ESRB RISK DASHBOARD

Cut-off date: 1 March 2013

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.
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List of acronyms

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<tr>
<td>BIS</td>
<td>Bank for International Settlements</td>
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<td>CDS</td>
<td>credit default swap</td>
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<td>CISS</td>
<td>composite indicator of systemic stress</td>
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<td>COREP</td>
<td>common solvency ratio reporting</td>
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<td>EA</td>
<td>euro area</td>
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<td>European Banking Authority</td>
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<td>European Central Bank</td>
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<td>EIOPA</td>
<td>European Insurance and Occupational Pensions Authority</td>
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<td>European System of Central Banks</td>
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<td>IPD</td>
<td>Investment Property Databank</td>
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<td>MFI</td>
<td>monetary and financial institutions</td>
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<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<td>OIS</td>
<td>overnight indexed swap</td>
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<td>PMI</td>
<td>purchasing managers index</td>
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<td>SRM</td>
<td>systemic risk measure</td>
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Cut-off date

Data available to the ECB by Friday, 1 March 2013 were taken into account in these statistics.

Contact

For enquiries regarding the risk dashboard and its contents, please contact: statistics@ecb.europa.eu
1. Interlinkages and composite measures of systemic risk

1.1 Composite indicator of systemic stress (CISS)


Sources: Thomson Reuters, ECB and ECB calculations.
Notes: The CISS includes 15 raw, mainly market-based 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 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.

1.2 Probability of a simultaneous default by two or more large and complex banking groups
(as measured by the systemic risk measure (SRM))


Sources: Thomson Reuters and ECB calculations.
Notes: 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.
1.3 Average contribution of individual institutions to overall systemic risk using CoVaR (EU financial system)


Source: Bloomberg.

Notes: The indicator is based on the methodology proposed by Adrian and Brunnermeier (see Adrian, T. and Brunnermeier, M.K., “CoVaR”, Federal Reserve Bank of New York Staff Reports, No 348, September 2011). The sample includes the (log) stock prices of 119 European financial institutions listed in the STOXX600 (52 banks, 33 financial service providers and 34 insurance companies). The average “systemic risk contribution” (loss) tends to be higher during stress periods.

1.4 Co-movements of sovereign credit default swap (CDS) spreads

(1 Jun. 2006 - 28 Feb. 2013; score of the first principal component)

Source: Markit.

Notes: The indicator for Europe is based on the spreads of 12 sovereign CDSs, namely those of Belgium, Germany, Ireland, Greece, Spain, France, Italy, the Netherlands, Austria, Portugal, Finland and the United Kingdom. The sub-sample 1 indicator is based on the CDS spreads of countries hit by the sovereign crisis (Ireland, Greece, Spain, Italy and Portugal), while the sub-sample 2 indicator is based on those of the remaining countries (Belgium, Germany, France, the Netherlands, Austria, Finland and the United Kingdom). All indicators are constructed from the first component extracted through principal component analysis (PCA). An increase in the indicator suggests an increase in the joint default risk. A specific level for Greece’s default probability is assumed for the period in which Greek CDSs were not traded, i.e. the period between 9 March (credit event) and 11 April 2012.
1.5 Cross-border claims of banks (international banking statistics)

(Q3 2012 (foreign claims) and Jun. 2012 (total consolidated capital); percentages)

lenders and borrowers, EU only ○ other EU countries ▲ other non-EU countries

(75%, 100%][100%, 200%][200%, 300%] above 300%

Sources: Bank for International Settlements (BIS), ECB and ECB calculations.

Notes: 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. BIS statistics for Q3 2012 are still preliminary and subject to change.
2. Macro risk

2.1 Current and forecast real GDP growth

(Q1 2010 - Q4 2012; percentages; year-on-year growth)

Sources: European Commission and the European Commission winter 2013 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, DK, EE, ES, CY, LV, HU, MT, PL, PT, SI, FI and SE, “last observation” refers to Q3 2012.

2.2 Domestic credit-to-GDP gap

(Q4 2010 - Q3 2012; percentages)

Sources: European Commission, ECB and ECB calculations.
Notes: The domestic credit-to-GDP gap is calculated as the difference between the ratio of notional stocks of domestic credit to nominal GDP and its recursive Hodrick-Prescott trend (see Alessi, L. and Detken, C., “Quasi real time early warning indicators for costly asset price boom/bust cycles: a role for global liquidity”, European Journal of Political Economy, Vol. 27, No 3, 2011). Domestic credit comprises MFI loans to domestic non-MFIs (excluding general government) and MFI holdings of securities other than shares issued by domestic non-MFIs (excluding general government). For Greece “last observation” refers to Q2 2012.
2.3 Current account balance-to-GDP ratio

(Q4 2009 - Q3 2012; percentages)

Sources: European Commission and ECB.
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


Sources: European Commission and the European Commission winter 2013 forecast.
Notes: The eight-year median unemployment rate is used as a proxy for the structural unemployment rate. For DE, EE, LV and HU, “last observation” refers to December 2012; for GR and UK, “last observation” refers to November 2012.
2.5 General government debt-to-GDP ratio

(2010-2012; percentages)

Sources: European Commission and the European Commission winter 2013 forecast.
Notes: The official debt reported in the context of the excessive deficit procedure was used as a source of data on general government debt. Intra-general government transactions are consolidated (netted out). The black dashed line represents the threshold of 60% for the government debt-to-GDP ratio. EU aggregates are not corrected for intergovernmental lending.

2.6 General government deficit-to-GDP ratio

(2010-2012; percentages)

Sources: European Commission and the European Commission winter 2013 forecast.
Note: The black dashed line represents the threshold of 3% for the budget deficit under the Stability and Growth Pact.
2.7 Credit default swap premia on sovereign debt in selected EU countries

(1 July 2008 - 28 Feb. 2013; basis points)

Sources: Thomson Reuters Datastream and CMA.
Note: Greek CDSs were not traded between 9 March (credit event) and 11 April 2012.

2.8 Sovereign debt redemptions

(Mar. 2013 - Feb. 2014; EUR billions; percentages)

Sources: ECB and ECB calculations; European Commission forecast for GDP.
Notes: Redemption schedules refer to tradable debt securities only (loans are excluded), including debt issued in a currency other than the domestic one.
Debt redemptions denominated in currencies other than euro are converted into euro at current exchange rates. For Cyprus, a special-purpose bond with a one-year maturity amounting to EUR 1.88 billion, issued in June 2012 with the aim of improving the capital position of the banking sector, was excluded, since it is automatically renewed for a period of up to five years unless exchanged for cash.
2.9 Households’ debt-to-gross disposable income ratio
(2007 - 2011; percentages)

Sources: ECB and European Commission.
Notes: Gross disposable income adjusted for the change in net equity of households and pension fund reserves. For Bulgaria and Romania, "last observation" refers to 2010. For Luxembourg, it refers to 2009. Data for Malta are not available.

2.10 Economic sentiment indicator
(Mar. 2010 - Feb. 2013)

Source: European Commission.
Notes: The long-term average is set to 100; the three-year historical average is the average of index levels over the last 12 quarters and covers the most recent full economic cycle. The indicator comprises the indicators for industrial confidence (weight 40%), service confidence (weight 30%), consumer confidence (weight 20%), construction confidence (weight 5%) and retail confidence (weight 5%). For Ireland, "last observation" refers to April 2008.
2.11 Global PMI output and industrial production

(Jan. 2008 - Jan. 2013; basis points)

Sources: OECD, JPMorgan and Markit.
Notes: JPMorgan Global PMI output index, compiled by Markit, with a base (neutral) level of 50; values above (below) 50 indicate an increase (decrease) in economic activity. Data are produced on the basis of the same methodology in more than 20 countries, including all main developed economies and the main emerging markets. The change in global industrial production over the most recent three-month period is expressed in percentage points, in comparison with the previous three-month period.

2.12 Gold and Brent crude oil prices


Source: Bloomberg.
Notes: Gold generic future and Brent spot price. Gold prices are shown as a measure for global risk aversion.
2.13 Non-financial corporations’ debt-to-GDP ratio

(Q3 2011 - Q3 2012; percentages)

Sources: ECB and European Commission.
Notes: Data are taken from the national accounts. Non-financial corporations’ debt includes companies’ pension reserve liabilities. Corporate sector financial derivatives are excluded owing to data quality issues. Data for Romania are not available. Data for Cyprus are not available for publication owing to national confidentiality constraints. Non-financial corporations’ debt is consolidated at the enterprise group level in the Netherlands, which affects cross-country comparability.
3. Credit risk

3.1 Residential property prices

a) Estimates of the over/undervaluation of residential property prices in selected EU countries

(2007 and Q3 2012; percentages; distribution of estimates)

Sources: ECB and ECB calculations.

Notes: Estimates based on four different valuation methods: price-to-rent ratio, price-to-income ratio and two model-based methods (for details, see Box 3 in Financial Stability Review, ECB, June 2011). For each country, the two solid blue lines represent the distribution of estimates, calculated as the interval between the minimum and maximum observation for the two dates reported in the legend. Data for the United Kingdom refer to Q2 2012, and for Germany and the Netherlands to Q4 2012.

b) Change in nominal residential property prices

(Q3 2012; percentages)

Sources: ECB and ECB calculations.

Notes: Data for CY, HU and UK refer to Q2 2012. Data for CZ refer to Q4 2011. Data for PL and RO are not available.
3.2 Foreign currency loans in the EU

a) Share in total loans and annual growth rates

(Dec. 2012; percentages)

Source: ECB.
Notes: Loans extended by MFIs excluding the ESCB to domestic non-MFIs (excluding general government).
* For selected EU countries (BG, DK, LT and LV) with a regime of fixed exchange rates vis-a-vis the euro, both the total share of foreign currency loans (blue dots) and the share of loans denominated in foreign currencies other than the euro (red dots) are presented.

b) Foreign currency loans, broken down by domestic counterpart sector

(Dec. 2012; percentages)

Source: ECB.
Note: Loans extended by MFIs excluding the ESCB.
3.3 Yields on euro area non-financial corporate bonds, broken down by rating class


Source: Thomson Reuters Datastream.
Note: Merrill Lynch Bond Index for the euro area non-financial corporate sector, broken down by rating class.

3.4 Lending spreads of monetary financial institutions - loans to non-financial corporations and households

(Dec. 2012; percentage points)

Sources: ECB, Thomson Reuters and ECB calculations.
Notes: Lending spreads are calculated as the weighted average of the spreads for the relevant breakdowns of new business loans using the volumes as weights. The spreads are measured as the difference between monetary financial institutions’ interest rates for new business loans and the swap rate with a maturity corresponding to the loan category’s initial period of rate fixation.
3.5 Changes in credit standards for residential mortgage loans

(Q1 2003 - Q1 2013; weighted net percentages)

Notes: Weighted net percentages of banks contributing to the tightening of standards over the past three months. For the United Kingdom, data are only available from the second quarter of 2007 and are weighted according to the market share of the participating lenders. The net percentage balances on secured credit availability to households in the United Kingdom have been inverted. For the United States, the data series for all residential mortgage loans was discontinued owing to a split into the prime, non-traditional and subprime market segments from the April 2007 survey onwards.

3.6 Changes in credit standards for loans to large enterprises

(Q1 2003 - Q1 2013; weighted net percentages)

Notes: Weighted net percentage of banks contributing to the tightening of standards over the past three months. For the United Kingdom, data are only available from the second quarter of 2007 and are weighted according to the market share of the participating lenders. The net percentage balances on corporate credit availability in the United Kingdom have been inverted. US commercial and industrial loans refer to large and medium firms.
4. Funding and liquidity

4.1 Interbank interest rate spreads

(1 Jan. 2000 - 28 Feb. 2013; basis points; three-month maturity)

Sources: Thomson Reuters and ECB calculations.
Note: Difference between interbank interest rates and overnight indexed swap (OIS) rates.

4.2 Financial market liquidity indicator for the euro area


Notes: The composite indicator includes arithmetic averages of individual liquidity measures, normalised over the period from 1999 to 2006 for non-money market components, and for the period from 2000 to 2006 for money market components. The data shown have been exponentially smoothed.

4.3 EUR/USD cross-currency basis swap spreads

(1 Jan. 2008 - 1 Mar. 2013; basis points)

Source: Bloomberg.

4.4 Loan-to-deposit ratio for a sample of large EU banking groups

(Q3 2011 - Q3 2012; multiples; individual institutions’ interquartile range and median)

Source: EBA.
Notes: The data presented above are subject to changes in the composition of the sample over time. The data refer to the ratio of total loans advances (including to credit institutions) to total deposits (other than from credit institutions). The figures are subject to revision.
4.5 Pattern of credit institutions’ liabilities

a) Liabilities of euro area credit institutions, broken down by instrument ¹)

- Eurosystem lending
- Inter bank lending
- Short-term deposits
- Long-term deposits
- Short-term debt securities issued
- Long-term debt securities issued
- Total liabilities ¹)

Source: ECB.
Note: Credit institutions are MFIs excluding the ESCB and money market funds.
¹) Total liabilities exclude capital and reserves as well as remaining liabilities.

b) Liabilities of EU credit institutions, broken down by country - historical distribution of annual growth rates ¹)

Source: ECB.
Notes: Credit institutions are MFIs excluding the ESCB and money market funds. Each box-plot displays the maximum, the third quartile, the median, the first quartile and the minimum of the annual growth rates of the credit institution sector’s total liabilities.
¹) Total liabilities exclude capital and reserves as well as remaining liabilities.
²) January 2004 or first available data point.
³) Data for the United Kingdom are derived according to ECB definitions on the basis of estimated data provided by the Bank of England.
4.6 Share of central bank funding in credit institutions’ liabilities

(Sep. 2012; percentages)

Sources: ECB, International Monetary Fund and ECB calculations.

Notes: Credit institutions are MFIs excluding the ESCB and money market funds. ESCB funding comprises loans to other MFIs and excludes holdings of securities other than shares issued by other MFIs.

1) Total liabilities exclude capital and reserves as well as remaining liabilities.
2) Data for the United Kingdom are not available.

4.7 Money markets and the Eurosystem’s standing facilities


Sources: ECB and Bloomberg.
4.8 Maturity profile of EU banks’ outstanding long-term debt

(2005 - Feb. 2013\(^{(p)}\), percentages)

Sources: Dealogic DCM Analytics and ECB calculations.

Notes: The data are based on all the amounts outstanding at the end of the corresponding year or month. Banks’ long-term debt includes corporate bonds, medium-term notes, covered bonds, asset-backed securities and mortgage-backed securities with a minimum maturity of 12 months.

\(^{(p)}\) Provisional data for February 2013.
5. Market risk

5.1 Global risk aversion indicator


Sources: Bloomberg, Bank of America Merrill Lynch (BoA ML), UBS, Commerzbank and ECB calculations.

Notes: 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. A rise in the indicator denotes an increase in risk aversion.
5.2 Equity indices

a) Equity indices, broken down by market


Sources: Bloomberg and Thomson Reuters.

b) Equity indices, broken down by sector


Sources: Bloomberg and Thomson Reuters.

c) Equity implied volatility indices: S&P 500 and Euro Stoxx 50


Source: Bloomberg.

Notes: Volatility is implied by at-the-money options observed in the market. The Chicago Options Exchange Volatility Index (CBOE VIX Index) represents a market estimate of future volatility, based on the weighted average of the implied volatilities for a wide range of strikes. The VSTOXX is based on the Euro Stoxx 50 Index options traded on Eurex. It measures implied volatility on options across all maturities.
5.3 Price/earnings ratio of equity indices, broken down by sector
(1 Jan. 1999 - 28 Feb. 2013)

Source: Thomson Reuters.

5.4 Short-term interest rates - implied volatility: three months - one year

Source: Bloomberg.
Note: 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

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

5.6 Exchange rate volatility
(1 Jan. 1999 - 28 Feb. 2013)

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 Slope of the yield curve

(2 Jan. 2006 - 28 Feb. 2013; basis points)


Note: The slope is defined as the difference between ten-year and one-year yields.
6.2 Profitability indicators

a) Return on equity
(Q3 2011 - Q3 2012; percentages; individual institutions’ interquartile range and median)

b) Cost-to-income ratio
(Q3 2011 - Q3 2012; percentages; individual institutions’ interquartile range and median)

c) Net interest income to total operating income
(Q3 2011 - Q3 2012; percentages; individual institutions’ interquartile range and median)

Source: EBA.
Notes: The data presented above are subject to changes in the composition of the sample over time. The figures are subject to revision. Quarterly flows are annualised.

(*) See table 6.7 for the list of large EU banking groups.
### 6.3 Solvency indicators

**a) Tier 1 capital to total assets excluding intangible assets**

(Q3 2011 - Q3 2012; percentages; individual institutions’ interquartile range and median)

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<td>2012</td>
<td>5.5</td>
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<td>7.0</td>
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**b) Impaired loans and past due (>90 days) loans to total loans**

(Q3 2011 - Q3 2012; percentages; individual institutions’ interquartile range and median)

<table>
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<tr>
<th>Year</th>
<th>Q3 2011</th>
<th>Q4 2011</th>
<th>Q1 2012</th>
<th>Q2 2012</th>
<th>Q3 2012</th>
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</table>

Source: EBA.

Notes: The data presented above are subject to changes in the composition of the sample over time. The figures are subject to revision.
6.4 Profitability indicators

**a) Return on equity**

(H1 2010 - H1 2012; percentages; individual institutions’ interquartile range and median)

![Graph of Return on Equity](image1)

Source: EIOPA.
Notes: 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. The data presented above are subject to changes in the composition of the sample over time. The figures are subject to revision.

**b) Combined ratio - non-life insurance business**

(H1 2010 - H1 2012; percentages; individual institutions’ interquartile range and median)

![Graph of Combined Ratio](image2)

Source: EIOPA.
Notes: The combined ratio is defined as net claims incurred and net operating expenses divided by net premium earned. Semi-annual data refer to cumulative flows over the corresponding year. The data presented above are subject to changes in the composition of the sample over time. The figures are subject to revision.

**c) Gross premiums written - life insurance business**

(H1 2010 - H1 2012; annual percentage changes; individual institutions’ interquartile range and median)

![Graph of Gross Premiums Written - Life Insurance Business](image3)

Source: EIOPA.
Notes: Semi-annual data refer to cumulative flows over the corresponding year. The data presented above are subject to changes in the composition of the sample over time. The figures are subject to revision.

**d) Gross premiums written - non-life insurance business**

(H1 2010 - H1 2012; annual percentage changes; individual institutions’ interquartile range and median)

![Graph of Gross Premiums Written - Non-Life Insurance Business](image4)

Source: EIOPA.
Notes: Semi-annual data refer to cumulative flows over the corresponding year. The data presented above are subject to changes in the composition of the sample over time. The figures are subject to revision.

(*) See table 6.7 for the list of large EU insurance groups.
6.5 Solvency indicators

a) Solvency ratio - life insurance business
(H1 2010 - H1 2012; percentages; individual institutions’ interquartile range and median)

Source: EIOPA.
Notes: The solvency ratio is defined as the available solvency capital divided by the required solvency capital. The data presented above are subject to changes in the composition of the sample over time. The figures are subject to revision.

b) Solvency ratio - non-life insurance business
(H1 2010 - H1 2012; percentages; individual institutions’ interquartile range and median)

Source: EIOPA.
Notes: The solvency ratio is defined as the available solvency capital divided by the required solvency capital. The data presented above are subject to changes in the composition of the sample over time. The figures are subject to revision.

6.6 Retention ratio
(H1 2010 - H1 2012; percentages; individual institutions’ interquartile range and median)

Source: EIOPA.
Notes: 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. The data presented are subject to changes in the composition of the sample over time. The figures are subject to revision.
### 6.7 Samples of large EU banking groups and large EU insurance groups

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<td>2 KBC Group</td>
<td>2 Allianz</td>
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<td>3 Dexia</td>
<td>3 Aviva</td>
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<td>12 Danske Bank A/S</td>
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<td>13 Banco Santander SA</td>
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<td>15 La Caixa</td>
<td>15 IF P&amp;C Insurance</td>
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<td>16 Banco Financiero y de Ahorro</td>
<td>16 ING</td>
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<td>17 BNP Paribas</td>
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<td>18 Crédit Agricole Group-Crédit Agricole</td>
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<td>21 Group BPCE</td>
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<td>25 HSBC Holdings Plc</td>
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<td>31 ABN Amro</td>
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<td>32 ING Groep NV</td>
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<td>33 Rabobank Group-Rabobank Nederland</td>
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<td>34 Skandinaviska Enskilda Banken AB</td>
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<td>35 Nordea Bank AB (publ)</td>
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<tr>
<td>36 Svenska Handelsbanken</td>
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</tbody>
</table>

1) WestLB is included in the indicators up to Q1 2011. On 30 June 2012 WestLB was formally dissolved.