



# Financial Stability Report 2018:1

Appendix - Charts

23 May 2018

# Financial markets

Per cent

80

60

40

20

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

US
Euro area
Japan
Sweden

10

08

Note. For Sweden, the Euro Area and Japan GDP outcome for the first quarter of 2018 is not available, the outcome for quarter four of 2017 has therefore been used.

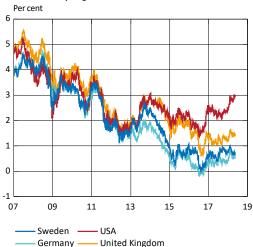
14

16

18

Source: Macrobond

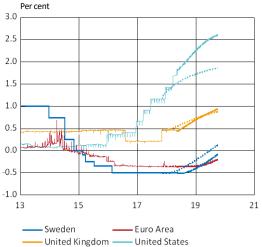
### Chart A3. Ten year government bond rates



Note. Benchmark bonds. The maturity could therefore potentially be different.

Source: Macrobond

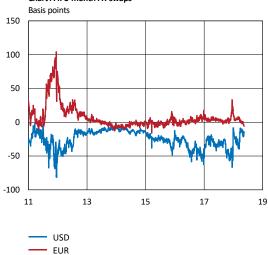
Chart A2. Policy rates and rate expectations according to forward rates



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 14th of May 2018, broken lines on 10th of November 2017.

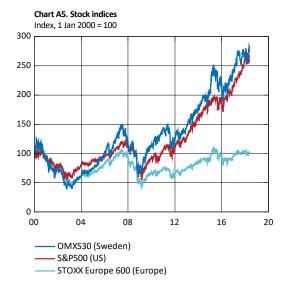
Sources: Macrobond and the Riksbank

## Chart A4. 3-month FX-swaps



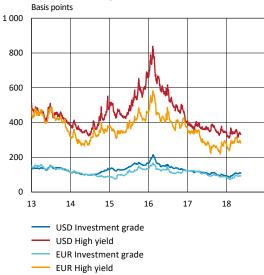
Note. Extra cost of borrowing through foreign currency and converting this into Swedish kronor compared to domestic borrowing cost. The calculations are based on interest rate parity condition between interbank rates.

Sources: Bloomberg and the Riksbank



Source: Macrobond

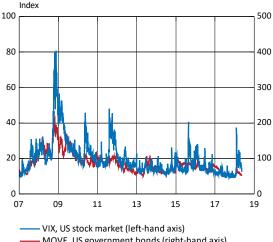




Note. The series shows the spread between corporate bonds with different credit worthiness issued in different currencies and a corresponding interest rate swap.

Source: Bloomberg

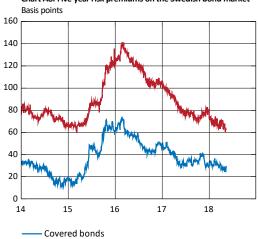
Chart A6. Expected volatility on the bond and stock markets



- MOVE, US government bonds (right-hand axis)

Source: Thomson Reuters

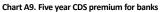
Chart A8. Five year risk premiums on the Swedish bond market

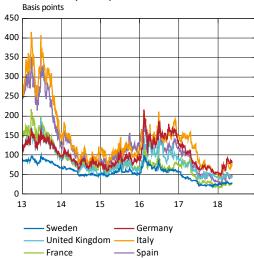


Note. Difference between bond yields and swap rate.

Source: The Riksbank

Corporate bonds

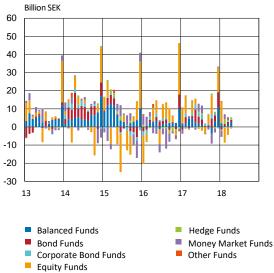




Note. Average of comparable major banks domiciled in each country respectively.

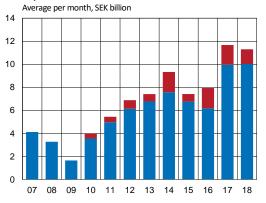
Sources: Markit and the Riksbank

Chart A11. Swedish fund flows



Note. Separate reporting for corporate bonds was introduced in 2014. Sources: Swedish Investment Fund Association and Macrobond

Chart A10. Bond issues in SEK on the Swedish market for non-financial corporate bonds

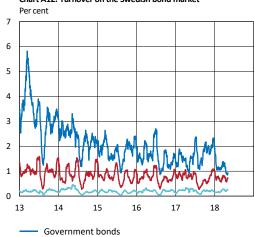


Investment gradeHigh-Yield

Note. Including medium term notes. 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

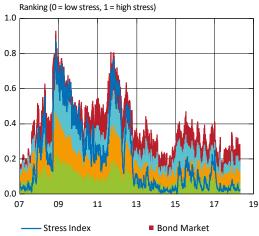


Covered bondsCorporate bonds

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

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

#### Chart A13. Swedish stress index

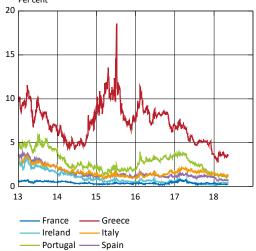


Foreign Exchange Market
 Stock Market

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. The last observation refers to 2018-04-18.

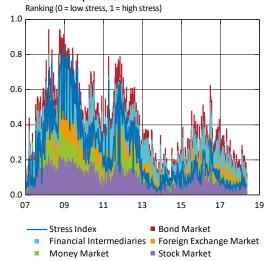
Sources: Bloomberg and the Riksbank

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



Source: Macrobond

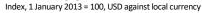
Chart A14. European stress index

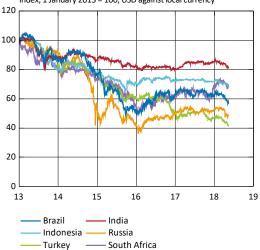


Note. The European stress index is published in the ESRB's Risk Dashboard and elsewhere. The stress level at a specific date is expressed as a value between zero and one, of which one signifies a historically high stress level and zero signifies a historically low stress level. See Holló et al., CISS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

Source: ECB

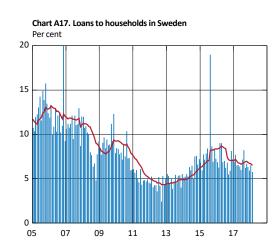
Chart A16. Emerging market currencies





Source: Macrobond

# The Swedish banking groups' borrowers

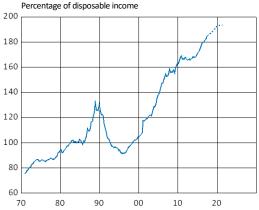


Monthly change, annualised rateAnnual percentage change

Note. Refers to loans from monetary financial institutions (MFI). The annual percentage change (red line) is not adjusted for reclassifications and traded loans.

Sources: Statistics Sweden and the Riksbank

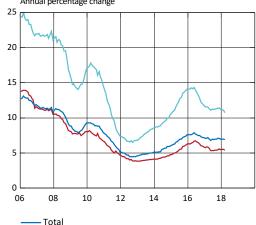
## Chart A19. Household debt-to-income ratio in Sweden



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

Sources: Statistics Sweden and the Riksbank

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

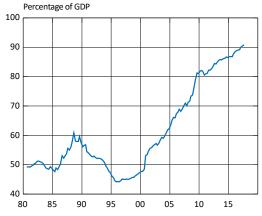


Loans with single-family houses as collateral
 Loans with tenant-owned apartments as collateral

Note. Refers to loans from monetary financial institutions (MFI). The total lending (blue line) is not adjusted for reclassifications and traded loans.

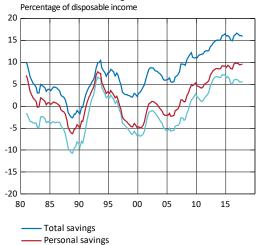
Sources: Statistics Sweden and the Riksbank

#### Chart A20. Household debt in Sweden



 $Sources: Statistics \, Sweden \, and \, the \, Riksbank \,$ 

Chart A21. Household savings in Sweden



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

Sources: Statistics Sweden and the Riksbank

Personal financial savings

Chart A23. Rate fixing 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. Adjustable rate refers to rate fixation periods up to 3 months. Fixed rate refers to rate fixation periods above 3 months.

Source: Statistics Sweden

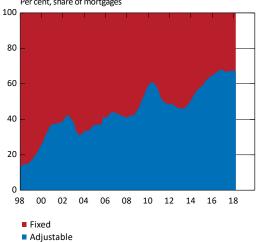
Adjustable

Chart A22. Mortgage rates to households in Sweden



Source: Statistics Sweden

Chart A24. 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 A25. Real Residential Real Estate Index in Sweden



Note. Deflated with CPIF. Refers to price developments for single-family houses.

Sources: Statistics Sweden and the Riksbank

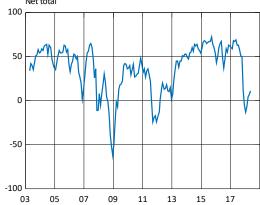
Chart A27. Loans to non-financial companies in Sweden



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

Source: Statistics Sweden

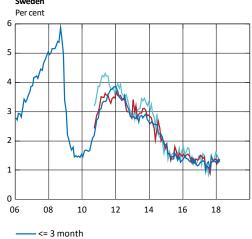
Chart A26. Households' expectations of housing prices in Sweden



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

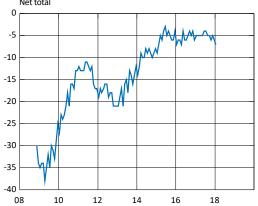
Chart A28. Interest rates on new loans to non-financial companies in Sweden



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

Source: Statistics Sweden

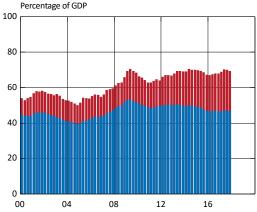
Chart A29. Lending standards for non-financial companies in Sweden



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 A31. Non-financial companies' debt levels in Sweden

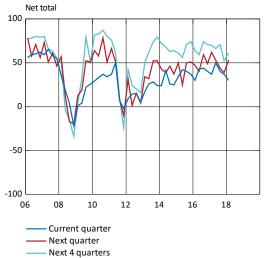


- Wholesale funding
- Funding from monetary financial institutions (MFI)

Note. Wholesale funding refer to certificates and bonds.

 $Sources: Statistics \, Sweden \, and \, the \, Riksbank \,$ 

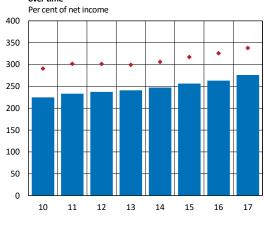
Chart A30. Banks' assessment of lending to non-financial companies in Sweden



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

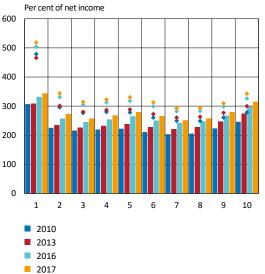
Chart A32. Debt-to-income among households with mortgage loans over time



Median DTIAverage DTI

Source: The Riksbank

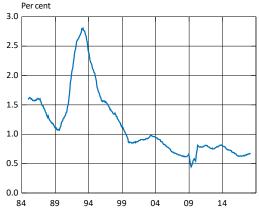
Chart A33. Debt-to-income for households with mortgages by income decile



Note. Stacks represents median while the diamonds represent the average. 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

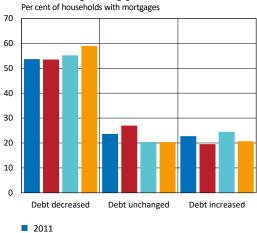
Chart A35. Bankruptcy rate for non-financial companies in Sweden



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 A34. Change in mortgage debt



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.

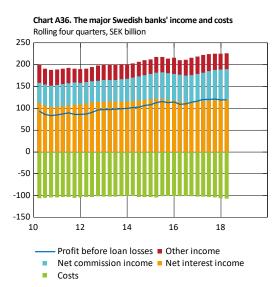
Source: The Riksbank

**2013** 

2016

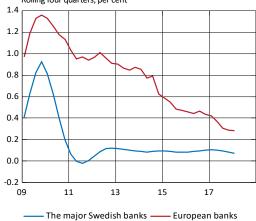
2017

# Developments in the Swedish banking groups



Sources: Bank reports and the Riksbank

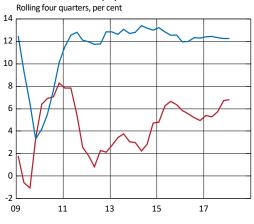
# **Chart A38. Loan losses in relation to lending to the public** Rolling four quarters, per cent



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

Sources: SNL Financial and the Riksbank

## Chart A37. Return on equity

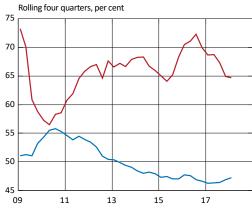


—— The major Swedish banks —— European banks

Note. Unweighted average adjusted for nonrecurring items. The red line represents a sample of other European banks, see footnote 2 in FSR

Sources: SNL Financial and the Riksbank

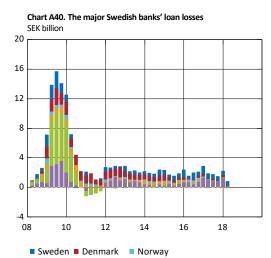
#### Chart A39. Costs-to-income ratio



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

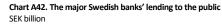
The major Swedish banks —— European banks

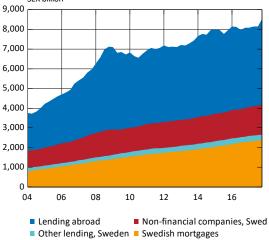
Sources: SNL Financial and the Riksbank



■ Finland ■ The Baltics ■ Other countries

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





Source: Statistics Sweden

Chart A41. Non-performing loans relative to total lending



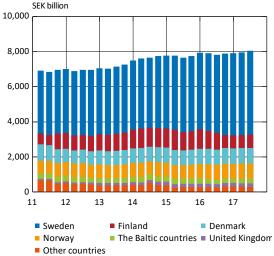
■ European banks

■ The major Swedish banks

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

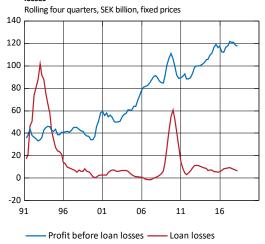
Source: SNL Financial

Chart A43. The major Swedish banks' lending by geography



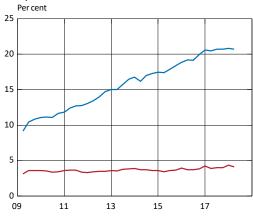
Sources: Bank reports and the Riksbank

Chart A44. The major Swedish banks' profit before loan losses and loan losses



Sources: Bank reports and The Riksbank

Chart A46. The major Swedish banks' CET1 capital ratios and CET1 capital in relation to total assets



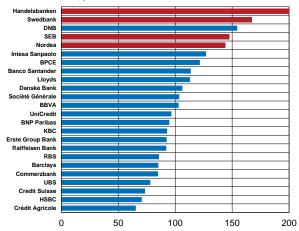
CET1 capital/Risk weighted assets (REA)CET1 capital/Total assets

Note. Weighted average.

Sources: Bank reports and the Riksbank

Chart A45. Loan-to-deposit ratio, European banks

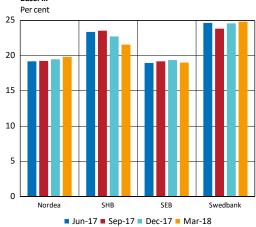
December 2017, per cent



Note. Average over the last four quarters.

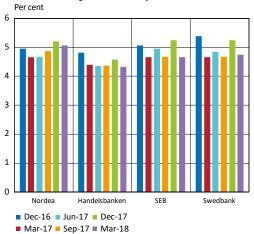
Källor: SNL Financial och Riksbanken

Chart A47. The major Swedish banks' CET1 capital ratios according to Basel III



Source: Bank reports

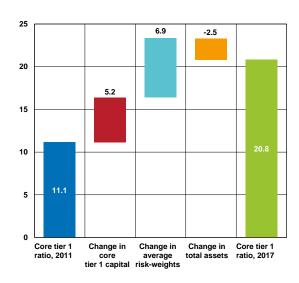
Chart A48. Leverage ratio for the major Swedish banks



Source: Bank reports

Chart A50. Development of the major Swedish banks' core Tier 1 capital ratios, Basel III

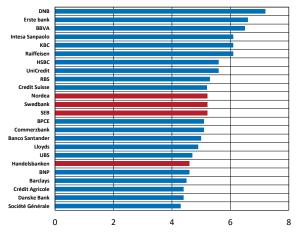
Per cent



Sources: Bank reports and the Riksbank

Chart A49. Leverage ratio, European banks

December 2017, per cent



Note. Calculated as per the Basel III framework.

Sources: SNL Financial and the Riksbank

Chart A51. Equity in relation to total assets, Swedish banks

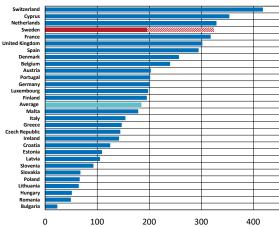


Equity in relation to total assets

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

Chart A52. Bank assets in relation to GDP

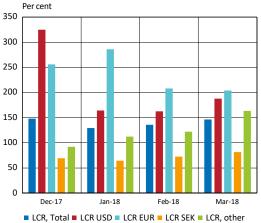
December 2017, per cent



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.

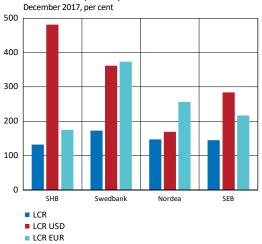
Sources: Bank reports, ECB, Eurostat, Swiss national bank and the Riksbank  $\,$ 

Chart A54. The major Swedish banks' average LCR by currency



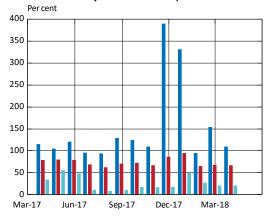
Sources: Finansinspektionen and the Riksbank

Chart A53. LCR by currency and bank



Source: Bank reports

Chart A55. The major Swedish banks daily LCR in SEK



- Highest observation
- Monthly average, all banks
- Lowest observation

Source: The Riksbank

Chart A56. The Swedish major banks' average NSFR

Per cent

120

100

80

60

40

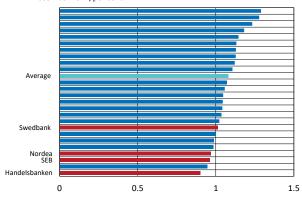
20

0

Note. The major Swedish banks are reporting their monthly NSFR to the

Source: The Riksbank

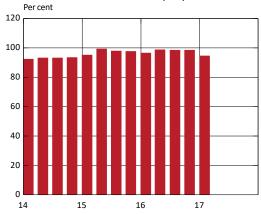
Chart A58. The Riksbank's structural liquidity measure, European banks December 2017, per cent



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

Sources: Liquidatum and the Riksbank

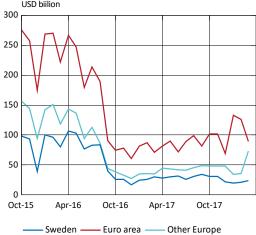
Chart A57. The Riksbank's structural liquidity measure



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.

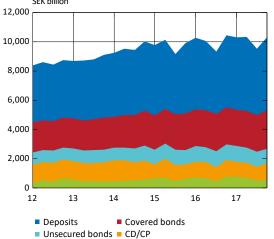
Source: The Riksbank

Chart A59. US Money Market Fund exposures to Europe



Note. The graph shows exposures for prime money market funds only. Sources: Investment Company Institute and the Riksbank

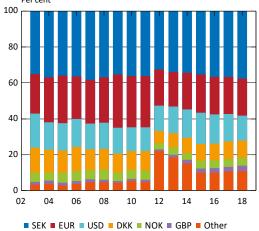
Chart A60. Total funding per liability type for the major Swedish banks



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

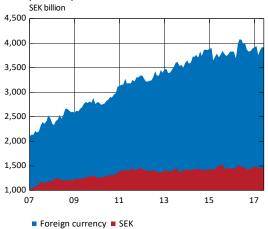
Net interbank

Chart A62. The major Swedish banks' total funding by currency Percent



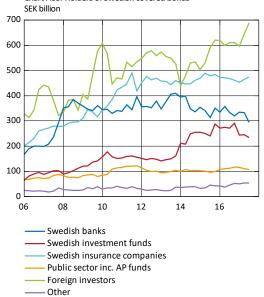
Note. Refers to the major Swedish banking groups' total funding. Source: Bank reports

Chart A61. The major Swedish banks' wholesale funding via Swedish parent companies and subsidiaries



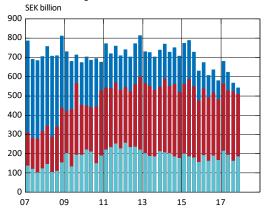
Note. Foreign subsidiaries not included. Sources: Statistics Sweden and the Riksbank

Chart A63. Holders of Swedish covered bonds



Sources: Statistics Sweden and the Riksbank

Chart A64. 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