

DANMARKS NATIONALBANK

THE DANISH EXPERIENCE WITH NEGATIVE INTEREST RATES

Niels Lynggård Hansen, Brookings, 6th June 2016



DANMARKS
NATIONALBANK

Key lessons from experience with negative interest rates

Negative interest rates have been effective in maintaining the exchange rate peg

ZLB seems to be binding for households and small firms but large depositors are met with negative interest rates

Impact on bank profitability small and partial. Impact due to lower rates, not negative as such. Profitability supported by fees, increased trading activities and lower loan impairment charges.

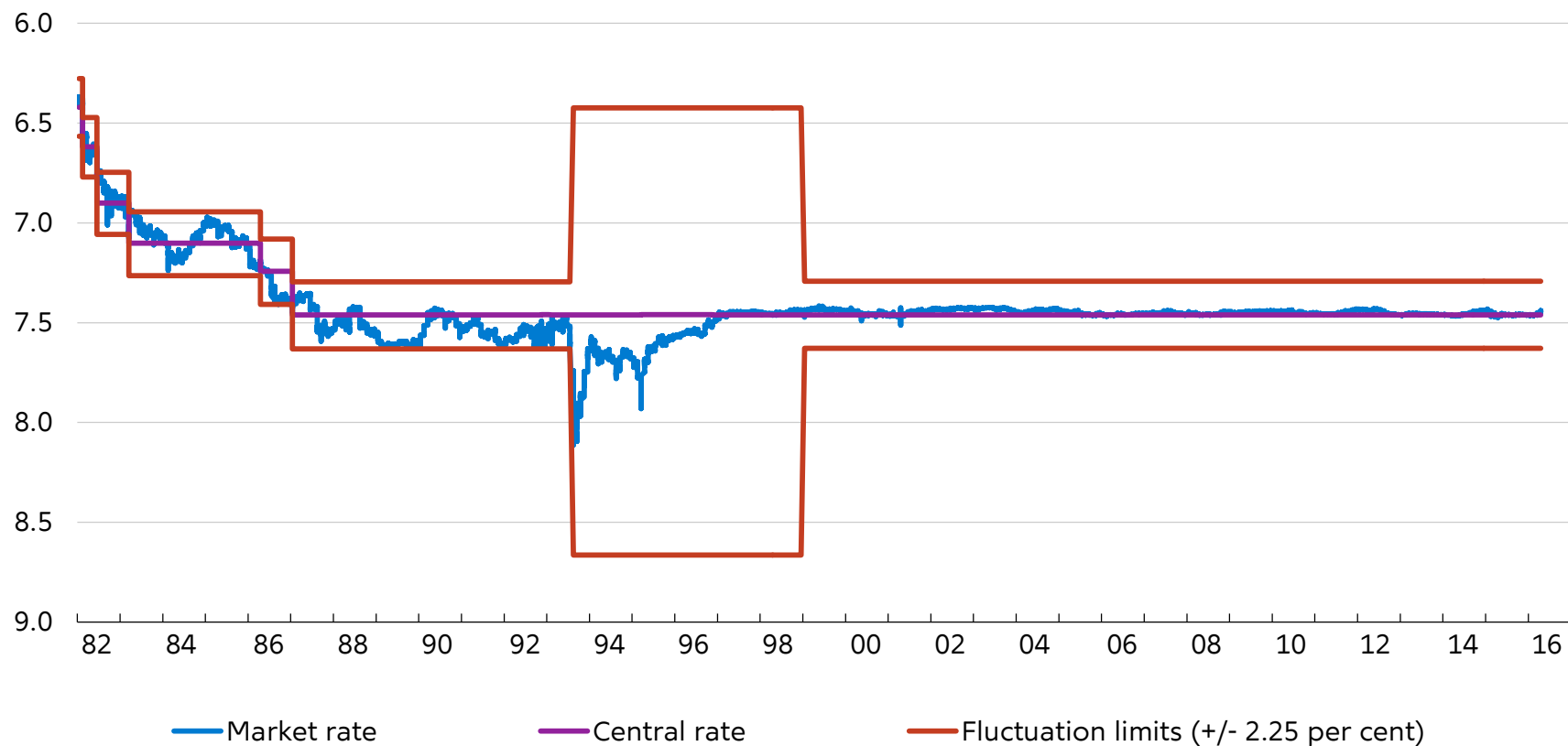
No measurable substitution into cash at current level of interest rates

No indications of bubbles in asset prices so far

Background on Danish monetary policy

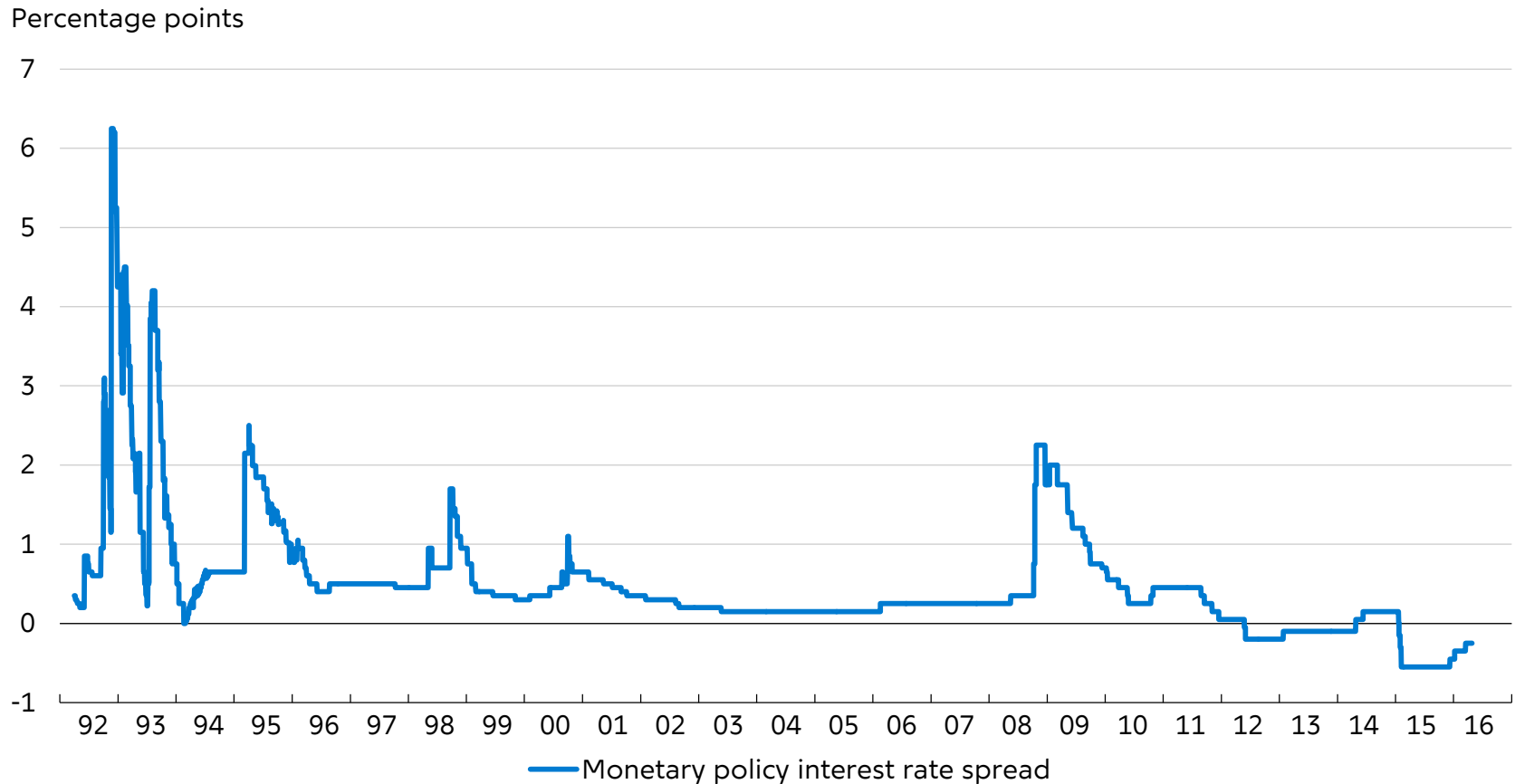
Danish exchange rate peg since 1982

Kroner per euro



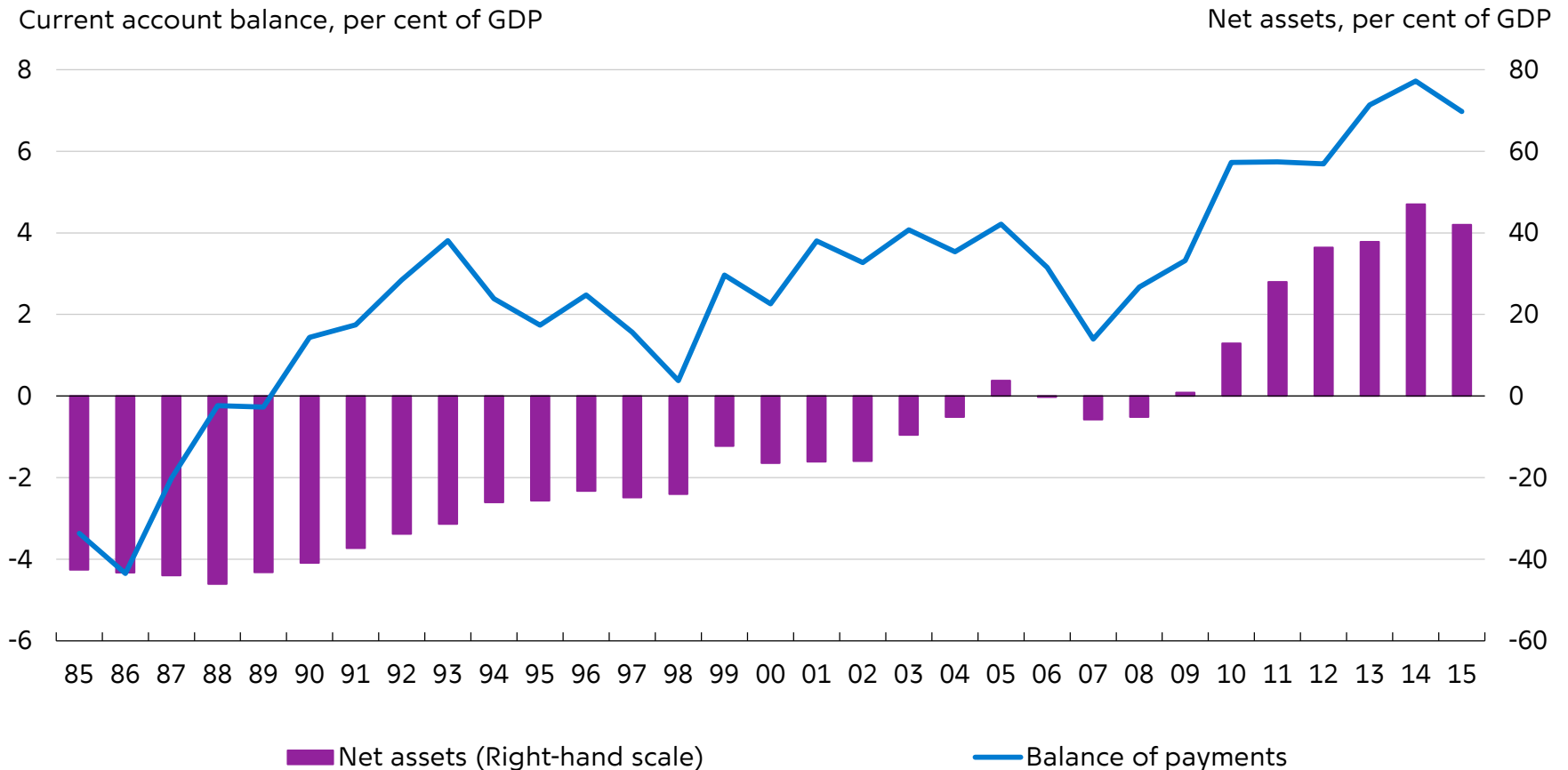
Note: The DEM/DKK rate has been converted to a EUR/DKK rate before 1 January 1999. 1 euro = 1.95583 D-mark
Source: Danmarks Nationalbank

Pressure reflected in monetary policy spread



Note: The interest rate spread is the spread between Danmarks Nationalbank's rate of interest on certificates of deposits and the ECB's rate. Until 14 October 2008, the ECB's main refinancing rate is used. After this date the ECB's deposit rate is used.
Source: Danmarks Nationalbank and ECB.

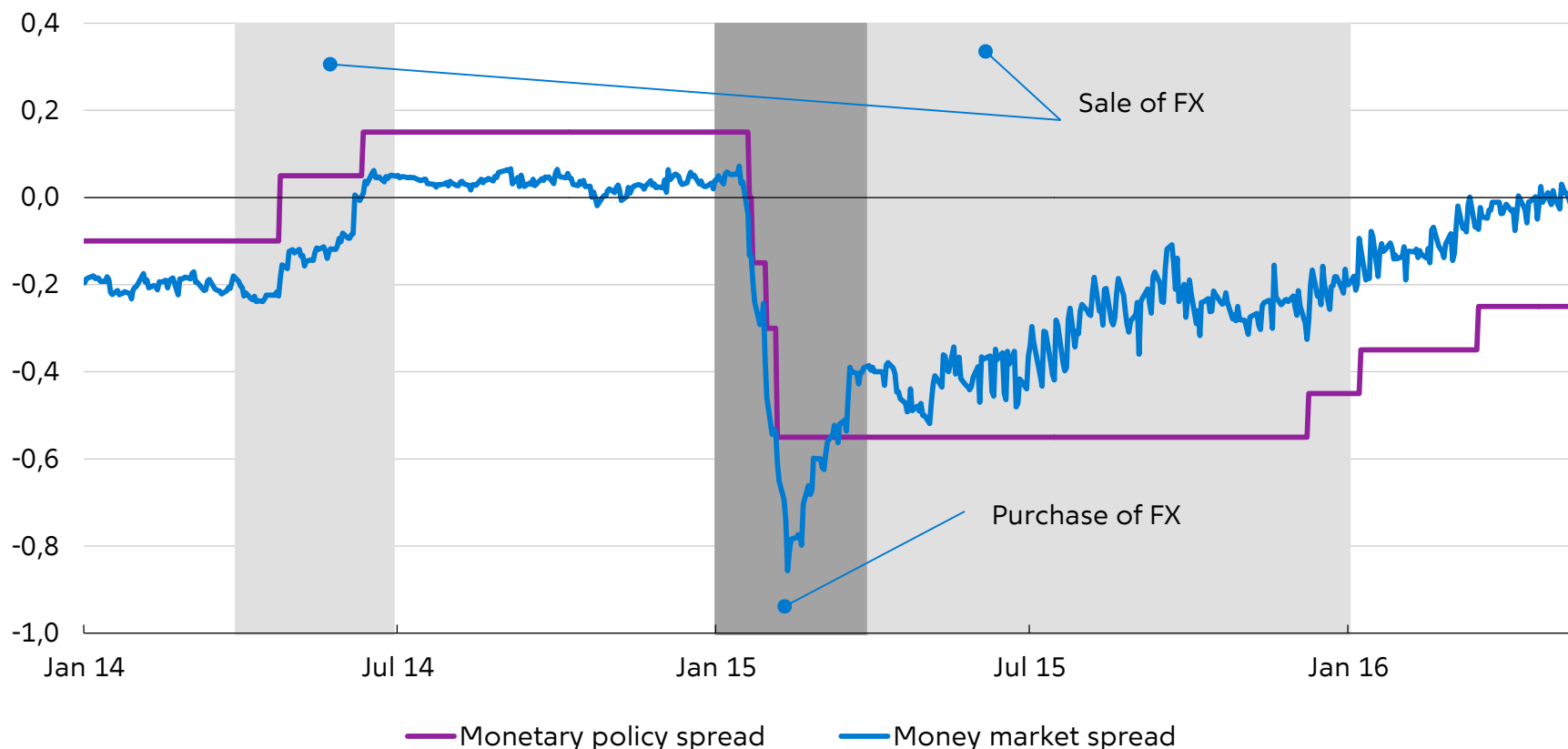
Current account balance and net foreign assets



Source: Statistics Denmark and Danmarks Nationalbank

Interest rate spread and FX interventions

Interest rate spread, per cent

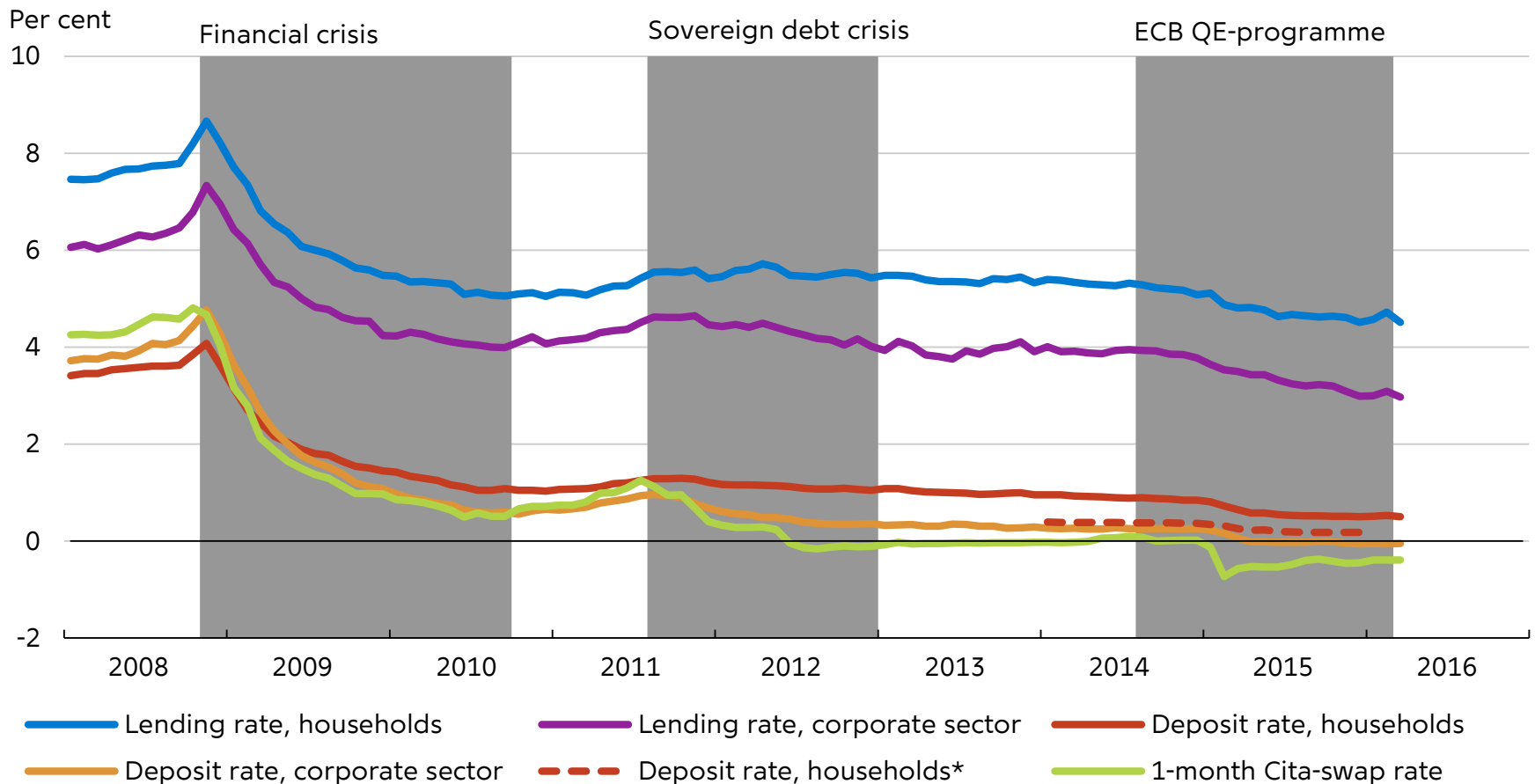


Note: Shaded quarters illustrate quarters where Danmarks Nationalbank intervened for more than DKK 20 bn. (net). Money market spread is the spread between 1 month OIS rates (i.e. EONIA- and CITA-swaps). Monetary policy spread is the spread between Danmark Nationalbank's CD rate and the ECB's deposit rate.

Source: Rio, Thomson Reuters Datastream, Danmarks Nationalbank and own calculations

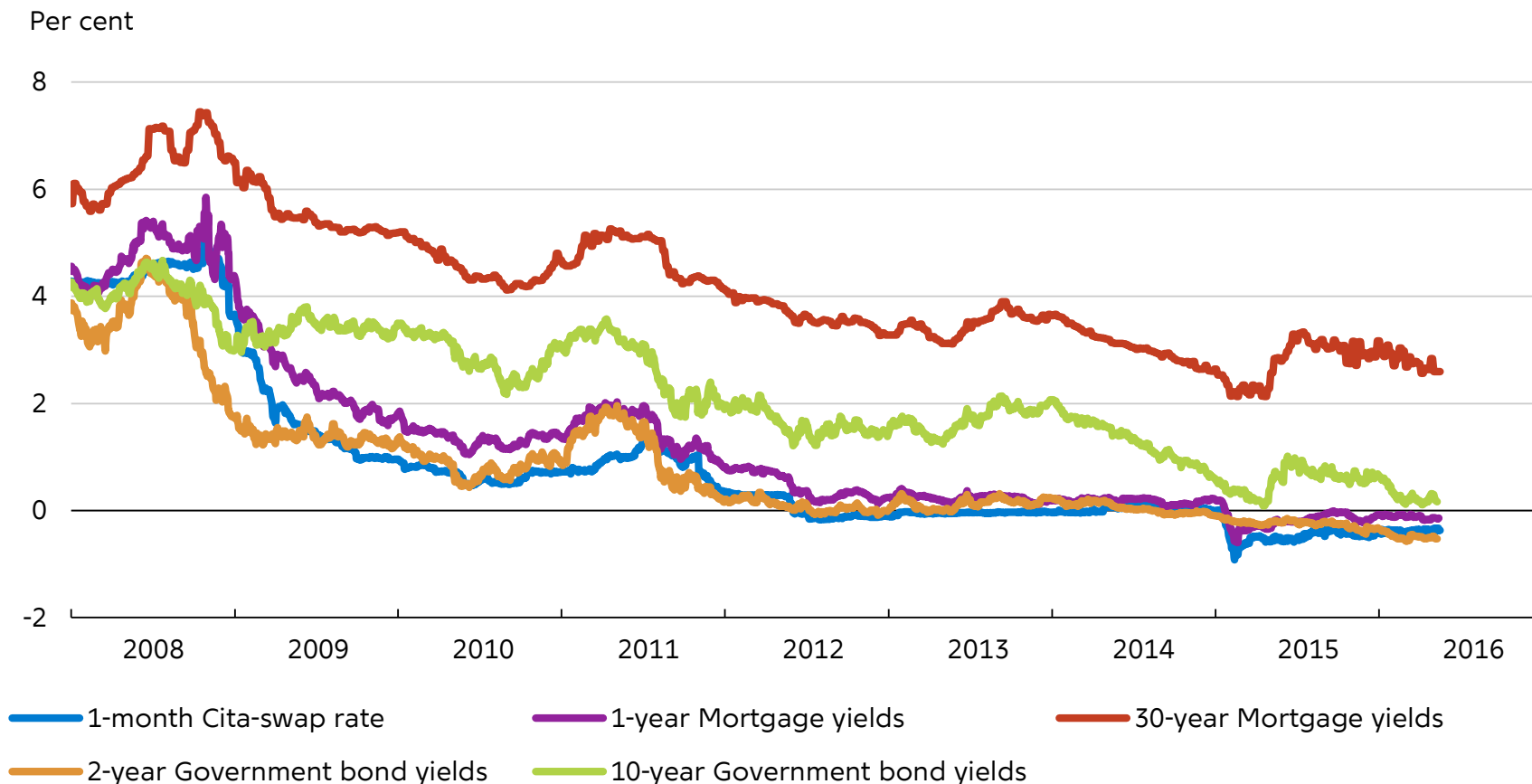
Pass-through to lending and deposit rates

Money market interest rate and banks' average deposit and lending rates



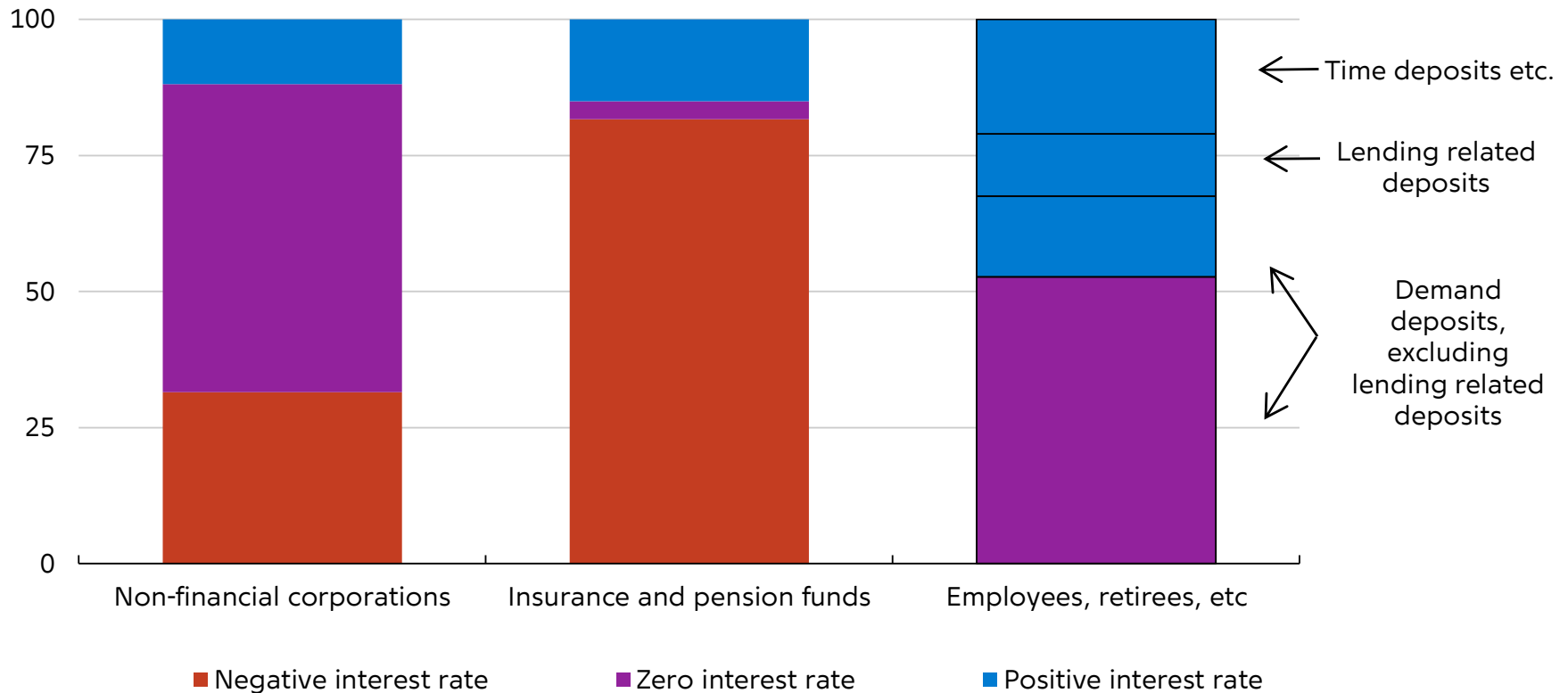
Note: The money market interest rate is the monthly average of the 1-month CITA swap rate.
 * Adjusted for mortgage-like bank loans.
 Source: Danmarks Nationalbank.

Mortgage rates and government bond rates became negative



Negative rates apply to large share of corporate deposits

Share in per cent

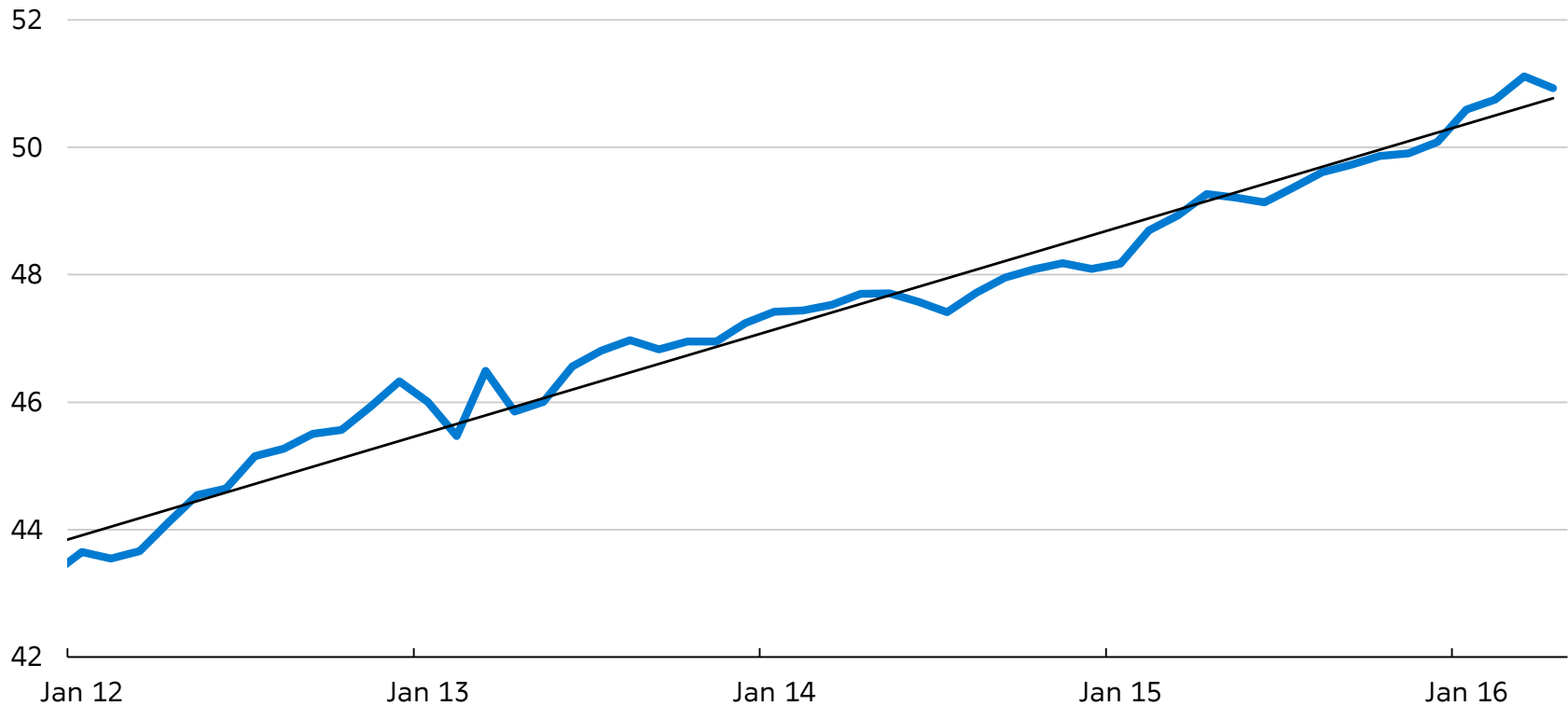


Source: Danmarks Nationalbank.

Potential side effects

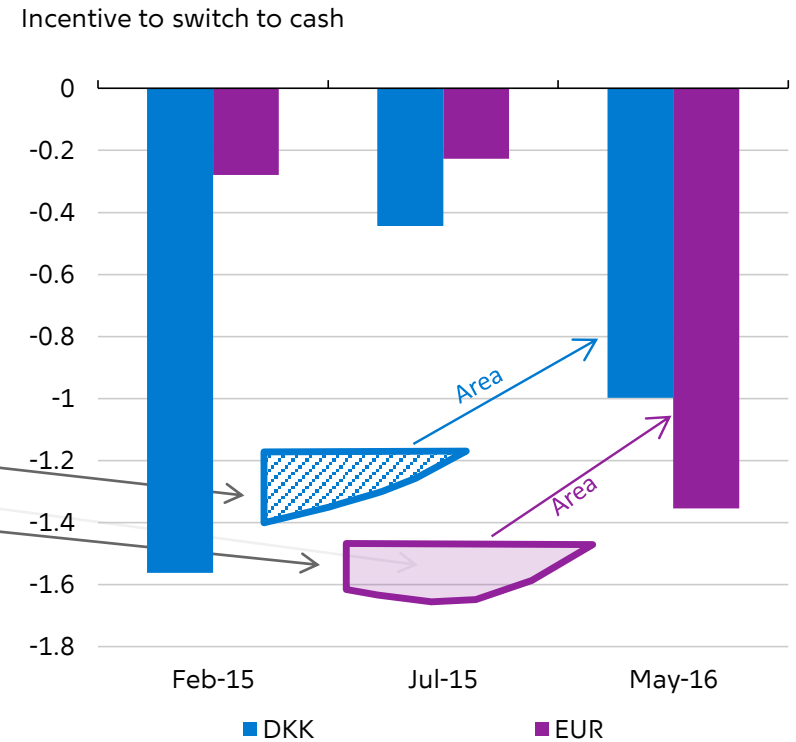
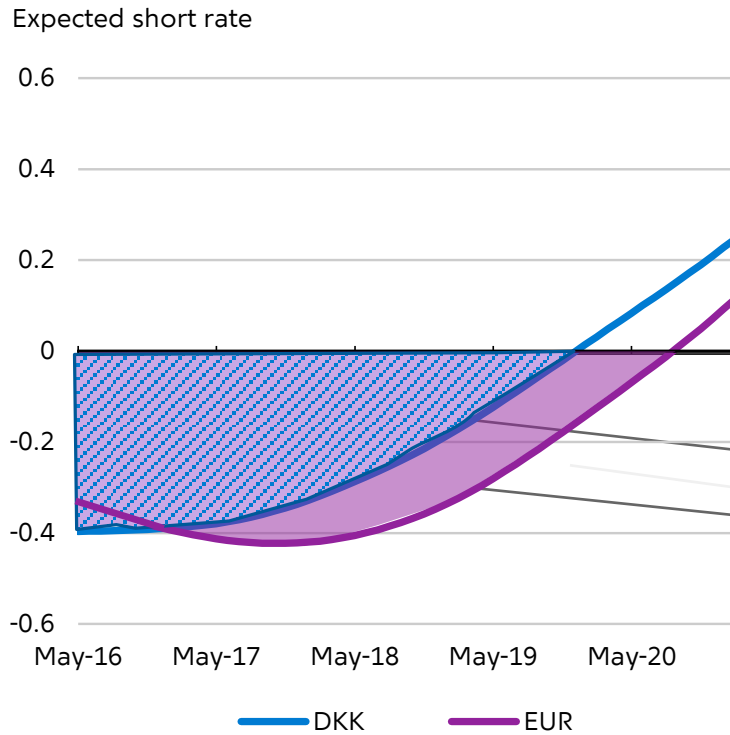
Circulation of DKK 500 and 1,000 notes

Kr. billion



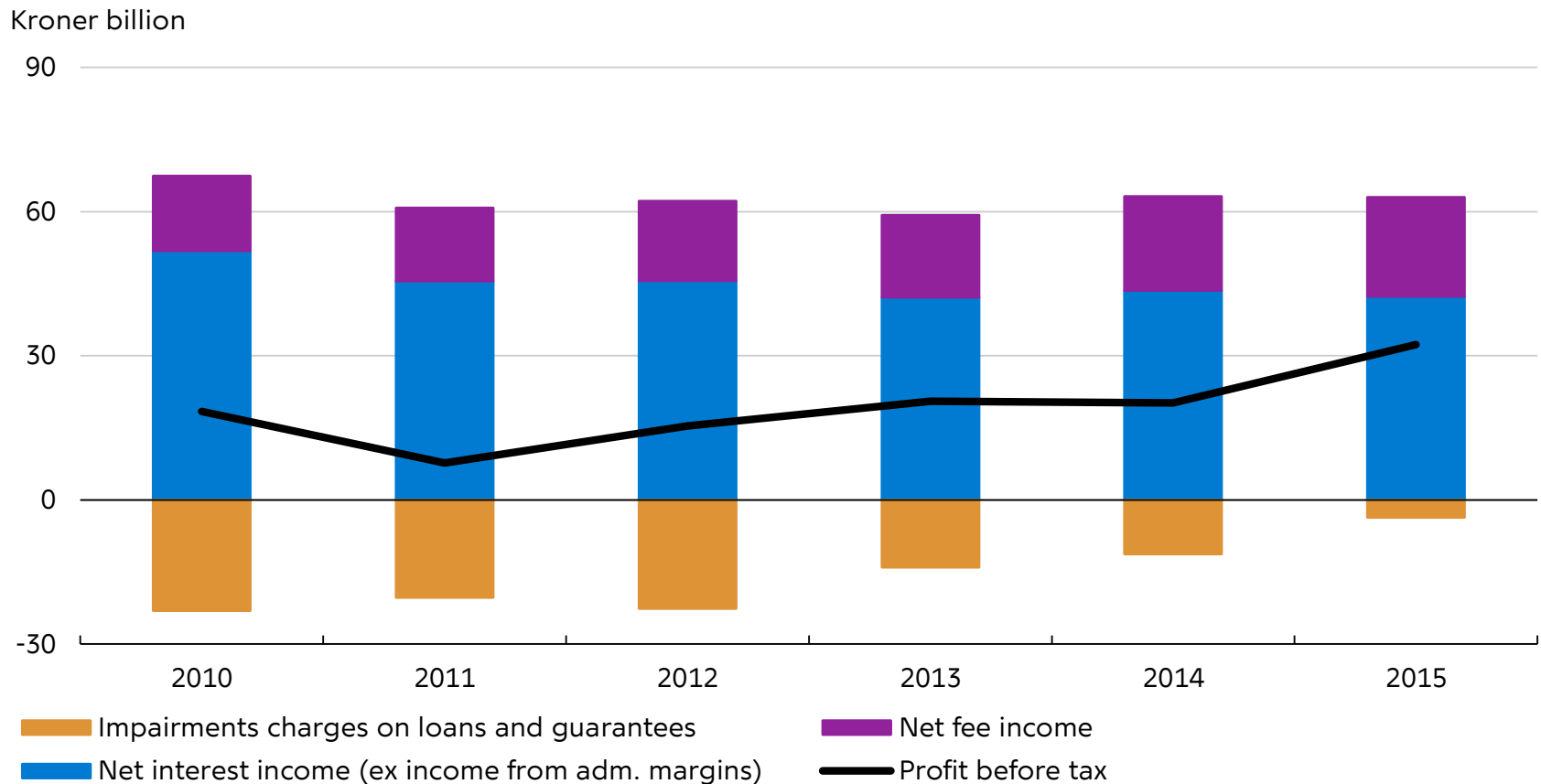
DANMARKS
NATIONALBANK

Incentive to switch to cash depends on level and expected duration of negative rates



Note: Derived from OIS rates. Observations are mid-month.
Source: Rio, own calculations.

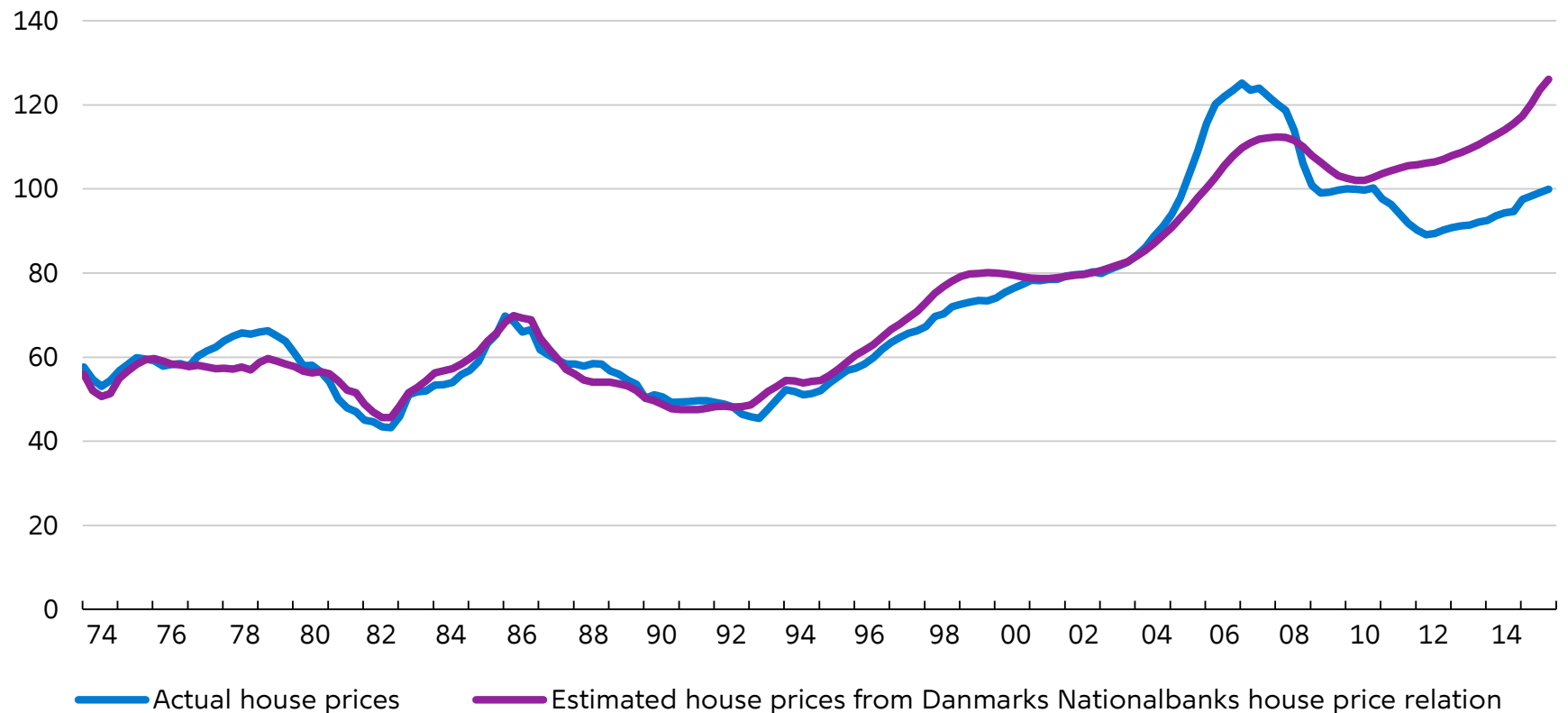
Systemic banks' earnings broken down by main items



Note: Profit before tax also contains income from administrative margins, net fee income, other profit and loss account items and value adjustments.
Source: Danish Financial Supervisory Authority and own calculations.

No indications of a house price bubble

Index 2010q1 = 100



Source: Statistics Denmark and own calculations.

Legal and technical challenges have been addressed

Mortgage: Negative interest rates initially raised a number of technical and legal challenges

- IT systems: Handling a situation where borrowers receive and investors pay interest.
- Tax issues: Borrowers pay tax on interest received; investors can deduct any interest payable.

Existing loans based on variable rate bonds (typically based on CITA or CIBOR): Most mortgage banks apply an interest rate floor of 0 per cent

New loans: Borrowers benefit from negative interest rates, e.g. by direct disbursement or a reduction of the outstanding debt

Tax: The Danish parliament has furthermore adopted adjustments to a number of laws regarding the tax treatment of negative interest for pension returns and corporate tax

Key lessons from experience with negative interest rates

Negative interest rates have been effective in maintaining the exchange rate peg

ZLB seems to be binding for households and small firms but large depositors are met with negative interest rates

Impact on bank profitability small and partial. Impact due to lower rates, not negative as such. Profitability supported by fees, increased trading activities and lower loan impairment charges.

No measurable substitution into cash at current level of interest rates

No indications of bubbles in asset prices so far