

Financial Stability Report

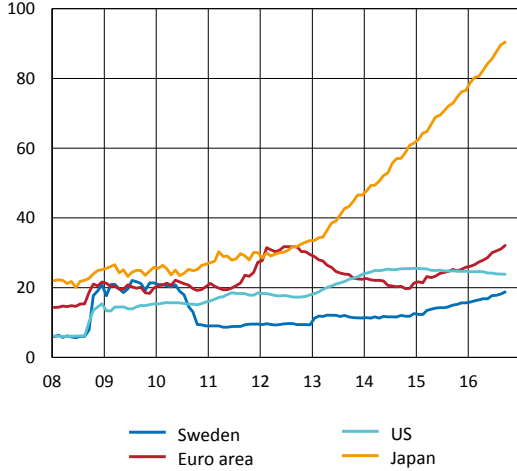
2016:2

Appendix - Charts

23 November 2016

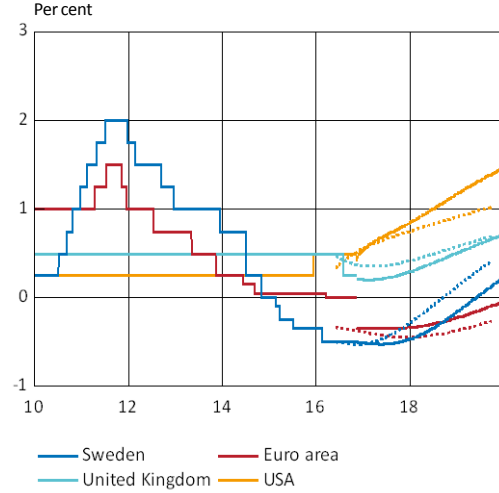
Financial markets

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



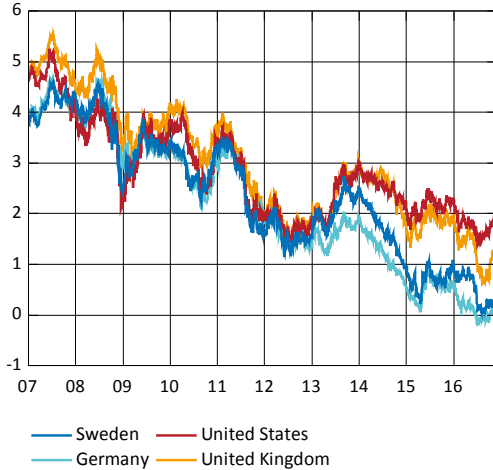
Note. For Sweden and the Euro area GDP outcome for the third quarter is not available, previous outcomes have therefore been used.
Source: Macrobond

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 11 November 2016, broken lines on 4 June 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 swap-rates
Basis points



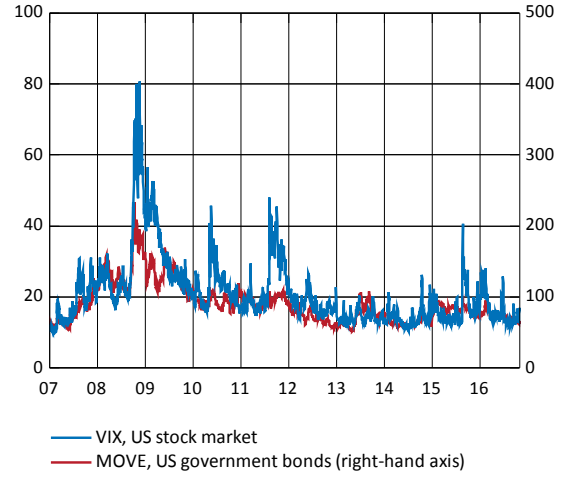
Note. Extra cost of borrowing through foreign currency and converting into Swedish kronor compared with domestic borrowing cost. The calculations are based on interest rate parity condition between interbank rates.
Sources: The Riksbank and Bloomberg

Chart A5. Stock indices
Index, 1 January 2000 = 100



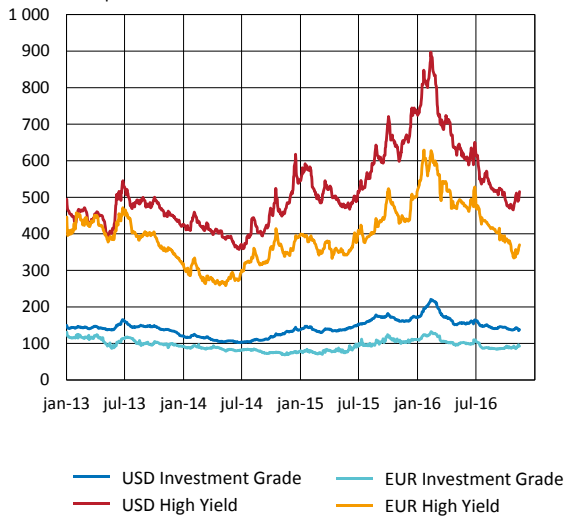
Source: Macrobond

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



Source: Thomson Reuters

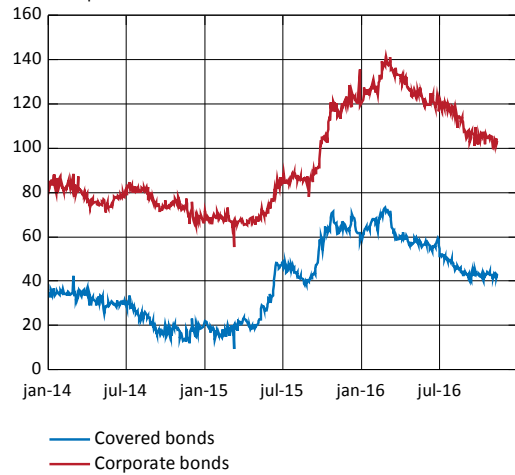
Chart A7. Yield on Investment Grade and High Yield corporate bonds
Basis points



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

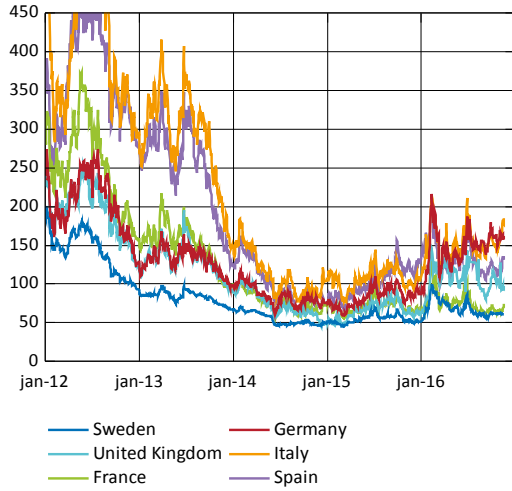
Chart A8. Five year risk premia on the Swedish bond market
Basis points



Note. Difference between bond yields and swap rate.

Source: The Riksbank

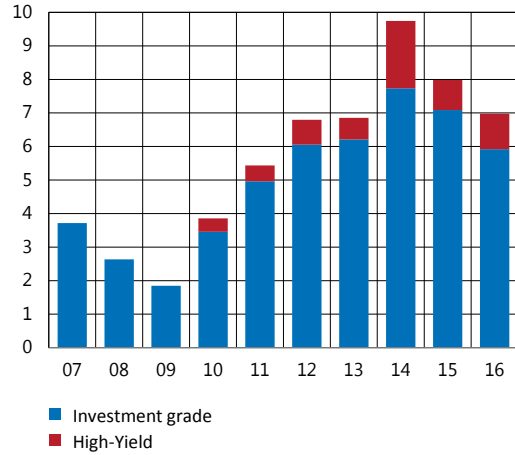
Chart A9. Five year CDS premiums for banks
Basis points



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

Sources: Markit and the Riksbank

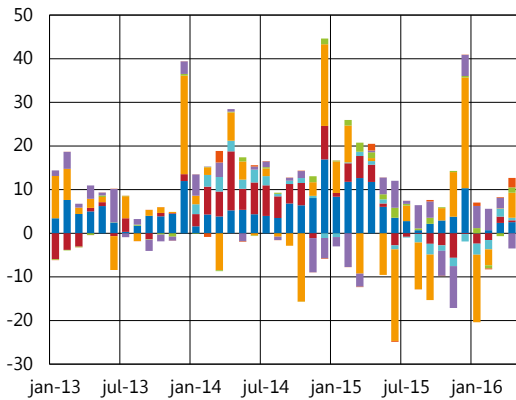
Chart A10. Bond issues on the Swedish corporate bond market
Average per month, SEK billion



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

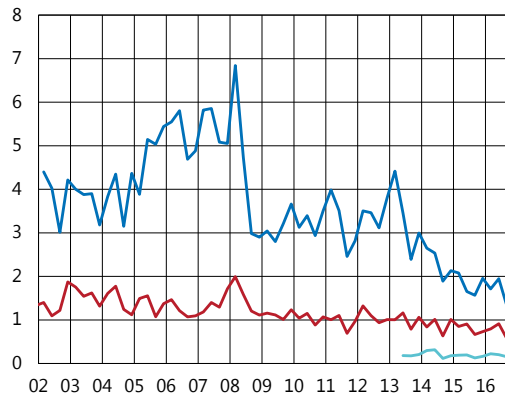
Chart A11. Swedish fund flows
Billion SEK



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

Source: Swedish Investment Fund Association and Macrobond

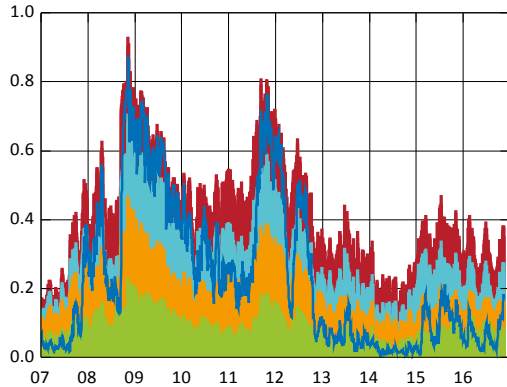
Chart A12. Turnover on the Swedish bond market
Per cent



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

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

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

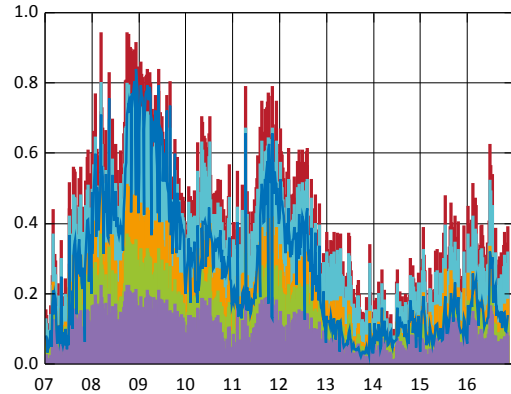


— Stress Index
■ Bond Market
■ Foreign Exchange Market
■ Money Market
■ Stock Market

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, *Sveriges Riksbank Economic Review 2013:1*. Sveriges Riksbank.

Sources: Bloomberg and the Riksbank

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

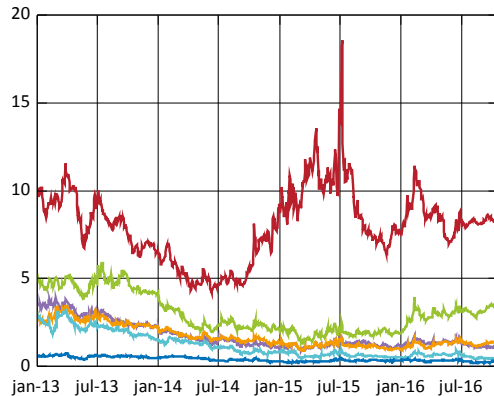


— Stress Index
■ Bond Market
■ Financial Intermediaries
■ Foreign Exchange Market
■ Money Market
■ Stock Market

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

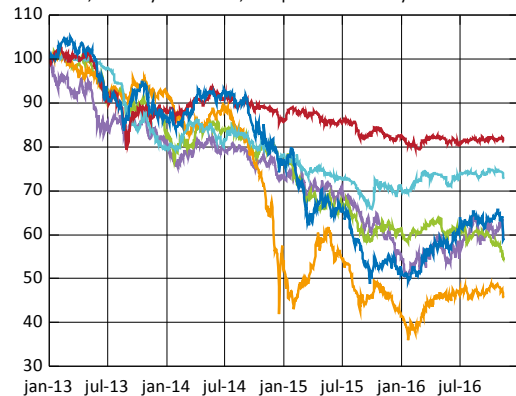
Chart A15. Ten year government bond yields, spread to Germany
Per cent



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

Source: Macrobond

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

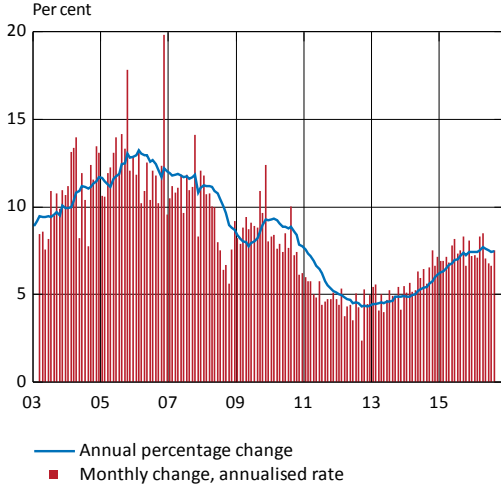


— Brazil
— Indonesia
— Turkey
— India
— Russia
— South Africa

Source: Macrobond

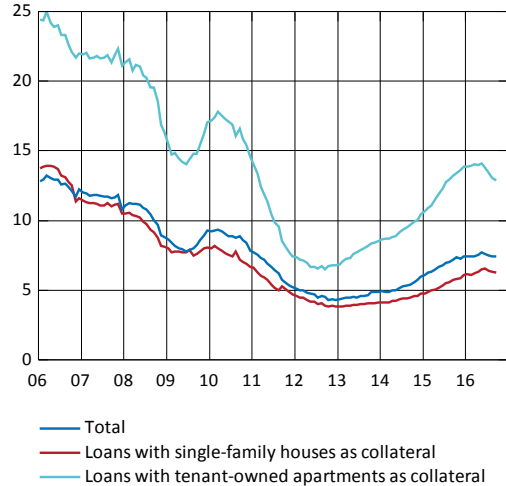
The Swedish banking groups' borrowers

Chart A17. Loans to households in Sweden



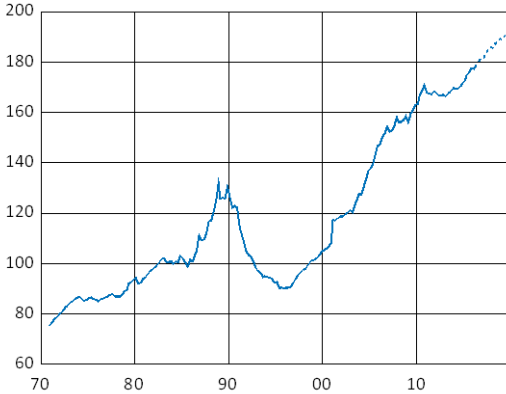
Note. Refers to loans from monetary financial institutions (MFI).
Sources: Statistics Sweden and the Riksbank

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



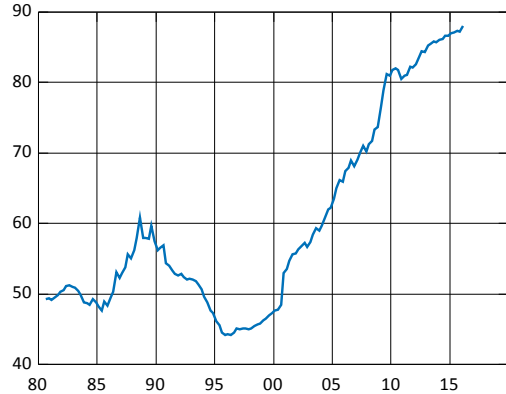
Note. Refers to loans from monetary financial institutions (MFI).
Sources: Statistics Sweden and the Riksbank

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



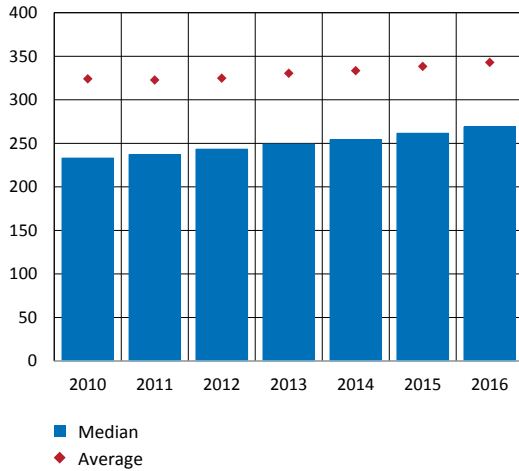
Note. The dashed line represents the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

Chart A20. Household debt in Sweden



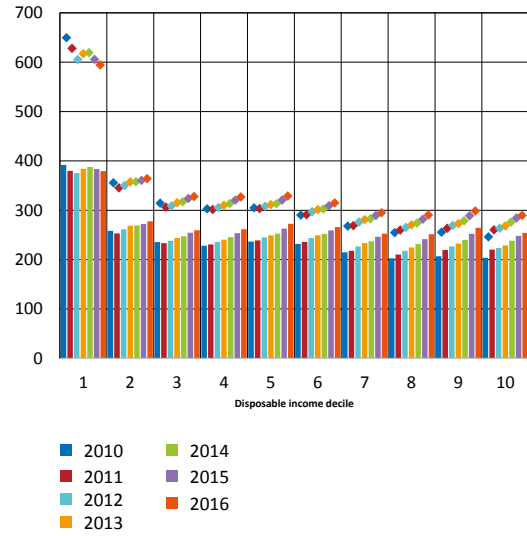
Sources: Statistics Sweden and the Riksbank

Chart A21. Debt to income over time
Percentage of disposable income



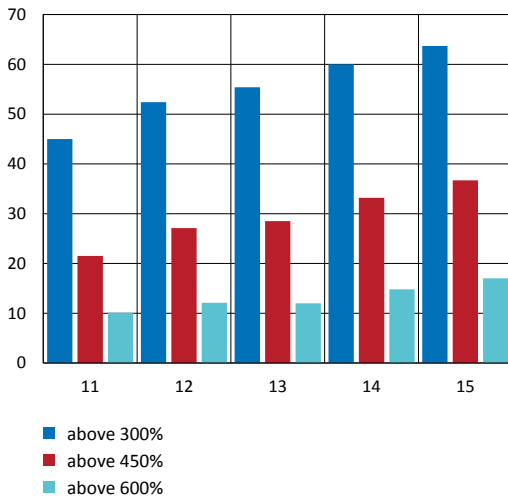
Note. Data is from July each year.
Source: The Riksbank

Chart A22. Debt to income by decile and over time
Percentage of disposable income



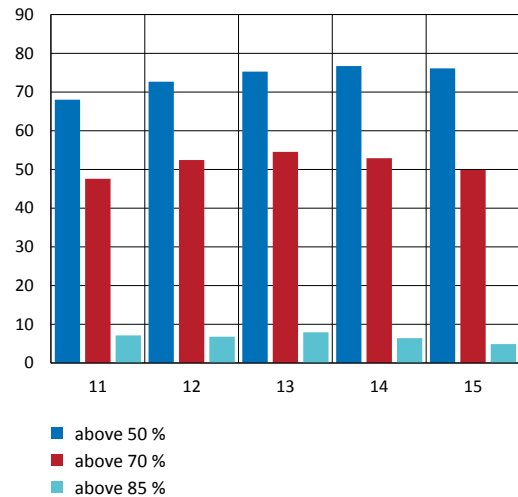
Note. The columns represents the median DTI level in a certain income decile a certain year, while the diamonds show the corresponding averages. Data is from July each year. The high debt ratio in the lowest income group should be interpreted with a certain amount of caution, as this group includes, among others, households with highly varied incomes such as households with negative disposable income.
Source: The Riksbank

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



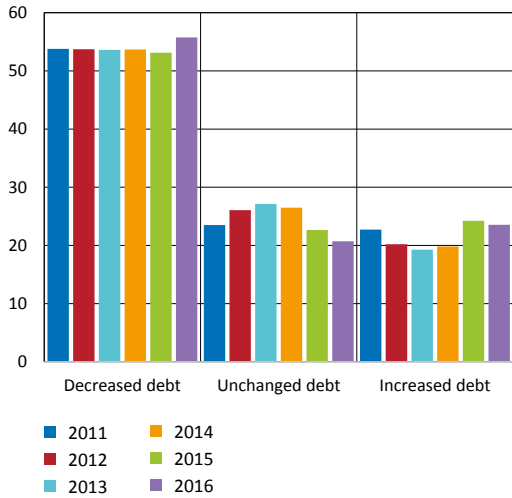
Note. The vertical axis shows the proportion of new borrowers who are above the given debt-to-income ratio. The data is based on the survey on new mortgage borrowers from The Swedish Mortgage Market in 2011, 2012, 2013, 2014 and 2015.
Sources: Finansinspektionen and the Riksbank

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 2011, 2012, 2013, 2014 and 2015.
Sources: Finansinspektionen and the Riksbank

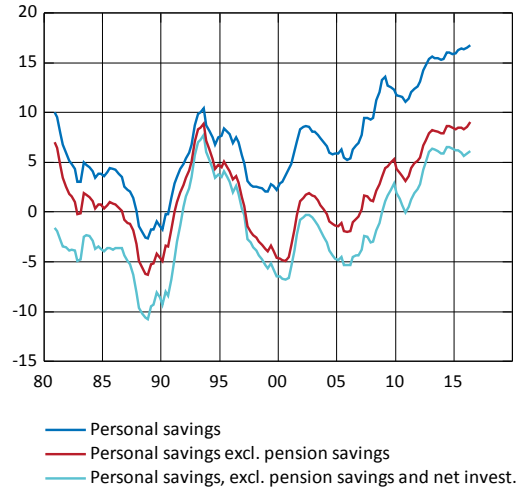
Chart A25. Change in mortgage debt
Per cent of households with a mortgage



Note. In this figure, only the mortgage debt, and not total debt of mortgage borrowers, is considered. Data is from July each year.

Source: The Riksbank

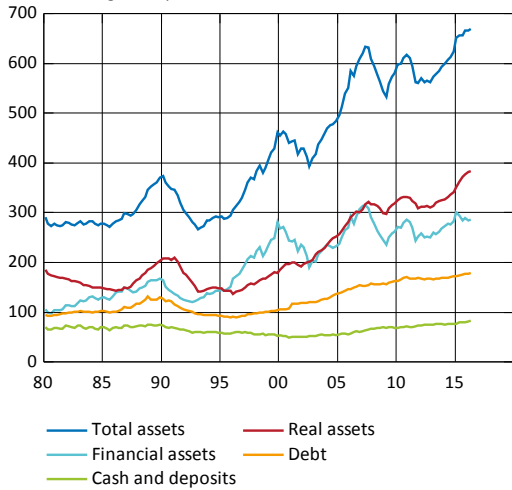
Chart A26. Household savings in Sweden
Percentage of disposable income



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

Sources: Statistics Sweden and the Riksbank

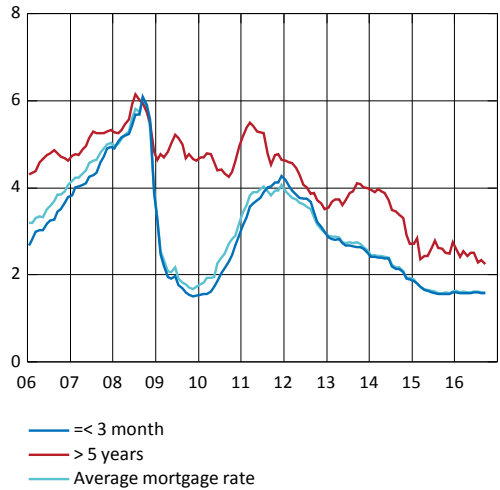
Chart A27. Household assets and liabilities in Sweden
Percentage of disposable income



Note. Total assets exclude collective insurance. Financial assets refer mainly to cash, bank deposits, bonds, mutual funds and shares. Real assets refer to single-family houses, tenant-owned apartments and second homes.

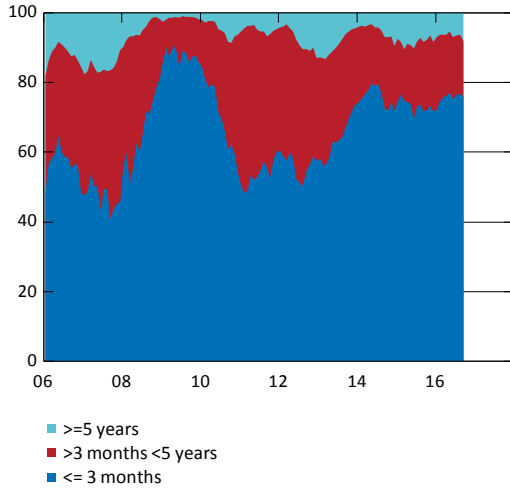
Sources: Statistics Sweden and the Riksbank

Chart A28. Mortgage rates to households in Sweden
Per cent



Source: Statistics Sweden

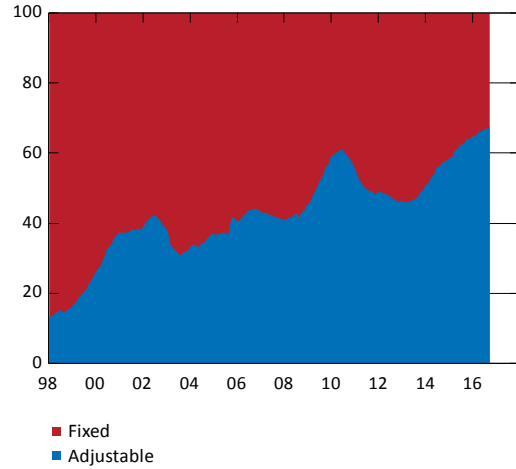
Chart A29. Rate fixation periods for new mortgage loans in Sweden
Per cent, share of mortgages



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

Source: Statistics Sweden

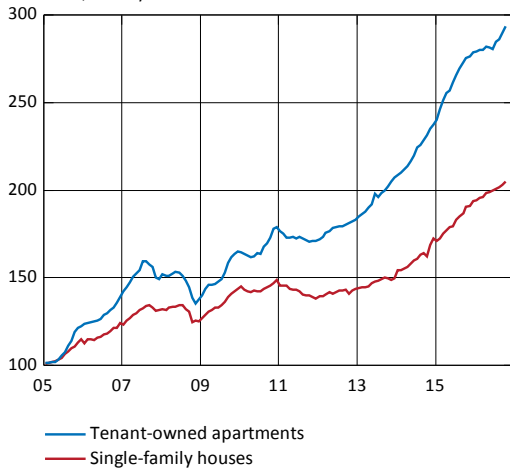
Chart A30. Rate fixation periods for the mortgage stock in Sweden
Per cent, share of mortgages



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

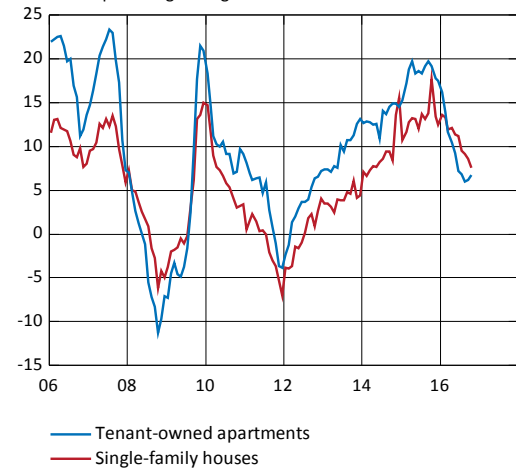
Chart A31. Housing prices in Sweden
Index, January 2005 = 100



Note. Seasonally adjusted housing prices.

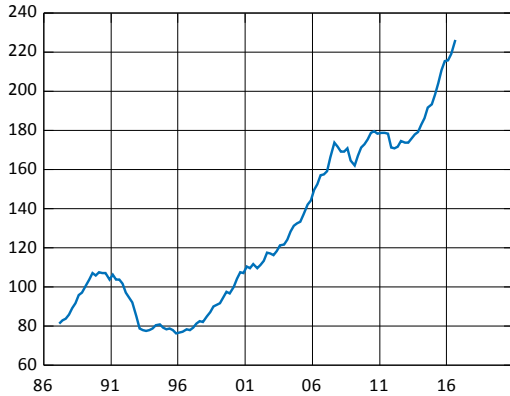
Sources: Valueguard and the Riksbank

Chart A32. Housing prices in Sweden
Annual percentage change



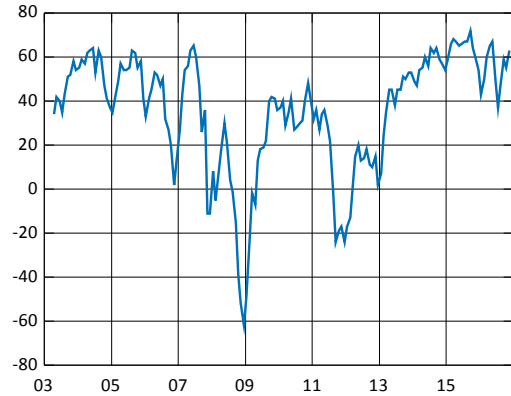
Source: Valueguard

Chart A33. Real residential real estate index in Sweden
Index Q1 2000 = 100



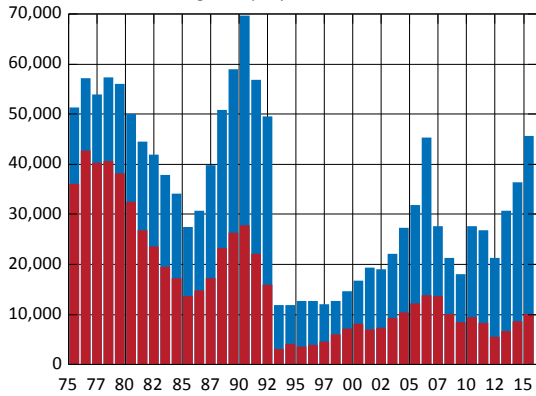
Note. Deflated with CPIF. Refers to the increase in single-family houses.
Sources: Statistics Sweden and the Riksbank

Chart A34. Households' expectations of housing prices in Sweden
Net total, per cent



Note. Net total 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

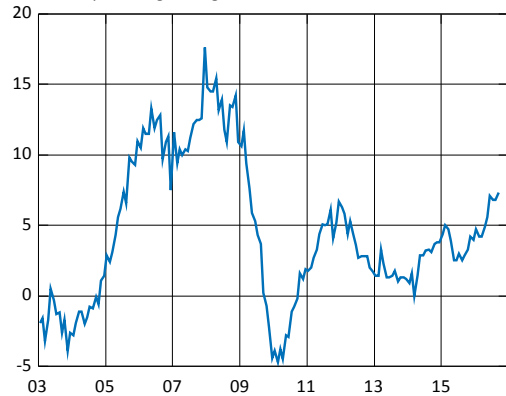
Chart A35. Housing construction in Sweden
Number of housing starts per year



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

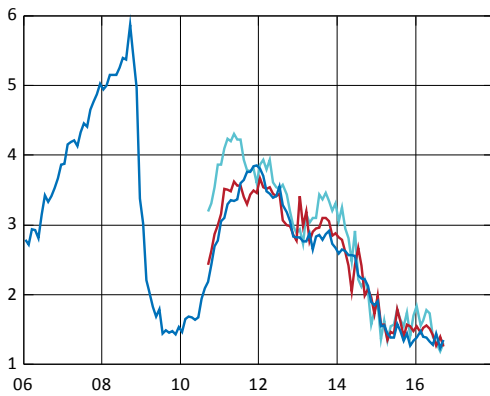
Sources: Statistics Sweden and the Riksbank

Chart A36. Loans to non-financial companies in Sweden
Annual percentage change



Note. Refers to loans from monetary financial institutions (MFI).
Source: Statistics Sweden

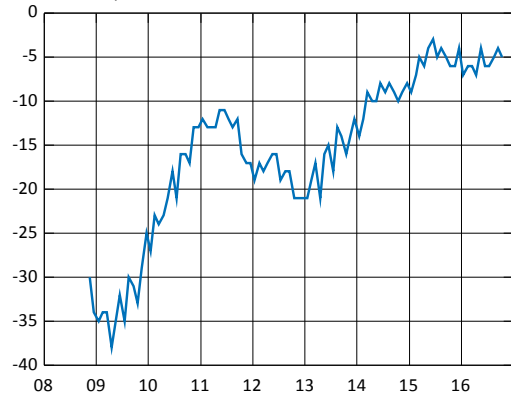
Chart A37. Interest rates on new loans to non-financial companies in Sweden
Per cent



— <= 3 month
— >1 year - <=3 years
— >3 years - <= 5 years

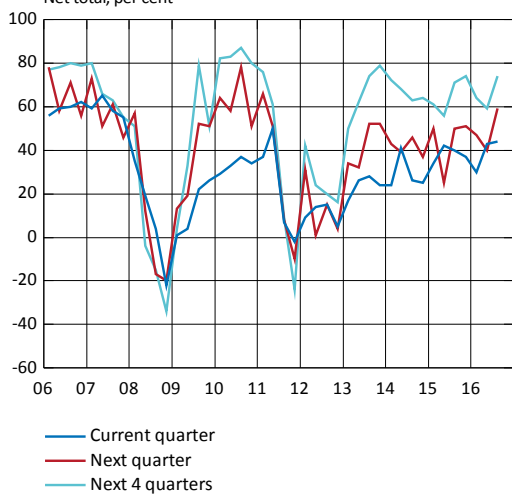
Note. Refers to loans from monetary financial institutions (MFI).
Source: Statistics Sweden

Chart A38. Lending standards for non-financial companies in Sweden
Net total, per cent



Note. Net total 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

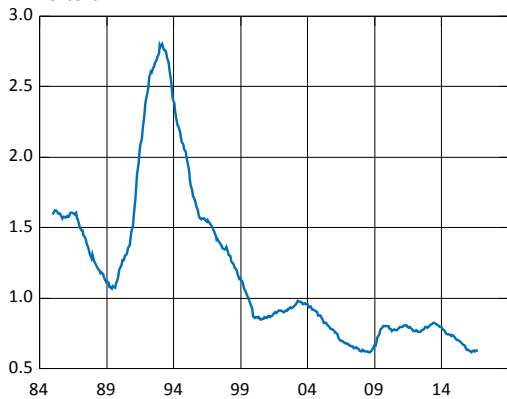
Chart A39. Banks' assessment of lending to non-financial companies in Sweden
Net total, per cent



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

Source: ALMI

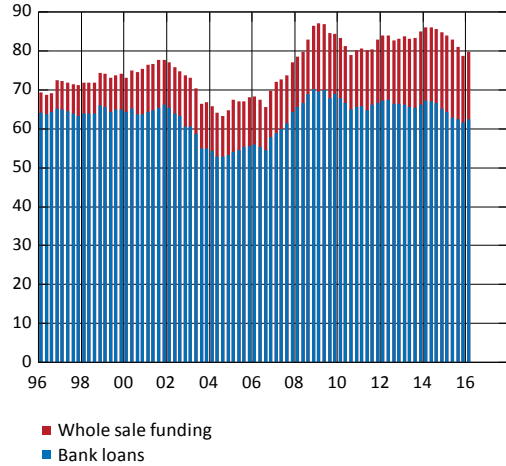
Chart A41. Bankruptcy rate for non-financial companies in Sweden
Per cent



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

Chart A40. Non-financial companies' debt levels in Sweden
Percentage of GDP

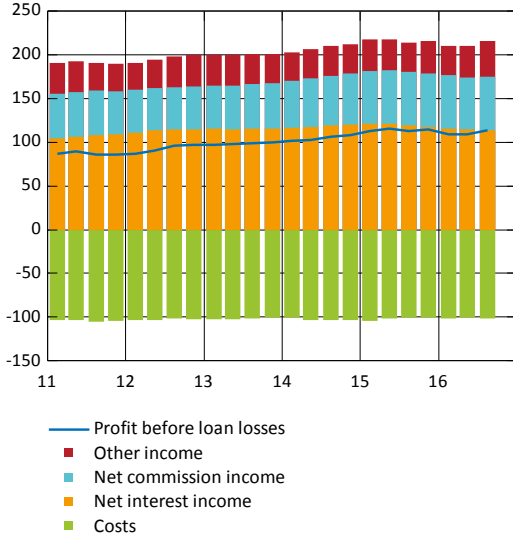


Note. Bank loans refer to loans in the short and long term. Whole sale funding refer to certificates and bonds.

Sources: Statistics Sweden and the Riksbank

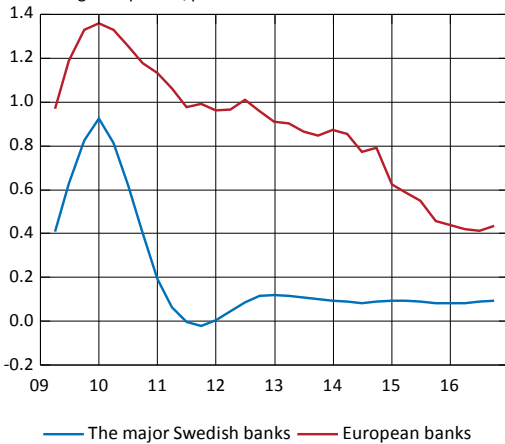
Developments in the Swedish banking groups

Chart A42. The major Swedish banks' income and costs
Rolling four quarters, SEK billion



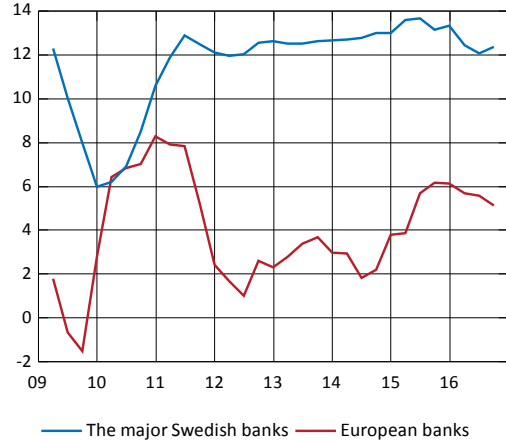
Sources: Bank reports and the Riksbank

Chart A44. Loan losses in relation to lending to the public
Rolling four quarters, per cent



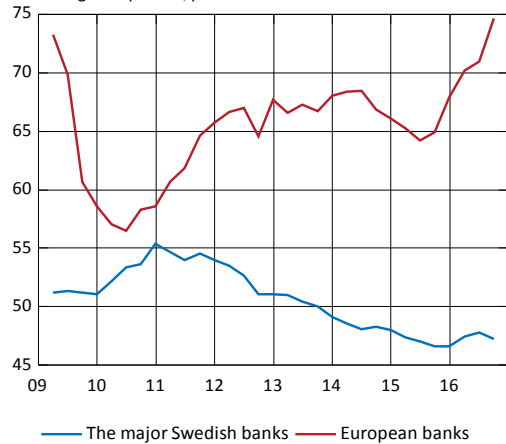
Note. Unweighted average. The red line represents a sample of other European banks, see footnote 2 in Financial Stability Report 2016:2.
Sources: SNL Financial and the Riksbank

Chart A43. Return on equity
Rolling four quarters, per cent



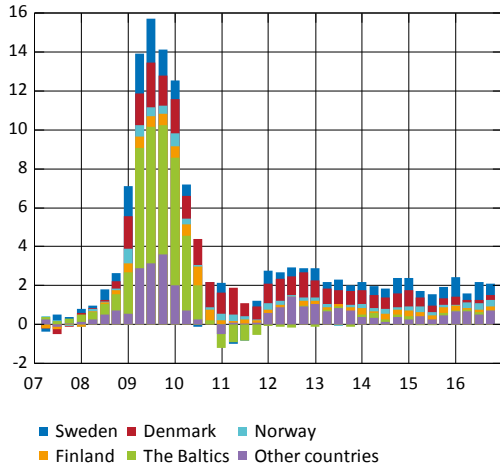
Note. Unweighted average. The red line represents a sample of other European banks, see footnote 2 in Financial Stability Report 2016:2.
Sources: SNL Financial and the Riksbank

Chart A45. 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

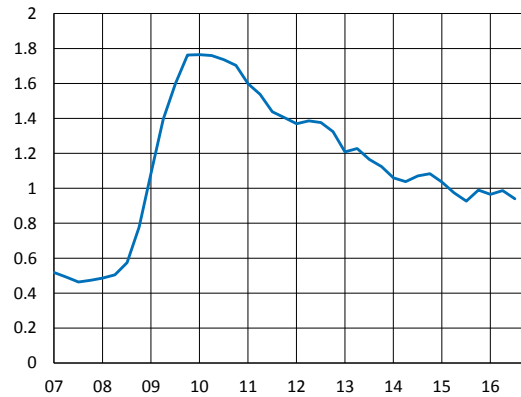
Chart A46. The major Swedish banks' loan losses
SEK billion per quarter



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.

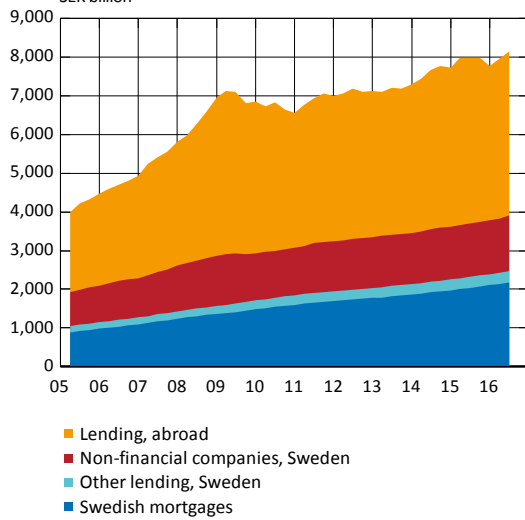
Sources: Bank reports and the Riksbank

Chart A47. The major Swedish banks' non performing loans in relation to total lending
Per cent



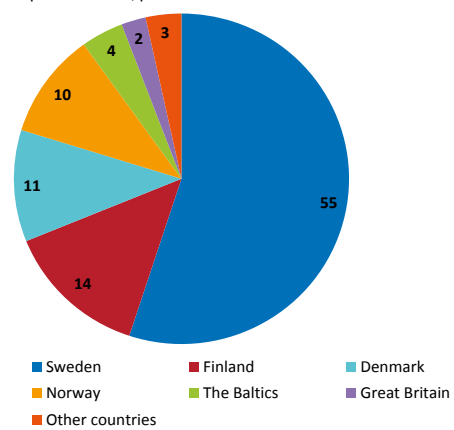
Sources: Bank reports and the Riksbank

Chart A48. The major Swedish banks' lending to the general public
SEK billion



Source: Statistics Sweden

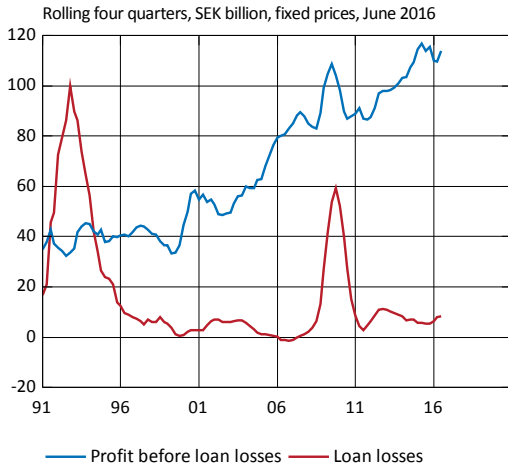
Chart A49. The major Swedish banks' lending by geography
September 2016, per cent



Note. The major Swedish banks' total lending amounted to 8112 billion SEK in the third quarter of 2016

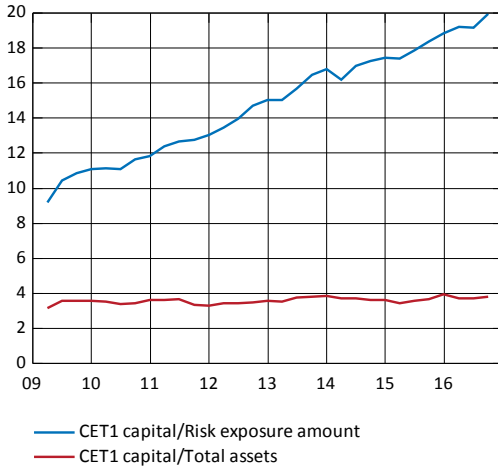
Sources: Bank reports and the Riksbank

Chart A50. The major Swedish banks, profit before loan losses and loan losses



Sources: Bank reports and the Riksbank

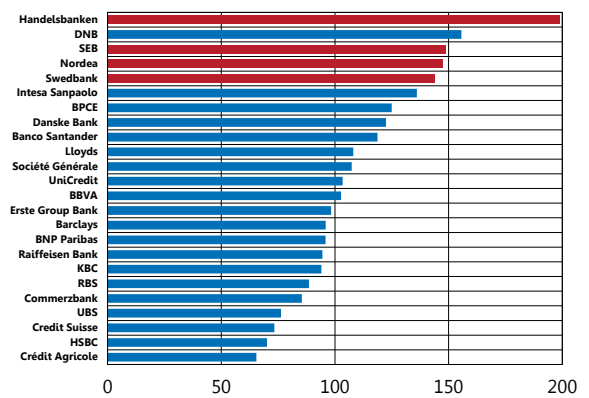
Chart A52. The major Swedish banks' CET1 capital ratios and CET 1 capital in relation to total assets



Note. Weighted average.

Sources: Bank reports and the Riksbank

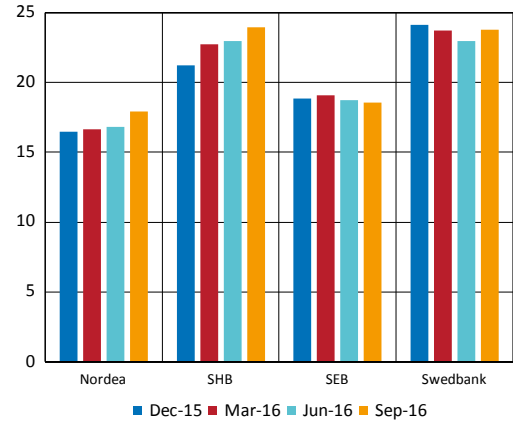
Chart A51. Loan to deposit ratio
September 2016, per cent



Note. An average over the last four quarters, except for Nordeas' figure based on the second quarter of 2016.

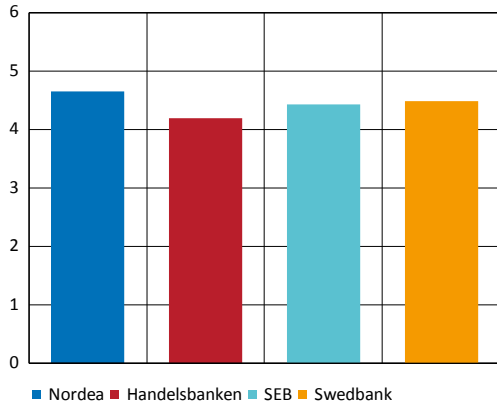
Sources: SNL Financial and the Riksbank

Chart A53. The major Swedish banks' CET1 capital ratios according to Basel III



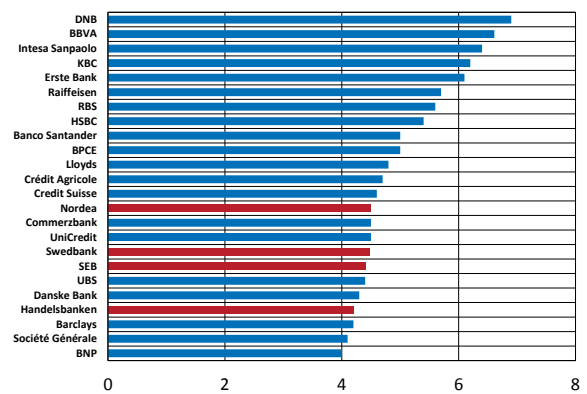
Source: Bank reports

Chart A54. Reported leverage ratio
September 2016, Per cent



Source: Bank reports

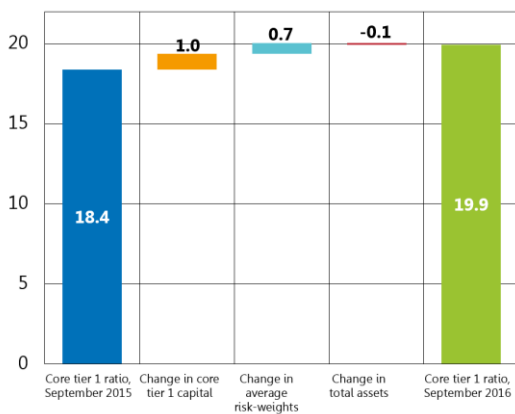
Chart A55. Reported leverage ratio, European banks
September 2016, per cent



Note. Calculation as per the Basel III framework.

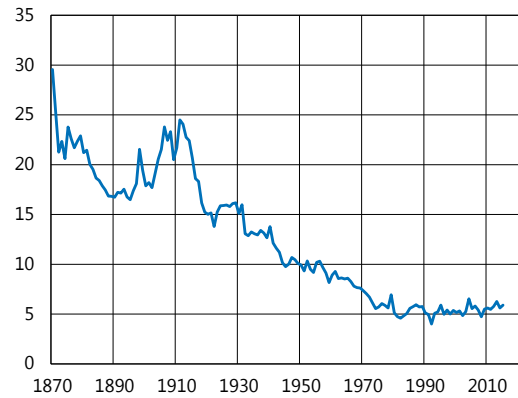
Sources: SNL Financial and the Riksbank

Chart A56. Development of the major Swedish banks' core Tier 1 capital ratios, Basel III
Per cent



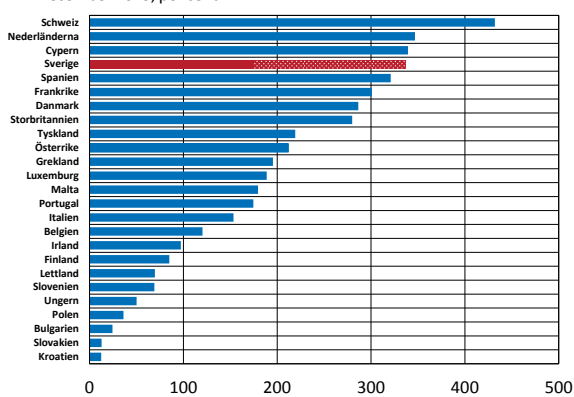
Sources: Bank reports and the Riksbank

Chart A57. 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 and the Riksbank

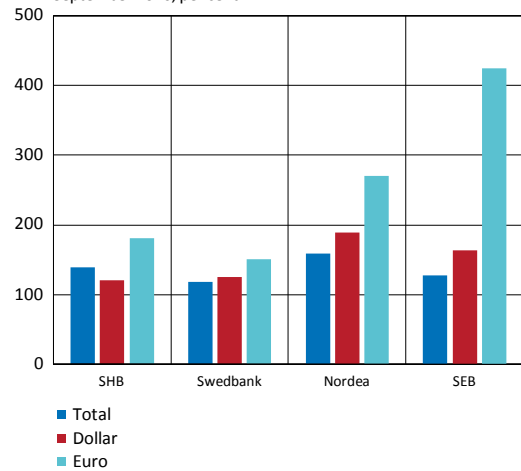
Chart A58. Bank assets in relation to GDP
December 2015, per cent



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

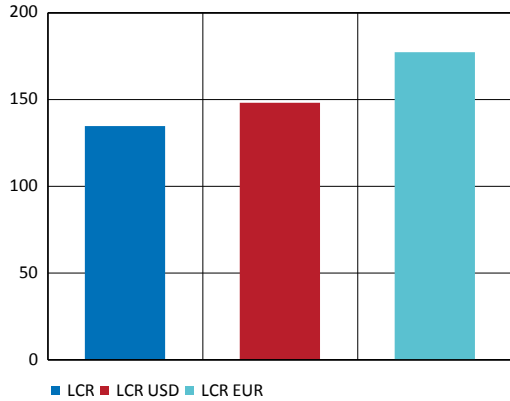
Sources: Eurostat, Swiss Bankers Association, Swiss national bank, Swiss Statistics, bank reports and the Riksbank

Chart A59. The major Swedish banks' LCR
September 2016, per cent



Source: Bank reports

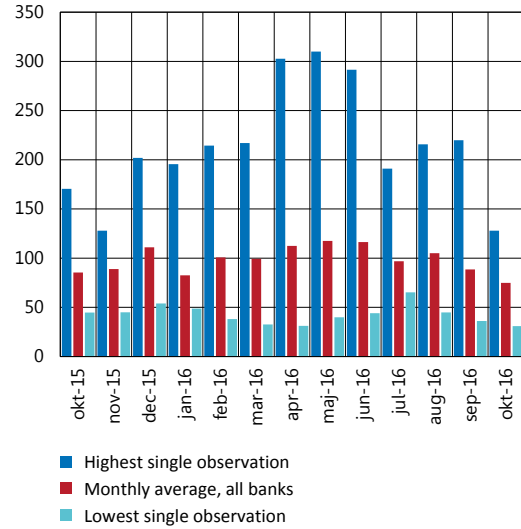
Chart A60. The major Swedish banks' average LCR
September 2016, per cent



Note. Weighted average.

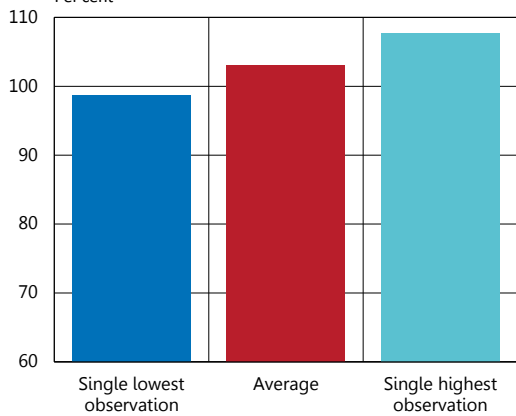
Sources: Finansinspektionen and the Riksbank

Chart A61. The major Swedish banks daily LCR in SEK
Per cent



Source: The Riksbank

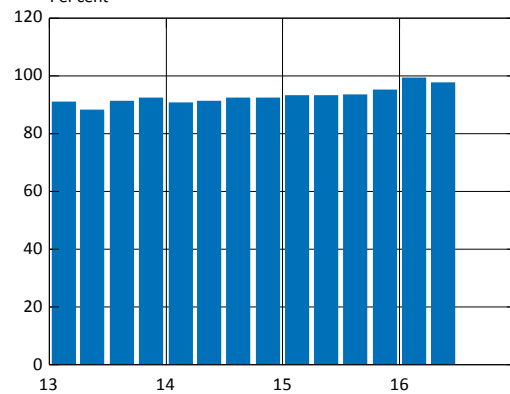
Chart A62. The major Swedish banks' lowest, average and highest monthly NSFR
Per cent



Note. Every month, the major Swedish banks are reporting their NSFRs to Riksbanken in accordance with the Basel Committee's final definition. The chart shows the average during the last year for all of the banks, as well as the highest and lowest observations for a single month.

Source: The Riksbank

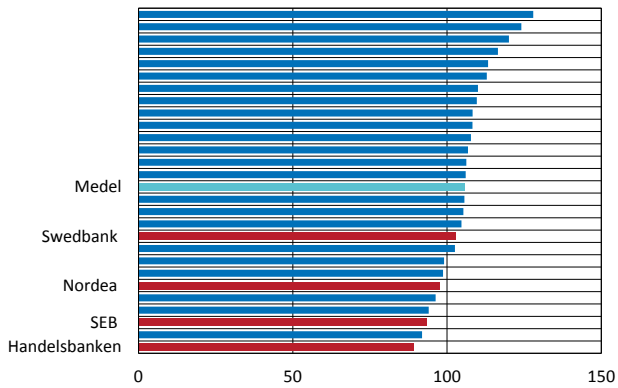
Chart A63. The Riksbank's structural liquidity measure
Per cent



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

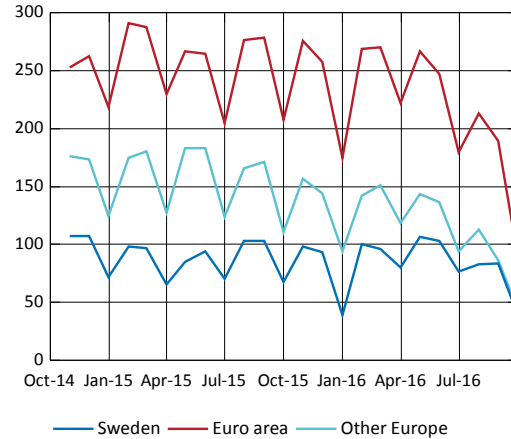
Source: The Riksbank

Chart A64. The Riksbank's structural liquidity measure
December 2015, per cent



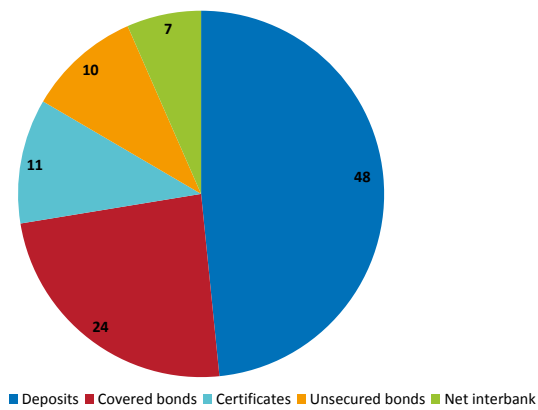
Note. The blue bars represents a group of other European banks.
Sources: Liquidatum and The Riksbank

Chart A65. US Money Market Funds' exposures
Billion US dollars



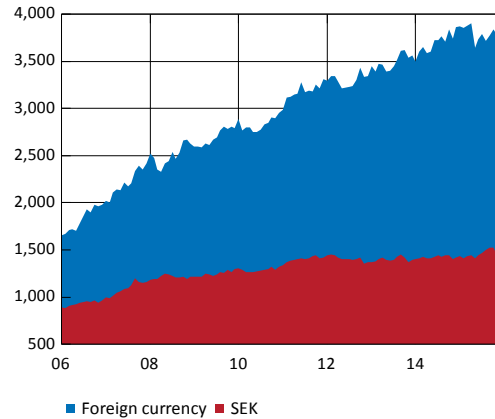
Sources: Investment Company Institute and the Riksbank

Chart A66. The major Swedish banks' funding by liability type
September 2016, per cent



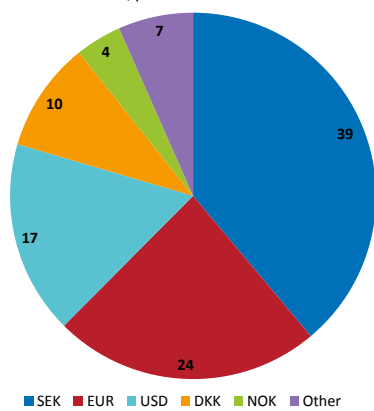
Sources: Bank reports and the Riksbank

Chart A67. The major Swedish banks' wholesale funding via Swedish parent companies and subsidiaries
SEK billion



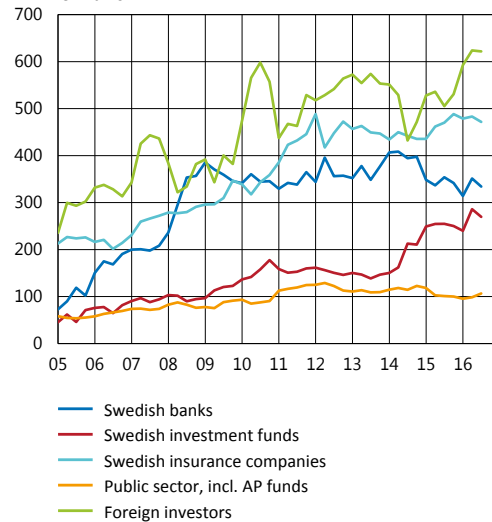
Sources: Statistics Sweden and the Riksbank

Chart A68. The major Swedish banks' funding by currency
December 2015, per cent



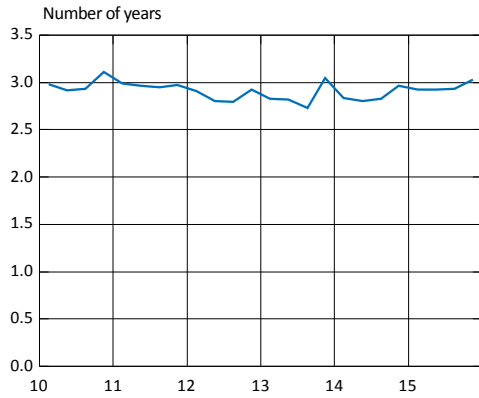
Note. The chart shows bank funding from deposits and securities
Sources: Bank reports and the Riksbank

Chart A69. Holders of Swedish covered bonds
SEK billion



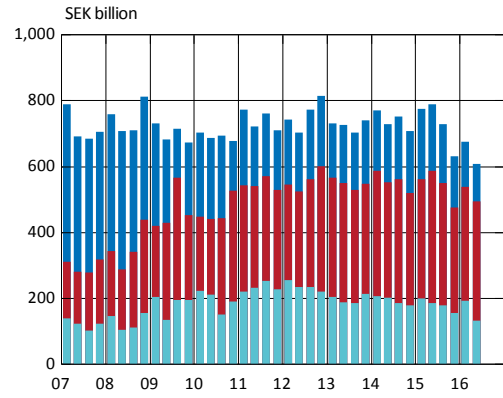
Sources: Statistics Sweden and the Riksbank

Chart A70. Average maturity of outstanding Swedish covered bonds



Source: The Association of Swedish Covered Bond Issuers

Chart A71. The major Swedish banks' counterparty exposures through securities holdings



- Other exposures
- The 15 largest counterparty exposures (excl. the major Swedish banks)
- The major Swedish banks

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

Source: The Riksbank