

# **Financial Stability Report**

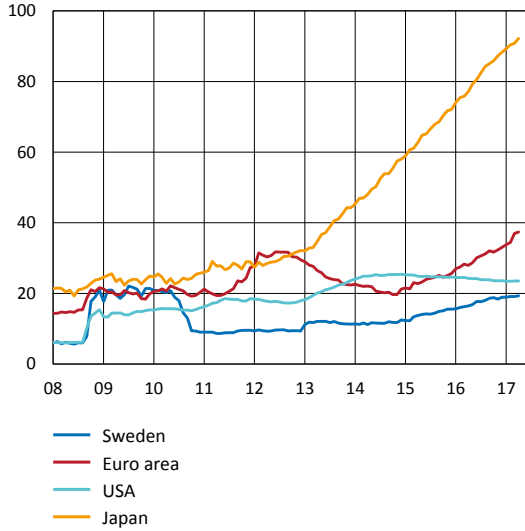
## **2017:1**

Appendix - Charts

24 May 2017

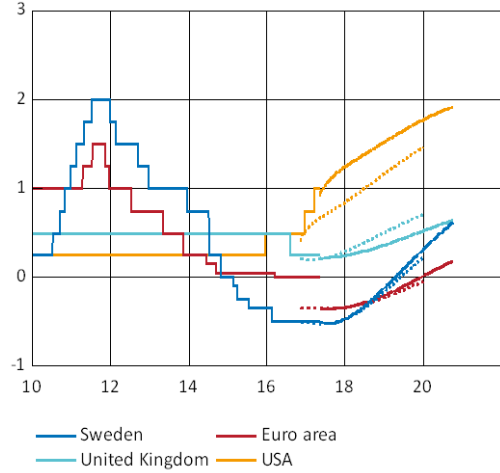
# Financial markets

**Chart A1. Central banks' balance sheet in relation to GDP**  
Per cent



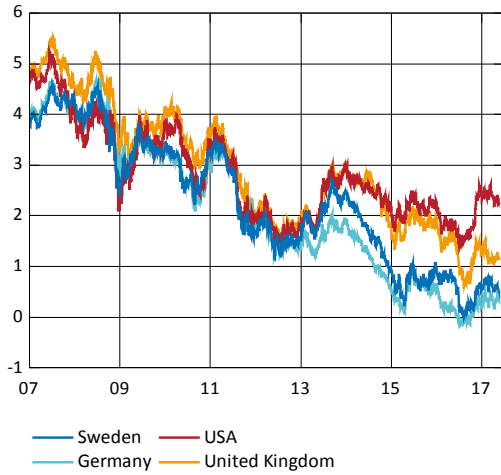
Note. For Sweden, the Euro Area and Japan GDP outcome for 2017 is not available, the outcome for quarter four 2016 has therefore been used.  
 Source: Macrobond

**Chart A2. Policy rates and rate expectations according to forward rates**  
Per cent



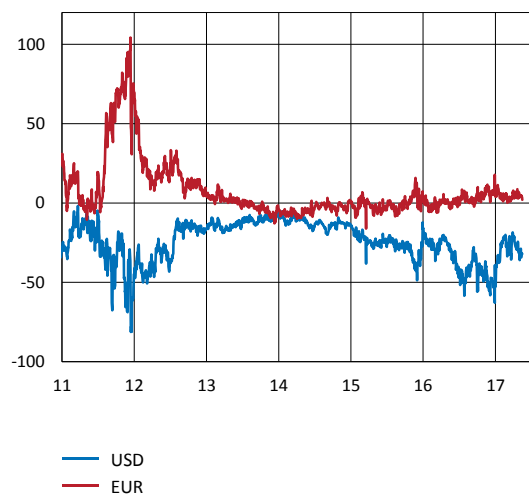
Note. Forward rates describe the expected overnight rate, which does not always correspond to the policy rate. There is no published overnight rate in Sweden, but it normally follows the repo rate closely. Unbroken lines are estimated on 12 May 2017, broken lines on 11 November 2016.  
 Sources: Macrobond and the Riksbank

**Chart A3. 10-year government bond rates**  
Per cent



Note. Benchmark bonds. The maturity could therefore potentially be different.  
 Source: Macrobond

**Chart A4. 3-month FX-swaps**  
Basis points



Note. Extra cost of borrowing through foreign currency and converting this into Swedish kronor compared to domestic borrowing cost. The calculations are based on interest rate parity condition between interbank rates.  
 Sources: Bloomberg and the Riksbank

**Chart A5. Stock indices**  
Index, 1 Jan 2000 = 100



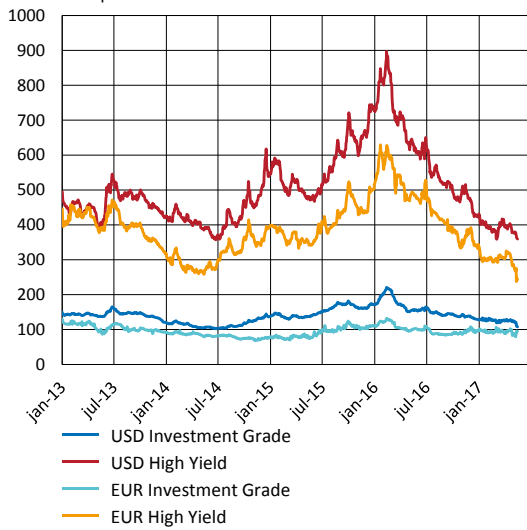
Source: Macrobond

**Chart A6. Expected volatility on the bond and stock markets**  
Index



Source: Thomson Reuters

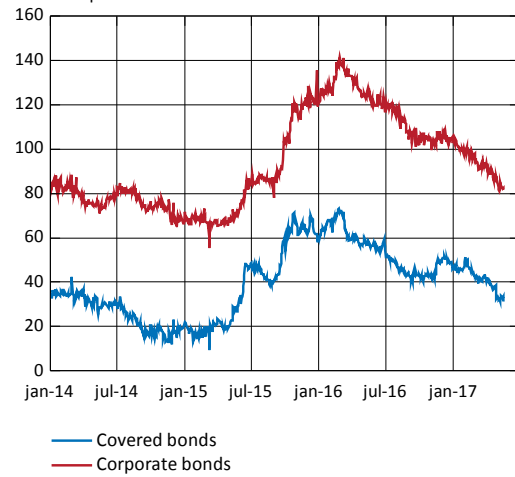
**Chart A7. Yield on corporate bonds**  
Basis points



Note. The series shows the spread between corporate bonds with different credit worthiness issued in different currencies and a corresponding interest rate swap.

Source: Bloomberg

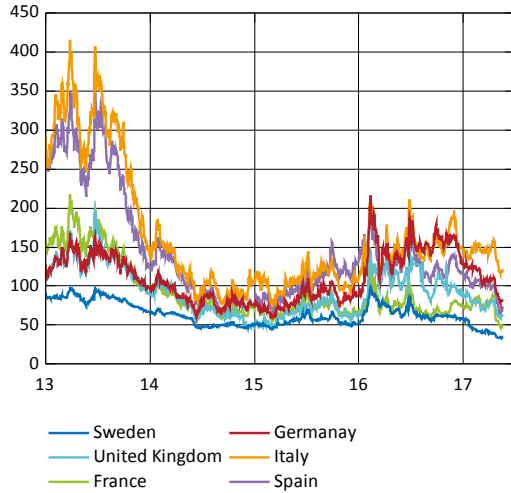
**Chart A8. Five year risk premiums on the Swedish bond market**  
Basis points



Note. Difference between bond yields and swap rate.

Source: The Riksbank

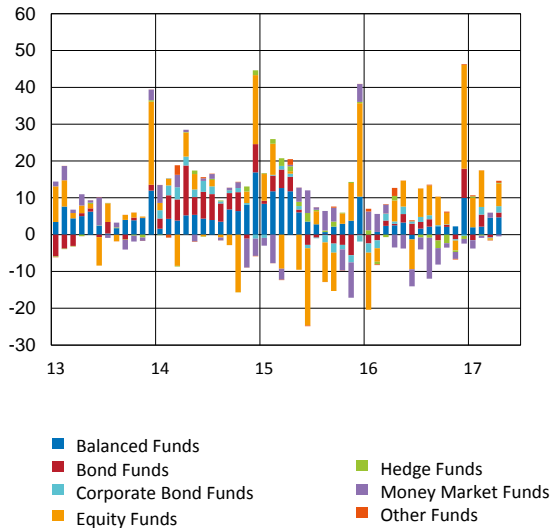
**Chart A9. Five year CDS premiums for banks**  
Basis points



Note. Average of comparable major banks domiciled in each country respectively.

Sources: Fitch and the Riksbank

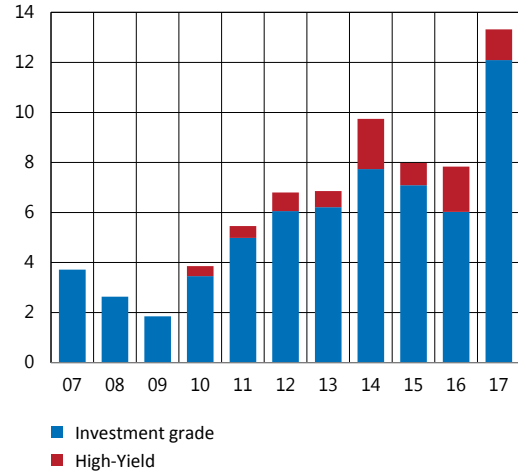
**Chart A11. Swedish fund flows**  
SEK billion



Note. Separate reporting for corporate bonds was introduced in 2014.

Sources: Swedish Investment Fund Association and Macrobond

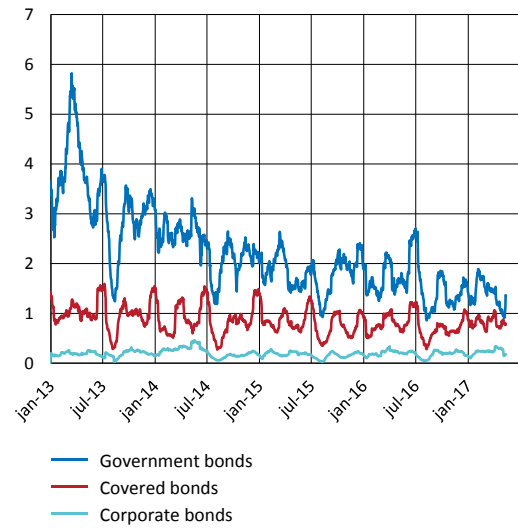
**Chart A10. Bond issues on the Swedish corporate bond market**  
Monthly average, SEK billion



Note. Some bonds have no credit rating from a credit institution and for these bonds the allocation between Investment Grade and High Yield is based on the banks' credit assessments of the companies.

Source: Dealogic

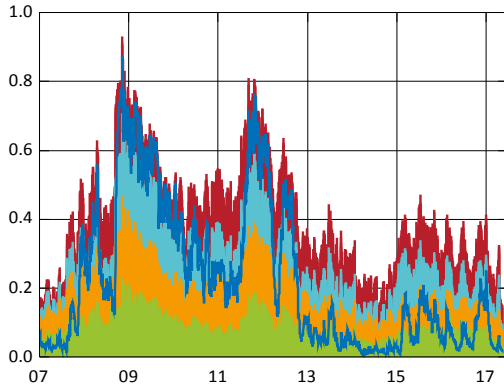
**Chart A12. Turnover on the Swedish bond market**  
Per cent



Note. Refers to monthly average of daily spot turnover in relation to outstanding volume.

Sources: Riksbank, Statistics Sweden and the Swedish National Debt Office

**Chart A13. Swedish stress index**  
Ranking (0=low stress, 1=high stress)

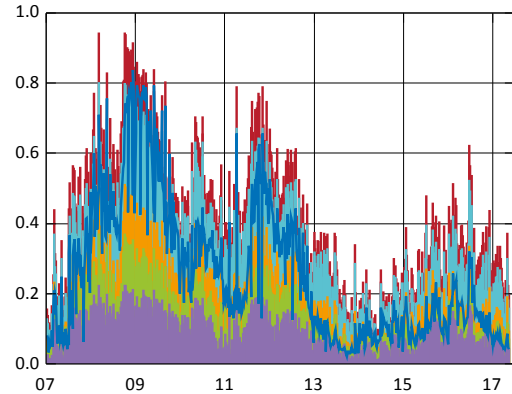


— Stress Index  
■ Bond Market  
■ Foreign Exchange Market  
■ Money Market  
■ Stock Market

Note. The Swedish stress index has been produced by the Riksbank using a method similar to that used by the ECB for the European stress index. See Johansson and Bonthron (2013), Further development of the index for financial stress in Sweden, *Economic Review 2013:1*. Sveriges Riksbank.

Sources: Bloomberg and the Riksbank

**Chart A14. European stress index**  
Ranking (0=low stress, 1=high stress)

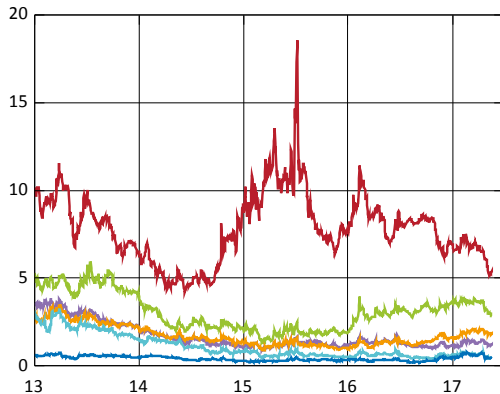


— Stress Index  
■ Financial Intermediaries  
■ Money Market  
■ Bond Market  
■ Foreign Exchange Market  
■ Stock Market

Note. The European stress index is published in the ESRB's Risk Dashboard and elsewhere. The stress level at a specific date is expressed as a value between zero and one, of which one signifies a historically high stress level and zero signifies a historically low stress level. See Holló et al., CISS – A composite indicator of systemic stress in the financial system, *Working Paper Series no. 1426*, March 2012, ECB.

Source: ECB

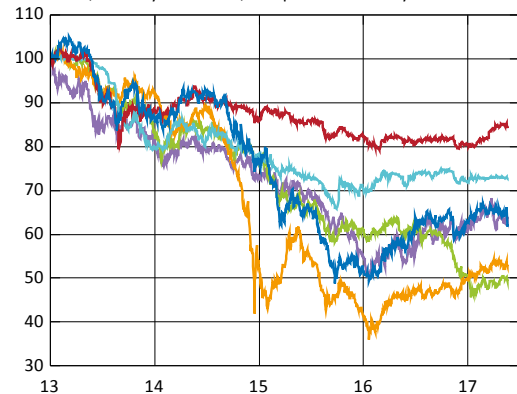
**Chart A15. Ten year government bond yields, spread to Germany**  
Per cent



— France — Greece  
— Ireland — Italy  
— Portugal — Spain

Source: Macrobond

**Chart A16. Emerging market currencies**  
Index, 1 January 2013 = 100, USD per local currency

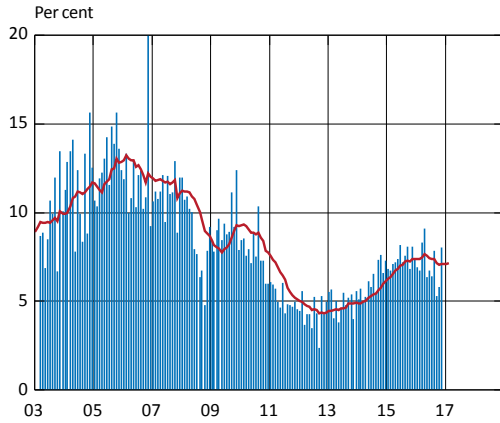


— Brazil — India  
— Indonesia — Russia  
— Turkey — South Africa

Source: Macrobond

## The Swedish banking groups' borrowers

**Chart A17. Loans to households in Sweden**

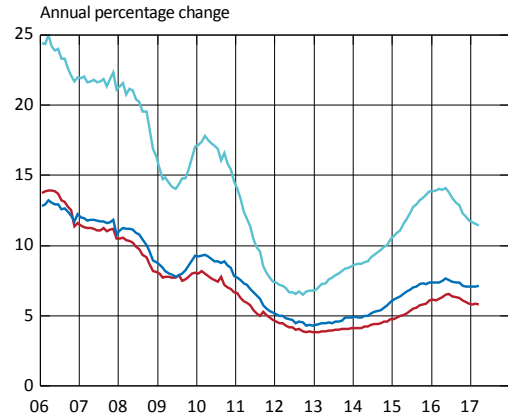


■ Monthly change, annualised rate  
— Annual percentage change

Note. Refers to loans from monetary financial institutions (MFI).

Sources: Statistics Sweden and the Riksbank

**Chart A18. Loans to households per type of collateral in Sweden**

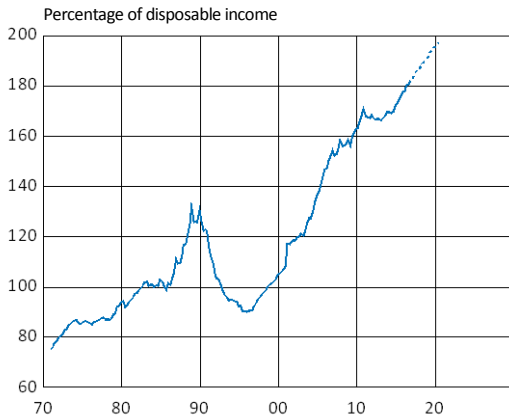


— Total  
— Loans with single-family houses as collateral  
— Loans with tenant-owned apartments as collateral

Note. Refers to loans from monetary financial institutions (MFI).

Sources: Statistics Sweden and the Riksbank

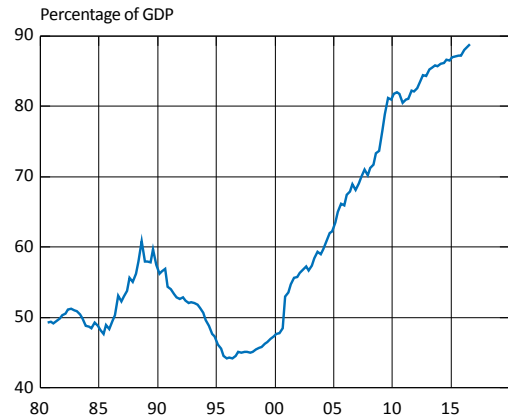
**Chart A19. Household debt-to-income ratio in Sweden**



Note. The dashed line represents the Riksbank's forecast.

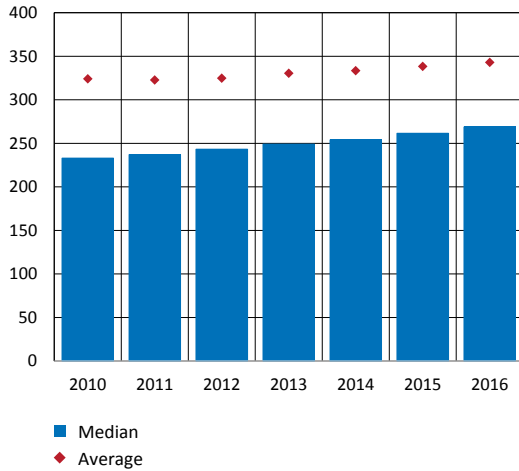
Sources: Statistics Sweden and the Riksbank

**Chart A20. Household debt in Sweden**



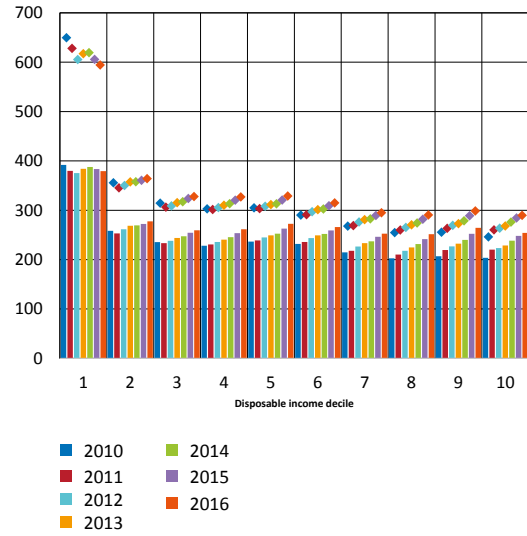
Sources: Statistics Sweden and the Riksbank

**Chart A21. Debt-to-income**  
Percentage of disposable income



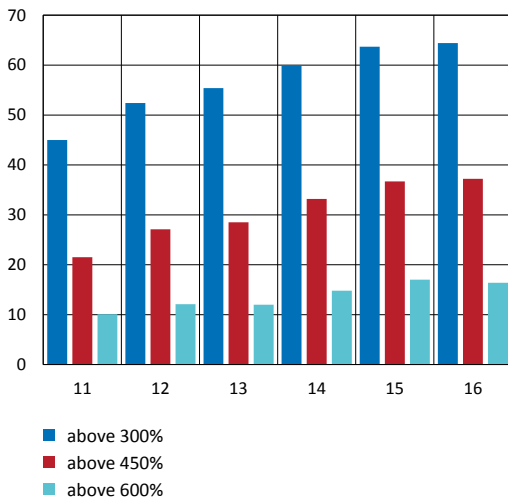
Note. Data is from July each year.  
Source: The Riksbank

**Chart A22. Debt-to-income by decile**  
Percentage of disposable income



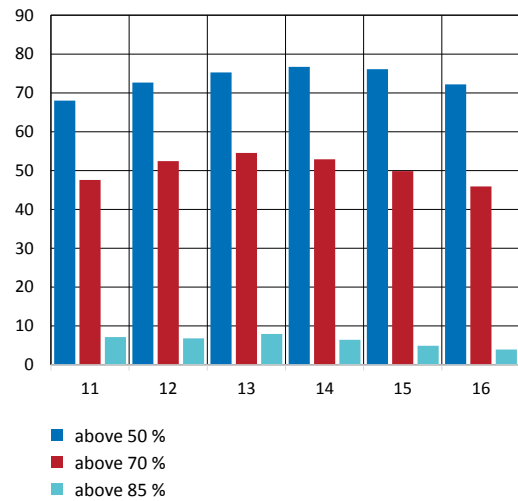
Note. The high debt ratio in the lowest income group should be interpreted with a certain amount of caution, as this group includes, among others, households with highly varied incomes.  
Source: The Riksbank

**Chart A23. Proportion of new mortgage borrowers with a debt-to-income ratio above a certain level in Sweden**  
Per cent



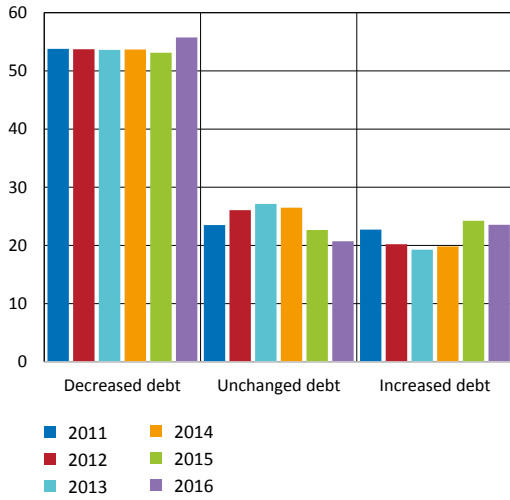
Note. The vertical axis shows the proportion of new borrowers who are above the given debt-to-income ratio. The data is based on the survey on new mortgage borrowers from The Swedish Mortgage Market in 2011, 2012, 2013, 2014 and 2015.  
Source: Finansinspektionen and the Riksbank

**Chart A24. Proportion of new mortgage borrowers with a loan-to-value ratio above a certain level in Sweden**  
Per cent



Note. The vertical axis shows the proportion of new borrowers who are above the given Loan-to-value ratio. The data is based on the survey on new mortgage borrowers from The Swedish Mortgage Market in 2009, 2011, 2012, 2013, 2014 and 2015.  
Source: Finansinspektionen and the Riksbank

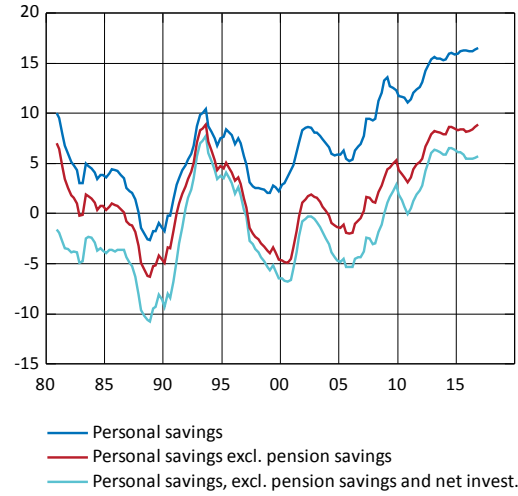
**Chart A25. Change in Swedish household's mortgage debt**  
Per cent



Note. The repayment period is the time it would take for a household to repay its mortgage debt, given the change in debt observed between the time periods. Only mortgage debt is considered.

Source: The Riksbank

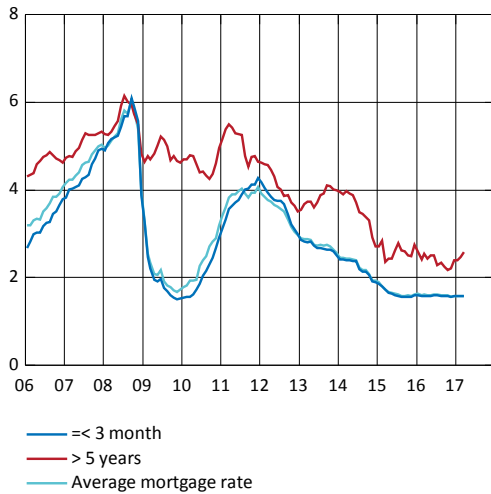
**Chart A26. Household saving in Sweden**  
Percentage of disposable income



Note. Personal savings is the total saving excluding collective savings and net investment in housing.

Sources: Statistics Sweden and the Riksbank

**Chart A27. Mortgage rates to households in Sweden**  
Per cent



Source: Statistics Sweden

**Chart A28. Rate fixation periods for new mortgage loans in Sweden**  
Per cent, share of mortgages

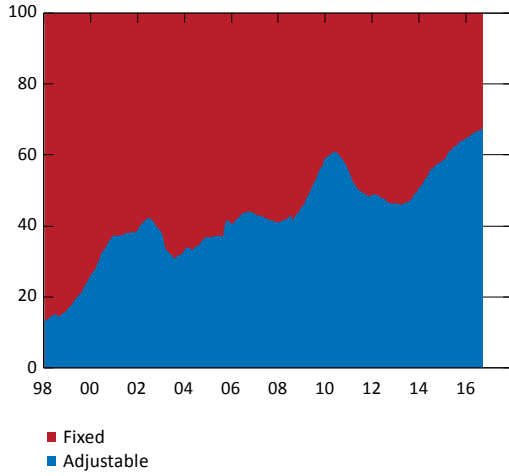


Note. The share of mortgages in each category is based on mortgage values.

Source: Statistics Sweden



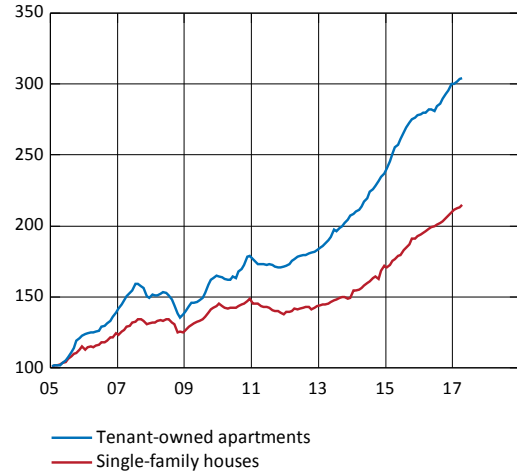
**Chart A29. Rate fixation periods for the mortgage stock in Sweden**  
Per cent, share of mortgages



Note. The share of mortgages in each category is based on mortgage values. Adjustable rate refers to rate fixation periods up to 3 months. Fixed rate refers to rate fixation periods above 3 months.

Source: Statistics Sweden

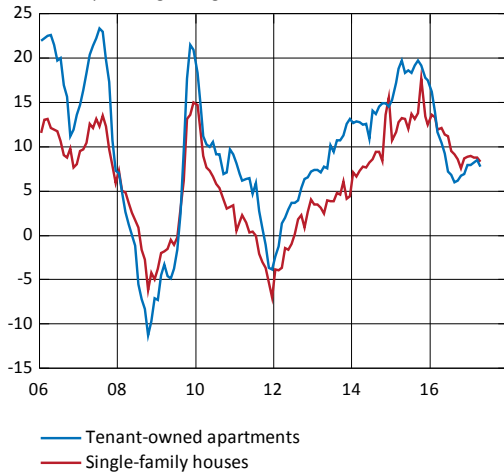
**Chart A30. Housing prices in Sweden**  
Index, January 2005=100



Note. Seasonally-adjusted housing prices.

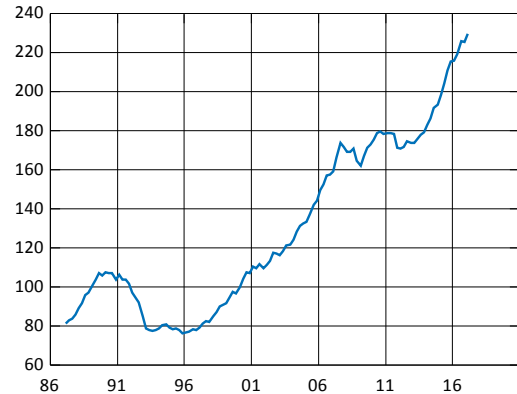
Sources: Valueguard and the Riksbank

**Chart A31. Housing prices in Sweden**  
Annual percentage change



Source: Valueguard

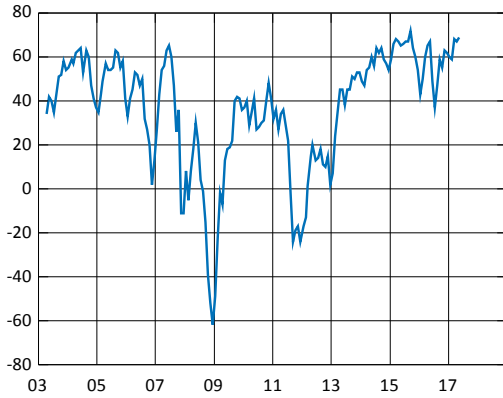
**Chart A32. Real Residential Real Estate Index i Sverige**  
Index Q1 2000 = 100



Note. Deflated with CPI. Refers to the increase in single-family houses.

Sources: Statistics Sweden and the Riksbank

**Chart A33. Households' expectations of housing prices in Sweden**  
Net figure



Note. Net figure is defined as the difference between the percentage of households who believe that housing prices will rise and the percentage who believe that housing prices will fall.

Source: SEB

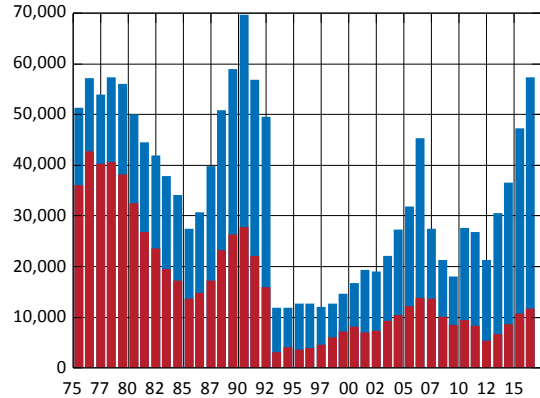
**Chart A35. Loans to non-financial companies in Sweden**  
Annual percentage change



Note. Refers to loans from monetary financial institutions (MFI).

Source: Statistics Sweden

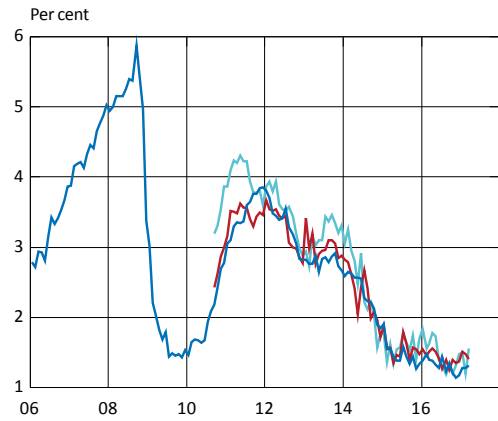
**Chart A34. Housing construction in Sweden**  
Number of housing starts per year



■ Housing starts, multiple-dwellings  
■ Housing starts, single-family houses

Sources: Statistics Sweden and the Riksbank

**Chart A36. Interest rates on new loans to non-financial companies in Sweden**  
Per cent

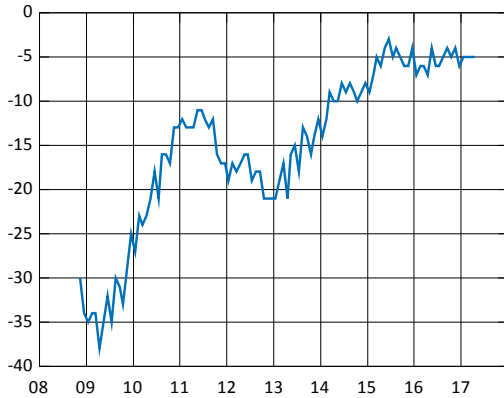


— ≤ 3 month  
— >1 year - ≤3 years  
— >3 years - ≤5 years

Note. Refers to loans from monetary financial institutions (MFI).

Source: Statistics Sweden

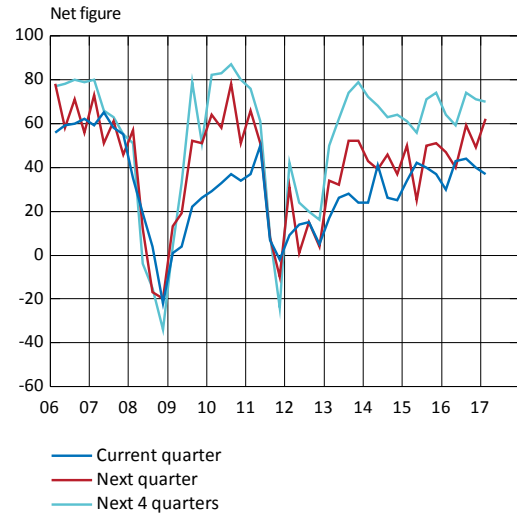
**Chart A37. Lending standards for non-financial companies in Sweden**  
Net figure



Note. Net figure is defined as the difference between the percentage of companies that estimate that lending standards are better or much better than normal, and the percentage who believes that lending standards are worse or much worse than normal.

Source: National Institute for Economic Research

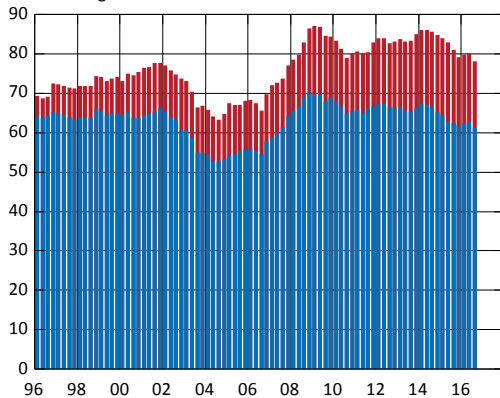
**Chart A38. Banks' assessment of lending to non-financial companies in Sweden**  
Net figure



Note. Net total is defined as the difference between the percentage of bank executives who believes that lending will increase or increase very much in the coming period, and the percentage who believes that lending will be less or considerably less in the coming period.

Source: ALMI

**Chart A39. Non-financial companies' debt levels in Sweden**  
Percentage of GDP

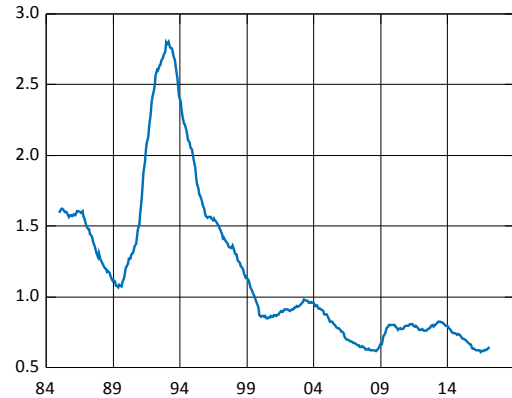


■ Whole sale funding  
■ Bank loans

Note. Bank loans refer to loans in the short and long term. Whole sale funding refer to certificates and bonds.

Sources: Statistics Sweden and the Riksbank

**Chart A40. Bankruptcy rate for non-financial companies in Sweden**  
Per cent

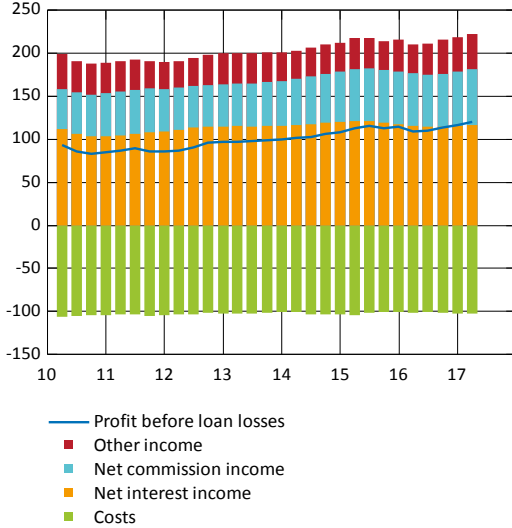


Note. Bankruptcy rate is defined as the number of bankruptcies divided by the number of companies.

Sources: Swedish Companies Registration Office, Statistics Sweden and the Riksbank

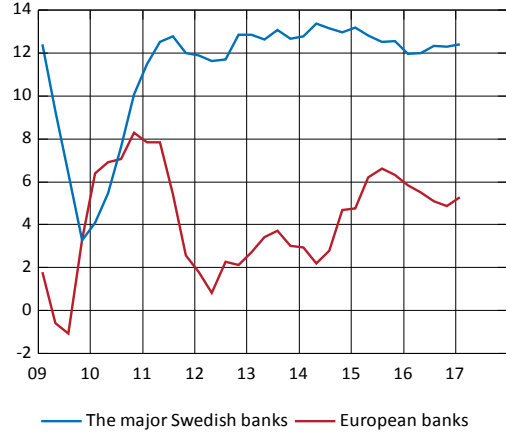
# Developments in the Swedish banking groups

**Chart A41. The major Swedish banks' income and costs**  
Rolling four quarters, SEK billion



Sources: Bank reports and the Riksbank

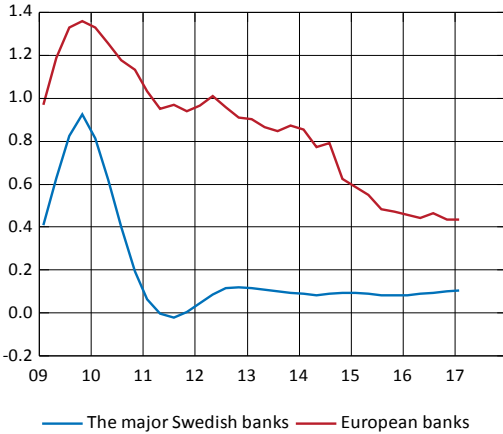
**Chart A42. Return on equity**  
Rolling four quarters, per cent



Note. Unweighted average adjusted for nonrecurring items. The red line represents a sample of other European banks, see footnote 2 in *Financial Stability Report 2016:2*.

Sources: SNL Financial and the Riksbank

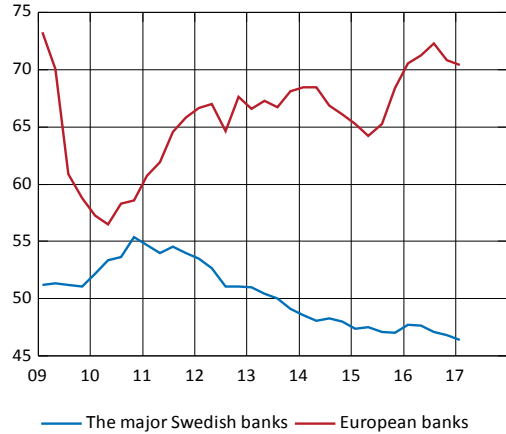
**Chart A43. Loan losses in relation to lending to the public**  
Rolling four quarters, per cent



Note. Unweighted average. The red line represents a sample of other European banks, see footnote 2 in *Financial Stability Report 2016:2*.

Sources: SNL Financial and the Riksbank

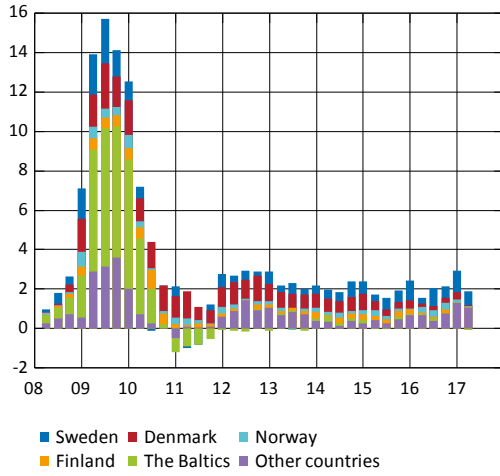
**Chart A44. Costs-to-income ratio**  
Rolling four quarters, per cent



Note. Unweighted average. The red line represents a sample of other European banks, see footnote 2 in *Financial Stability Report 2016:2*.

Sources: SNL Financial and the Riksbank

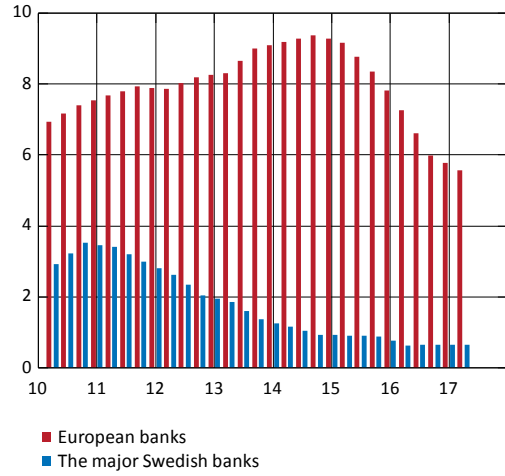
**Chart A45. The major Swedish banks' loan losses**  
SEK billion



Note. The category "Other countries" refers to loan losses in the other countries in which the banks have operations as well as loan losses that are not allocated to a specific country in the banks' public reporting.

Sources: Bank reports and the Riksbank

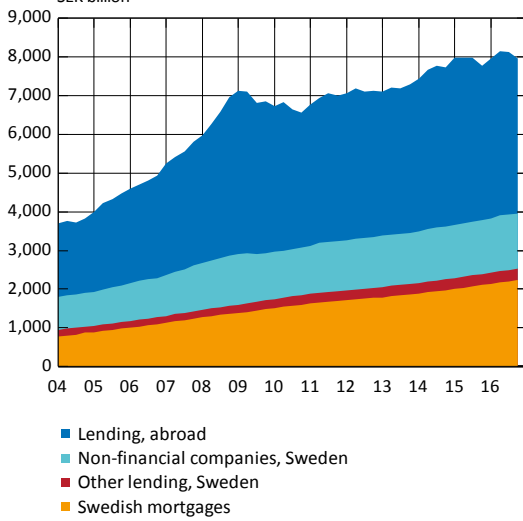
**Chart A46. Non-performing loans relative to total lending**  
Rolling four quarters, per cent



Note. Unweighted average. The red bars represents a sample of other European banks, see footnote 2 in *Financial Stability Report 2016:2*.

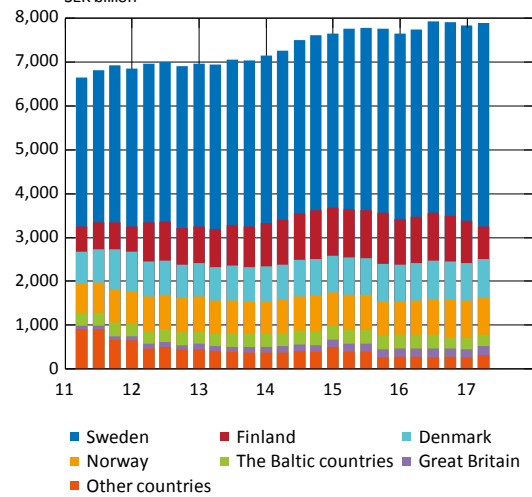
Source: SNL Financial

**Diagram A47. The major Swedish banks' lending to the public**  
SEK billion



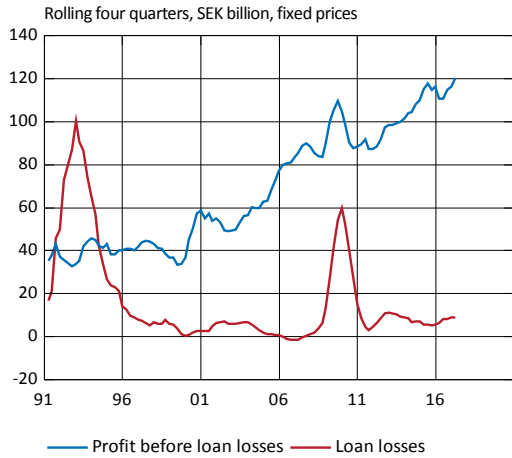
Source: Statistics Sweden

**Diagram A48. The major Swedish banks' lending by geography**  
SEK billion



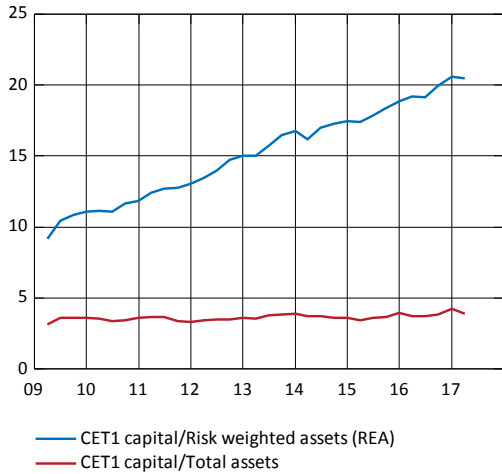
Sources: Bank reports and the Riksbank

**Diagram A49. The major Swedish banks' profit before loan losses and loan losses**



Sources: Bank reports, Macrobond and The Riksbank

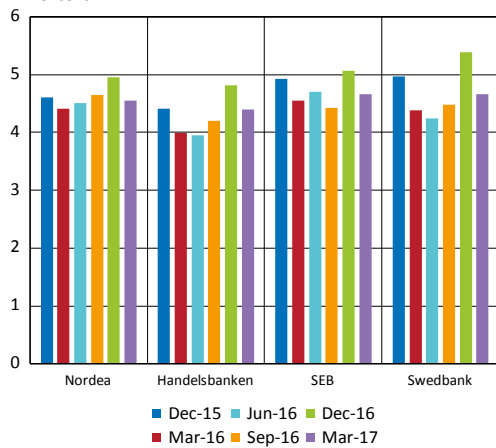
**Diagram A51. The major Swedish banks' CET1 capital ratios and CET 1 capital in relation to total assets**



Note. Weighted average.

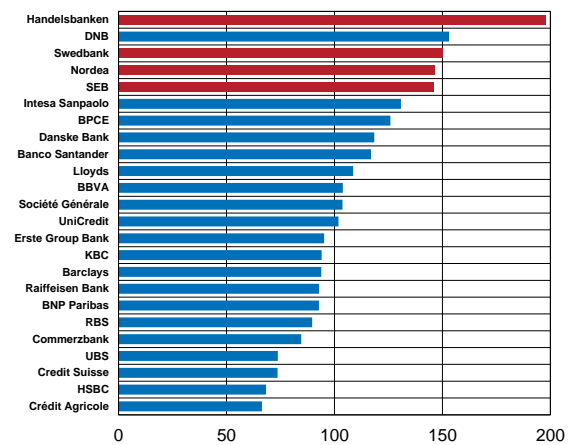
Sources: Bank reports and the Riksbank

**Chart A53. Leverage ratio for the major Swedish banks**



Source: Bank reports

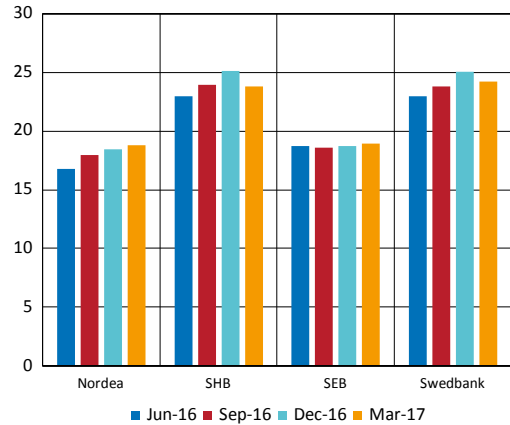
**Diagram A50. Loan-to-deposit ratio, European banks**



Note. An average over the last four quarters except for Raiffeisen Bank for which the last observation is Q4 2016.

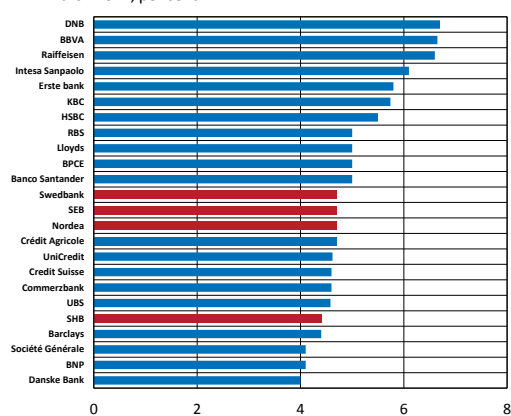
Källor: SNL Financial och Riksbanken

**Chart A52. The major Swedish banks' CET1 capital ratios according to Basel III**



Source: Bank reports

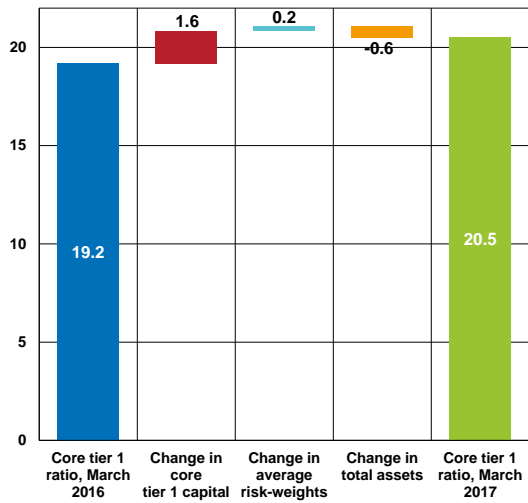
**Chart A54. Leverage ratio, European banks**



Note. Calculated as per the Basel III framework. December 2016 figure for Raiffeisen.

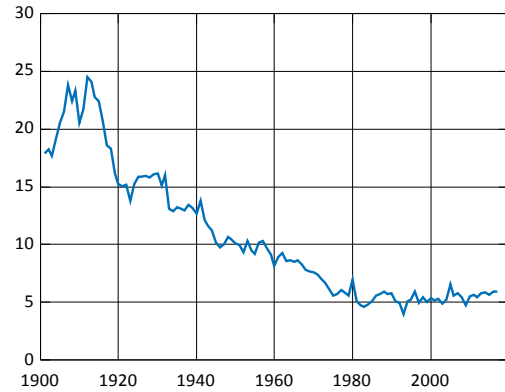
Sources: SNL Financial och Riksbanken

**Chart A55. Development of the major Swedish banks' core Tier 1 capital ratios, Basel III**  
Per cent



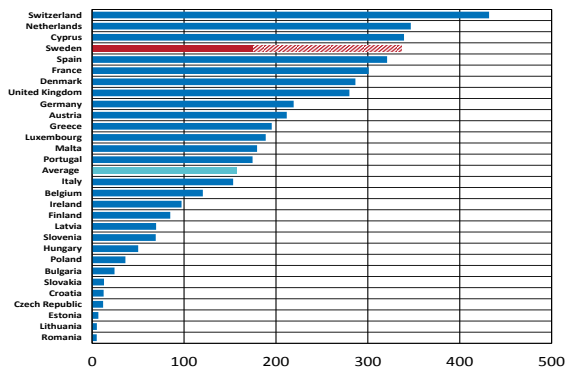
Sources: Bank reports and the Riksbank

**Chart A56. Equity in relation to total assets, Swedish banks**  
Per cent



Sources: Hortlund, Do Inflation and High Taxes Increase Bank Leverage?, SSE/EFI Working Paper Series in Economics and Finance, No 6122005, November 2005, Statistics Sweden and the Riksbank

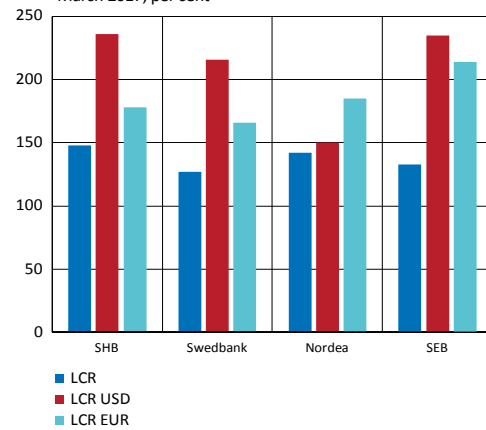
**Chart A57. Bank assets in relation to GDP**  
December 2015, per cent



Note. Total bank assets, both foreign and domestic. The shadowed part of the red bar shows the Swedish banks' assets abroad in relation to Swedish GDP.

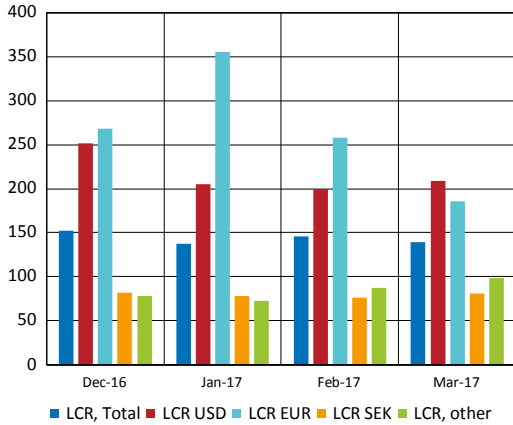
Sources: Eurostat, Swiss Bankers Association, Swiss national bank, Swiss Statistics, bank reports and the Riksbank

**Chart A58. LCR by currency and bank**  
March 2017, per cent



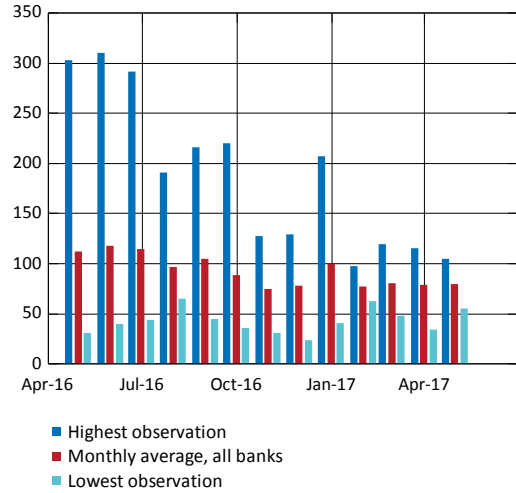
Source: Bank reports

**Chart A59. The major Swedish banks' average LCR**  
Per cent



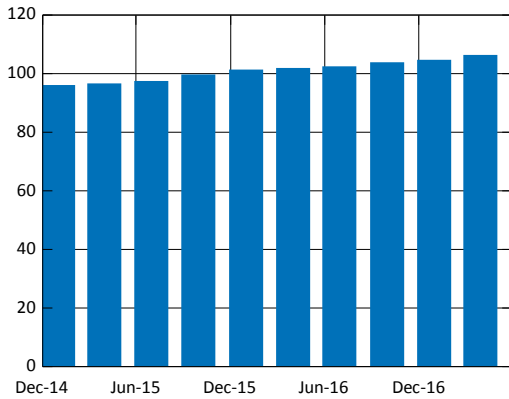
Sources: Finansinspektionen and the Riksbank

**Chart A60. The major Swedish banks daily LCR in SEK**  
Per cent



Source: The Riksbank

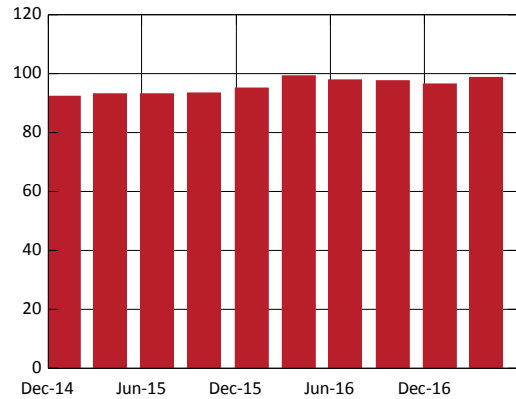
**Chart A61. The Swedish major banks' average NSFR**  
Per cent



Note. The major Swedish banks are reporting their monthly NSFRs to the Riksbank in accordance with the Basel Committee's final definition.

Source: The Riksbank

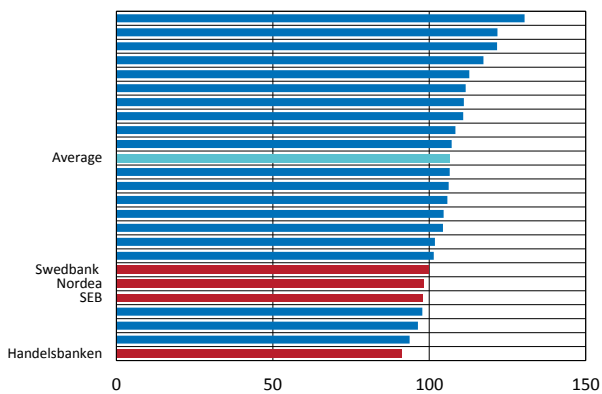
**Chart A62. The Riksbank's structural liquidity measure**  
Per cent



Note. The measure compares a bank's stable funding with its illiquid assets. The higher a bank's results in the measure, the lower its structural liquidity risks.

Source: The Riksbank

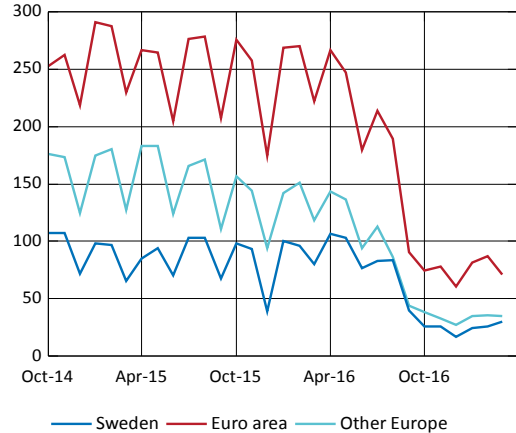
**Chart A63. The Riksbank's structural liquidity measure**  
December 2016, per cent



Note. The blue bars represents a group of other European banks.

Sources: Liquidatum and the Riksbank

**Chart A64. US Money Market Fund exposures**  
Billion US dollars

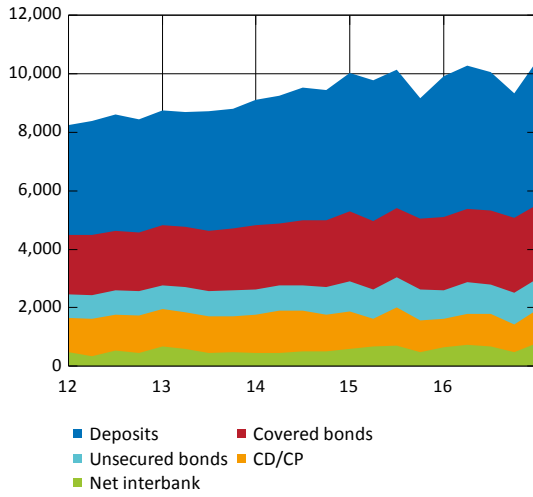


Note. The graph shows exposures for prime money market funds only.

Sources: Investment Company Institute and the Riksbank

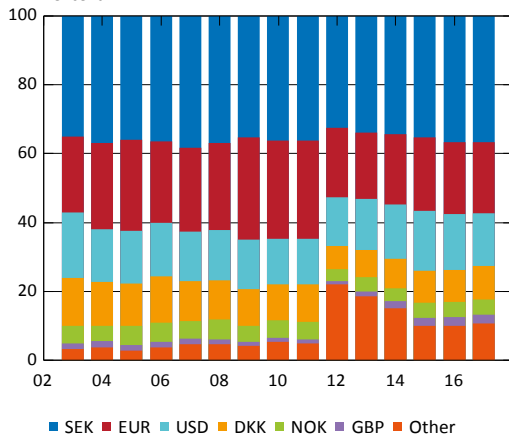


**Chart A65. Total funding per liability type**  
SEK billion



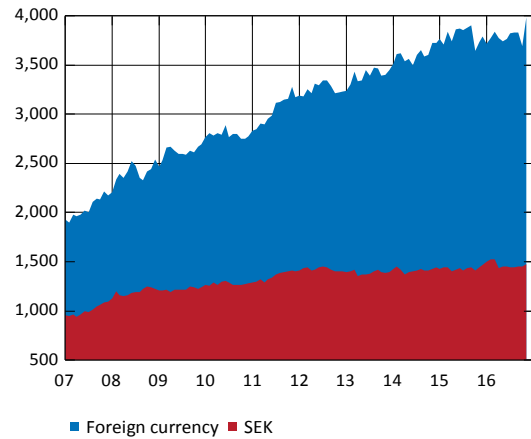
Note. Refers to the major Swedish banking groups' total funding.  
Source: Bank reports

**Chart A67. The major Swedish banks total funding by currency**  
Per cent



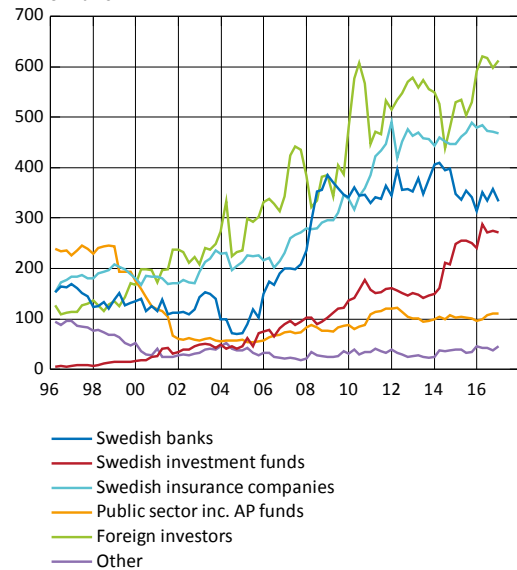
Note. Refers to the major Swedish banking groups' total funding.  
Source: Bank reports

**Chart A66. The major Swedish banks' wholesale funding via Swedish parent companies and subsidiaries**  
SEK billion



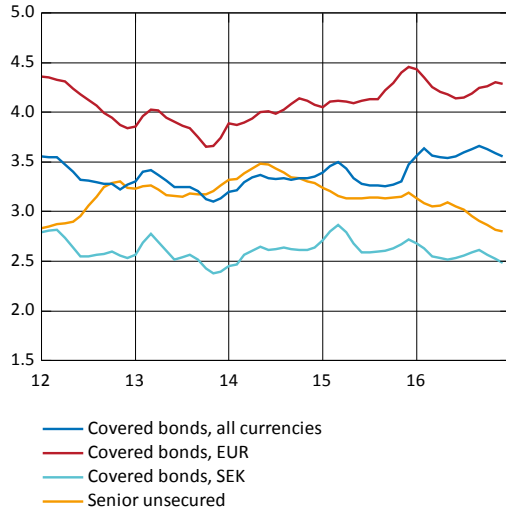
Note. Foreign subsidiaries not included.  
Sources: Statistics Sweden and the Riksbank

**Chart A68. Holders of Swedish covered bonds**  
SEK billion



Sources: Statistics Sweden and the Riksbank

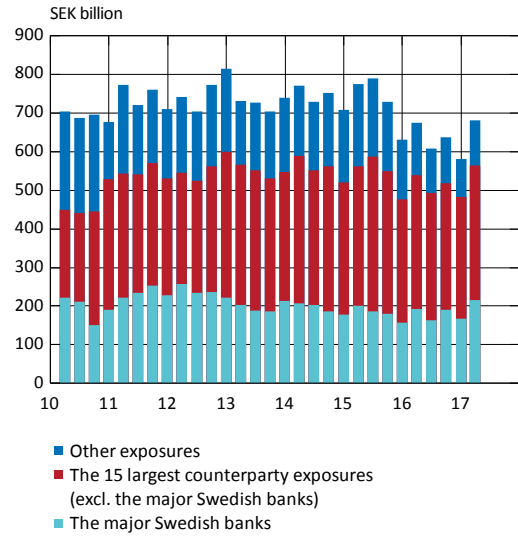
**Chart A69. Average maturity of outstanding long term funding**  
Number of years, 3 month moving average



Note. Refers to securities issued by the major four Swedish banks, volume weighted averages.

Source: The Riksbank

**Chart A70. The major Swedish banks' counterparty exposures through securities holdings**



Note. The chart shows the breakdown of the major banks' total securities holdings on the basis of who issued the securities.

Source: The Riksbank