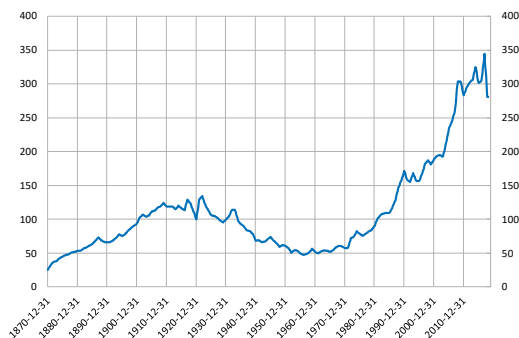


Appendix 2 Chart pack

Appendix 2 collects a chart pack of the variables that enter the five different sectoral indicators. Data is not standardized nor transformed in any way, unless otherwise stated. For transformations and more detailed descriptions of the variables etc., see the descriptions in the staff memo and *Appendix 1 List of input variables*.

The banking sector

Chart A2.1 MFI assets in relation to GDP
Per cent



Note. The blue line refers to bank assets in relation to GDP and the red line refers to monetary financial institutions' (MFI) assets to GDP.

Sources: Hortlund (2005), Statistics Sweden and Macrobond

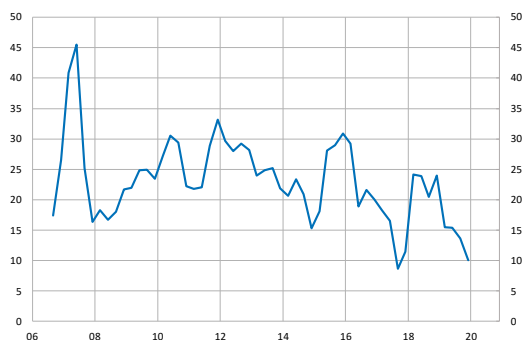
Chart A2.2 Equity in relation to assets
Per cent



Note. Equity and assets are book-valued. The ratio is referred to as leverage.

Sources: Hortlund (2005), Statistics Sweden and Macrobond

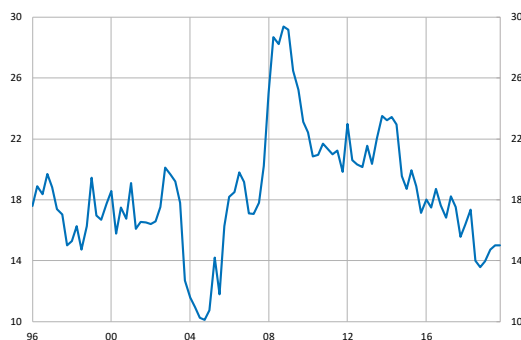
Chart A2.3 Conditional probability of default (CPoD)
Probability



Note. The CPoD estimates the likelihood of a banking crisis (two or more banks defaulting) conditional on a major bank default, from CDS-prices. Average CPoD of Danske Bank, Handelsbanken, Nordea, SEB and Swedbank.

Sources: Lucas et al. (2017) and Macrobond

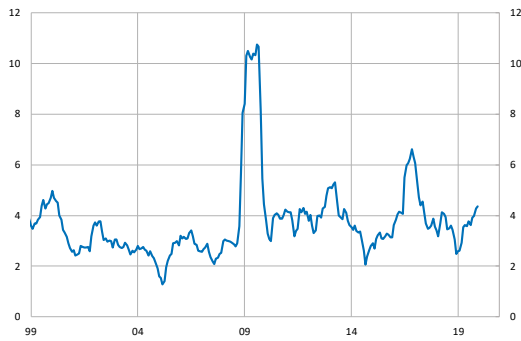
Chart A2.4 Cross-holdings of covered bonds
Per cent



Note. The time series refers to the ratio between long-term debt securities issued by housing credit institutions and the total stock of covered bonds among banks. Calculated for Swedish MFIs.

Source: Statistics Sweden

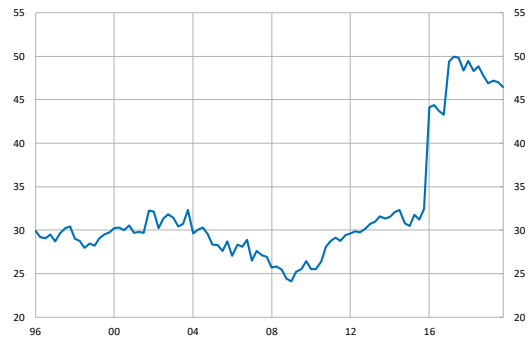
Chart A2.5 Δ CoVaR for Nordic banks
Per cent



Note. Δ CoVaR estimates the 95th percentile of return losses on a portfolio of share, when a specific bank is in distress. Average Δ CoVaR of Danske Bank, DNB, Handelsbanken, Nordea, SEB and Swedbank.

Sources: Adrian & Brunnermeier (2016) and Macrobond

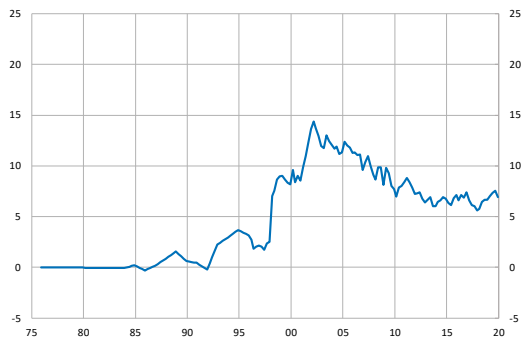
Chart A2.6 Deposits in relation to total assets
Per cent



Note. Calculated for Swedish MFIs.

Source: Statistics Sweden

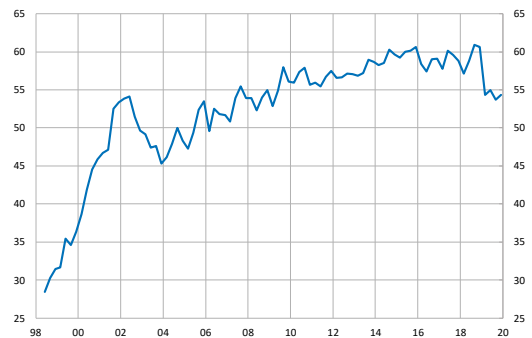
Chart A2.7 FX mismatch in relation to assets
Per cent



Note. FX mismatch is defined as FX liabilities in excess of FX assets and represents foreign currency funding imbalance. Calculated for Swedish monetary financial institutions.

Source: Statistics Sweden

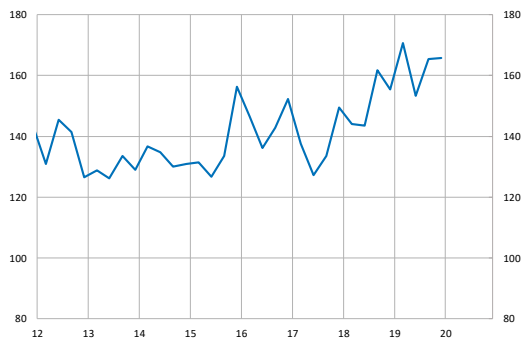
Chart A2.8 Wholesale funding in FX in relation to total funding
Per cent



Note. The time series refers to the share of MFI's outstanding debt securities in currencies other than Swedish kronor, in relation to total debt outstanding.

Source: Statistics Sweden

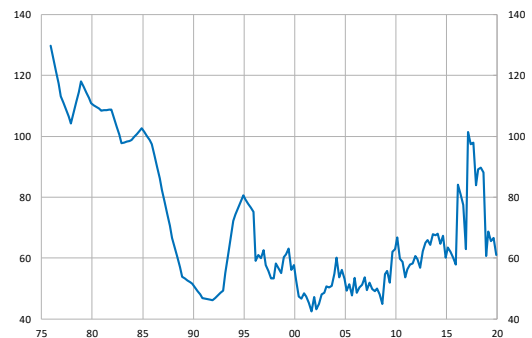
Chart A2.9 Liquidity coverage ratio for the major banks in Sweden
Per cent



Note. Refers to LCR in all currencies as specified in quarterly reports. Average LCR of Handelsbanken, Nordea, SEB and Swedbank.

Source: Banks' quarterly reports

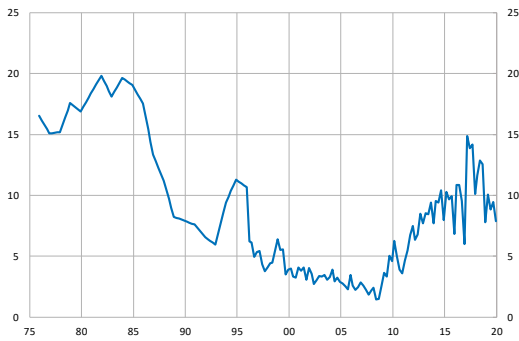
Chart A2.10 Liquid assets in relation to runnable liabilities
Per cent



Note. Liquid assets are measured as the weighted average of banks' assets, with weights increasing in the liquidity of the asset class. Runnable liabilities are measured as weighted averages of banks' liabilities, with weights increasing in maturity and stability. The ratio can be interpreted as an NSFR proxy. Calculated for Swedish MFIs.

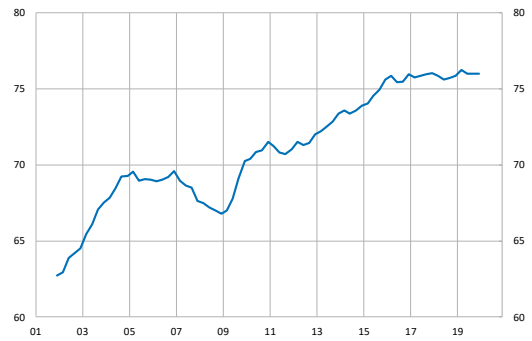
Source: Statistics Sweden and the Riksbank

Chart A2.11 Liquid assets in relation to total assets
Per cent



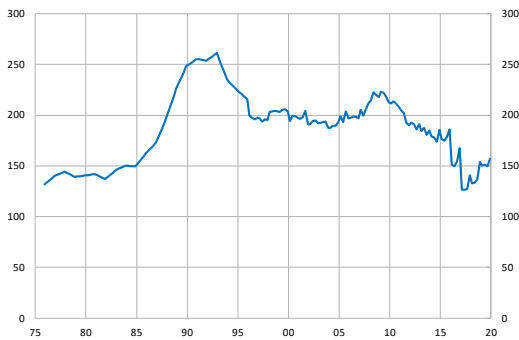
Note. Calculated for Swedish MFIs.
Source: Statistics Sweden

Chart A2.12 Loans secured by property in relation to total loans
Per cent



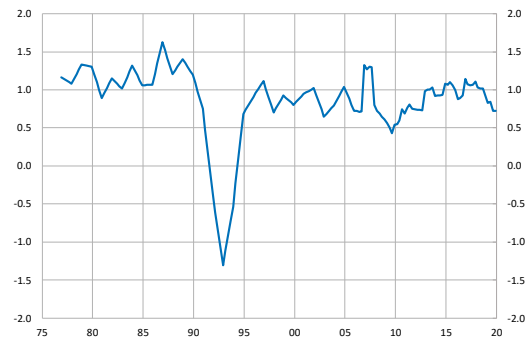
Note. Calculated for Swedish MFIs.
Source: Statistics Sweden

Chart A2.13 Loans in relation to deposits
Per cent



Note. Calculated for Swedish MFIs.
Source: Statistics Sweden

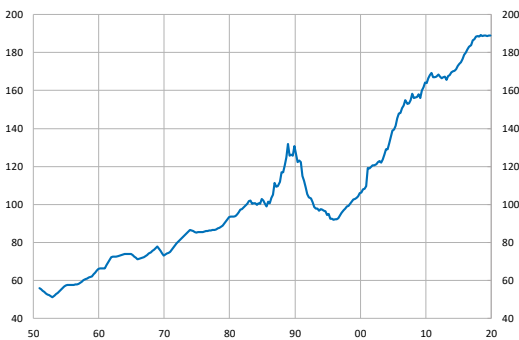
Chart A2.14 Return on average assets
Per cent



Note. Calculated for Swedish MFIs.
Source: Statistics Sweden

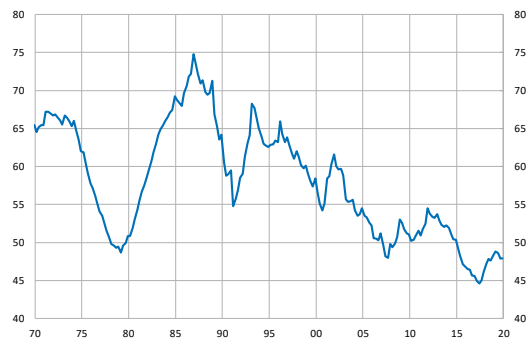
The household sector

Chart A2.15 Household debt in relation to disposable income
Per cent



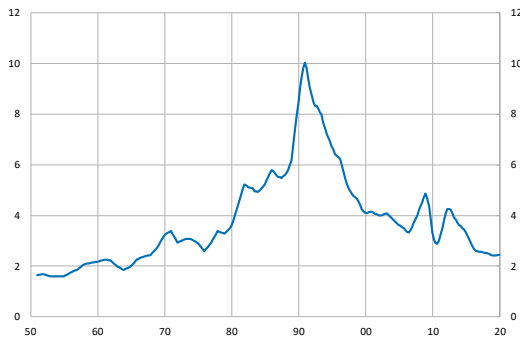
Note. Total debt of households as a share of their disposable income summed over four quarters.
Source: Statistics Sweden

Chart A2.16 Household debt in relation to assets
Per cent



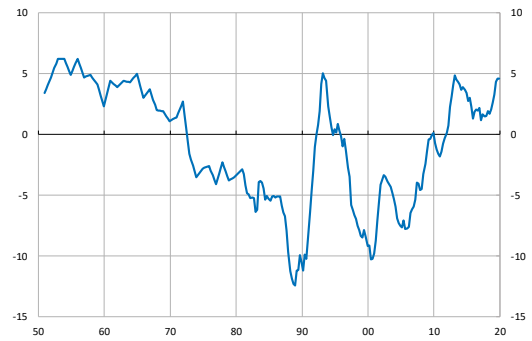
Note. Household debt in relation to assets is also referred to as household leverage. Household assets refer to real household wealth (owner-occupied dwellings and housing, at market prices).
Source: Statistics Sweden

Chart A2.17 Interest expenditure in relation to disposable income
Per cent



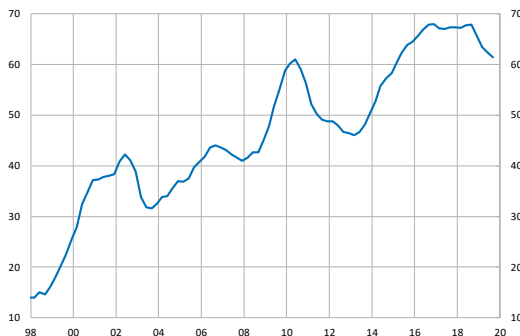
Note. After tax interest expenditures in relation to gross disposable income (income before interest payments and depreciation).
Source: Statistics Sweden

Chart A2.18 Financial savings in relation to disposable income
Per cent



Note. Personal financial savings equals personal savings excluding investment in housing. Personal savings equals total savings excluding collective savings.
Source: Statistics Sweden

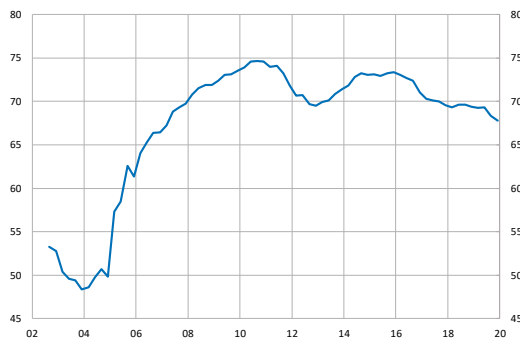
Chart A2.19 Interest rate fixation periods for mortgages
Per cent



Note. Loans from mortgage institutions. The time series shows the share of mortgages with a variable interest rate in relation to the total mortgage stock (volume weighted). Variable rate refers to rate fixation periods up to 3 months.
Source: Statistics Sweden

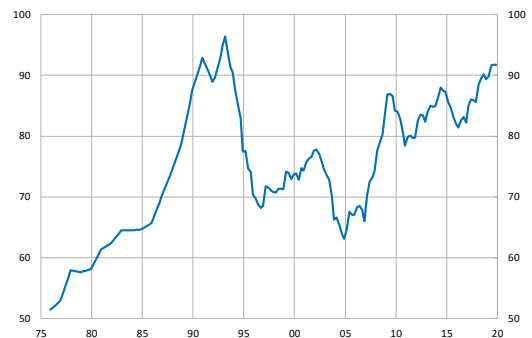
The non-financial corporate sector

Chart A2.20 Interest rate fixation periods for MFI loans to non-financial companies
Per cent



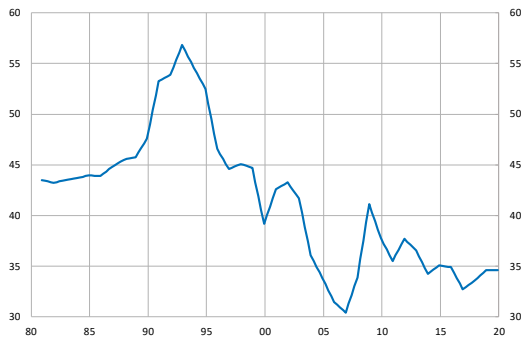
Note. The time series shows the share of loans with a variable interest rate in relation to the total non-financial companies' debt stock. Variable rate refers to rate fixation periods up to 1 year.
Source: Statistics Sweden

Chart A2.21 Non-financial companies' debt in relation to GDP
Per cent



Note. Refers to both loans from MFIs and issued securities.
Source: Statistics Sweden

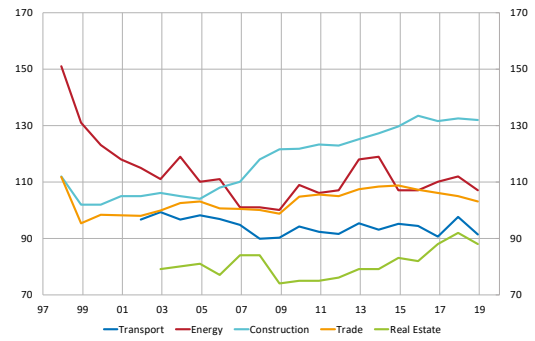
Chart A2.22 Corporate leverage
Per cent



Note. The corporate leverage ratio is calculated as total liabilities (obtained by subtracting companies' net wealth from total assets) in relation to total assets (book valued).

Source: Statistics Sweden

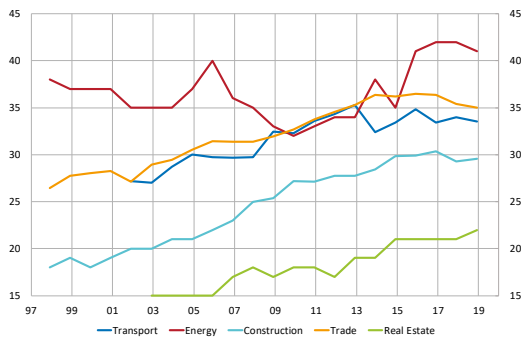
Chart A2.23 Liquidity in different sectors
Per cent



Note. Liquidity is defined as current assets (minus inventories and prepaid expenses) in relation to current liabilities.

Source: Statistics Sweden

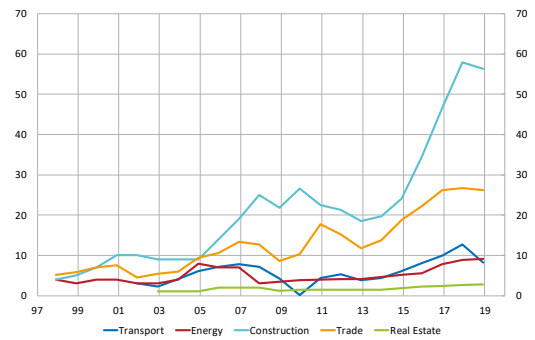
Chart A2.24 Solidity in different sectors
Per cent



Note. Solidity is defined as the book value of equity in relation to total assets.

Source: Statistics Sweden

Chart A2.25 Interest coverage ratios in different sectors
Per cent

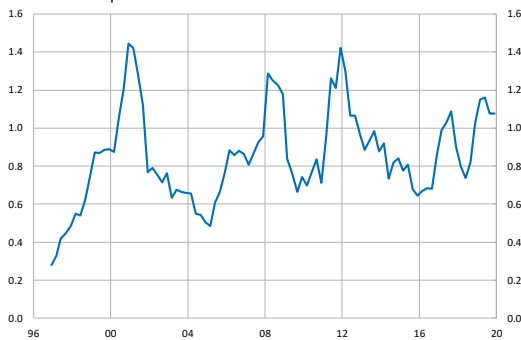


Note. The interest coverage ratio is defined as EBIT in relation to interest expenditures.

Source: Statistics Sweden

The property market

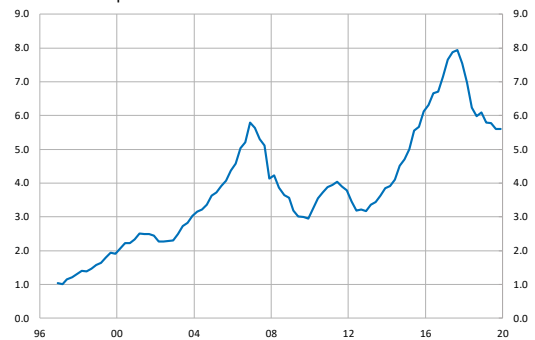
Chart A2.26 Building permits, commercial properties
Million square meters



Note. Building permits for new construction, gross floor area. Property types included are offices, shops, hotels and restaurants. Delays in reporting results in an underestimation of the last most recent four quarters. The largest underestimation is for the most recent quarter (about 30 per cent) while delays after one year result in about 1 per cent underestimation. 4-quarter sums.

Source: Statistics Sweden

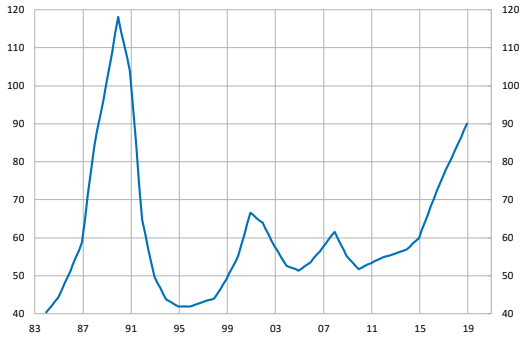
Chart A2.27 Building permits, residential properties
Million square meters



Note. Building permits for new construction, gross floor area. Property types included are one or two dwelling buildings, and multi-dwelling buildings excluding service dwellings. See note to chart 26 for information about delay in reporting. 4-quarter sums.

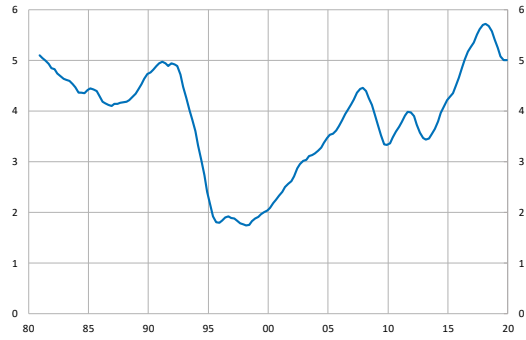
Source: Statistics Sweden

Chart A2.28 Real commercial real estate prices, Stockholm central Index, base year 1983



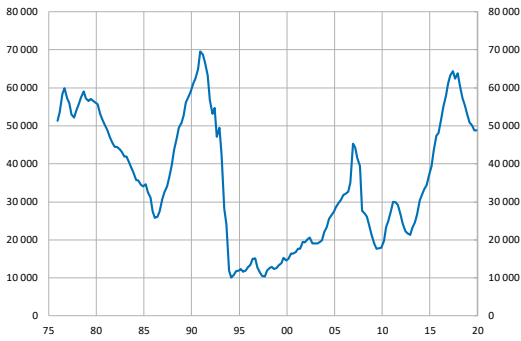
Note. Refers to the Stockholm Central area capital growth index.
Source: MSCI

Chart A2.29 Housing investment in relation to GDP Per cent



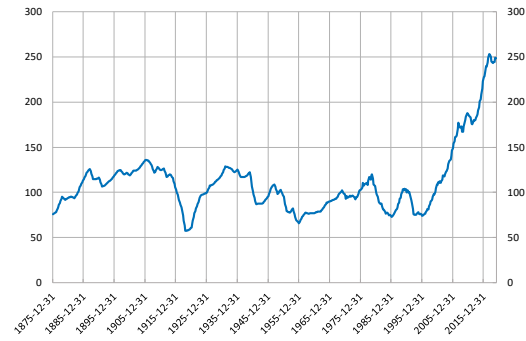
Note. Refers to gross fixed capital formation for housing. Four quarter sums for housing investment and GDP.
Source: Statistics Sweden

Chart A2.30 Construction activity for apartments and single-family houses
Number



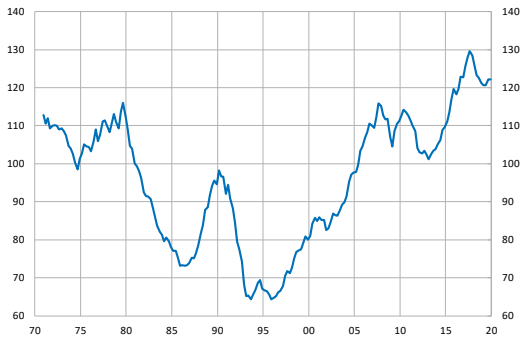
Note. Construction is measured by the number of housing starts for multiple-unit dwellings (apartments) and single-detached dwellings (single-family houses). Multi-dwelling buildings refer to buildings with three or more apartments, including balcony access housing. A dwelling refers to a room or a number of rooms intended for private habitation. Due to delays in reporting, the numbers may be underestimated for the last quarter by about 20 to 60 per cent. After one year the underestimation is about 2 per cent.
Source: Statistics Sweden

Chart A2.31 Real housing prices deflated by CPI Index, 1980q4 = 100



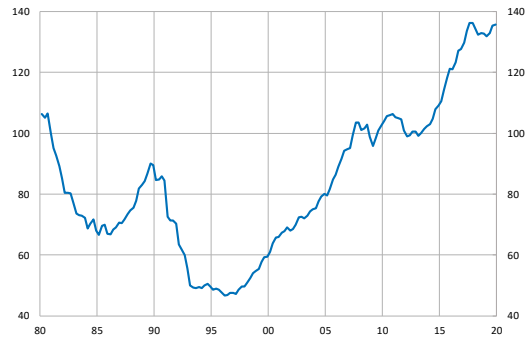
Note. Refers to prices for owner-occupied one and two-dwelling buildings for the whole country. For the definition of a dwelling, see note to chart 30.
Sources: Statistics Sweden and the Riksbank

Chart A2.32 Housing prices in relation to disposable income per capita
Index



Note. Base year 1980q4 for disposable income per capita, 1970q4 for the housing prices index.
Source: Statistics Sweden

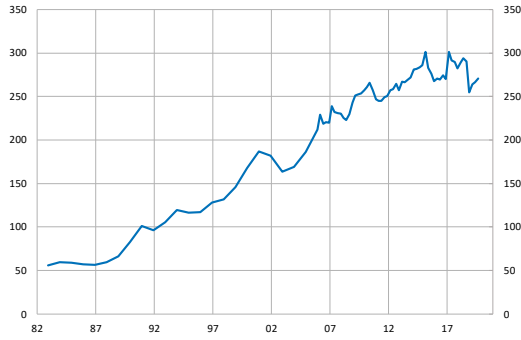
Chart A2.33 Housing prices in relation to rents
Index



Note. Base year 1980q4 for CPI rent index.
Source: Statistics Sweden

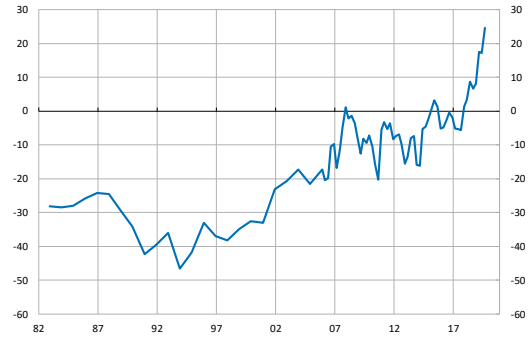
The external environment

Chart A2.34 Gross external debt in relation to GDP
Per cent



Source: Statistics Sweden

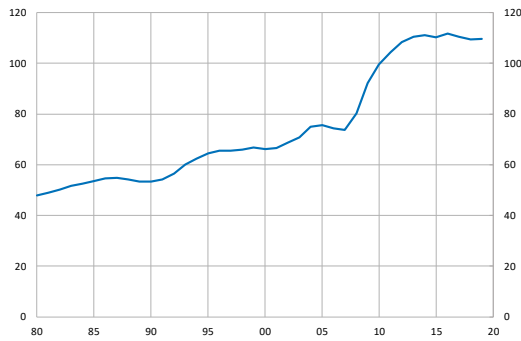
Chart A2.35 Net international investment position in relation to GDP
Per cent



Note. The net international investment position is defined as the difference between foreign assets held by Swedish agents and Swedish assets funded by foreign agents.

Source: Statistics Sweden

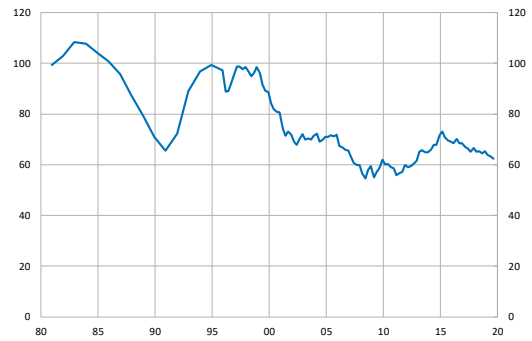
Chart A2.36 Global general government debt in relation to GDP
Per cent



Note. General government gross debt ratios for Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Switzerland, the United Kingdom and the United States.

Source: IMF

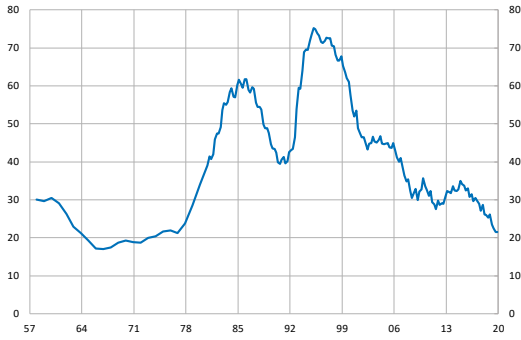
Chart A2.37 General government debt in relation to GDP in Sweden
Per cent



Note. Covers the debt position of the state, other (central and local) authorities and the public pension system.

Source: Statistics Sweden

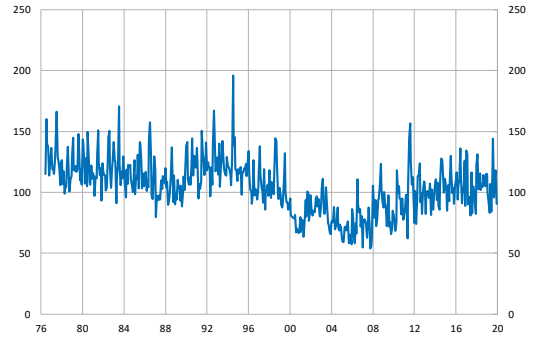
Chart A2.38 Public debt in relation to GDP in Sweden
Per cent



Note. Refers to central government debt, or debt position of the state, as managed by the National Debt Office.

Source: Swedish National Debt Office

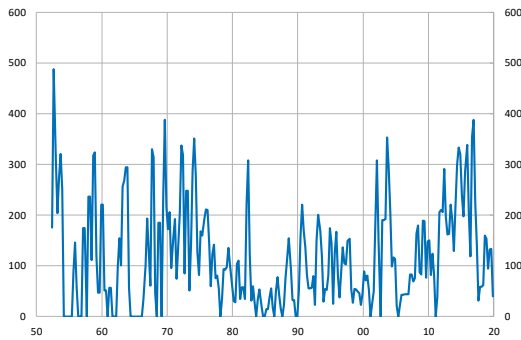
Chart A2.39 Economic policy uncertainty index for Sweden
Index



Note. The Swedish EPU index is constructed by scraping the National Library of Sweden’s online newspaper archive. The archive is queried for Swedish key phrases that correspond to the English equivalents of “economic” (E), “policy” (P) and “uncertainty” (U) in major newspapers. A higher numbers means higher uncertainty, and vice versa. See also note to chart 42.

Sources: Baker, Bloom and Davis, *Measuring economic policy uncertainty*, (2016), and Armelius, Hull and Stenbacka Köhler, *The timing of uncertainty shocks in a small open economy* (2017), and www.policyuncertainty.com

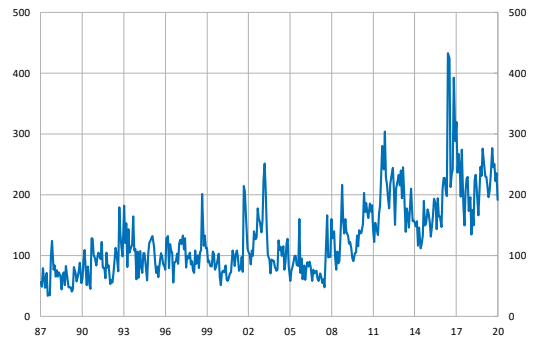
Chart A2.40 World uncertainty index for Sweden
Index



Note. The WUI determines uncertainty using the frequency of the selfsame word in the quarterly Economist Intelligence Unit country reports. The WUI is normalized by total numbers of words and rescaled by multiplying by 1,000. A higher numbers means higher uncertainty, and vice versa. For more information see the source below.

Source: Ahir, Bloom and Furceri, *The world uncertainty index*, (2018), www.policyuncertainty.com

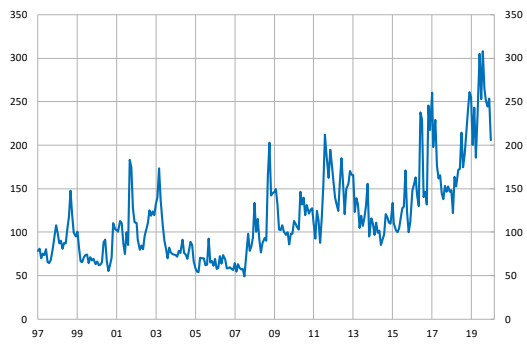
Chart A2.41 Economic policy uncertainty index for Europe
Index



Note. The EPU index for Europe is constructed by drawing two newspapers per country in Europe and counting the numbers of newspaper articles that contain the terms uncertainty, economic or economy, and one or more policy-relevant terms, in the native language of the newspapers. The raw EPU count is scaled by a measure of the number of articles in the same newspaper. A higher numbers means higher uncertainty, and vice versa. For more information see the source below.

Source: Baker, Bloom and Davis, *Measuring economic policy uncertainty*, (2016), www.policyuncertainty.com

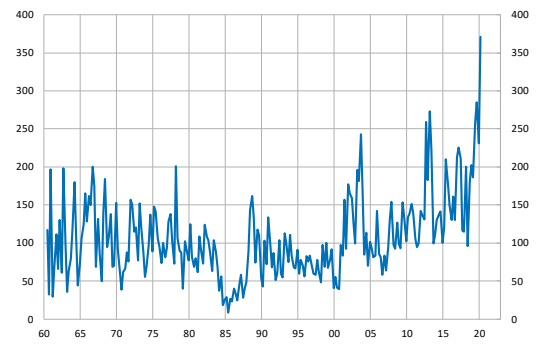
Chart A2.42 Economic policy uncertainty index, global Index



Note. See note to chart 42. The index is a balanced GDP weighted average for 21 countries.

Source: Baker, Bloom and Davis, *Measuring economic policy uncertainty*, (2016), www.policyuncertainty.com

Chart A2.43 World uncertainty index, global Index



Note. See note to chart 41. The index is an unbalanced GDP weighted average for 142 countries.

Source: Ahir, Bloom and Furceri, *The world uncertainty index*, (2018), www.policyuncertainty.com