and money market paper.
*** Item 'Remaining assets and cash of which euro' (A7C) has been excluded to eliminate country-specific treatment of financial derivatives recognised in the balance sheet.
% = AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK (the group of countries may change due to changes in the number of euro area or EU Member States, or for statistical reasons (e.g. confidentiality)).

Justification: Large holdings of domestic government bonds expose credit institutions to credit-loss and contagion risks and to funding constraints in situations where the state's creditworthiness or debt-service capacity deteriorates significantly.

Domestic MFIs' share of ownership of bonds issued by domestic credit institutions

Risk factor – Interconnectedness of domestic credit institutions in lending, payment transfers and other banking functions important to financial stability

Frequency: Quarterly
Source: European Central Bank

Numerator = MFI* holdings of debt securities** issued by domestic credit institutions
Denominator = Debt securities** issued by MFIs

Series keys:
BSI.Q.%.N.A.A30.A.1.U6.1000.Z01.E
/
BSI.M.%.N.A.L40.A.1.Z5.0000.Z01.E

* Comprises all monetary financial institutions (MFIs) operating in the respective country, incl. foreign subsidiaries and branches, excl. the Eurosystem / national central banks. Non-consolidated data.
** Refers here to bonds and money market paper.
% = AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK (the group of countries may change due to changes in the number of euro area or EU Member States, or for statistical reasons (e.g. confidentiality)).

Justification: Large domestic MFI holdings of bonds issued by domestic credit institutions increase the risk that credit institutions' difficulties in bond repayment could weaken the lending and loss-absorption capacity of the whole sector in the event of economic disruptions, thereby undermining investor confidence in the sector.

Credit institutions sector funding gap

Risk factor – Interconnectedness of the credit institutions sector with foreign banking and financial systems, central counterparties and other financial market actors

Frequency: Quarterly
Source: European Central Bank

Numerator: MFI* loans to euro area households** and non-financial corporations*** and to the non-euro area private sector
Denominator: MFI deposits from euro area households and non-financial corporations and from the non-euro area private sector***

Series keys, euro area countries:

(BSI.M.%.N.A.A20.A.1.U6.2240.Z01.E + BSI.M.%.N.A.A20.A.1.U5.2240.Z01.E + BSI.M.%.N.A.A20.A.1.U6.2250.Z01.E + BSI.M.%.N.A.A20.A.1.U5.2250.Z01.E + BSI.Q.%.N.A.A20.A.1.U4.00NB.Z01.E)
/
BSI.M.%.N.A.L20.A.1.U6.2240.Z01.E + BSI.M.%.N.A.L20.A.1.U5.2240.Z01.E + BSI.M.%.N.A.L20.A.1.U6.2250.Z01.E + BSI.M.%.N.A.L20.A.1.U5.2250.Z01.E + BSI.Q.%.N.A.L20.A.1.U4.00NB.Z01.E

Series keys, other EU countries:

BSI.M.%.N.A.A20.A.1.U2.2240.Z01.E + BSI.M.%.N.A.A20.A.1.U2.2250.Z01.E + BSI.Q.%.N.A.A20.A.1.U8.00NB.Z01.E
/
BSI.M.%.N.A.L20.A.1.U2.2240.Z01.E + BSI.M.%.N.A.L20.A.1.U2.2250.Z01.E + BSI.Q.%.N.A.L20.A.1.U8.00NB.Z01.E

* Comprises all monetary financial institutions (MFIs) operating in the respective country, incl. foreign subsidiaries and branches, excl. the Eurosystem / national central banks. Non-consolidated data.
** Incl. non-profit institutions serving households.
*** Incl. housing corporations.
*** Non-resident non-banks (more detailed breakdown not available).
% = AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK (the group of countries may change due to changes in the number of euro area or EU Member States, or for statistical reasons (e.g. confidentiality)).

Justification: Funding gap refers to the ratio between credit granted and deposits taken by the credit institutions sector (loan-to-deposit ratio). Credit institutions cover the gap mainly by raising debt funding in the international financial markets. In times of crisis, market funding typically dries up faster than deposits. Solid capital adequacy of the credit institutions sector reduces the risk that market funding dries up.

Aggregate balance sheet of subsidiaries and branches of foreign banks relative to location country GDP

Risk factor – Interconnectedness of the credit institutions sector with risks to the financial systems of EU Member States and of other countries

Frequency: Quarterly
Source: European Central Bank

Numerator = Total assets of foreign branches and subsidiaries in the respective country
Denominator = Nominal GDP (four-quarter moving sum)

Series key: DD.Q.%.TA_FBS.PGDP.4F_N

% = AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK (the group of countries may change due to changes in the number of euro area or EU Member States, or for statistical reasons (e.g. confidentiality)).

Justification: Banking and financial crises of other countries may be transmitted to the home country via foreign subsidiaries and branches. Observations show that, in times of crisis, cross-border banking groups have often made the largest cuts in lending in units operating abroad. Hence, large market shares of subsidiaries and branches of foreign banks justify solid capital adequacy of the credit institutions sector to ensure lending capacity in crisis situations.

Balance sheet of the credit institutions sector relative to nominal GDP

Risk factor – Size and concentration of the credit institutions sector as measured by the size of credit institutions' balance sheets, and concentration in lending and acceptance of retail deposits

Frequency: Quarterly
Source: European Central Bank

Numerator = Consolidated total assets of domestic credit institutions and of foreign branches and subsidiaries
Denominator = Nominal GDP (four-quarter moving sum)

Series keys: DD.Q.%.TA_DBG.PGDP.4F_N + DD.Q.%.TA_FBS.PGDP.4F_N

* Domestic credit institutions. Consolidated data.
% = AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK (the group of countries may change due to changes in the number of euro area or EU Member States, or for statistical reasons (e.g. confidentiality)).

Justification: The large size of the banking sector increases the costs of banking crises to the real economy and general government. Therefore, robust capital buffers against banking crises are justified especially in countries with a large banking sector.

Loans granted by domestic credit institutions to households and non-financial corporations as a share of households' and non-financial corporations' total liabilities

Risk factor – Importance of the credit institutions sector in the intermediation of finance to the domestic private sector

Frequency: Quarterly
Source: European Central Bank

Numerator = Loans granted by MFIs* to domestic non-financial corporations** and households***
Denominator = Liabilities**** of non-financial corporations and households

Series keys: (QSA.Q.N.%.W2.S12K.S11.N.A.LE.F4.T._Z.XDC._T.S.V.N._T + QSA.Q.N.%.W2.S12K.S1M.N.A.LE.F4.T._Z.XDC._T.S.V.N._T)
/ (QSA.Q.N.%.W2.S1.S11.N.A.LE.F4.T._Z.XDC._T.S.V.N._T-
QSA.Q.N.%.W2.S11.S11.N.A.LE.F4.T._Z.XDC._T.S.V.N._T-

QSA.Q.N.%.W2.S1M.S11.N.A.LE.F4.T._Z.XDC._T.S.V.N._T+
QSA.Q.N.%.W2.S1.S1M.N.A.LE.F4.T._Z.XDC._T.S.V.N._T-
QSA.Q.N.%.W2.S11.S1M.N.A.LE.F4.T._Z.XDC._T.S.V.N._T-
QSA.Q.N.%.W2.S1M.S1M.N.A.LE.F4.T._Z.XDC._T.S.V.N._T)

* Comprises all monetary financial institutions (MFIs) operating in the respective country, incl. foreign subsidiaries and branches, excl. the Eurosystem / national central banks, excl. money market funds. Non-consolidated data.
** Incl. housing corporations.
*** Incl. non-profit institutions serving households.
**** Loans excl. intra- and inter-company loan liabilities, and intra- and inter-household loan liabilities.
% = AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK (the group of countries may change due to changes in the number of euro area or EU Member States, or for statistical reasons (e.g. confidentiality)).

Justification: The higher the dependency of debtors on credit institutions and the fewer the alternative funding channels available for them, the more important it is to ensure the sufficiency of the credit institutions sector's loss-absorption and lending capacity.

Household sector liabilities relative to household disposable income

Risk factors – Indebtedness of credit institutions' largest customer groups

Frequency: Annual
Source: European Central Bank

Numerator = Loans granted to households and non-profit institutions serving households (financial accounts)
Denominator = Gross disposable income of households and non-profit institutions serving households, adjusted for net equity of households in pension funds reserves (sector accounts of national accounts)

Available for: BE, CZ, DK, DE, EE, IE, ES, FR, HR, IT, CY, LV, LT, LU, HU, NL, AT, PL, PT, SI, SK, FI, SE, UK

Series keys: QSA.Q.N.%.W0.S1M.S1.N.L.LE.F4.T._Z.XDC_R_B6GA_CY._T.S.V.N._T
% = AT, BE, CZ, DE, DK, ES, FI, FR, GB, GR, HR, IE, IT, NL, PL, PT, RO, SE, SI

QSA.A.N.%.W0.S1M.S1.N.L.LE.F4.T._Z.XDC_R_B6GA_CY._T.S.V.N._T
% = CY, EE, LT, LV, SK, AT, BE, BG, CZ, DE, DK, ES, FI, FR, GB, GR, HR, HU, IE, IT, NL, PL, PT, RO, SE, SI, LU

(The group of countries may change due to changes in the number of euro area or EU Member States, or for statistical reasons (e.g. confidentiality)).

Justification: High household debt levels expose credit institutions to large direct and indirect loan-loss risks in crisis situations and increase the probability and effects of banking crises.

Non-financial corporations' indebtedness relative to GDP

Risk factor – Indebtedness of credit institutions' largest customer groups

Frequency: Quarterly
Source: European Central Bank

Numerator = Loan liabilities* and debt securities** issued by non-financial corporations***
Denominator = Nominal GDP (four-quarter moving sum)

Series keys: (QSA.Q.N.%.W0.S11.S1.C.L.LE.F4.T._Z.XDC._T.S.V.N._T + QSA.Q.N.%.W0.S11.S1.N.L.LE.F3.T._Z.XDC._T.S.V.N._T)
/ ECB_MNA_Q.Y.%.W2.S1.S1.B.B1GQ._Z._Z._Z.XDC.LR.N****

* Consolidated data.
** Non-consolidated data.
*** Incl. housing corporations.

**** Seasonally adjusted series are not necessarily available for all countries (Y).
% = AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, UK, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK (the group of countries may change due to changes in the number of euro area or EU Member States, or for statistical reasons (e.g. confidentiality)).

Justification: High corporate debt levels expose credit institutions to large direct and indirect loan-loss risks in crisis situations and increase the probability and effects of banking crises.